



**A LITHIUM LED BATTERY MINERALS
AND TECHNOLOGY COMPANY**

Investor Presentation

DECEMBER 2022

ASX:LLI

DISCLAIMER



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The information in this report that relates to Exploration Results is based on information either compiled or reviewed by Mr Darren Allingham FAIG who is an employee of Loyal Lithium Limited. Mr Allingham is a Fellow of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Allingham consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

This presentation has been approved by the Board of Loyal Lithium Ltd.

MEET OUR CEO

ADAM RITCHIE BEng (hon), MEng, CPEng



Highly experienced lithium and development professional



Over 20 years' experience in the resources sector having held senior positions at Australia's leading resources companies including Pilbara Minerals, FMG, Rio Tinto & BHP




Former Project Director of Pilbara Minerals (ASX: PLS) flagship Pilgangoora Lithium Project



A person in a white jacket is holding a smartphone, while another person in a grey jacket is using an electric vehicle charging station. The background is dark and out of focus.

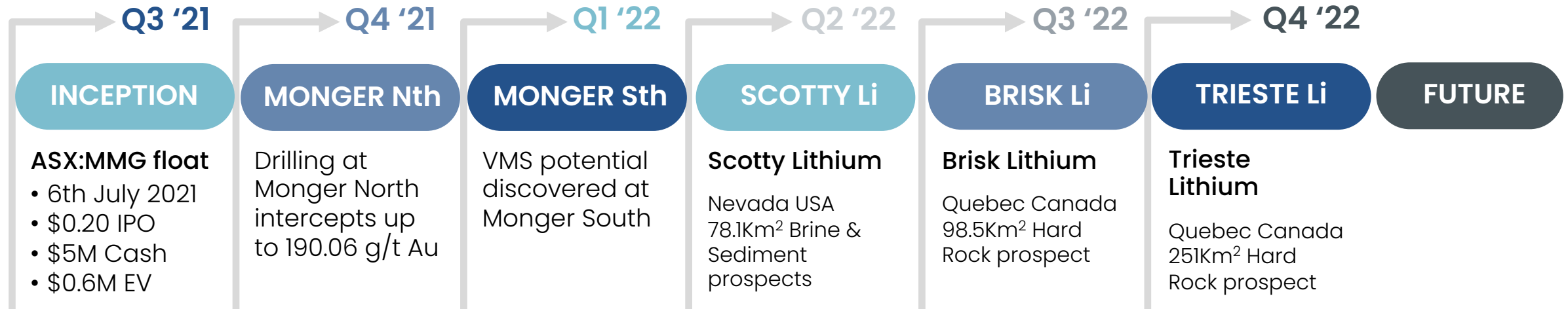
**LITHIUM IS CHANGING THE
WAY WE TALK, DRIVE & LIVE
THIS IS JUST THE BEGINNING**

 **LOYAL LITHIUM**



**WE AIM TO FIND, DEFINE, MINE AND REFINE
ASSETS THAT CONSIDER THE FULL
LITHIUM SUPPLY CHAIN POTENTIAL
NOT JUST THE RESOURCE POTENTIAL**

OUR JOURNEY



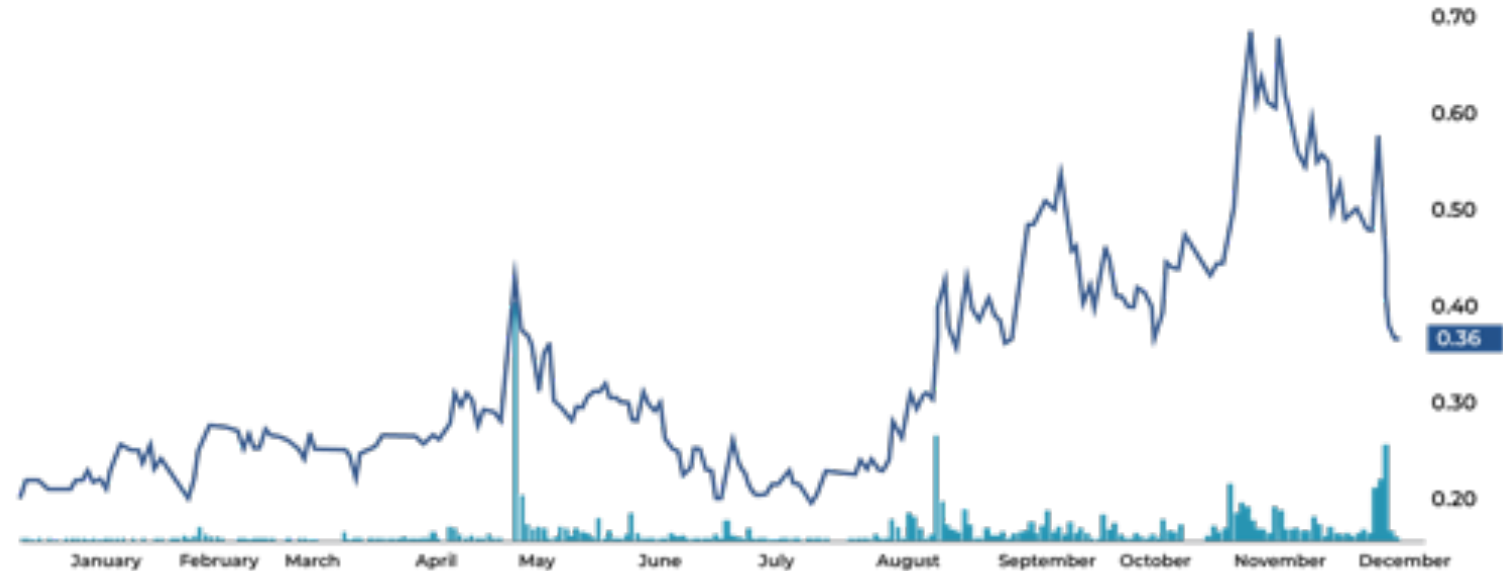
“Since our IPO in July 2021, we have continued to achieve milestones with the acquisition of three highly prospective North American lithium assets defining our future direction. We plan to systematically advance these assets in parallel throughout 2023, creating value for our Loyal Lithium shareholders along the journey.”

Adam Ritchie, Chief Executive Officer

CORPORATE SNAPSHOT



ASX - 15 DEC 2022	LLI
Shares on Issue	55.45m
Share Price	\$0.36
Market Cap	\$20m
Cash (Dec '22) ¹	\$7m
Debt	Nil
Enterprise Value	\$13m
Top 20	52%



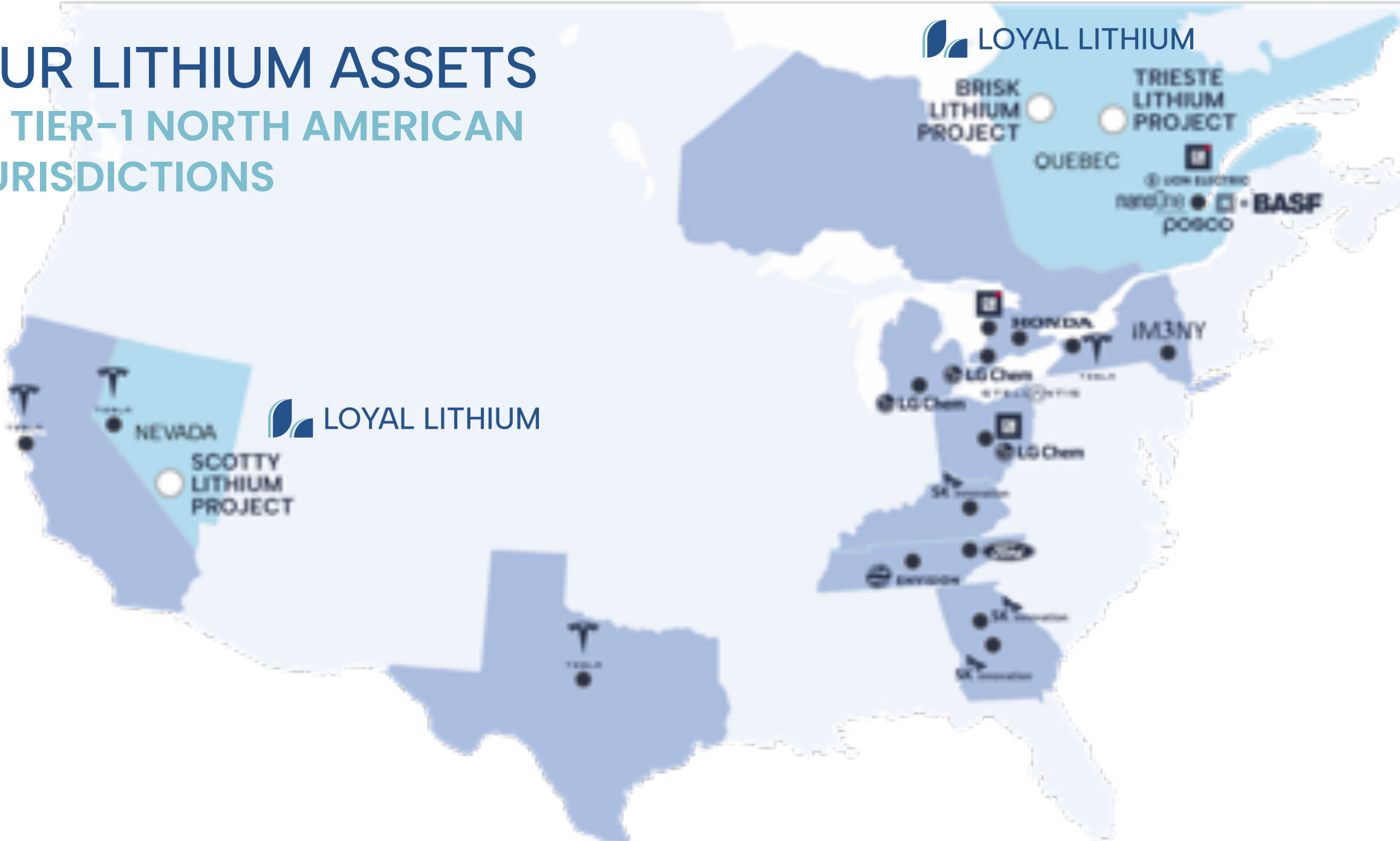
"The change of company name to Loyal Lithium is a critical milestone, as it signifies our transition to a lithium-led battery minerals and technology company and our renewed focus on the exploration and development of our North American lithium assets.

