



LOYAL LITHIUM

A LITHIUM LED BATTERY MINERALS
AND TECHNOLOGY COMPANY

Investor Presentation

OCTOBER 2023

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 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

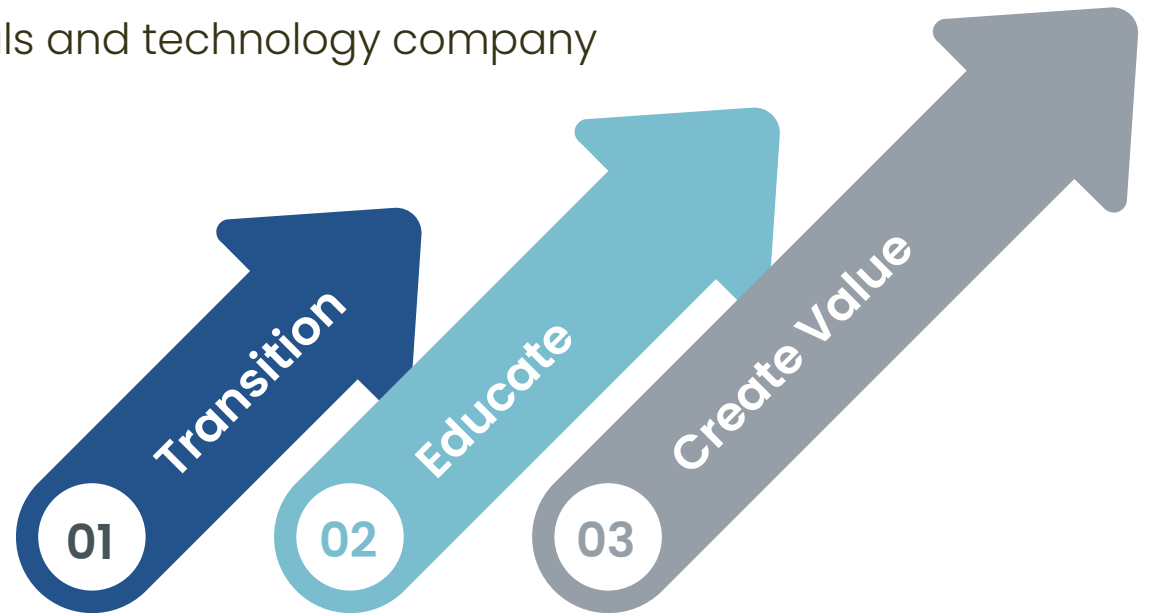
We believe the lithium supply chain is sub optimal and we plan to educate investors on a better way

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

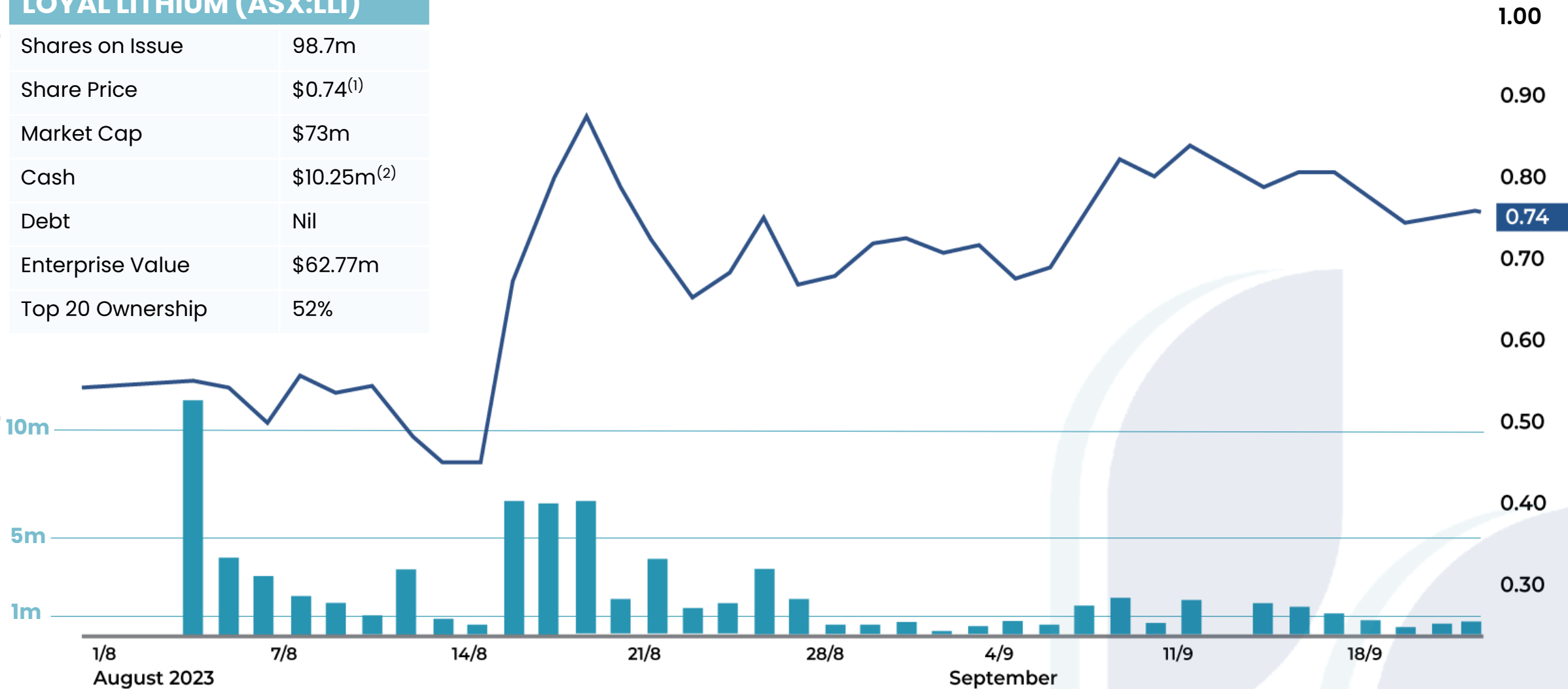
CAPITAL STRUCTURE

TRADING STRONG POST RECOMPLIANCE



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LOYAL LITHIUM (ASX:LLI)	
Shares on Issue	98.7m
Share Price	\$0.74 ⁽¹⁾
Market Cap	\$73m
Cash	\$10.25m ⁽²⁾
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



