

Investor Presentation – North American Operations

18 September 2024

ASX:SYA | OTCQB:SYAXF

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Overview

1. Quebec Operations
2. Overview of NAL
3. NAL Operations
 - a. Mine Operations
 - b. Processing Plant
4. Logistics and Commercial
5. Operating Performance and Improvement
6. NAL Exploration
7. Moblan Exploration





Quebec Operations

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NAL Management Team

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Sylvain Collard
President, COO & Interim GM



Lynn Girard
Mill Manager



Philippe Chabot
Vice-President Mining &
Interim Mine Manager



Rina Moreno
Finance Manager



Sarah Laquerre
Human Resources
Manager



Bianca Galimi
Communications & Community
Relations Manager



Patrick O'keefe-Maher
Maintenance & Project
Senior Manager



Alexandre Aubin
Supply Chain Manager



Audrey Humbert-Leblanc
Health & Safety
Superintendent



Geneviève Godbout
Environment
Superintendent



A Large Portfolio of Lithium Exploration and Mining Projects

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Eeyou Istchee James Bay Hub

Combined JORC Measured, Indicated and Inferred Resource for Moblan

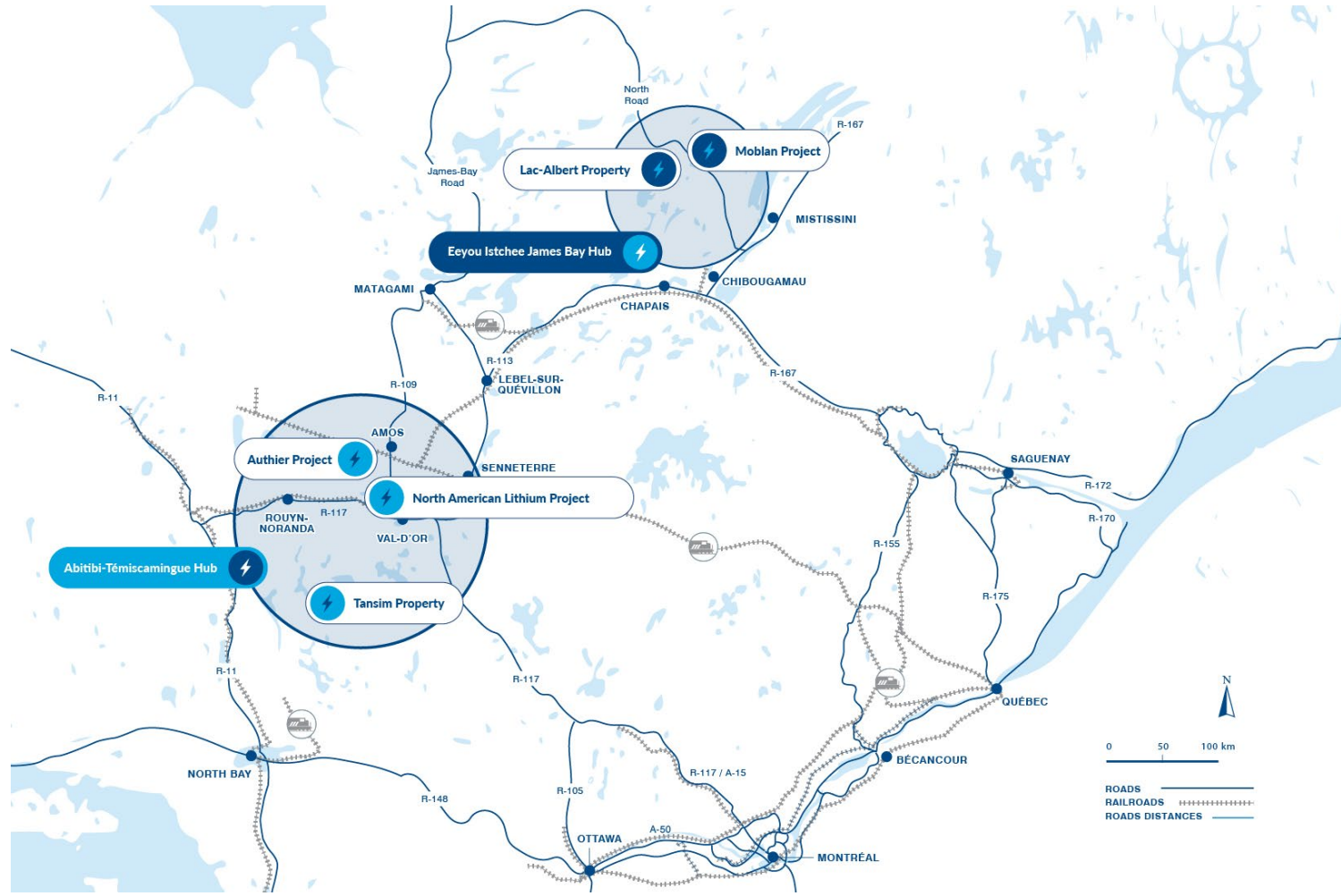
Moblan: 93.1 Mt @ 1.21%¹ Li₂O

Abitibi-Témiscamingue Hub

Combined JORC Measured, Indicated and Inferred Resource for NAL

NAL: 87.9 Mt @ 1.13%¹ Li₂O

Authier: 14.1 Mt @ 1.01%² Li₂O



Notes

- 1 Released post end of FY24, refer to ASX Announcement on 27 August 2024.
- 2 Refer to ASX announcement 14 April 2023



Overview of NAL

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History of the Mine Site

Since its discovery

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Discovery of the site by George H. Dumont

Dismantling of the mine site by Cambior Inc.

Canada Lithium starts construction

Jilin Jien Nickel Industry Co Ltd acquires the mine in partnership with Investissement Quebec

Creation of North American Lithium

Mine operations suspended

First production of spodumene concentrate in March 2023



1942

1987-1991

2011

2016

2019

2023

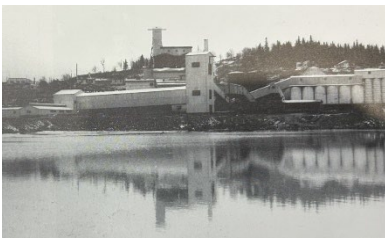
1955-1965

2008

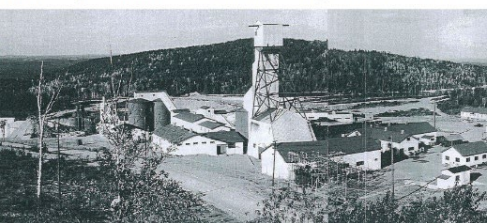
2012-2014

2017

2021



Quebec Lithium Mine Operations and Processing Plant - 1959



IAMGOLD acquires Cambior Inc. and sells the site to Canada Lithium

Canada Lithium merges with Sirocco Mining to form RB Energy Inc.

Operations restart with sales to customers Transamine Holdings and Investments Ltd and Contemporary Amperex Technology Ltd

Sayona Quebec acquires NAL in August 2021

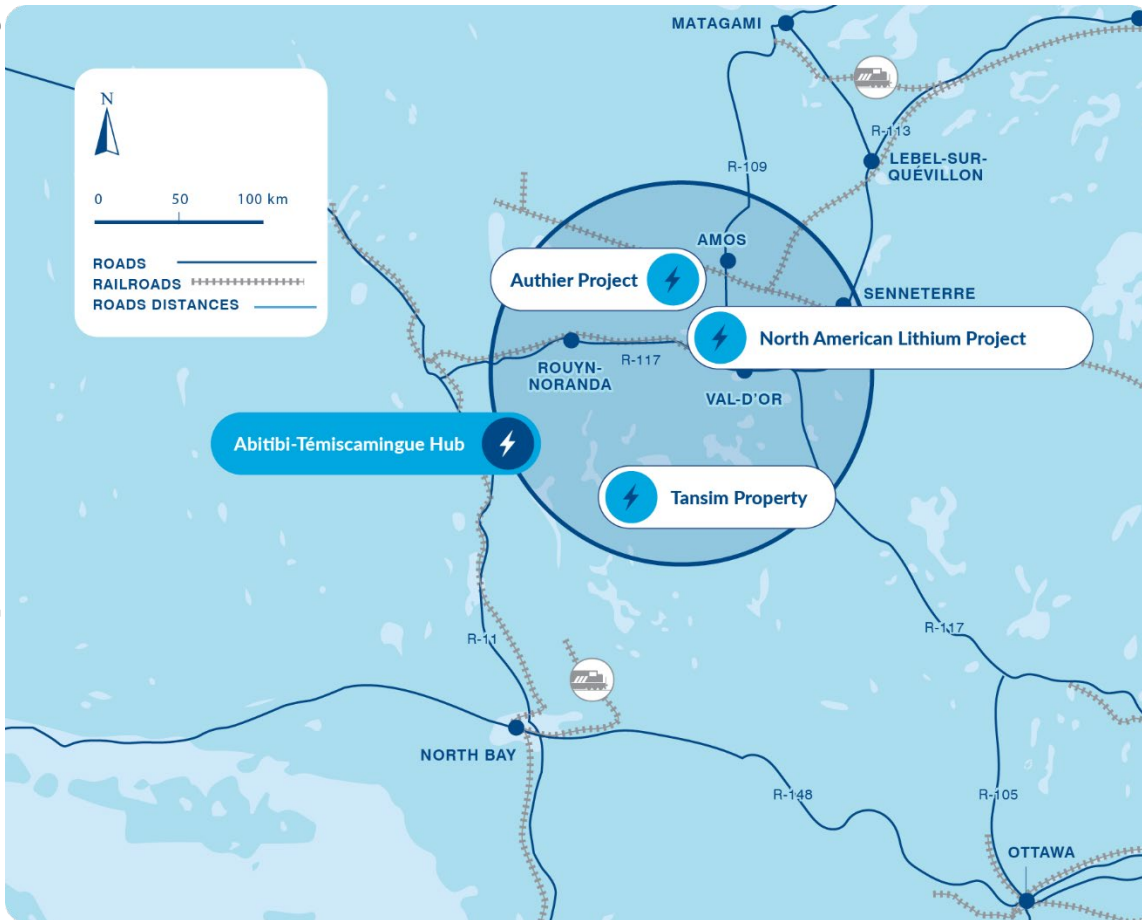




North American Lithium

North America's leading producer of hard-rock lithium

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Only major North American hard-rock lithium producer

Access to low-cost, renewable power and mature infrastructure

On-going drilling indicates potential to further expand resource

87.9
MILLION TONNES @
1.13%
JORC
Resource

190 -
210 kt
Li₂O
FY25 Planned
Production¹

75%
Sayona
Ownership 75%
Piedmont 25%

Notes.
1 Refer to ASX announcement 29 August 2024

Infrastructure

- Open pit
- Processing plant
- ROM ore pad
- Waste stockpile
- Conventional tailings facility
- Overburden stockpile
- Administration facility, including offices and personnel changing area (dry)
- Workshop, tyre change, warehouse and storage areas
- Fuel, lube and oil storage facility
- Reticulated services, including power, lighting and communications, raw water and clean water for fire protection, sewage collection, treatment and disposal