We look forward to beginning this new period as Loyal Lithium."

Adam Ritchie, Chief Executive Officer

¹ - Unaudited

OUR LITHIUM ASSETS IN TIER-1 NORTH AMERICAN JURISDICTIONS



TRIESTE LITHIUM PROJECT
JAMES BAY LITHIUM DISTRICT
QUEBEC, CANADA



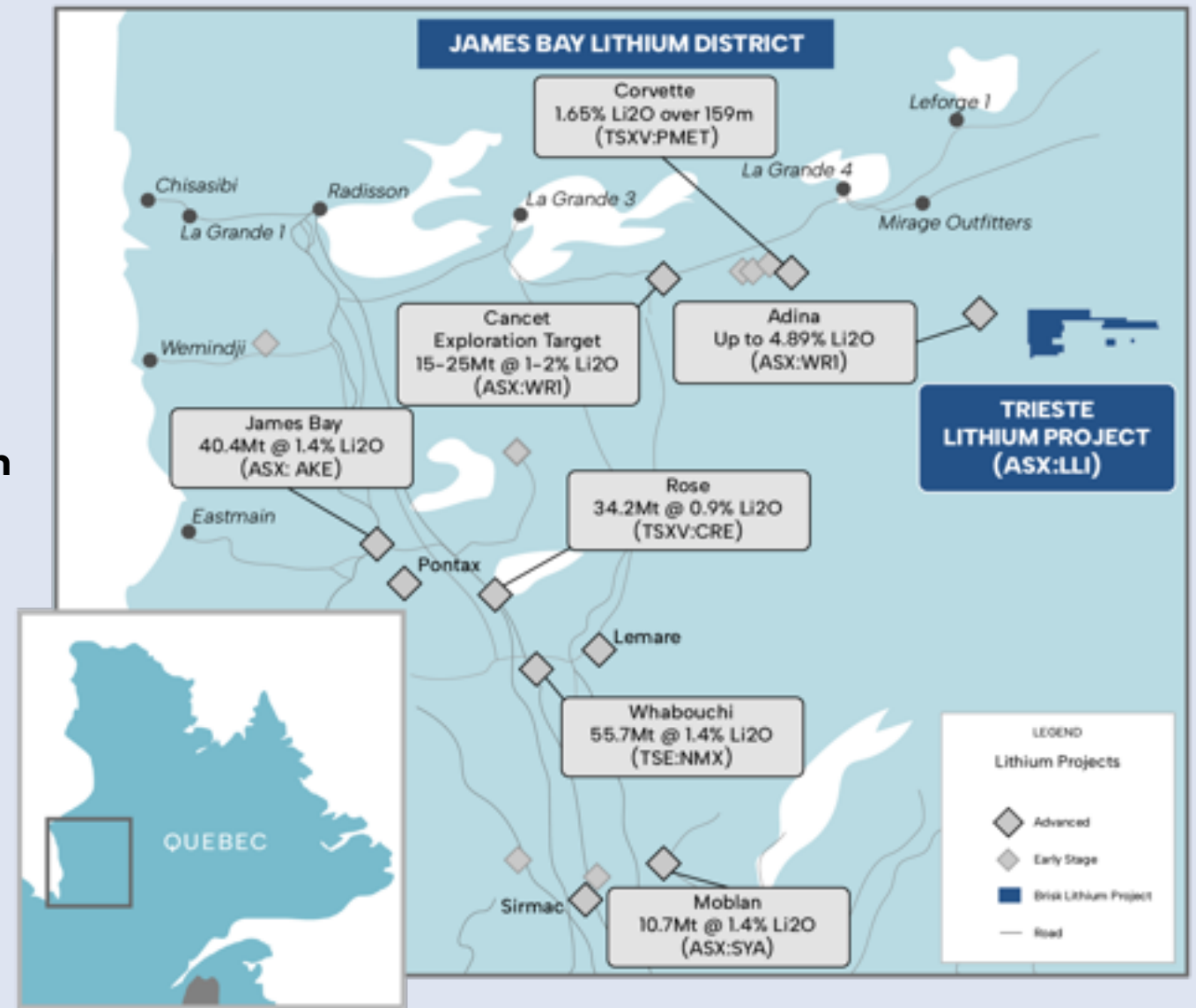
TRIESTE LITHIUM PROJECT

JAMES BAY LITHIUM DISTRICT

ASX Announcement 20 October 2022

“Loyal Lithium triples land position with the acquisition of the Trieste Lithium Project in the James Bay Lithium District, Quebec”

- ✓ **Drilling Success Next-door - Winsome Resources' (ASX: WRI) Adina Project only 14km east along strike**
- ✓ Trieste - 466 claims covering 251km²
- ✓ 39km contact zone in Trieste Greenstone Belt
- ✓ 123 pegmatite outcrop observations
- ✓ Anomalous lithium assay (180ppm)*



Map not to scale

* Historical lithium assay via 2019 Geological Survey of Canada (GSC) Sample Id: 2014059299; ICP 4-acid digest

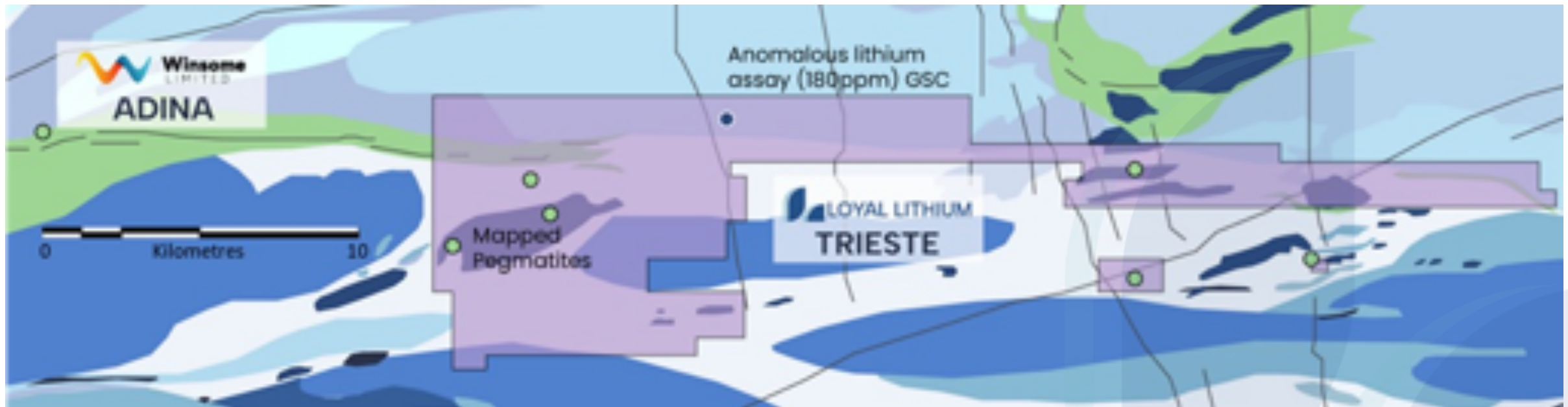
TRIESTE LITHIUM PROJECT

DRILLING SUCCESS NEXT DOOR

ALL EYES ON THE TRIESTE GREENSTONE BELT

Winsomes' Adina Project is 14km East of Loyal Lithium's' Trieste Project

- 31 Sept 22: Rock chips returning high grade lithium assay results¹ of up to 4.89% Li₂O
- 28 Oct 22: 160m of pegmatite collectively intercepted²



1 - Refer to 31 Sept 2022 - Winsome Resources Limited ASX Announcement entitled Exceptional High Grade Lithium Assays from Adina.

2 - Refer to 28 Oct 2022 - Winsome Resources Limited ASX Announcement Significant Pegmatite Intercept at Adina from Early Drilling.