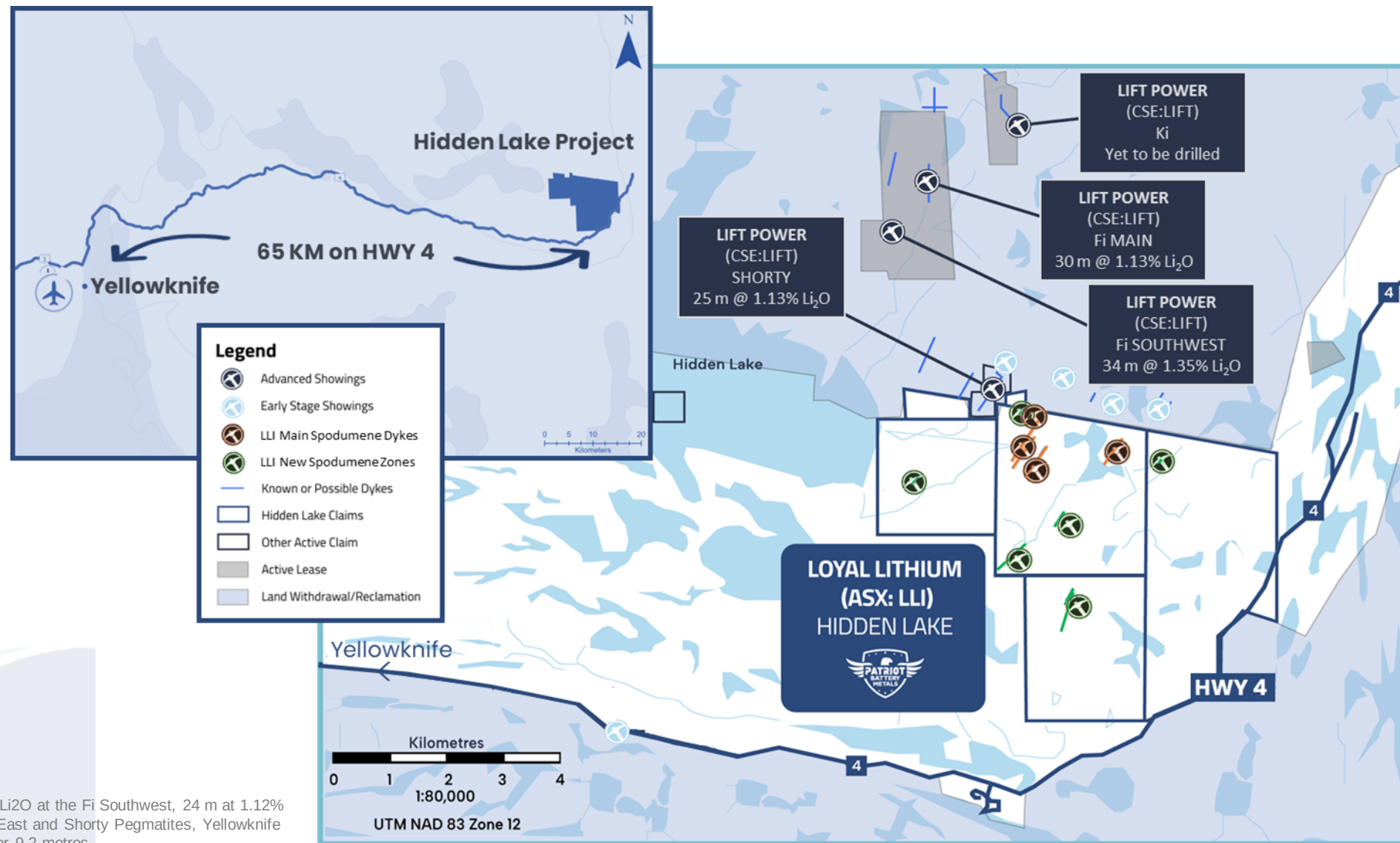
HIDDEN LAKE LITHIUM PROJECT

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

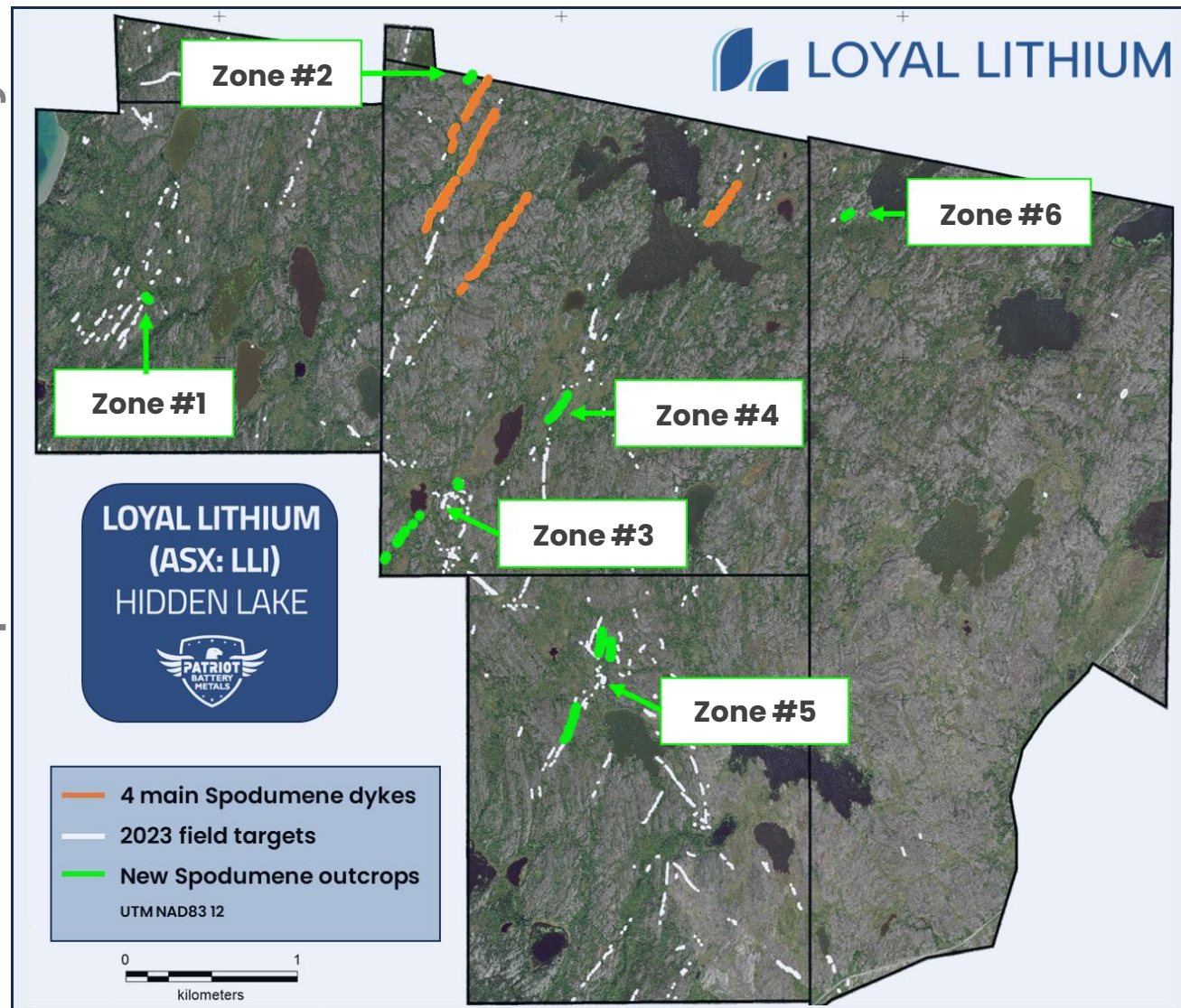


LIFT Drilling Data:

1. September 2023, LIFT Corporate Presentation
2. September 6, 2023 LIFT Intersects 22 m at 1.46% Li₂O at the Fi Southwest, 24 m at 1.12% Li₂O at the Fi Main, and reports first results from BIG East and Shorty Pegmatites, Yellowknife Lithium Project, NWT Intercepts of up to 1.6% Li₂O over 9.2 metres.

