FRONTIER LITHIUM

Always Moving Forward.

A TIER ONE LITHIUM RESOURCE IN NORTH AMERICA

AUGUST 2022

TSX.V: FL

FrontierLithium.com

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
- 41.9 mt (M&I&I) of 1.54% 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

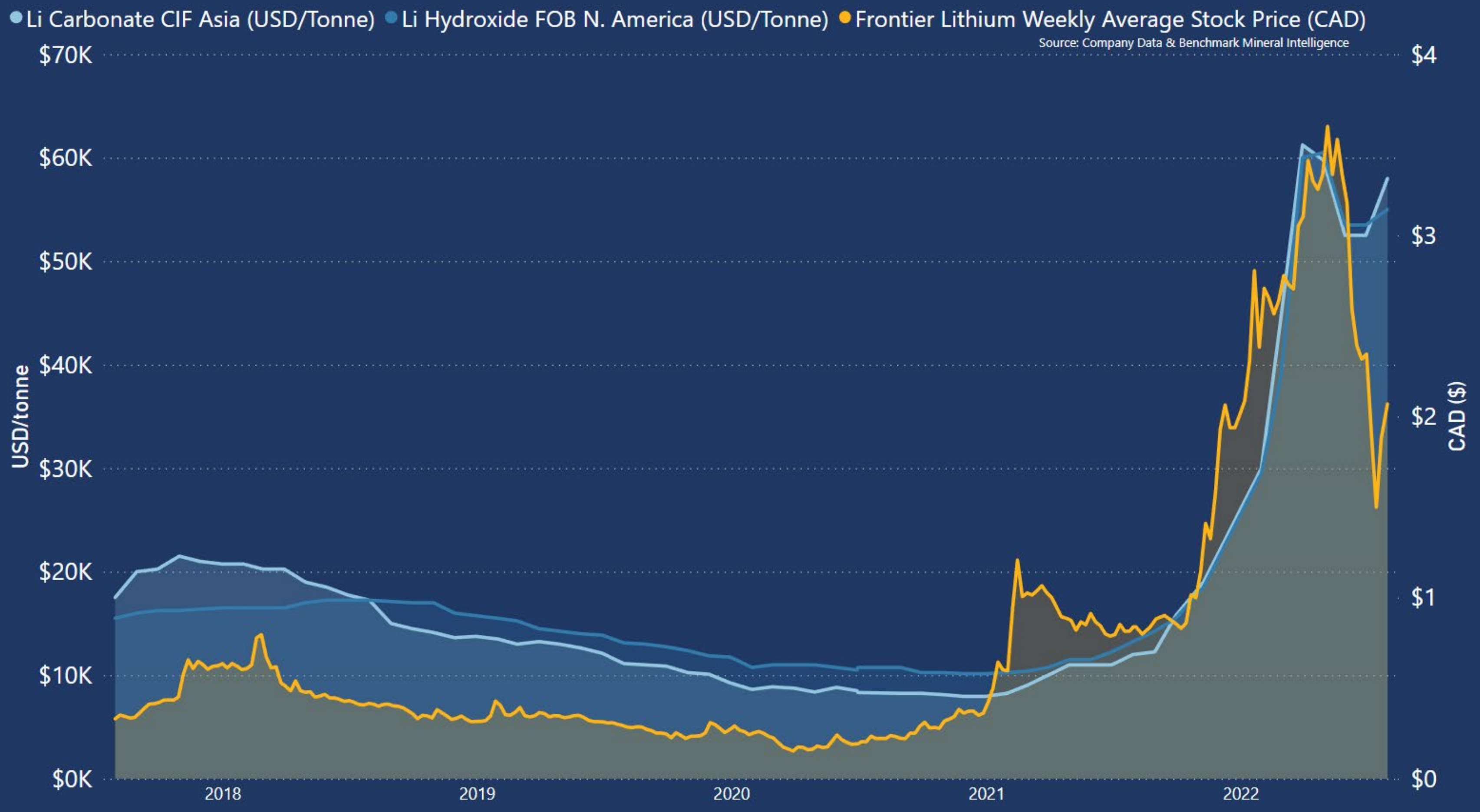
High purity hard rock spodumene ore-to-hydroxide focus for long range EV's

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

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

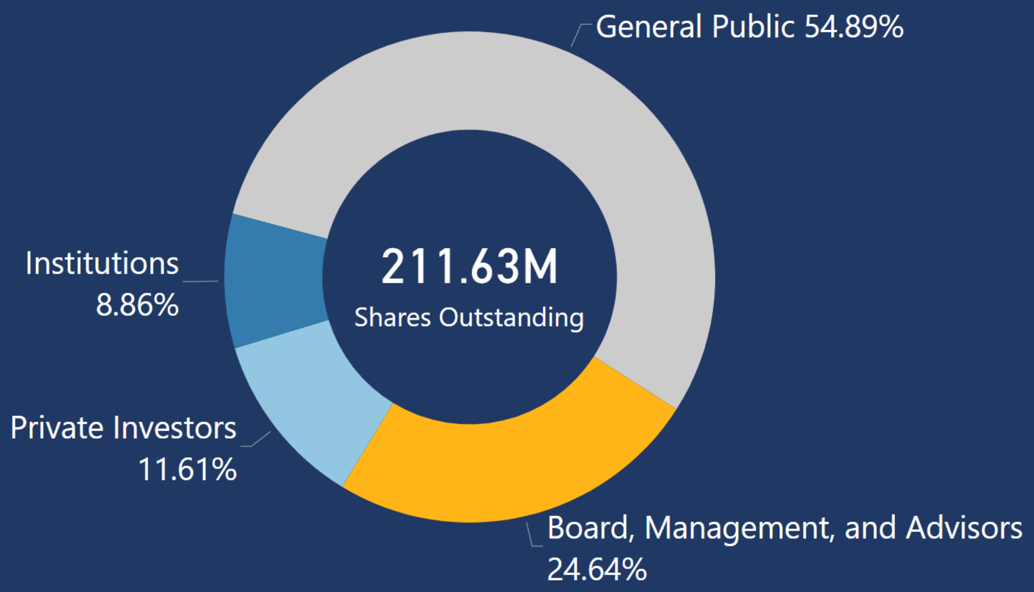
Building North America's Highest Quality Source of Lithium Hydroxide to Power the Electric Vehicle and Energy Storage Transition.

