



**Critical  
Resources  
Limited**

**ASX : CRR**

# **RIU Sydney Resources Round-up**

**Booth 24**

**8 May 2024**



# Strategic Highlights

## The Right Place

Exceptional location, high-growth market and infrastructure rich

## The Right Project

Resource-backed with growth potential

## The Right Pathway

Clear pathway to advance the Project and deliver lithium products to market

- Ontario provides **supportive** Provincial and Federal **Governments** – plus potential access to US Government initiatives
- **Unprecedented investment** into North American electric vehicle supply chains
- Project **location and existing infrastructure** (road, rail and port) provides **significant** operational and **financial advantages**
- Flagship Mavis Lake Lithium Project - Maiden Mineral Resource Estimate (MRE) **8Mt @ 1.07% Li<sub>2</sub>O**, drilling subsequent to MRE release has included world-class intercepts up to **74.4m @ 1.18% Li<sub>2</sub>O\***
- Potential for **further discoveries**, multiple mapped spodumene bearing pegmatites yet to be drill tested
- Met testwork delivered **high recoveries** (up to 87%) with **excellent** concentrate **grades** (5.9-6.4% Li<sub>2</sub>O)\*
- Ore sorting trials delivered outstanding (98%) waste rock separation
- **Focused project development** activity being conducted in parallel with continued resource growth and permitting
- Development Team **leveraging experience gained** from previous hard rock lithium projects
- Economic Assessment being undertaken, Project economics to drive **value creation**
- Ownership = 100%, Offtake = **100% Uncommitted**



# Corporate Snapshot

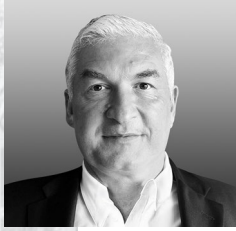
## Board of Directors



**Alex Cheeseman** Managing Director  
 20+ years leadership and management across projects and operations. 7 years dedicated to the lithium industry(former GM Altura Mining).  
 Extensive experience building and managing high-performance teams operating in multiple jurisdictions.



**Robert Martin** Non-Executive Chairman  
 A successful businessman and accomplished company Director with over 25 years' experience across mining and mining services.  
 Significant experience in capital markets and corporate strategy. Chairman of ASX:BM8, ASX:EQN and ASX:PLN, NED of ASX:PKD and TSX:VCT.



**John Markovic** Non-Executive Director  
 Highly successful businessman, with proven history in value creation.  
 Strategic expertise in marketing, financial planning and risk management.  
 Track record in achieving high-growth for shareholders.



**Nigel Broomham** Non-Executive Director  
 A professional geologist with 10+ years dedicated in exploration for battery raw materials.  
 Former Head of Geology for Pilbara Minerals (ASX:PLS). Current CEO Battery Age Minerals (ASX:BM8) and NED Pioneer Lithium (ASX:PLN).

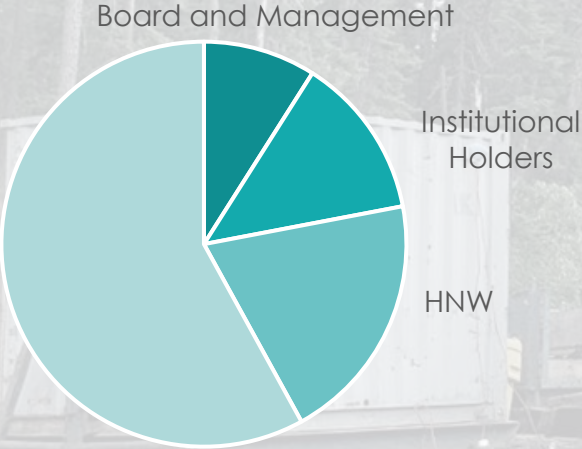


**Anthony Tse** Strategic Advisor  
 Early pioneer and veteran of the lithium industry.  
 Former CEO of Galaxy/Alkem – now the 5th largest lithium producer.  
 Extensive strategy, management and investment experience across the battery value chain globally.

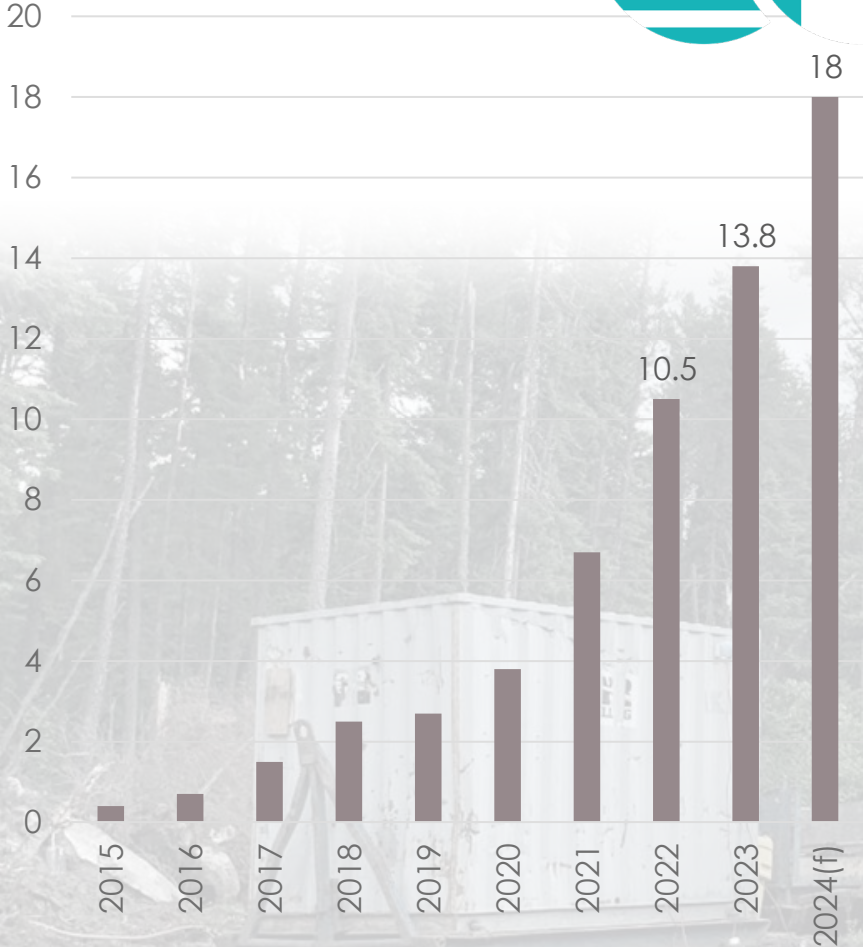
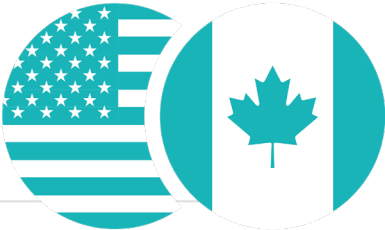
## Capital Structure

