FRONTIER LITHIUM | **ALWAYS** MOVING FORWARD

FrontierLithium**.com** | TSX.V: **FL**

Disclaimers

Forward Looking Statements

Certain statements in this presentation may contain “forward looking” statements that involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company or industry to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. It is uncertain if further work will in fact lead to production of a mineral resource and of lithium compounds.

Frontier has filed on SEDAR a NI-43-101 compliant Technical Report, “PAK Property” -PAK Lithium Project, Preliminary Economic Assessment issued on April 5, 2021. All technical information should be reviewed according to this resource estimate.

Frontier Highlights

Tier 1 quality spodumene lithium resource globally
- 26 mt (M&I) of 1.6% Li_2O
- 32.5 mt (Inferred) 1.4% Li_2O

Targeting to be Top 3 in contained lithium size in North America
- 27,000 hectares land package
- Significant exploration upside

$1B USD NPV utilizing two of four total discoveries

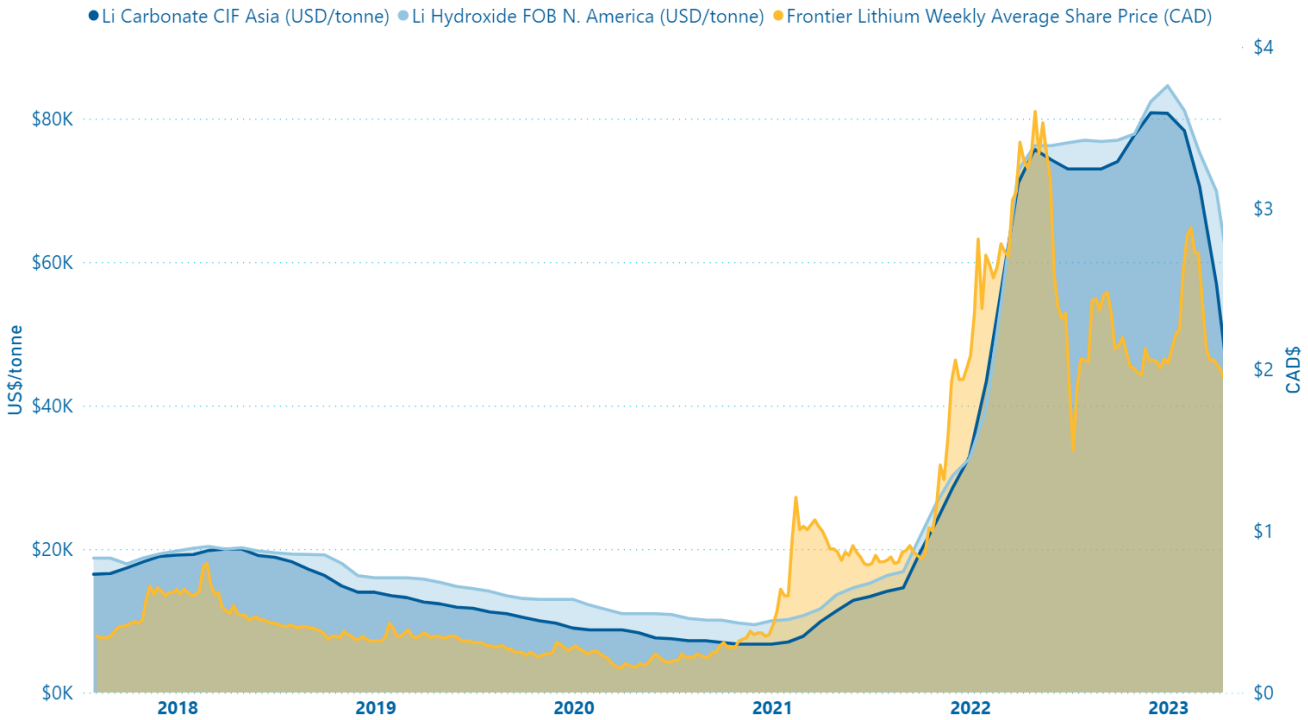
High purity hard rock spodumene for long range EV's

Proximate to USA & EU Markets with low-cost, sustainable operations

Ontario rich in Mining/Processing/Manufacturing with low sovereign risk

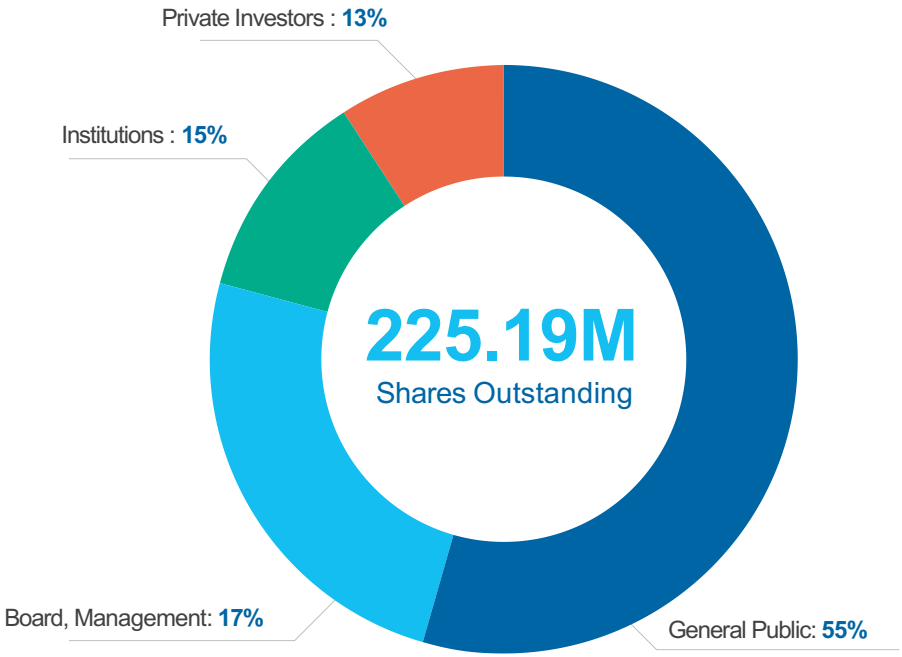
Building North America's Highest Quality Source of Lithium Hydroxide to Power the Electric Vehicle and Energy Storage Transition.