TRIESTE LITHIUM PROJECT

2023 WORK PLAN DETERMINED

1

Historical Data Review

Historical Data obtained whilst targeting other minerals and metals:

- Aeromagnetic, EM and IP surveys
- 767 in-situ outcrop samples
- 316 transported glacial till samples
- 13 diamond drill holes (2,195m)

Testing of Pegmatites in Historical Drill Core

- Pegmatites were observed in all 13 historical drill core logs and photos with a combined total of 274m of pegmatites intercepted
- Core trays have been located and will be prepared for geochemical sampling

2

3

Satellite Data

- LLI plans to engage Geospatial Intelligence Pty Ltd to utilise high resolution historical satellite data multi/hyper-spectrally to characterise/identify outcrops and correlate with historical logging data

Field Mapping Exercise

- A spring / summer 2023 field mapping program will be formulated
- Targets and transit routes will be ranked and mapped in order of prospectivity
- In-country geological partners, Dahrouge Geological Consulting, will be engaged to perform the field work programs

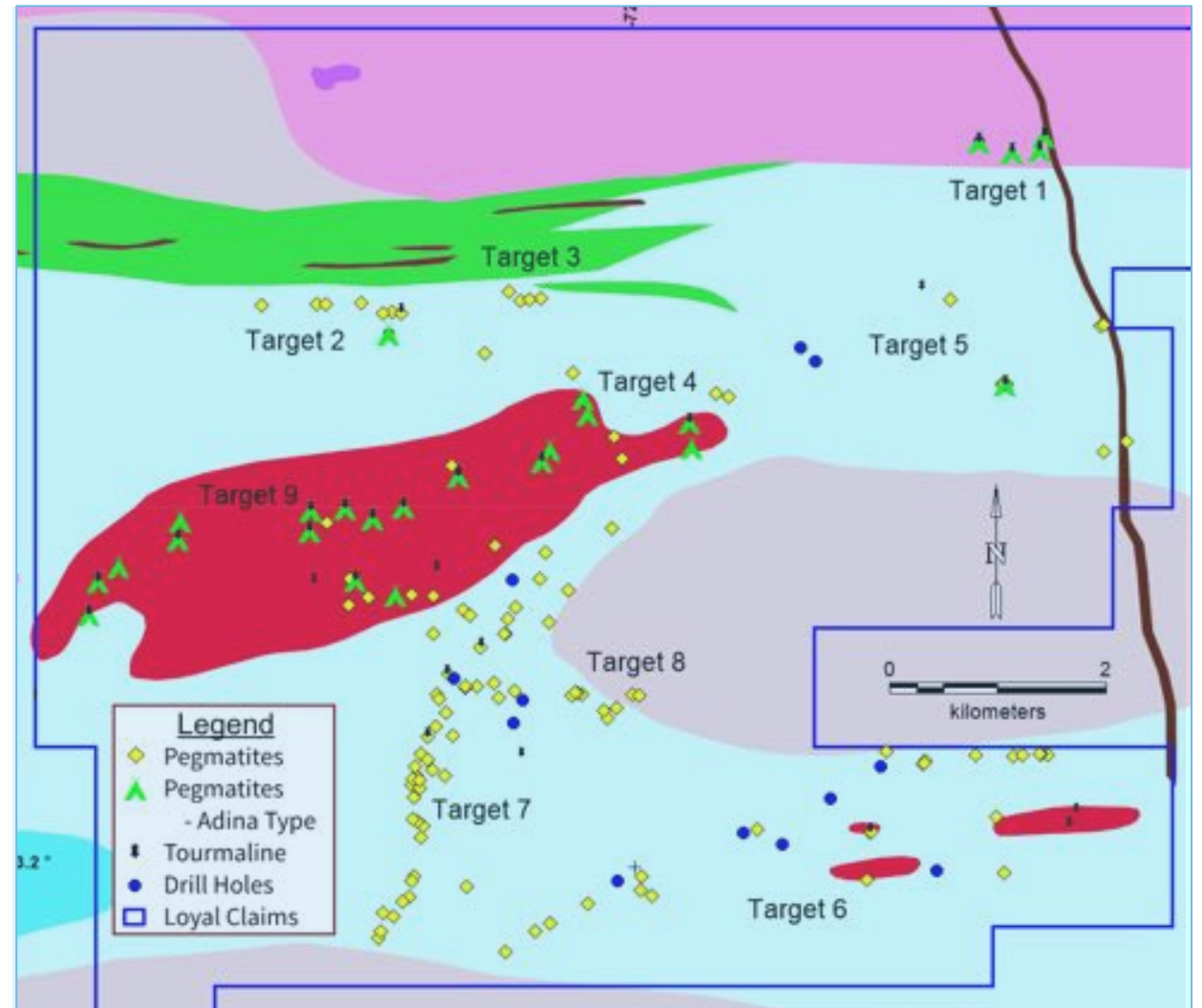
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TRIESTE LITHIUM PROJECT

INITIAL REVIEW OF HISTORICAL DATA

Encouraging Insights

- 123 pegmatite outcrop observations exist at the Trieste Lithium Project
- Multiple exploration targets identified
- Target 1: The pegmatite outcrop observations at the anomalous historical lithium assay (180ppm) site have the same classification as those identified at Winsome Resource's (ASX: WRI) Adina Project



TRIESTE LITHIUM PROJECT

TESTING OF PEGMATITES FOUND IN HISTORICAL DRILL CORE INSIGHTS

- Trieste has never been explored for lithium
- Historical drilling targeted gold / base metal sulphide conductors identified by EM and IP surveys
- Pegmatites were observed in all 13 historical drill core logs and photos with a combined total of 274m of pegmatites intercepted

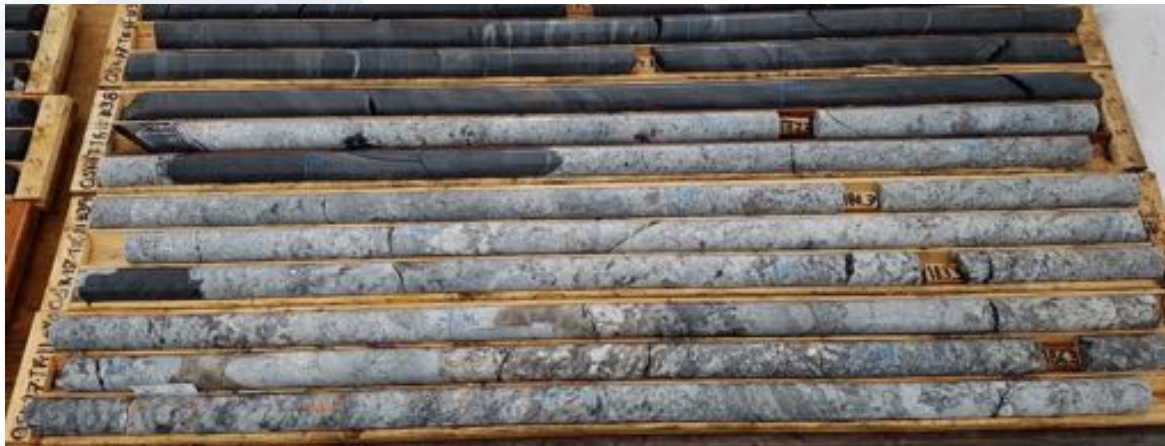


Image 1 - Historical core hole OSK-TR-17-011, Trays B37-40 with pegmatite interval

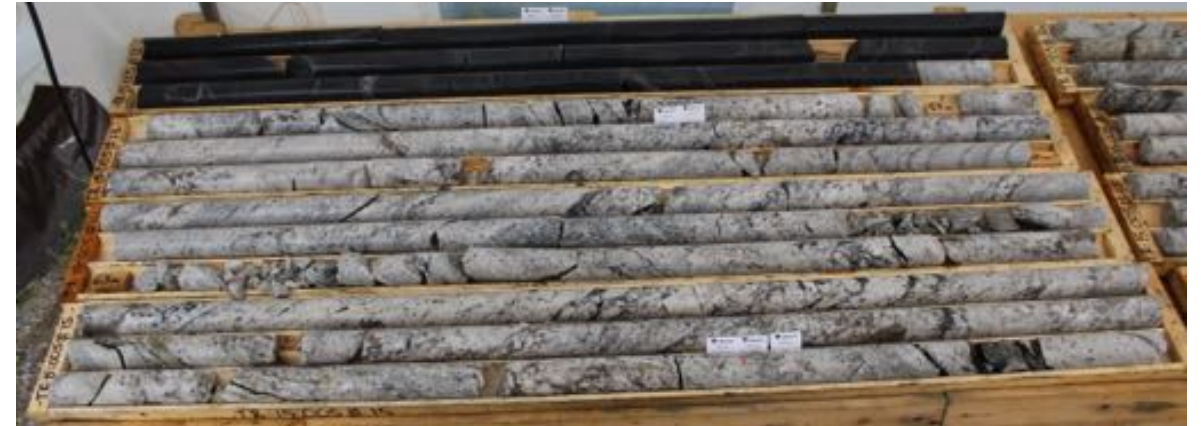


Image 2 - Historical core hole TR-15-005 Trays B13 to B15 with pegmatite interval.



Image 3 - Historical core hole TR-15-005 Trays B16 to B19 with pegmatite interval.