Share Price (30 April 2024)	AUD\$0.013
Shares	1.78b
<b>Market Cap. (undiluted)</b>	<b>~AUD23m</b>
Cash (31 March 2024)	AUD\$3.4M
Debt	\$0
Options (47m - \$0.04 strike – expiry 3 Dec 24)	AUD\$1.88m

## Share Register

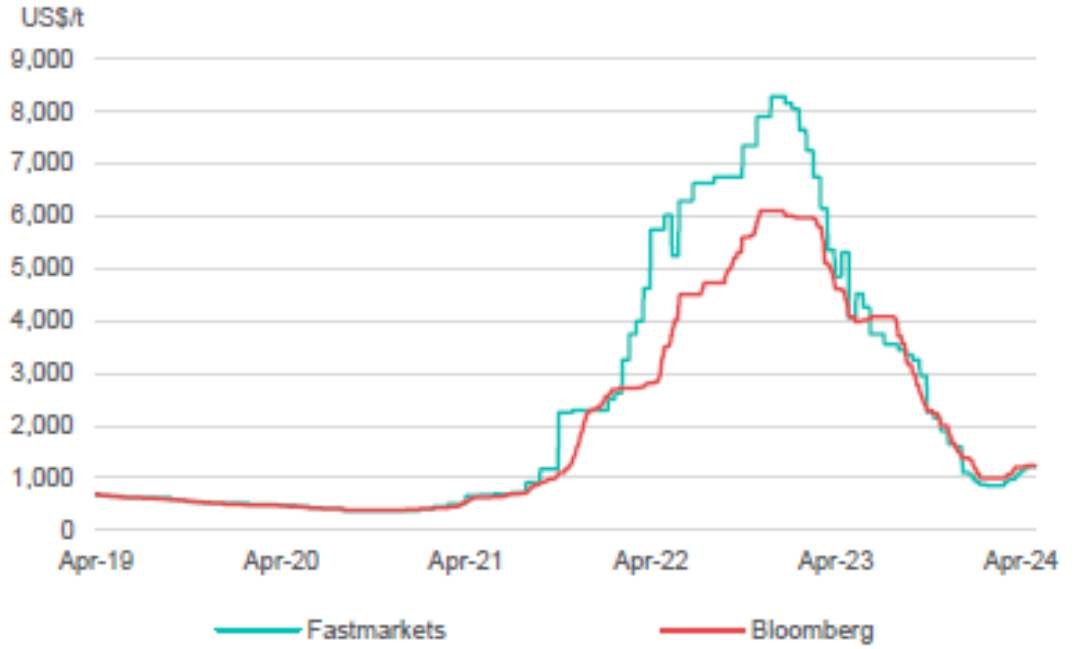


Global EV sales  
all vehicle classes



Source: RhoMotion Jan 2024

Spodumene (5-6% Li<sub>2</sub>O) CIF China



## Grow to Full Potential

Year on year Resource growth through exploration success and organic Resource expansion

## Advance Towards Production

Project development through permitting, technical and economic studies with ongoing Community engagement

## Secure Strategic Partners

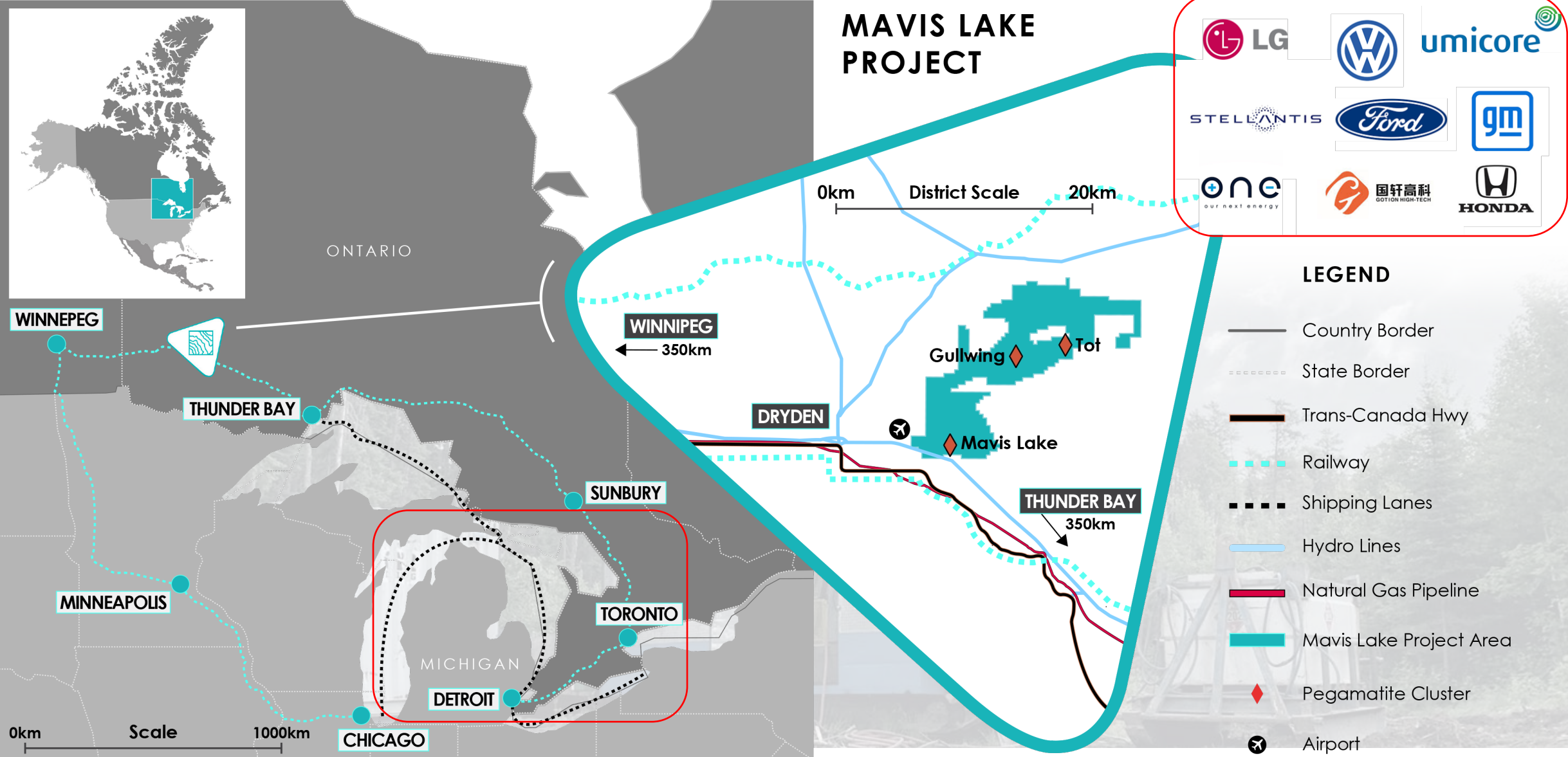
Leverage early mover advantage and management credentials to secure value accretive strategic partnerships



