

# Nevada Lithium Achieves 97% Lithium and 98% Boron Recovery on High-Grade Mineralization

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## Engages Fluor Enterprises, Inc. to Design Flowsheet and Process Plant for Updated PEA

VANCOUVER, Oct. 23, 2024 - [Nevada Lithium Resources Inc.](#) (CSE: NVLH; OTCQB: NVLHF; FSE: 87K) ("Nevada Lithium" or the "Company") is pleased to provide a technical update on its 2024 metallurgical program at its 100% owned Bonnie Claire Lithium project (the "Project" or "Bonnie Claire"), located in Nye County, Nevada.

Nevada Lithium's CEO, Stephen Rentschler, comments:

*"The high-grade Lithium and Boron mineralization we have identified over the last two drilling programs presents additional opportunities that were undiscovered when the Company's Preliminary Economic Assessment ("PEA") was completed three years ago. With Bonnie Claire now looking to be an analog to Loneer Ltd.'s Rhyolite Ridge deposit ("Rhyolite Ridge"), the logical next step was to explore relationships with companies instrumental in the development of Rhyolite Ridge.*

*We are happy to report that we have engaged Fluor Enterprises, Inc. ("Fluor") to develop the metallurgical processes and plant design that will be incorporated into an updated PEA", he continued. "The updated PEA will, for the first time, reflect the impact of the tremendous grades and intercepts of Lithium and Boron that we have encountered in the lower high-grade Lithium and Boron mineralized zone at Bonnie Claire.*

*Fluor is an internationally recognized firm with comprehensive capabilities that have been utilized in some of the world's largest and most significant Lithium projects, such as Loneer's Rhyolite Ridge, Albemarle Corporation's Meishan Project, [Jindalee Lithium Ltd.](#) and Aurora Lithium SA, among others. We think that Fluor's participation in our Project clearly reflects the increasing industry recognition of Bonnie Claire's position among the world's top tier of Lithium and Boron projects."*

### Highlights:

- Acid leaching has become the preferred option for treating material with high Lithium and Boron content at Bonnie Claire. Preliminary acid leach test work gives 97% overall Lithium recovery and 98% overall Boron recovery. To date, acid leaching has been advanced as the typical recovery process for Lithium-bearing Nevada claystone projects.
- A conceptual two-stage acid leach flowsheet proposes a Boron stream to produce boric acid and a Lithium stream for generating lithium carbonate.
- Thermal treatment may be an option for processing high grade Lithium material with low Boron content at Bonnie Claire. Processing claystone material with 1,000 ppm Lithium and 1% searlesite achieved 80% Lithium recovery.
- Fluor Enterprises, Inc. of Greenville, South Carolina and Kemetco Research Inc. of Richmond, BC ("Kemetco") will oversee future test work and develop a process plant design for the updated Preliminary Economic Assessment.
- Test work should conclude in early 2025, with PEA completion at the end of Q1 2025.

### Previous Work

The 2021 Preliminary Economic Assessment for Bonnie Claire favored thermal treatment of mineralized material. This treatment included calcination of material with the addition of sodium sulfate, followed by hot water leaching. This thermal treatment achieved high Lithium recoveries of up to 80%. Additional work by Hazen Research Inc. ("Hazen") included the successful production of battery-grade lithium carbonate (see the Company's news release dated February 27, 2023). The thermal process on a bulk (300 kg) sample confirmed the process using the same flowsheet but achieved a lower 61% Lithium recovery rate. This

sample contained about 11% searlesite. The lower recovery was likely due to agglomeration by the presence of searlesite.

### Newly Identified Boron

The Company has identified a thick zone of gently dipping, high-grade mineralization at depth. This zone exhibits both high-grade Lithium mineralization, including 3076 ppm Lithium over 1100 ft (November 20, 2023 news release) and high-grade Boron mineralization, including 15,001 ppm Boron over 560 feet (May 22, 2024 news release).

Boron mineralization is contained in the mineral searlesite, which makes up to 38% of mineralized rock in the lower zone. Hazen has demonstrated that a high searlesite content reduces the melting temperature of the material, inhibiting effective calcination. While the Company has concluded that calcination is not preferred for the high-grade material at Bonnie Claire, it may still be an option for material with lower searlesite content, such as the lower-grade upper zone.