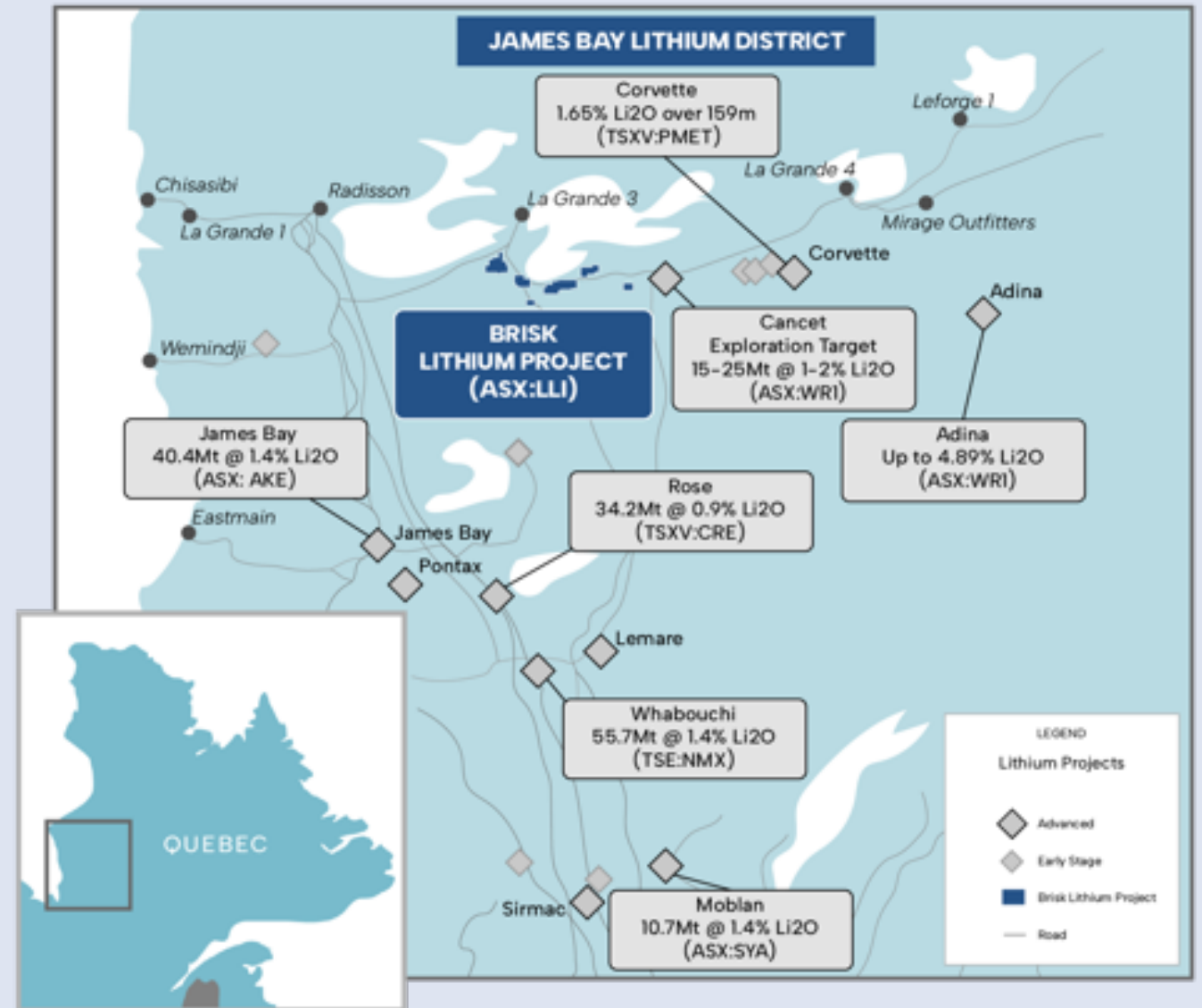
BRISK LITHIUM PROJECT
JAMES BAY LITHIUM DISTRICT
QUEBEC, CANADA

BRISK LITHIUM PROJECT

JAMES BAY LITHIUM DISTRICT

Six prospects over 98.5km² host to several known pegmatite outcrops

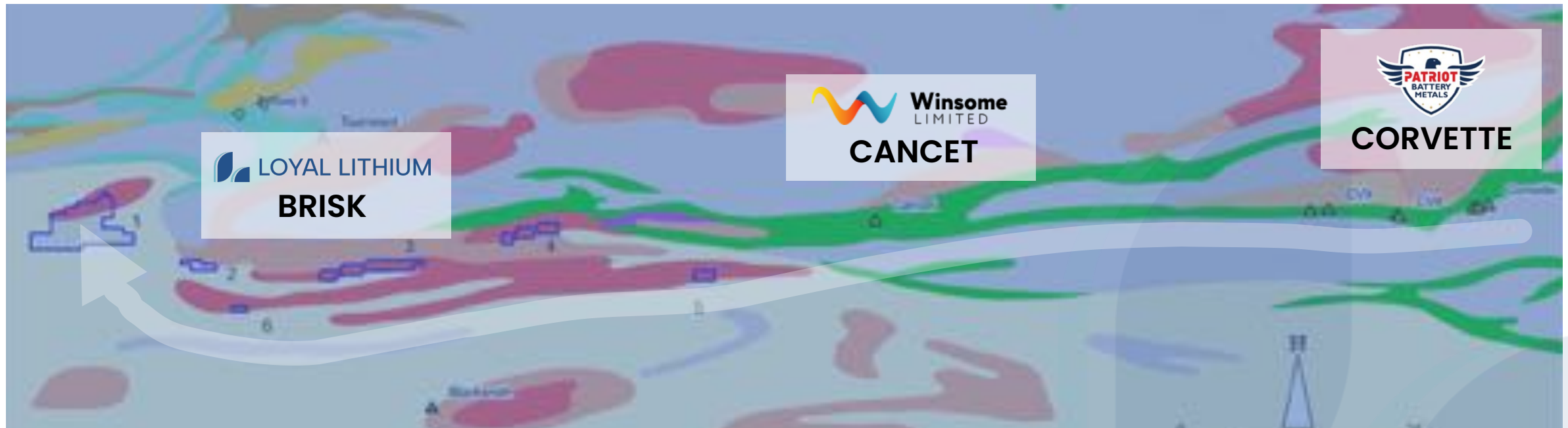
- ✓ **Hard Rock Capital**
(of North America)
- ✓ **In-Country Geo Partner**
(DG Resource Management)
- ✓ **Downstream Battery Corridor**
(demand at doorstep)



BRISK LITHIUM PROJECT

SIX PROSPECTS – 98.5km²

- Brisk Lithium Project is located due west of Winsome Resources' Cancet Project, on trend with Cancet and Corvette.
- Located within close proximity to the La Grande Complex (hydroelectric) and associated infrastructure, including the all-weather Trans-Taiga road.



0 Kilometres 25

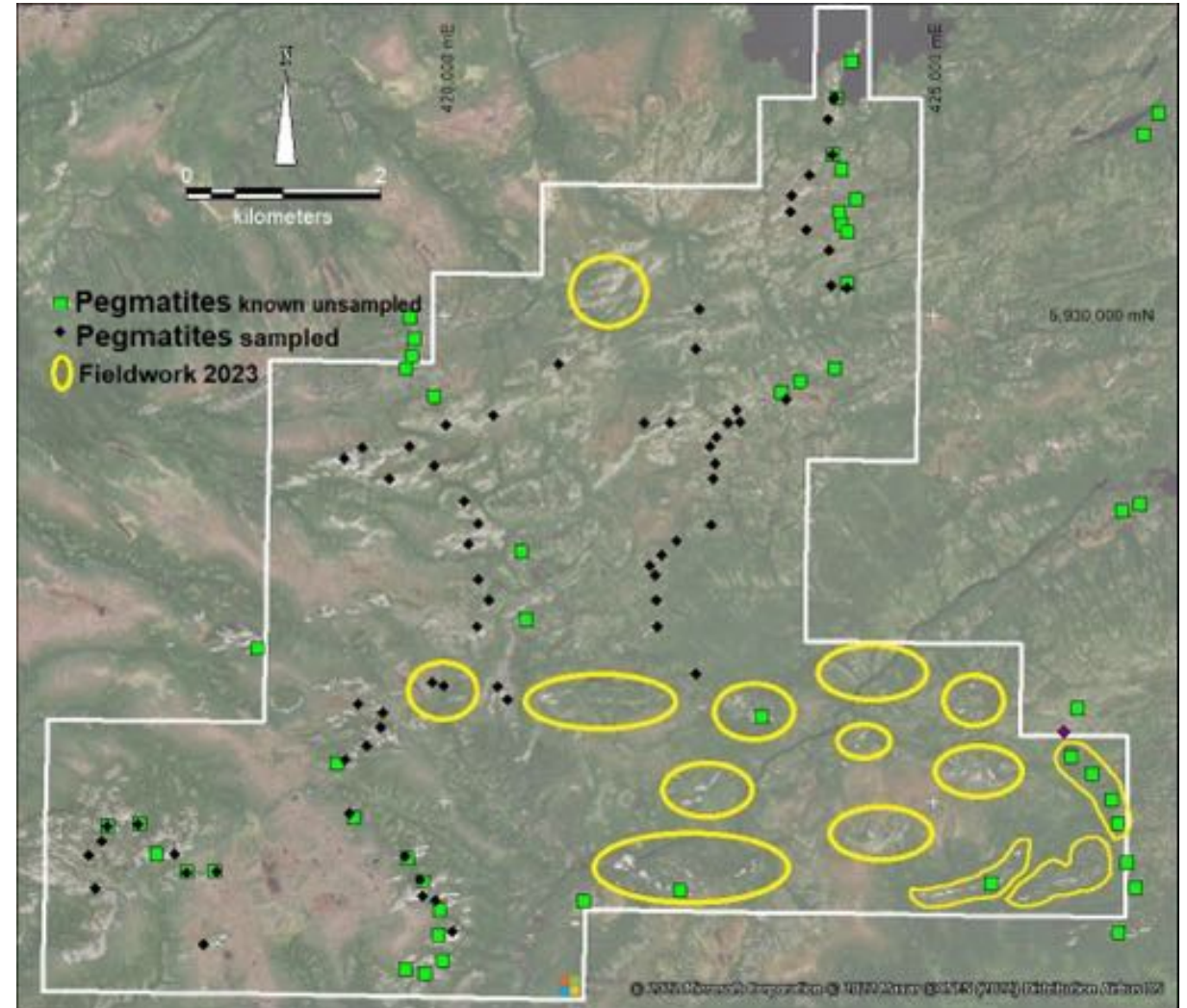
BRISK LITHIUM PROJECT

INAUGURAL EXPLORATION PROGRAM

One day was assigned to each of the 6 areas to traverse the initially identified targets on foot, collect rock chips (every ~1km) and conduct a high-level geological assessment