TSX.V: FL Price History



Market Facts 24/02/2023	
Ticker – TSX Venture	FL
Ticker – FSE	HL2
Ticker – OTC QX	LITOF
Price	CAD 2.02
52 Week High and Low	$3.89 - $1.30
Market Cap	CAD $455M
Cash (February 2023)	CAD $28M
Shares Outstanding	225.19M

Research Coverage



Desjardins	Frederic Tremblay, CFA April 5, 2023
RBC Capital Markets	Wayne Lam, CFA December 5, 2022
STIFEL GMP	Cole McGill November 21, 2022
CORMARK SECURITIES INC.	Brandon Smith, CFA, MFE April 11, 2022
cg Canaccord Genuity Capital Markets	Katie Lachapelle, CPA February 22, 2022

Proven Leadership

BOARD OF DIRECTORS

Rick Walker, Chairman
45+ years Mining/Construction experience

Marc Boissonneault, P.Eng, MBA
Most recently Head of Global Nickel Operations, Glencore

John Didone CPA, CA, CMA, Audit Committee
+35 years Accounting

Mike Koziol P.Geo, P.Eng., Audit Committee
+35 years Exploration Experience,

Stephen J.J. Letwin, Audit Committee
Former President and CEO of IAMGOLD Corporation

Tess Lofsky LLB, Director
General Counsel & Corporate Secretary at Canada Development Investment Corporation (CDEV)

Greg Mills
35+ years experience in capital markets former Managing Director of RBC Capital Markets

Bart Meekis
Former Chief of Sandy Lake First Nation

EXECUTIVE TEAM

Trevor R. Walker, President and CEO
20+ years in the mining industry, Trevor joined the company in 2010, and since has played a key strategic role in focusing and developing the company's PAK Lithium Project in Northwestern Ontario.

Dr. Naizhen Cao, VP Technology
Dr. Cao is an industry veteran having worked both in China and Canada as senior technical leader with expertise in lithium and battery materials.

Garth Drever, VP Exploration
40+ years of mineral exploration experience. He has worked with Frontier Lithium since 2011, and was fundamental in the exploration process that led to new discoveries on the PAK Lithium Project.

David Ewing, VP Sustainability & External Affairs
20+ years of experience in mining, energy and government with significant experience in ESG and regulatory and Indigenous affairs.

Graeme Goodall, VP Operations
20+ years of experience focused on metallurgy, pyrometallurgy and extractive operations for multi-national mining and metals producers.

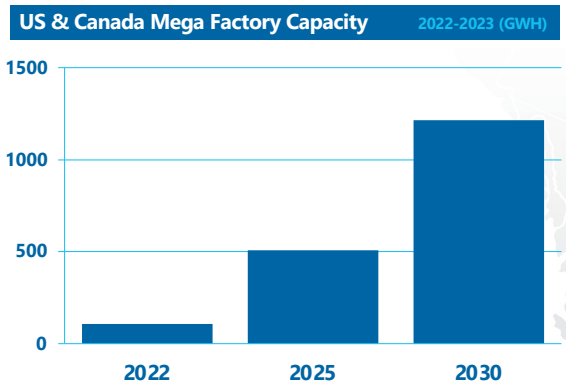
NOTABLE ADVISORS

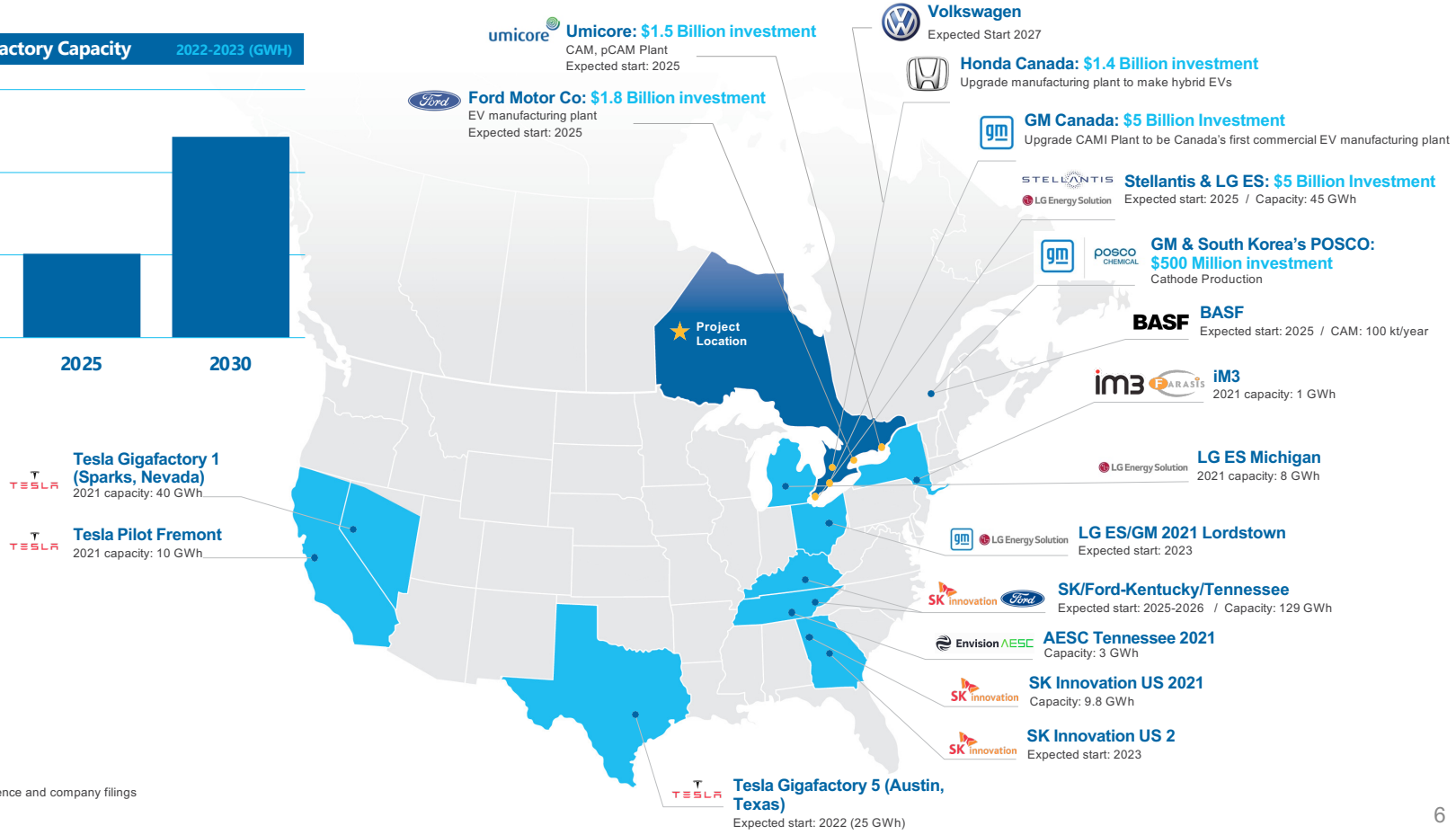
Mike Tamlin
25+ years of expertise in lithium and tantalum concentrates and chemicals. His lithium experience covers the development of the Chinese chemical and global technical spodumene markets for the Greenbushes Mine in Western Australia, the Zhangjiagang Lithium Carbonate Project and the Rincon Brine Project.

Peter Vanstone, P. Geo
Peter Vanstone maintains specialized experience in rare metals with over 30 years of lithium, tantalum, and cesium exploration and mine production in the Canadian Shield.

Gordon MacKay
Most recently Director of Mineral Development and Lands Branch at the Ministry of Northern Development and Mines.

