



ARIZONA LITHIUM AGM

NOVEMBER 26, 2024

COMPANY OVERVIEW

NEAR TERM PRODUCTION AT PRAIRIE LITHIUM PROJECT

ASX Code: **AZL**, OTCQB Code: **AZLAF**
Combined resources of **Lithium Brine and Sedimentary**



Prairie Lithium Project

Saskatchewan, Canada

- Brine resource
- 340,000+ acres of sub surface mineral rights
- Located in Saskatchewan, Canada, one of the top ranked mining friendly jurisdictions in the world
- Near Term Production



Big Sandy Project

Arizona, USA

- Sedimentary resource
- Located just two hours north of Phoenix, Arizona, and our Lithium Research Centre (LRC)
- Medium Term Lithium Production

12 MONTH REVIEW

A YEAR OF GROWTH

January

- Continued operations of DLE Pilot in Emerald Park

February

- Completed DLE Pilot in Emerald Park

March

- Executed NTEC Mining Service Agreement

April

- Released DLE Pilot results

May

- Commenced drilling program at Prairie

June

- Executed Drilling & Completions program at Prairie

July

- Executed further Drilling & Completions program at Prairie
- Conditional approval of \$21mm investment incentive for Pad #1 at Prairie

August

- Executed further Drilling & Completions program at Prairie
- Announced Battery Grade Lithium Carbonate sample from Prairie
- Bulk Sample collected at Big Sandy

September

- Executed further Drilling & Completions program at Prairie

October

- Executed further Drilling & Completions program at Prairie
- Announced \$11mm non-dilutive divestment

