



A LITHIUM LED BATTERY MINERALS  
AND TECHNOLOGY COMPANY

**Investor Presentation**

OCTOBER 2023

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 by the Board of Loyal Lithium Limited.*

# OUR MISSION & VISION



**MANAGING DIRECTOR – ADAM RITCHIE** BEng (hon), MEng, CPEng

*“Loyal Lithium aims to play a key role in the North American lithium supply chain by building a business that attracts development opportunity, whilst also adding value to communities and shareholders.”*

*“We are passionate about lithium and believe we can do it better.”*

**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



# 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

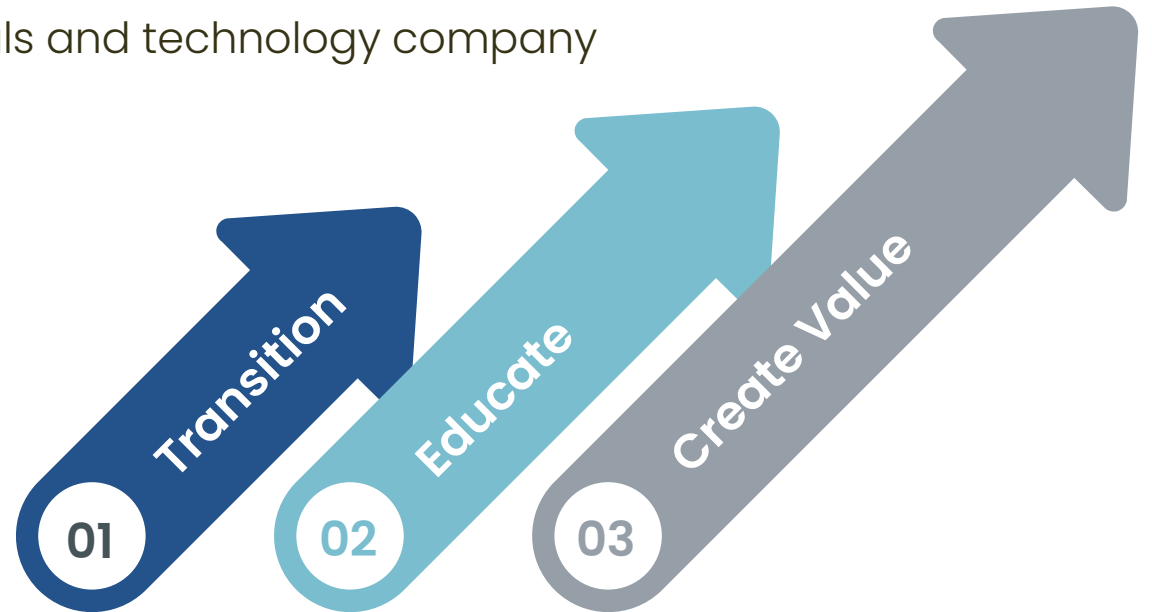
We believe the lithium supply chain is sub optimal and we plan to educate investors on a better way

**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

# OUR TRANSITION IS COMPLETE

## OUR NORTH AMERICAN LITHIUM PORTFOLIO

**1** HIDDEN LAKE LITHIUM PROJECT  
NWT, CANADA 

**2** TRIESTE LITHIUM PROJECT  
QUEBEC, CANADA 

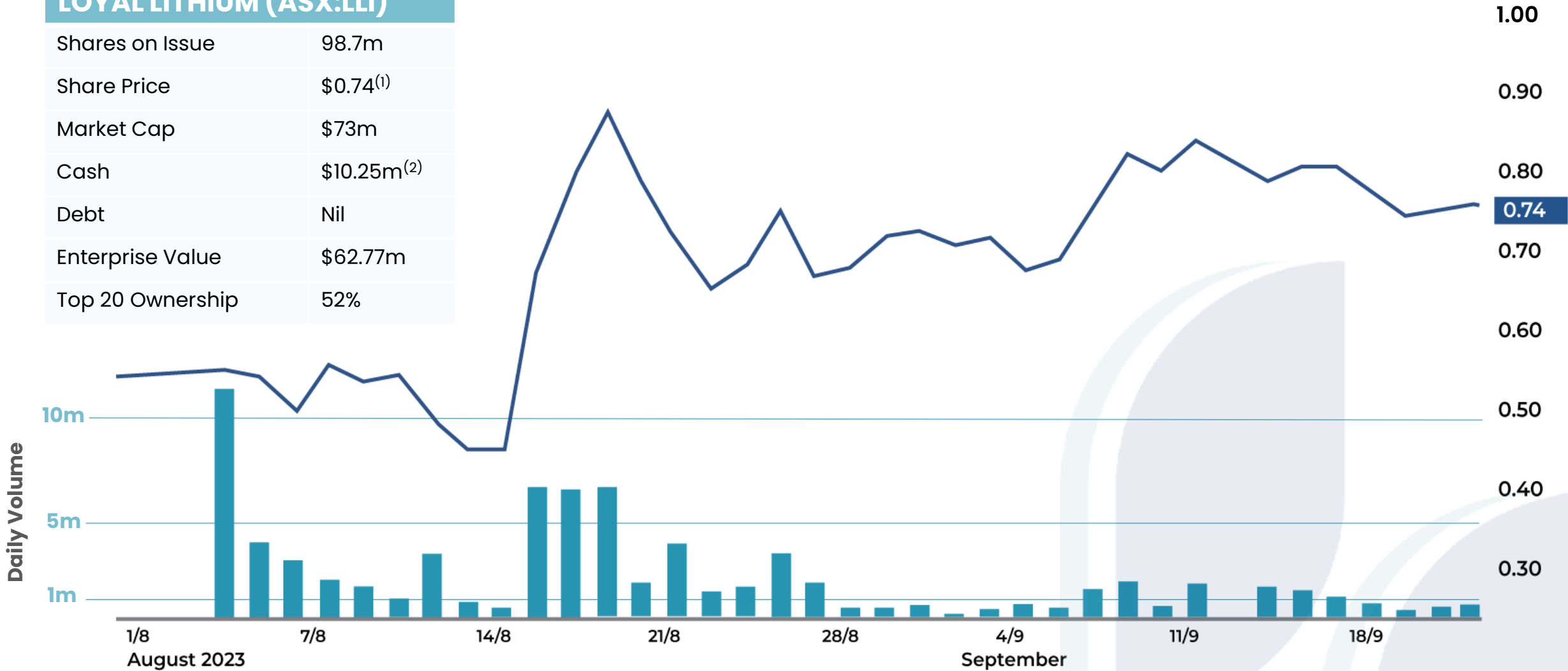
SCOTTY LITHIUM PROJECT  
NEVADA, USA **3** 



# CAPITAL STRUCTURE

## TRADING STRONG POST RECOMPLIANCE

LOYAL LITHIUM (ASX:LLI)	
Shares on Issue	98.7m
Share Price	\$0.74 <sup>(1)</sup>
Market Cap	\$73m
Cash	\$10.25m <sup>(2)</sup>
Debt	Nil
Enterprise Value	\$62.77m
Top 20 Ownership	52%



(1) Share price at 25 September 2023  
 (2) \$3.752m at 30 June 2023 plus \$5m from September CR and \$1.5m from the re-compliance CR