Building North America's Supply Chain





Umicore: $1.5 Billion investment
CAM, pCAM Plant
Expected start: 2025

Ford Motor Co: $1.8 Billion investment
EV manufacturing plant
Expected start: 2025

Volkswagen
Expected Start 2027

Honda Canada: $1.4 Billion investment
Upgrade manufacturing plant to make hybrid EVs

GM Canada: $5 Billion Investment
Upgrade CAMI Plant to be Canada's first commercial EV manufacturing plant

Stellantis & LG ES: $5 Billion Investment
Expected start: 2025 / Capacity: 45 GWh

GM & South Korea's POSCO: $500 Million investment
Cathode Production

BASF
Expected start: 2025 / CAM: 100 kt/year

iM3
2021 capacity: 1 GWh

LG ES Michigan
2021 capacity: 8 GWh

LG ES/GM 2021 Lordstown
Expected start: 2023

SK/Ford-Kentucky/Tennessee
Expected start: 2025-2026 / Capacity: 129 GWh

AESC Tennessee 2021
Capacity: 3 GWh

SK Innovation US 2021
Capacity: 9.8 GWh

SK Innovation US 2
Expected start: 2023

Tesla Gigafactory 1 (Sparks, Nevada)
2021 capacity: 40 GWh

Tesla Pilot Fremont
2021 capacity: 10 GWh

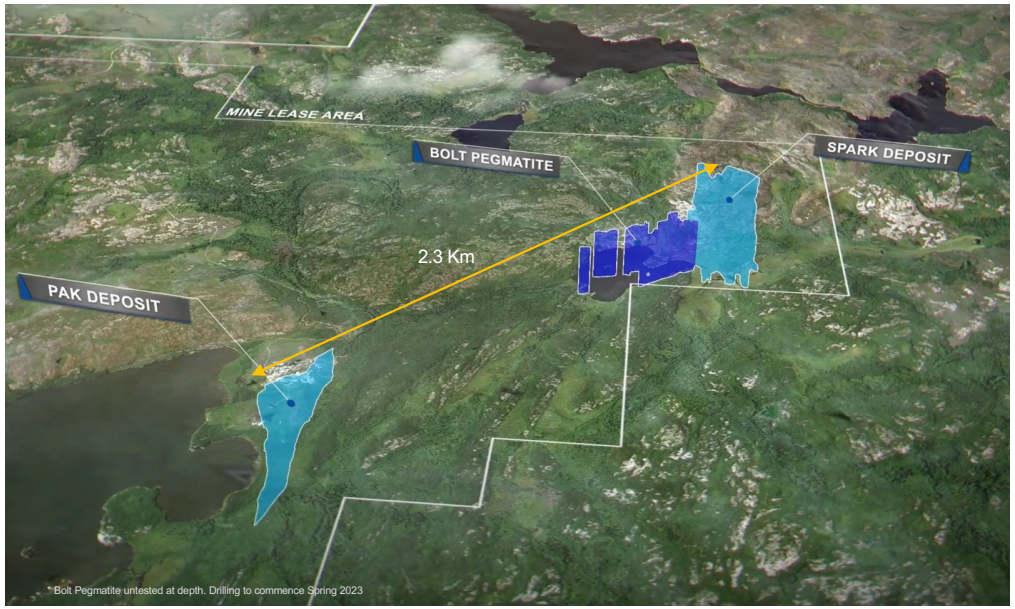
Tesla Gigafactory 5 (Austin, Texas)
Expected start: 2022 (25 GWh)

Source: Benchmark Mineral Intelligence and company filings

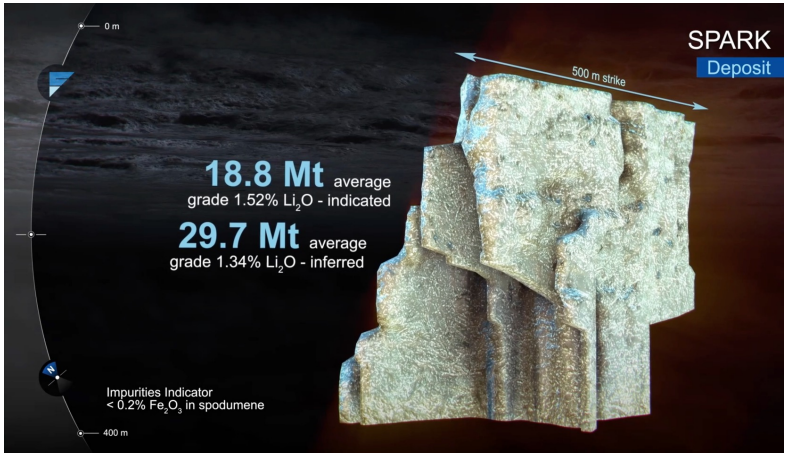
Resource

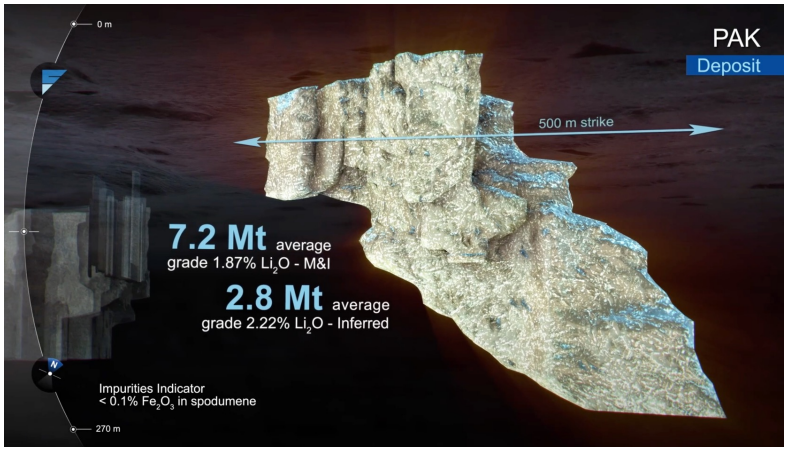
PAK DEPOSIT	
Resource	7.2 Mt, average grade 1.8% Li_2O - M+I 2.8 Mt, ave. grade 2.2% Li_2O - Inferred
Impurities Indicator	< 0.1% Fe_2O_3 in spodumene
Orientation	Sub-vertical
Average Width	45m (varying from 10-125m)
Dimensions	500m strike length, 300m deep
Status	Remains open at depth and along strike