### Two-Stage Acid Leaching

To formulate a suitable recovery method for high-grade Lithium and Boron material at Bonnie Claire, the Company asked Hazen to conduct preliminary acid leach benchwork and to develop a conceptual acid treatment process to recover both Lithium and Boron. To date, acid leaching has been advanced as the typical recovery process for Lithium-bearing Nevada claystone projects. Fluor has also advanced the use of acid leach in the Definitive Feasibility Study for Rhyolite Ridge, the only other known Lithium-Boron claystone deposit in Nevada.

Hazen has developed a conceptual two-stage leaching approach using:

- An initial dilute acid leach at 160 kg acid/t solid, to facilitate the recovery of Boron
- A second concentrated 500 kg acid/t solid for the recovery of Lithium

Using this two-stage leaching approach, Hazen achieved a 97% overall Lithium recovery, together with a 98% overall Boron recovery.

The two-stage leaching approach produces two filtrates: a high Boron stream to produce boric acid and a high Lithium stream for generating lithium carbonate. However, there may not be a benefit to a two-stage leach if Boron content is low. A single stage leach has the advantage of requiring less solid/liquid separation stages. The decision to use countercurrent leaching for better acid utilization will be determined after further test work is performed.

### Fluor and Kemetco

Following the successful preliminary acid leach benchwork and conceptual flowsheet by Hazen, Nevada Lithium has accepted a proposal from Fluor and Kemetco. The companies will oversee and perform future benchwork and develop a process plant for inclusion into an updated PEA.

Fluor's Lithium Center of Excellence will set-up and coordinate a test work program to take place at Kemetco's lab facility. The key focus will be to prove the make-up of a conceptual acid-leach circuit. Fluor and Kemetco's joint expertise in developing test work programs for Lithium compounds of similar metallurgy will play an instrumental role in bringing a high level of certainty to the Project flowsheet.

It is estimated that the test work program will conclude in early 2025. The development of a process plant will then feed the preparation of the updated PEA report pertaining to metallurgy, capital, and operating expenses (CAPEX and OPEX, respectively). Global Resource Engineering will prepare an updated PEA, with an estimated completion date by the end of Q1 2025.

About Nevada Lithium Resources Inc.

Nevada Lithium Resources Inc. is a mineral exploration and development company focused on shareholder value creation through its core asset, the Bonnie Claire Lithium Project, located in Nye County, Nevada, where it holds a 100% interest.

Bonnie Claire has a current National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101") inferred mineral resource of 3,407 million tonnes (Mt) grading 1,013 ppm Li for 18.372 million tonnes (Mt) of contained lithium carbonate equivalent (LCE), at a cut-off grade of 700 ppm Li<sup>1</sup>.

The PEA for Bonnie Claire indicates a net present value (8%) of \$1.5 Billion USD (after tax) using \$13,400 USD per tonne LCE and after-tax IRR of 23.8%. With an LCE price of \$30,000 USD per tonne, the net present value (8%) of the Project is \$5.9 Billion USD (after tax) and an IRR of 60.3%<sup>1</sup>.

For further information on Nevada Lithium and to subscribe for updates about Nevada Lithium, please visit its website at: <https://nevadalithium.com/>

#### QP Disclosure

The technical information in the above disclosure has been reviewed and approved by the designated Qualified Person under NI 43-101, Dr. Jeff Wilson, PhD, P. Geo, Vice President of Exploration for Nevada Lithium. Dr. Wilson is not independent of Nevada Lithium, as he is Vice President of Exploration for Nevada Lithium.

<sup>1</sup>See Preliminary Economic Assessment NI 43-101 Technical Report on the Bonnie Claire Lithium Project, Nye County, Nevada authored by Terre Lane, J. Todd Harvey, MBA, PhD, Hamid Samari, PhD and Rick Moritz (Effective date of August 20, 2021, and Issue date of February 25, 2022) (the "PEA" or the "Preliminary Economic Assessment") as summarized in Nevada Lithium's news release dated October 13, 2021, which are available on Nevada Lithium's SEDAR+ profile at [www.sedarplus.ca](http://www.sedarplus.ca). Results of the Preliminary Economic Assessment represent forward-looking information. This economic assessment is, by definition, preliminary in nature and includes inferred mineral resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the Preliminary Economic Assessment will be realized. Mineral resources are not mineral reserves as they do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted into Mineral Reserves.