Highlights

- More pegmatite outcrops than originally anticipated at Area 1
- Area 1 & Area 2 considered prospective for lithium, with further field work recommended
- Multiple samples containing highly fractionated pegmatites with indicator mineralogy (anomalous Lithium, Tantalum, Niobium, Beryllium and Bismuth)



BRISK LITHIUM PROJECT

2023 WORK PLAN DETERMINED

Complete field mapping in Areas 1, 2 & 3

- Conduct field mapping programs on the southeast of Area 1 and prospective portions of Areas 2 and Area 3 that were not covered in the 6-day inaugural field program

Area 1 additional detailed field traverses

- With the support of the inaugural field program geochemical results, additional traverses will be planned for the most prospective pegmatites



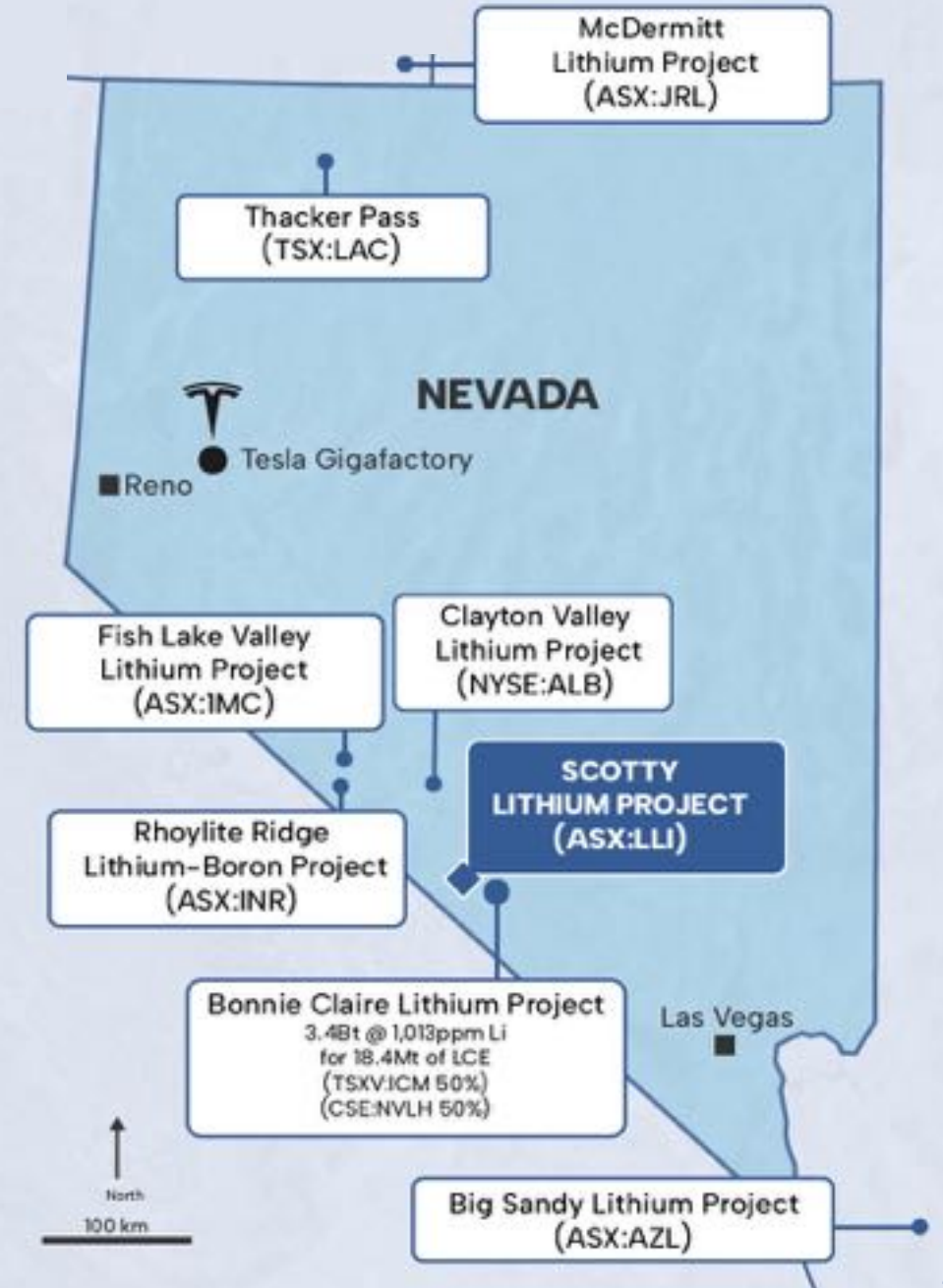
SCOTTY LITHIUM PROJECT
NEVADA, USA



NEVADA LITHIUM IS ALIVE

A TIER-1 JURISDICTION

- Surrounded by multiple brine and sediment projects with significant market caps including:
 - Ioneer's Rhyolite Ridge Lithium-Boron Project
 - Albermarle's Silver Peak Lithium Project
- Adjacent to Bonnie Claire Lithium Project with a 18.4Mt of LCE resource from 9 drill holes
- President Biden's Inflation Reduction Act
 - Enforces a minimum level of locally sourced raw materials from USA*

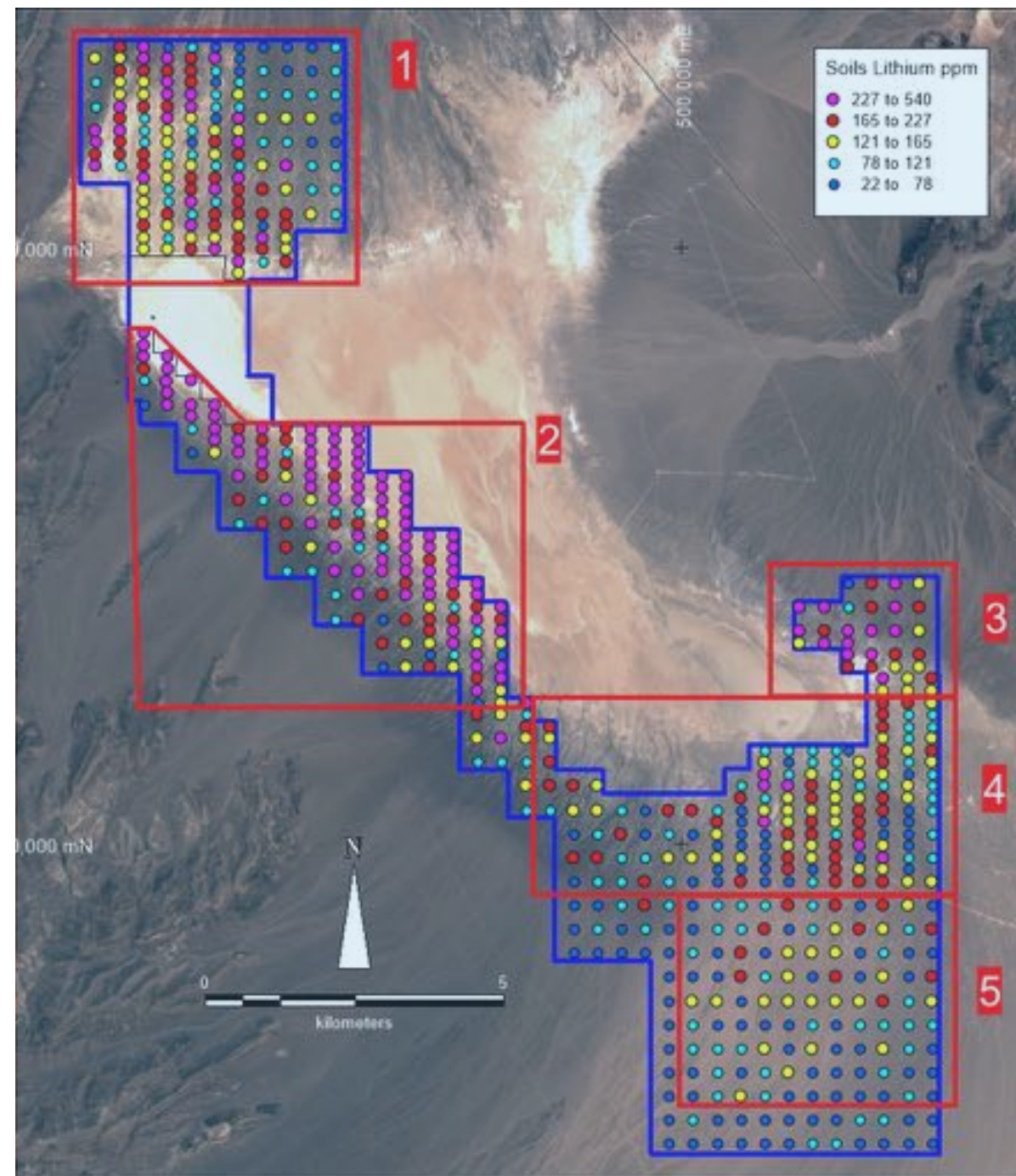


(*) See Appendix for details on Inflation Reduction Act.

