

LithiumBank Reports >3,000 mg/L Lithium and >98% Recovery from Direct Lithium Extraction Test Work

Calgary, Alberta--(Newsfile Corp. - November 22, 2023) - **LithiumBank Resources Corp. (TSXV: LBNK) (OTCQX: LBNKF)** ("**LithiumBank**" or the "**Company**") is pleased to announce results from bench-scale G2L Greenview Resources Inc. ("**G2L**") - Direct Lithium Extraction (DLE) test work on brine from its Boardwalk Lithium Brine Project. The Boardwalk Project is located in west-central Alberta, Canada, and situated on 100% owned crown mineral rights.

Highlights:

- Greater than 98% recovery of lithium from the Boardwalk Project brine.
- G2L DLE produced the highest purity concentrated lithium solution (eluate) of the 15 technologies tested or assessed to date.
- Greater than 90% reduction of calcium (Ca), sodium (Na), chlorine (Cl) impurities in the eluate.
- G2L DLE produced lithium eluate concentration of > 3,000 mg/L (3 g/L) Li.
- This represents:
 - Greater than 40 fold increase in lithium concentration from feedstock; and
 - Greater than 40 fold volume reduction of brine post DLE processing.
- Reagents used in the G2L DLE processing are approximately a third of the cost of those used in the DLE process that was used in the Company's maiden Boardwalk PEA published in May 2023. The reagents in the existing PEA accounted for 54% of the total operating costs.
- Results anticipated to be included in an updated Boardwalk PEA expected in late 2023.
- Pilot Plant testing with G2L continuous DLE (cDLE®) technology, at a rate of up to 10,000L per day to commence Q1 2024.

"The test results from G2L represent a significant improvement in the overall purity of the concentrated brine, or eluate, from the existing DLE process we employed in our existing PEA," commented LithiumBank COO Kevin Piepgrass. "We are very pleased because we can achieve this purity level using lower cost reagents that are readily available in Central Alberta. The high-grade eluate of over 3,000 mg/L lithium represents a 40-fold reduction in brine volume which significantly reduces downstream handling and processing of the brine post-DLE concentration."

"We are excited to continue optimizing our cDLE® process for the Boardwalk project brine," commented Peter Voigt, CTO of G2L. "Our focus will remain on maximizing the recovery and purity of lithium while reducing operating and capital costs. We believe further efficiencies can be achieved when we start testing our technology in the cDLE® pilot plant that is being shipped to LithiumBank this month."

	Eluate	Feed Brine (mg/L)	Existing PEA DLE Eluate (mg/L)	G2L DLE Eluate (mg/L)	Change (G2L vs PEA)
Elemental Concentration	B	114	57.2	24.8	-57%
	Ba	10.3	39.3	-	100%
	Ca	22,390	3,948	406	-90%
	Cl	139,373	34,027	2,384	-93%
	K	4,216	59.7	124	108%
	Li	70.1	3,590	3,238	-10%

Mg	2,630	676	417	-38%
Na	56,719	3,231	254	-92%
S	263	5.5	10,594	>10k mg
Sr	931	209	7.2	-97%
Zn	0.6	4.3	-	-100%

LithiumBank has undertaken testing of the G2L DLE process to determine the suitability of the technology for Boardwalk lithium-rich brine. Test work produced a high-purity eluate with lithium concentrations between 3,000 - 7,000 mg/L (3-7 g/L), with low levels of impurities. Eluate concentrations of Ca, Na and Cl were reduced by 90% when compared with results used in another DLE process which was employed in the existing PEA. Furthermore, the G2L cDLE process also reduced the eluate concentrations of magnesium (Mg) and boron (B) by 38% and 57%, respectively. These results are considered very favourable as higher lithium and lower impurity concentrations in the eluate requires a smaller processing plant post-DLE and may reduce the cost of further impurity removal steps.