HIDDEN LAKE LITHIUM PROJECT  
YELLOWKNIFE LITHIUM BELT  
NORTHWEST TERRITORIES, CANADA



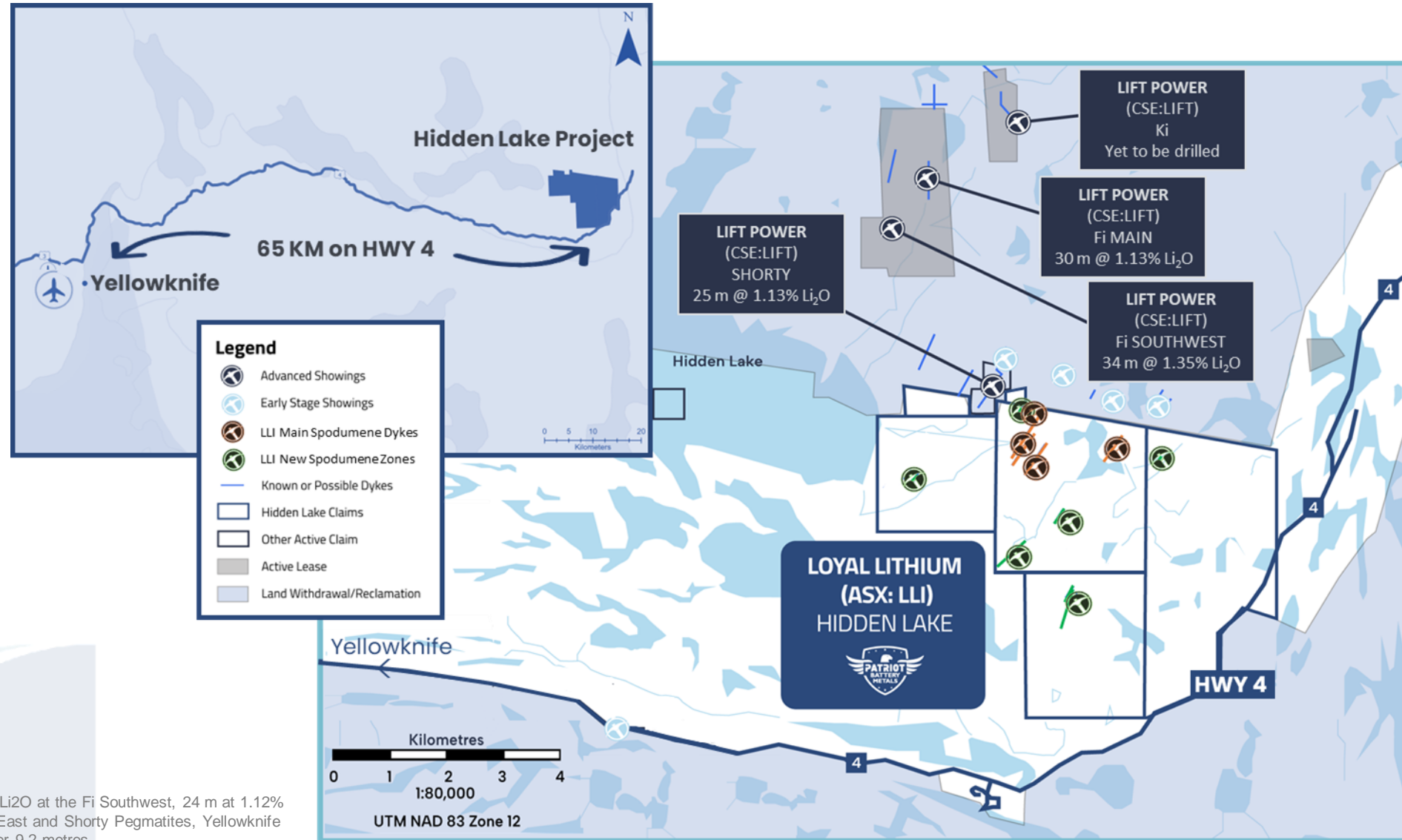
# HIDDEN LAKE LITHIUM PROJECT

## WE LOVE IT – UNDER EXPLORED YET UNDERSTOOD



“We are excited to bring fresh ambitions to this notable spodumene project alongside our joint venture partners, Patriot Battery Metals.”

**Adam Ritchie**  
Managing Director  
Loyal Lithium

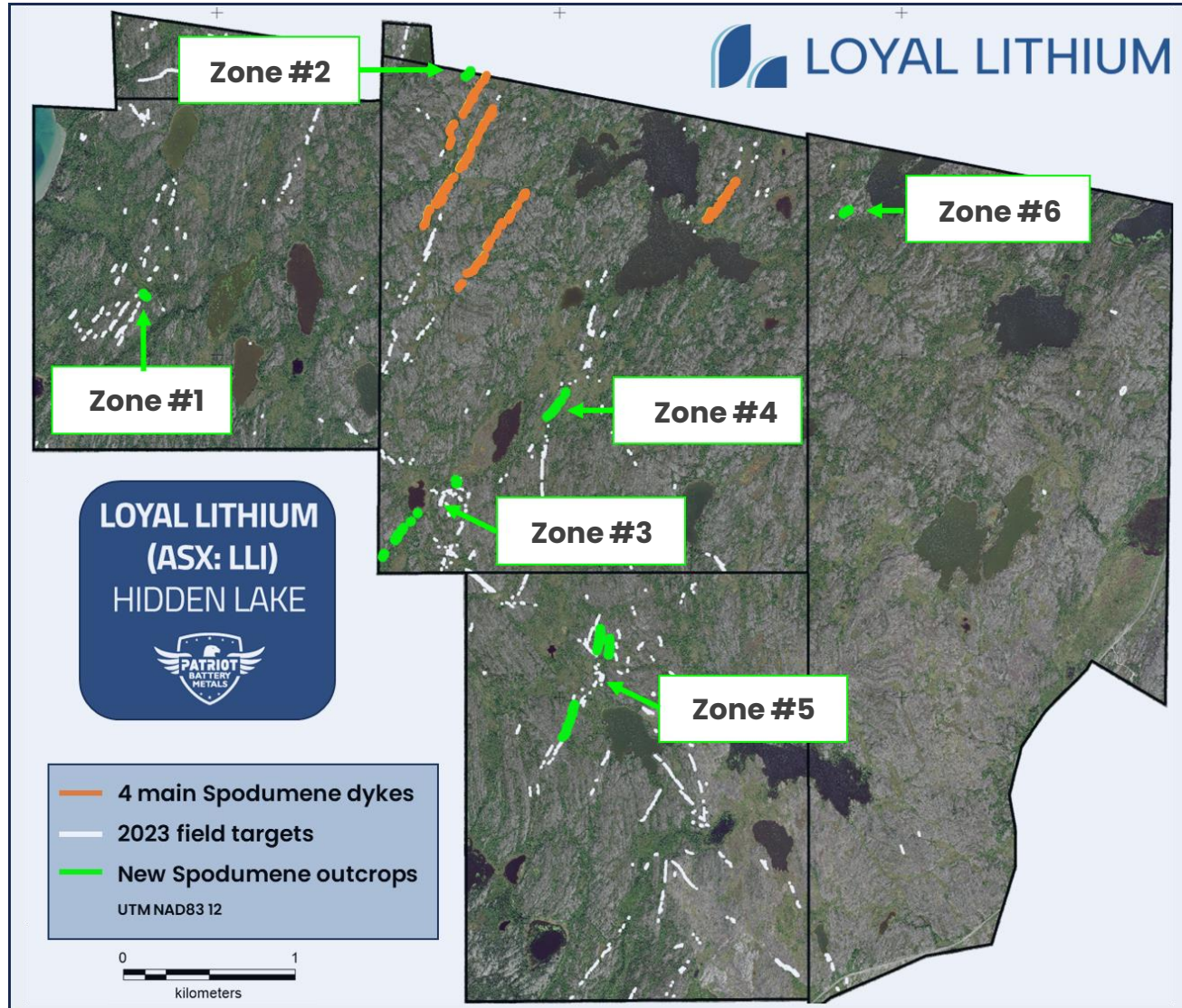


LIFT Drilling Data:  
 1. September 2023, LIFT Corporate Presentation  
 2. September 6, 2023 LIFT Intersects 22 m at 1.46% Li<sub>2</sub>O at the Fi Southwest, 24 m at 1.12% Li<sub>2</sub>O at the Fi Main, and reports first results from BIG East and Shorty Pegmatites, Yellowknife Lithium Project, NWT Intercepts of up to 1.6% Li<sub>2</sub>O over 9.2 metres.