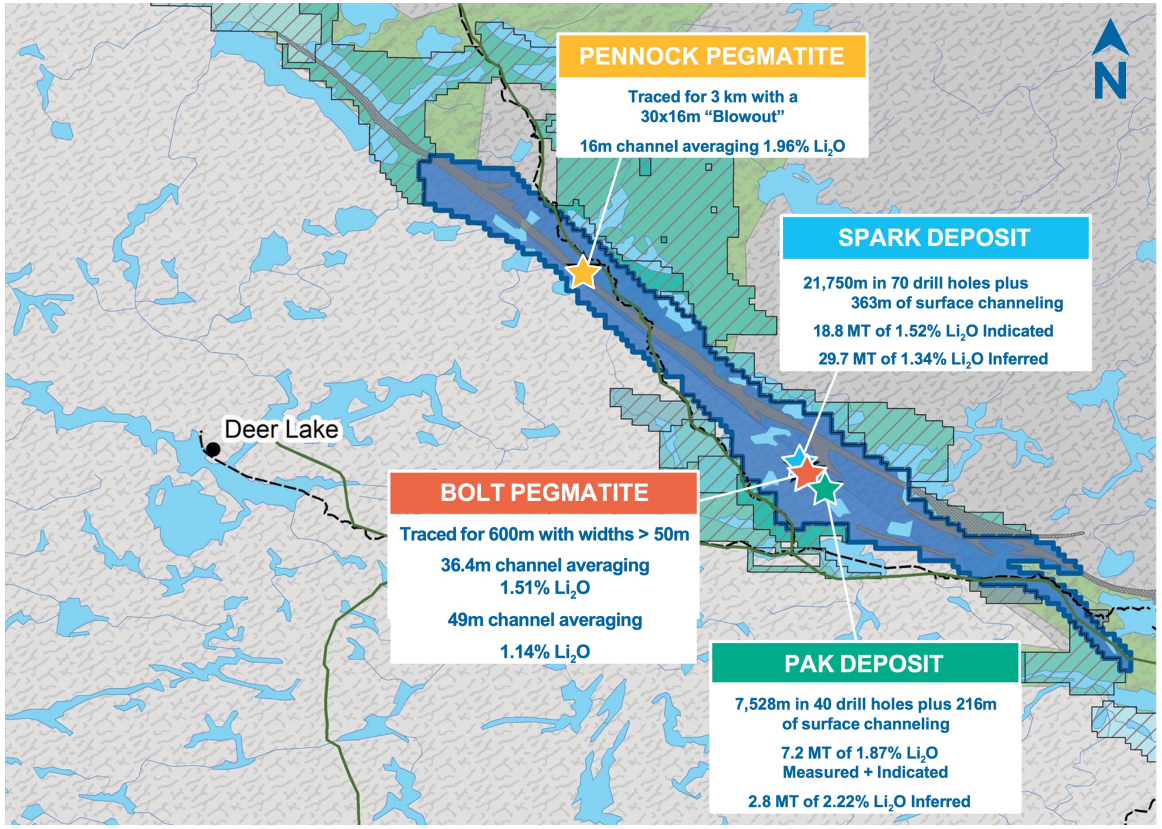
SPARK DEPOSIT	
Resource	18.8 Mt, average grade 1.5% Li_2O - Indicated 29.7 Mt, average grade 1.3% Li_2O - Inferred
Width	>100m
Strike	> 300m
Status	Remains open at depth and along strike In-fill drilling program highlights: • 398 m averaging 1.88% Li_2O • 405 m averaging 1.5% Li_2O



Resource & Exploration Upside





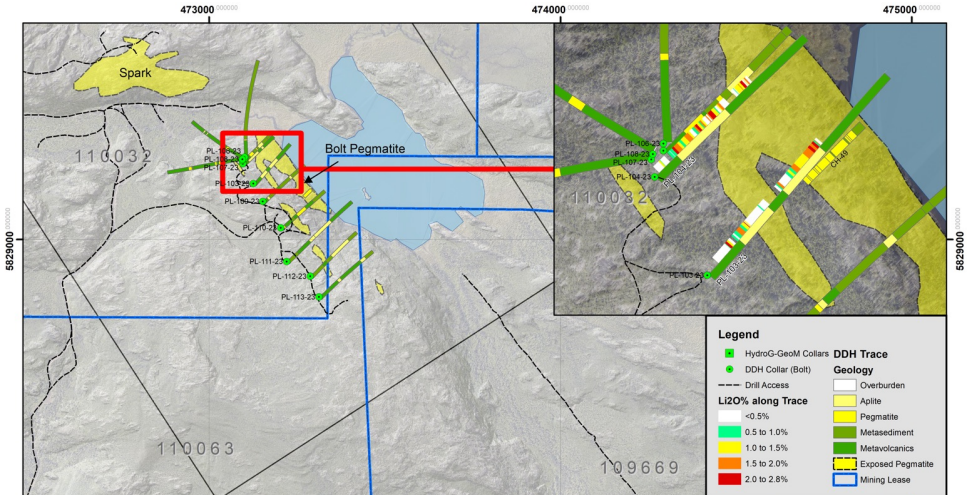


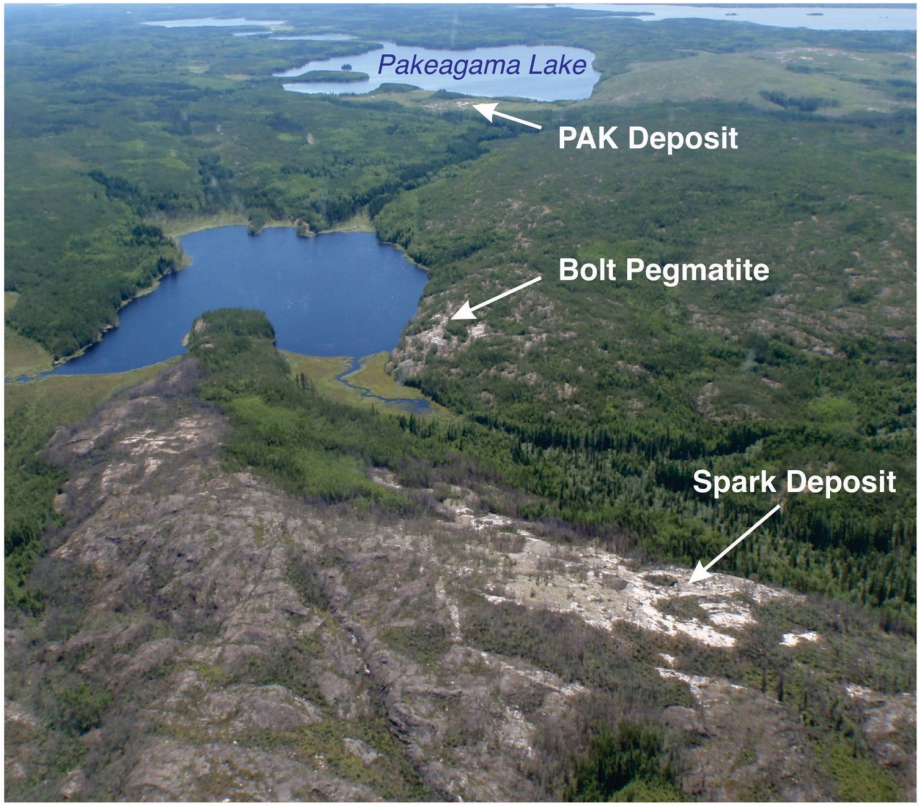
Resource & Exploration Upside

Bolt Pegmatite

During 2020, the Bolt pegmatite was discovered ranging between a few metres to over 50 m wide and traced for at least 600 m

- DDH PL-103-23 - 60.5m of pegmatite averaging 1.33% Li_2O.
  - Including 30.1m averaging 1.63% Li_2O and 12.1m averaging 1.94% Li_2O
- DDH PL-104-23 intersected 67.2m of pegmatite averaging 1.33% Li_2O.
  - Including 19.4m averaging 1.53% Li_2O and 6.7m averaging 1.92% Li_2O

