



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

**Investor Presentation**

**NOVEMBER 2022**

**ASX:LLI**

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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 and authorised for release by the Board of Loyal Lithium Limited.*

# 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.

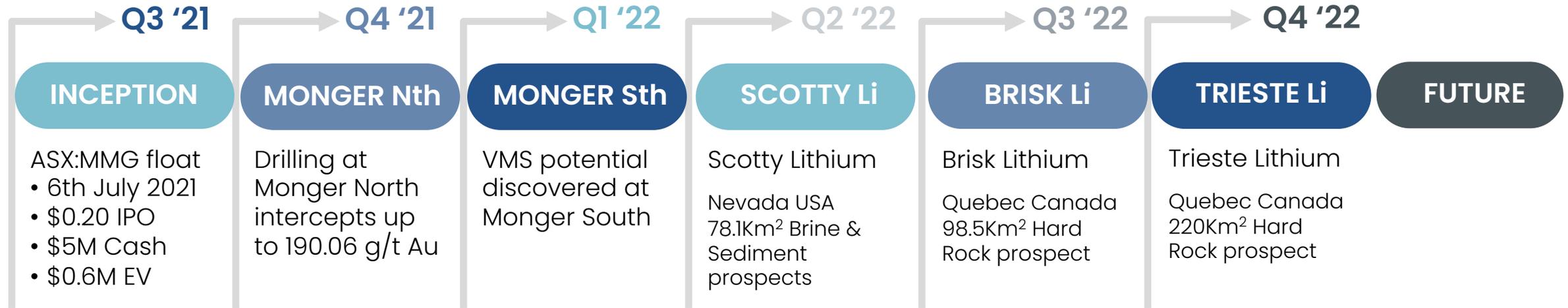
**LITHIUM IS CHANGING THE  
WAY WE TALK, DRIVE & LIVE  
THIS IS JUST THE BEGINNING**

 **LOYAL LITHIUM**



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

# OUR JOURNEY

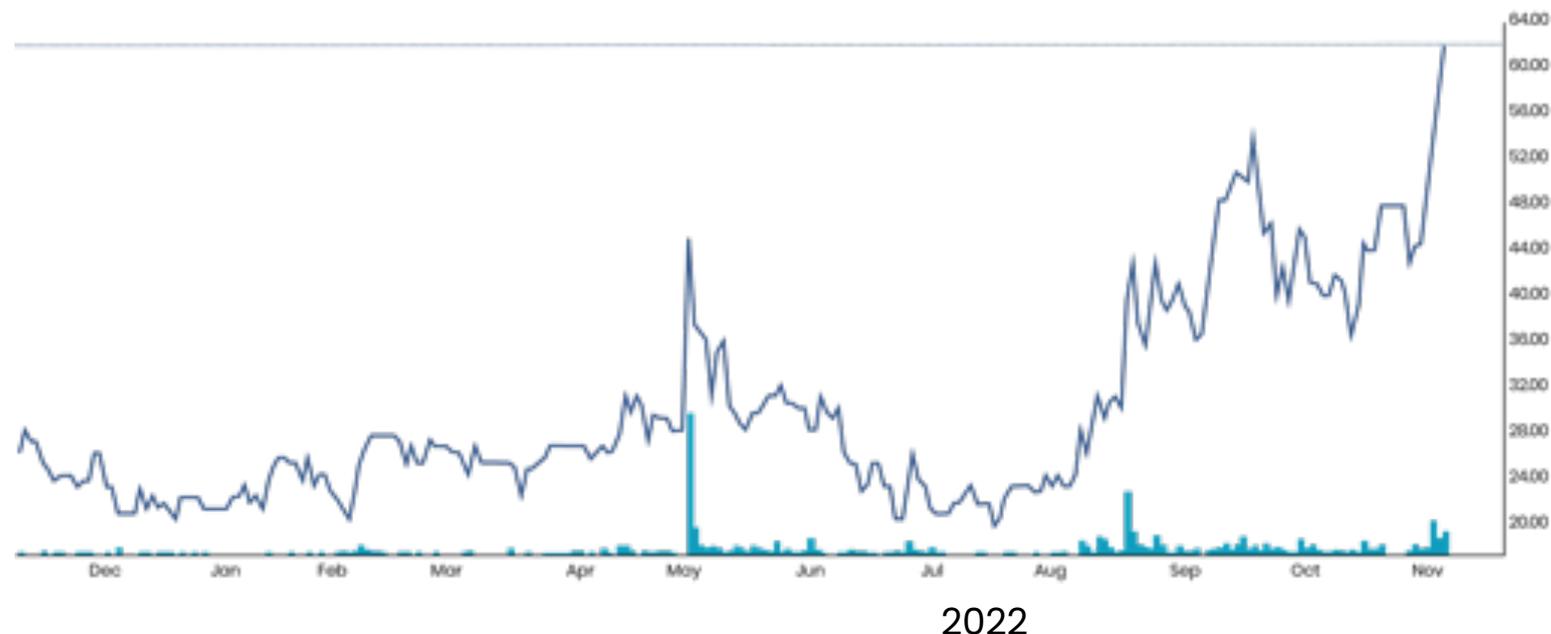


**“Since our IPO in July 2021, we have continued to achieve milestones with the acquisition of three highly prospective North American lithium assets defining our future direction. We plan to systematically advance these assets in parallel throughout 2023, creating value for our Loyal Lithium shareholders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

**Adam Ritchie, Chief Executive Officer**

# CORPORATE SNAPSHOT

ASX - 4 Nov 2022	LLI
Shares on Issue	49.7m
Share Price	\$0.625
Market Cap	\$31.0m
Cash (30 Sep '22)	\$3m
Cash (Oct '22 Raise)	+\$4.5m
Debt	Nil
Enterprise Value	\$26m
Top 20	52%