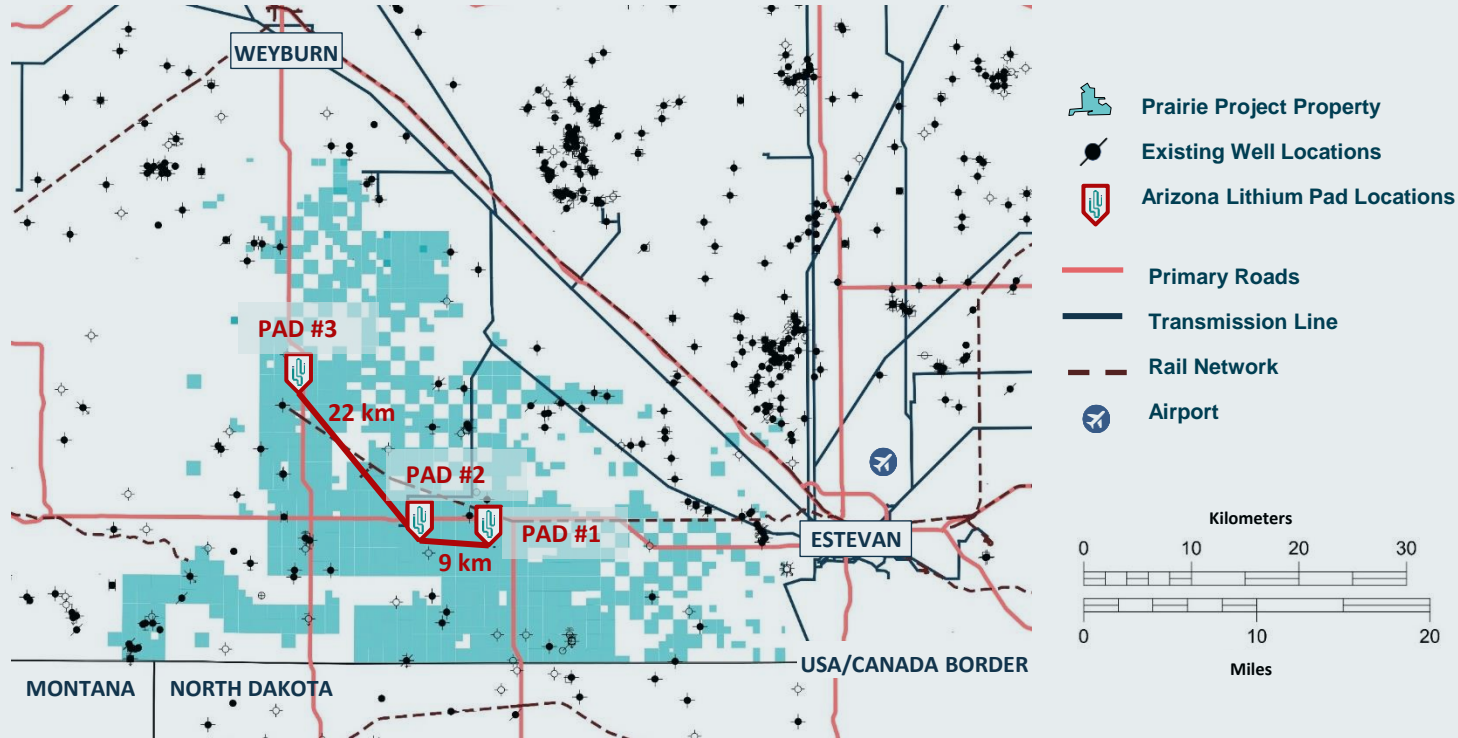
November

- Finalized Drilling & Completions program at Prairie



PRAIRIE LITHIUM PROJECT

>340,000 ACRES OF SUBSURFACE MINERAL PERMITS ENCOMPASSED BY INFRASTRUCTURE



PRAIRIE LITHIUM PROJECT ANIMATION

ILLUSTRATION OF PRAIRIE DEVELOPMENT AND PRODUCTION PROCESS



<https://www.youtube.com/watch?v=vTJsCv9Puqo>

PAD RESULTS

DRILLING & COMPLETIONS



PAD #1

- 3 WELLS DRILLED
- Explored Souris River and Dawson Bay
- Pump tested Duperow
- Tested disposal formations



