FRONTIER LITHIUM

Always Moving Forward.

# A TIER ONE LITHIUM RESOURCE TO BRIDGE THE CRITICAL MINERALS SUPPLY GAP

MAY 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**.

# HARD-ROCK vs BRINES

Greenbushes, Australia

Atacama, Chile

# 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

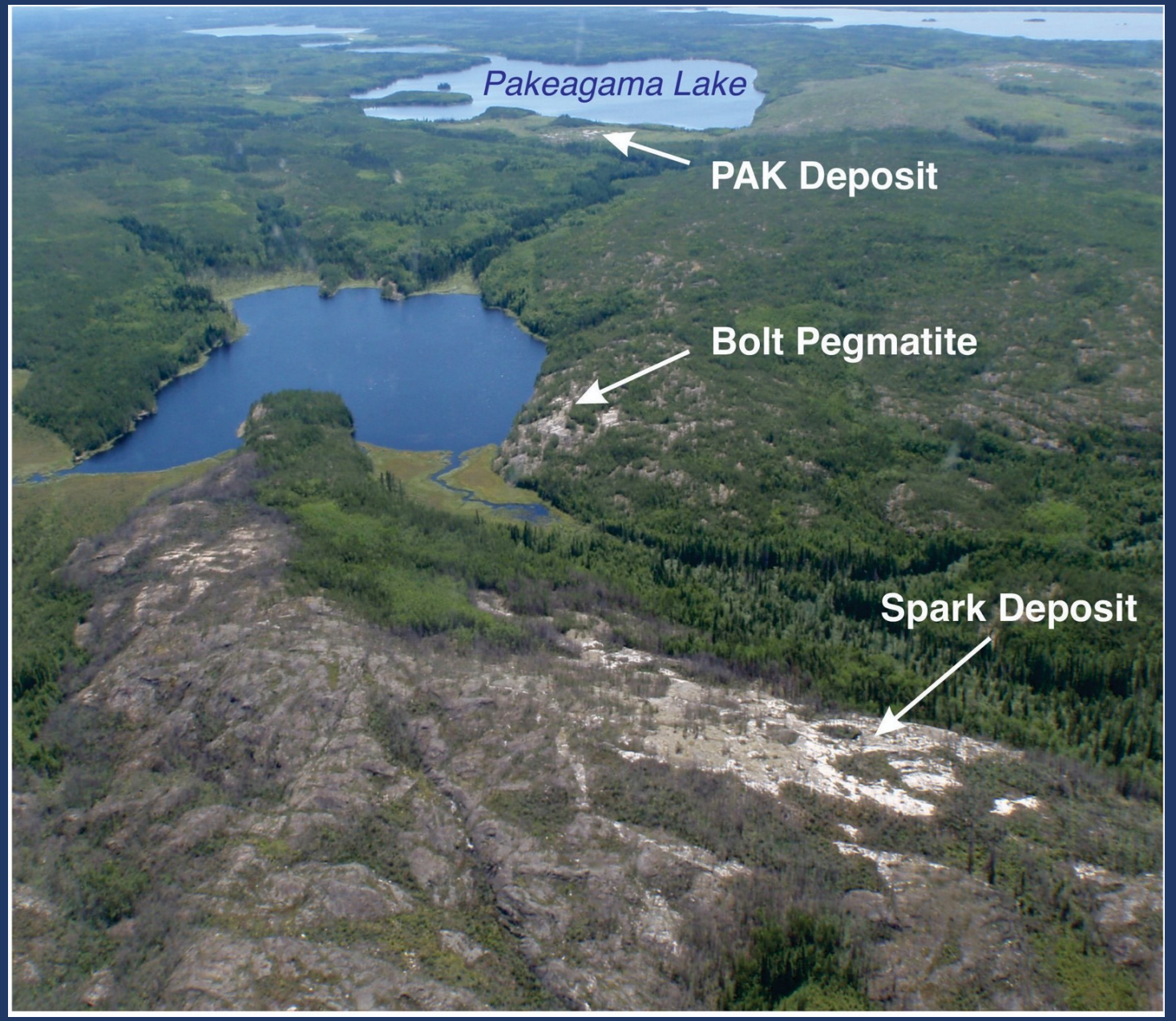
Ontario rich in Mining/Processing/Manufacturing with low sovereign risk