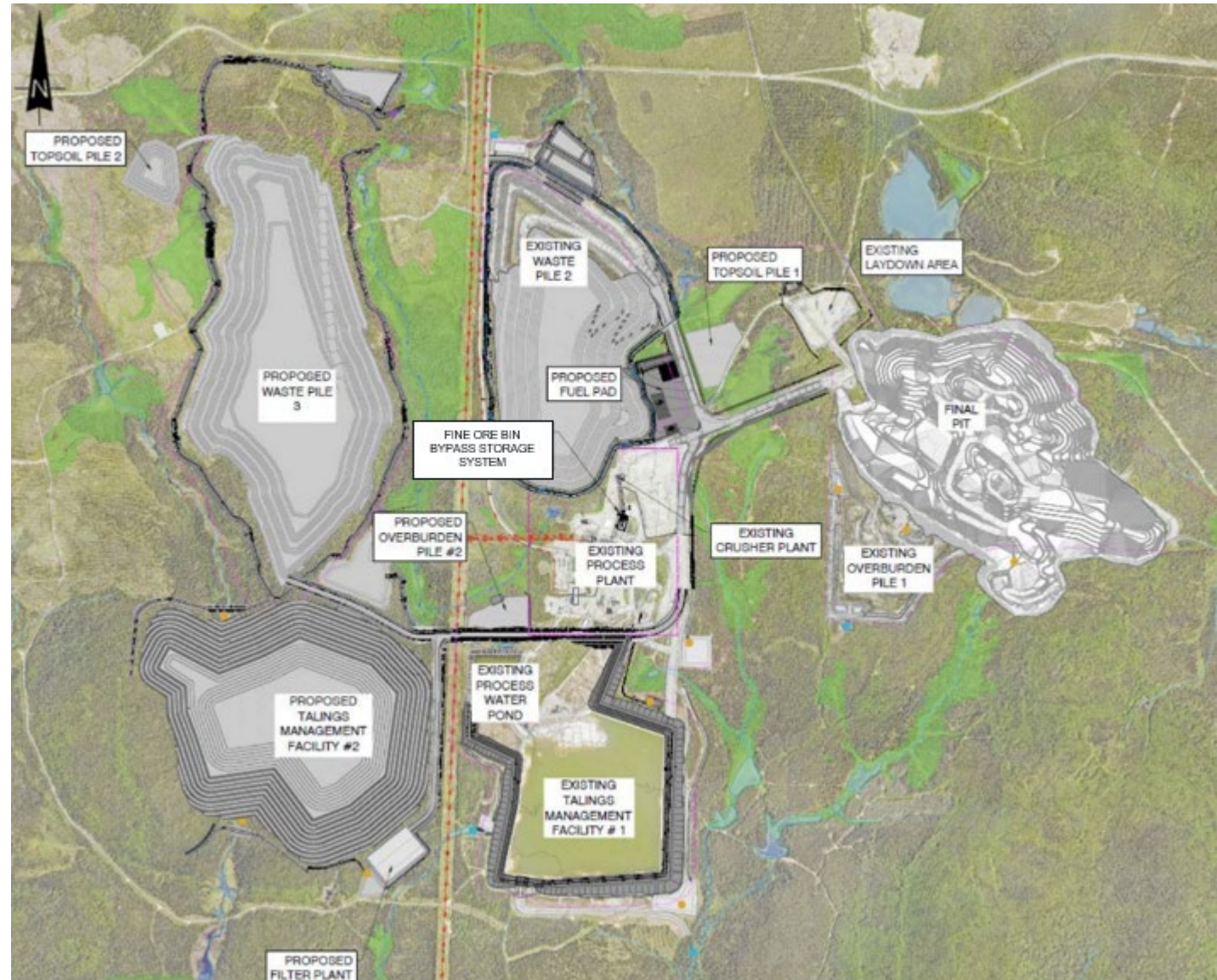


Figure 1 : NAL Site Layout Schematic (DFS 2023)



Mine Operations

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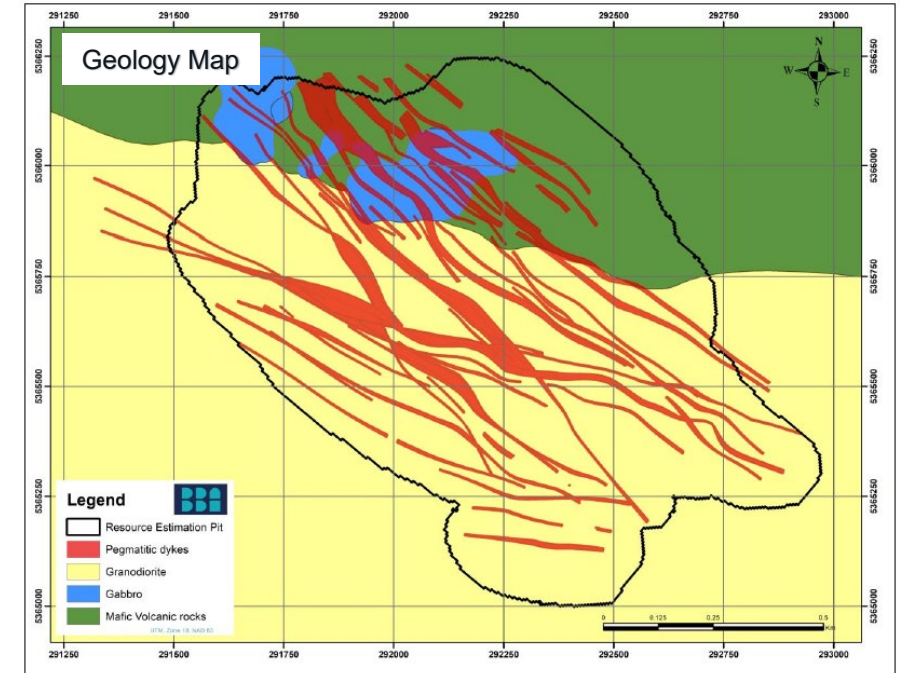


NAL | Geology Overview



Key Highlights: Mineralisation

- **Spodumene-bearing dykes:** 109 spodumene-bearing dykes identified on the property.
- **Extent of exposure:** Surface exposures traced over 700 m along strike and nearly 70 m vertically down pit walls.
- **Dyke characteristics:**
 - Widths range from 10 cm to 90 m, extending several hundred meters in length.
 - Most dykes over 3 m wide are spodumene-bearing.
- **Spodumene presence:** Variable occurrences within the dykes, displaying faint greenish shades and sometimes 1-10 centimeters large crystal clusters.





NAL | Mine Overview

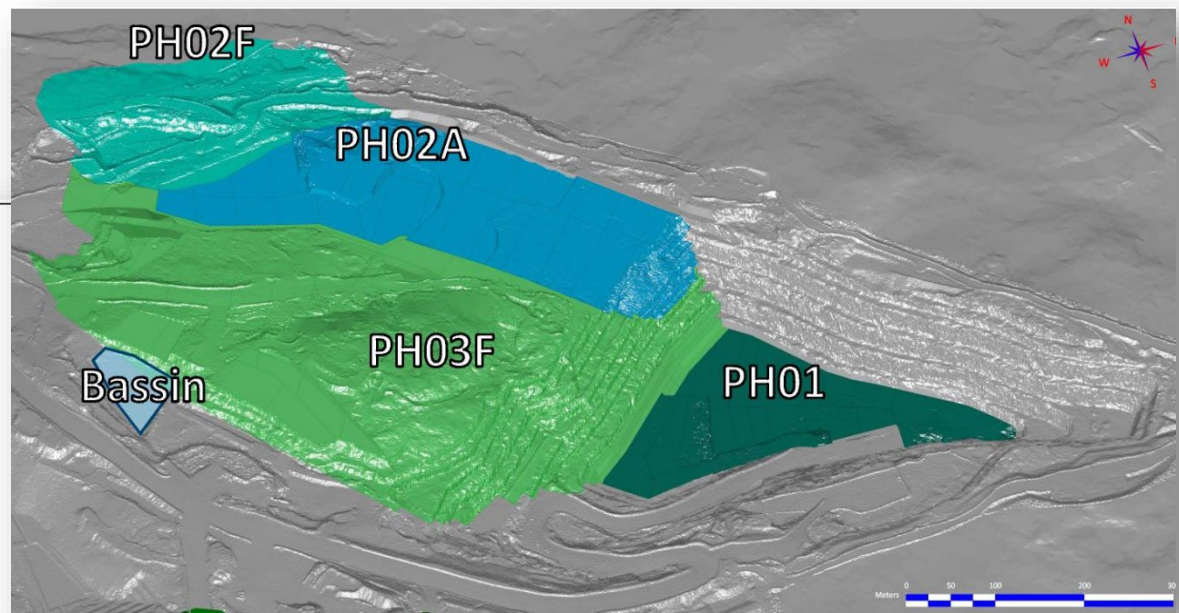
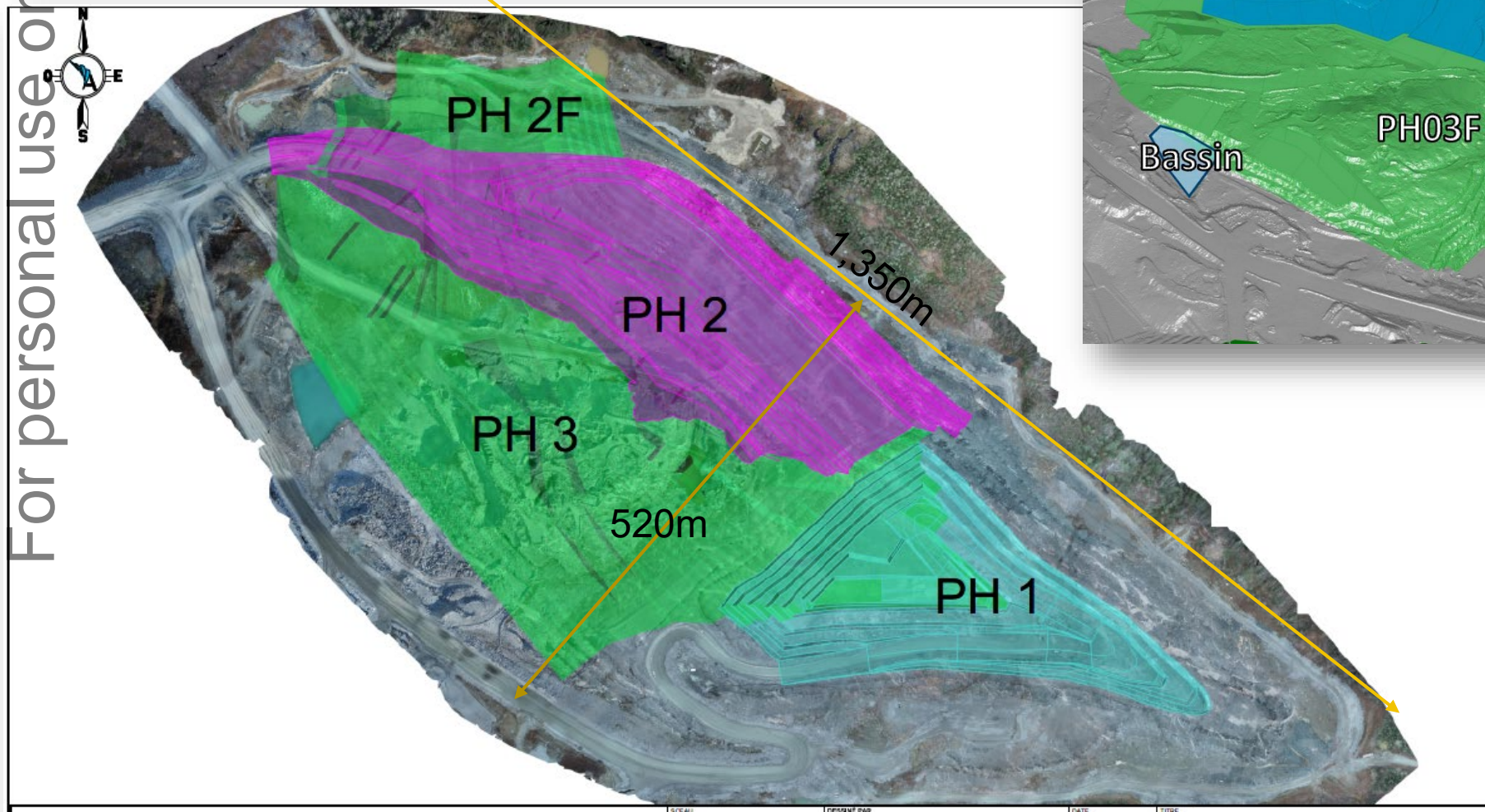
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NAL | Mining Phases in Operation