PAD #2

- 2 WELLS DRILLED
- Explored Souris River and Dawson Bay

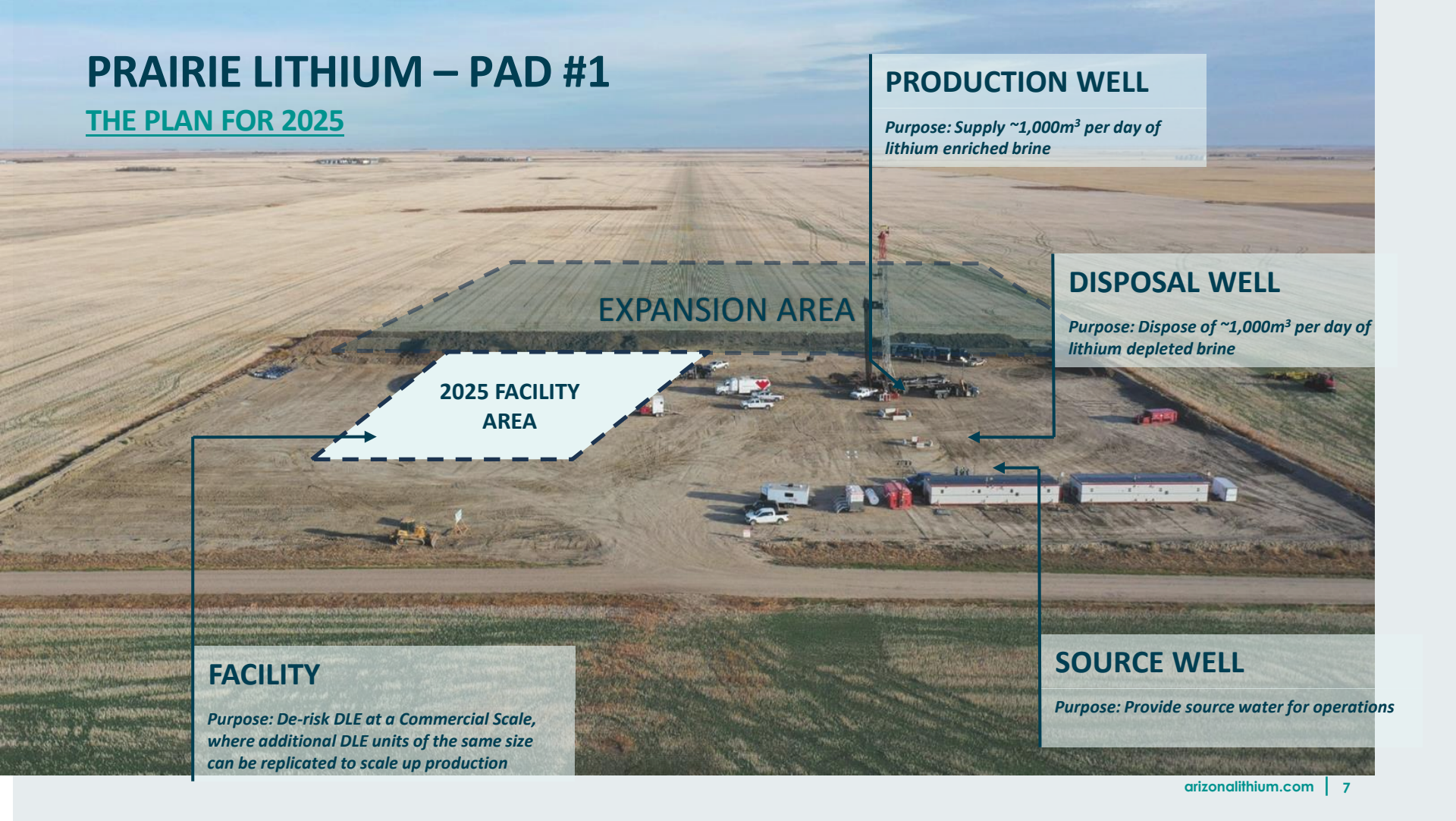


PAD #3

- 1 WELL DRILLED
- Explored Souris River, Dawson Bay and Duperow

PRAIRIE LITHIUM – PAD #1

THE PLAN FOR 2025



PRODUCTION WELL

Purpose: Supply ~1,000m³ per day of lithium enriched brine

DISPOSAL WELL

Purpose: Dispose of ~1,000m³ per day of lithium depleted brine

EXPANSION AREA

2025 FACILITY AREA

FACILITY

Purpose: De-risk DLE at a Commercial Scale, where additional DLE units of the same size can be replicated to scale up production