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

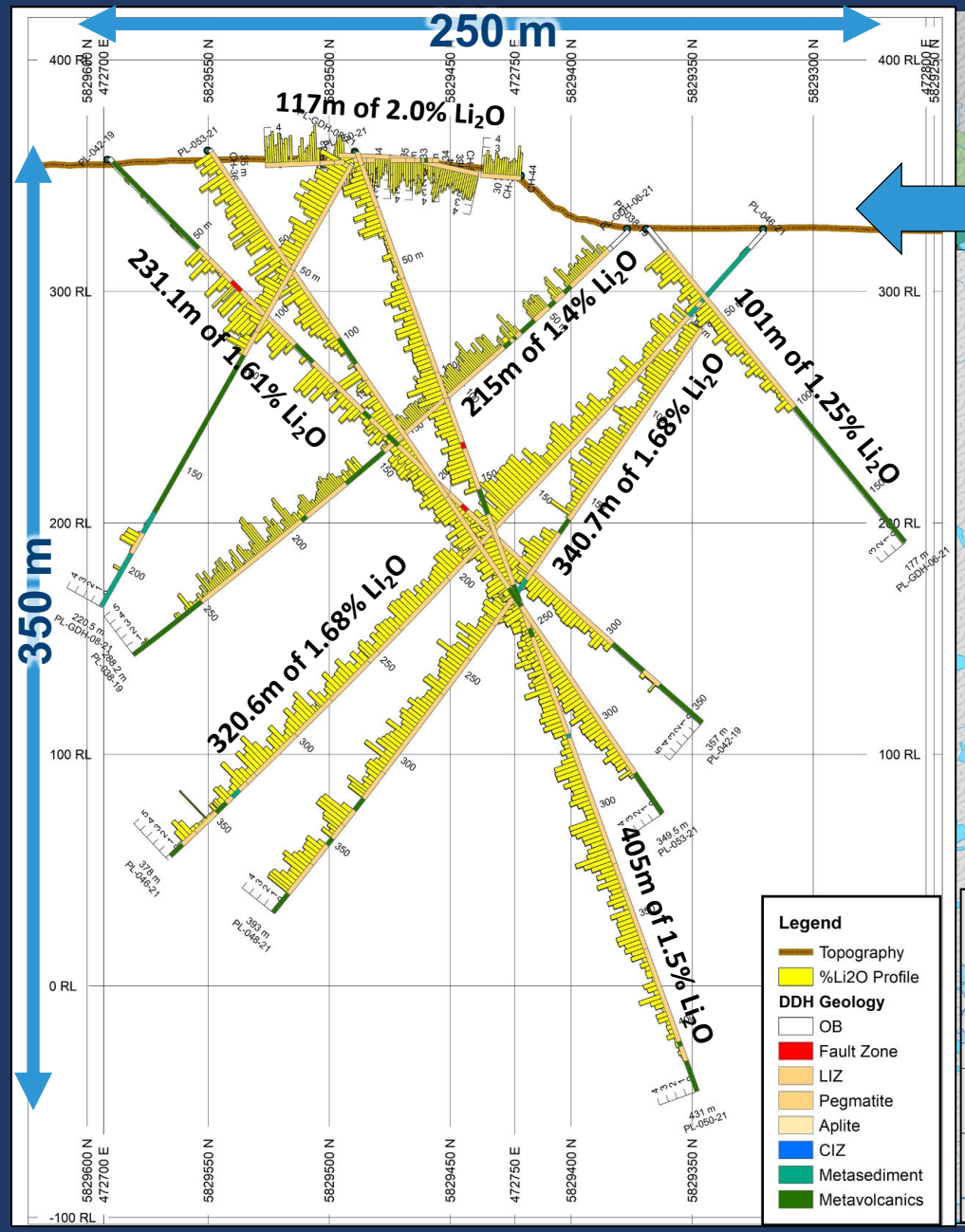
# RESOURCE

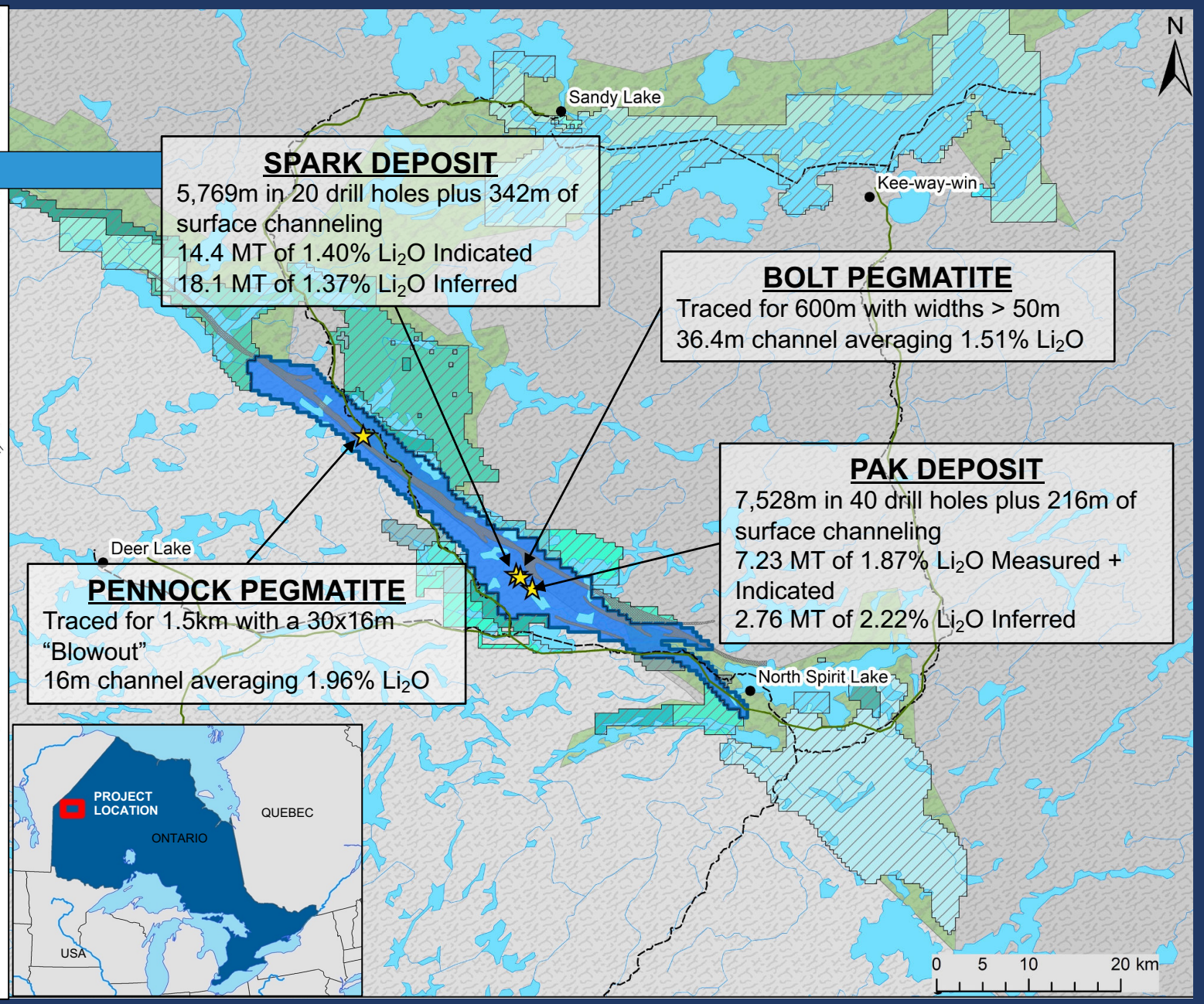
| PAK DEPOSIT | |
|---|---|
| Resource | 9.3 Mt |
| Average Grade | 2.02% $Li_2O$ |
| Impurities Indicator | < 0.1% $Fe_2O_3$ in spodumene |
| Orientation | Sub-vertical |
| Average Width | 45m (varying from 10-125m) |
| Dimensions | 500m strike length, 300m deep |
| Status | Remains open at depth and along strike |