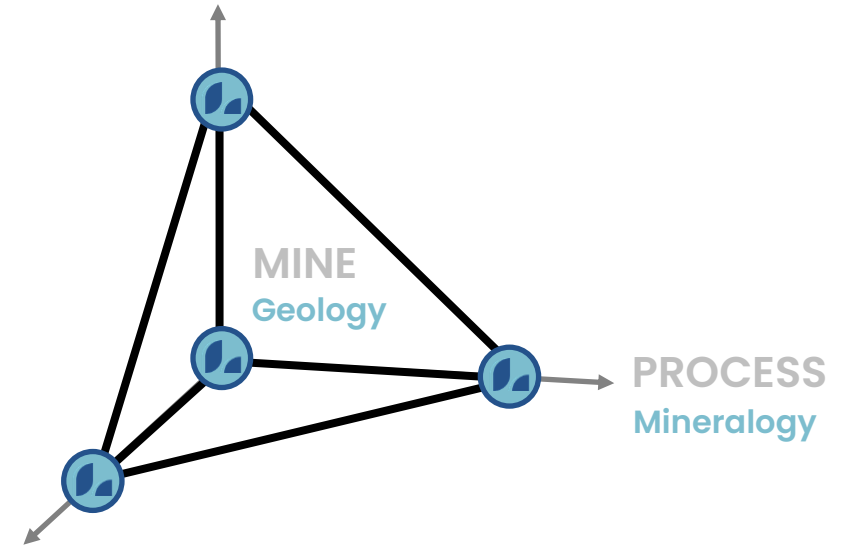
# HIDDEN LAKE LITHIUM PROJECT

## WHY WE LOVE IT – RESOURCE POTENTIAL



### RESOURCE POTENTIAL

Exploration Work

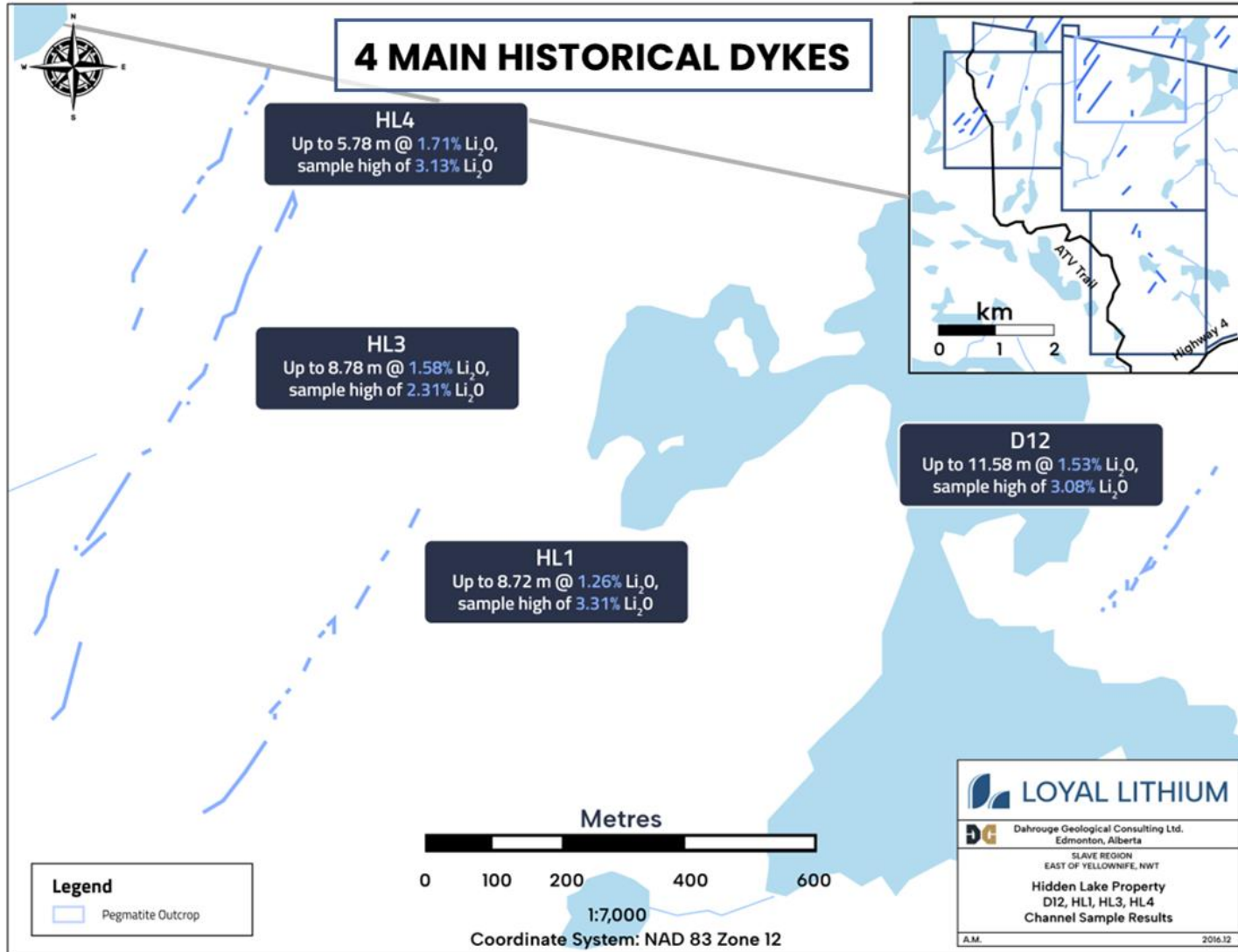


### Extensive spodumene bearing pegmatite outcrops identified:

- 4 main spodumene bearing dykes drill tested
- 6 new spodumene bearing Zones discovered
- LiDAR & rock chip samples results pending
- Drilling preparations for the Canadian winter

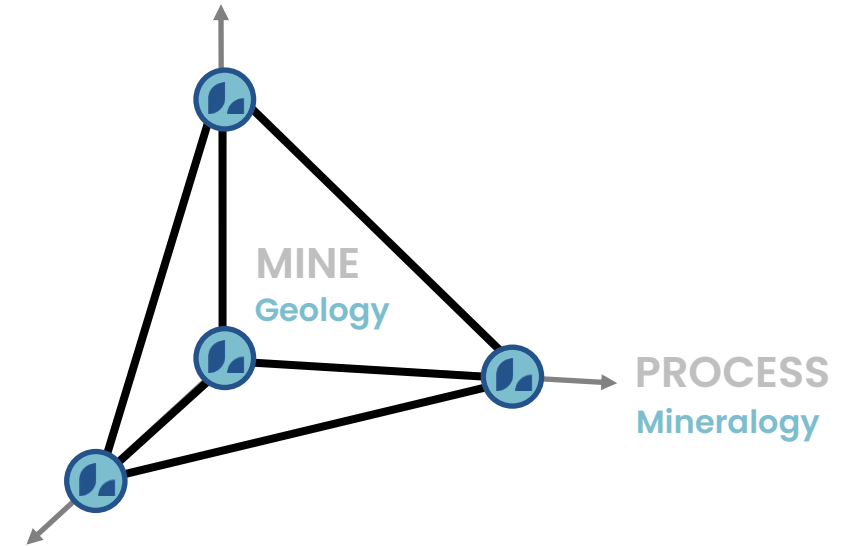
# HIDDEN LAKE LITHIUM PROJECT

## WHY WE LOVE IT – RESOURCE POTENTIAL



### RESOURCE POTENTIAL

Exploration Work



INFRASTRUCTURE

Proximity to Existing

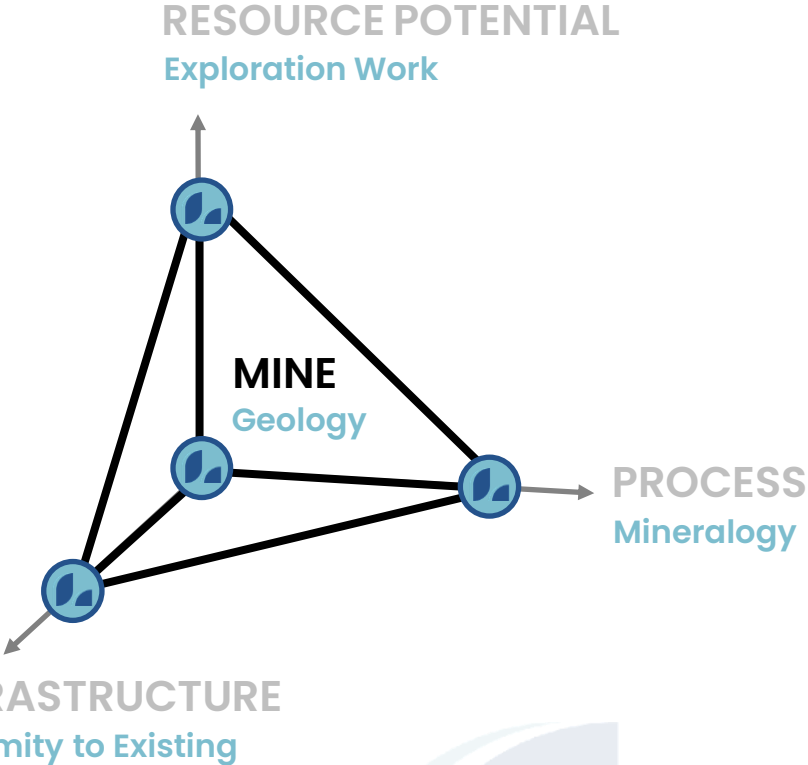
**4 main dykes drill tested with cumulative strike length 2,250 m**

- 10 drill holes conducted to 30–50 m vertical to confirm mineralised with grades up to 1.81%  $\text{Li}_2\text{O}$
- Open along strike and depth



# HIDDEN LAKE LITHIUM PROJECT

## WHY WE LOVE IT – MINEABLE



Prominent spodumene pegmatite outcrops with apparent widths up to 11.58 m have a cumulative strike length of ~2,250 m. Surface exposures and drill intercepts imply favourable mining geometries for both open cut and underground operations.