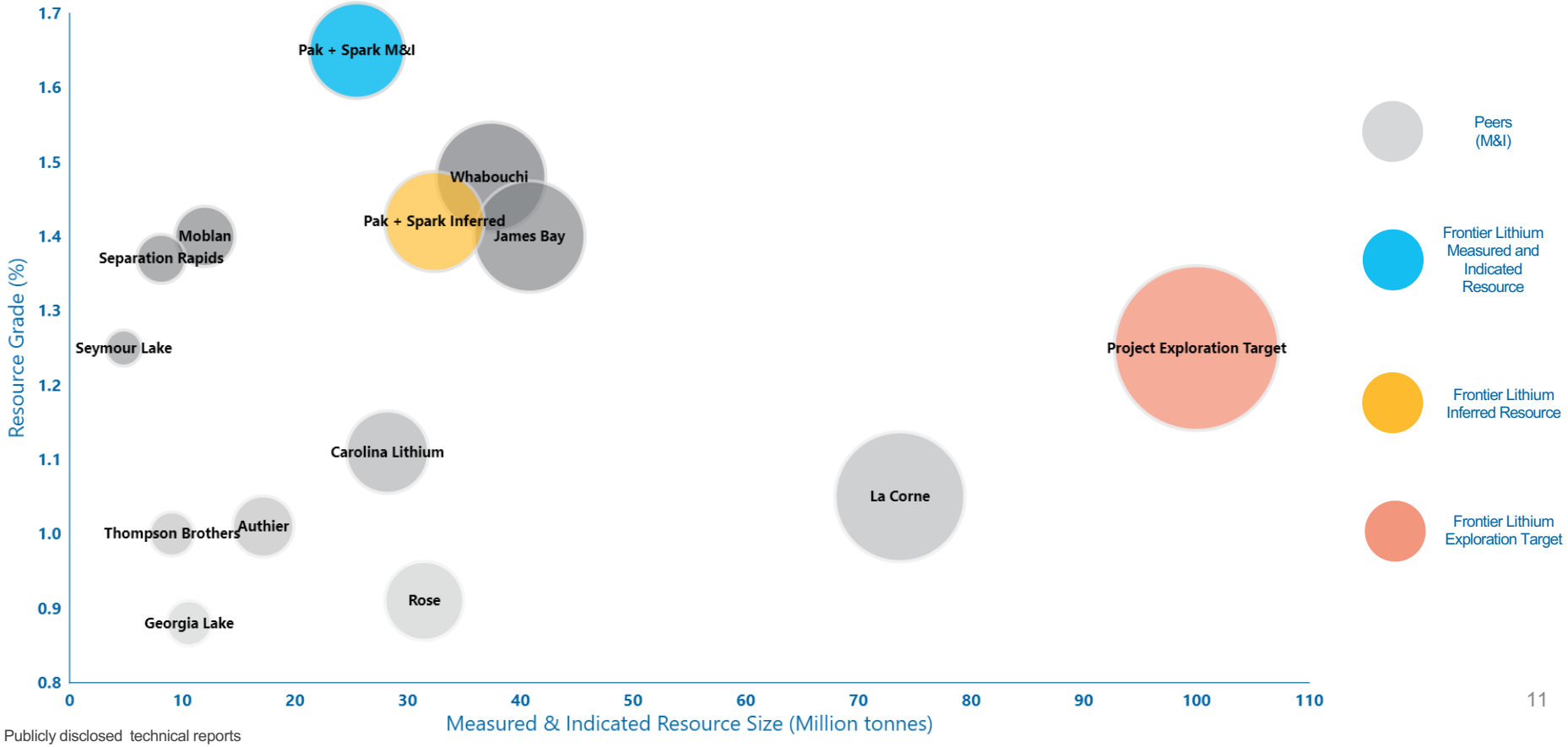




North American Hardrock Spodumene Deposits

Plot Showing Grade Li_2O and Resource (Mt)

* Bubble diameter represents contained Lithium Carbonate Equivalent (tonnes)

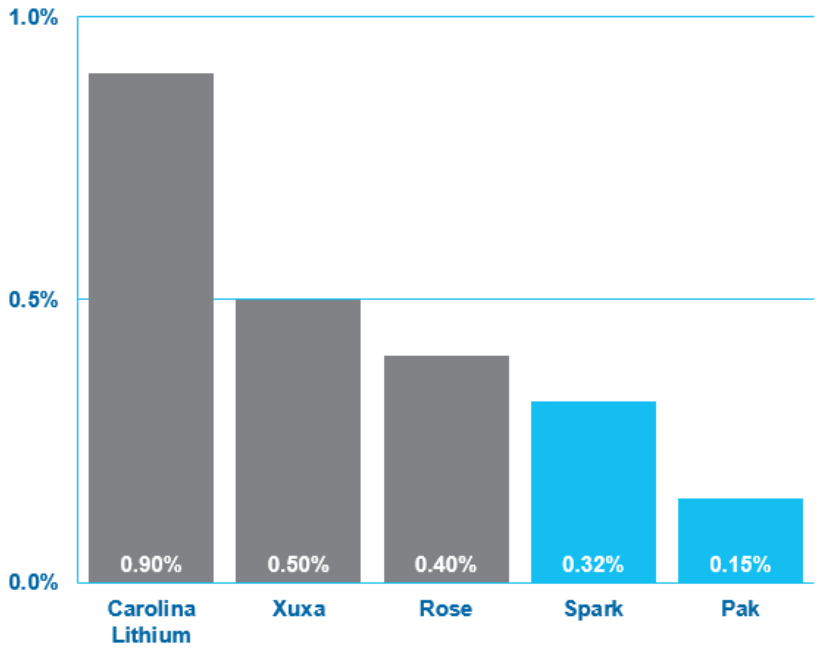


Source: Publicly disclosed technical reports

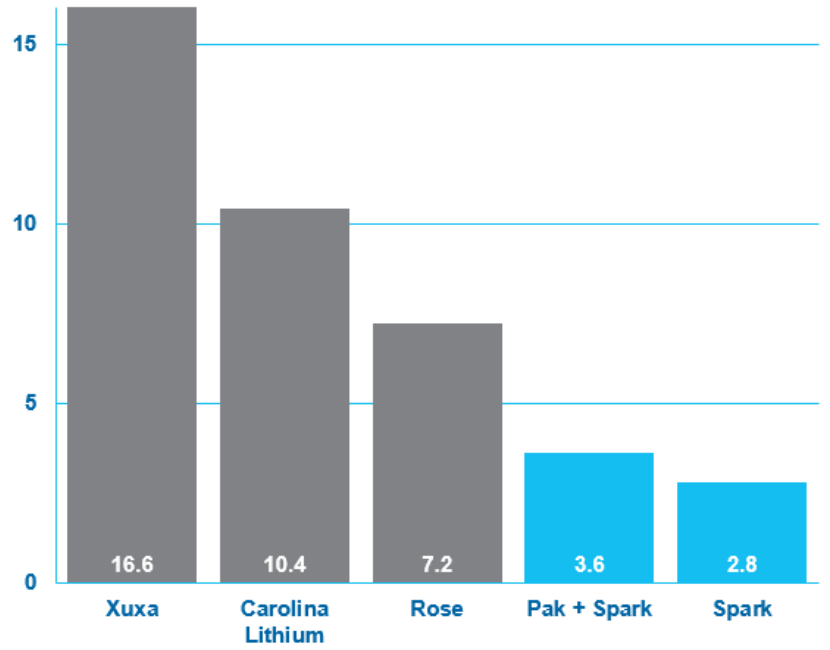
Quality Resources Enable Low-Cost Mining

