



# A NEW HORIZON IN SUSTAINABLE ENERGY.

Saskatchewan Energy  
Suppliers' Update  
March 24<sup>th</sup>, 2021

## FORWARD LOOKING INFORMATION AND FUTURE ORIENTED FINANCIAL INFORMATION

This presentation contains certain forward-looking statements relating, but not limited, to Prairie Lithium and LiEP expectations, intentions, plans and beliefs. Forward-looking information can often be identified by forward looking words such as “potential”, “project”, “anticipate”, “believe”, “expect”, “goal”, “plan”, “intent”, “estimate”, “may” and “will” or similar words suggesting future outcomes or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance. Forwardlooking information may include reserve and resource estimates, estimates of future production, costs of capital projects and timing of commencement of operations, and is based on current expectations that involve a number of business risks and uncertainties. Factors that could cause actual results to differ materially from any forward-looking statement include, but are not limited to, failure to establish estimated resources and reserves, the recovery of resources varying from estimates, capital and operating costs varying significantly from estimates, delays in obtaining or failures to obtain required governmental, environmental or other project approvals, inflation, changes in exchange rates, fluctuations in commodity prices, delays in the development of projects and other factors. Forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results to differ materially from expected results.

Shareholders and prospective investors should be aware that these statements are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those suggested by the forward-looking statements. Shareholders are cautioned not to place undue reliance on forward-looking information. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. Prairie Lithium and LiEP undertakes no obligation to update publicly or otherwise revise any forward-looking information whether as a result of new information, future events or other such factors which affect this information, except as required by law.

# Who We Are

- Innovators in lithium exploration and technology development
- Attracting investment to future oriented industry in Saskatchewan
- Passionate about “Made in Saskatchewan” energy solutions
- Founded in Regina, Saskatchewan in February 2019
- Head Office in Emerald Park, Saskatchewan



# What Is Lithium?

Chemical symbol Li

Lightest metal with highest energy density

- Element of choice for Battery Electric Vehicles (BEVs)

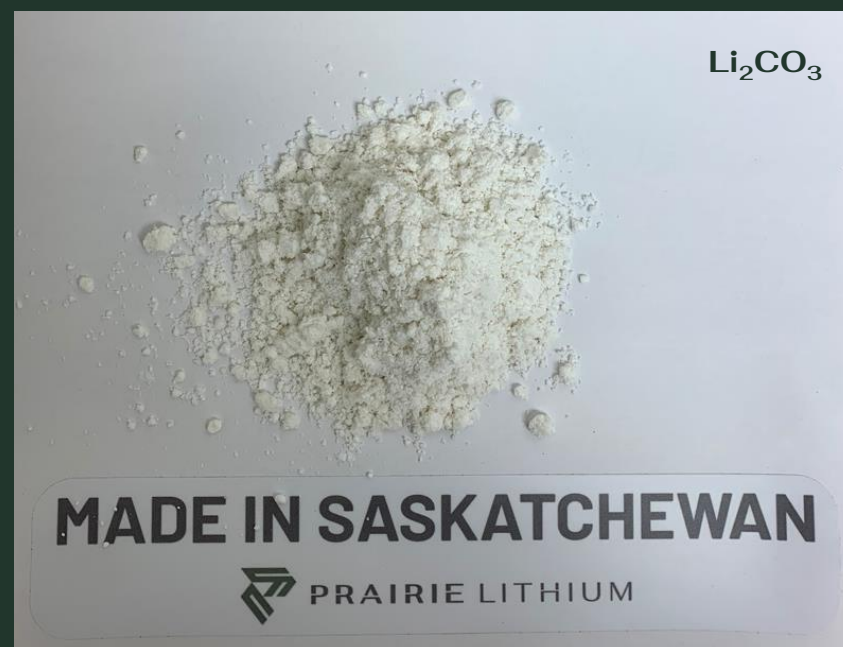
Mined in South America, Australia, and China

Four types of lithium sources

- Brine (Salar, Oilfield, Geothermal)
- Hardrock (Spodumene)
- Sedimentary (Clay)
- Urban (Battery Recycling)

Sold under closed contracts between miner and buyer, often in compound form of:

- Lithium Carbonate ( $\text{Li}_2\text{CO}_3$ )
- Lithium Hydroxide Monohydrate ( $\text{LiOH}\cdot\text{H}_2\text{O}$ )
- Lithium Chloride ( $\text{LiCl}$ )
- Lithium Sulphate ( $\text{Li}_2\text{SO}_4$ )