# HIDDEN LAKE LITHIUM PROJECT

## WHY WE LOVE IT – PROCESSING SIMPLICITY

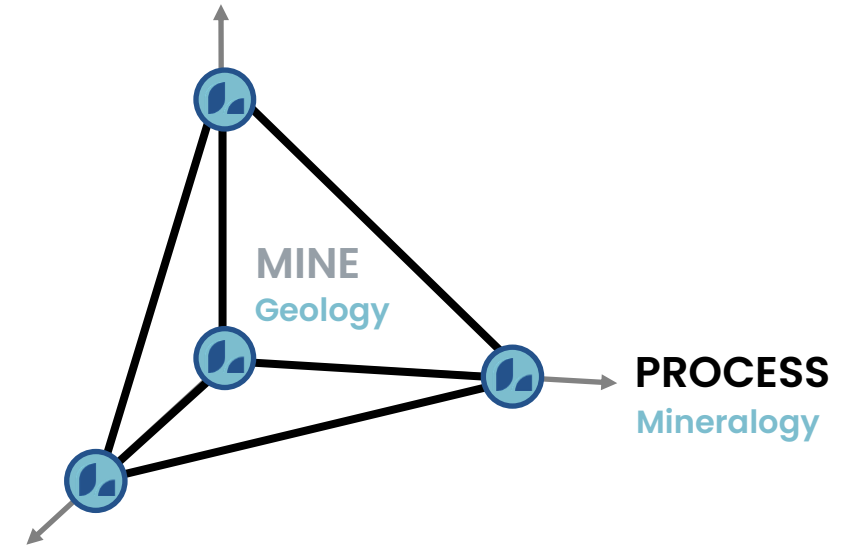
Mineralogy & Metallurgy fundamentals understood

Mineralogy is simple and consistent with low impurities

- Spodumene + Quartz + Feldspars
- < 0.25% FeO



RESOURCE POTENTIAL  
Exploration Work



INFRASTRUCTURE  
Proximity to Existing

**Metallurgy supports DMS concentration**

- DMS concentrate via pilot plant
- Highly liberated
- 50%+ mass rejection < 0.2% Li<sub>2</sub>O loss



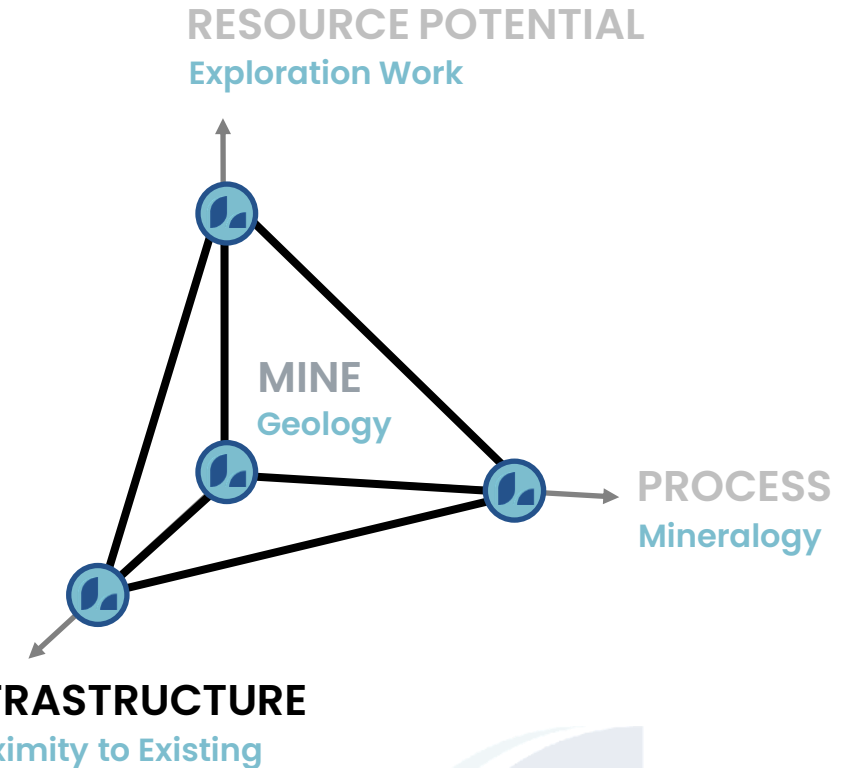
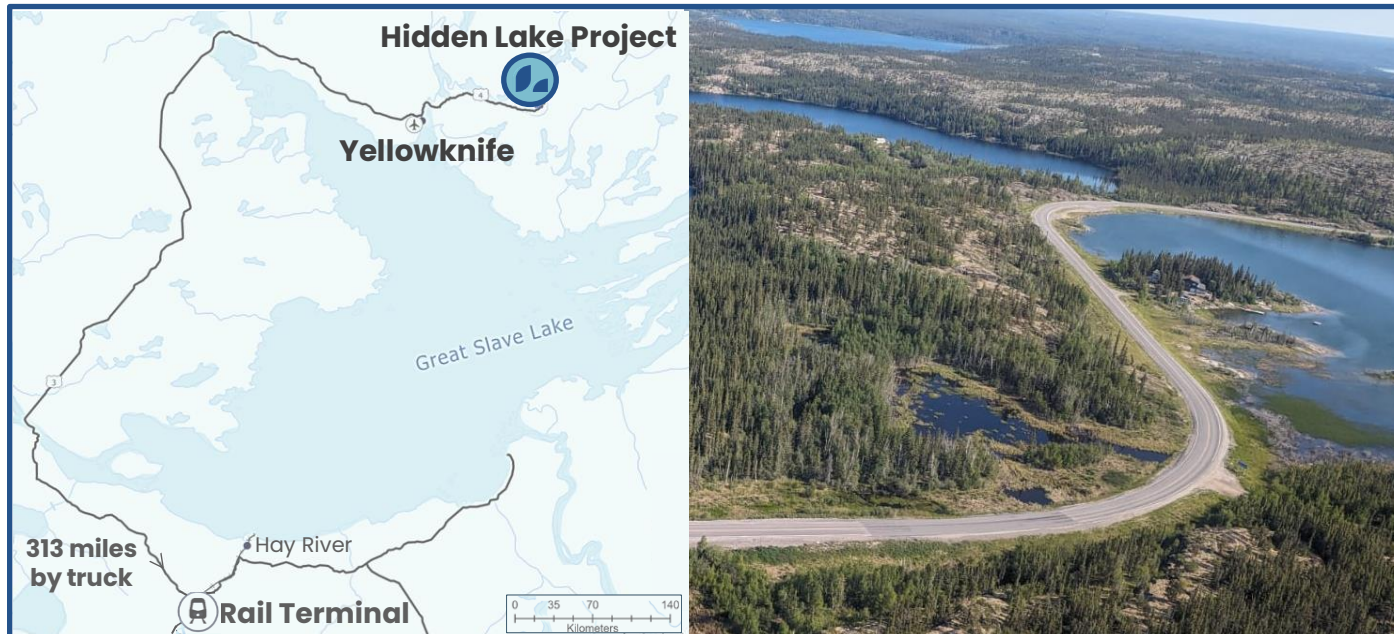
# HIDDEN LAKE LITHIUM PROJECT

## WHY WE LOVE IT – EXISTING INFRASTRUCTURE

65km drive Highway 4 – Hidden Lake to Yellowknife

Yellowknife – Capital of NWT population of ~20,000

- Well established workforce and support services
- Domestic Airport – daily connections to Canadian cities
- All-weather roads – south to Alberta and British Columbia
- Hydroelectric power – 2030 plans for the Lithium Belt



Hay River Rail Terminal – CN Rail  
Canada & United States of America

- Significant backhaul capacity

# HIDDEN LAKE APPROACH

## CONCURRENT WORKSTREAMS IN MOTION

2023

2024

### LAND & COMMUNITY

- First Nations Engagement
- Yellowknife Community Engagement

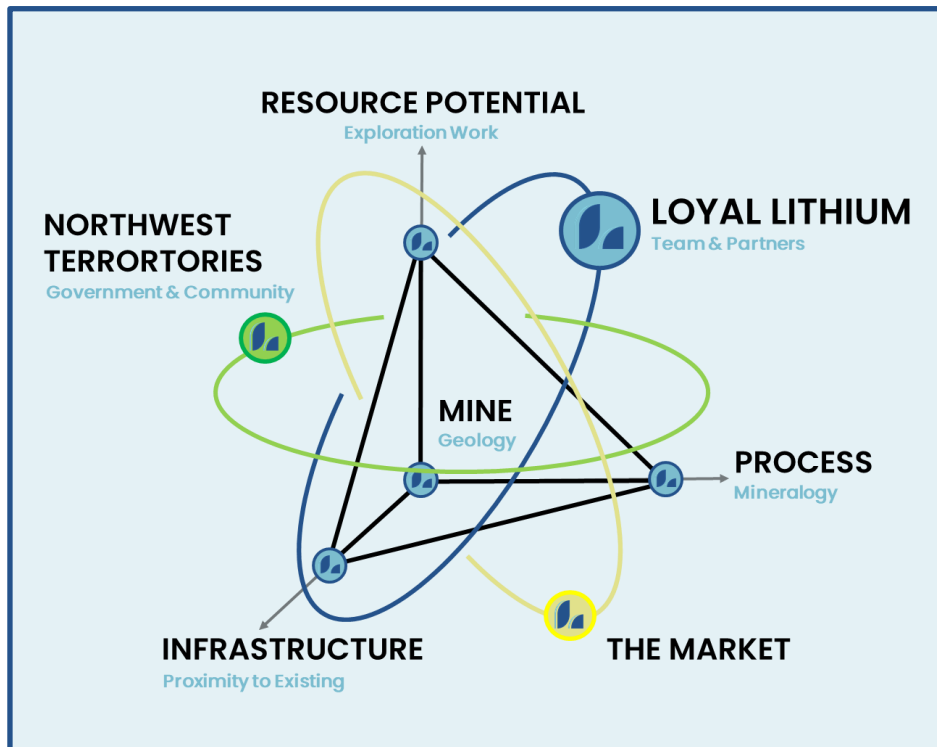
- Government & Regulators
- Environmental & Cultural Surveys