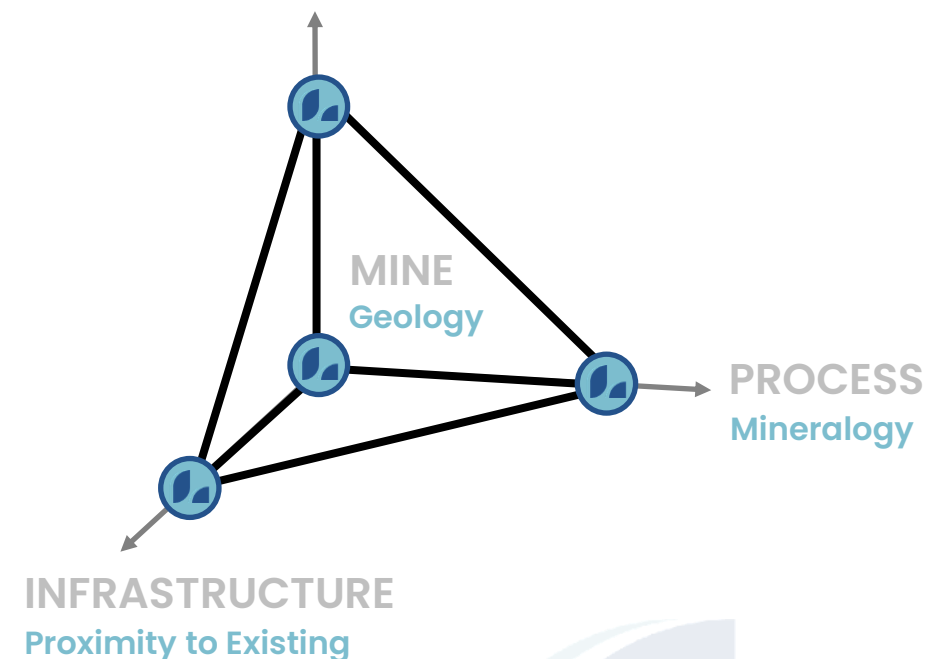
HIDDEN LAKE LITHIUM PROJECT

WHY WE LOVE IT – RESOURCE POTENTIAL



RESOURCE POTENTIAL

Exploration Work



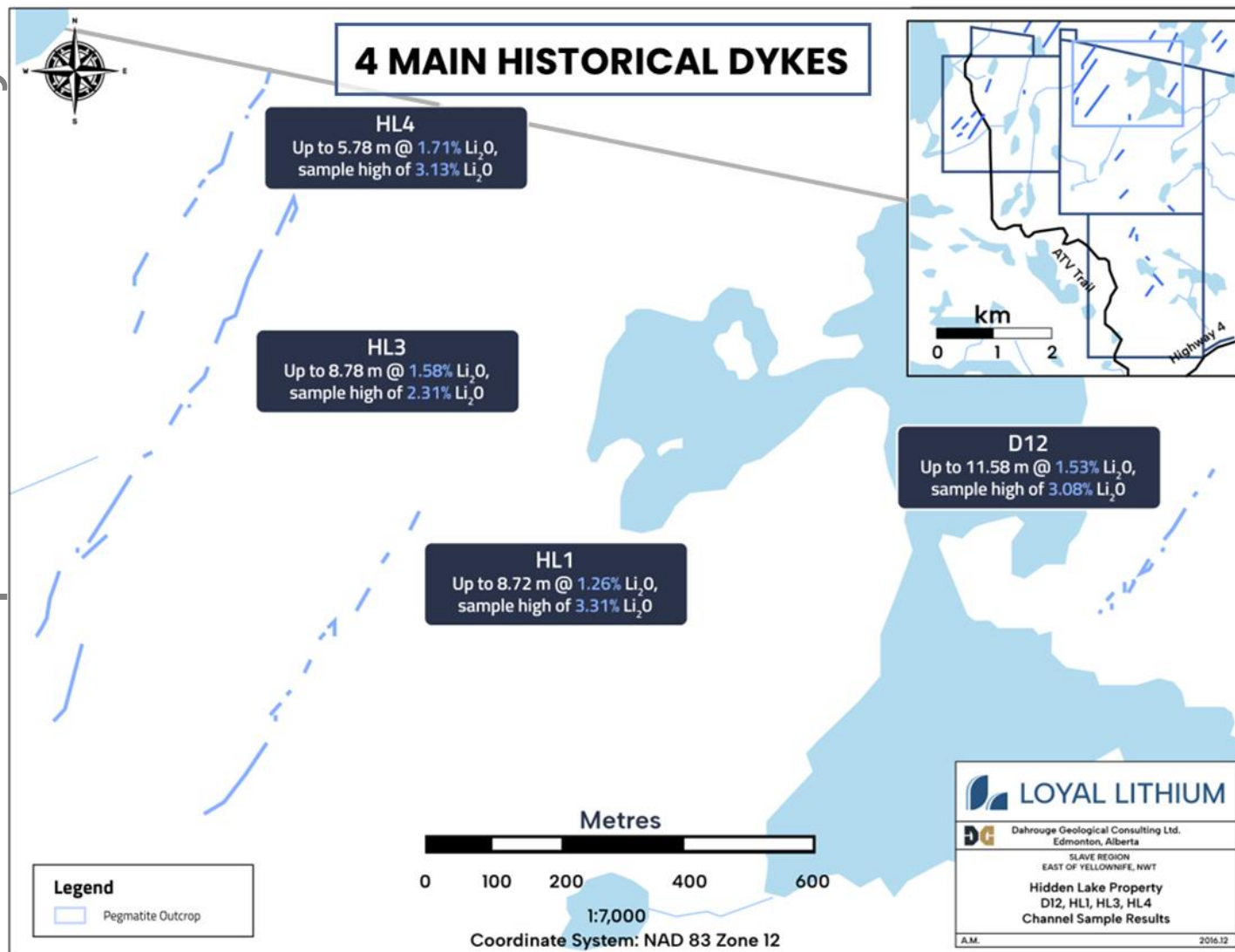
Extensive spodumene bearing pegmatite outcrops identified:

- 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

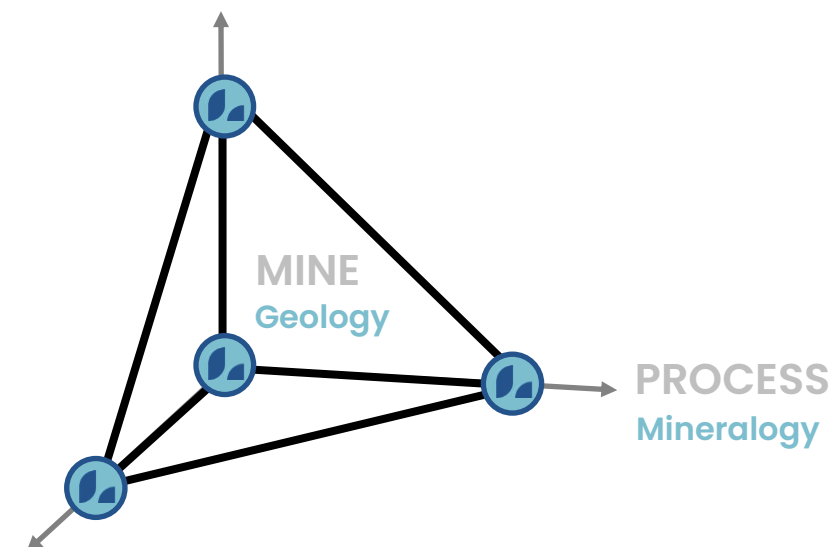
WHY WE LOVE IT – RESOURCE POTENTIAL

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RESOURCE POTENTIAL

Exploration Work



INFRASTRUCTURE

Proximity to Existing

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

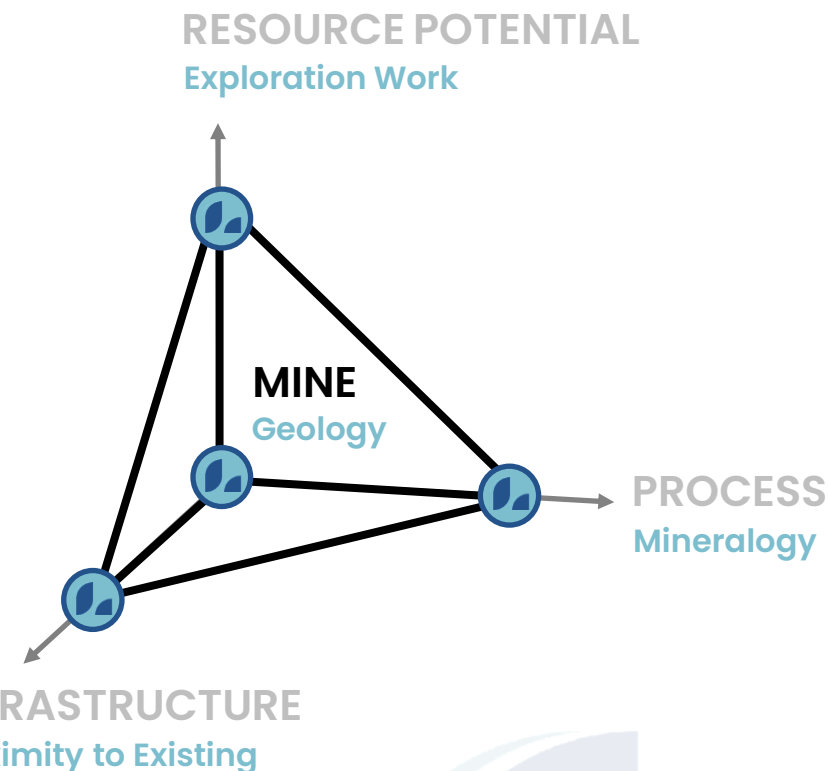
- 10 drill holes conducted to 30–50 m vertical to confirm mineralised with grades up to 1.81% Li_2O
- Open along strike and depth

HIDDEN LAKE LITHIUM PROJECT

WHY WE LOVE IT – MINEABLE



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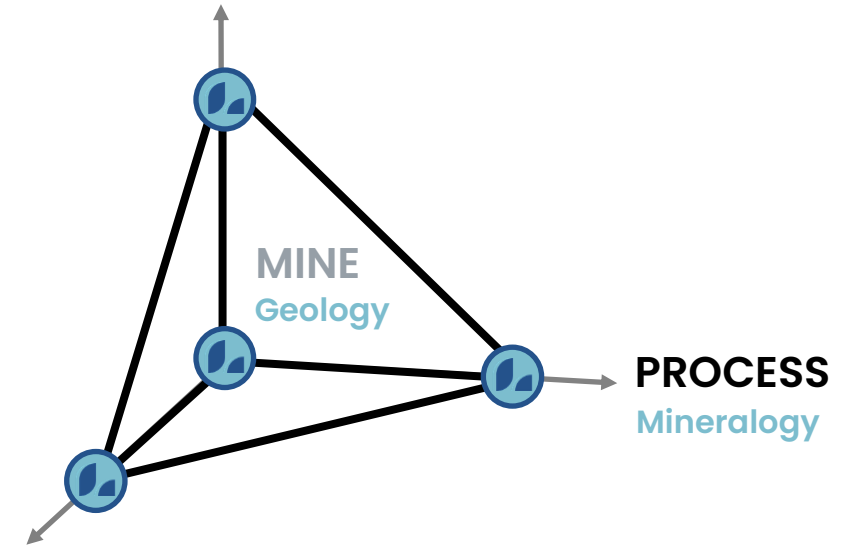
Prominent spodumene pegmatite outcrops with apparent widths up to 11.58 m have a cumulative strike length of ~2,250 m. Surface exposures and drill intercepts imply favourable mining geometries for both open cut and underground operations.

HIDDEN LAKE LITHIUM PROJECT

WHY WE LOVE IT – PROCESSING SIMPLICITY



RESOURCE POTENTIAL
Exploration Work



PROCESS
Mineralogy

INFRASTRUCTURE
Proximity to Existing

Metallurgy supports DMS concentration

- DMS concentrate via pilot plant
- Highly liberated
- 50%+ mass rejection < 0.2% Li_2O loss

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Mineralogy &
Metallurgy
fundamentals
understood

Mineralogy is simple
and consistent with
low impurities

- Spodumene
+ Quartz
+ Feldspars
< 0.25% FeO



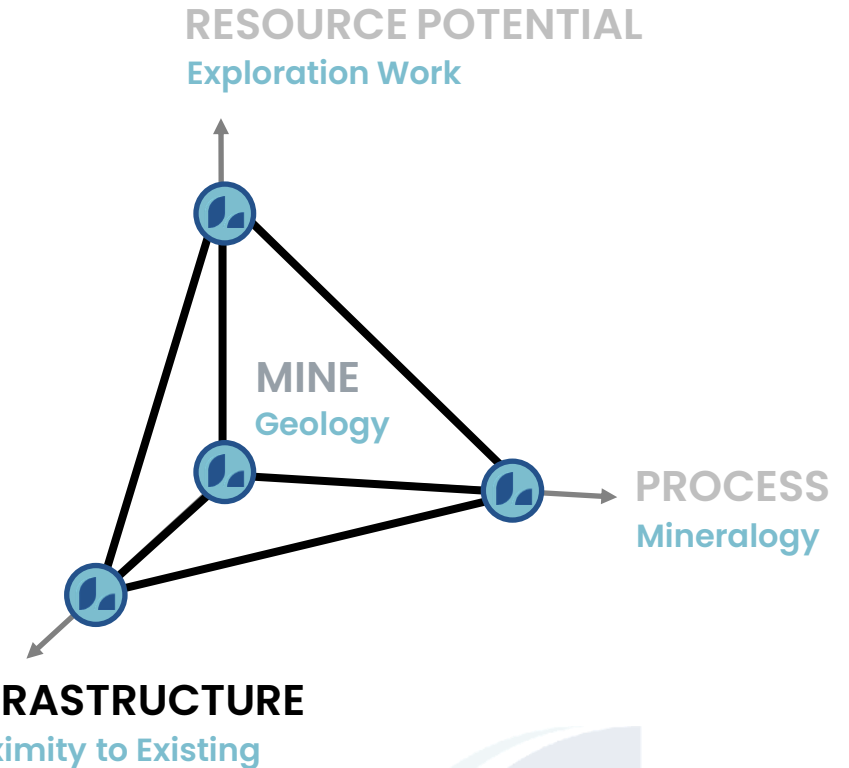
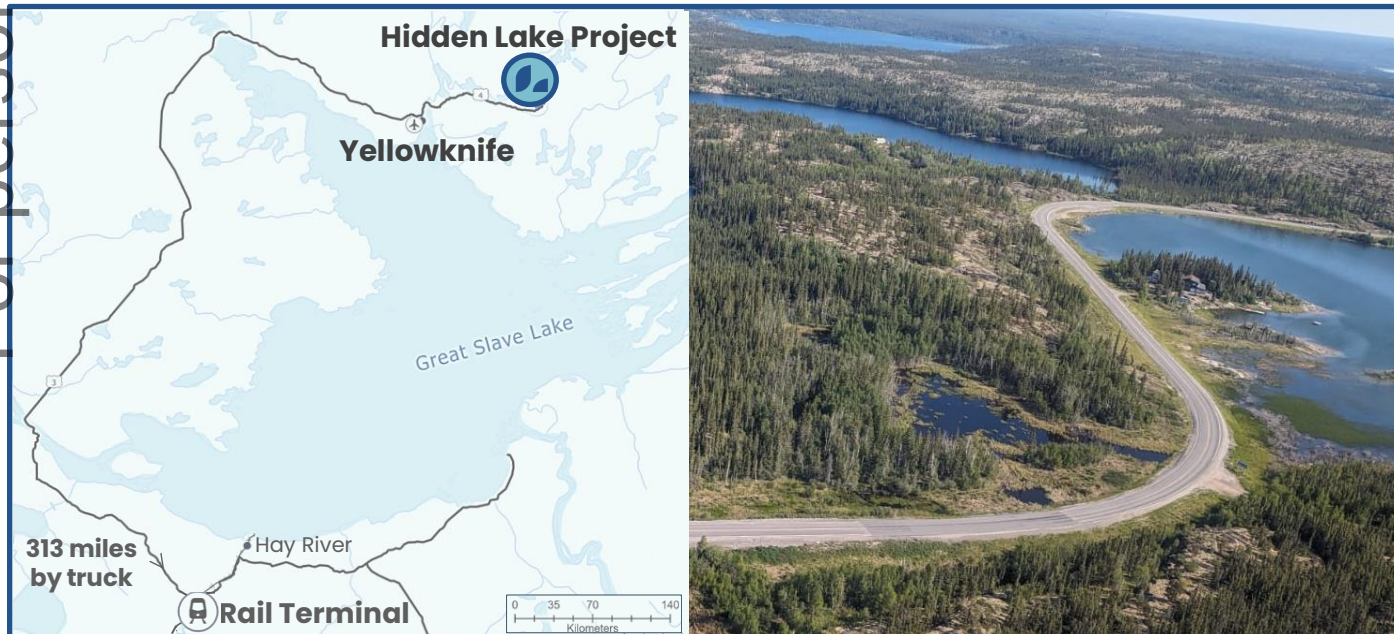
HIDDEN LAKE LITHIUM PROJECT