Source: Publicly disclosed technical reports

Iron Oxide Content (%) of Concentrate

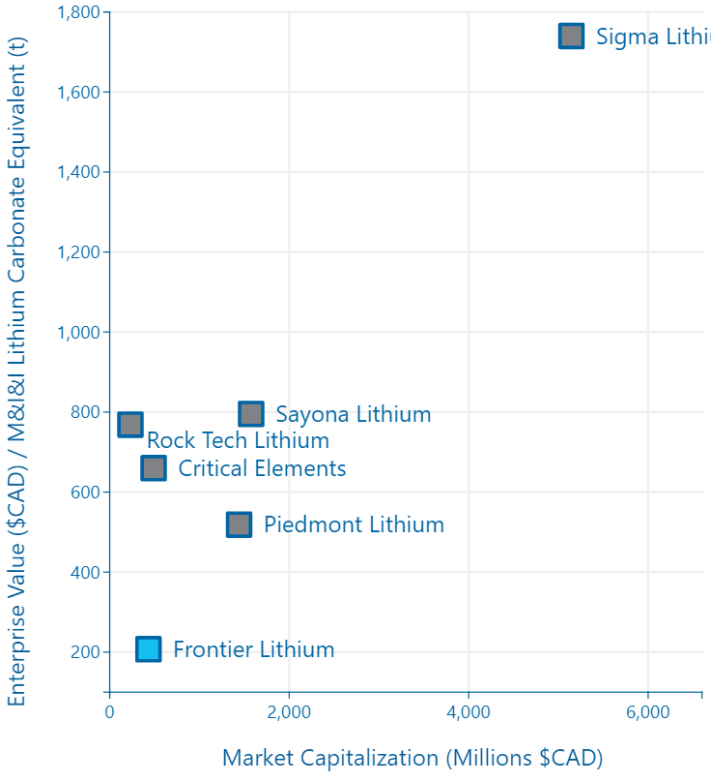


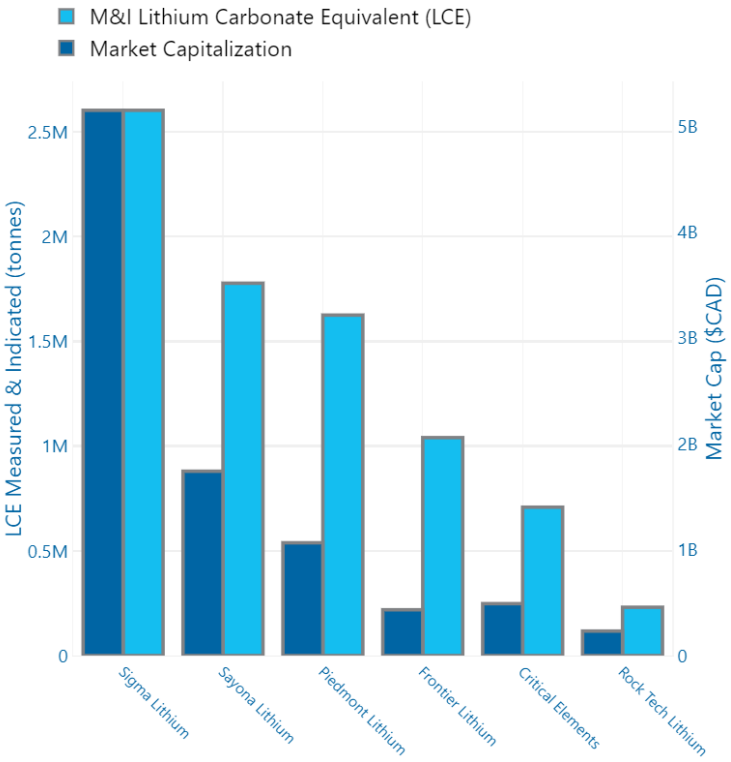
Strip Ratio



Comparative Peer Valuation Analysis

Peer Lithium Carbonate Equivalent (LCE) and Current Market Evaluation





Source: Publicly disclosed technical reports and data
Market data as of Jan 5, 2023

High Quality & Low Impurity

7.2 % Li_2O, 0.135 % Fe_2O_3

Technical Grade – Spodumene Concentrate
from mini-piloting

56.5 % $LiOH\text{-}H_2O$

Battery-Quality Lithium Hydroxide
from mini-piloting

Chemical Compound	FL Composite Sample AVG	Albemarle(i) SC 7.2 Premium	Albemarle(i) SC 7.2 Standard
Li_2O	7.2 %	min 7.2 %	max 7.2 %
Al_2O_3	24.4 %	min 25.0 %	min 25.0 %
SiO_2	64.8 %	min 62.5 %	max 62.5 %
Fe_2O_3	0.135 %	max 0.12 %	max 0.17 %
NA_2O	0.16 %	max 0.35 %	min 0.35 %
K_2O	0.11 %	max 0.30 %	min 0.40 %
P_2O_5	0.05 %	max 0.25 %	min 0.35 %
CaO	0.03 %	max 0.10 %	min 0.10 %

Element | Compound	Unit	FL Composite Sample AVG	China Spec.	N.A. Supplier Spec.
LiOH	%	56.5	≥56.5	56.5
Na	ppm	6	20	20
K	ppm	<10	10	10
Fe	ppm	Below detection	8	5
Ca	ppm	4	150	15
Cu	ppm	Below detection	5	5
Mg	ppm	<1	10	10
Si	ppm	34	30	30
Cl	ppm	<20	20	20
SO_4	ppm	<30	100	100