Brine used in the G2L test work was collected from Well 100/09-26-068-22WS/OO located in the South Sturgeon Lake oilfield, within the "Production Zone" of the Boardwalk Project and has a reported average grade of 73.8 mg/L Lithium (as previously reported in LithiumBank news release dated June 28, 2022). DLE test work was conducted in Melbourne Australia at the G2L lab facilities where the results and procedures were reviewed by Ms Lisa Parks, Qualified Person ("QP"), as defined by NI 43-101. Samples were analyzed at HRL Technology Group Pty Ltd, a third party, ISO 17025:2017 certified lab, in Melbourne Australia. G2L implemented strict Quality Control and Quality Assurance (QA/QC) protocols for the analysis where each batch of analysis included duplicates, blanks, standard reference material, and check lab analysis.

In the Company's existing Boardwalk PEA [published in May 2023](#), the costs of the reagents and resin used in the DLE accounted for 54% of the total operating expenditures ("OPEX"). Recent test work has shown that the G2L process, in addition to delivering superior eluate concentrations, can also effectively use alternative, more cost-effective reagents such as easily sourced quicklime (CaO) instead of sodium hydroxide (NaOH) and sulphuric acid (H₂SO₄) instead of hydrochloric acid (HCl). Furthermore, downstream processes are capable of recovering a significant portion of the H₂SO₄ used in the cDLE® process; this is expected to further reduce the OPEX. These reagent substitutions have shown to be effective and are expected to have a significant net positive impact on the economics in an updated PEA. LithiumBank has engaged Hatch Inc. to prepare the updated PEA in accordance with National Instrument 43-101 which the Company expects to be completed in late 2023.

LithiumBank has entered into an intellectual property license agreement dated September 8, 2023 (the "**License Agreement**"), as previously announced on [September 11, 2023](#), with G2L, a subsidiary of Go2Lithium Inc., whereby G2L agreed to grant to the Company a license (the "**License**") in Alberta and Saskatchewan for a full suite of continuous ion exchange technologies (the "**Licensed Technology**"). The DLE technology will be used to extract lithium salts from enriched brines present at the Company's lithium development projects.

G2L has also agreed to provide the Company with access to a deployment-ready pilot plant that has been previously operating in Australia. Modifications to the pilot plant are almost complete and it is expected to be shipped in November to Alberta with pilot testing commencing in Q1 2024. The pilot plant is expected to have a nameplate throughput capacity of up to 10,000 L per day, making it one of the largest DLE pilot plants in North America. The Company anticipates that access to a dedicated DLE pilot plant will accelerate the Company's test work program and provide the necessary design parameters for inclusion in feasibility studies for its Boardwalk, Park Place, and Saskatchewan lithium development properties.

First Issuance of Shares Under License Agreement with G2L

The Company pleased to also announce it has issued the first 4,000,000 common shares in the capital of the Company (the "**Shares**") to G2L pursuant to the License Agreement.

Pursuant to the terms of the License Agreement, in consideration for the License, LithiumBank has agreed to issue up to an aggregate of 14,000,000 Shares to G2L as follows:

- a. 4,000,000 Shares on November 21, 2023;
- b. 3,000,000 Shares upon there being an operational plant that has processed lithium brine for at least 100 hours of continuous operation in the province of Alberta (the "**First Milestone**");
- c. 3,000,000 Shares if the Company does not deliver a notice to G2L advising G2L that it does not intend to use the Licensed Technology for the Boardwalk Brines Project (a "**Notice to Terminate**") by the date that is 12 months after the achievement of the First Milestone (the "**Second Milestone Deadline**"), provided that the Second Milestone Deadline may be extended for an additional six months if required to generate sufficient data from piloting to support a pre-feasibility study; and
- d. 4,000,000 Shares upon completion of a pre-feasibility study that concludes the Company's Boardwalk Brines Project demonstrates an ungeared internal rate of return greater than the applicable discount rate used to value the Boardwalk Brine Project,

(collectively, the "**Consideration Shares**").

If, following achievement of the First Milestone, a Notice to Terminate is delivered by the Company by the Second Milestone Deadline, the License shall automatically terminate and no further Consideration Shares shall be issuable.

Subject to certain exceptions, the Consideration Shares issued pursuant to the License Agreement shall not be sold or otherwise disposed of by G2L for a period of 12 months following the date of issuance of the Consideration Shares.