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 Colombia
- Hydroelectric power – 2030 plans for the Lithium Belt



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

- Significant backhaul capacity

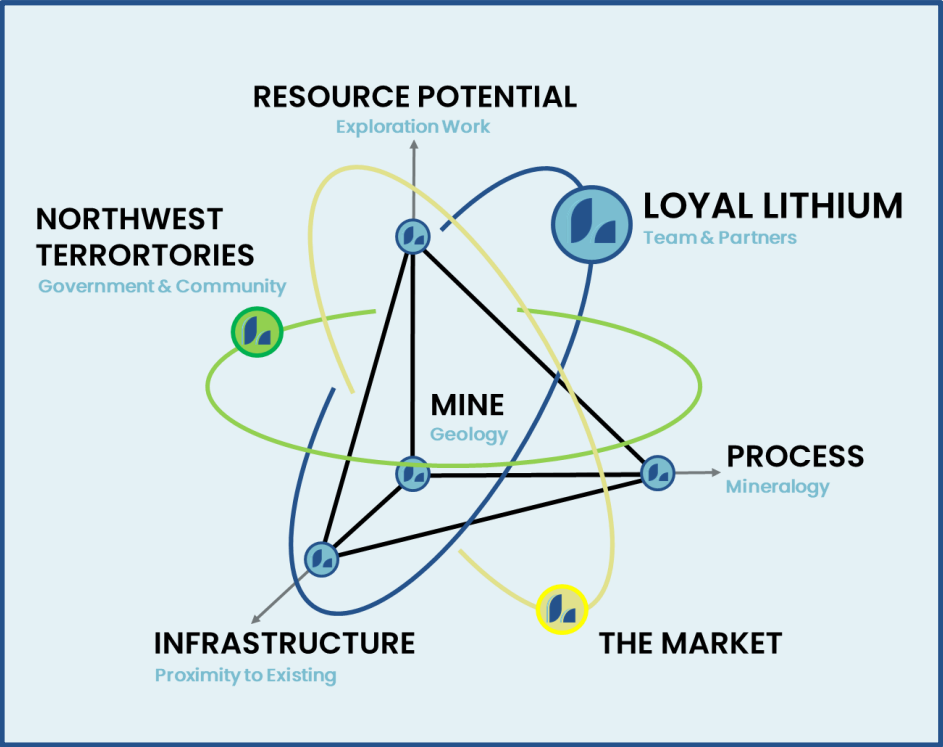
HIDDEN LAKE APPROACH

CONCURRENT WORKSTREAMS IN MOTION

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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



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

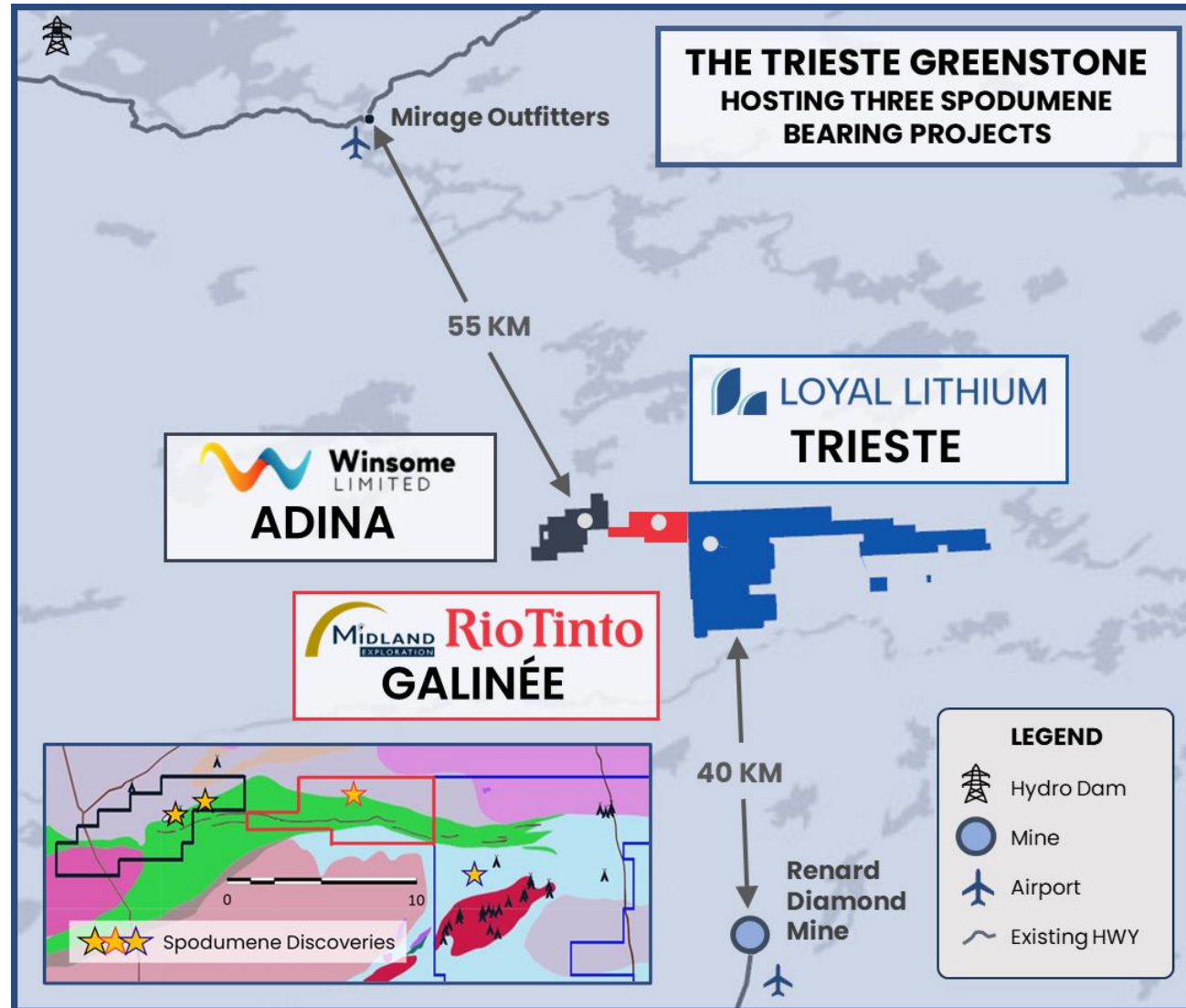
Five spodumene bearing pegmatites discovered in maiden field program.