Battery Materials Ecosystem

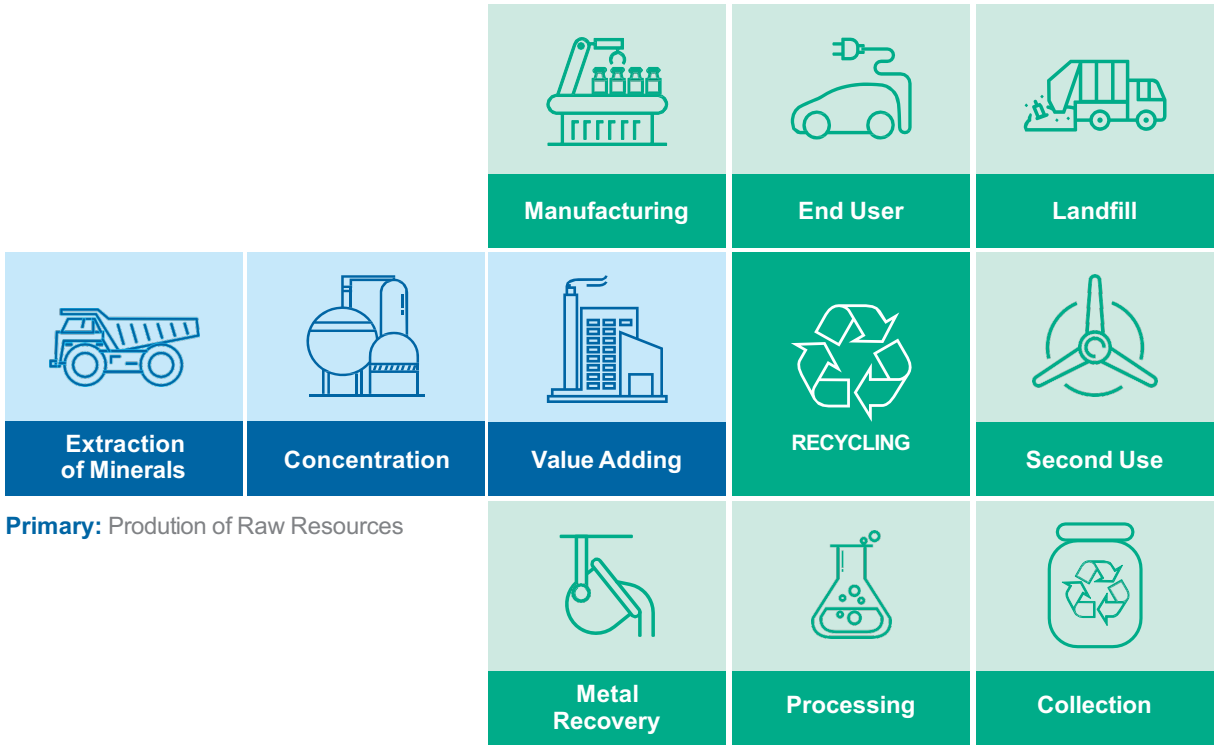
Frontier Lithium is assessing options for producing battery materials production and recycling through advancing the lithium chemicals piloting and demonstration.

In part, this process is supported by the Ontario government.The process and technology selection taking place during Pre-Feasibility Study.

CAMBRIAN COLLEGE

Ontario

nohfc An Agency of the Government of Ontario



Primary: Prodution of Raw Resources

Secondary: Manufacture of goods
Tertiary: Services

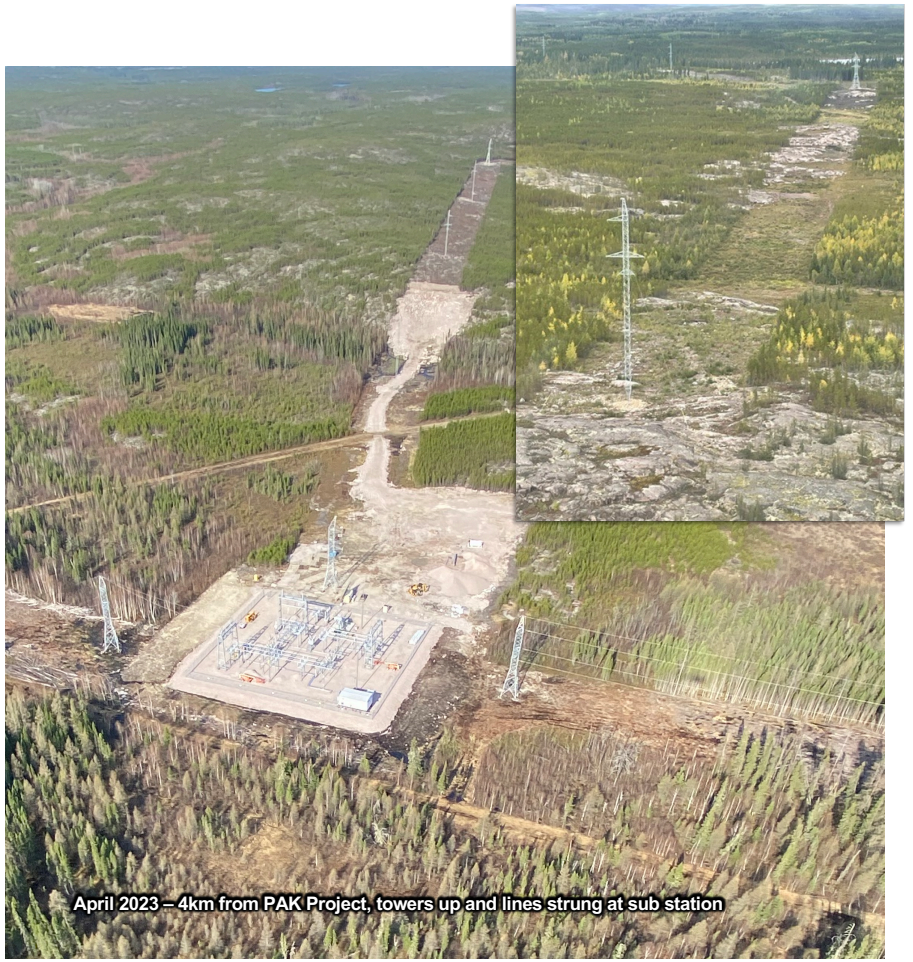
Infrastructure

Partnered First Nation Communities seeking infrastructure upgrades.

POWERLINE: Under Construction

- Wataay Power Project is being built to service 17 First Nation Communities
- The high-voltage transmission line to be 4km from the PAK resource
- Fully funded by the Government ($2B)
- Completion target 2024