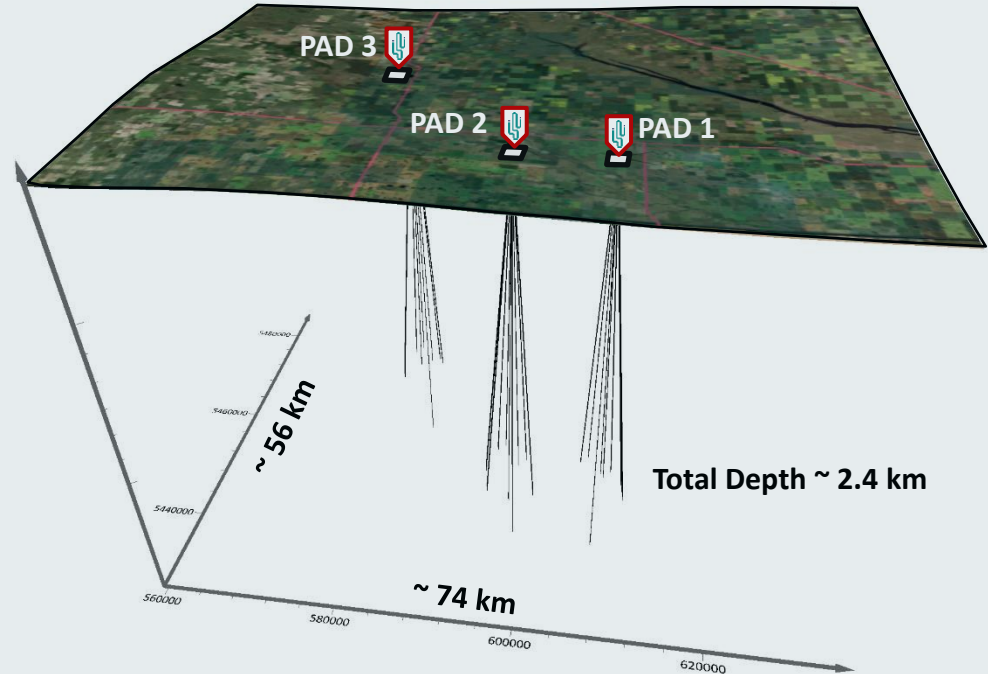
SOURCE WELL

Purpose: Provide source water for operations

PRAIRIE LITHIUM PROJECT

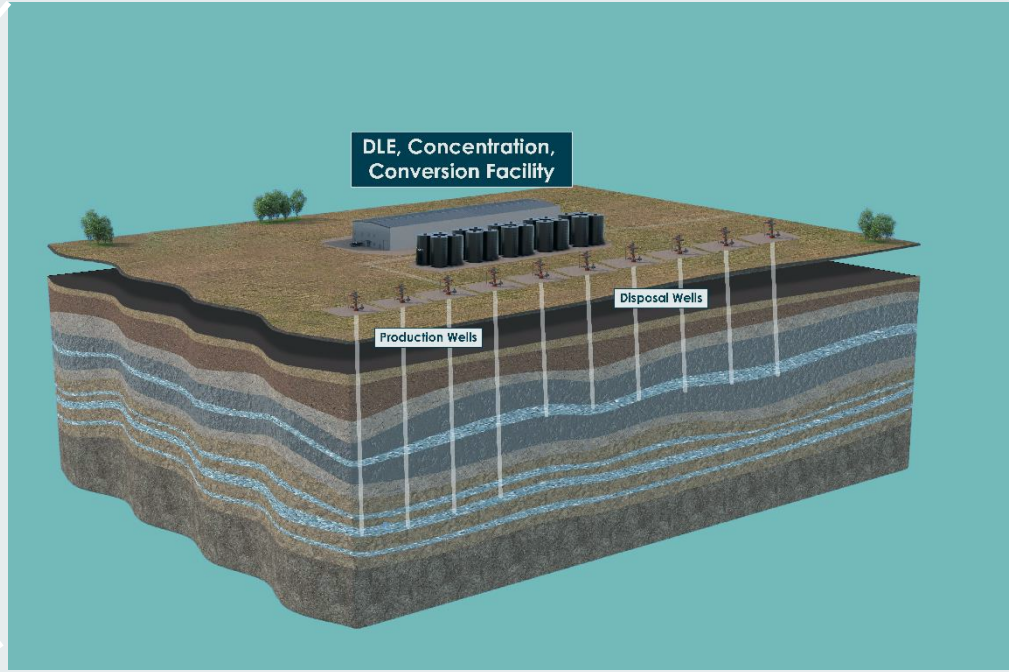
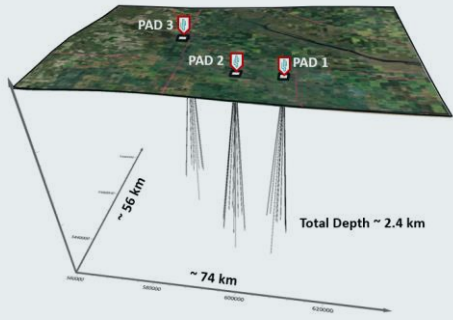
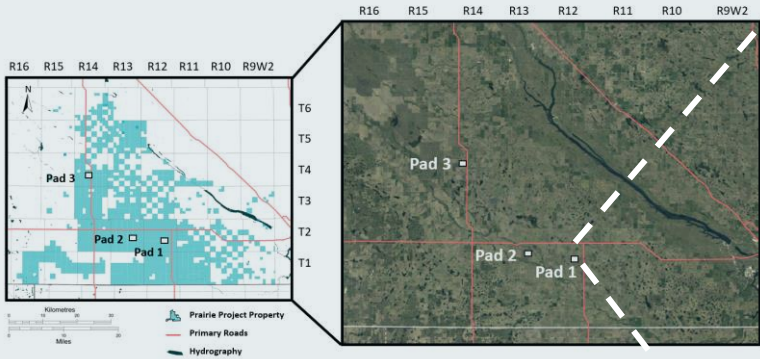
EXPANDABLE PRODUCTION BY PADS