### EXPLORATION

- Field mapping has identified six new spodumene zones
- Rock chip & channel sample assays pending
- LiDAR & high resolution orthophotos pending
- Preliminary geotechnical assessment pending
- Magnetic geophysics planned
- Enhanced winter drilling program

### STUDIES

- Environmental baseline
- Test work & flowsheet
- Scoping
- Feasibility





TRIESTE LITHIUM PROJECT  
JAMES BAY LITHIUM DISTRICT  
QUEBEC, CANADA





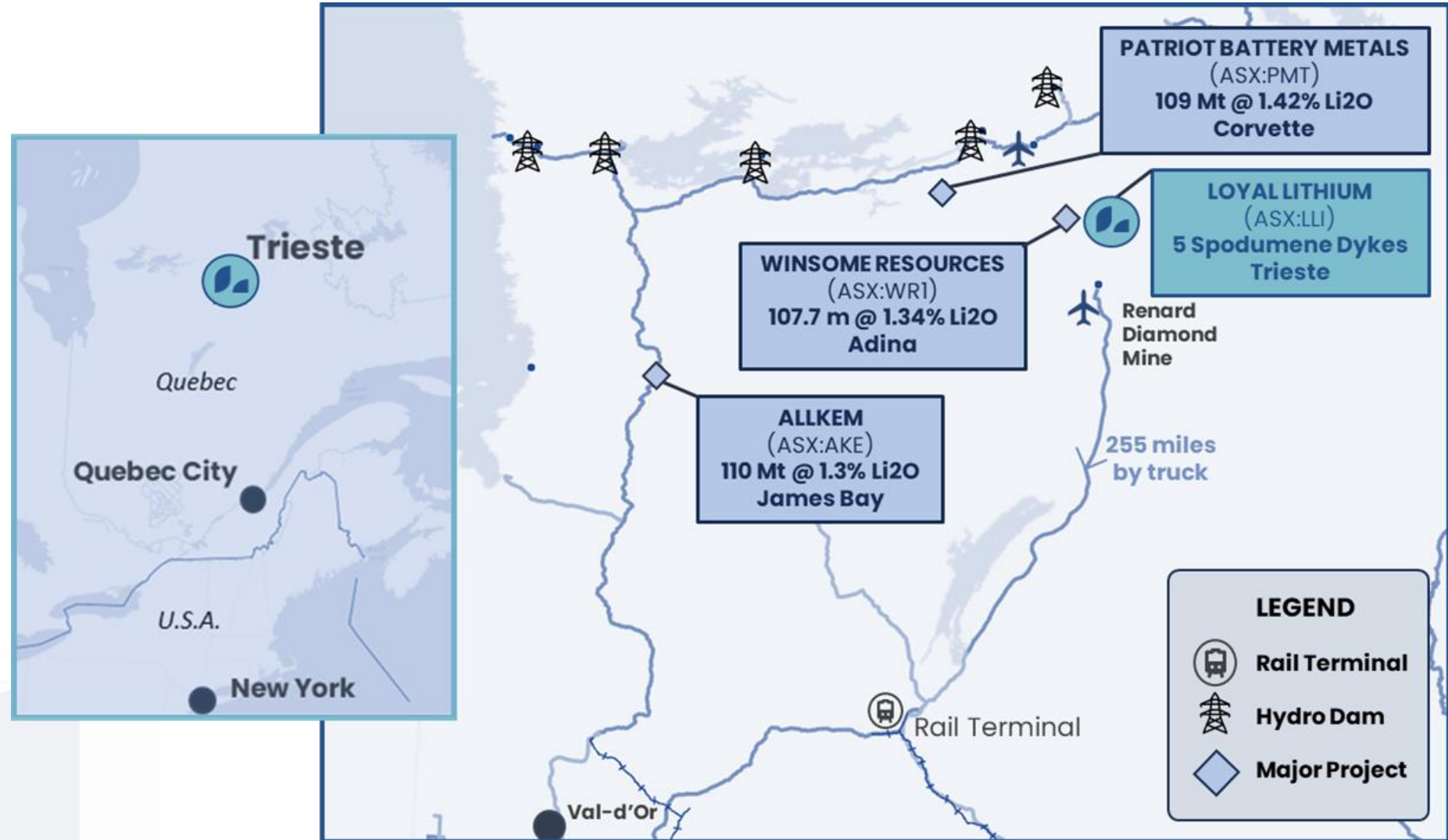
# TRIESTE LITHIUM PROJECT

## JAMES BAY LITHIUM DISTRICT

Surrounded by large scale advanced lithium projects in the Tier 1 mining jurisdiction of Quebec, Canada.

Five spodumene bearing pegmatites discovered in maiden field program.

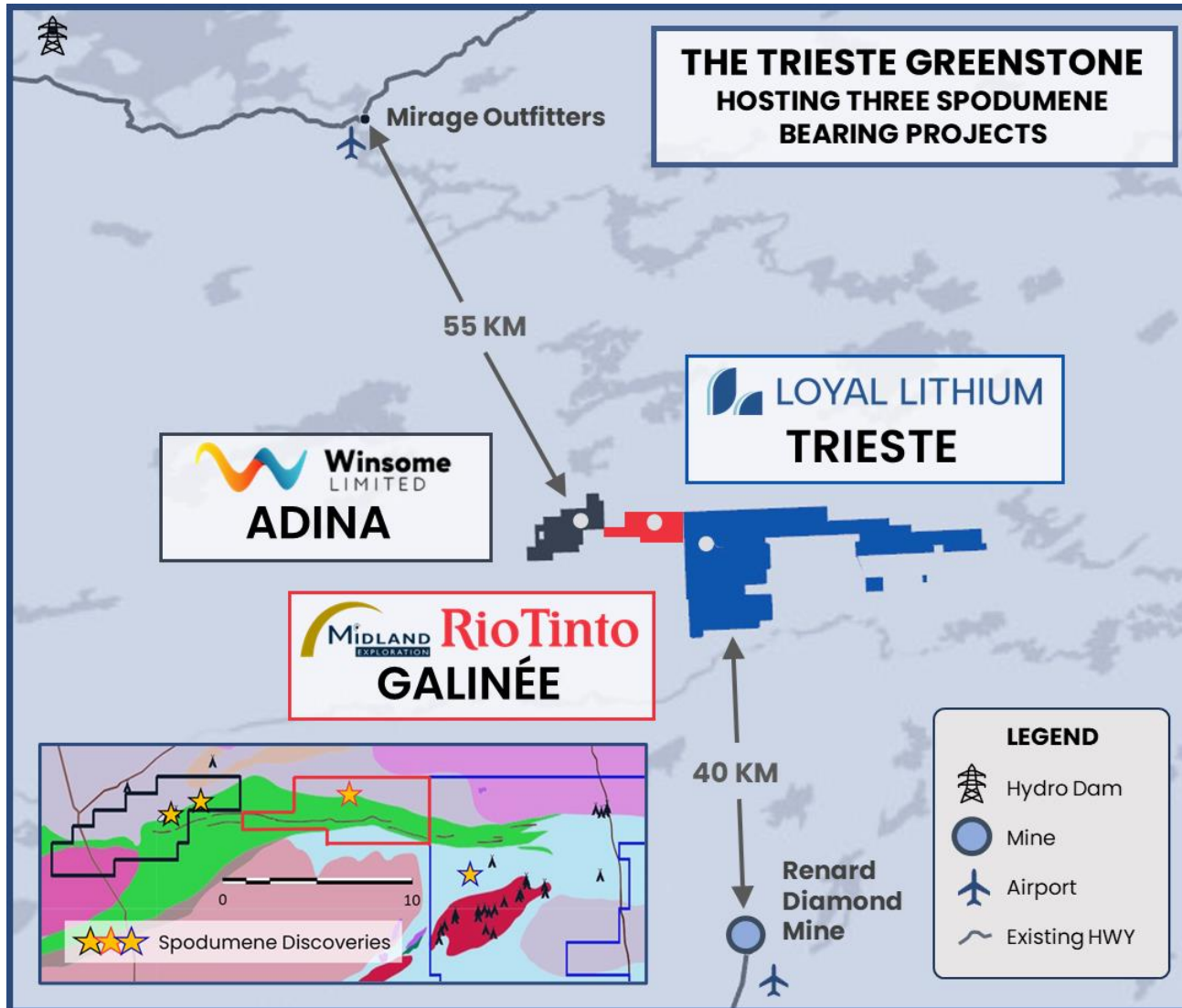
Fast-tracked drilling program is underway, just 6 weeks post discovery.