TSX.V: FL PRICE HISTORY



Market Facts	30/6/2022
Ticker – TSX Venture	FL
Ticker – OTC QX	LITOF
Price	CAD 2.30
52 Week High and Low	$3.89 - $.73
Market Cap	CAD $485M
Cash (March 31,2022)	CAD $18M
Shares Outstanding	211.6M

RESEARCH COVERAGE



Institution	CORMARK SECURITIES INC.
Coverage Initiation Date	April 11, 2022
Price Target	$ 4.50
Analyst	Brandon Smith, CFA
	Analyst - Institutional Equity Research, Battery Metals
	(416) 943-4224

Institution	Canaccord Genuity Capital Markets
Coverage Initiation Date	Feb 22, 2022
Price Target – August 2022	$ 4.75
Analyst	Katie Lachapelle, CPA
	Analyst, Equity Research - Metals & Mining
	(416) 869-7368

PROVEN LEADERSHIP

BOARD OF DIRECTORS

Rick Walker | Chairman
45+ years Mining/Construction experience

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

Bart Meekis Former Chief of Sandy Lake First Nation

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

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

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

Tess Lofsky LLB Director
Senior Legal Counsel and Corporate Secretary at Bird Construction

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

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.

Tony Zheng | Chief Financial Officer
10+ years as a Chartered Professional Accountant with significant experience in finance, risk management, corporate strategy, mergers and acquisitions, with international precious and base metals companies.

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.

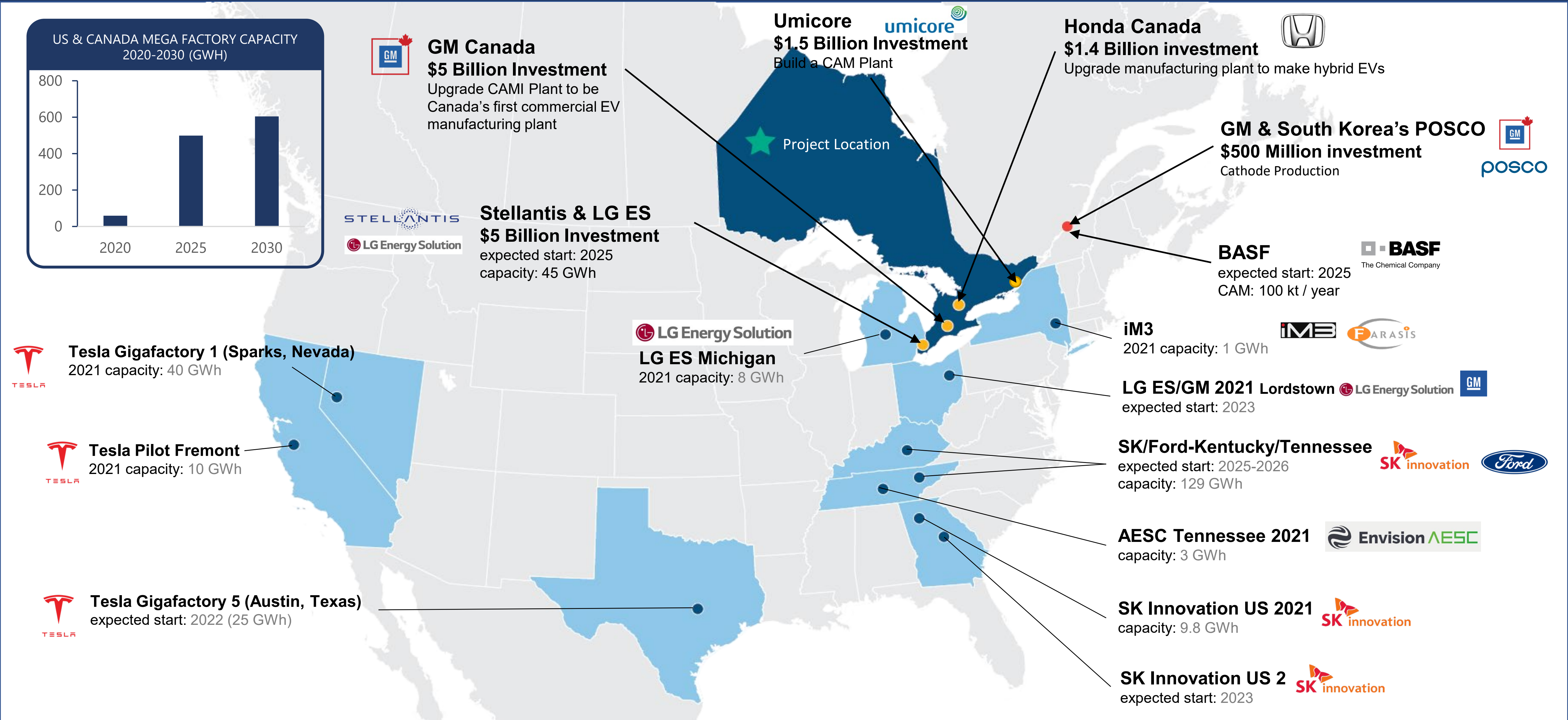
NOTABLE ADVISORS

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 McKay
Most recently Director of Mineral Development and Lands Branch at the Ministry of Northern Development and Mines

BUILDING NORTH AMERICA'S SUPPLY CHAIN



Source: Benchmark Mineral Intelligence and company filings

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STRONG PRELIMINARY ECONOMIC ASSESSMENT