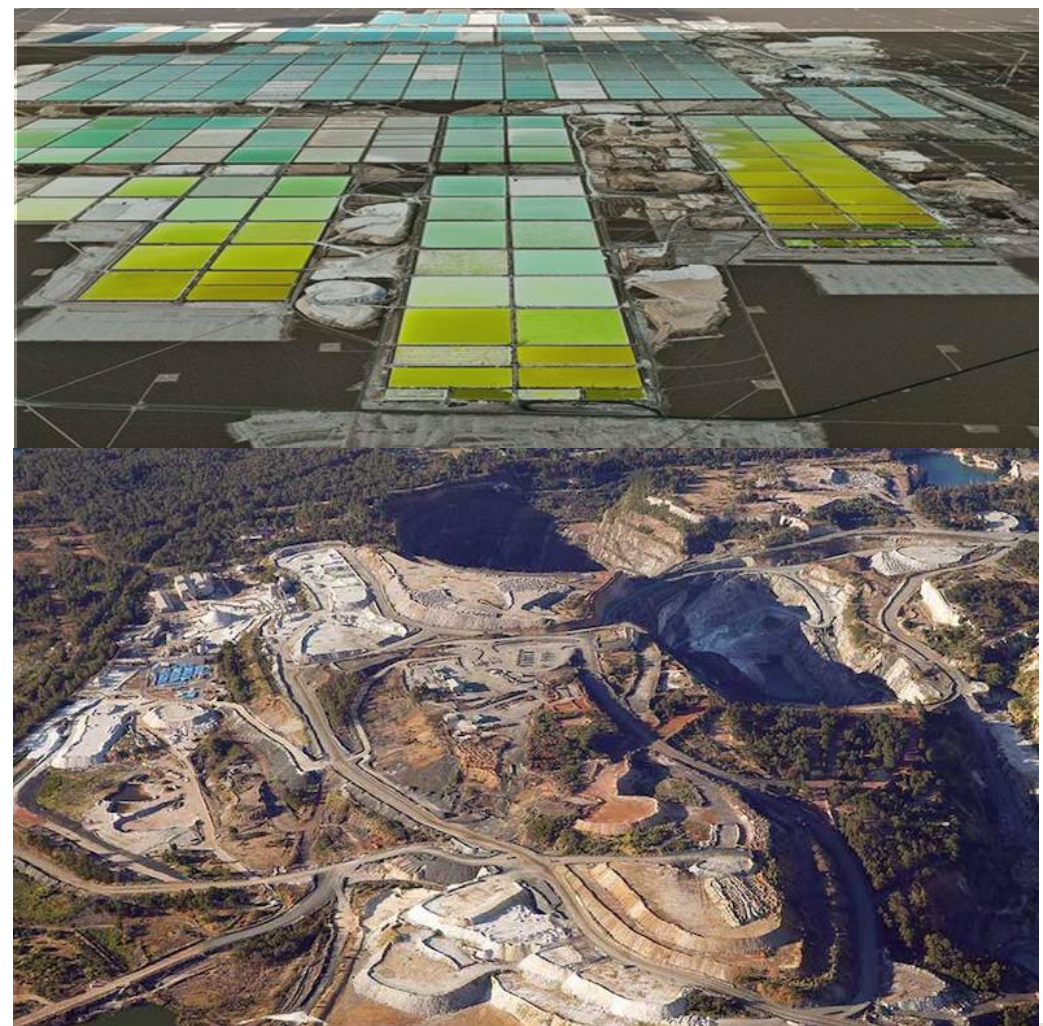


Lithium carbonate sample produced by Prairie Lithium



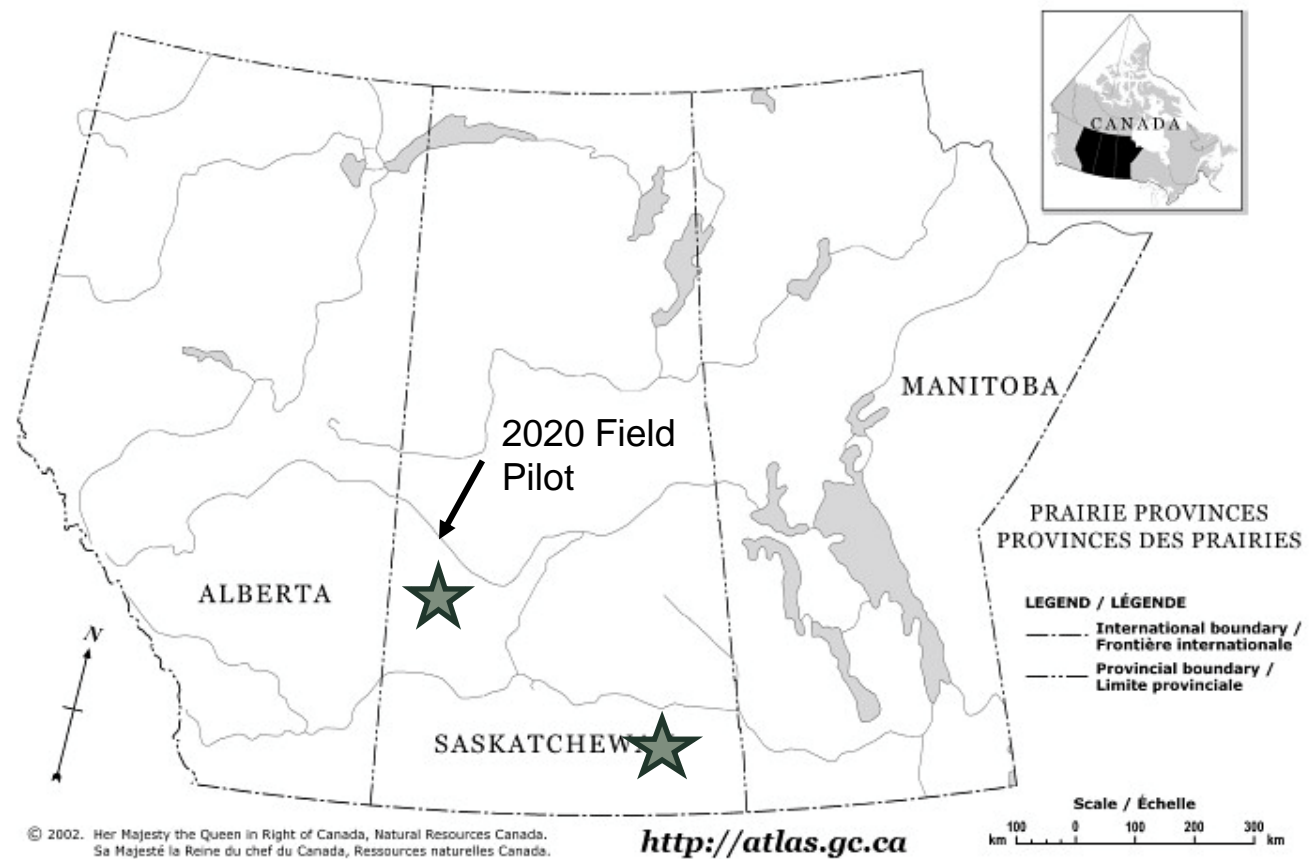
# How Is Lithium Mined?

- Evaporation ponds and spodumene strip mines have a large environmental footprint and are plagued by inefficiencies and long lead times for mine production
- Direct Lithium Extraction (DLE) requires a fraction of the environmental footprint and allows most waste to remain in solution for re-injection & disposal
- Battery manufacturers are very cognizant of their environmental footprint, creating a large opportunity for new producers with new technology



# Where Is Lithium In Saskatchewan?

- *West Central Saskatchewan*
- *Southeast Saskatchewan*
- *Lithium is still unexplored across most of Saskatchewan*
- *Prairie Lithium holds mineral rights across Saskatchewan*



Maintaining, and creating jobs in rural Saskatchewan for:

- Truck drivers
- Welders
- Electricians
- Engineers
- Geologists
- Chemists
- Rig hands & service providers