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NAL | Mine Operations

Key Highlights:

Mine operations team

- 247 (Staff + Mining Contractors)

Department Management

- Geology : Sayona – Management & Technical team
- Engineering : Sayona – Management & Technical team
- Mine Ops : Management Sayona – Execution : Mining Contractor

Mining Equipment : Total of 40 equipment items

- 1 X 150t :Production Excavator
- 2 X 125t :Production Excavator
- 1 X 80t :Remote Production Excavator
- 1 X 60t :Remote Production Excavator
- 11 x 100t :Hauling trucks
- 24 :Auxiliary & support

Mining Facts

- ± 30ktpd - ~10 mtpa mining rate
- Strip Ratio: ~ 8.3 – (DFS 2023)



Sandvik Leopard di650i drill



Mustang Drill



Caterpillar 777 & Komatsu PC 1250

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NAL | Evolution

Previous Practices

2011-2013 & 2017-2019

- High dilution +25%
- Mining contractor management (Bulk vs Selective Mining)
- Geological in-pit management
- Material segregation for continuous feed to the mill

Sayona approach

2023 – Today

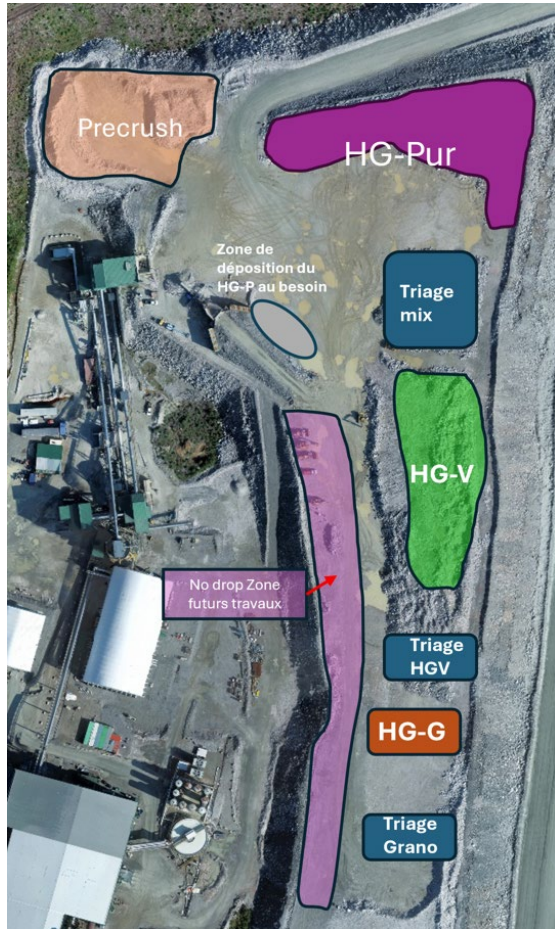
- 2024 – dilution 11.7%
- Mining contractor management
 - Geological training
 - Each operator required undertake induction / training
 - Selective Mining
- Geological In pit management
 - Presence of technician & Geologist 7d/7d – 24h/24h
- Material segregation for continuous feed to the mill
 - 6 type of Ore feed
- Use of technology for better traceability
 - Consolidated production metrics in PowerBI
 - MineBook – Mining Metrics
 - Lidar + RTK Drone Surveys
 - Paradygm – Blast timing
 - GeoticLog – Blast hole data base
 - Deswik - MineSight for mine design and planning



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NAL | Focus Areas

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Open Pit Selective Mining Training

Section view

Legend:

- HG-Ore
- Sterile
- Ore Ribbon
- Sterile Ribbon
- HG-G Area
- HG-Pu Area

Vue en plan

Vue en section

Légende:

- HG-Mineral
- Stérile
- Ruban mineral
- Ruban stérile

Vue en plan

Vue en section

Légende:

- HG-Mineral
- Stérile
- Ruban mineral
- Ruban stérile

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NAL | Focus Areas

Legacy of the 50's – Underground Stopes

1950's – Historical underground workings

- 21 underground stopes, drifts, ore passes and ventilation rises
- Located in Phases 2 and 3
- Mining of these areas will be complete in 3 years
- Already factored into operating costs

Sayona action plan

- Operation SOPS developed in collaboration with Canadian Malartic
- Experts in Rock Mechanics and Geotech highly involved
- Continuous drilling + 3D scanning for underground mapping
- Day-to-day assessment in the field
- Intense worker training
- This is not uncommon in the historical gold mining region of Abitibi



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Processing Plant

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Design Change / Equipment

Flowsheet

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Additions or modifications since previous operations:

Crushers

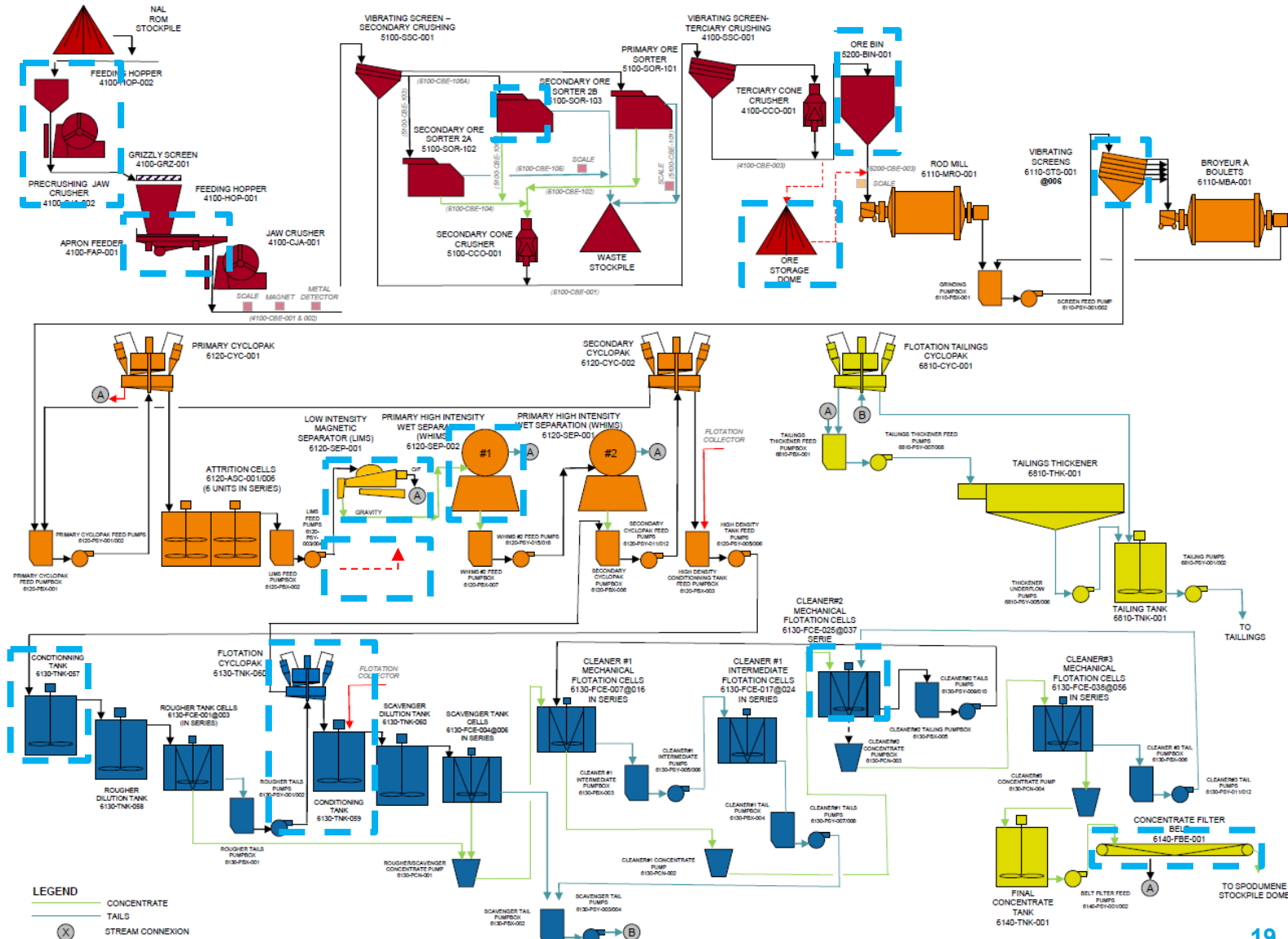
- Jaw crusher (C-150)
- Apron Feeder to C125
- HP400 crusher
- 4100 building HVAC
- Additional sorter
- Crushed ore dome (and temp. bypass)
- Fine ore silo insulation
- Fine ore silo boiler

Mill

- 2 x additional stacksize screens
- LIMS
- Additional WHIMS
- Conditioners 57 and 59 (with cyclopac)
- Secondary cleaners (previously used for conditioning)
- Heating system for collector
- Doubled filter belt capacity
- Several equipment bypasses

General

- Programming and parameter optimisation

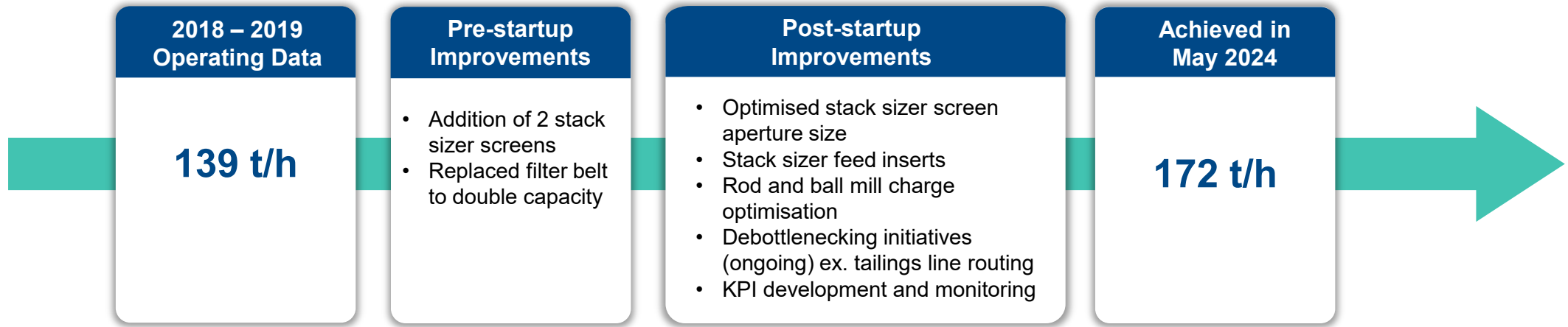




Throughput Improvement

Approaching DFS mill rates within 16 months

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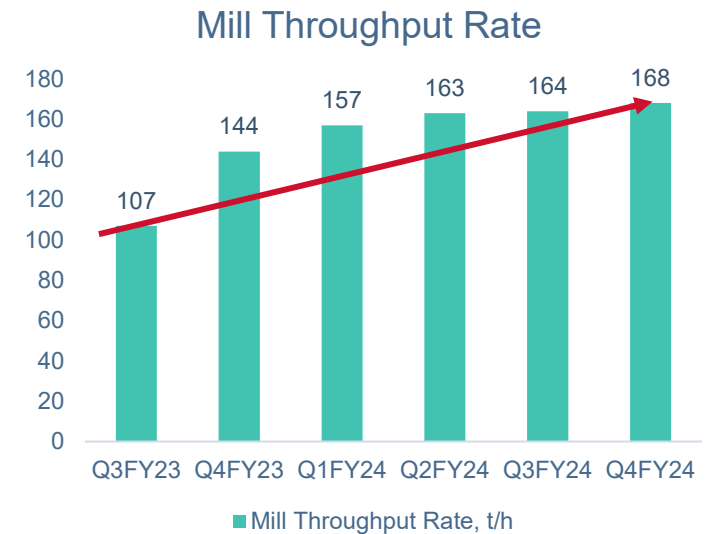
Picture 1: Rod mill charge level increase