PAK Deposit High Grade Zone consists of 657kt at 3.59% Li_2O

26 Year
Project Life

23,174 tonnes/yr
Production
$LiOH\text{-}H_2O$

USD $8.52B
Life of Project Revenue

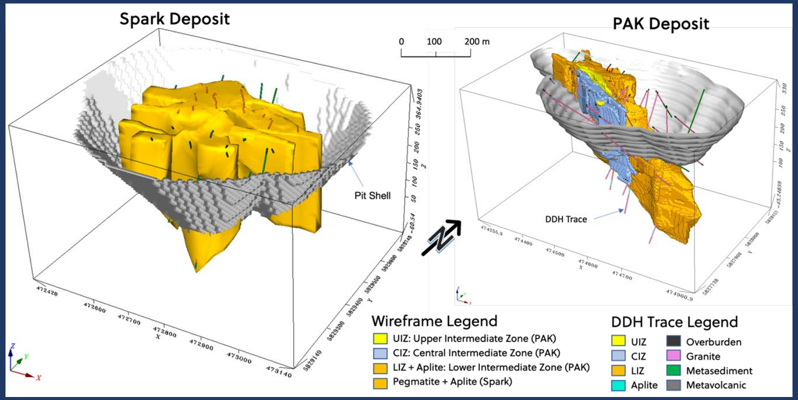
USD $974.6M
Post –Tax NPV
@ 8% Discount

21 %
Post –Tax
Internal Rate of Return

USD $685M
Total CAPEX
with 22.5% Contingency

USD $225M
Average Annual EBITDA

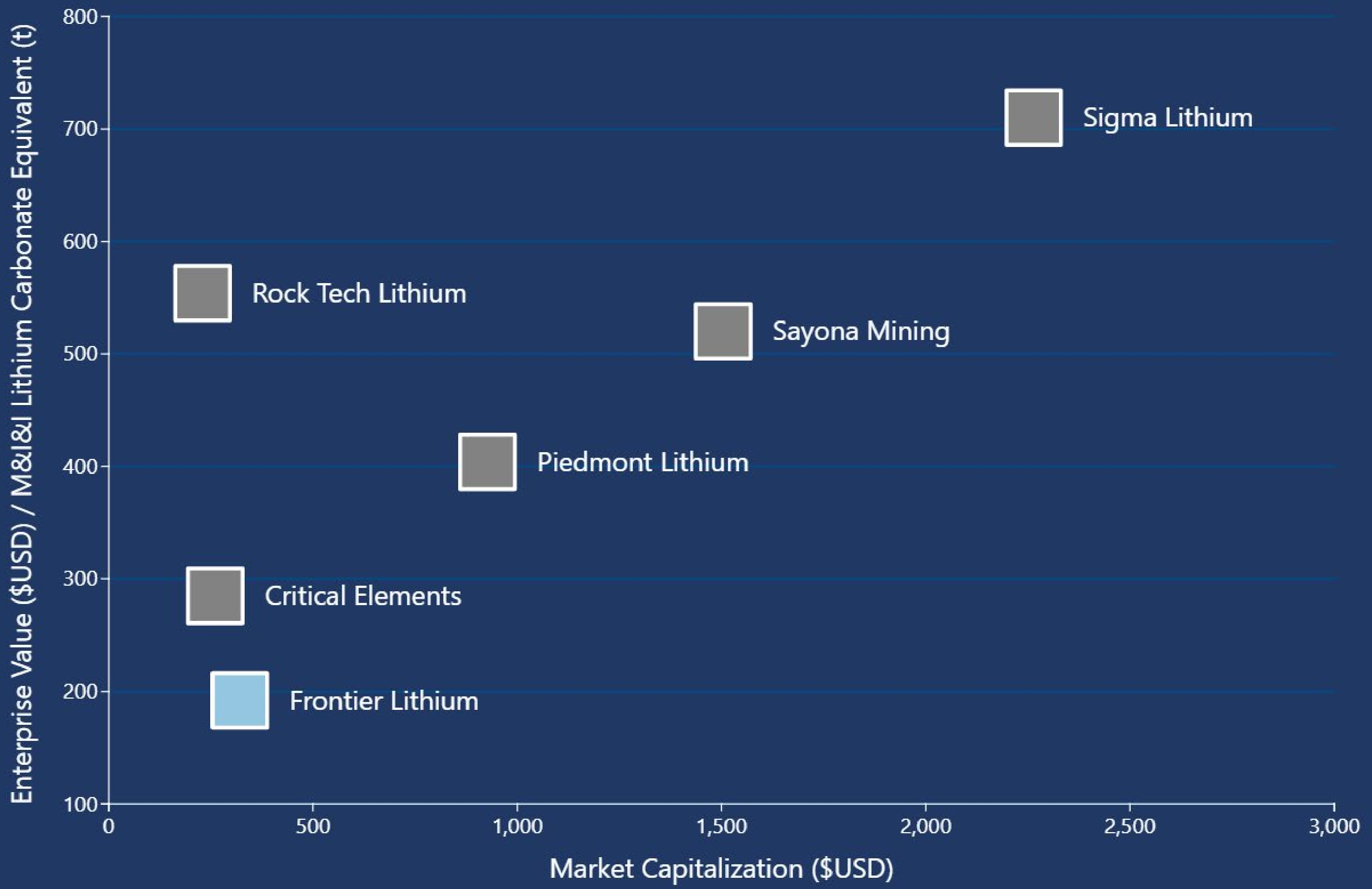
13,500 USD/Tonne
Average LiOH Selling Price



Both deposit remains open to depth and along strike.

The Study includes measured, indicated and inferred resource to produce 556,200 tonnes of LiOH from the PAK and Spark deposits. Conventional open pit mining only.