SCOTTY LITHIUM PROJECT

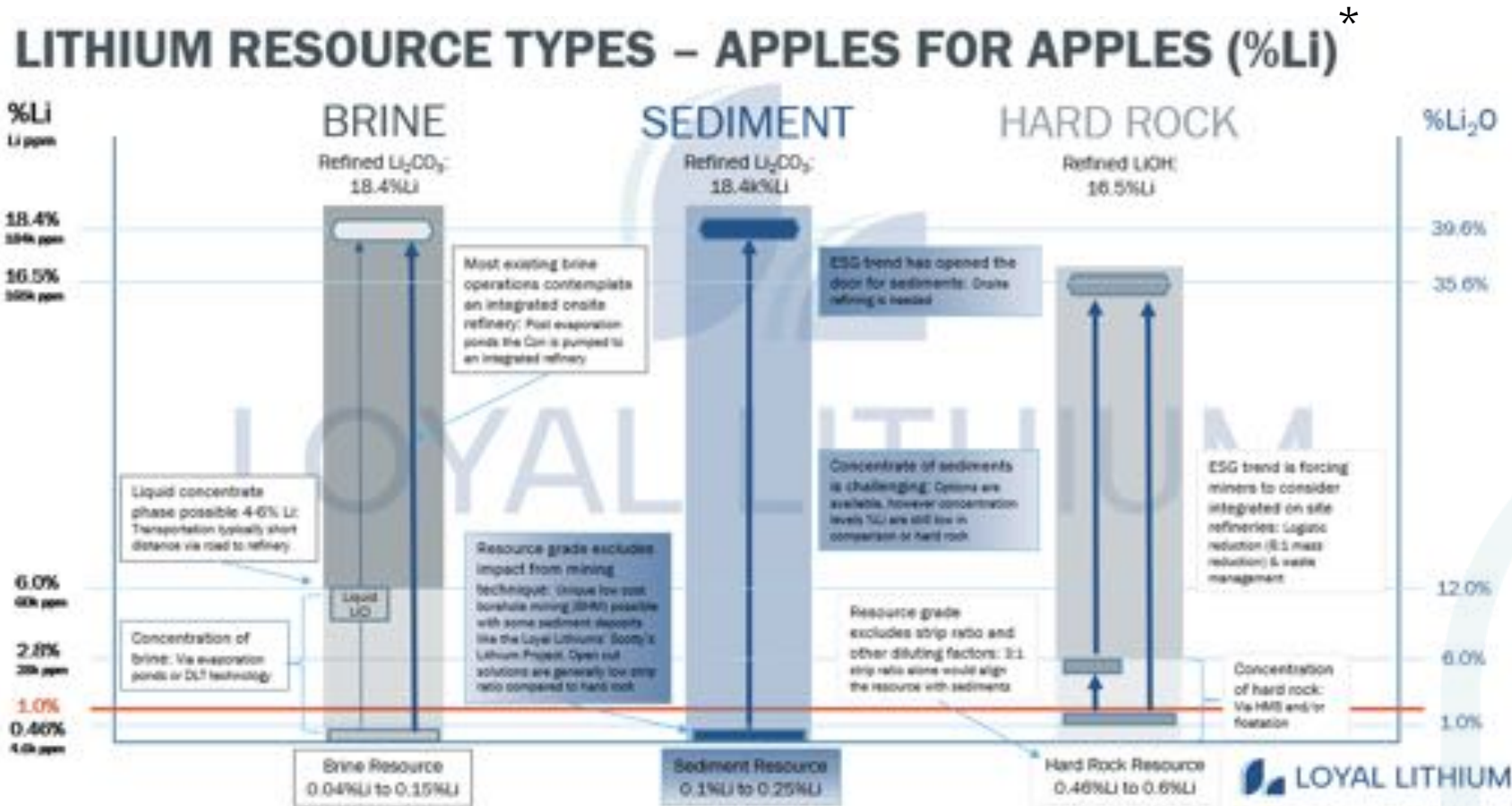
EXPLORATION WORK ADVANCING

- ✓ **Extensive soils program completed**
 - 540ppm peak Lithium¹ recorded
- ✓ **In-Country geological partner engaged**
 - Dahrouge Geological Consulting
- ✓ **Drilling program optimised**
 - Via historical data and 3D basin model
- ✓ **Regulator drilling approvals submitted**
 - August 2022
- ✓ **Drilling Environmental survey completed**
 - Report Submitted
- ✓ **MT geophysics survey commenced**
 - Completion late December 2022
- ✓ **Drill contractors short listed**
 - Start date anticipated within Q1 2023



SCOTTY LITHIUM PROJECT

SEDIMENTS ARE IN PLAN



Bonnie Claire Mineral Resource Estimate

"Bonnie Claire appears to be a new type of deposit that has lithium compounds like lithium carbonate and lithium salts deposited within the fine grain clay, silt, and sand pore space. Although most of the sediment hosted lithium in the literature occurs in clays, it does not at Bonnie Claire."

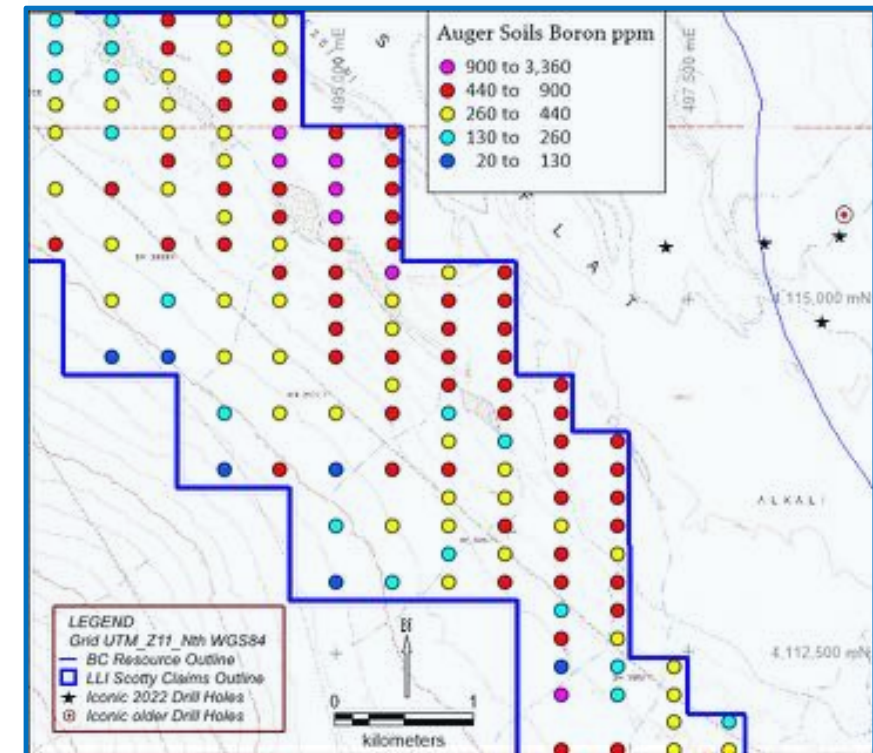
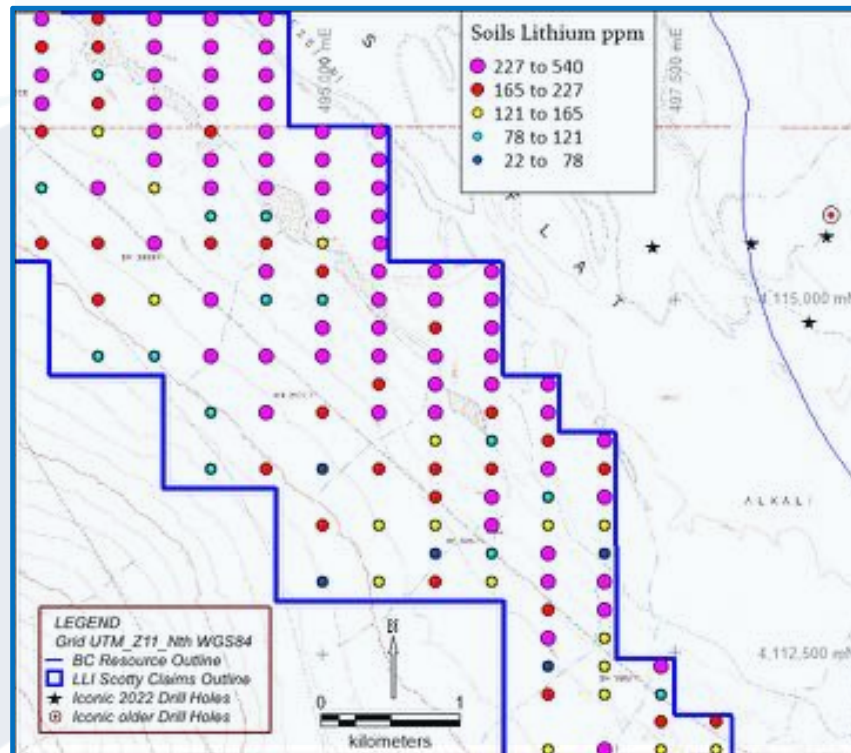
(*) See Appendix for Lithium Resource Types - Takeaways

SCOTTY LITHIUM PROJECT

LITHIUM-BORON POTENTIAL

- Strong lithium-boron results reported 4km east of LLI's Scotty Target 2 on the Bonnie Claire Project
 - 0.59" assays to a maximum of 5,570ppm Lithium and >10,000ppm Boron².
- Scotty Target 2 soils also shows anomalous lithium-boron assays results.