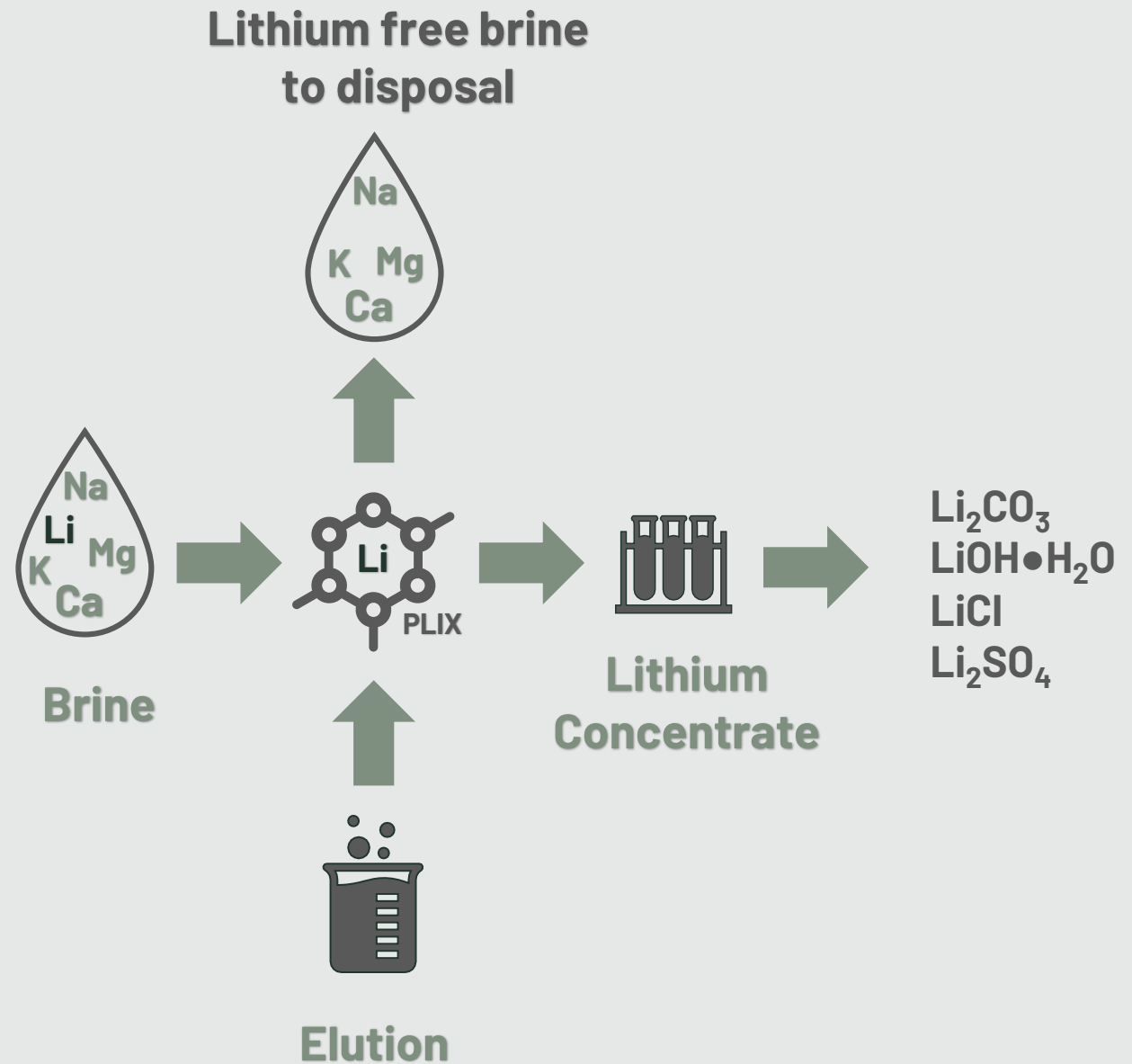
# From The Mine, To The Market

- **DEVELOPING 100% WHOLLY OWNED TECHNOLOGY AND RESOURCE IN SASKATCHEWAN, CANADA**
- **VERTICALLY INTEGRATED AND DEDICATED TO A SUSTAINABLE NORTH AMERICAN LITHIUM SUPPLY**



# Prairie Lithium Ion Exchange (PLIX)

- *Selectively removing lithium from impurities in solution*
- *Utilizing the ionic properties of lithium to perform selective extraction*