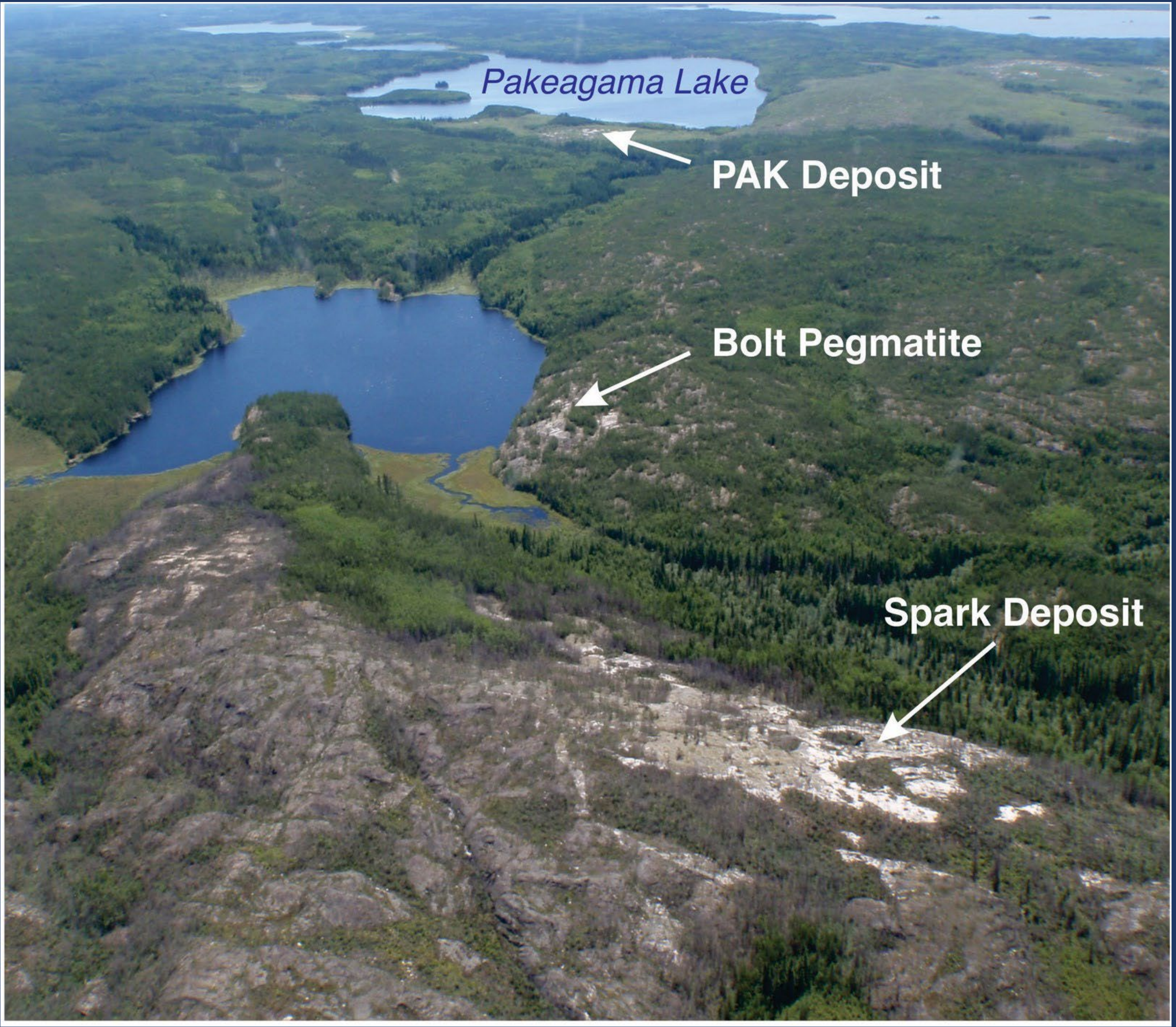
COMPARATIVE PEER VALUATION ANALYSIS



RESOURCE

PAK DEPOSIT	
Resource	9.3 Mt
Average Grade	2.02% Li_2O
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	14.4 Mt, average grade 1.40% Li_2O - Indicated 18.1 Mt, average grade 1.37% Li_2O - Inferred
Width	>100m
Strike	> 300m
Status	In-fill drilling program highlights: • 340 m averaging 1.68% Li_2O • 405 m averaging 1.5% Li_2O