- Resource is developed on a Pad-by-Pad basis
- Each Pad being designed to produce ~2,000 TPA LCE⁽¹⁾
- The Pad's function independent of one another
- The first 3 Pad locations have been built
- Additional Pads are being planned
- Commercial scale DLE planned for Pad #1 in 2025



(1) Prairie Lithium PFS Confirms Extremely Low Operating Costs of \$2,819 USD per Tonne – ASX Announcement (December 29, 2023)

HOW DOES IT SCALE UP?



- Well pad's can be replicated across our land to increase production
- Disposing of waste brine into different formation then production brine

Disclaimer

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COMPETENT PERSON STATEMENT

The information in this report regarding exploration results, exploration targets and the mineral resources is based on and fairly represents information compiled by Mr Gregory Smith, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Smith has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from The original market announcements and that the material assumptions and technical parameters underpinning the Resource estimate continue to apply.

COMPETENT PERSONS STATEMENT FOR PRAIRIE AND REGISTERED OVERSEAS PROFESSIONAL ORGANISATION (ROPO) AND JORC TABLES

Gordon MacMillan P.Geol., Principal Hydrogeologist of Fluid Domains, who is an independent consulting geologist of a number of brine mineral exploration companies and oil and gas development companies, reviewed and approves the technical information pertaining to the resource provided in the PFS release and JORC Code – Table 1 attached to the PFS release. Mr. MacMillan is a member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA), which is ROPO accepted for the purpose of reporting in accordance with the ASX listing rules. Mr. MacMillan has been practicing as a professional in hydrogeology since 2000 and has 23 years of experience in mining, water supply, water injection, and the construction and calibration of numerical models of subsurface flow and solute migration. Mr. MacMillan is also a Qualified Person as defined by NI 43-101 rules for mineral deposit disclosure.

Kyle Gramly PE, Sr. Process Engineer for Samuel Engineering, reviewed and approves the technical information pertaining to DLE test work and processing provided in the PFS release and JORC Code – Table 1 attached to the PFS release. He is a registered Professional Engineer (Chemical) with the Colorado Department of Regulatory Agencies (No. 0058009) since 2020 and has worked in the engineering field on a variety of mining projects for 15 years since graduating from Colorado School of Mines. Mr. Gramly is a Qualified Person as defined by 17 CFR § 229.1302 - (Item 1302) and has been involved in several pilot test programs and engineering design studies regarding the commodity discussed in this release.