The background features abstract geometric shapes in teal and grey on the left side. A large, light grey wireframe pattern, resembling a grid or a mesh, curves across the right side of the image. The text 'Mavis Lake Project' is centered in the middle of the image, overlaid on the wireframe pattern.

# Mavis Lake Project

# Project Location



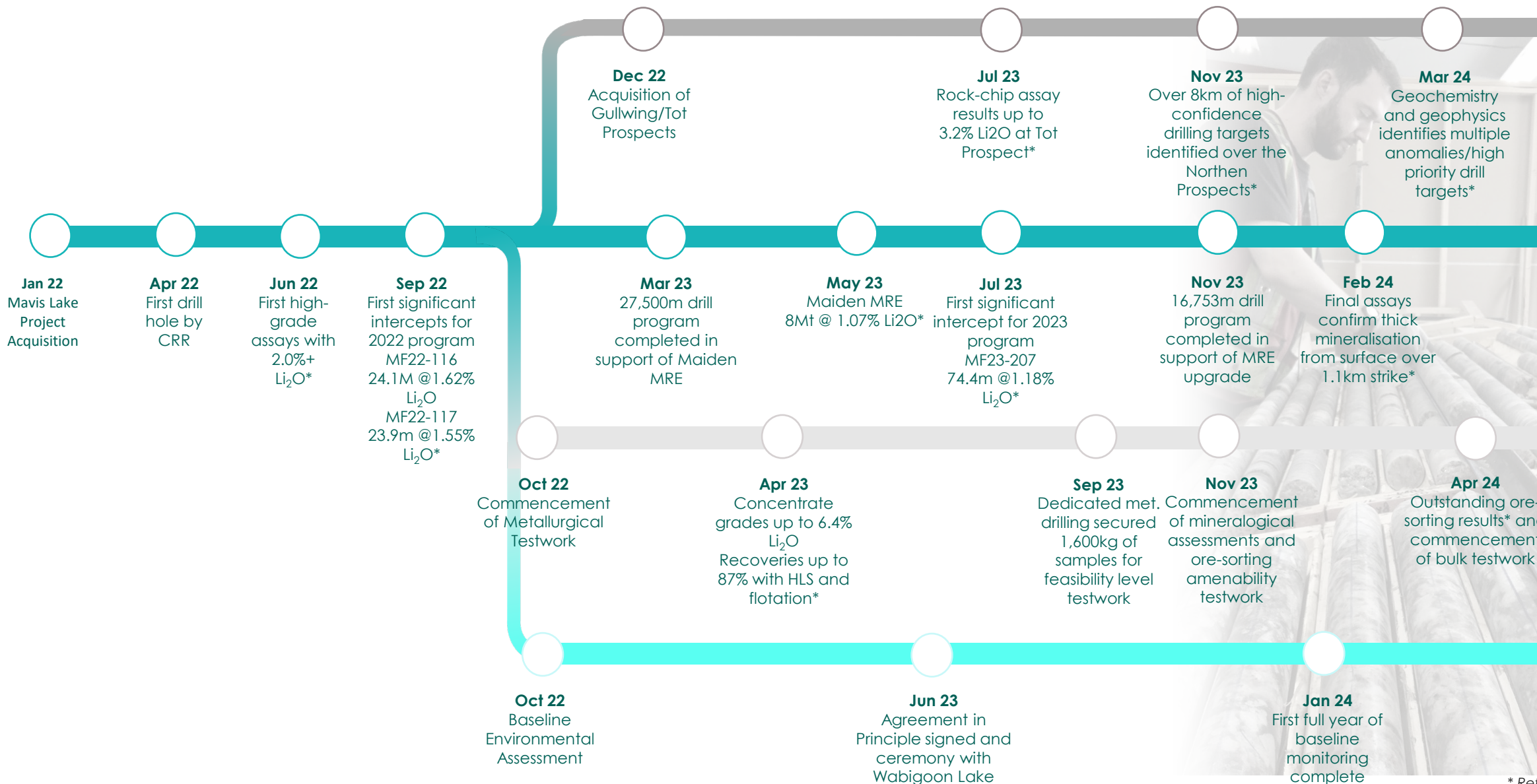
Logos of partner companies:

- LG
- VW
- umicore
- STELLANTIS
- Ford
- gm
- our next energy
- 国轩高科 (GOTION HIGH-TECH)
- HONDA

### LEGEND

- Country Border
- State Border
- Trans-Canada Hwy
- Railway
- Shipping Lanes
- Hydro Lines
- Natural Gas Pipeline
- Mavis Lake Project Area
- Pegamatite Cluster
- Airport