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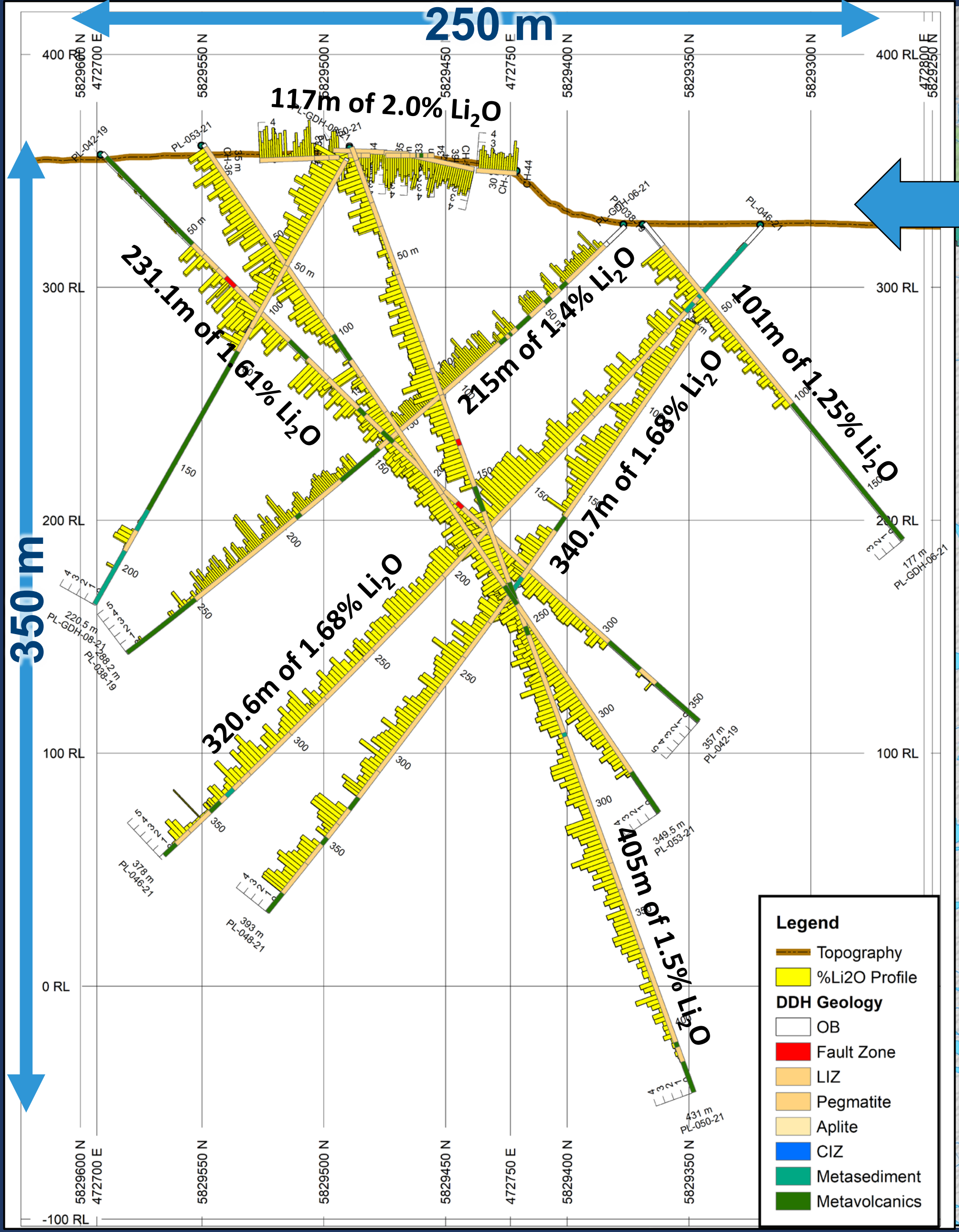
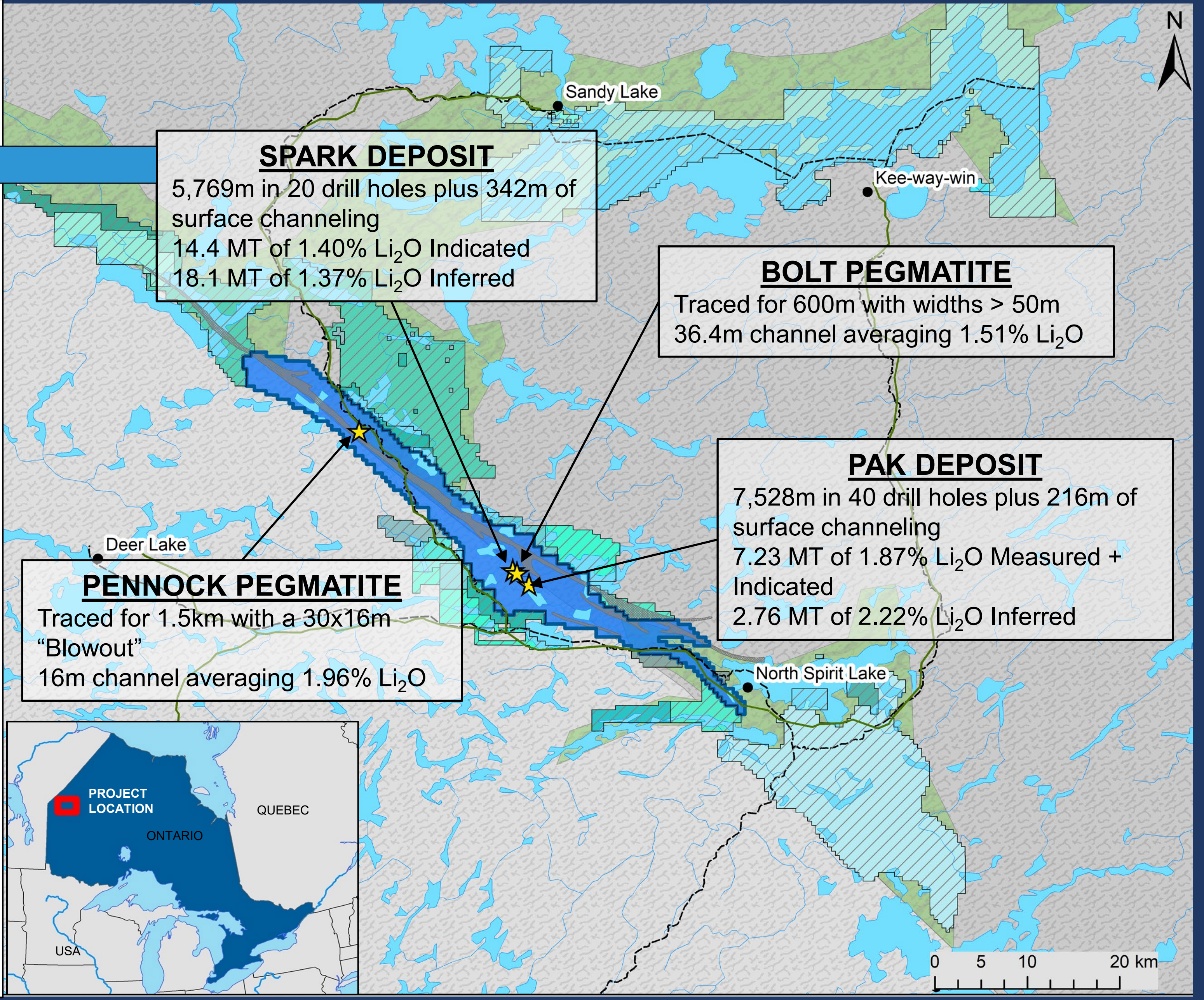
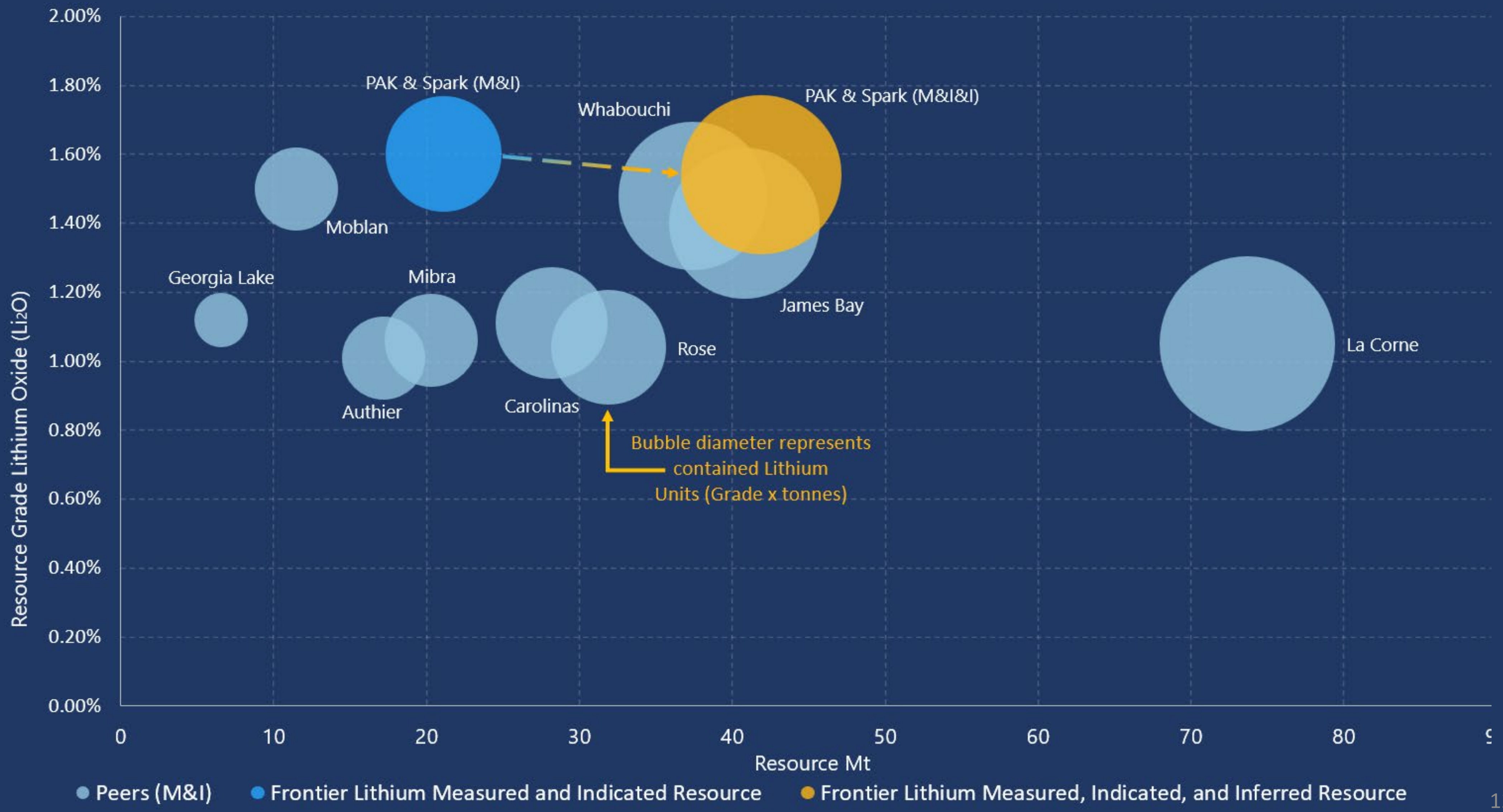
RESOURCE & EXPLORATION UPSIDE