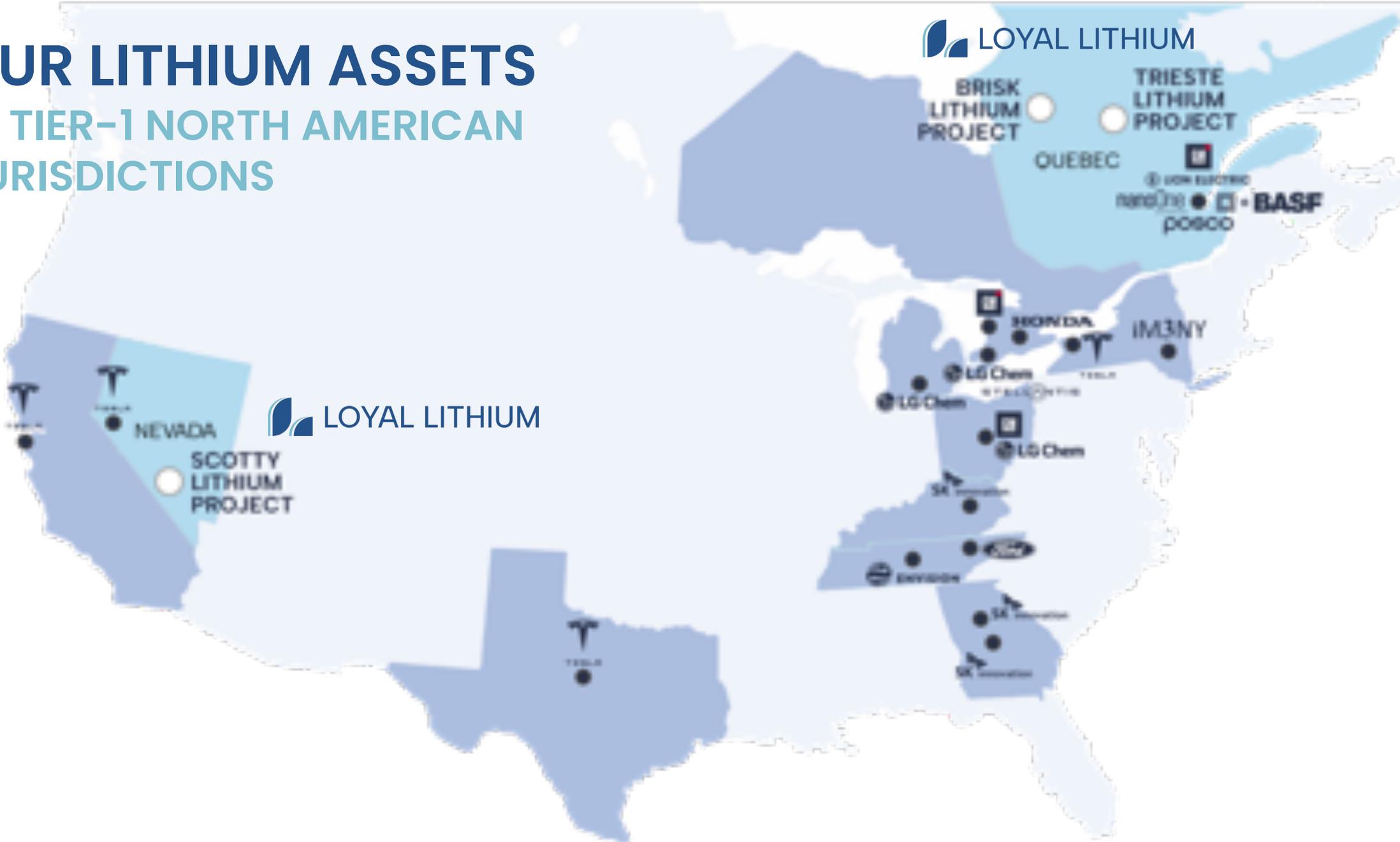


**"The change of company name to Loyal Lithium is a critical milestone for the Company, as it signifies our transition to a lithium-led battery minerals and technology company and our renewed focus on the exploration and development of our North American lithium assets.**