TARGET 2 SOIL ASSAY RESULTS				
LITHIUM				BORON
Samples >200ppm Li	Samples >264ppm Li	Max Li ppm	Area >165ppm Li (km ²)	Max B ppm
99	61	448	10.0	3,360



2023 STRATEGIC BUSINESS PLAN

A THREE PRONGED APPROACH

1. Transition

We are transitioning to a lithium led battery minerals and technology company

Invest – Divest – Rebrand

2. Educate

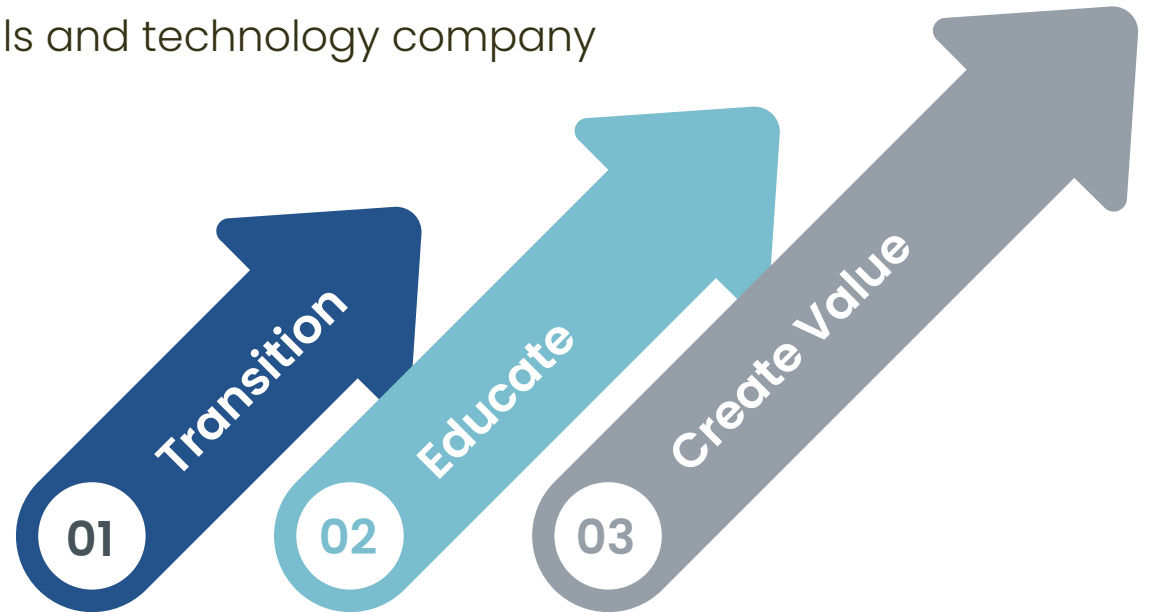
We believe the lithium supply chain is sub optimal and we plan to educate investors on a better way

History – Options – Trends

3. Create Value

We will provide unique value propositions to our partners and shareholders

Find – Define – Mine – Refine



THE FUNDAMENTALS THAT UNDERPIN OUR STRATEGY

People/Partners: Build a team of industry professionals and like-minded partners to achieve objectives

Process: For each asset consider, in advance, the appropriate development phases with respect to ESG trends and supply chain

Technology: The lithium industry must adopt emerging technology to satisfy demands and compete long term

IN COUNTRY GEOLOGICAL PARTNERS



DG Resource Management are geological project generators with a unique perspective on mineral exploration that has resulted in numerous grass roots discoveries across multiple commodities, including lithium, REE's, uranium and specialty metals.

DG Resource Management identified, acquired and vended the potentially world-class Corvette Lithium Project for Patriot Battery Metals.

The Brisk Lithium Project was generated using similar methods which led to the identification of the Corvette Project.



LITHIUM EXPLORATION

NEWSFLOW AHEAD

Q1 2023

Q2 2023

Q3 2023

ONGOING

Corporate Activity

- Value via Strategic Business Plan

Trieste Lithium Project (Canada)

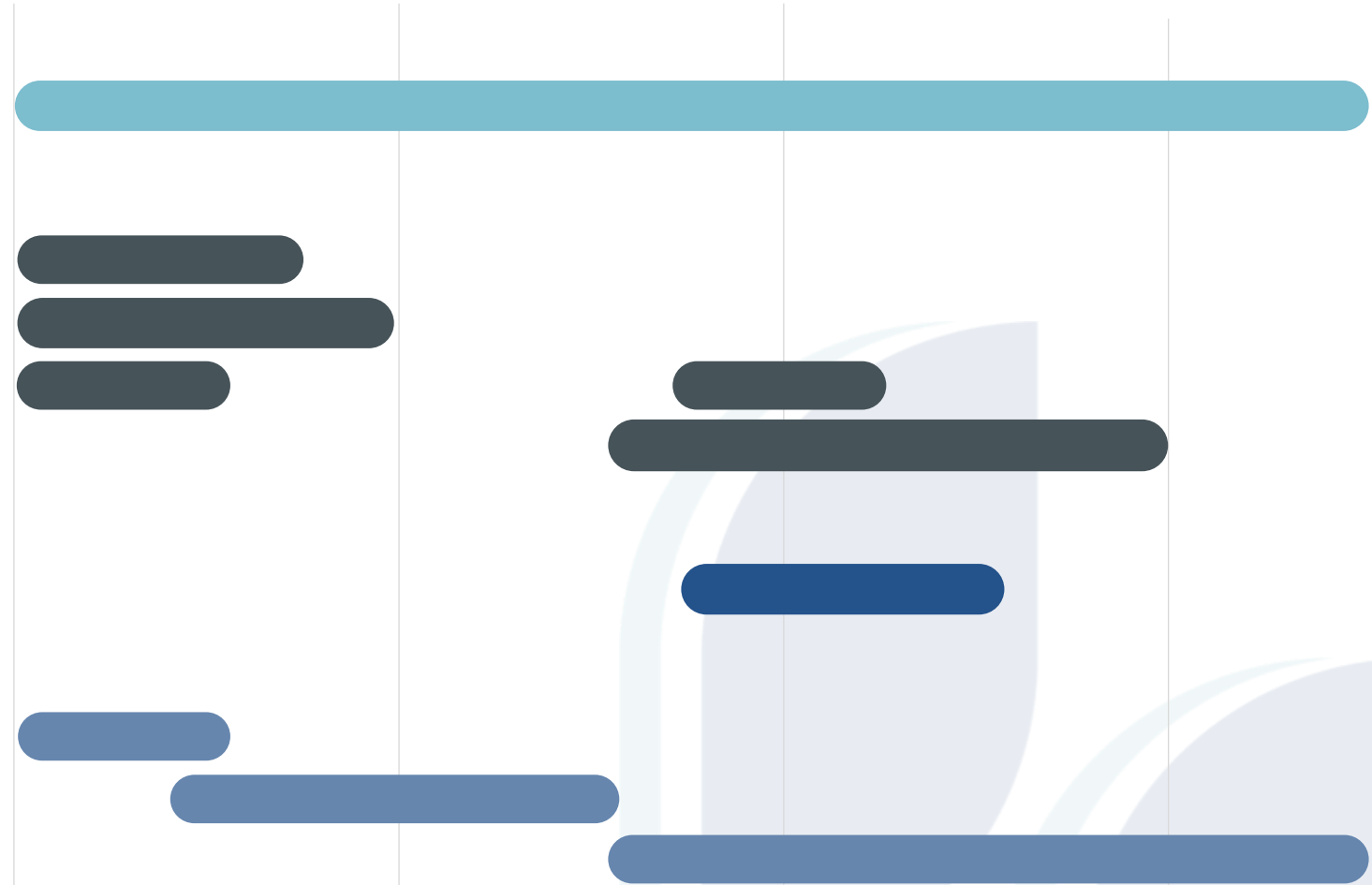
- Historical Data Review
- Testing of Pegmatites in Historical Core
- Satellite Data
- Field Mapping Exercise

Brisk Lithium Project (Canada)

- Targeted Field Mapping

Scotty Lithium Project (USA)

- MT Survey Results
- Maiden Drilling Program
- Geological & Metallurgical Test Work