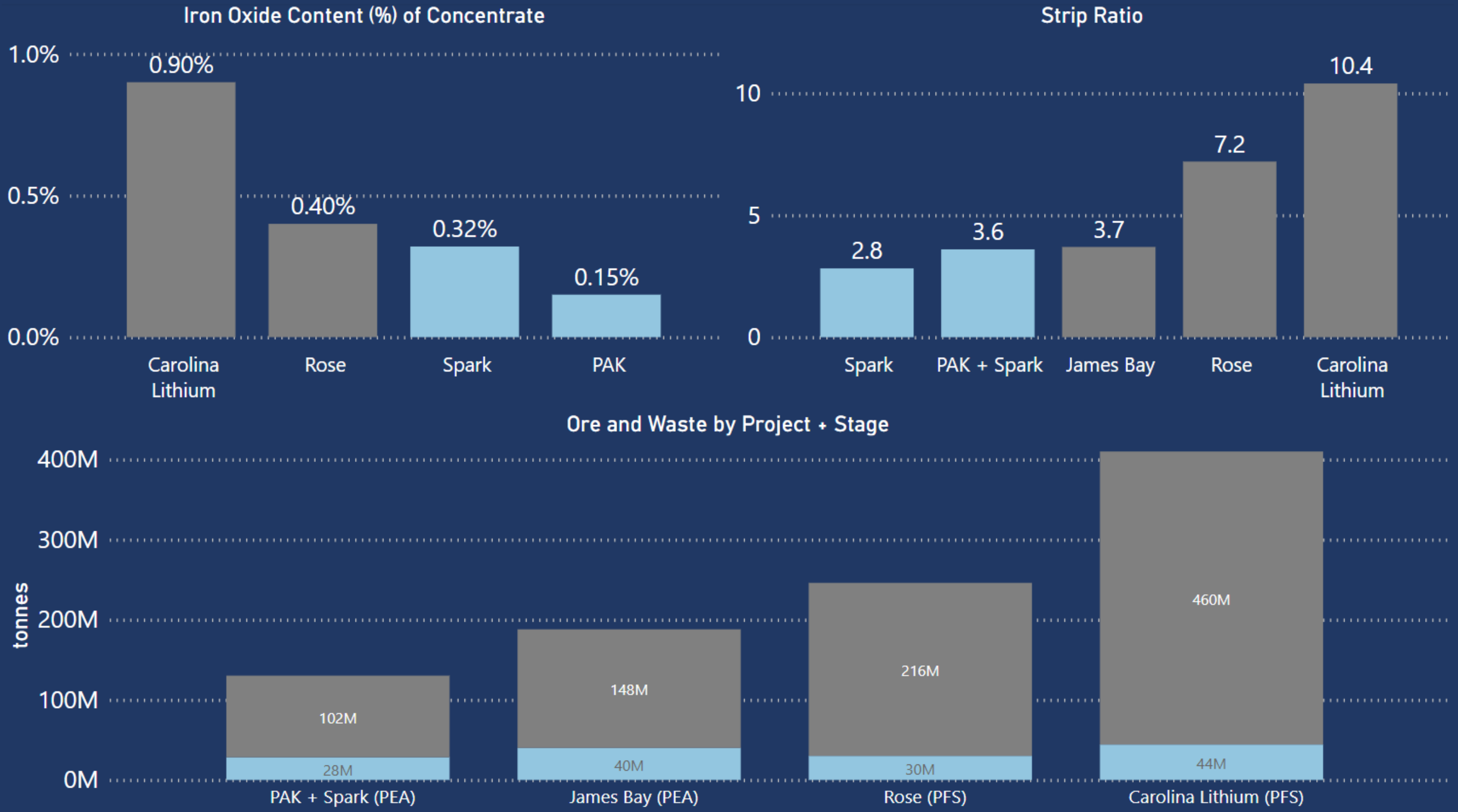
North American Hardrock Spodumene Deposits