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

**Adam Ritchie, Chief Executive Officer**

# OUR LITHIUM ASSETS IN TIER-1 NORTH AMERICAN JURISDICTIONS



**TRIESTE LITHIUM PROJECT**  
**JAMES BAY LITHIUM DISTRICT**  
**QUEBEC, CANADA**



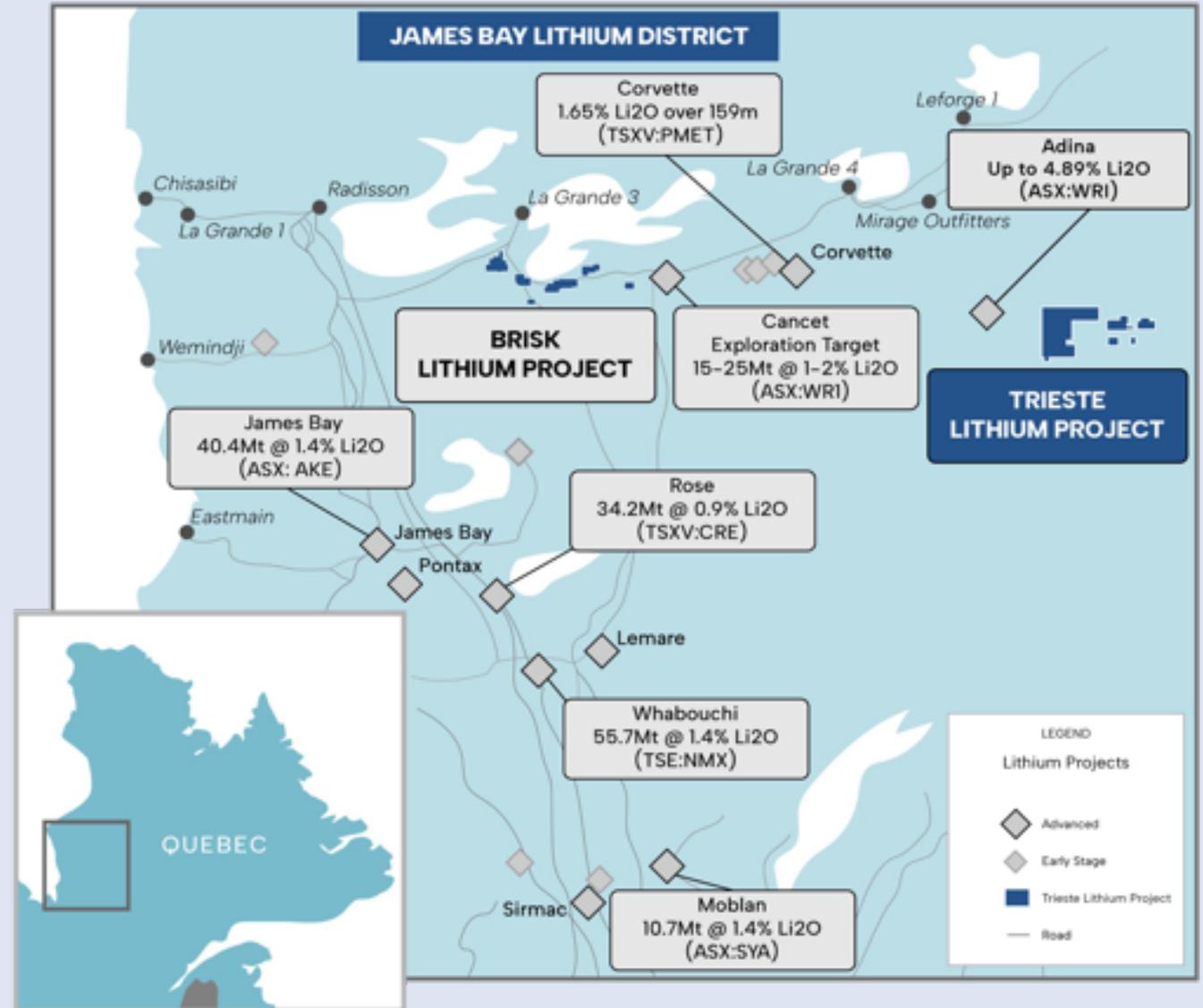
# TRIESTE LITHIUM PROJECT

## 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”

- ✓ **423 claims covering 220km<sup>2</sup>**
- ✓ **Several pegmatite outcrops**  
(Mapped indicator mineralogy)
- ✓ **Anomalous lithium assay (180ppm)**  
(Historical lithium assay via GSC\*)



\* 2019 Geological Survey of Canada (GSC) Sample Id: 2014059299; ICP 4-acid digest

# TRIESTE LITHIUM PROJECT

## FIVE PROSPECTS – 220km<sup>2</sup>

- Winsomes' Adina just 14km west of Trieste along Greenstone
  - Rock Chips returning high grade lithium assay results<sup>1</sup> of up to 4.89% Li<sub>2</sub>O
  - 160m of Pegmatite collectively intercepted<sup>2</sup>
- Project area captures the eastern extension of the Trieste Greenstone belt and its inferred eastern continuation
- Contains an anomalous historical lithium assay (180ppm) GSC\* among other mapped indicator mineralogy



0 Kilometres 10

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

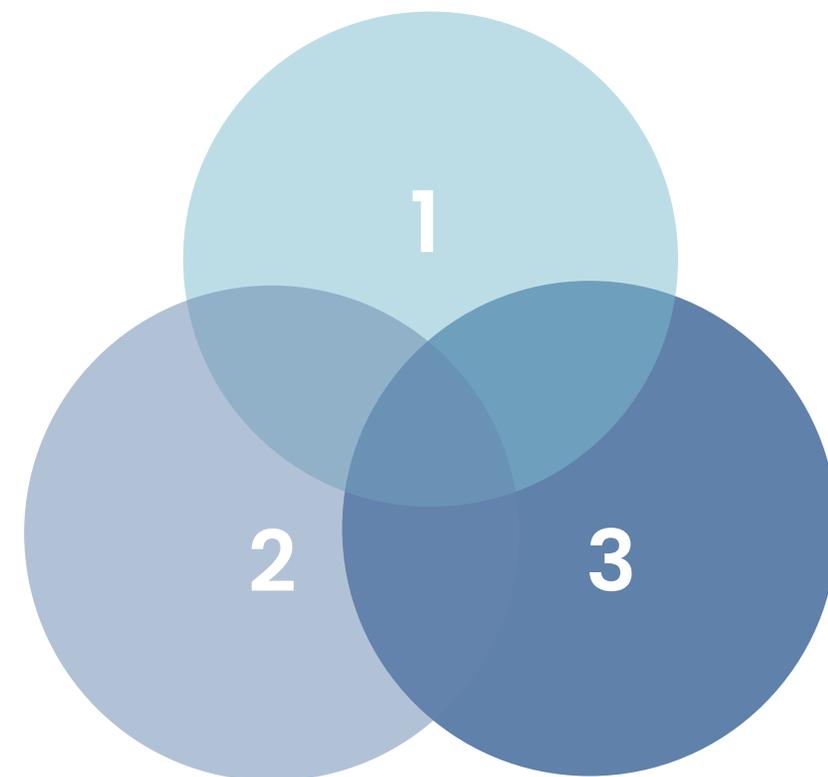
## TRI-PARTY IDENTIFICATION

- 1 Staking of Claims**

Staking was supported by an in-country Loyal Lithium project development consultant
- 2 Geological Assessment**

Regional identification/assessment conducted by two independent Loyal Lithium in-country geological partners
- 3 Three Package Vendors**

The Trieste Package was the consolidation of three independent Loyal Lithium vendors



# TRIESTE LITHIUM PROJECT

## NEXT STEPS – EXPLORATION OPTIONS

1

### Data Review

- Review of historical reports from gold and base metal explorers not exploring for lithium
- Deep dive into historical reports and vendor data for indicator minerals and spodumene to target areas in field geological surveys

2

### Satellite Data

- High-resolution satellite imagery to identify resistive pegmatite outcrops
- Hyperspectral pilot study data acquisition from recent satellites (5m spatial resolution 300 bands 10x info) to identify lithium and indicator minerals

3

### Field Mapping Exercise

- On ground prospecting of known and freshly identified targets
- Co-ordinated traversing
- Rock chip collection & description
- Mineral identification by spodumene and indicator mineral experts