On behalf of the Board of Directors of Nevada Lithium Resources Inc.  
*"Stephen Rentschler"*  
Stephen Rentschler, CEO

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#### Cautionary Note Regarding Forward-Looking Statements

This news release contains forward-looking statements and forward-looking information (collectively,

"forward-looking statements") within the meaning of applicable Canadian securities legislation. These statements relate to matters that identify future events or future performance. Often, but not always, forward looking information can be identified by words such as "could", "pro forma", "plans", "expects", "may", "will", "should", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", "believes", "potential" or variations of such words including negative variations thereof, and phrases that refer to certain actions, events or results that may, could, would, might or will occur or be taken or achieved.

The forward-looking statements contained herein include, but are not limited to, statements regarding: the performance of the Project and results of the 2023 Exploration and Development Plan (including, without limitation, its mineral resources, current claims and its ability to utilize global lithium needs); the results of any analysis conducted by Fluor, Hazen, or other advisors on the Project; the ability of Fluor and Hazen to oversee and perform future benchwork and develop a process plant for inclusion into an updated PEA; the conclusion of a test work program in early 2025 or at any time; the ability of the Company to complete a future PEA based on results of its current drilling program on the Project; and the performance of lithium as a commodity, including the sustained lithium demand and prices.

In making the forward looking statements in this news release, Nevada Lithium has applied several material assumptions, including without limitation: market fundamentals that result in sustained lithium demand and prices; the receipt of any necessary permits, licenses and regulatory approvals in connection with the future development of Bonnie Claire in a timely manner; the availability of financing on suitable terms for the development; construction and continued operation of Bonnie Claire; the Project containing mineral resources; and Nevada Lithium's ability to comply with all applicable regulations and laws, including environmental, health and safety laws.

Investors are cautioned that forward-looking statements are not based on historical facts but instead reflect Nevada Lithium's management's expectations, estimates or projections concerning future results or events based on the opinions, assumptions and estimates of managements considered reasonable at the date the statements are made. Although Nevada Lithium believes that the expectations reflected in such forward-looking statements are reasonable, such information involves risks and uncertainties, and under reliance should not be placed on such information, as unknown or unpredictable factors could have material adverse effects on future results, performance or achievements expressed or implied by Nevada Lithium. Among the key risk factors that could cause actual results to differ materially from those projected in the forward-looking statements are the following: operating and technical difficulties in connection with mineral exploration and development and mine development activities at the Project; estimation or realization of mineral reserves and mineral resources, requirements for additional capital; future prices of precious metals and lithium; changes in general economic, business and political conditions, including changes in the financial markets and in the demand and market price for commodities; possible variations in ore grade or recovery rates; possible failures of plants, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; delays or the inability of Nevada Lithium to obtain any necessary approvals, permits, consents or authorizations, financing or other planned activities; changes in laws, regulations and policies affecting mining operations; currency fluctuations, title disputes or claims limitations on insurance coverage and the timing and possible outcome of pending litigation, environmental issues and liabilities; risks relating to epidemics or pandemics such as COVID-19, including the impact of COVID-19 on Nevada Lithium's business; as well as those factors discussed under the heading "Risk Factors" in Nevada Lithium's latest Management Discussion and Analysis and other filings of Nevada Lithium filed with the Canadian securities authorities, copies of which can be found under Nevada Lithium's profile on the SEDAR+ at [www.sedarplus.ca](http://www.sedarplus.ca).

Should one or more of these risks or uncertainties materialized, or should assumptions underlying the forward-looking statements prove incorrect, actual results may vary materially from those described herein as intended, planned, anticipated, believed, estimated or expected. Although Nevada Lithium has attempted to identify important risks, uncertainties and factors which could cause actual results to differ materially, there may be others that cause results not to be as anticipated, estimated or intended. Nevada Lithium does not intend, and does not assume any obligation, to update this forward-looking information except as otherwise required by applicable law.

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