Picture 2: Derrick stack sizer screens



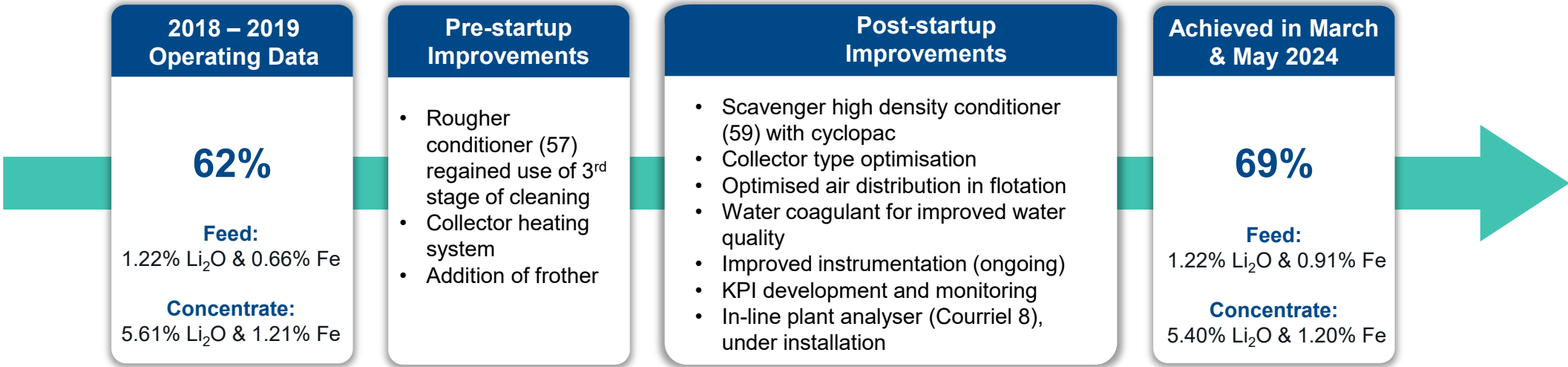
Picture 3: New stack sizer screen feed inserts



Recovery

In line with DFS estimates

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Picture 1: Collector testing in lab

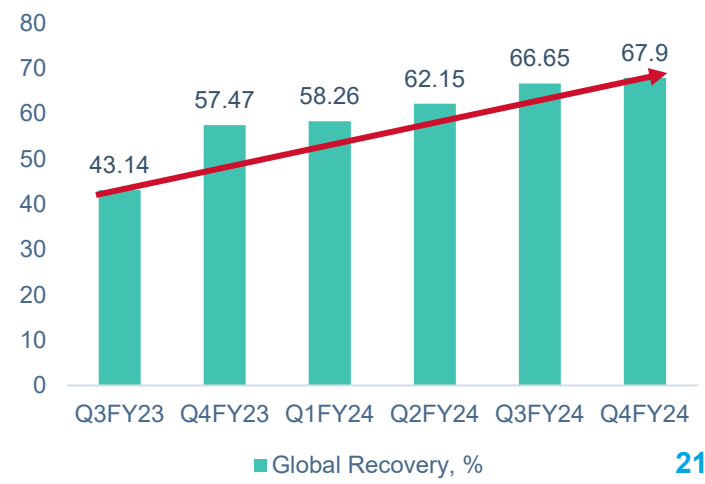


Picture 2: Mechanical slurry level measurement



Picture 3: New air distribution valves and flowmeters

Global Recovery

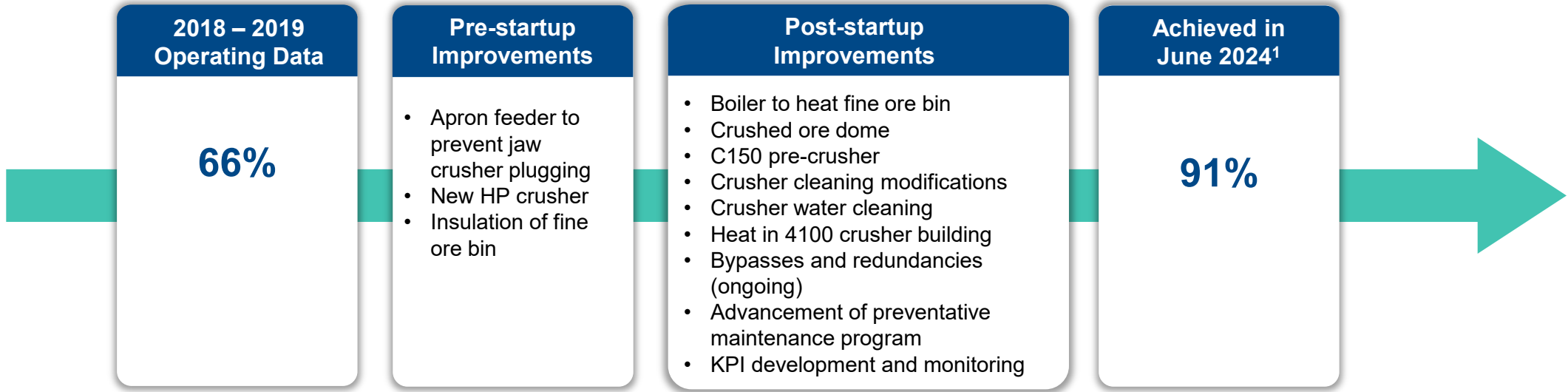




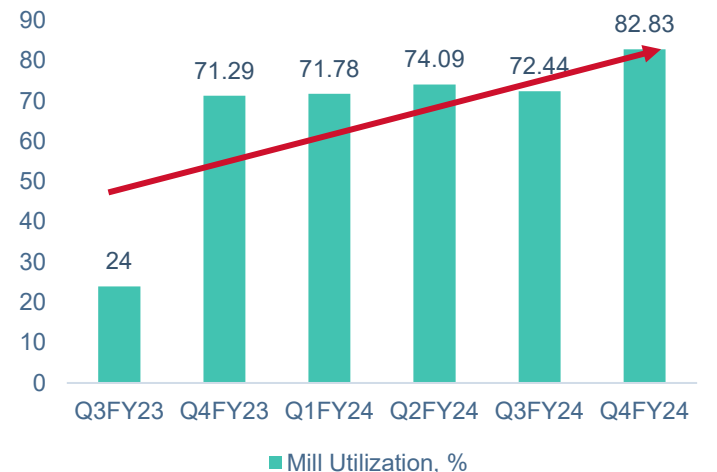
Reliability

Surpassed 90% mill utilisation in 15 months

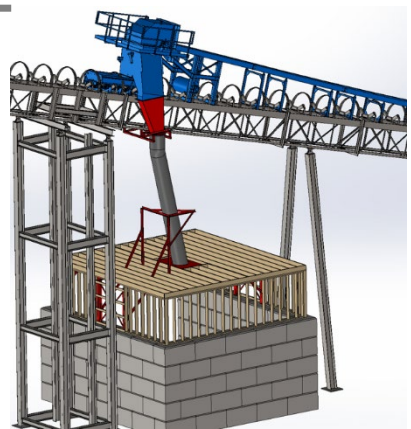
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Mill Utilisation



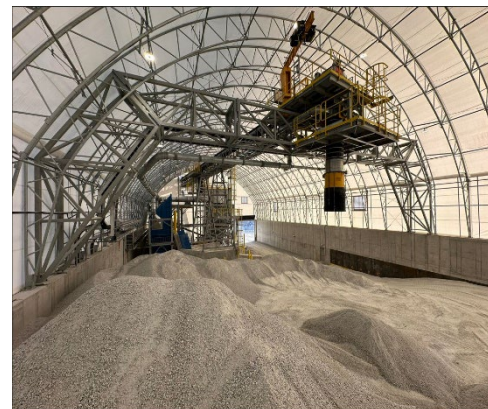
Notes.
 1 Refer to ASX announcement 24 July 2024



Picture 1: Temporary diverter system



Picture 2: Temporary feeder system



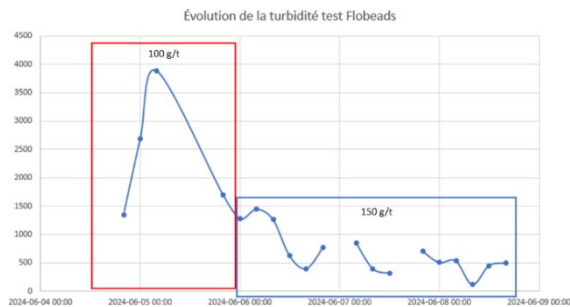
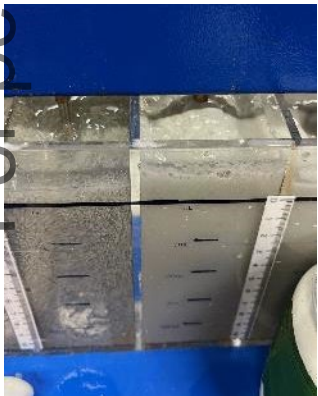
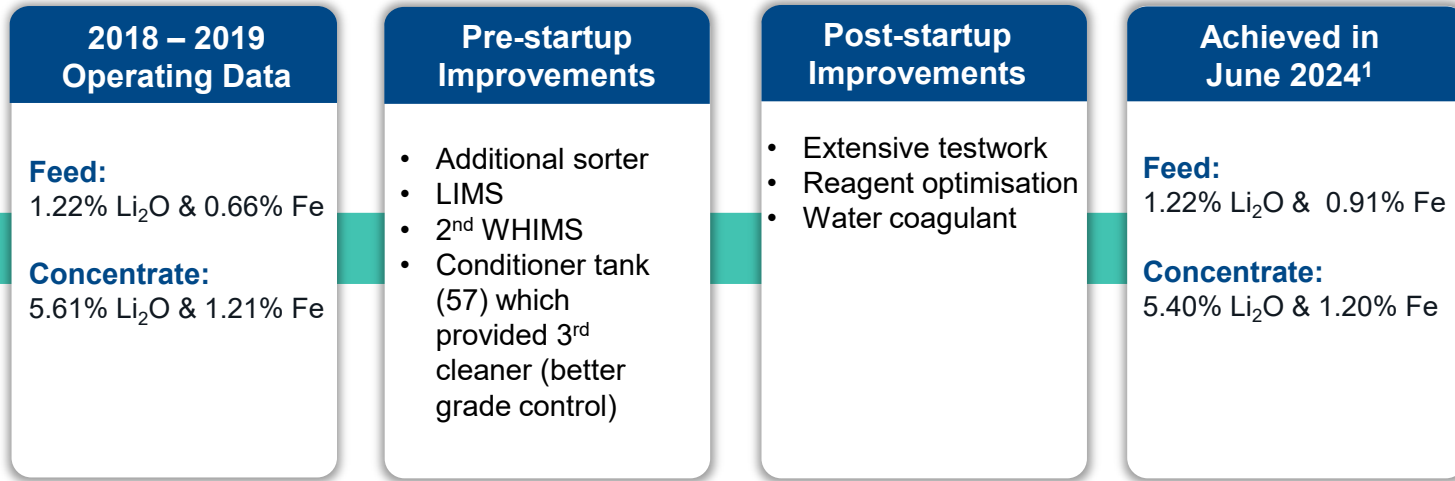
Picture 3: Permanent crushed ore dome