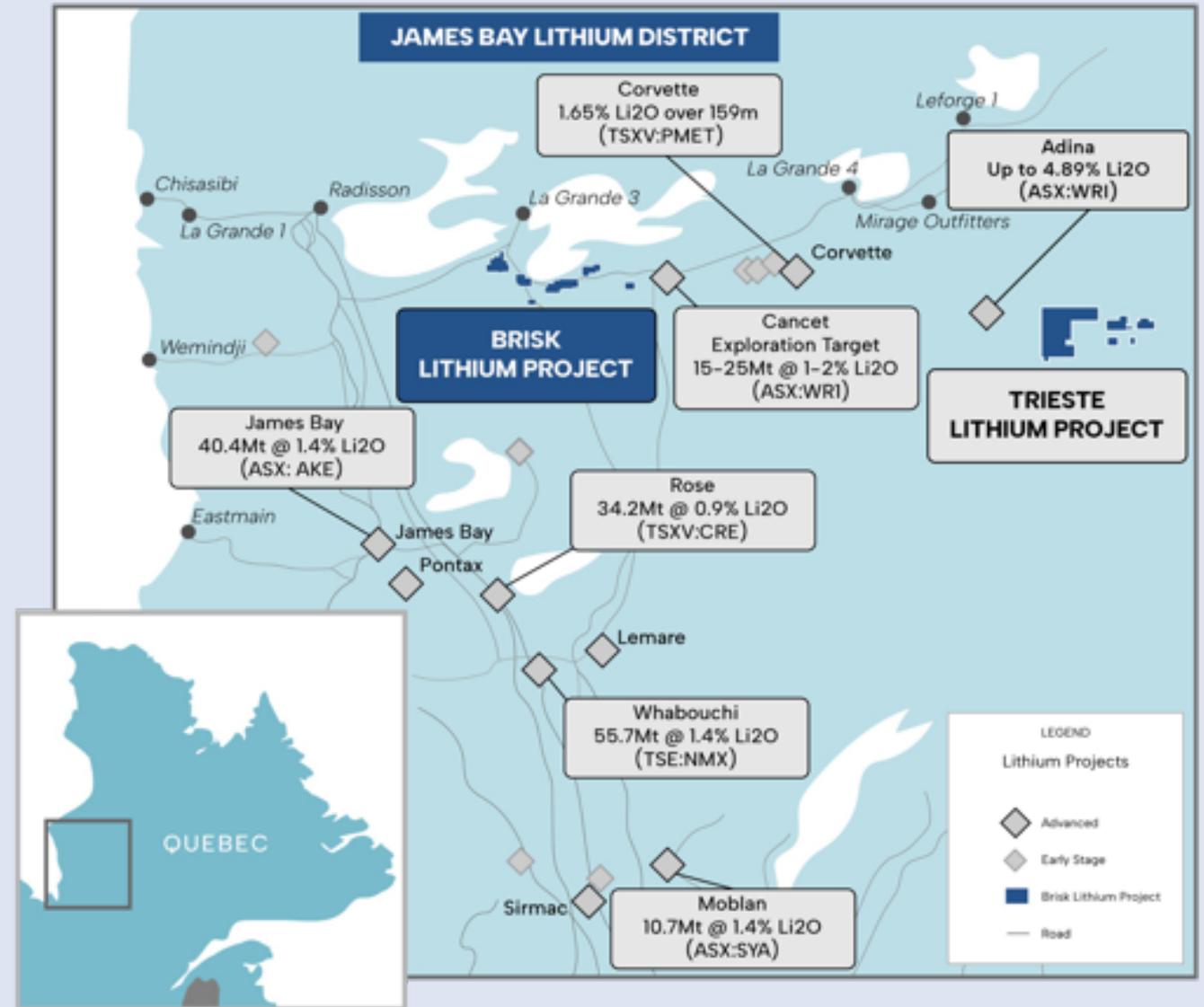
**BRISK LITHIUM PROJECT**  
**JAMES BAY LITHIUM DISTRICT**  
**QUEBEC, CANADA**

# BRISK LITHIUM PROJECT

## JAMES BAY LITHIUM DISTRICT

Six prospects over 98.5km<sup>2</sup> 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 – 98.5km<sup>2</sup>

- 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

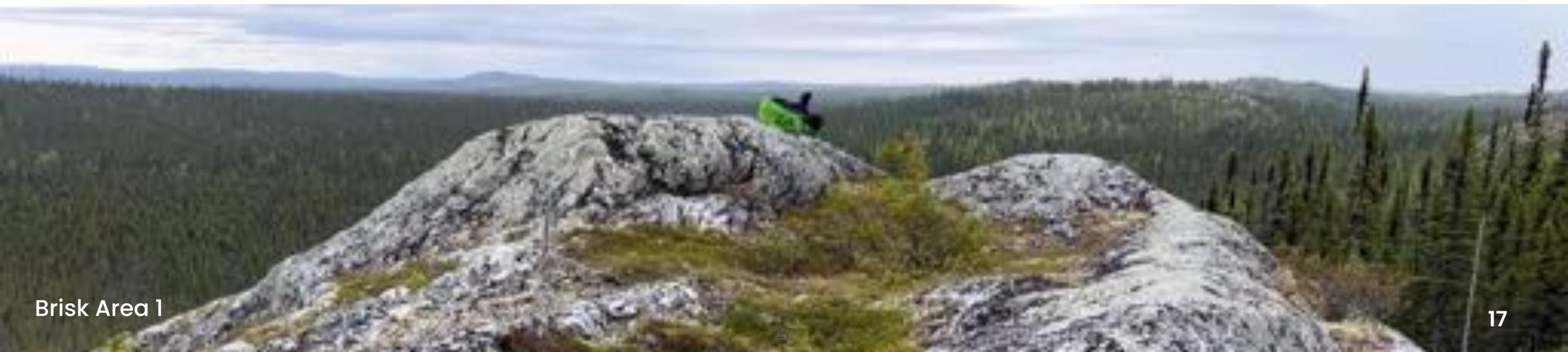
# IN COUNTRY GEOLOGICAL PARTNERS



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.

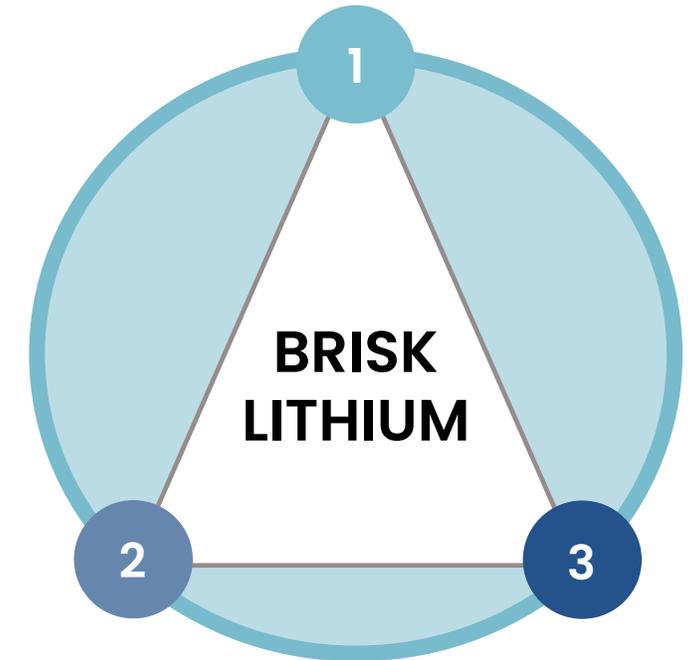
DG Resource Management identified, acquired and vended the potentially world-class Corvette Lithium Project for Patriot Battery Metals.