| SPARK DEPOSIT | |
|---|---|
| Resource | 14.4 Mt, average grade 1.40% $Li_2O$ - Indicated<br><br>18.1 Mt, average grade 1.37% $Li_2O$ - Inferred |
| Width | >100m |
| Strike | > 300m |
| Status | In-fill drilling program highlights:<br>• 340 m averaging 1.68% $Li_2O$<br>• 405 m averaging 1.5% $Li_2O$ |



# RESOURCE & EXPLORATION UPSIDE




**SPARK DEPOSIT**
5,769m in 20 drill holes plus 342m of surface channeling
14.4 MT of 1.40% $Li_2O$ Indicated
18.1 MT of 1.37% $Li_2O$ Inferred

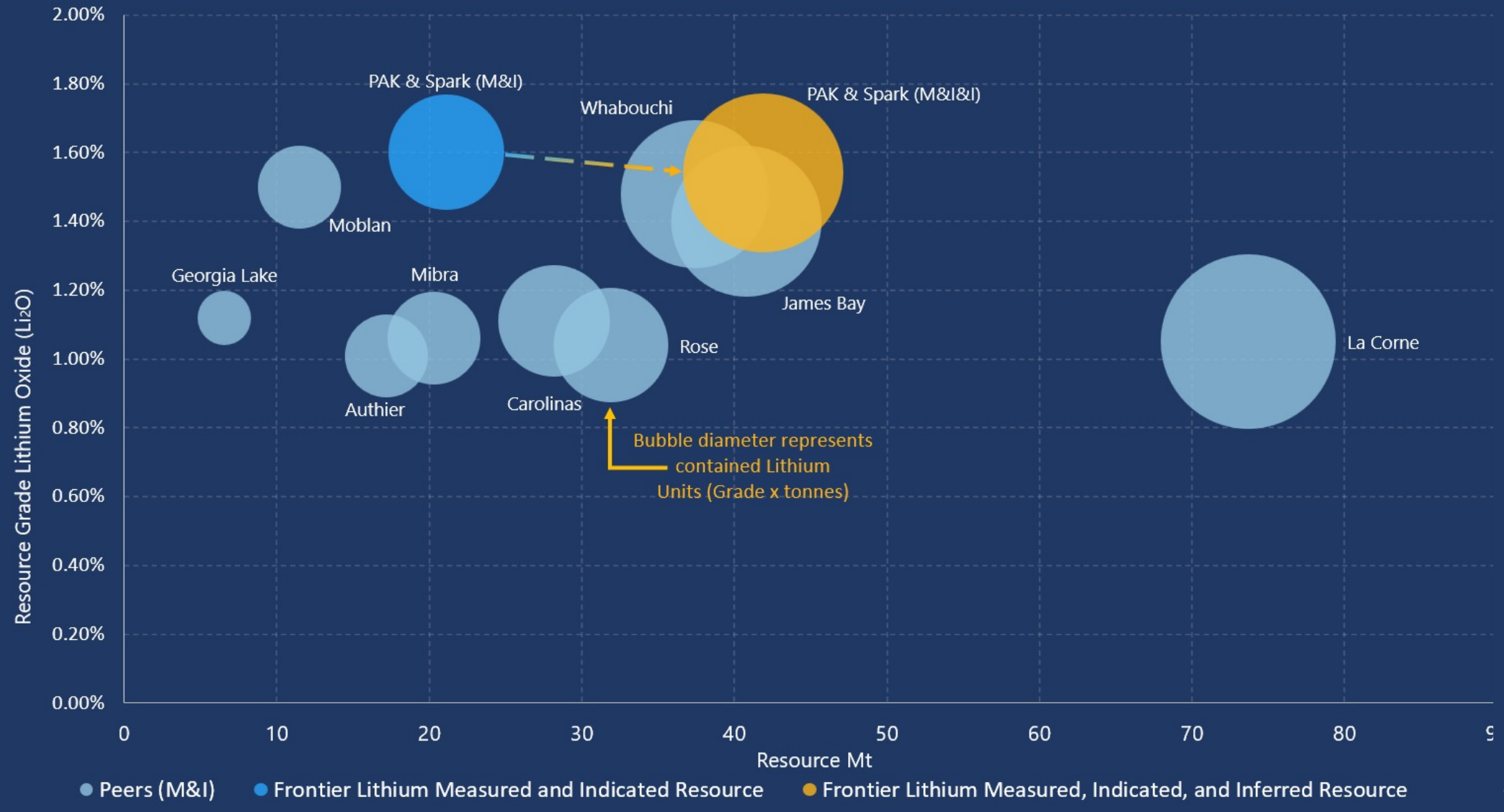
**BOLT PEGMATITE**
Traced for 600m with widths > 50m
36.4m channel averaging 1.51% $Li_2O$