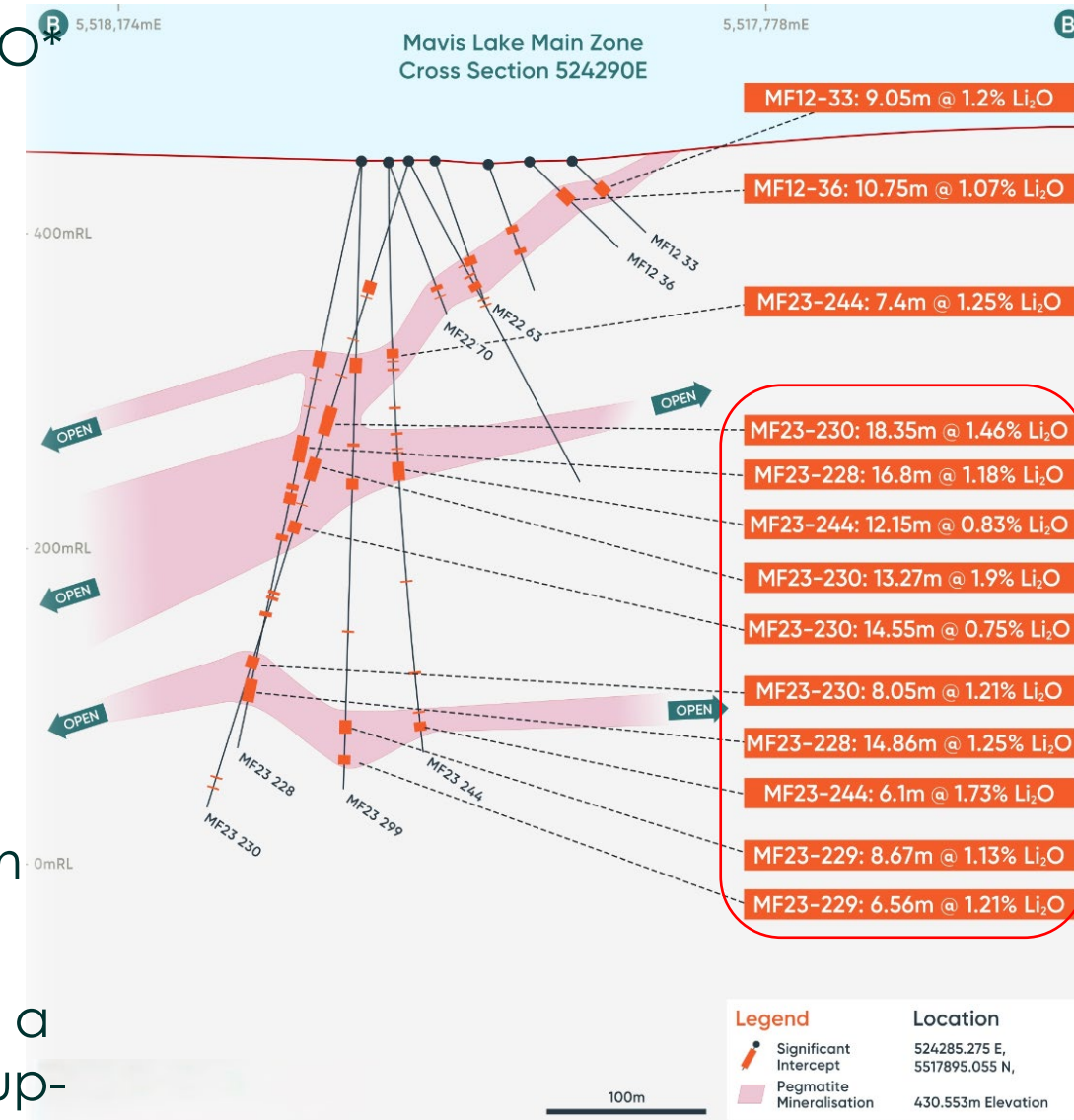
# Building Momentum Since Acquisition





# Maiden Resource with Growth Potential

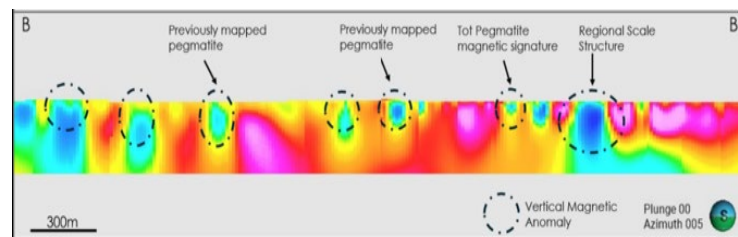
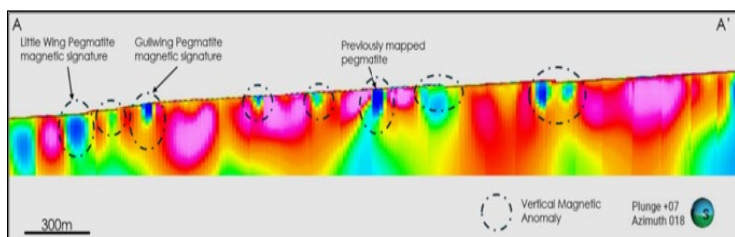
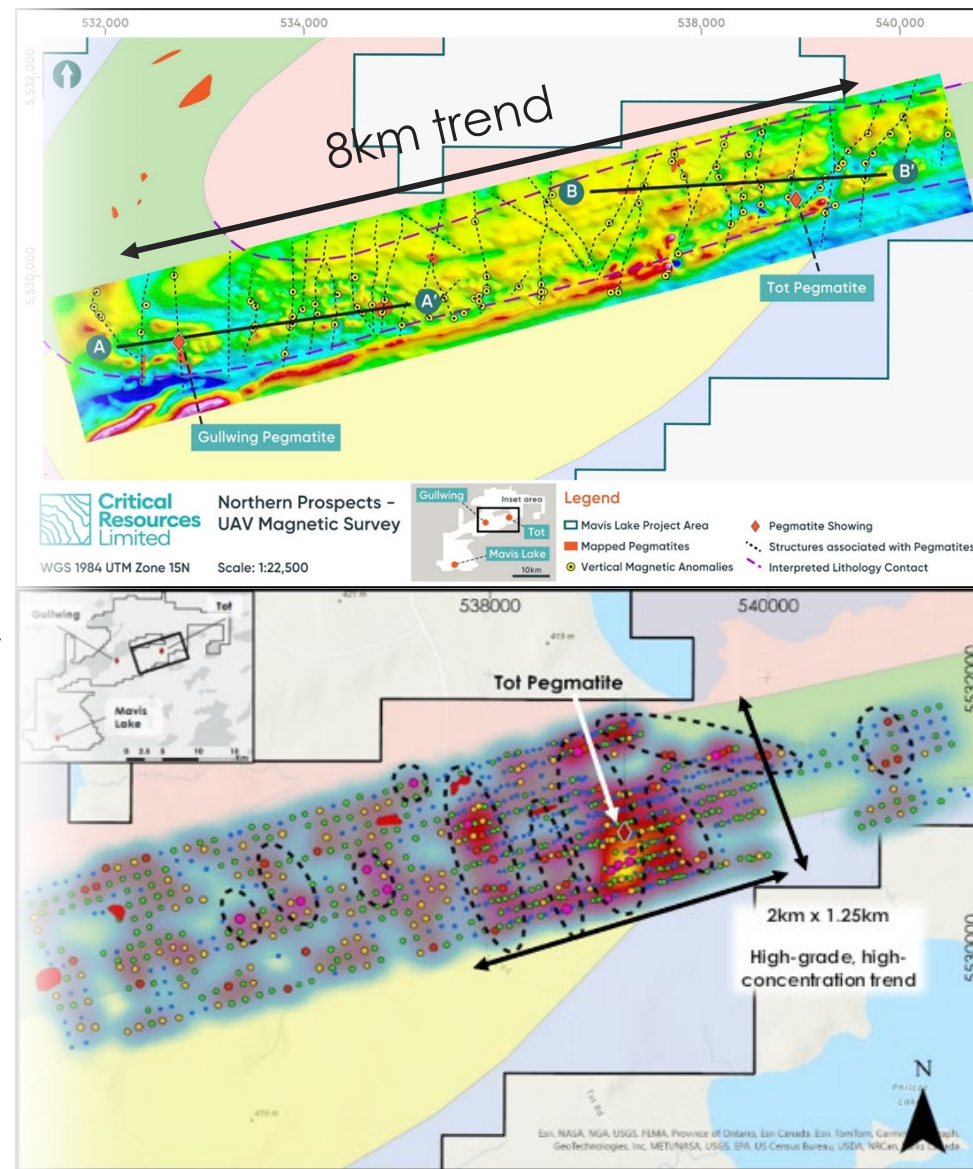
- Maiden MRE released in May 2023 - 8Mt @ 1.07% Li<sub>2</sub>O\*
- Maiden MRE included drilling results up to 30 March 2023, a further 16,753m was drilled in CY 2023
- June-November 2023 saw outstanding intercepts\* including:
  - Drill Hole MF23-207 with 74.4m @ 1.18% Li<sub>2</sub>O
  - Drill Hole MF23-213 with 50.2m @ 1.28% Li<sub>2</sub>O
  - Drill Hole MF23-225 with 37.75m @ 1.12% Li<sub>2</sub>O
- Updated resource model being developed, with expectation of first MRE upgrade in H2 2024
- Thick, high-grade lithium mineralisation, starting from surface, over a 1.1km strike
- Drilling late in 2023 also confirmed the discovery\* of a new/lower mineralised stack, which remains open up-dip and down-dip