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WHAT IS DIRECT LITHIUM EXTRACTION “DLE”

The objective of DLE is to create a purified LiCl or Li_2SO_4 eluate

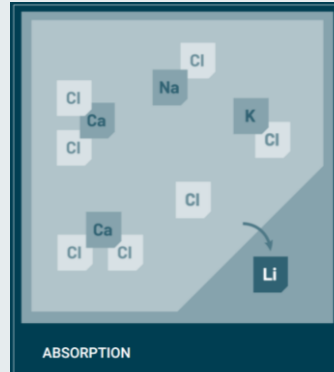
Brine:

- 104 mg/L Li
- >99% of cations & anions are NOT Li

DLE Eluate:

- 200-2,000+ mg/L Li
- >50% of cations & anions are Li

The eluate can then be converted into a battery grade lithium carbonate or lithium hydroxide

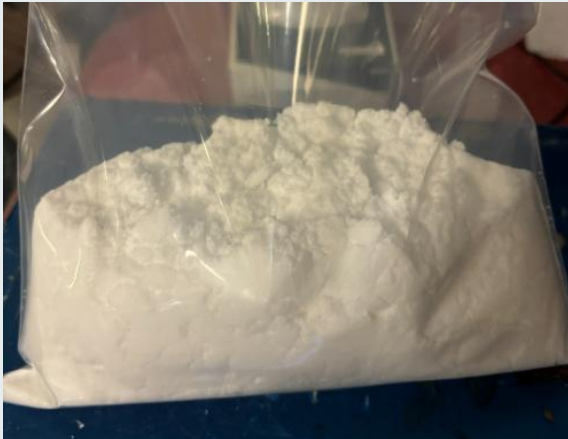


Source: <https://www.arizonalithium.com/research-tech/lrc/>



WHAT IS DIRECT LITHIUM EXTRACTION “DLE”

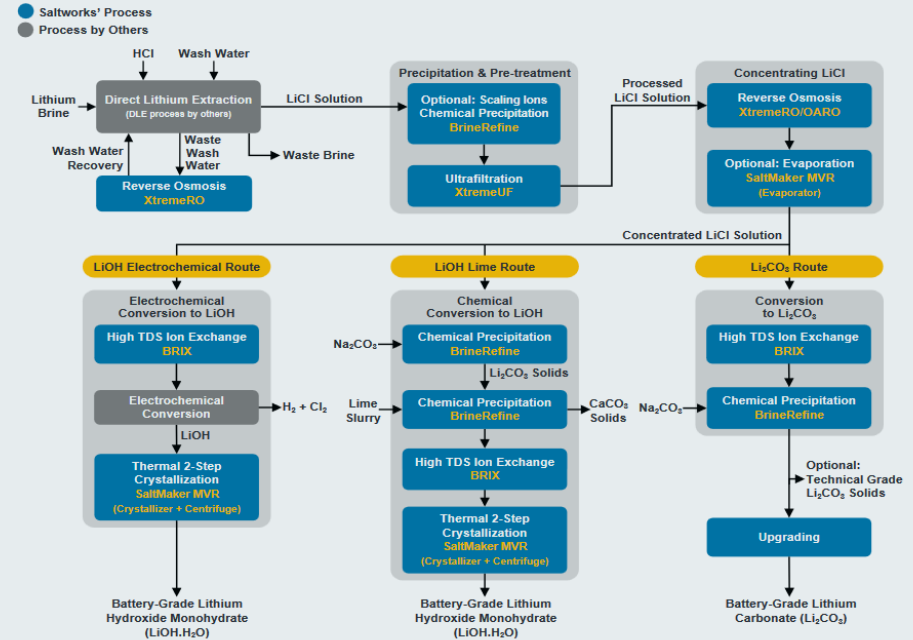
Converting a DLE eluate into a battery grade lithium carbonate / hydroxide