Plot Showing Grade Li_2O and Resource (Mt)



Source: Publicly disclosed 2021 technical reports

QUALITY RESOURCES ENABLE LOW-COST MINING



Source: Publicly disclosed technical reports

HIGH QUALITY & LOW IMPURITY

7.2 % Li_2O, 0.135 % Fe_2O_3
Technical Grade – Spodumene Concentrate from mini-piloting

Chemical Compound	Frontier Lithium composite sample average	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 %

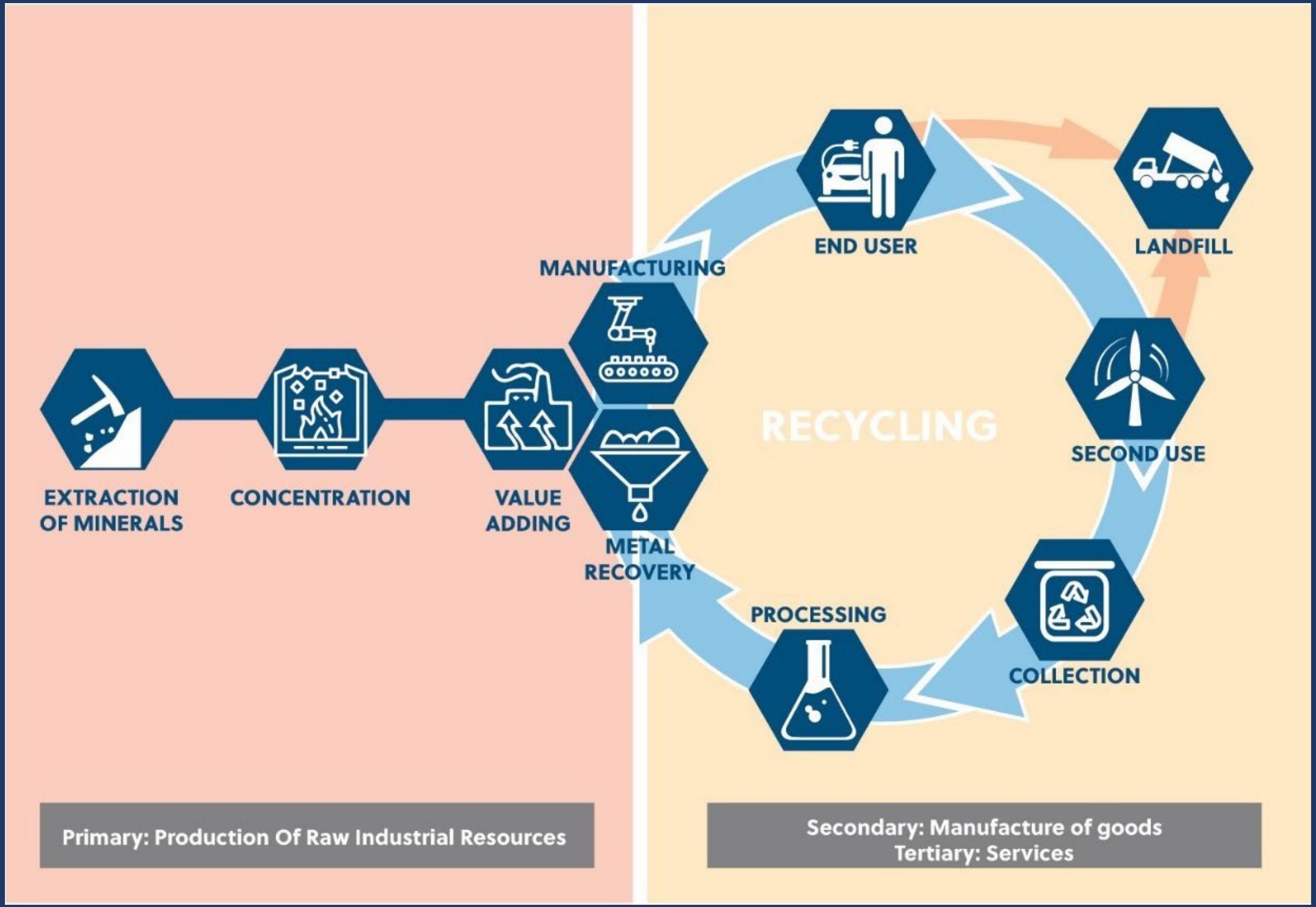
56.5 % $LiOH.H_2O$
Battery-Quality Lithium Hydroxide from mini-piloting

Element | Compound	Unit	Frontier Lithium composite sample average	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