\* Refer to Appendix

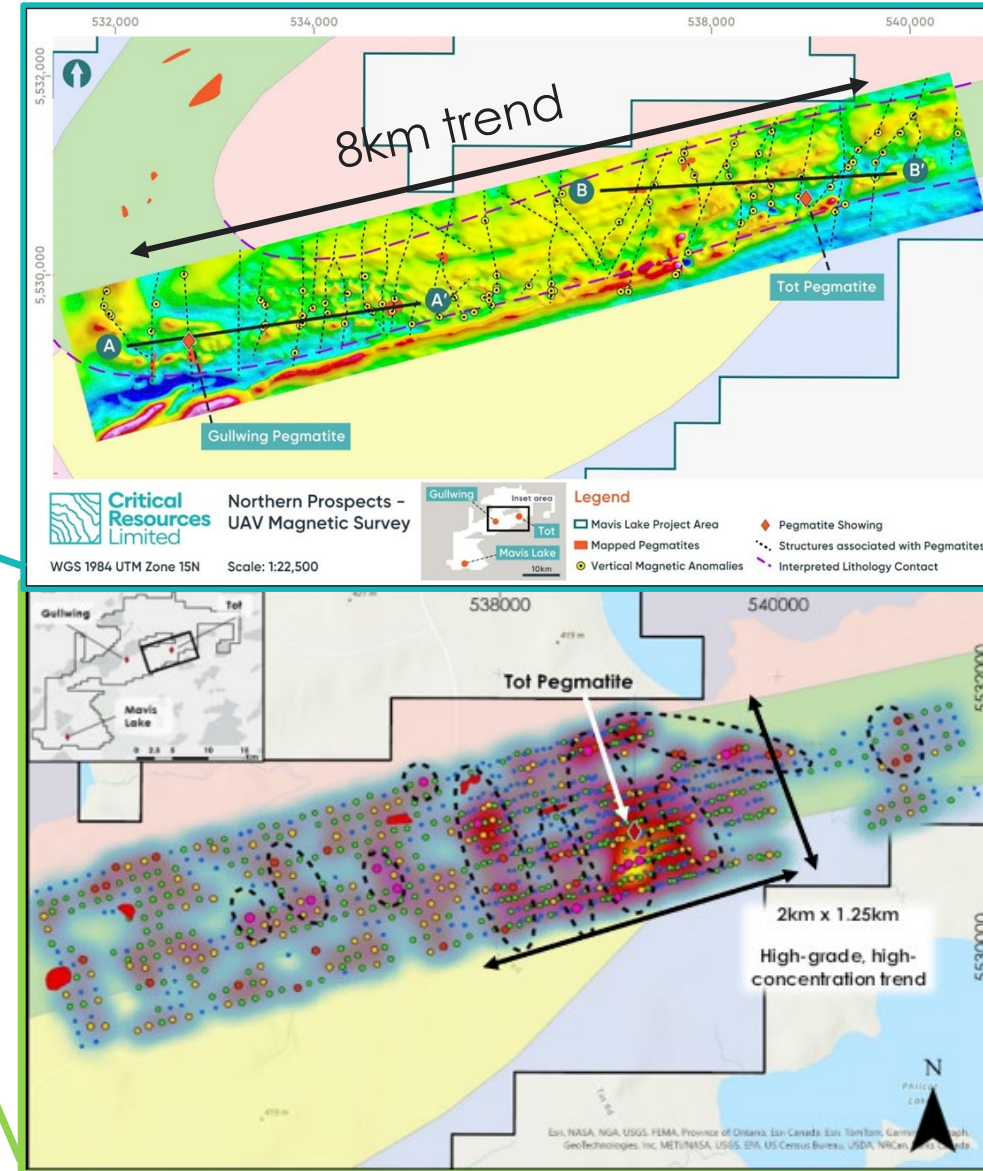
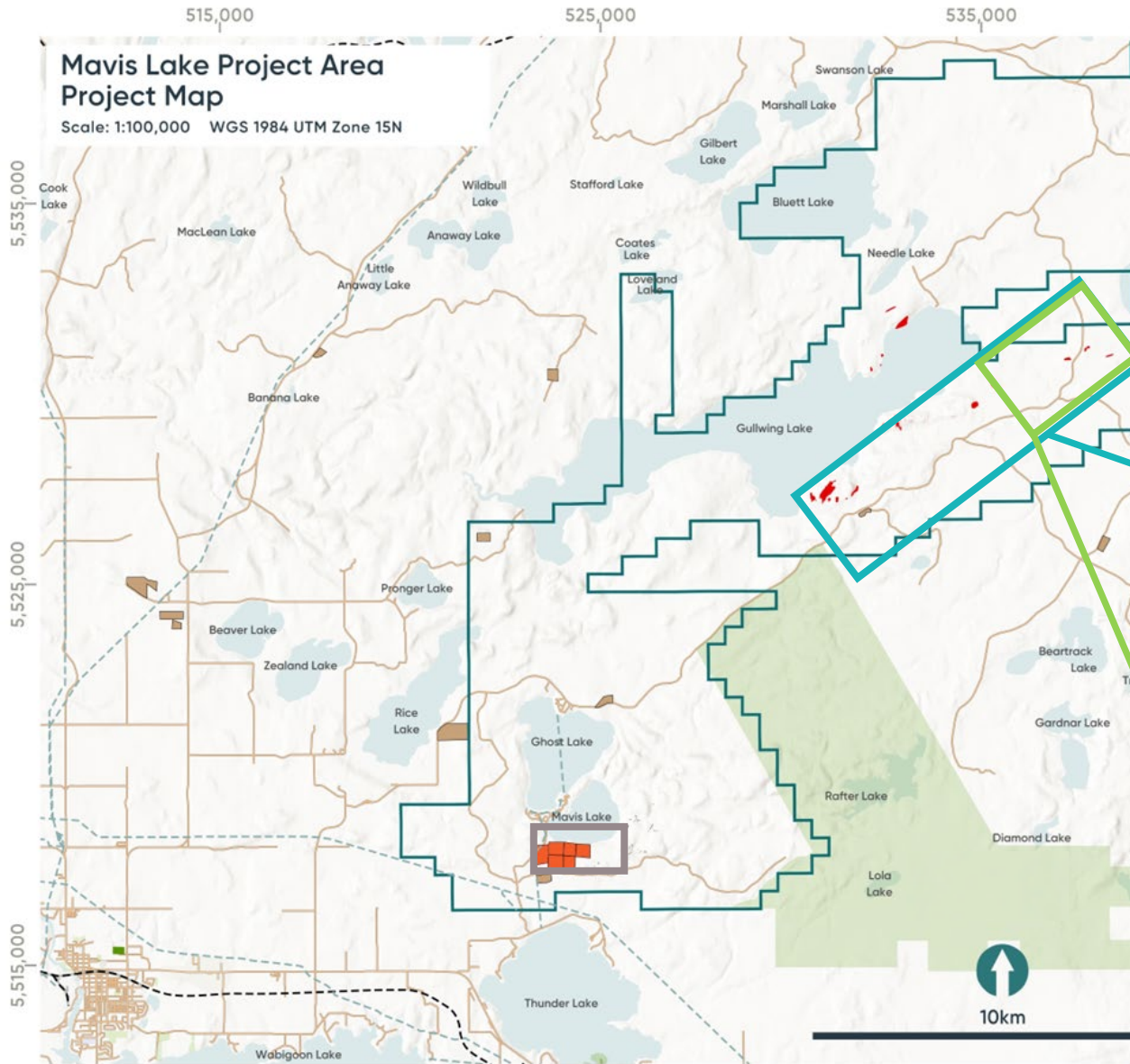
# Unlocking District Scale