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



# BRISK LITHIUM – PROJECT IDENTIFICATION

- 1 Favorable Host Rock Conditions**  
Ideally aged granites with large structure/intrusions\*
- 2 Mapped Pegmatites**  
Quebec government mapped pegmatites in host rocks
- 3 Indicator Mineralogy**  
Appropriate indicator mineralogy of spodumene-bearing pegmatites



- 4 Local Knowledge**  
Regional and local geological mapping is immature and there is evidence of mapped mineralogy recently proven to be misclassified spodumene-bearing pegmatites

(\*) See appendix for further Insight into favourable host rock at Brisk

# BRISK LITHIUM

## INAUGURAL EXPLORATION PROJECTS



### Surface Exploration

- Low flying helicopter surface exploration
- Planned routes with landing targets to support ground prospecting
- Access remote areas and cover large areas



### Traversing on Foot

- On ground prospecting of known and freshly identified targets
- Co-ordinated traversing
- Rock chip collection
- Mineral identification by DG Geologists who are spodumene experts
- Structural geological assessment



### Geochemical Sampling

- Rock chip will undergo geochemical assaying
- Lithium, cesium, tantalum, beryllium, gallium, niobium, tin, rubidium, thallium typical LCT pegmatite enriched elements

**SCOTTY LITHIUM PROJECT**  
**NEVADA, USA**



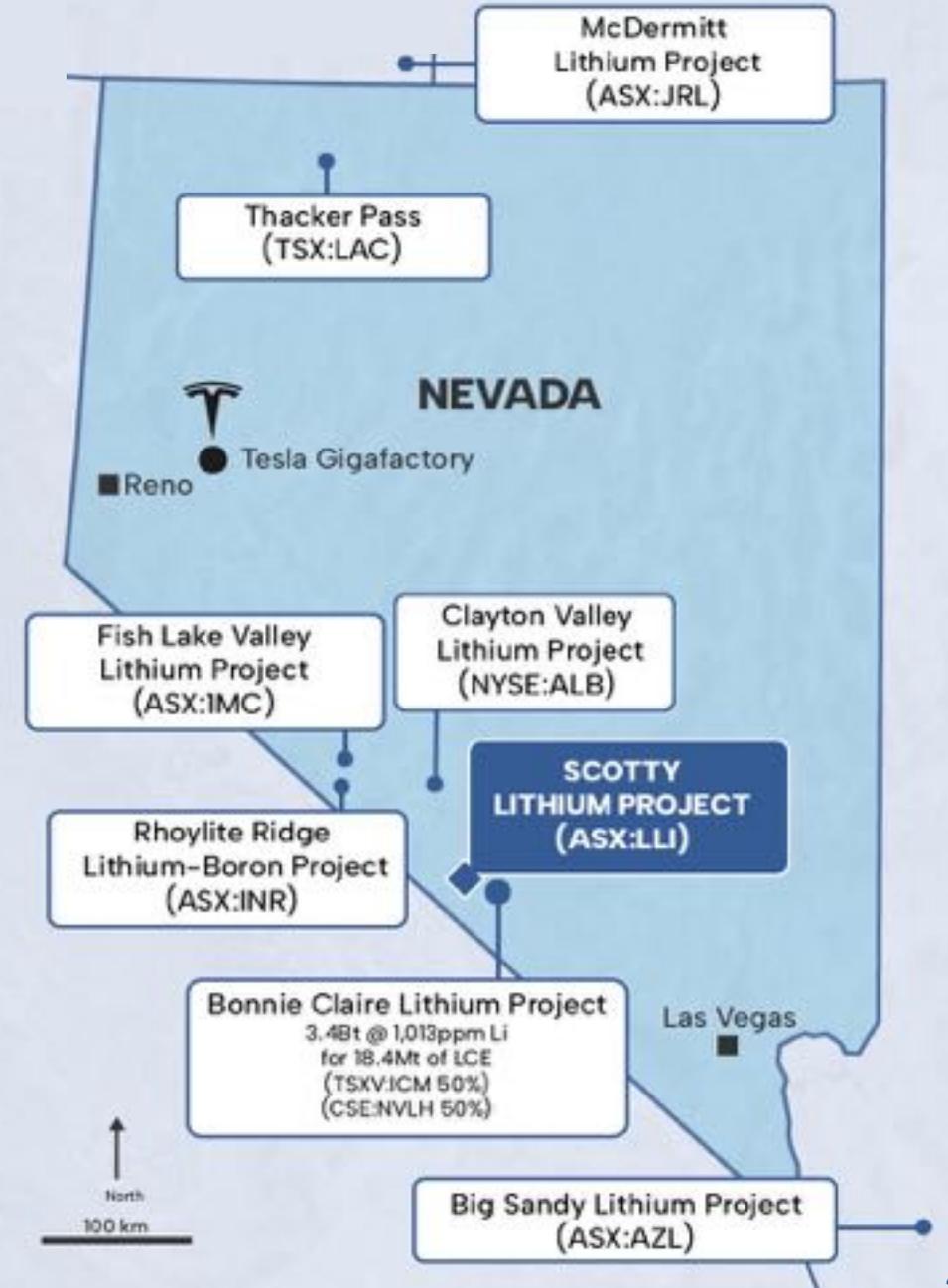
# NEVADA LITHIUM IS ALIVE

## A TIER-1 JURISDICTION

- Multiple brine and sediment projects with \$150m+ market cap
- Adjacent Bonnie Claire 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

## SOILS DEFINE TARGETS

Twin Prospects –Sediment & Brine

Strong soil assay results of up to 540ppm Li with defined target areas:

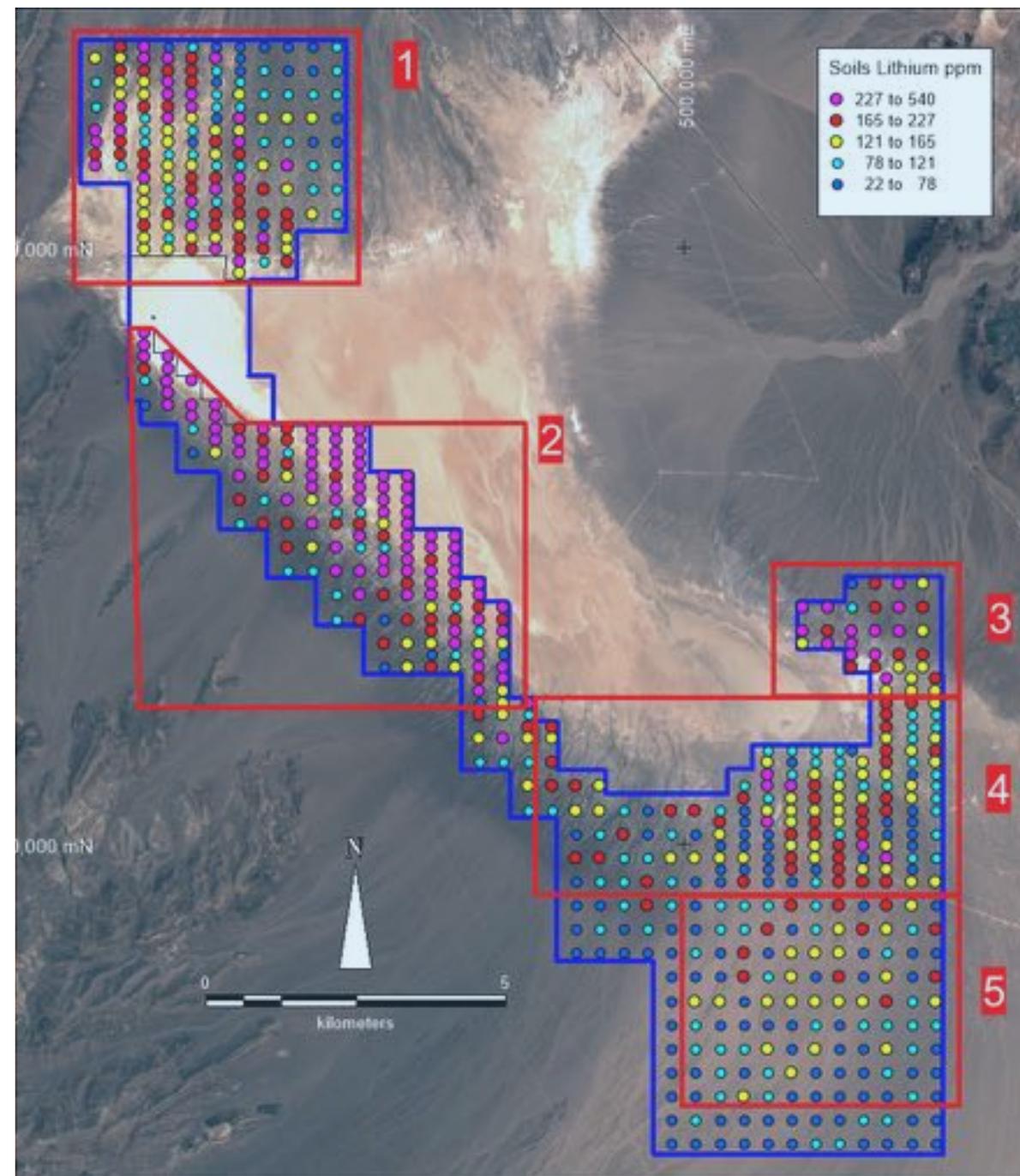
- 3 sediment target – Zones 1, 2 & 3
- 2 twin targets (sediment & brine) – Zones 4, 5

643 soils samples taken with:

- 177 samples (~27%) recording greater than 200ppm Li
- 89 samples (~14%) recording greater than 264ppm Li, the maximum recorded at the adjacent Bonnie Claire Lithium Deposit

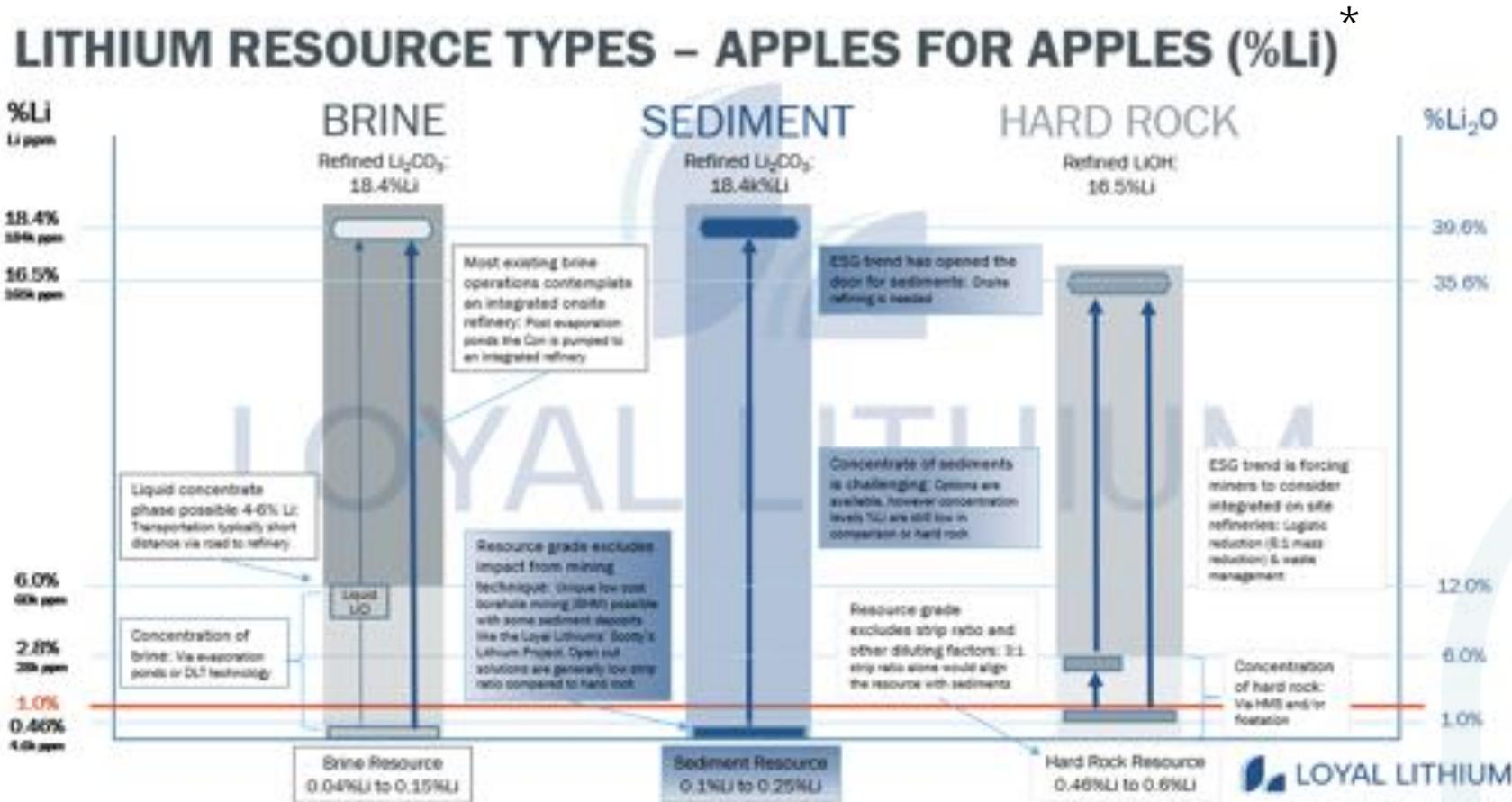
Soil geochemistry was used effectively in the discovery and delineation of the adjoining Bonnie Claire Lithium Deposit:

- Inferred resource 3.4Bt @ 1,013ppm Li for 18.3Mt of LCE resource from 9 drill holes



# SCOTTY LITHIUM PROJECT

## SEDIMENTS ARE IN PLAN

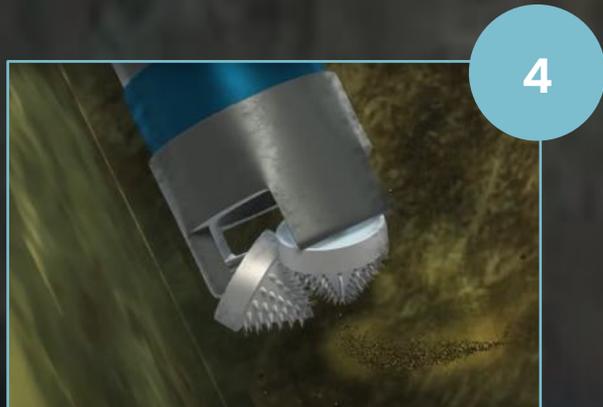
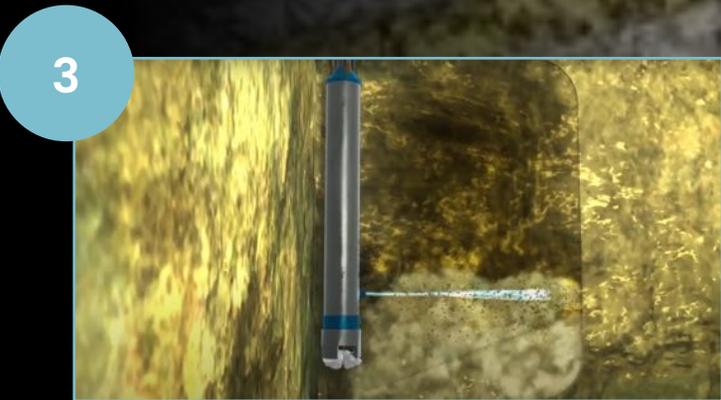


## Bonnie Claire Mineral Resource Estimate

"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 BORE HOLE MINING POTENTIAL



# 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

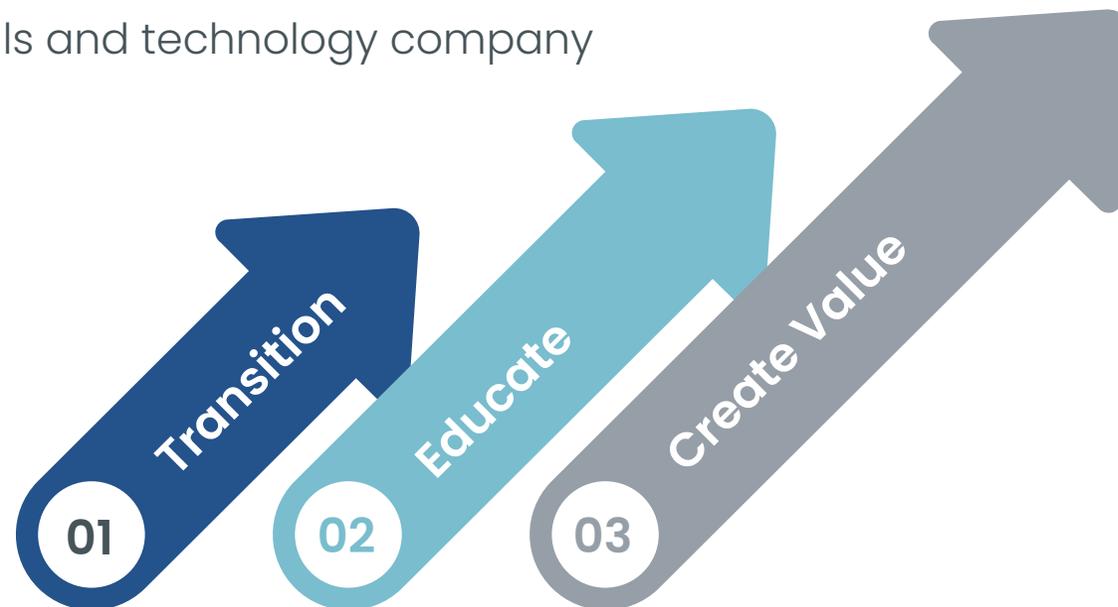
We believe the lithium supply chain is sub optimal and we plan to educate investors on a better way