**PAK DEPOSIT**
7,528m in 40 drill holes plus 216m of surface channeling
7.23 MT of 1.87% $Li_2O$ Measured + Indicated
2.76 MT of 2.22% $Li_2O$ Inferred

**PENNOCK PEGMATITE**
Traced for 1.5km with a 30x16m "Blowout"
16m channel averaging 1.96% $Li_2O$

# North American Hardrock Spodumene Deposits

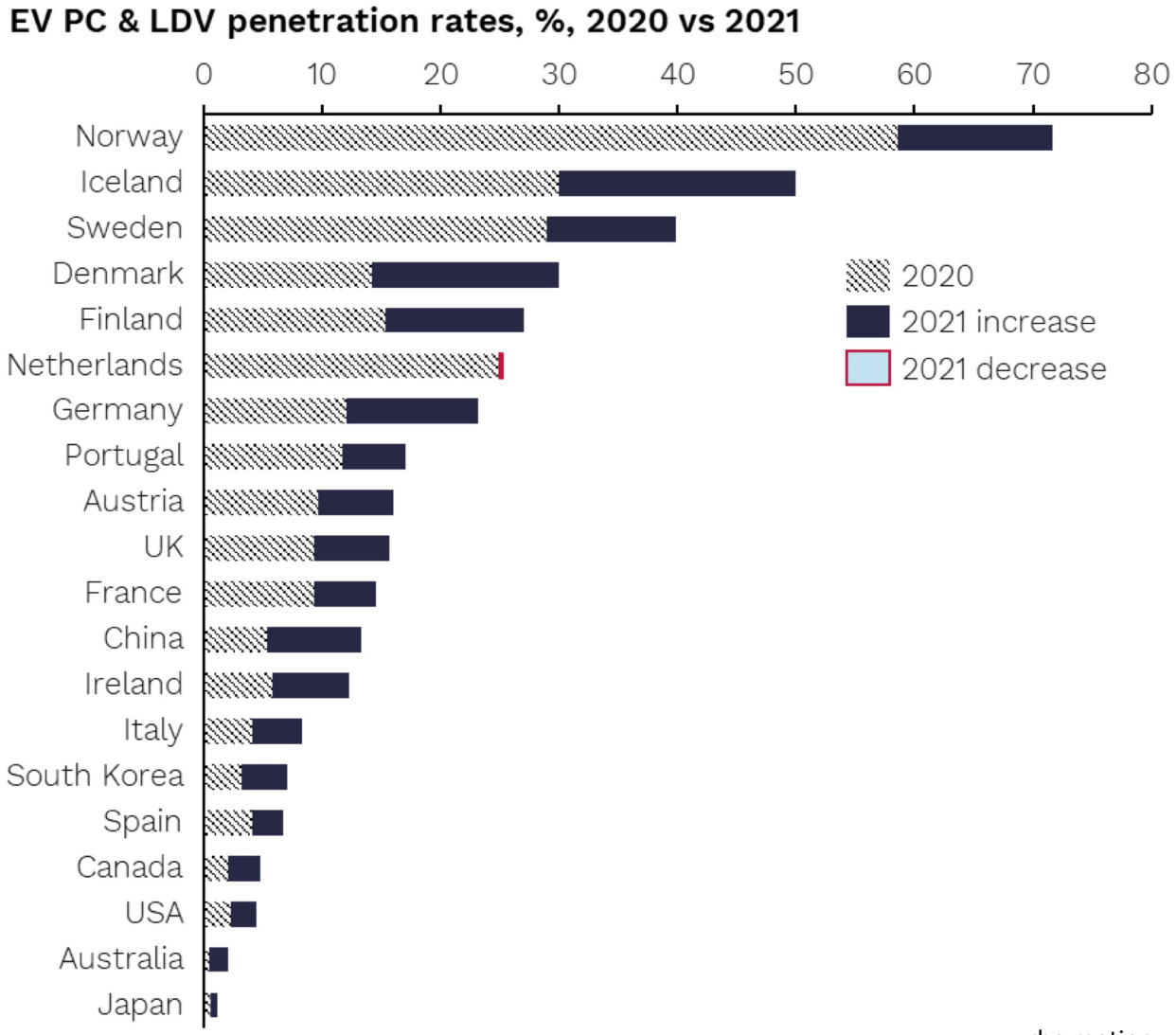
## Plot Showing Grade $Li_2O$ and Resource (Mt)