- Approximately 8km of strike with high-grade assays\* from rock chips and channel sampling including:
  - Sample 159082 Gullwing rock chip @ 6.78% Li<sub>2</sub>O
  - Sample 157856 Tot 1.3m channel sample @ 2.88% Li<sub>2</sub>O
  - Sample 347562 Tot rock chip @ 3.21% Li<sub>2</sub>O
- Soil sampling identified 1 x 1.25km trend extending from the Tot pegmatite\*
- Low altitude, high-resolution aeromag and LIDAR survey identified multiple magnetic signatures consistent with previously mapped spodumene bearing pegmatites\*
- Field work commencing in May to ground truth recent results





# Unlocking District Scale



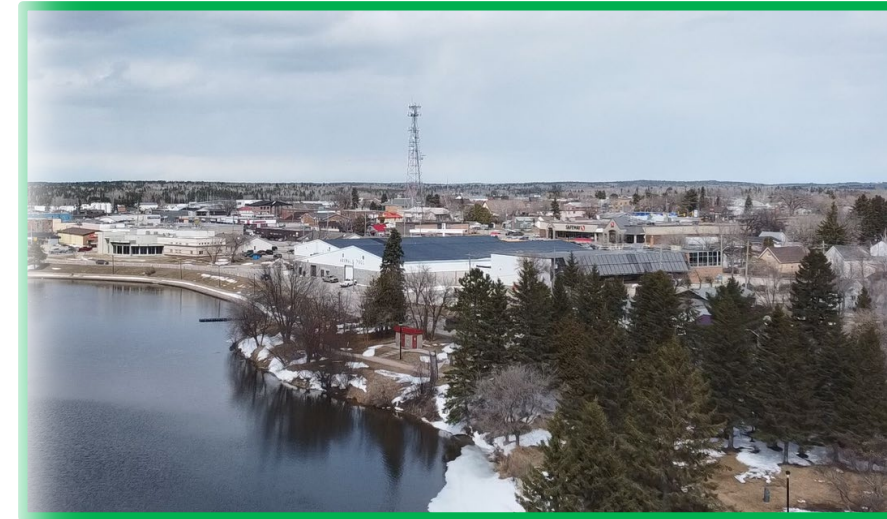
Esri, NASA, NGA, USGS, FEMA, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,



# World Class Infrastructure

- All field activities based out of Dryden – a low-cost, well serviced base for future growth
- Road and rail options to a number of deepwater ports, all currently supporting dry-bulk cargo export
- Growing services and opportunities in Dryden – potential for contracted services to provide multi-user camp, laboratory and warehouse solutions
- Direct access to infrastructure and utilities – significant CAPEX savings