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

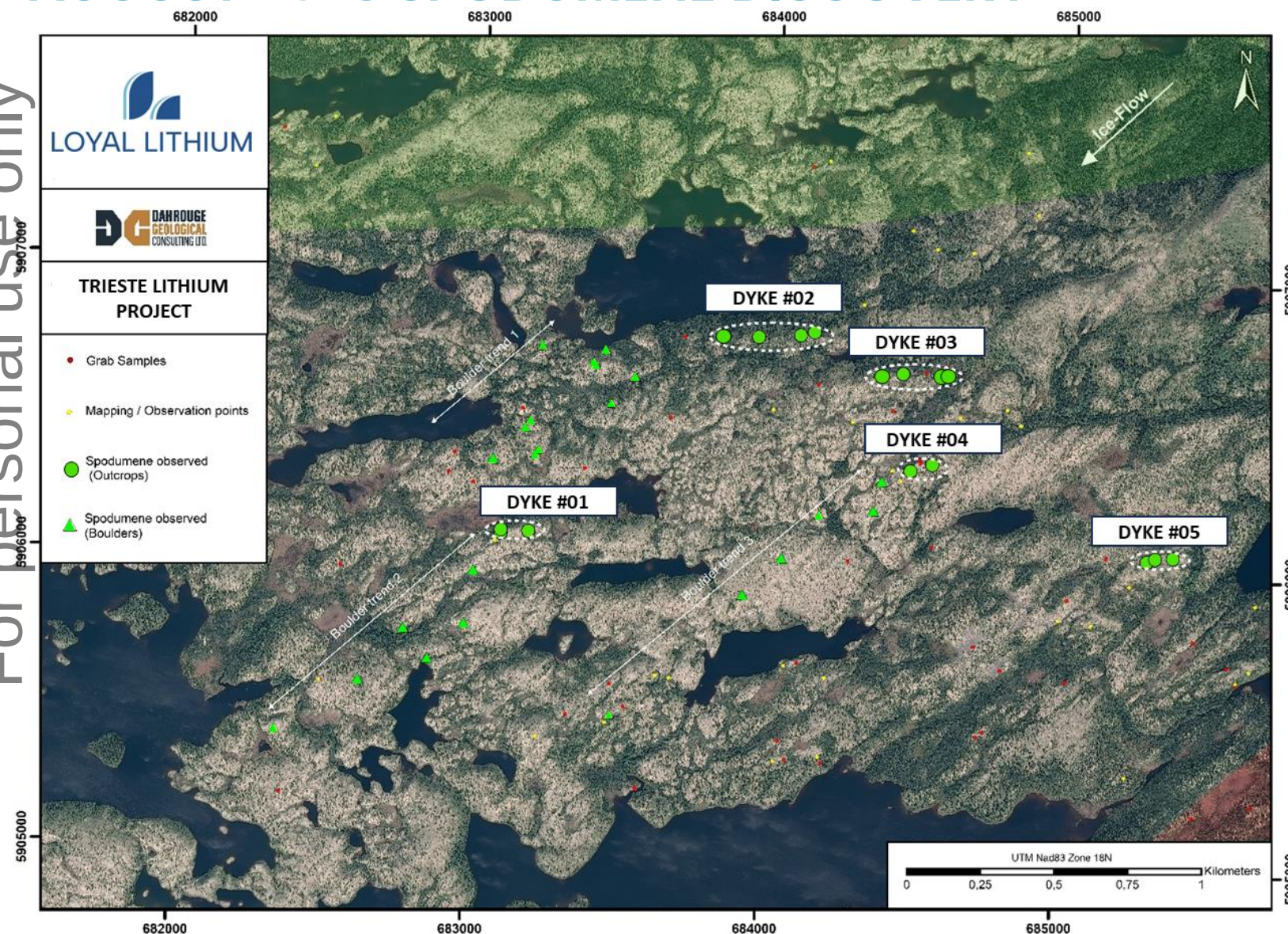
AUGUST 2023 SPODUMENE DISCOVERY



FIVE SPODUMENE BEARING PEGMATITE DYKES DISCOVERED

The five spodumene bearing pegmatite dykes, with aligned implied continuous outcrops, have been identified within a 6km² area to the south of the Trieste greenstone belt, situated in a metasediment host.

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TRIESTE LITHIUM PROJECT

AUGUST 2023 SPODUMENE DISCOVERY



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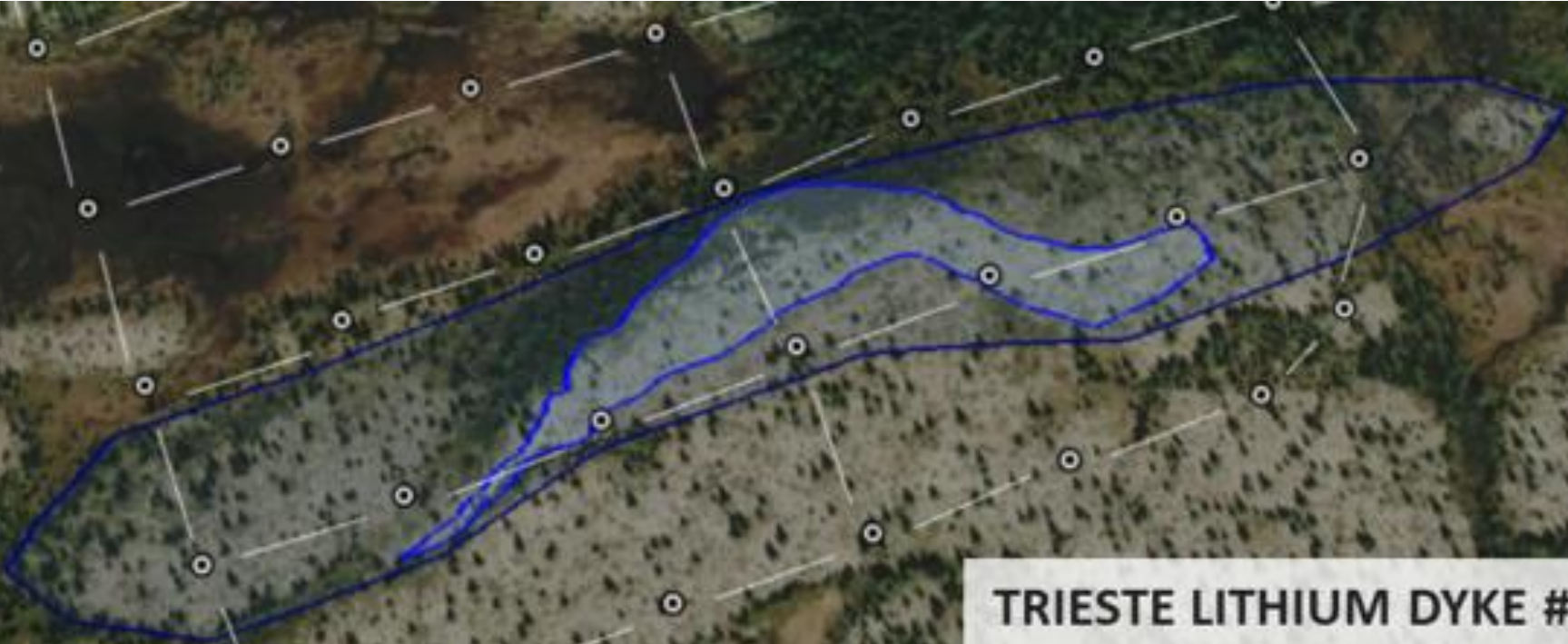
Dyke #01