Quality

Maintained target concentrate grades with increased iron feed grades

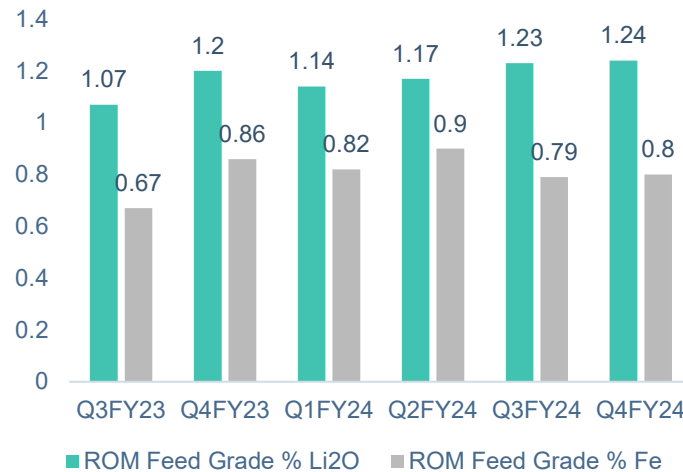
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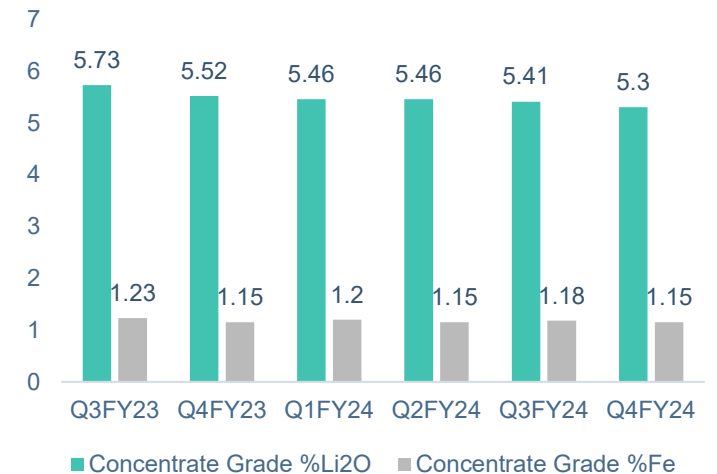
Picture 2: Turbidity reduction in process water with new coagulant

Picture 1: Water quality jar test – Left: Floabeads (new) Right: Floquat (previous)

ROM Feed Grade



Concentrate Grade





Logistics and Commercial

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Logistics Chain

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Logistics Chain

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Concentrate Loading

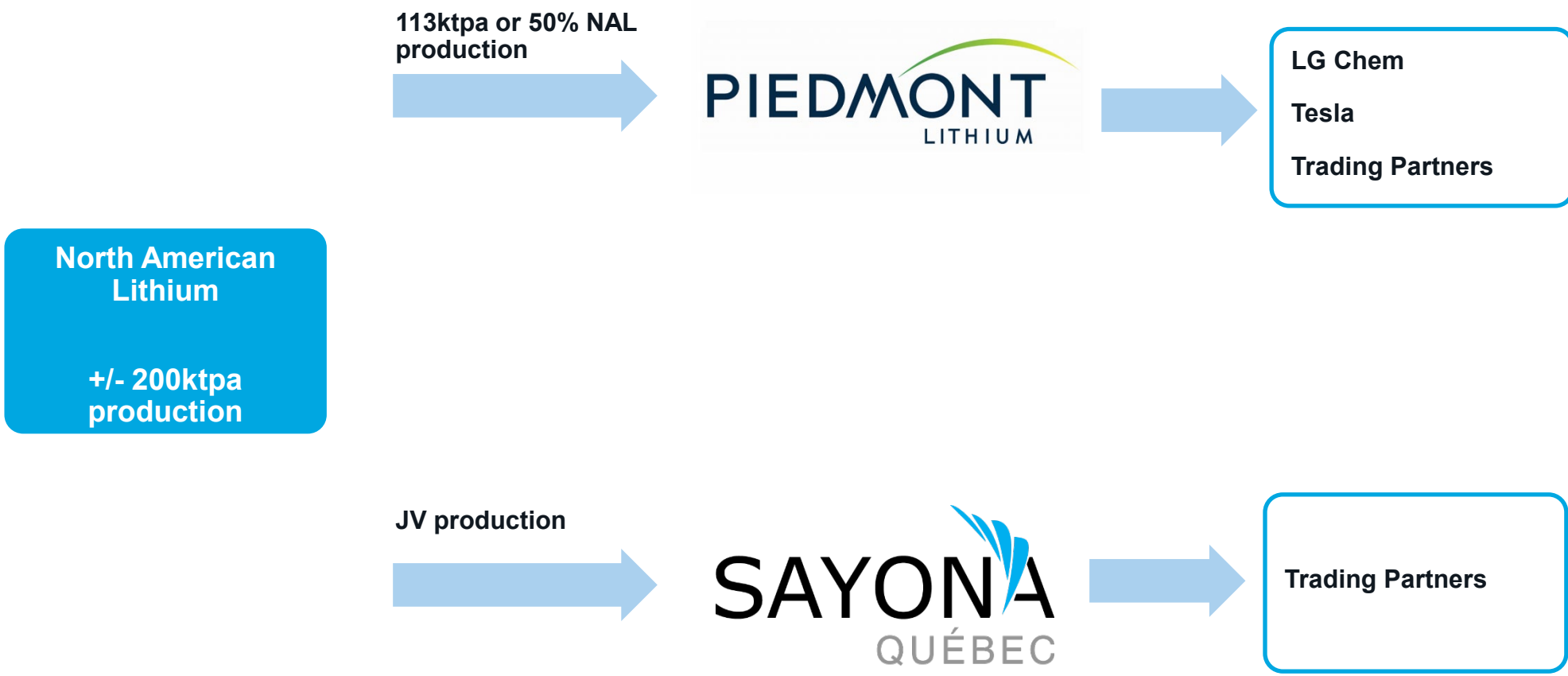
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Commercial

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Notes

- 1 FY25 spodumene concentrate sales guidance is between 200,000 – 230,000 dmt at 5.4% Li₂O for 100% of North American Lithium sales (see ASX announcement 29 August 2024).
- 2 Piedmont offtake agreement is linked to market prices subject to a ceiling price of US\$900/dmt and a floor price of US\$500/dmt



Operating Performance and Improvement Projects

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Project

C-150 Crusher

Objective

Assembly, installation, refurbishment and commissioning of the C-150 pre-crusher to deliver more consistent feed to the C-125 primary crusher

End of project

June 2024

Progression

In operation



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Project

Crushed Ore Dome

Objective

Increase the reserve of crushed ores to circa 6kt. Loading on the rod mill feed conveyor during maintenance or shutdowns of the crushing circuit.

End of project

May 2024

Progression

In operation



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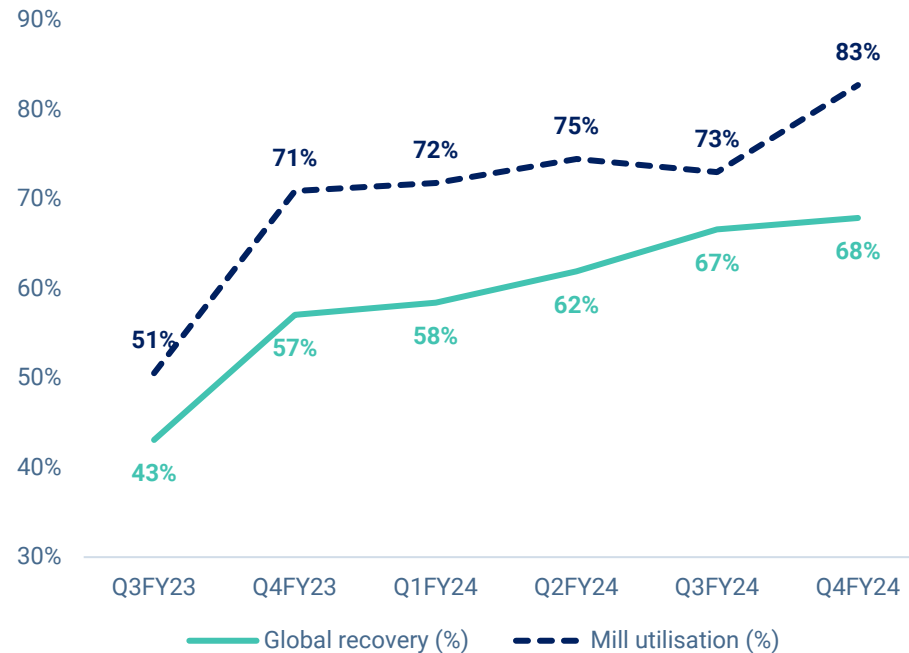
NAL Operational Performance

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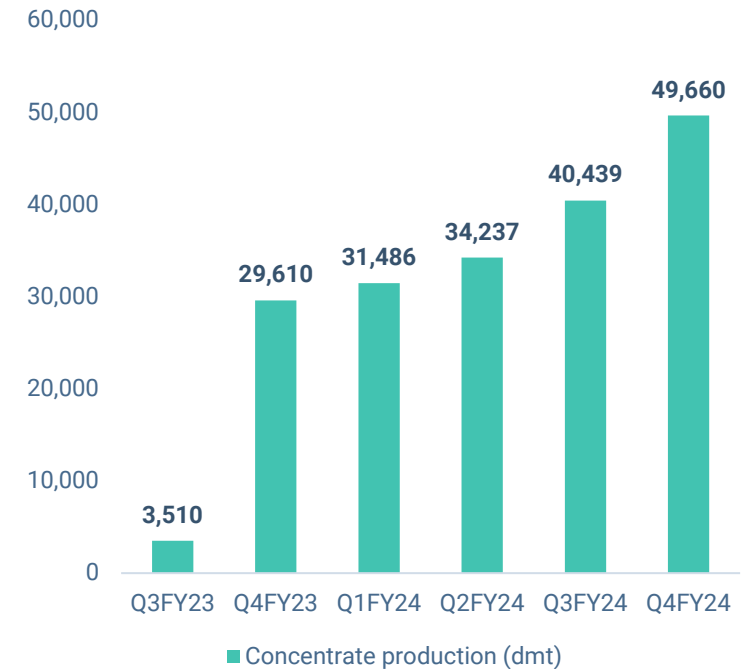
Delivering significant QoQ production increase

- Production restart and maiden shipments within 2 years of NAL acquisition
- Significant increase in ore mined, combined with higher grades delivered to plant due to increased blasting efficiencies and dilution management
- Continued focus on improving process plant utilisation and plant stability
- Shipments to customers continuing with improvements in logistics costs identified
- Continued focus on safety improvement in FY25

NAL Global Recovery and Mill Utilisation



NAL Concentrate Production





NAL Exploration

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North American Lithium 51% increase in Mineral Resource to 88Mt

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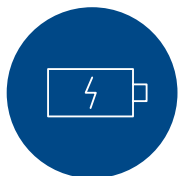
JORC Measured, Indicated and Inferred Resource

87.9Mt @ 1.13% Li₂O¹



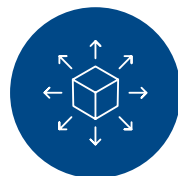
Excellent conversion to reserves expected

82% in M&I category



Contained lithium

Up 39%



Additional drilling

in 2024²



Notes

¹ Refer to ASX Announcement on 27 August 2024 (at 0.60% cut-off grade).