# TRIESTE LITHIUM PROJECT

## ALL EYES ON THE TRIESTE GREENSTONE REGION



## COLLABORATIVE MOU WITH WINSOME RESOURCES

“With many alternative lithium sources available globally, collaboration is essential to ensure a cost-effective domestic lithium supply is realised.”

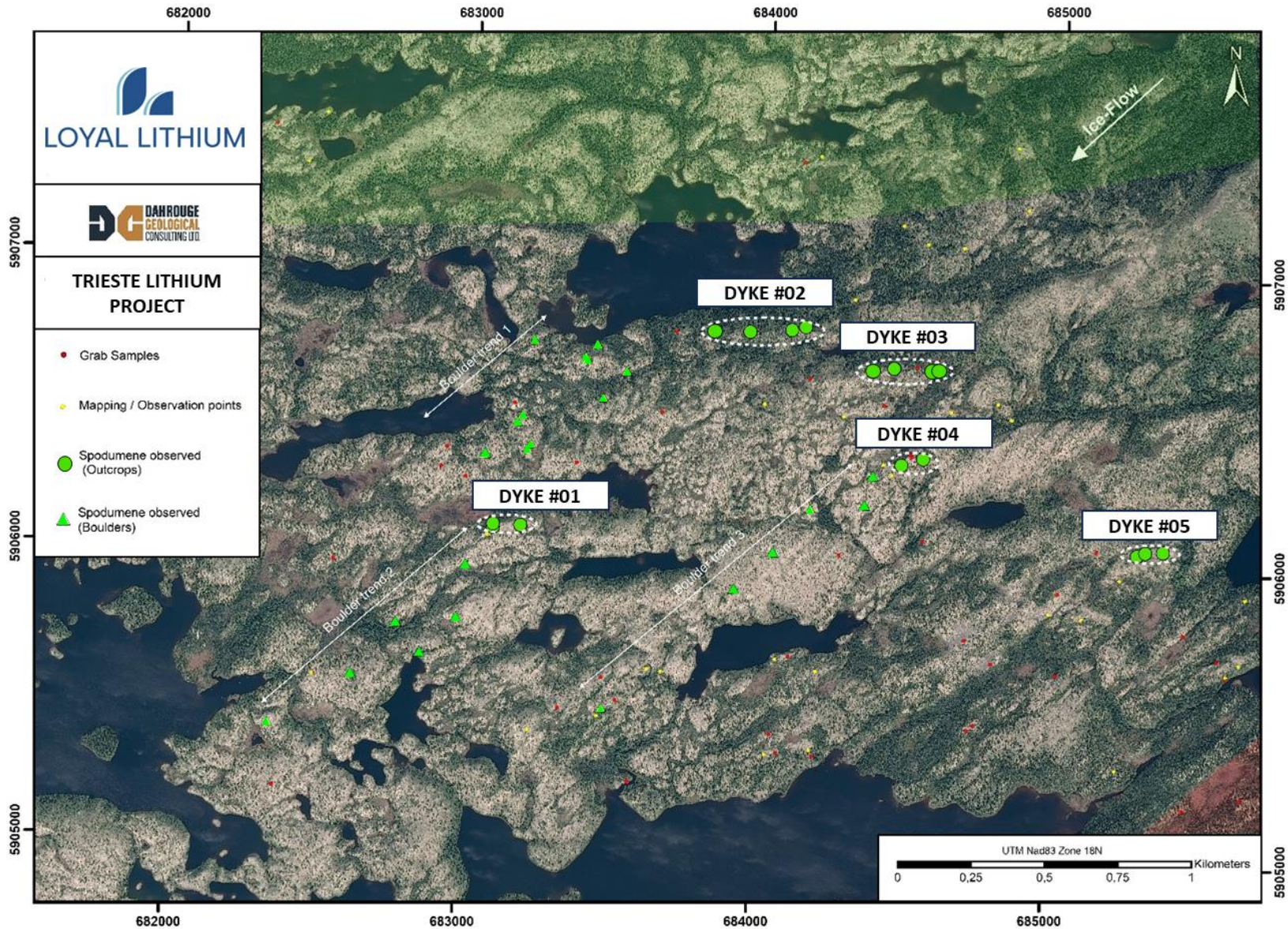
“Although early days – discoveries to date indicate that the Trieste greenstone region could play an important role in the emerging North American lithium supply chain.”

**Adam Ritchie**  
Managing Director  
Loyal Lithium



# TRIESTE LITHIUM PROJECT

## AUGUST 2023 SPODUMENE DISCOVERY



### FIVE SPODUMENE BEARING PEGMATITE DYKES DISCOVERED

The five spodumene bearing pegmatite dykes, with aligned implied continuous outcrops, have been identified within a 6km<sup>2</sup> area to the south of the Trieste greenstone belt, situated in a metasediment host.



# TRIESTE LITHIUM PROJECT

## AUGUST 2023 SPODUMENE DISCOVERY

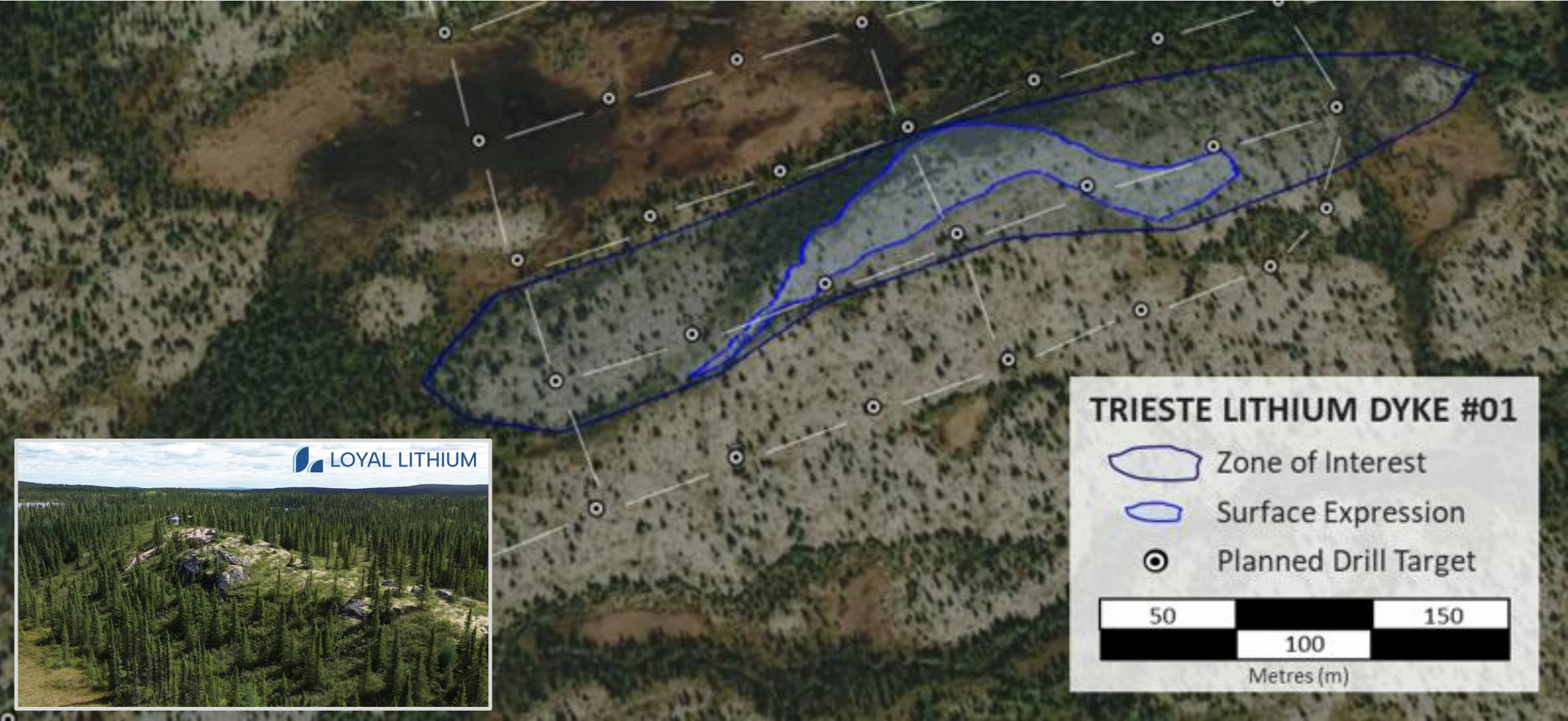


Dyke #01



# TRIESTE LITHIUM PROJECT

## FAST-TRACKED DRILLING PROGRAM





# TRIESTE APPROACH

## FAST-TRACKED EXPLORATION IN MOTION

2023

2024

### FIELD MAPPING

- Five spodumene bearing pegmatites discovered
- Rock chip & channel sample assays pending
- LiDAR surveys planned

### FAST-TRACKED DRILLING

- Dyke #01 initial target - largest dyke, by surface area and topographic prominence
- Assay results will be expeditated
- Results to support winter drilling program

### WINTER DRILLING

- Larger wide scale program
- Inform desktop studies

# SCOTTY LITHIUM PROJECT NEVADA, USA



# SEDIMENT HOSTED LITHIUM EXPLORATION TARGET DEFINED

## SCOTTY LITHIUM PROJECT, NEVADA USA

Drilling assays confirm the presence of a ~165m deep mineralised lithium basin at the 100% owned Scotty Lithium Project, with an average grade of 1,120ppm lithium<sup>1</sup>.