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APPENDIX

FAVOURABLE HOST ROCK CONDITIONS

The Archean Age 2640–2660Ma

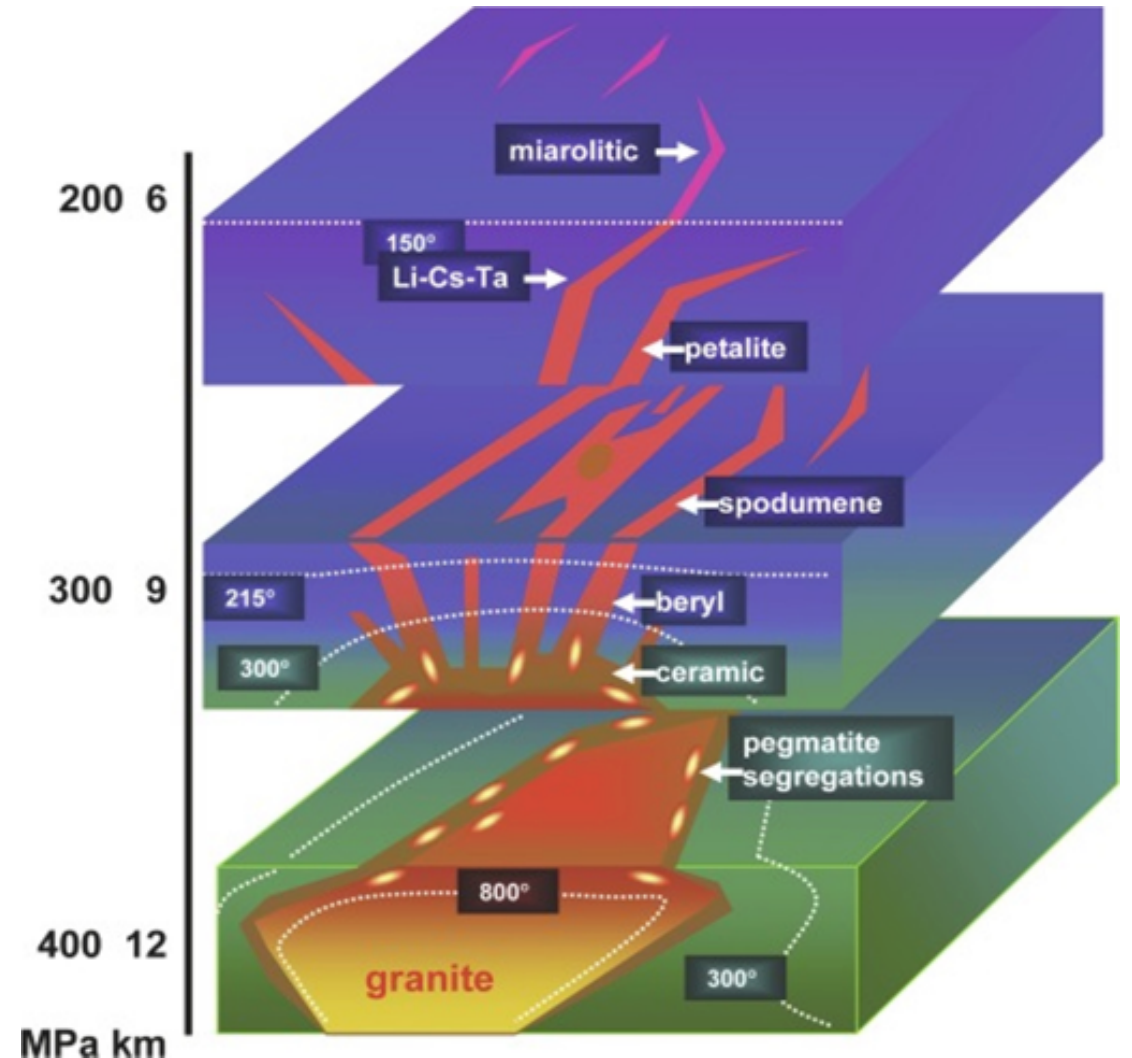
The Creation of Pegmatites

Brisk has 2687/2690Ma host rocks. The intrusions where pegmatites are derived take 10s Ma to solidify allowing enough time for incompatible elements, like Lithium, to concentrate and migrate into intrusions.

Tectonic Intrusions

Pegmatites flow into the gaps

Brisk has many occurrences of complex multiple intrusions which could support the concentration of incompatible elements like Lithium. Pegmatites form late in tectonic history and exploit pre-existing structures i.e they get squeezed into cracks over time.



The Inflation Reduction Act conditions the two-part credits on a certain percentage of materials used in a vehicle's batteries being extracted, processed, manufactured and/or assembled in the US or in certain US-allied countries for example Australia & Canada.

- To qualify for the first \$3,750 credit, a percentage of the value of applicable critical minerals contained in a vehicle's batteries must be extracted or processed in the US or in a country with which the US has a free trade agreement or must have been recycled in North America. Applicable percentages increase from 40 percent prior to 2024, to 80 percent after 2026. Qualifying critical minerals include aluminium, cobalt, lithium, nickel, and graphite, among others.
- To qualify for the second \$3,750 credit, a certain percentage of the value of the battery components in an EV must be manufactured or assembled in North America; applicable percentages increase from 50 percent prior to 2024 to 100 percent after 2028.
- Further, after calendar year 2024, a clean vehicle will not qualify for the tax credit if it contains any critical minerals that were "extracted, processed, or recycled by a foreign entity of concern" – including companies owned by, controlled by or subject to the jurisdiction of the government of the People's Republic of China.
- After December 31, 2023, a vehicle may not qualify for the credit if any "components" contained in its battery are "manufactured or assembled by a foreign entity of concern".

APPENDIX

LITHIUM RESOURCE TYPES – TAKE AWAYS

Apples for Apples



Lithium resources are often quoted with different metrics, due to the differing in-situ forms:

- Brine = %Li or ppm
- Sediment = %Li or ppm
- Hard Rock = %Li₂O

%Li is 46% of the quoted %Li₂O (Lithium Oxide) .

Further consideration must be given to the mining, concentration and extraction technique. E.g. strip ratio, ore dilution and recoveries.

All Low In-situ %Li



The 3 main lithium resource types are created by magma formations – directly or indirectly.

The level of magma exposure has defined the resource type and in turn the level of energy and process complexity to extract the lithium.

Regardless, all resource types have very low in-situ grades (all below 1% Li) and therefore require refining in order to satisfy the market.

Each resource type has unique mining and refining pros and cons

All 3 are in Play



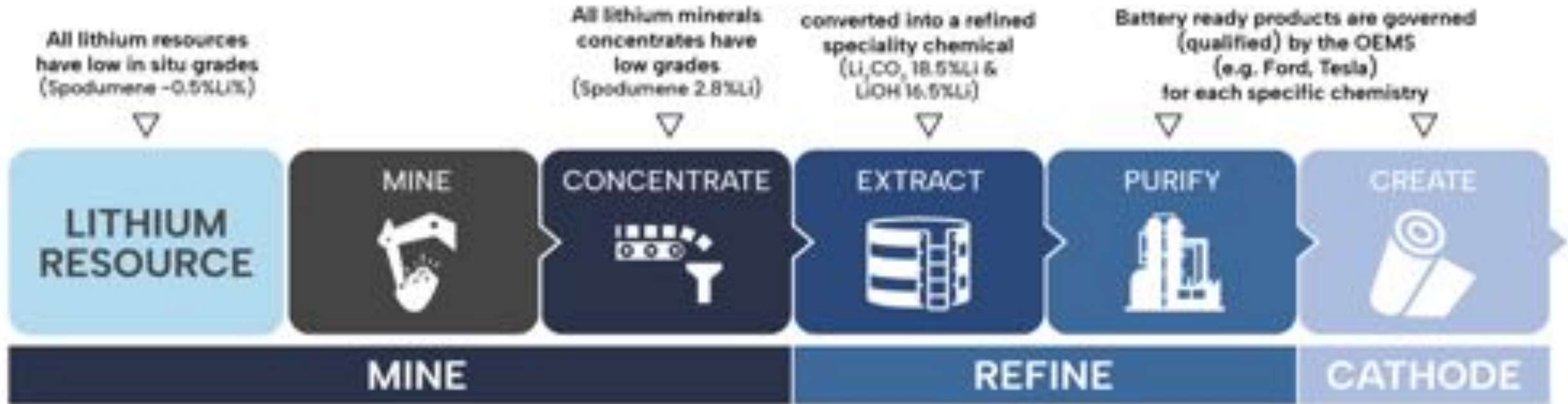
Recent market trends puts all resource types into play:

- Demand is strong: Forecast to continue.
- Investment appetite is growing: Large scale integrated projects now palatable.
- ESG Focus: Low energy processes, low impact mining, reduced logistics, waste management.
- Geopolitical: Regional bias – recently US legislation enforces a minimum level of locally sourced raw materials within the North American U.S battery supply chain.

APPENDIX

LITHIUM SUPPLY CHAIN: WE KNOW IT AND KNOW WHERE TO DRAW THE LINE

Our aim is to capture as much value as possible without meddling with the evolving OEM specifications (purity and cathode chemistry)



Lithium is a technical mineral and the supply chain is unoptimised but evolving:

Current players, processes and economics must be considered against a backdrop of history, ESG trends and emerging technology.

Currently refineries produce battery grade purity. Emerging trend is a midstream product – high concentration but lower purity level.