Step 1: Direct Lithium Extraction (DLE)* by Others

*or other lithium brine-producing process

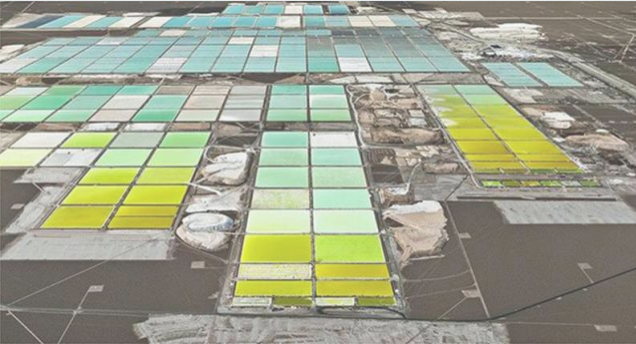
Step 2: Concentrate, Refine, Convert by Saltworks



Source: <https://www.saltworkstech.com/brochures/lithium-brochure.pdf>

HOW LITHIUM IS MINED

ON THE CUSP OF DISRUPTION



BRINE: EVAPORATION POND

South America



HARDROCK SPODUMENE

Australia

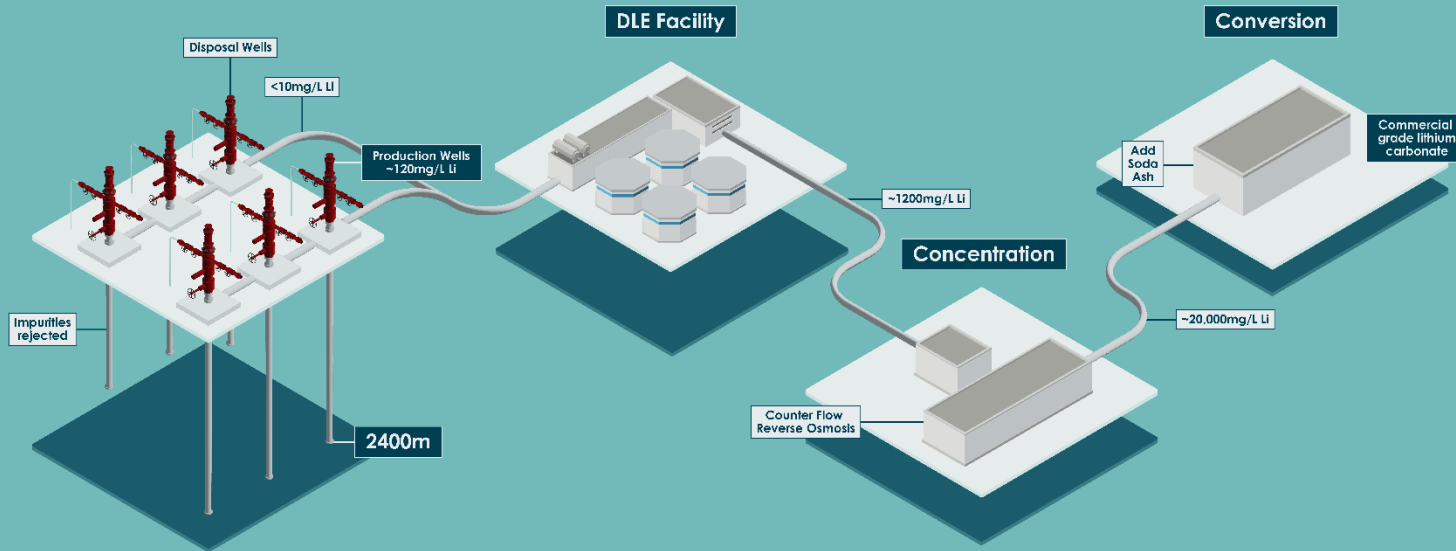


BRINE: DIRECT LITHIUM EXTRACTION (DLE)