INFRASTRUCTURE

Partnered First Nation Communities seeking infrastructure upgrades

POWERLINE – Under Construction

- Watay 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 2023-2024


Oct. 2021- Const. Camp 8km from PAK Project

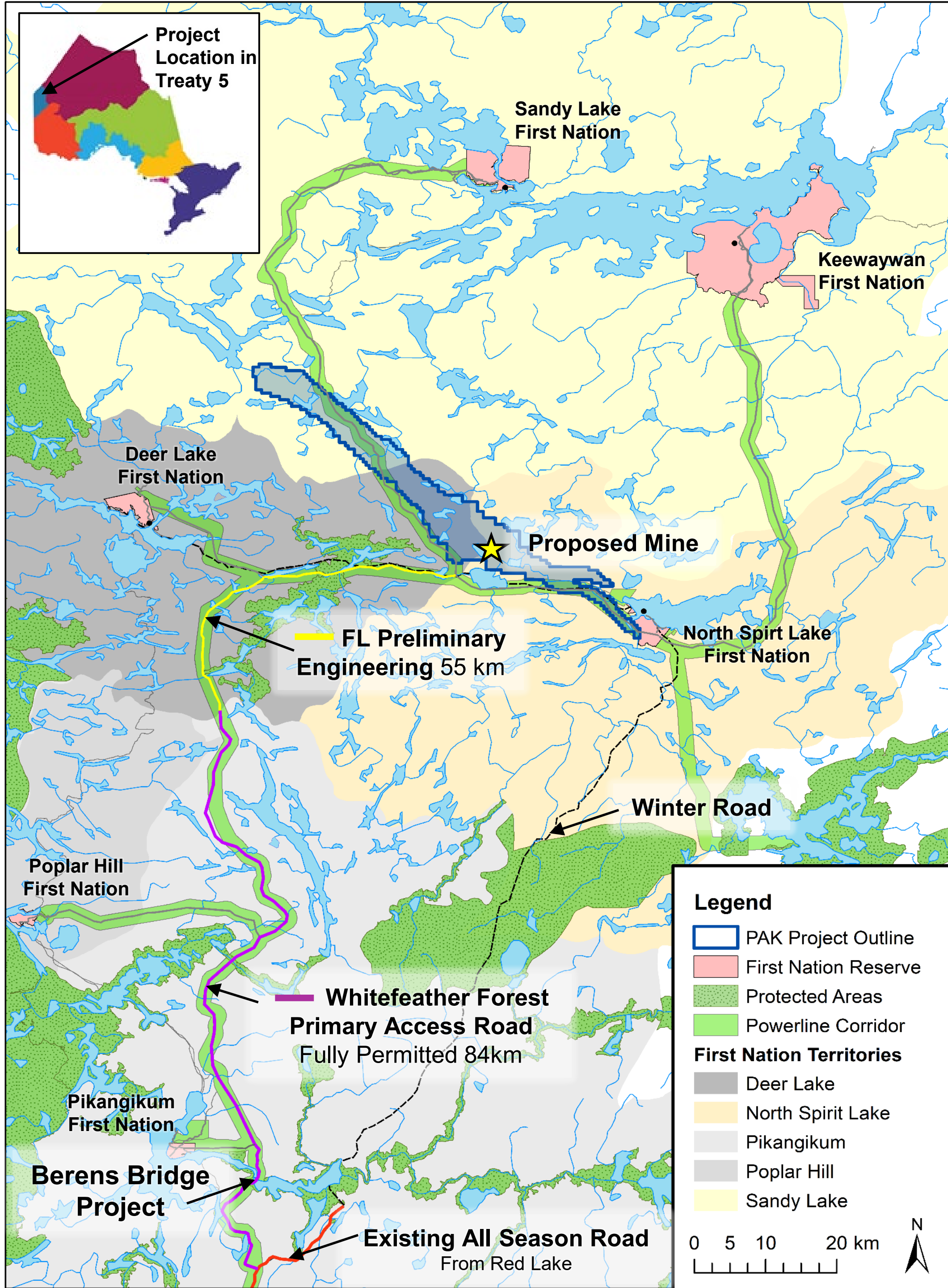
Nov. 2021 – 4Km from PAK Project

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



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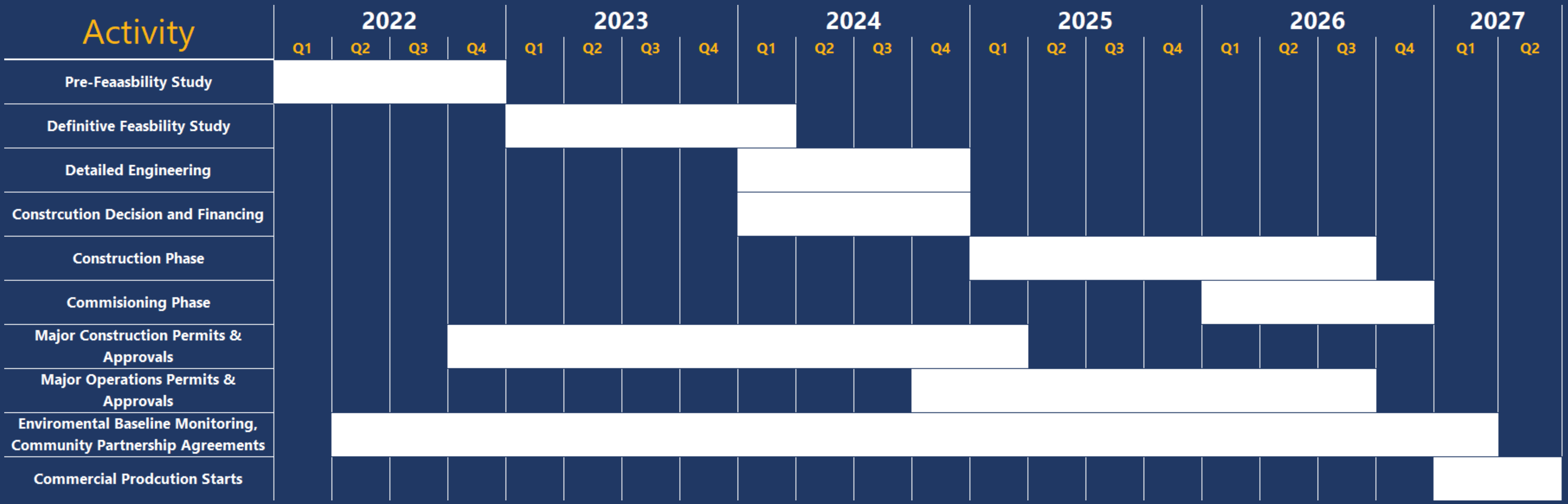
VERTICALLY INTEGRATED LITHIUM CHEMICALS PRODUCER



Currently Conducting;

- Pre-Feasibility Study support work
- Spark infill Drilling

✓ Lithium Chemicals Pilot Plant Results

✓ Resource Upgrade

✓ Spodumene Concentrates Piloting

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

FRONTIER LITHIUM

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

* Based on 2020 data