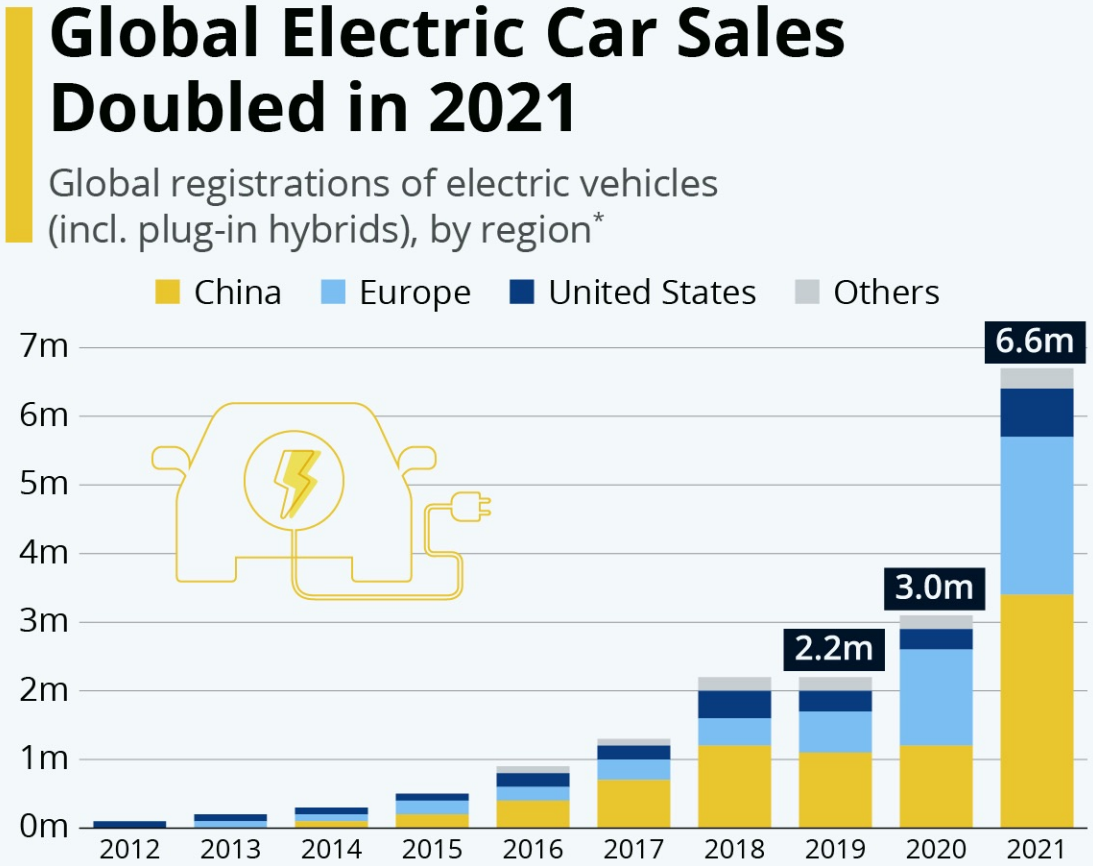




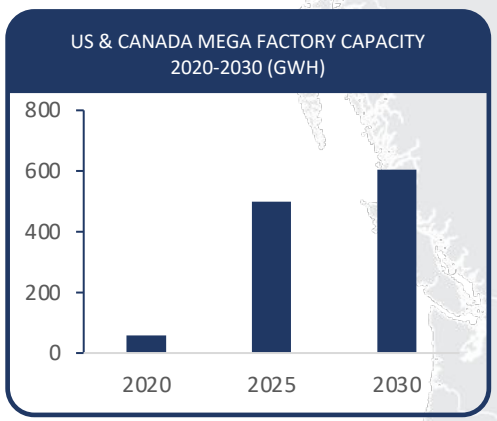

Source: Publicly disclosed 2021 technical reports

# GLOBAL EV MARKET



# BUILDING NORTH AMERICA'S SUPPLY CHAIN




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

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

Project Location

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

**Stellantis & LG ES**
**$5 Billion Investment**
expected start: 2025
capacity: 45 GWh

**BASF**
expected start: 2025
CAM: 100 kt / year

**iM3**
2021 capacity: 1 GWh

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