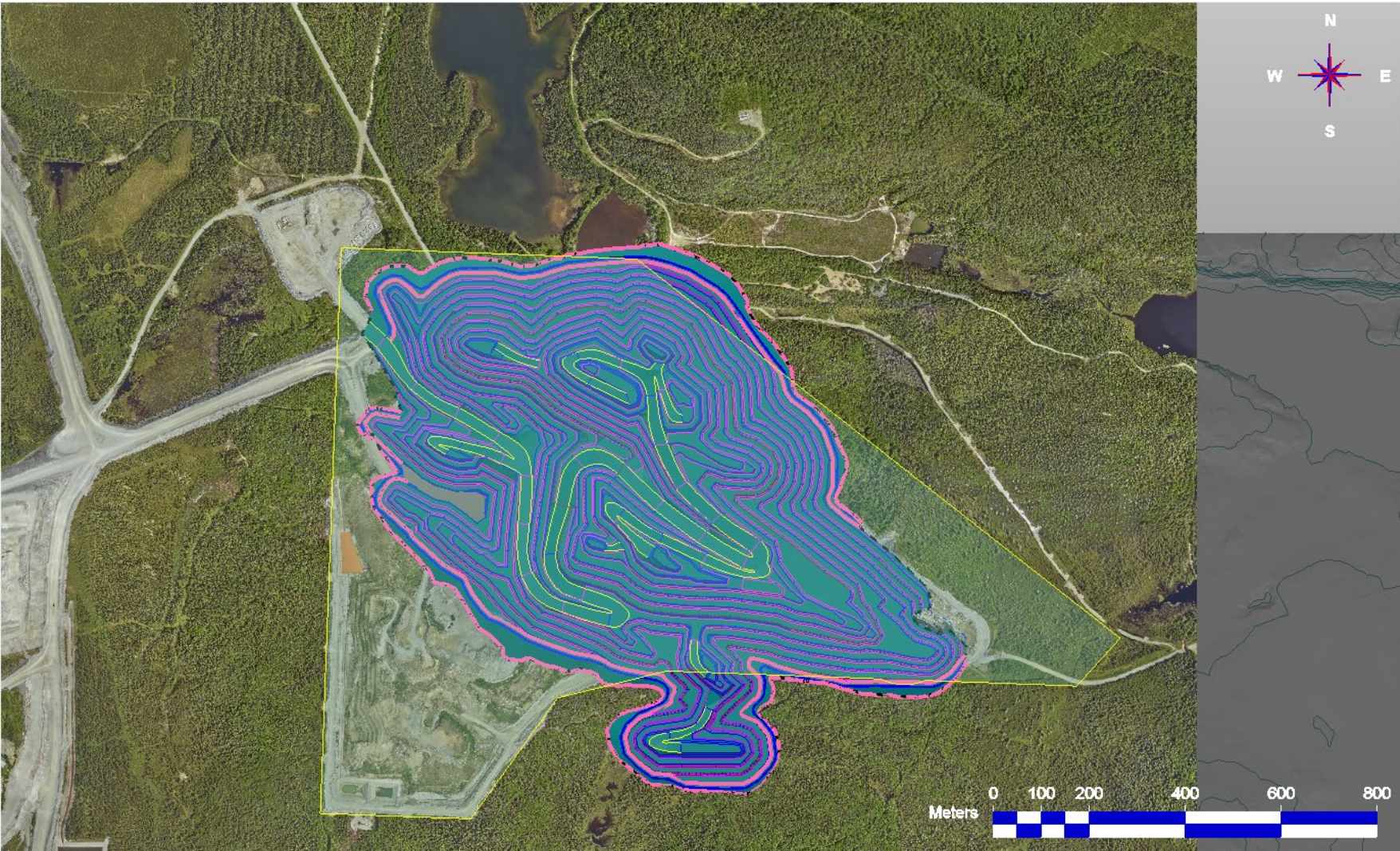
² Funded through Flow Through Share funding as allowed under the Income Tax Act (Canada).



Feasibility Study 2023

Pit Shell

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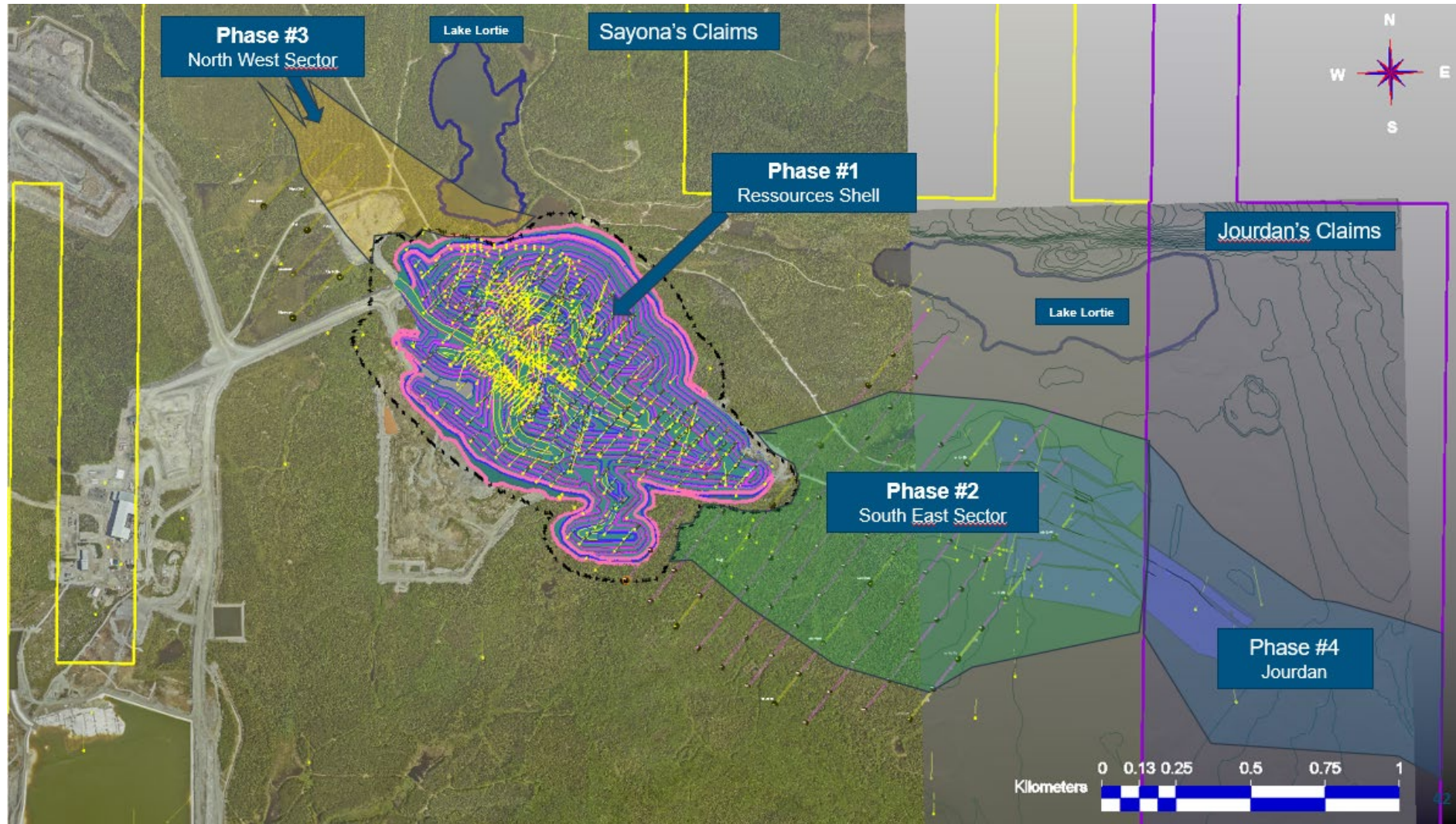




Drilling Campaign 2023

Testing extensions of mineralisation to NW and SE

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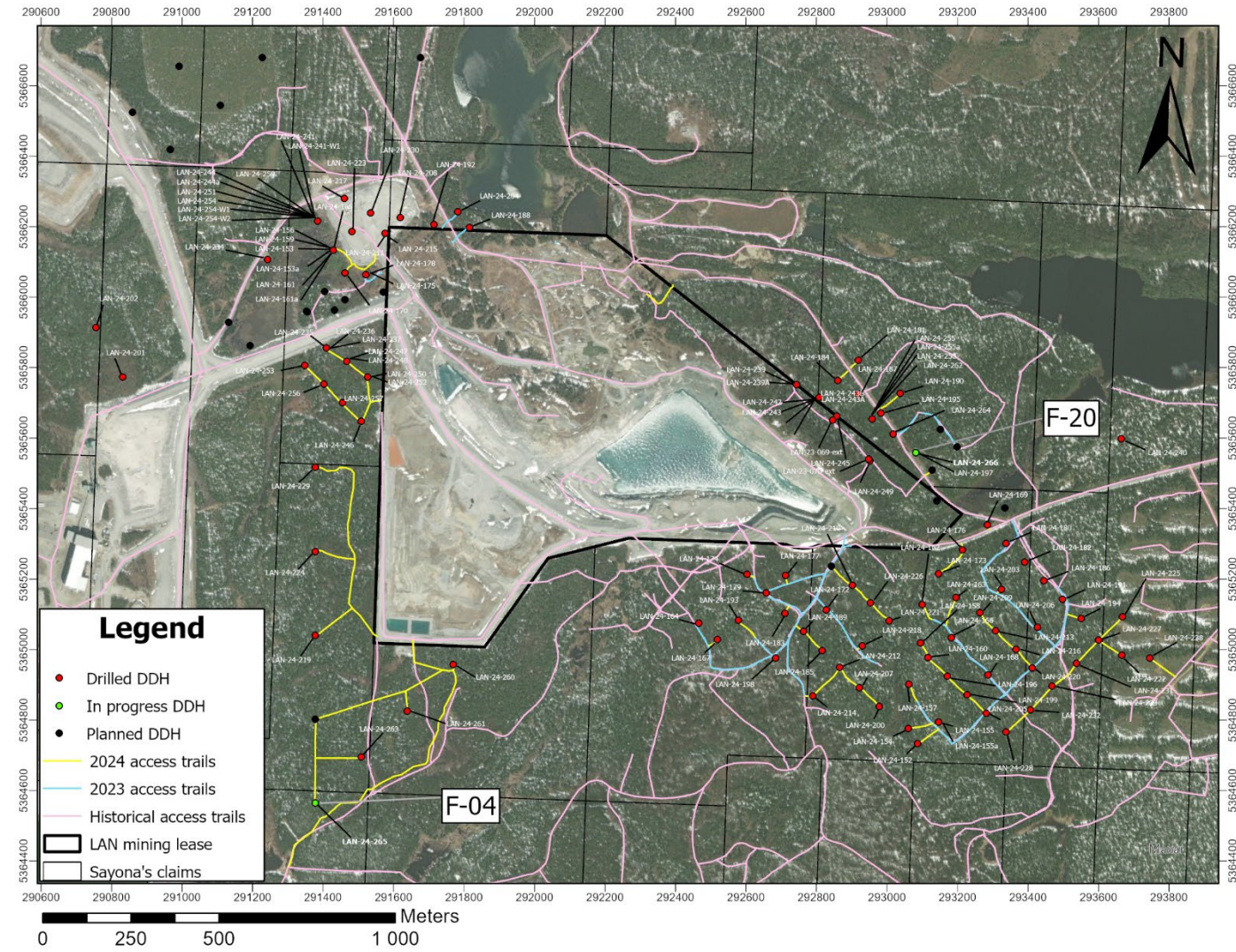