Key Infrastructure	Distance to ML Resource
<b>Trans-Canada Highway</b>	<b>4.5 km</b>
230Kv Power Lines (Hydro)	1.5 km
<b>Dryden City Centre</b>	<b>14 km</b>
Natural Gas Pipeline	5.7 km
Public Road	588 m
Airport	6 km
Canadian Pacific Railway	5.5 km
Canadian National Railway	21.2 km



# Detailed Flowsheet Development



- Heavy Liquid Separation (HLS) delivered spodumene concentrate up to 6.4%  $\text{Li}_2\text{O}$  with very low  $\text{Fe}_2\text{O}_3$ .
- Optimization work (HLS and flotation) delivered recoveries up to 87%\*
- QEMSCAN has identified predominantly large spodumene crystals and confirms spodumene is the predominant lithium mineral
- Ore sorting amenability trials completed\*:
  - 150%  $\text{Li}_2\text{O}$  increase for UV sorting
  - 98% waste rock rejection from XRT sorting
- Bulk ore sorting and DMS test work program commenced in April 2024 – results to underpin Scoping Study flowsheet design and economic parameters
- Hybrid DMS and flotation flowsheet anticipated – designing a staged project delivery approach to minimise upfront CAPEX requirement











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**Authorisation** this document has been authorised for release by the Company’s Board of Directors.

## COMPLIANCE STATEMENT

This document contains information relating to Exploration Results in respect of the Mavis Lake project extracted from ASX market announcements reported previously and published on the ASX platform on those dates noted below.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed.

- Drill Hole MF12-33 refer to ASX announcement dated 25 October 2021
- Drill Hole MF12-36 refer to ASX announcement dated 25 October 2021
- Drill Hole MF17-49 refer to ASX announcement date 25 October 2021
- Drill Hole MF18-53 refer to ASX announcement date 25 October 2021
- Drill Hole MF22-64 refer to ASX announcement dated 16 June 2022
- Drill Hole MF22-72 refer to ASX announcement dated 21 July 2022
- Drill Hole MF22-116 refer to ASX announcement dated 13 September 2022
- Drill Hole MF22 -117 refer to ASX announcement dated 13 September 2022
- Drill Hole MF22-121 refer to ASX announcement dated 24 October 2022
- Northern Prospects sample 159082 refer to ASX announcement dated 20 December 2022
- Northern Prospects sample 157856 refer to ASX announcement dated 20 December 2022
- Northern Prospects sample 347562 refer to ASX announcement dated 20 December 2022
- First Concentrate Produced form Mavis Lake dated 23 January 2023
- High grade low impurity Spodumene concentrate produced 9 February 2023
- Drill Hole MF22-177 refer to ASX announcement dated 27 March 2023
- Drill Hole MF22-178 refer to ASX announcement dated 27 March 2023
- Drill Hole MF23-190 refer to ASX announcement dated 27 March 2023
- Excellent Results from Metallurgical Test Work dated 3 April 2023
- Drill Hole MF23-191 refer to ASX announcement dated 27 June 2023
- Drill Hole MF23-197 refer to ASX announcement dated 27 June 2023
- Drill Hole MF23-207 refer to ASX announcement dated 24 July 2023
- Drill Hole MF23-210 refer to ASX announcement dated 21 August 2023
- Drill Hole MF23-211 refer to ASX announcement dated 21 August 2023
- Drill Hole MF23-213 refer to ASX announcement dated 19 October 2023
- Drill Hole MF23-214 refer to ASX announcement dated 19 September 2023
- Drill Hole MF23-217 refer to ASX Announcement dated 19 October 2023
- Drill Hole MF23-222 refer to ASX announcement dated 19 October 2023
- Drill Hole MF23-225 refer to ASX announcement dated 19 October 2023
- Drill Hole MF23-228 refer to ASX announcement dated 15 November 2023
- Drill Hole MF23-229 refer to ASX announcement dated 15 November 2023
- District-Scale Potential at Mavis Lake Northern Prospects with Multiple Drill Targets date 2 November 2023
- Drill Hole MF23-230 refer to ASX announcement dated 13 February 2024
- Drill Hole MF23-244 refer to ASX announcement dated 13 February 2024
- Outstanding Ore Sorting Testwork Results for Mavis Lake dated 2 May 2024

This document contains information relating to Exploration Results in respect of the Gullwing Tot (Northern Prospects) project extracted from ASX market announcements reported previously and published on the ASX platform on 20 December 2022, 29 December 2022, 17 July 2023, 18 March 2024 and 17 April 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed.

All announcements are available for viewing at the Company's website [www.criticalresources.com.au](http://www.criticalresources.com.au).



# Mineral Resource Estimate

## COMPLIANCE STATEMENT

This document contains information relating to the Mineral Resource estimate for the Mavis Lake Lithium Project is extracted from the Company's ASX announcement dated 5 May 2023. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply.