**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

# TRANSITION TO LITHIUM

## SIGNIFICANT NEWSFLOW

### Corporate Activity

- Transition to Loyal Lithium
- Value via Strategic Business Plan

### Trieste Lithium Project (Canada)

- Data Review
- Satellite Data
- Field Mapping Exercise

### Brisk Lithium Project (Canada)

- Inaugural Exploration Report
- Targeted Exploration Planning

### Scotty Lithium Project (USA)

- MT Survey & Drilling Program
- Metallurgical Test Work



# CONTACT



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**ASX:LLI**

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# APPENDIX

## FAVOURABLE HOST ROCK CONDITIONS

### The Archean Age 2640–2660Ma

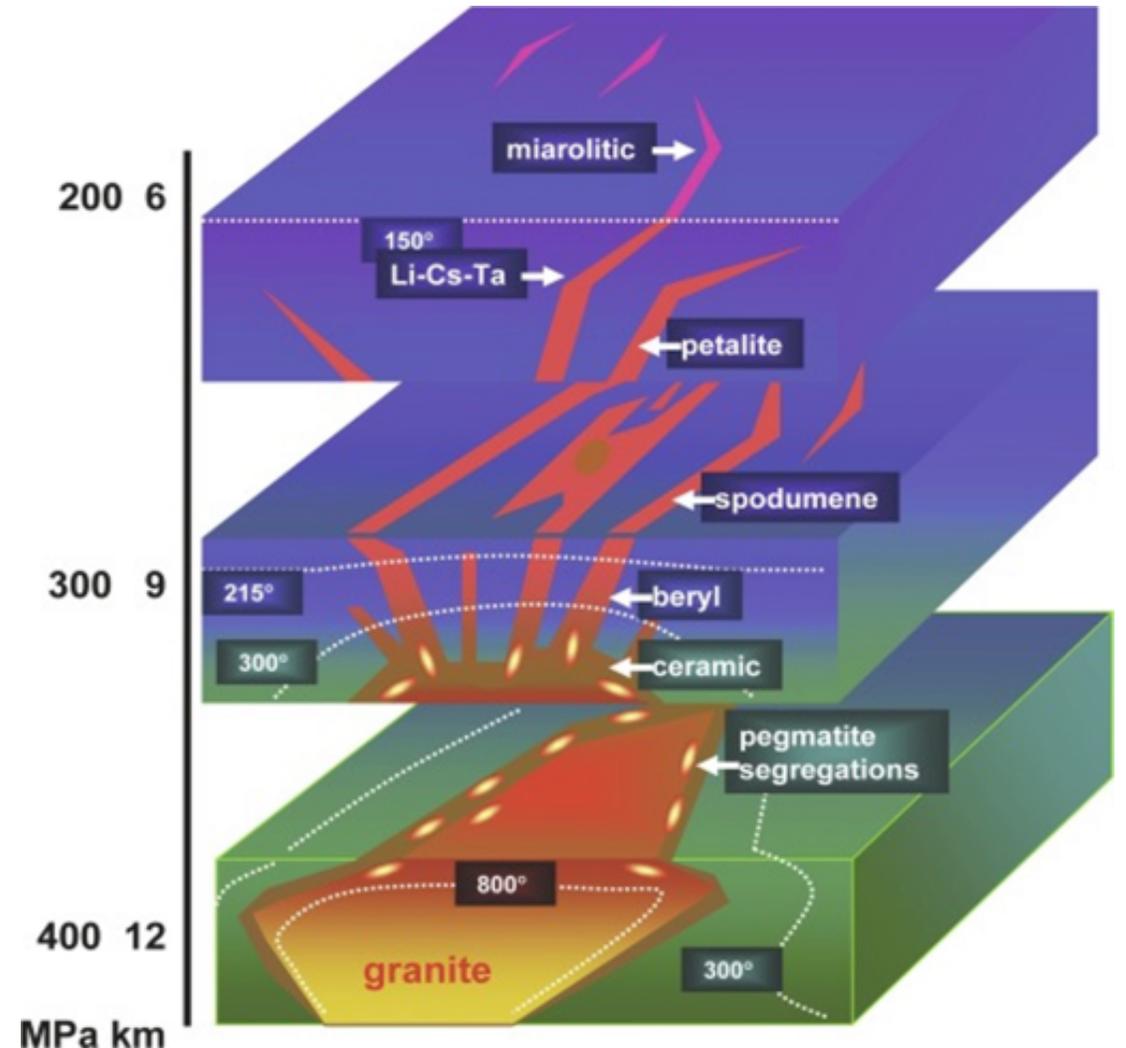
#### The Creation of Pegmatites

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.



# APPENDIX

## LITHIUM IS NOW POLITICAL

**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 = %Li<sub>2</sub>O

%Li is 46% of the quoted %Li<sub>2</sub>O (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



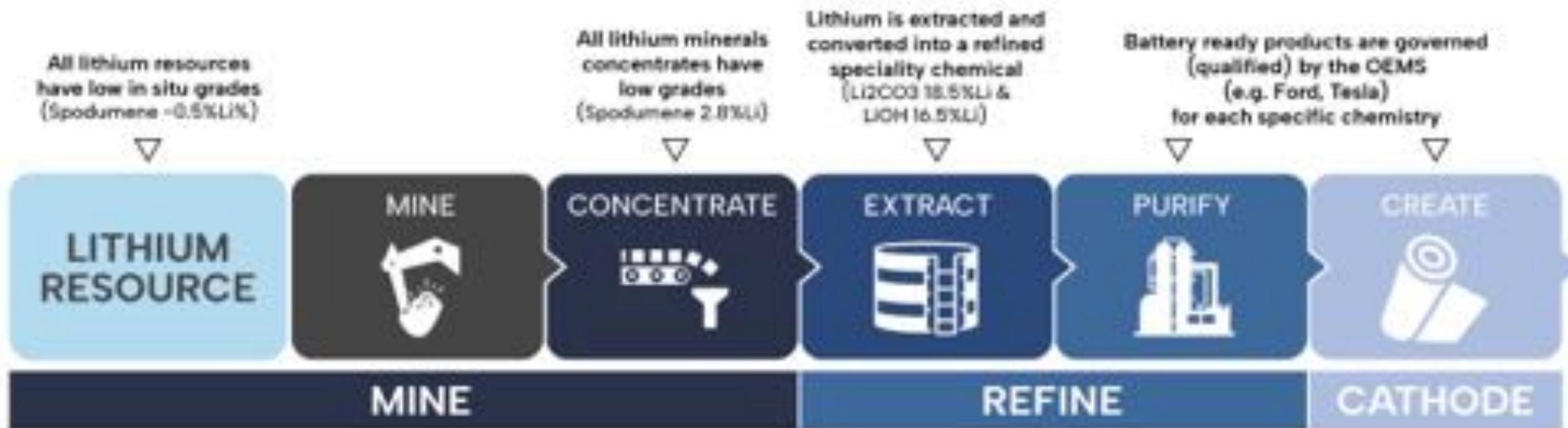
Recent market trends puts all resource types into play:

- 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.