Drilling Campaign 2024

In-fill drilling and testing further extensions to mineralisation

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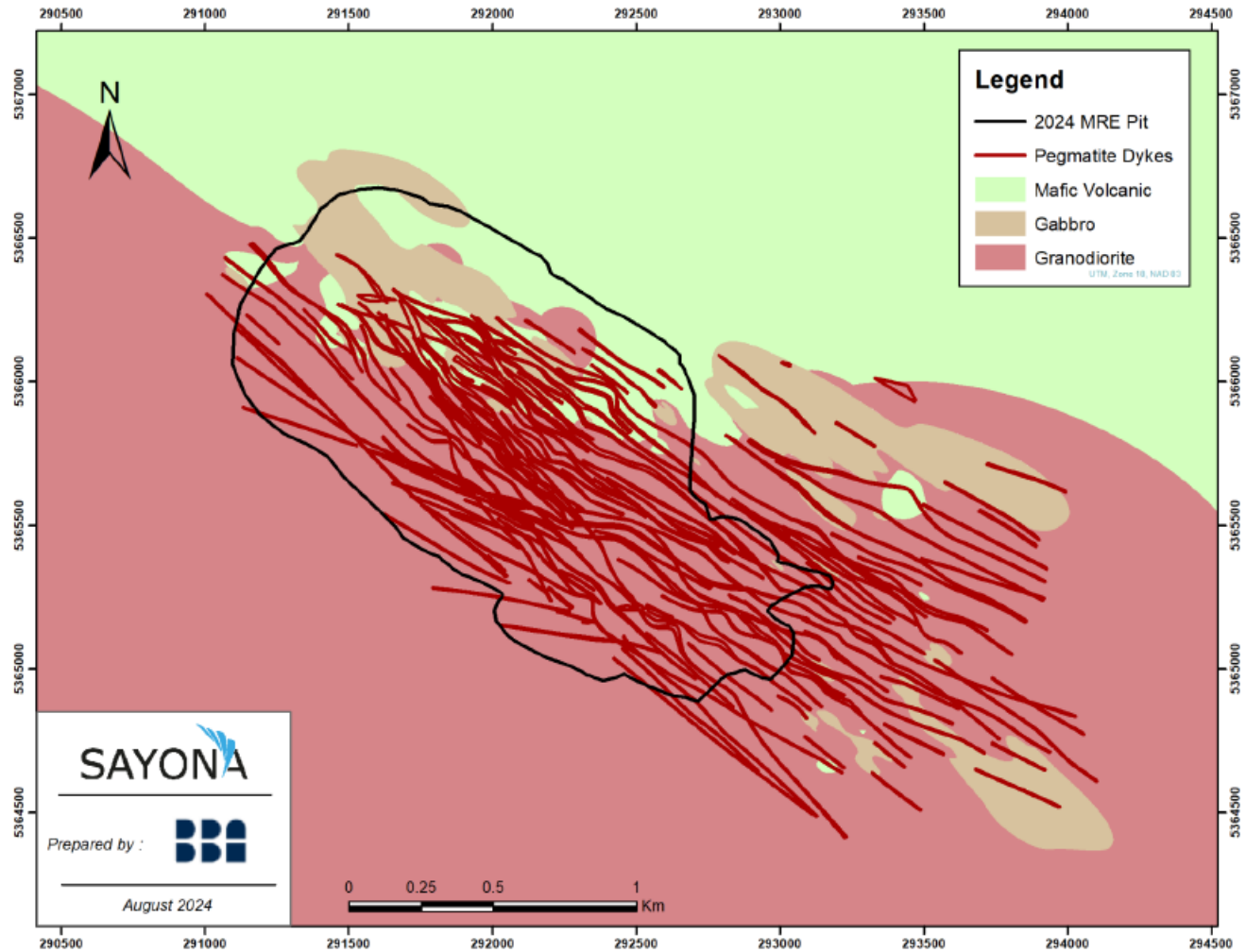




NAL Contains Extensive Pegmatites Dykes

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- Results demonstrate that North American Lithium is a major extensively mineralised lithium system.
- The primary metal is lithium and is mainly associate with **spodumene**, a lithium bearing pyroxene.
- Pegmatites also contains domains with **tantalum**, which could potentially be extracted as a by-product.

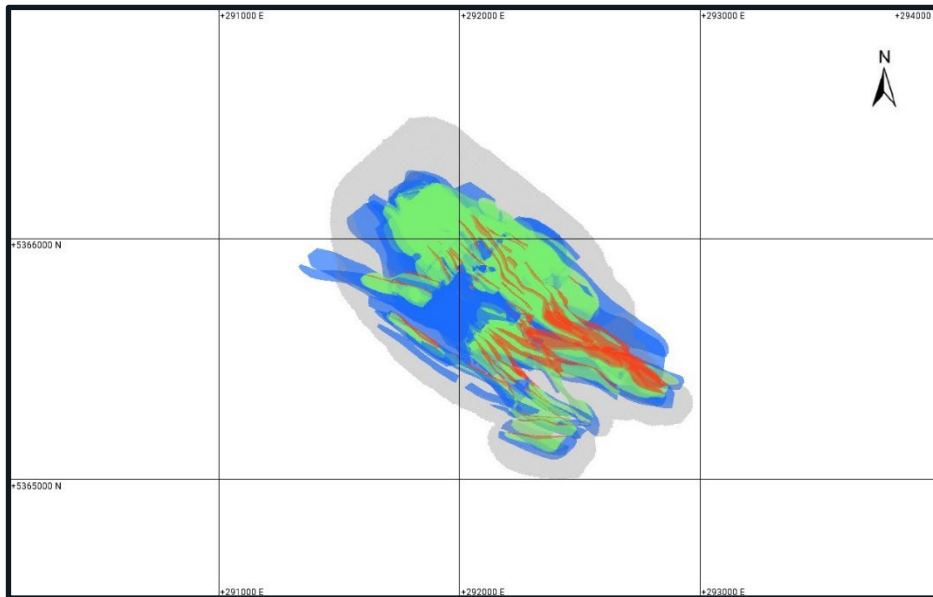
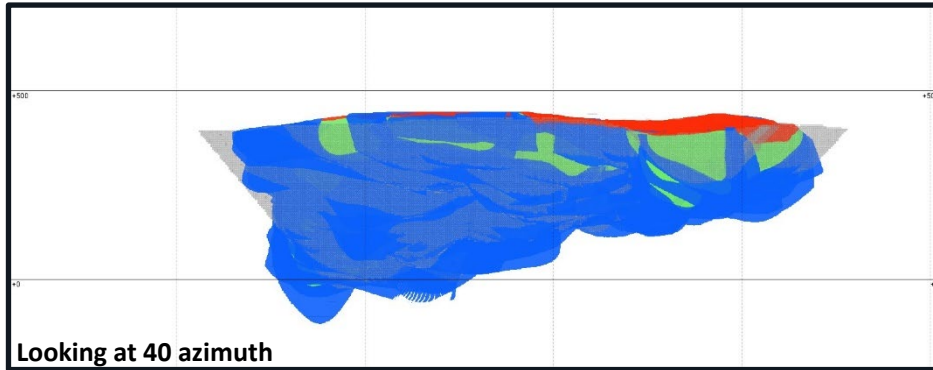




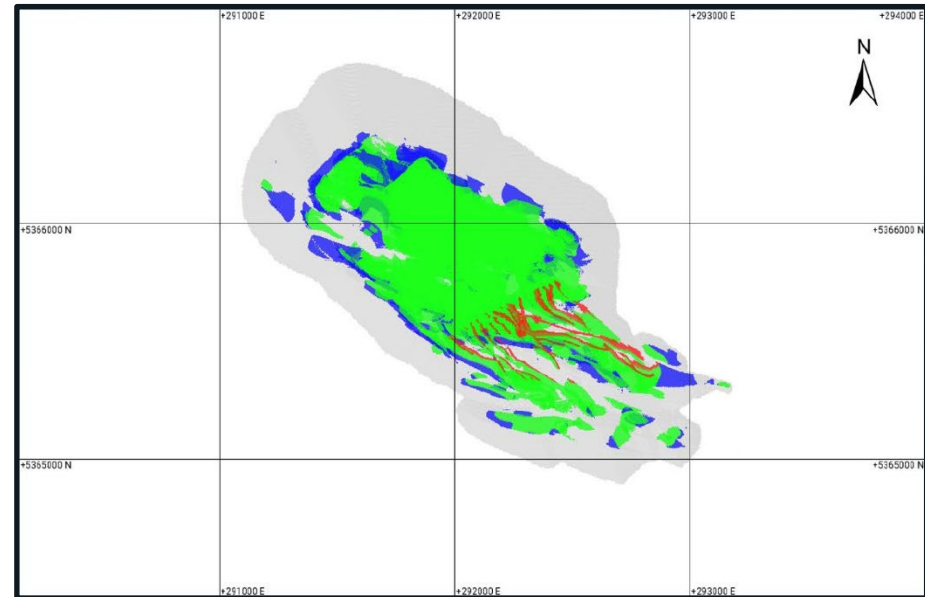
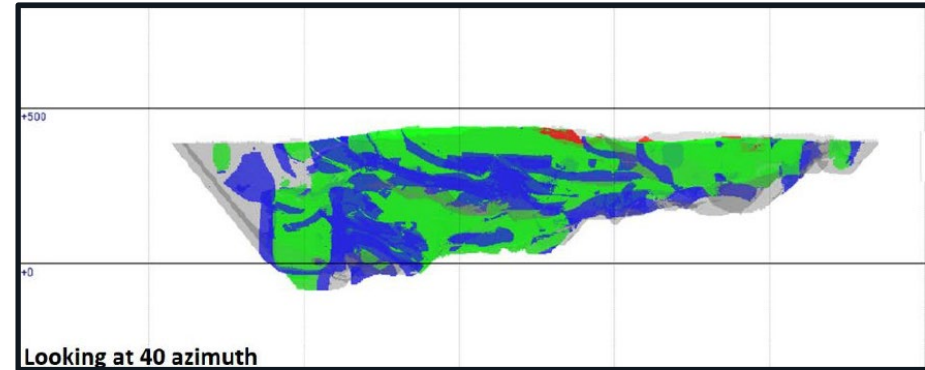
NAL MRE