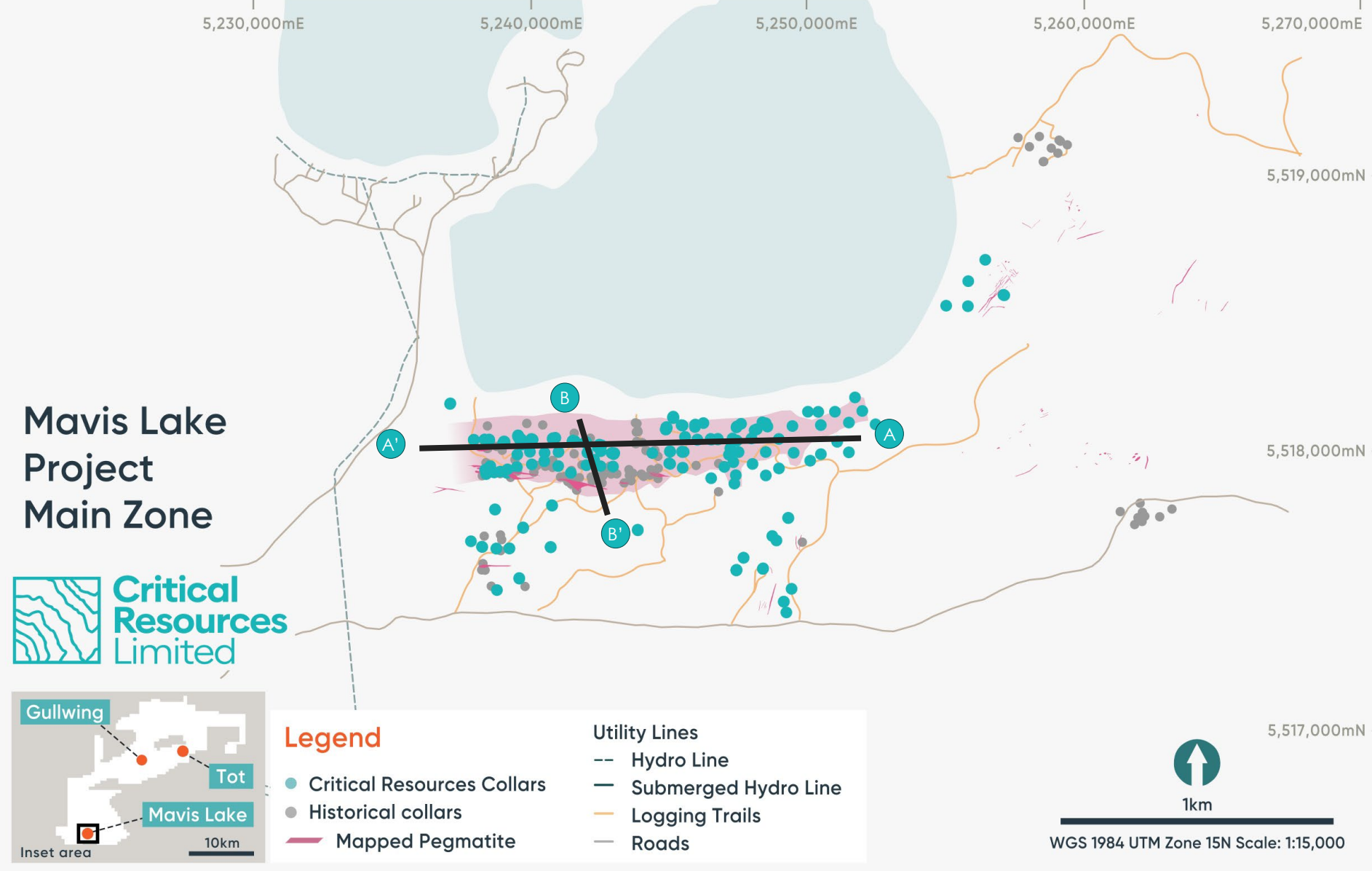
The Mavis Lake MRE includes all applicable drilling results up to and including 29 March 2023.

MRE has been reported at a cut-off grade of 0.3% Li<sub>2</sub>O and open-pit mining scenario. Bulk Density of 2.8 has been used for mineralised pegmatite. Estimation has been completed using inverse distance weighting. Resource classification is according to the JORC Code Mineral Resource categories

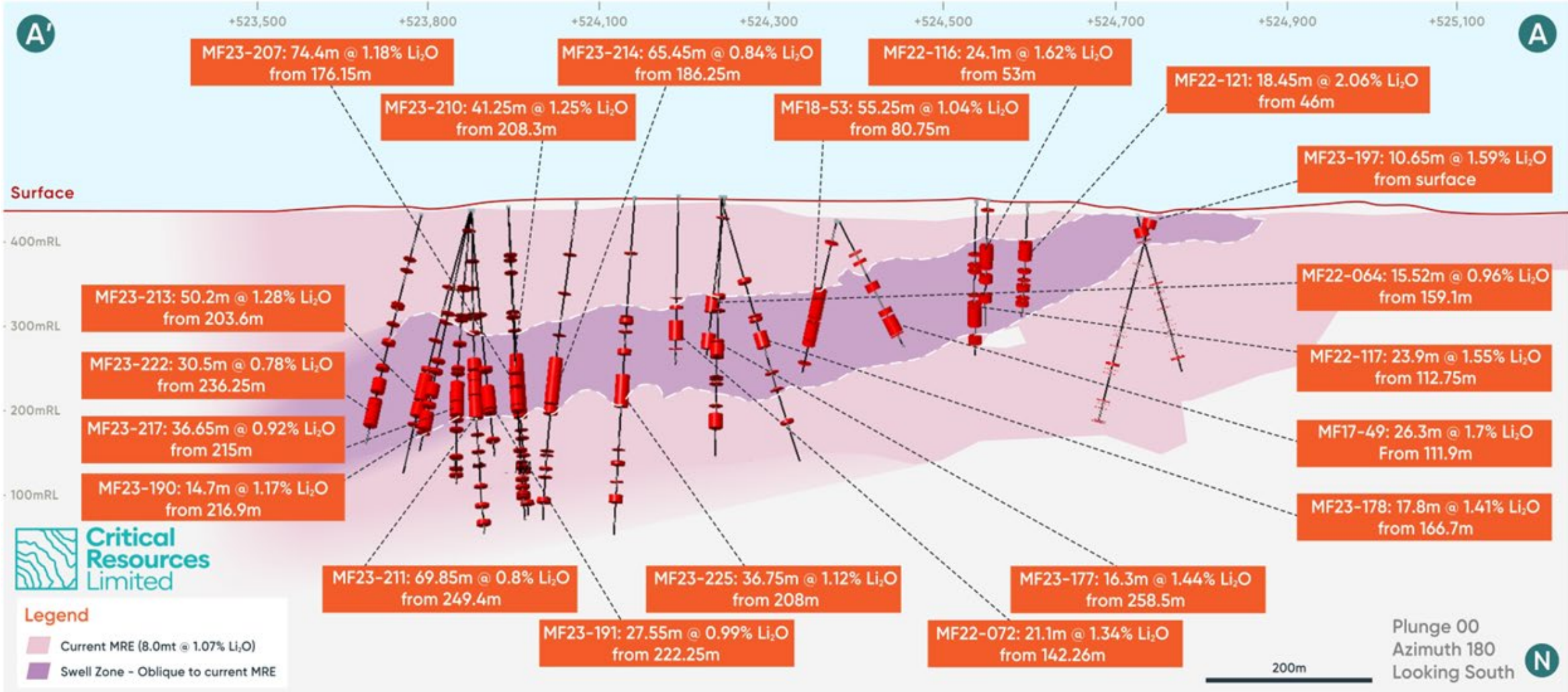
All announcements are available for viewing at the Company's website [www.criticalresources.com.au](http://www.criticalresources.com.au).

JORC Classification	Li <sub>2</sub> O Cut-Off grade (%)	Tonnage (Mt)	Li <sub>2</sub> O (%)
Inferred	0.3	8.0	1.07

# Main Zone Plan View and Section References Critical Resources Limited



# Main Zone Long Section





# Ontario's Lithium Landscape