**LG ES Michigan**
2021 capacity: 8 GWh

**LG ES/GM 2021 Lordstown**
expected start: 2023

**Tesla Pilot Fremont**
2021 capacity: 10 GWh

**SK/Ford-Kentucky/Tennessee**
expected start: 2025-2026
capacity: 129 GWh

**AESC Tennessee 2021**
capacity: 3 GWh

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

**SK Innovation US 2021**
capacity: 9.8 GWh

**SK Innovation US 2**
expected start: 2023

Source: Benchmark Mineral Intelligence and company filings

# HIGH QUALITY & LOW IMPURITY

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

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

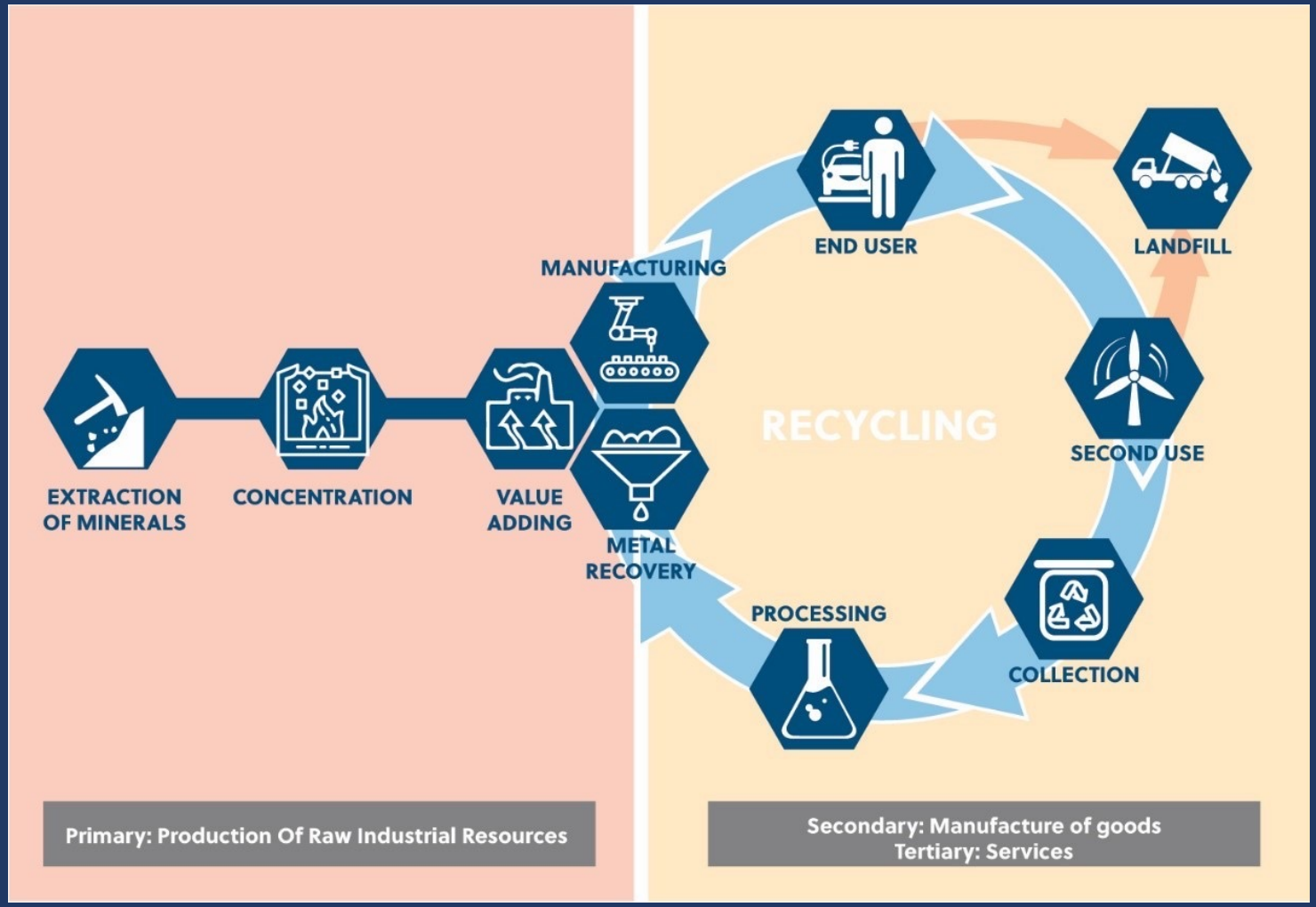
| Chemical Compound | Frontier Lithium composite sample average | Albemarle[(i)] SC 7.2 Premium | Albemarle[(i)] SC 7.2 Standard |
|---|---|---|---|
| $Li_2O$ | 7.2 % | min 7.2 % | max 7.2 % |
| $Al_2O_3$ | 24.4 % | min 25.0 % | min 25.0 % |
| $SiO_2$ | 64.8 % | min 62.5 % | max 62.5 % |
| $Fe_2O_3$ | 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 % |

| 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

nohfc An Agency of the Government of Ontario

FRONTIER LITHIUM

96%* Zero Carbon Energy

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




* Based on 2020 data