Geological modelling has determined a large and robust independent exploration target.<sup>3</sup>

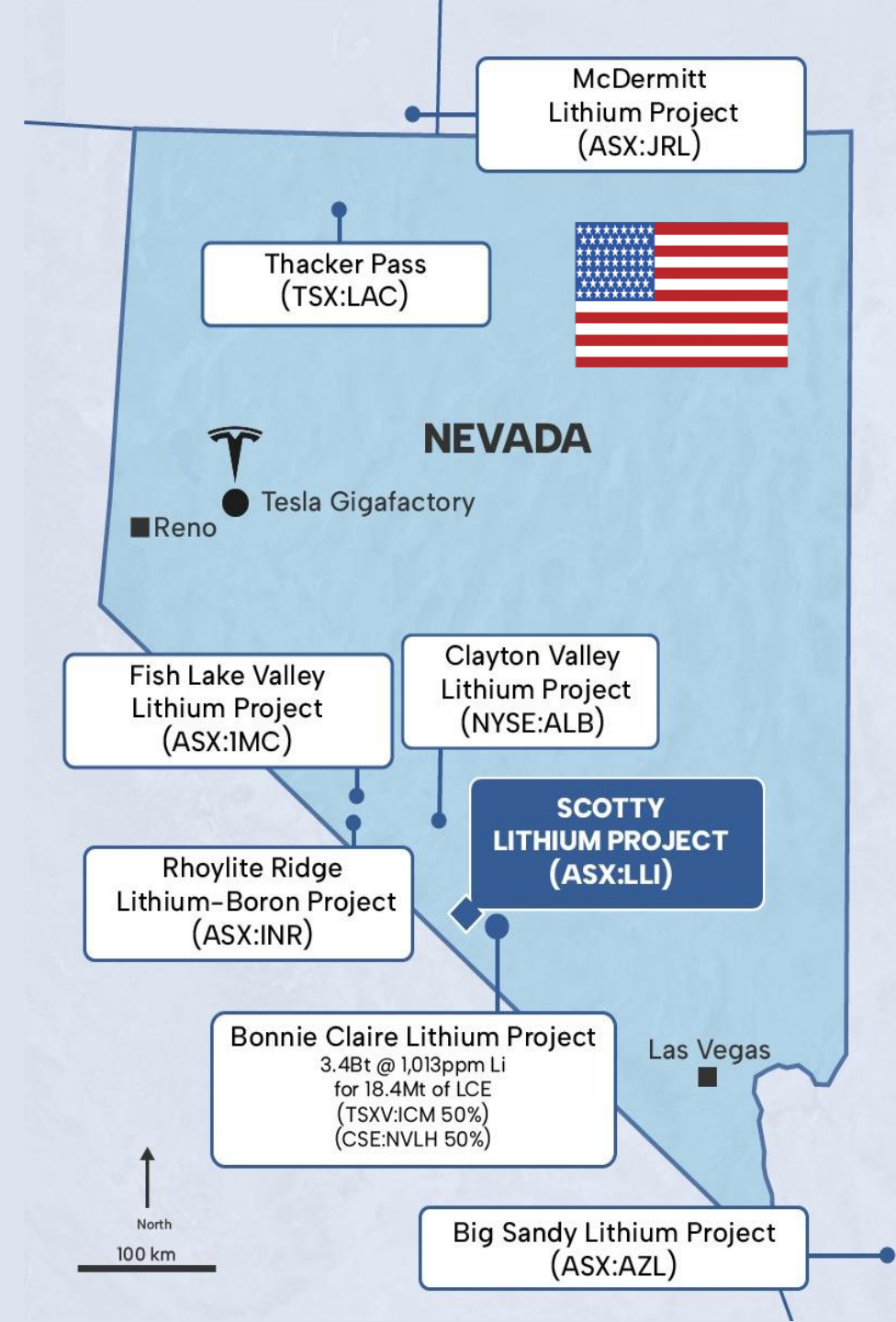
**Lower Range**

**460 Mt**  
@ 1145 ppm<sup>1,2,3</sup>

**Upper Range**

**837 Mt**  
@ 1175 ppm<sup>1,2,3</sup>

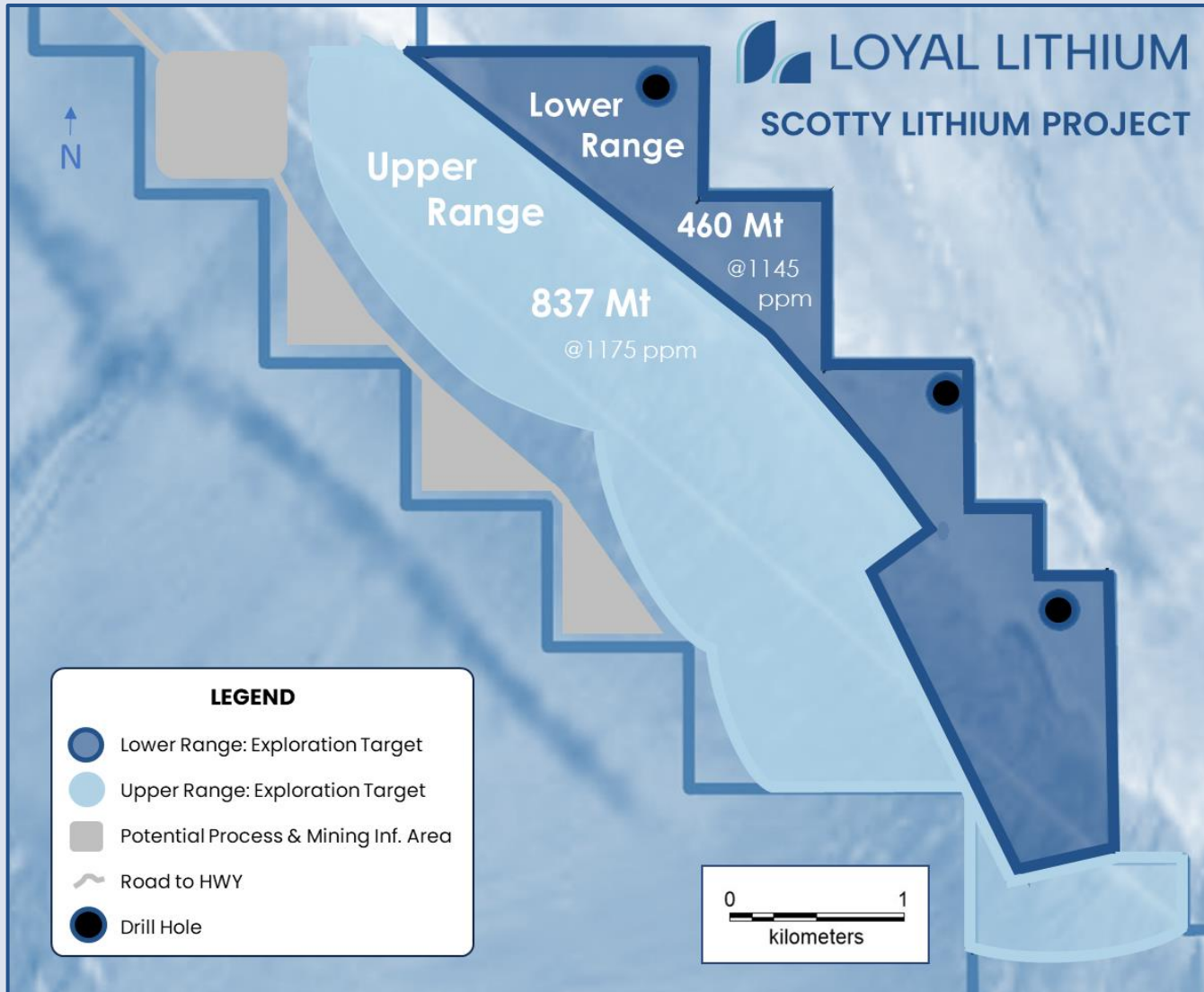
1. At a 700ppm lithium cut-off-grade.  
 2. The potential quantity and grade is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource and the Company is uncertain if further exploration will result in the estimation of a Mineral Resource.  
 3. LLI ASX Announcement 29 September 2023 - Sediment Hosted Lithium Exploration Target Defined at the Scotty Lithium Project, Nevada, USA.