TRIESTE LITHIUM PROJECT

FAST-TRACKED DRILLING PROGRAM

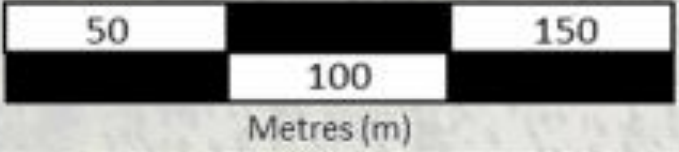


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TRIESTE LITHIUM DYKE #01

-  Zone of Interest
-  Surface Expression
-  Planned Drill Target



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 expedited
- Results to support winter drilling program

WINTER DRILLING

- Larger wide scale program
- Inform desktop studies

SCOTTY LITHIUM PROJECT NEVADA, USA



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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 lithium¹.

Geological modelling has determined a large and robust independent exploration target.³

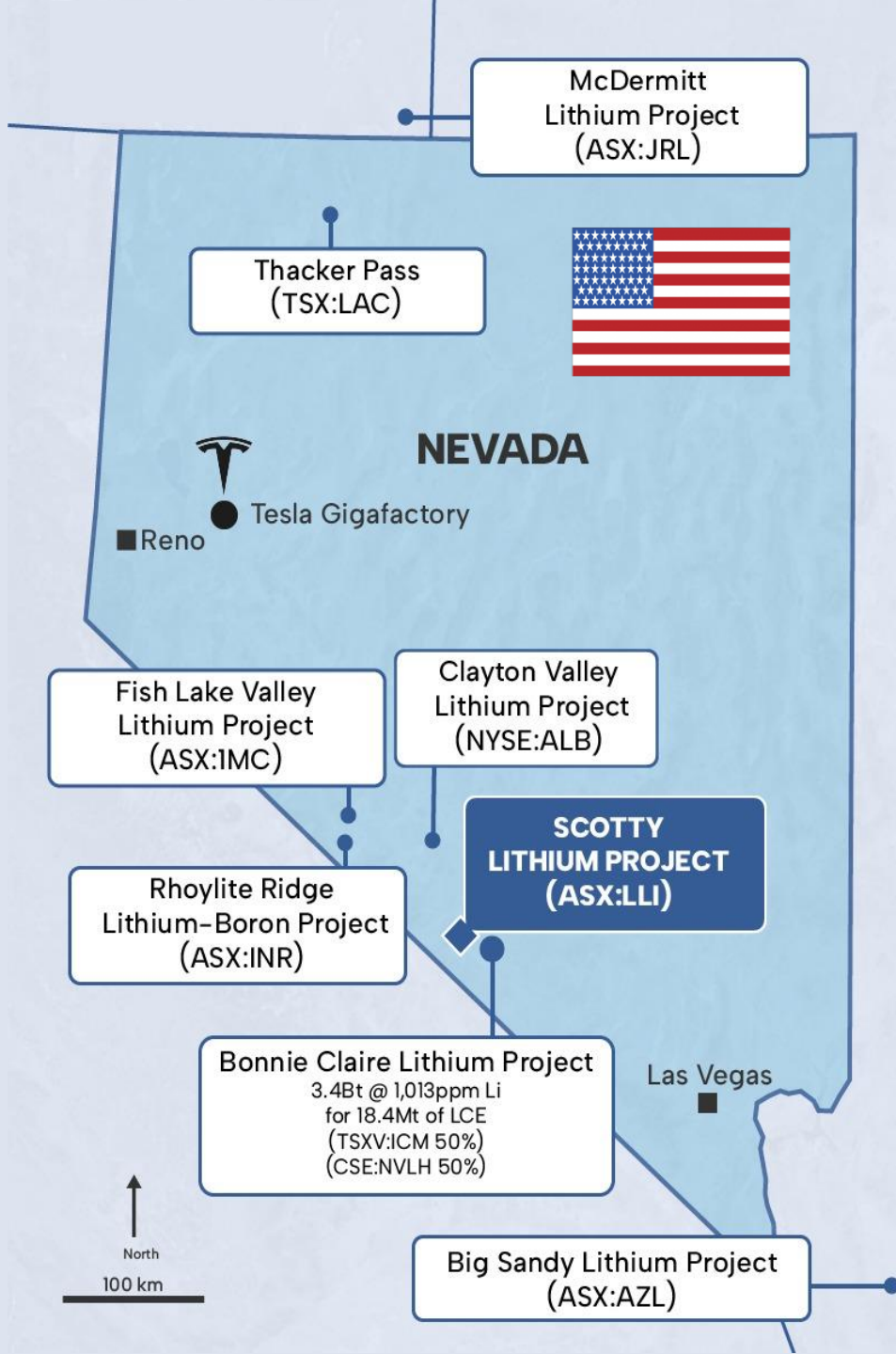
Lower Range

Upper Range

460 Mt
@ 1145 ppm^{1,2,3}

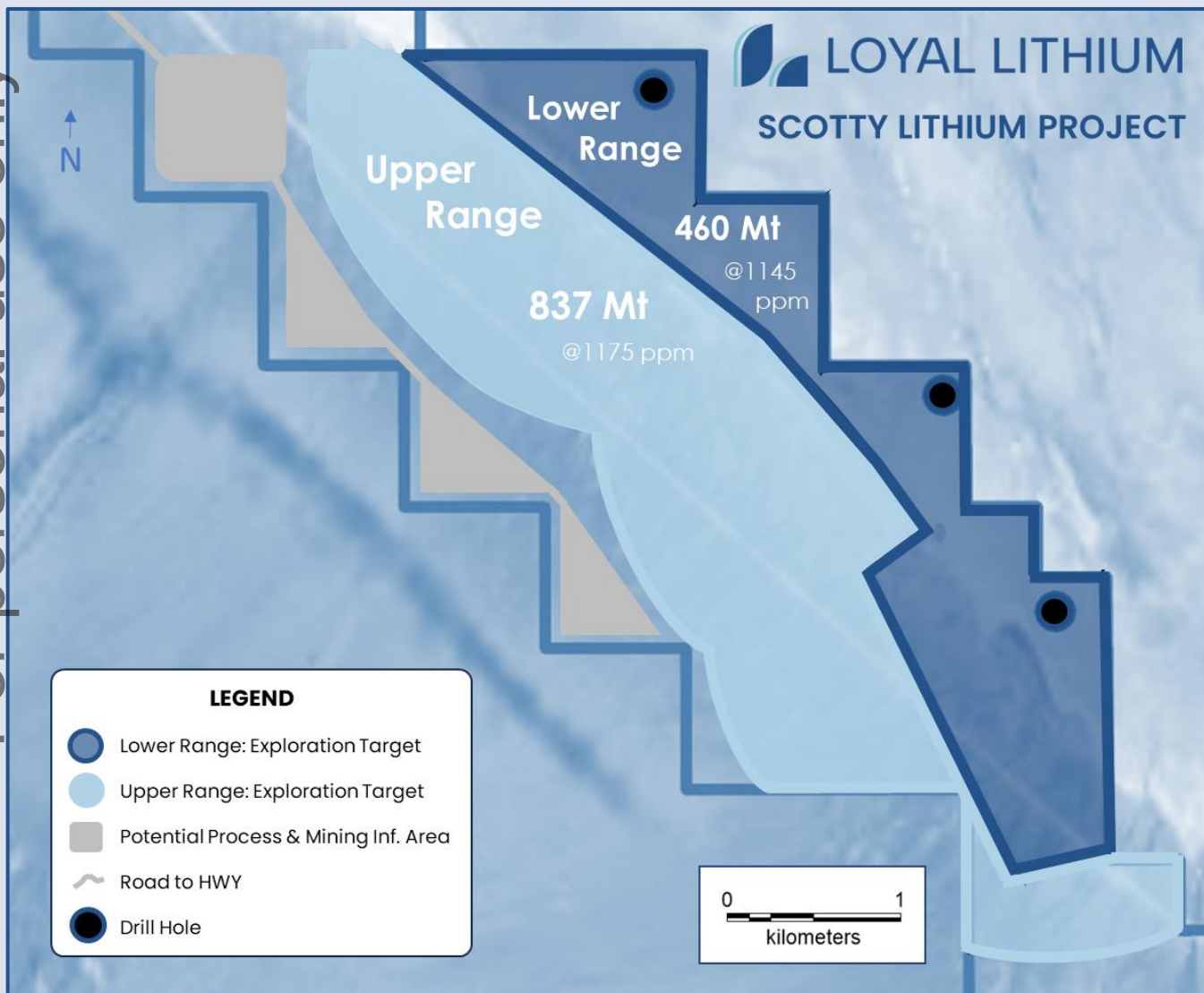
837 Mt
@ 1175 ppm^{1,2,3}

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

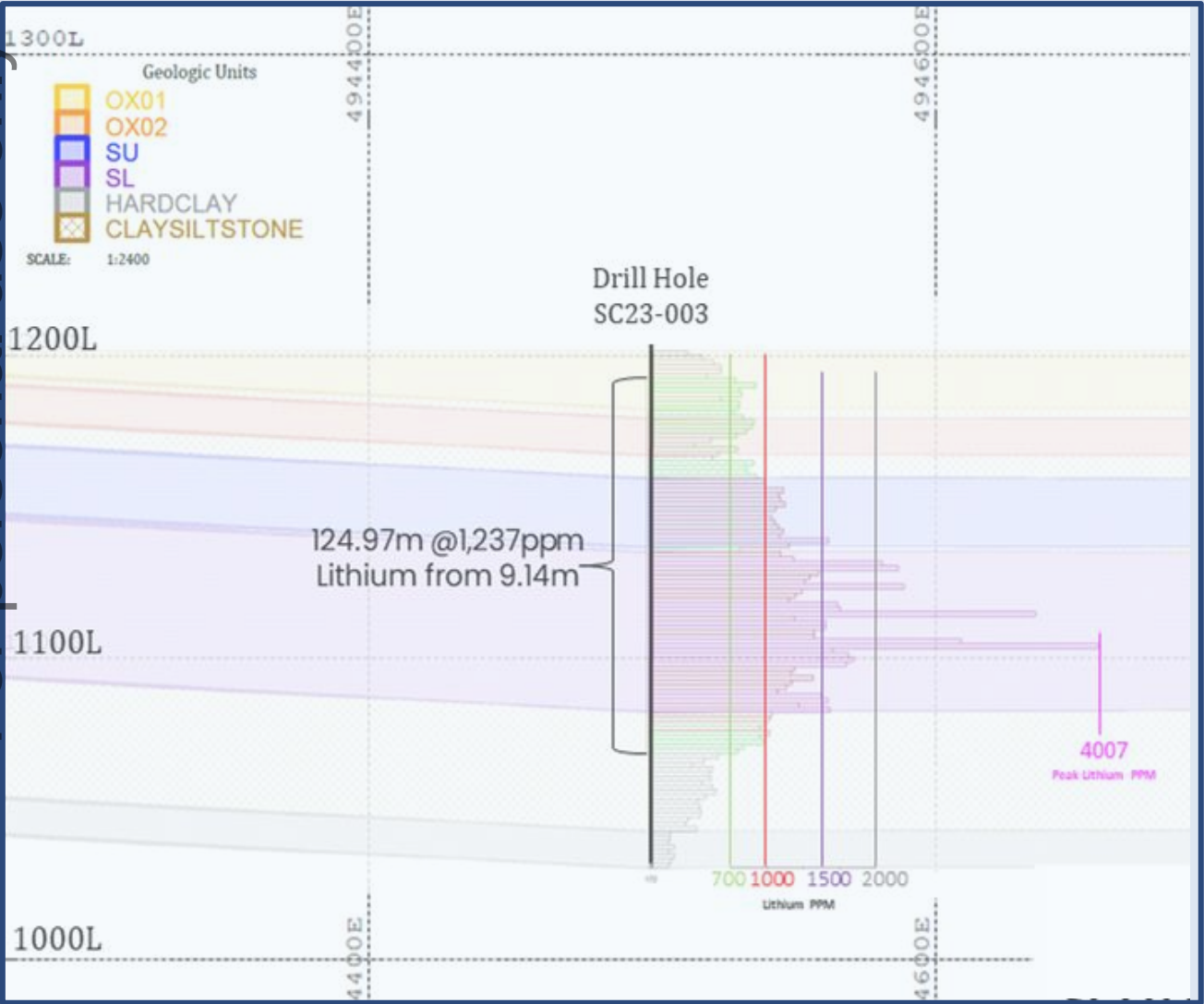
- Mining Solution: Traditional Truck & Shovel
 - Like Iron Ore and other bulk commodities
- Mining Parameters: Potentially Low Strip Ratio
 - Mineralisation from near surface
- Process & Mining Infrastructure: Western Edge
 - Alluvial fan basin edge is ideal for entering the potential pit and housing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

DRILLING RESULTS

REPRESENTING SIGNIFICANT RESOURCE POTENTIAL



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"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

Q3 2023 Q4 2023 Q1 2024 ONGOING

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Hidden Lake Lithium Project, NWT, Canada

- Maiden Exploration Field Program
- LiDAR & Geophysics Survey
- Exploration Field Program – Assay Results
- Enhanced Winter Drilling Campaign

Trieste Lithium Project, James Bay Quebec, Canada

- Targeted Field Mapping & Assay Results
- LiDAR Survey
- Fast-Tracked Drilling Campaign
- Winter Drilling Campaign

Scotty Lithium Project, Nevada, USA

- Maiden Drilling Program
- Drill Assay Results
- Exploration Target
- Development Concept Study & Next Steps

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