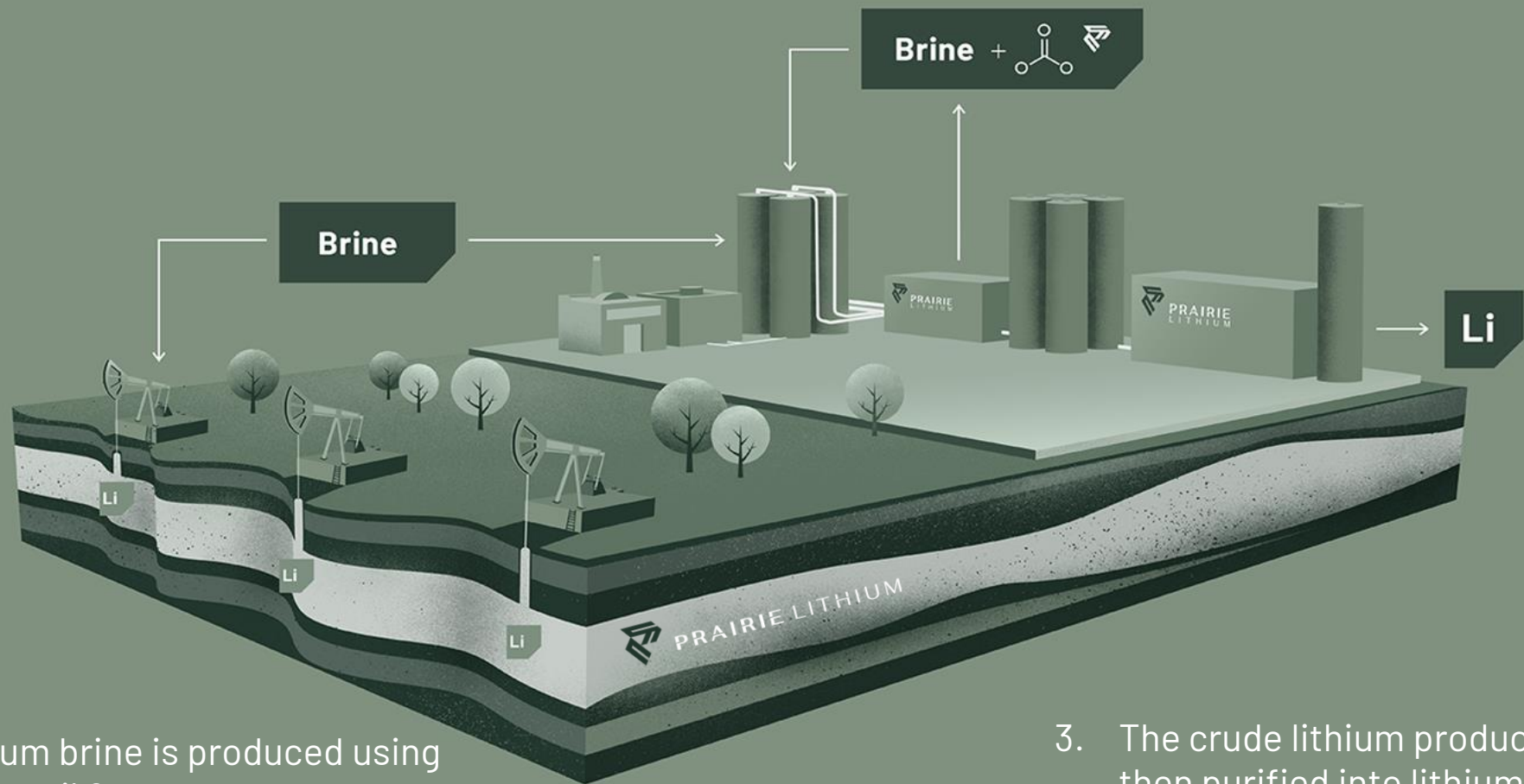
Technology operating range ( 1 ppm – 100+ mg/L Li)



# The Prairie Lithium Solution:

## HOW IT WORKS

- 
2. Prairie Lithium holds the mineral rights to the brine and uses ion exchange in its proprietary process to extract the lithium out of the brine.



1. Lithium brine is produced using known oil & gas processes.

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3. The crude lithium product is then purified into lithium hydroxide or lithium carbonate.



# The Prairie Lithium Pilot:

August – October 2020



# Project Highlights

## Industry Friendly, Politically Stable Jurisdiction



- Our project is in the mining friendly jurisdiction of Saskatchewan, Canada
- Project is supported by local governments

## Year-Round Access to all Utilities & Services



- The project has immediate access to year-round, stable supplies of electricity, natural gas and fresh water
- The project is in the heart of oil & gas country, and has access to all services required to build and service the project throughout its life

## Limited Environmental Impacts



- The project can utilize existing oil wells as exploration access points to assess the resource across our project area
- Our Direct Lithium Extraction (DLE) technology requires a fraction of the surficial environmental footprint of evaporation ponds

## Proprietary Technology & Resource Knowledge



- Patent Pending rapid lithium extraction process with widespread potential
- Extensive knowledge of lithium in our resource project area

## Strong Demand



- Strong North American and European demand growth associated with increased battery manufacturing