# EXPLORATION TARGET IS LARGE & ROBUST

## SHALLOW MINERALISATION → DEVELOPMENT CONCEPTS



## SHALLOW MINERALISATION

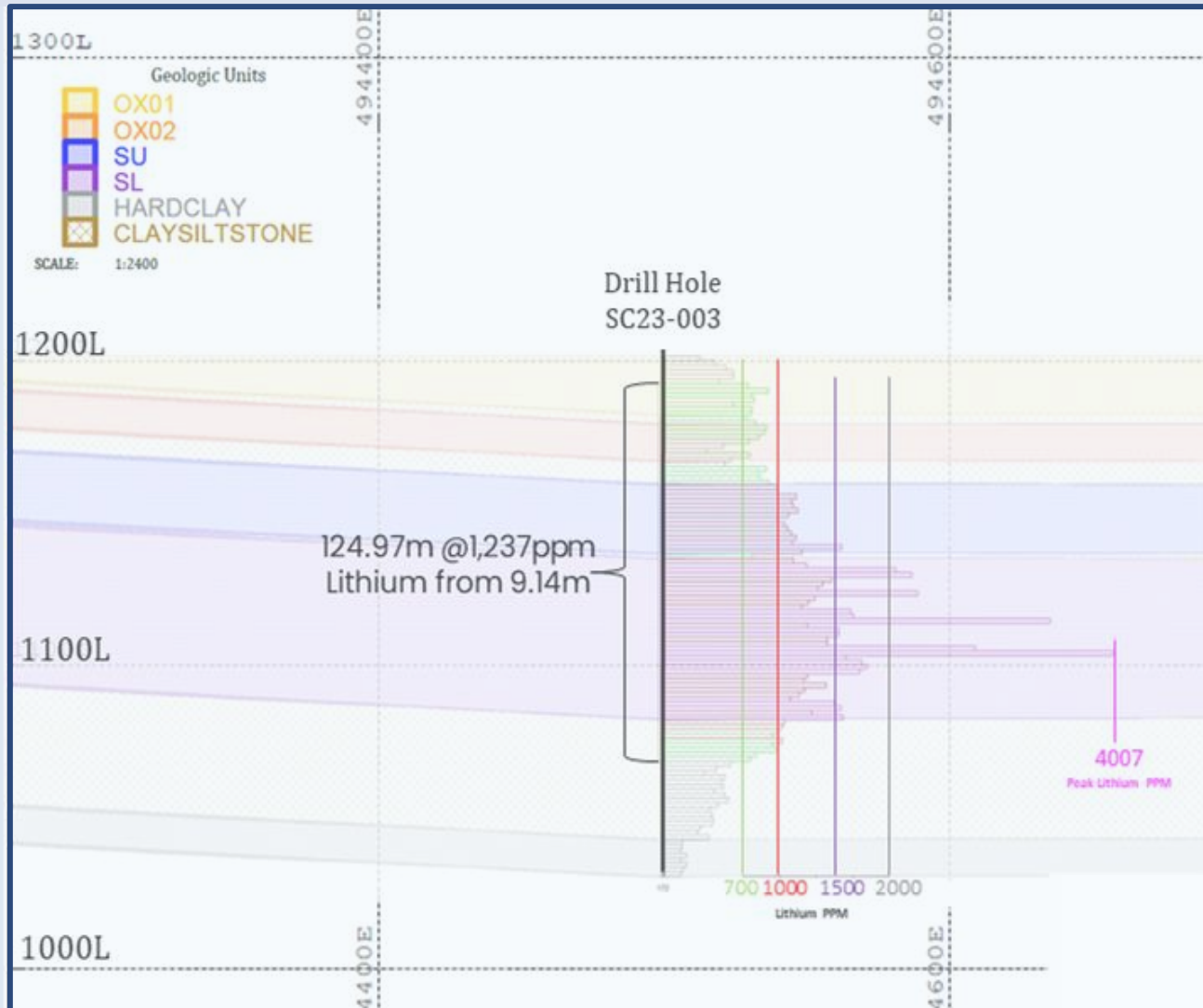
With strong mineralisation from **near surface** and close to the western edge of the basin, Scotty has the potential to adopt a traditional mining solution which supports strong development concepts.

## DEVELOPMENT CONCEPTS

- Mining Solution: Traditional Truck & Shovel
  - Like Iron Ore and other bulk commodities
- Mining Parameters: Potentially Low Strip Ratio
  - Mineralisation from near surface
- Process & Mining Infrastructure: Western Edge
  - Alluvial fan basin edge is ideal for entering the potential pit and housing mining & processing infrastructure

# DRILLING RESULTS

## REPRESENTING SIGNIFICANT RESOURCE POTENTIAL



"The Scotty Lithium Project continues to deliver with outstanding drilling assay results confirming strong lithium mineralisation, representing significant resource potential."

"Nevada lithium is alive, and the Scotty Lithium Project has shown its potential to play a significant role in the emerging North American lithium supply chain."

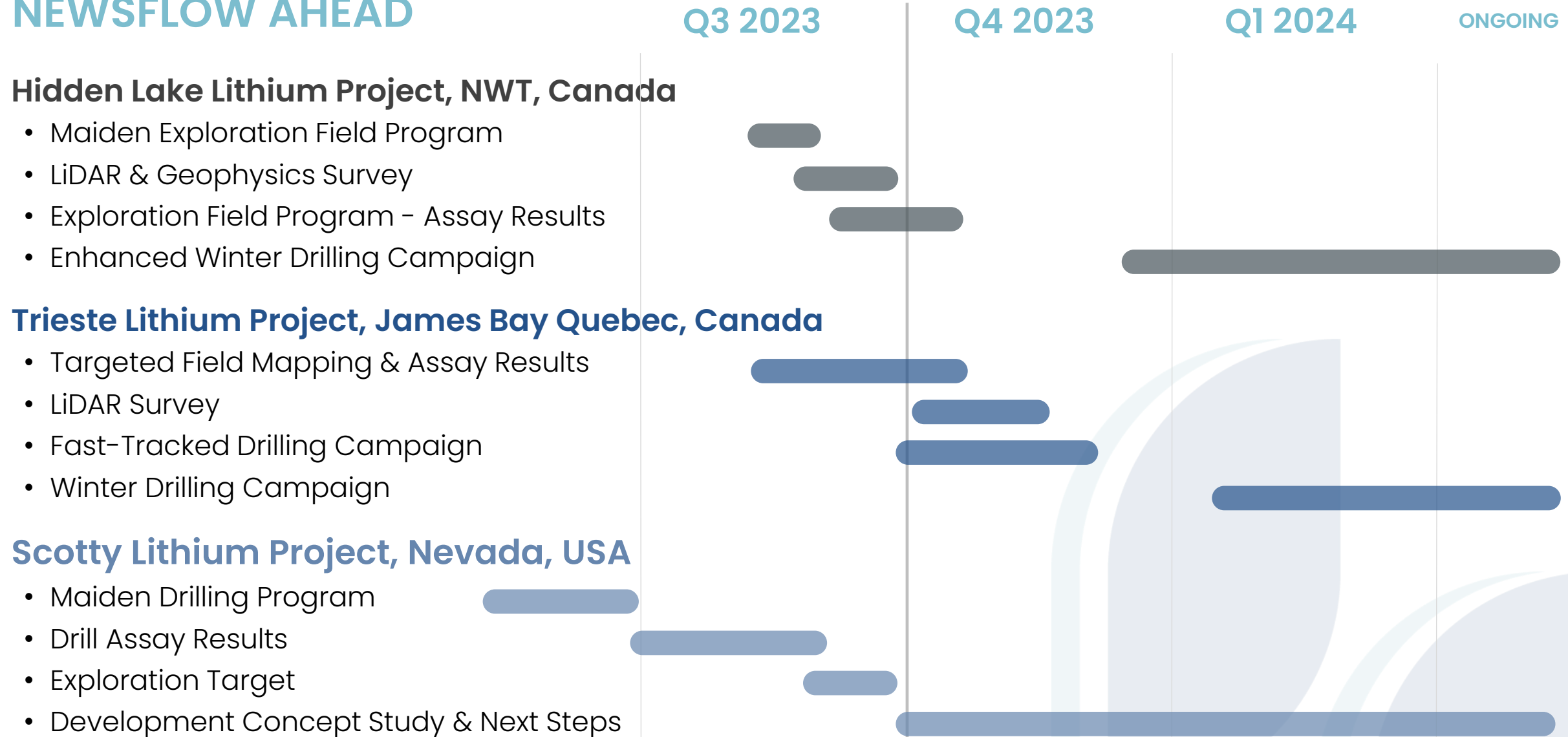
**Adam Ritchie**  
Managing Director  
Loyal Lithium

Drill Hole	Intercept Metres	Lithium Grade ppm	Depth From metres	Lithium Max Assay ppm over 1.52m
SC23-001	117.35	813	15.24	1,228
SC23-002	82.30	1,106	21.34	2,156
SC23-003	124.97	1,237	9.14	4,007



# LITHIUM EXPLORATION

## NEWSFLOW AHEAD



# CONTACT



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