Qualified Person's/Competent Person's Statement

The scientific and technical disclosure of the test work undertaken by G2L in this news release has been reviewed and approved by Ms. Lisa Park. Ms Park is a Chemical Engineer and is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Ms. Park is Principal of Process Engineering Options and is independent of LithiumBank Resources Corp. and its subsidiaries. Ms. Park has sufficient relevant experience and is a "Qualified Person" as defined in NI 43-101. Ms. Park consents to the inclusion of the data in the form and context in which it appears.

The scientific and technical disclosure with respect to the PEA 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 Alberta (APEGA) and 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. (TSXV: LBNK) (OTCQX: LBNKF), is a publicly traded lithium company that is focused on developing its two flagship projects, Boardwalk and Park Place, in Western Canada. The Company holds 2,480,196 acres of brown-field lithium brine permits, across 3 districts in Alberta and Saskatchewan. In May 2023, LithiumBank completed an initial robust preliminary economic

assessment of its Boardwalk project that targets a 31,350 TPA operation with a pre-tax USD \$2.7B NPV and a 21.6% IRR with the potential for a number of near term enhancements. The Company will continue to de-risk its assets through detailed geological modelling and advanced engineering.

For more information see the Company's Boardwalk Lithium Brine Project Preliminary Economic Assessment Technical report entitled "Preliminary Economic Assessment (PEA) for LithiumBank Resources Boardwalk Lithium-Brine Project in West-Central Alberta, Canada" effectively dated June 16, 2023 filed on SEDAR+ (www.sedarplus.ca) on June 23, 2023 and on the Company's website (www.lithiumbank.ca).

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. A preliminary economic assessment is preliminary in nature as it includes a portion of inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

About G2L Greenview Resources Inc.

Go2Lithium Inc. was formed in early 2023 as a 50/50 joint venture with Computational Geosciences Inc (CGI), a subsidiary of the Robert Friedland-chaired Ivanhoe Electric Inc. and Clean TeQ Water. Please see Clean TeQ's case studies for additional information on their suite of water treatment and metal extraction technologies.

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Cautionary Statement Regarding Forward-Looking Statements

This news 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, the statement that the Company intends to complete an updated PEA containing the test results and the anticipated timeline for completion of such updated PEA; the expectation that the reduction in brine impurities and increased lithium concentration resulting from the G2L DLE testwork will be repeatable at scale; the expectation that the reduced costs for reagents used in the G2L DEL process will create a reduction in OPEX; the expectation that G2L will provide the Company with access to a deployment-ready pilot plant; the expectation that the pilot plant will have capacity of up to 10,000 L per day and the anticipated impact of a dedicated DLE pilot plan in accelerating the Company's work programs and feasibility studies; achievement of any of the milestones under the License Agreement and the corresponding issuance of the Consideration Shares; the target and potential production of the Company's projects; and the de-risking of the Company's assets are forward-looking statements and contains 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", "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 updated PEA containing the test results can be completed and on the anticipated timeline; that the reduction in brine impurities and increased lithium concentration resulting from the G2L DLE testwork will be repeatable at scale; that the reduced costs of the reagents used in the G2L DLE will create a reduction in OPEX; that G2L will provide the Company with access to a deployment-ready pilot plant; that the pilot plant will have capacity of up to 10,000 L per day and that a dedicated DLE pilot plant will accelerate the Company's work program and feasibility studies; that the Company will achieve the milestones under the License Agreement; that the Company will be able to achieve its target and potential production; and that the Company will be able to de-risk its assets. 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 updated PEA containing the updated test results will not be completed on the timelines expected by management or at all, that the results of the G2L DLE study will not be replicable at scale, that the reduced costs of the reagents used in the G2L DLE process will not have a significant impact on OPEX; that G2L will not provide the Company with access to a deployment-ready pilot plant; that the pilot plant will not have capacity of up to 10,000 L per day and that access to a dedicated DLE pilot plant will not materially accelerate the Company's work programs and feasibility studies, or at all; that the milestones for the payment of the Consideration Shares as set out in the License Agreement may not be achieved; that the Company is unable to achieve its target and potential production; that the Company will not be able to de-risk its assets.

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.



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