Saskatchewan, Canada

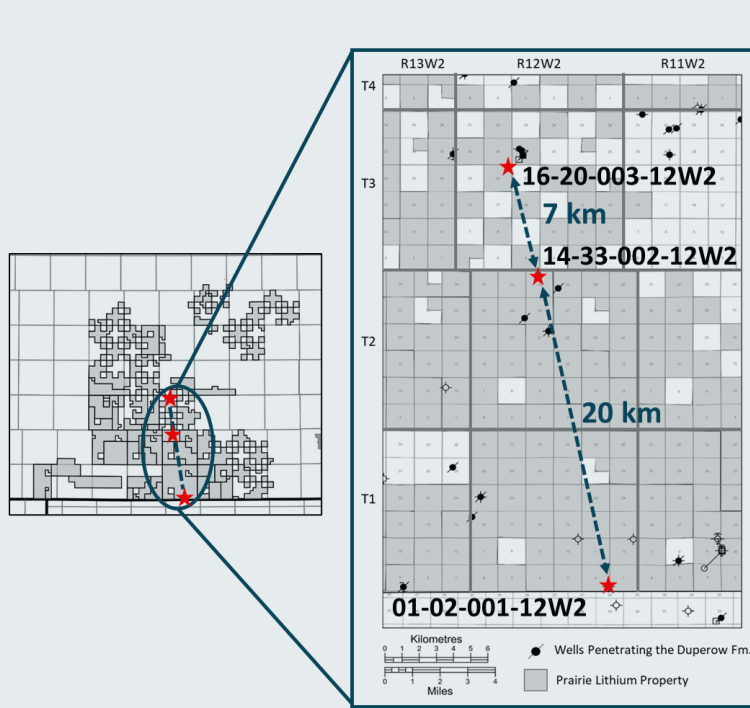
HOW DOES IT WORK?

LITHIUM BRINE PROCESSING



Contiguous Resource

- Devonian, Duperow Formation
 - ~2,400m depth
 - ~140m thick
- Five wells tested
- Consistent grade over 27km N-S
- **340,000+ acres** of sub surface mineral rights



		← 27 km →		
		★ Well 01-02-001-12W2 mg/L Li	★ Well 14-33-002-12W2 mg/L Li	★ Well 16-20-003-12W2 mg/L Li
Duperow Formation	Seward Member		99	
	Flat Lake Evaporite			
	Upper Wymark	166	172	137
	Middle Wymark		149 135	113
	Lower Wymark	130	130	103
	Saskatoon Member	53	68 48	

Lithium Concentration (mg/L)

Prairie Project Pilot Plant

Pilot Plant at Prairie Project

(November 2023 – February 2024)

- >200,000L of lithium brine processed⁽¹⁾
- >13,500L of lithium concentrate produced at the Pilot Facility in Emerald Park, Saskatchewan, representing approximately 80kg of LCE⁽¹⁾
- Conversion of lithium concentrate into lithium carbonate taking place in Q1 & Q2 2024
- Pilot data will allow the company to finalize the engineering and design of the first commercial facility
- Steady-state lithium extraction of 95.6% achieved⁽²⁾
- Steady-state impurity rejection of 99.9% achieved⁽²⁾



Prairie Project PFS

KEY PROJECT PARAMETERS ⁽¹⁾		
TIMELINE	UNITS	PFS RESULT
Lithium Price	USD \$/tonne	\$21,000
Opex	USD \$/tonne	\$2,819
Total Capex (excluding contingency)	USD \$ millions	\$290
Average LCE Production	tonnes/year	6,000

ECONOMIC EVALUATION ⁽¹⁾		
PARAMETERS	UNITS	PFS RESULT
NPV ₈ Pre-Tax	USD \$ millions	\$448
NPV ₈ Post-Tax	USD \$ millions	\$312
IRR Pre-Tax	%	23.9
IRR Post-Tax	%	20.4
Payback Period	Years	2.2

Phase One:

- First production in H1 2025 ⁽¹⁾
- 6,000tpa (total modeled production over 20 years <3% of Indicated Resource) ⁽¹⁾
- Capex US\$290 million (plus contingency) → ~US\$70 million per pad ⁽¹⁾
- Opex US\$2,819 / tonne ⁽¹⁾ → one of the lowest cost projects globally