May 2023 – Frontier's new Const. Camp 8km from PAK Project



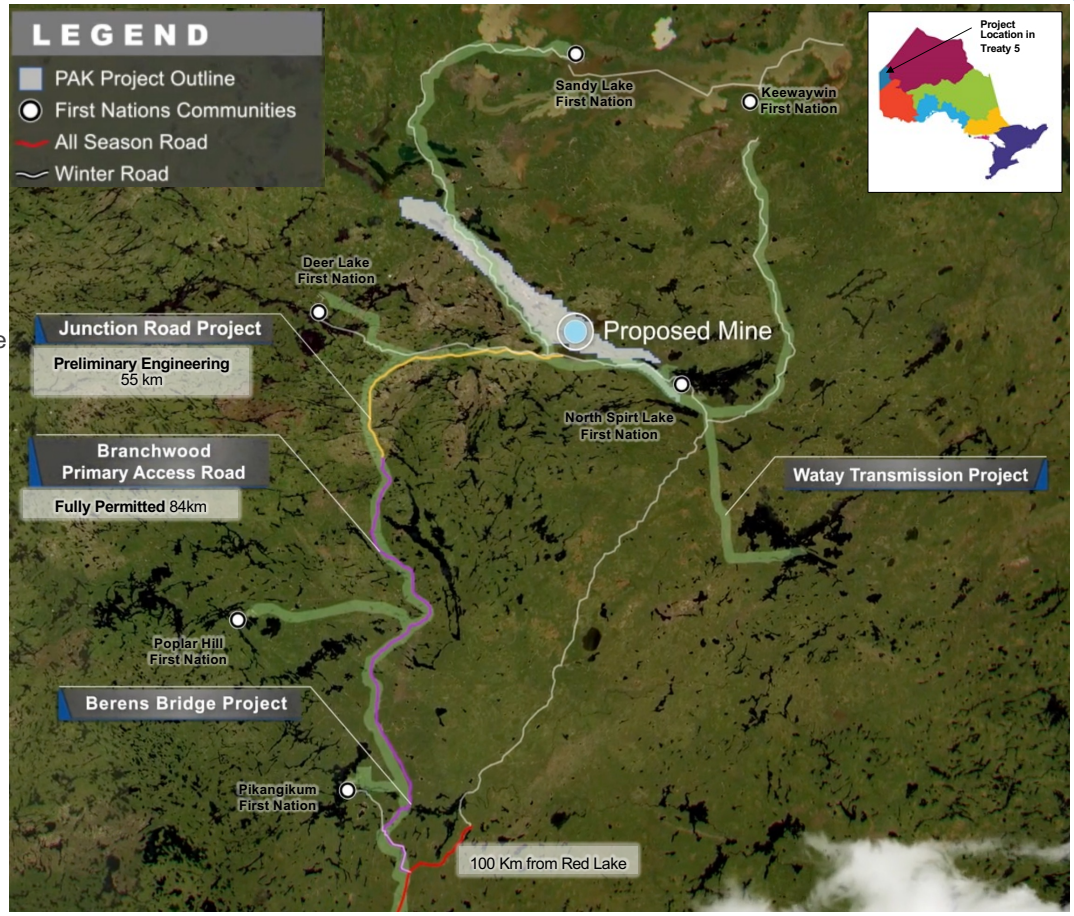
April 2023 – 4km from PAK Project, towers up and lines strung at sub station

Infrastructure

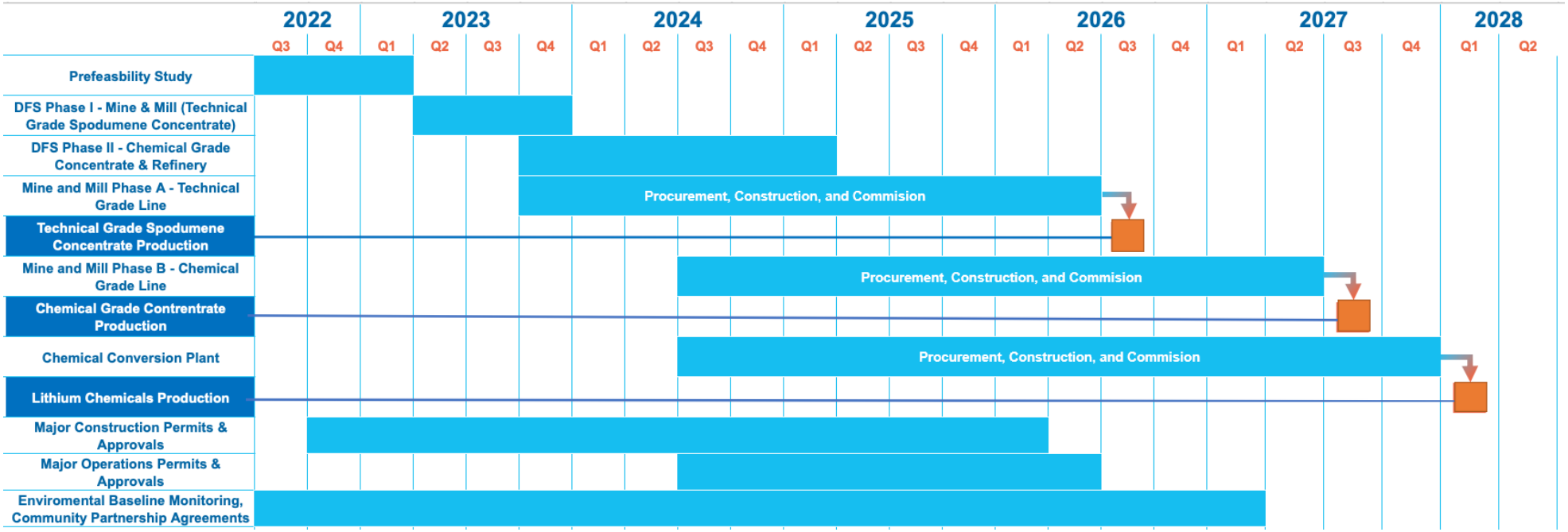
Partnered First Nation Communities seeking infrastructure upgrades.

ROAD: Under Scoping Study

- Power-line will reduce winter road usage
- Government funded engineering study is underway for “Berens River bridge and Roads” project to improve and extend the winter road season
- Internal scoping study assessing optimal all-season road access underway



A PHASED APPROACH TO VERTICALLY INTEGRATED LITHIUM CHEMICALS PRODUCTION



*The project timelines are estimates and subject to adverse developments in business and economic conditions in the principal markets. The timeline is under review in Pre-Feasibility Study.

Project Advancement

Current Activities

- Government funded engineering study is underway for “Berens River bridge and Roads” project set to improve and extend the winter road season
- PAK deposit geotechnical and environmental drilling is currently underway
- Continuing to conduct environmental baseline studies to advance project permitting
- 1,000 metric tonne bulk samples taken from both the PAK and Spark deposits

Upcoming Catalyst

- PFS is expected in Spring 2023
- Maiden drilling on the untested 600 meter long Bolt pegmatite in 2023
- Exploration drilling planned to test Spark deposit’s western extension towards a high-grade target 1.1km down strike from the resource

Frontier is positioned to become a strategic regional battery metals supplier.

94% zero carbon energy

Frontier Lithium Opportunity Highlights

Compelling Lithium Market Backdrop	• Race is on from auto OEMs and battery manufacturers to secure supply of raw materials required to meet EV production growth plans. • Unprecedented level of competition for offtake for high quality projects.
Exceptional Spodumene Resource	• One of the largest and highest grade spodumene resources located in North America. • Tier 1 spodumene resource: large tonnage, high grades, low strip, and low impurities.
Vertically Integrated Lithium Chemicals Producer	• Key differentiating factor will be manufacturing battery-grade lithium hydroxide. • Assembled highly experienced team to build and operate chemical plant.
Strategically Located in Ontario	• Well-established mining-friendly jurisdiction with supportive government, access to infrastructure and local skilled workforce. • Ideally situated to feed local supply chains to support multi-billion-dollar investments in EV battery manufacturing in Ontario and Quebec.
Significant Mine Life Upside Potential	• Mine life of ~25 years based on two deposits that remain open to depth and along strike. • Two pegmatites remain on the property to be further investigated. • 27,000h land package remains largely unexplored.
Highly Experienced Management Team	• Led by a strong management team and directors who have a track record of making discoveries, building projects and operating mines. • Management and directors own ~17% of equity, creating alignment with investors.

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