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2023 Mineral resource



2024 Mineral resource

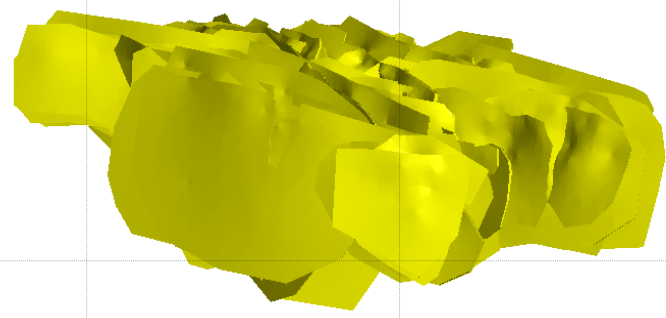


-  Measured Mineral Resources
-  Indicated Mineral Resources
-  Inferred Mineral Resources
-  Resources Pit Shell

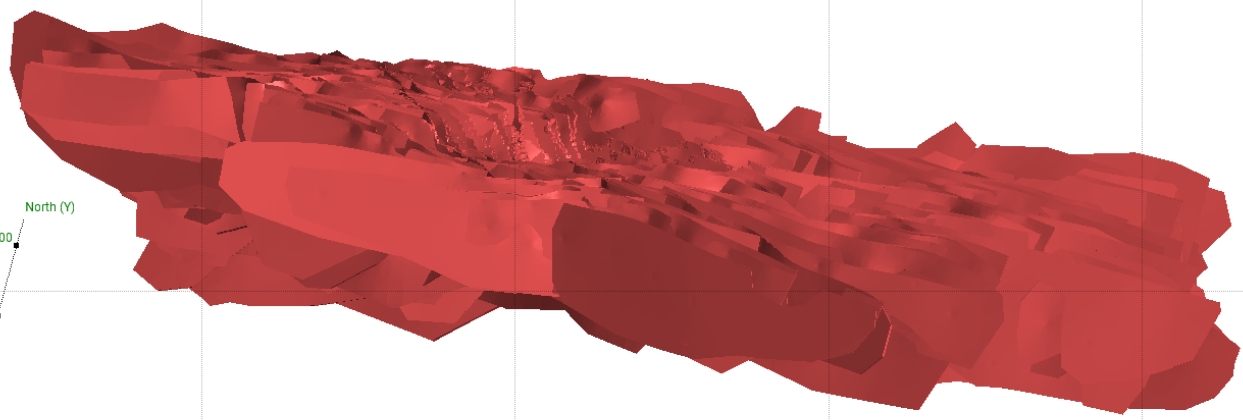
Revised Geological Model



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2023 MRE
- contains 49 mineralised dykes



2024 MRE
- contains 109 mineralised dykes



NAL MRE

Sayona acquired 75% of NAL in 2021

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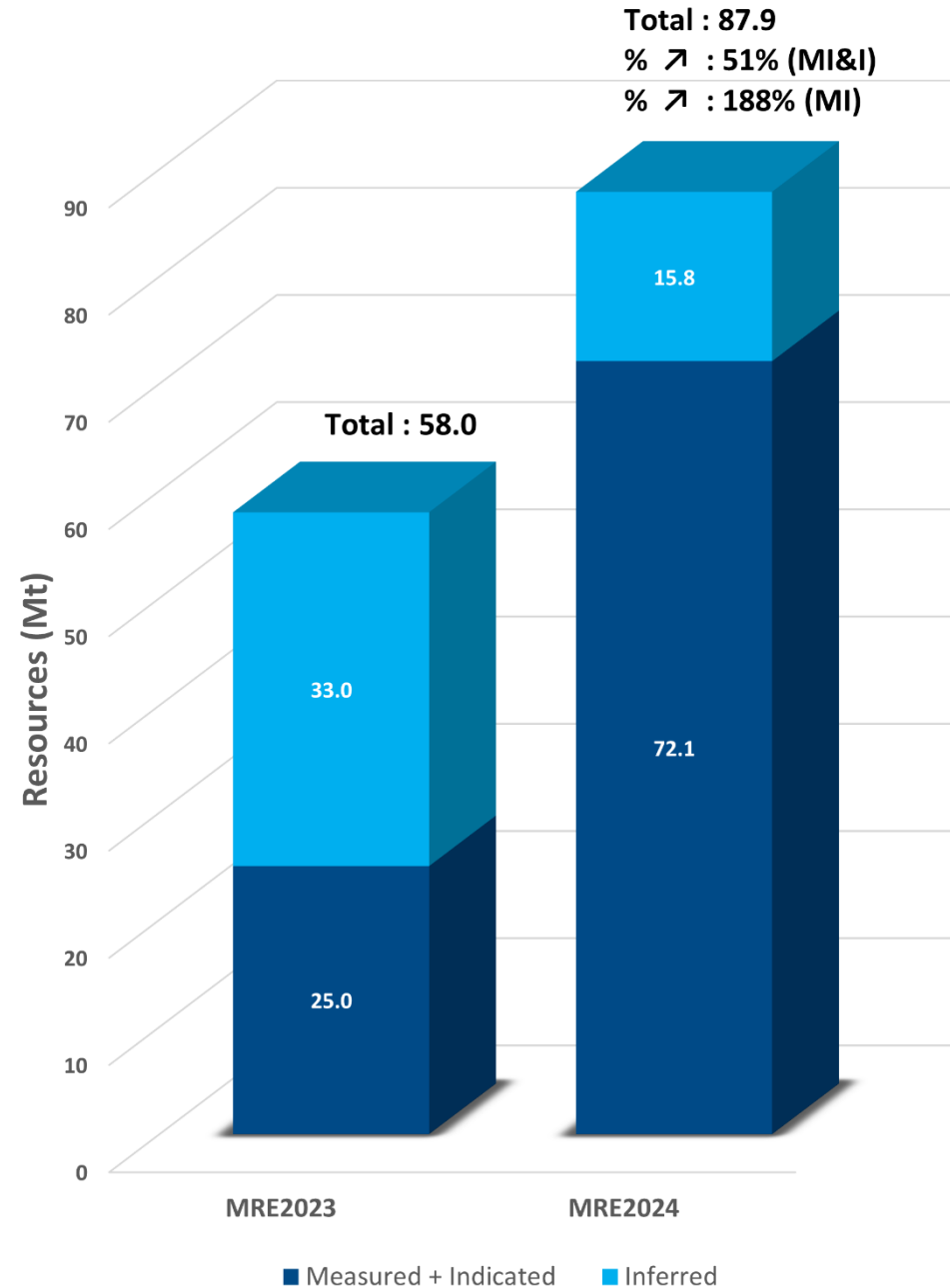
Major resource expansion

51% increase in Measured, Indicated and Inferred:
Resource total of 87.9 million tonnes (Mt) @ 1.13% Li₂O (0.60% Li₂O cut-off grade).

188% increase in Measured and Indicated:
Resource total of 72.1 million tonnes (Mt) @ 1.14% Li₂O (0.60% Li₂O cut-off grade).

Between 2023 and 2024, Sayona's drill program has added materially to the total resource with an impressive conversion rate from Inferred to Measured & Indicated Resources categories.

Mineral Resources Estimation for the NAL project





Moblan Exploration

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Moblan Lithium Project

81% upgrade in Mineral Resource to 93Mt

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JORC Measured, Indicated and Inferred Resource

93.1Mt @ 1.21% Li₂O¹
70% in M&I category



Easily accessible resource

High grade, low strip ratio,
and high Li₂O recovery



Close to, and well-serviced by, key infrastructure and transport nodes

Such as roads, railroads, and power lines – enabling year-round access



Excellent access

to high growth EV and battery markets across North America



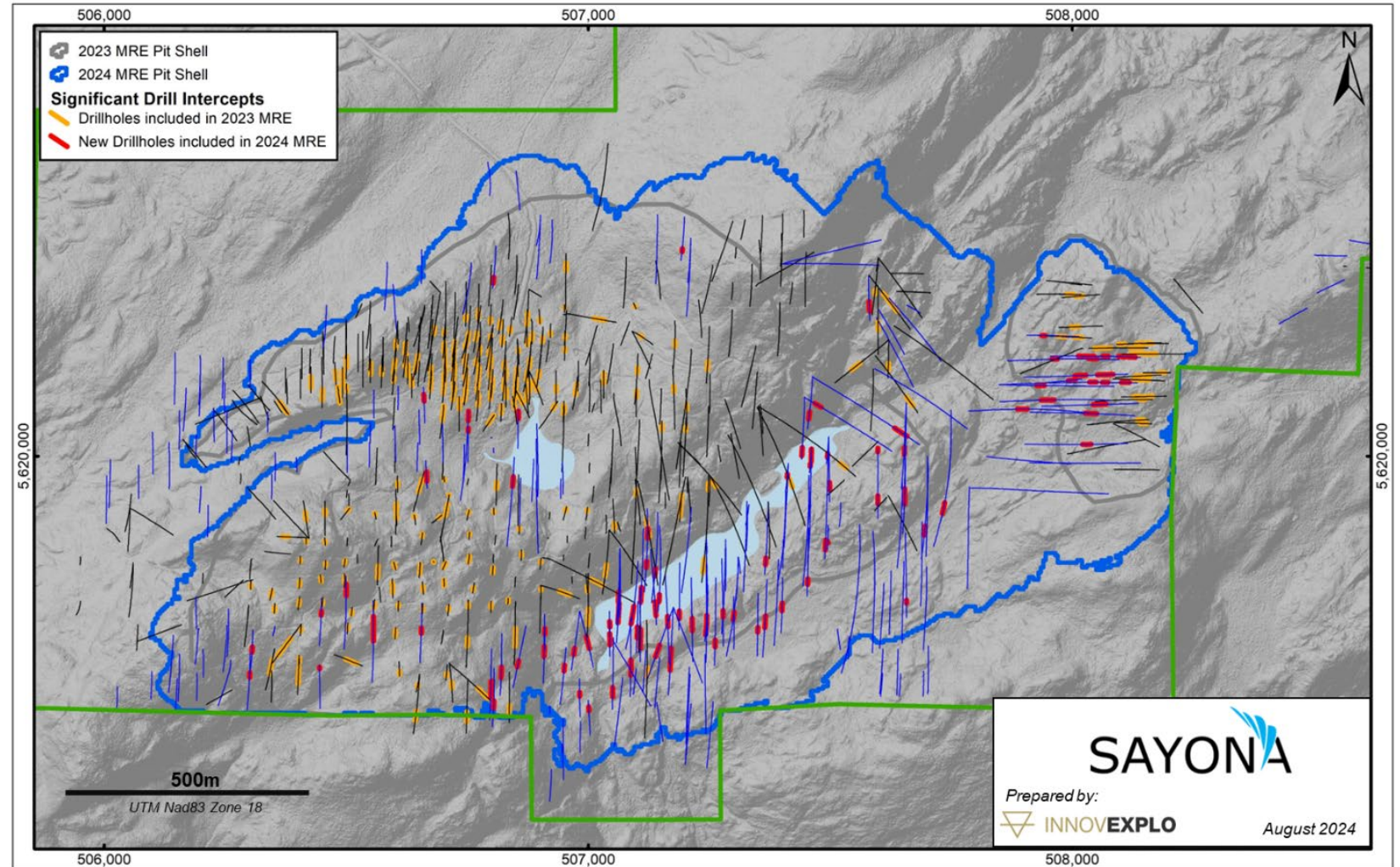
Notes
1 Refer to ASX Announcement on 27 August 2024 (at 0.55% cut-off grade).



Moblan MRE

New drillholes included in 2024 MRE

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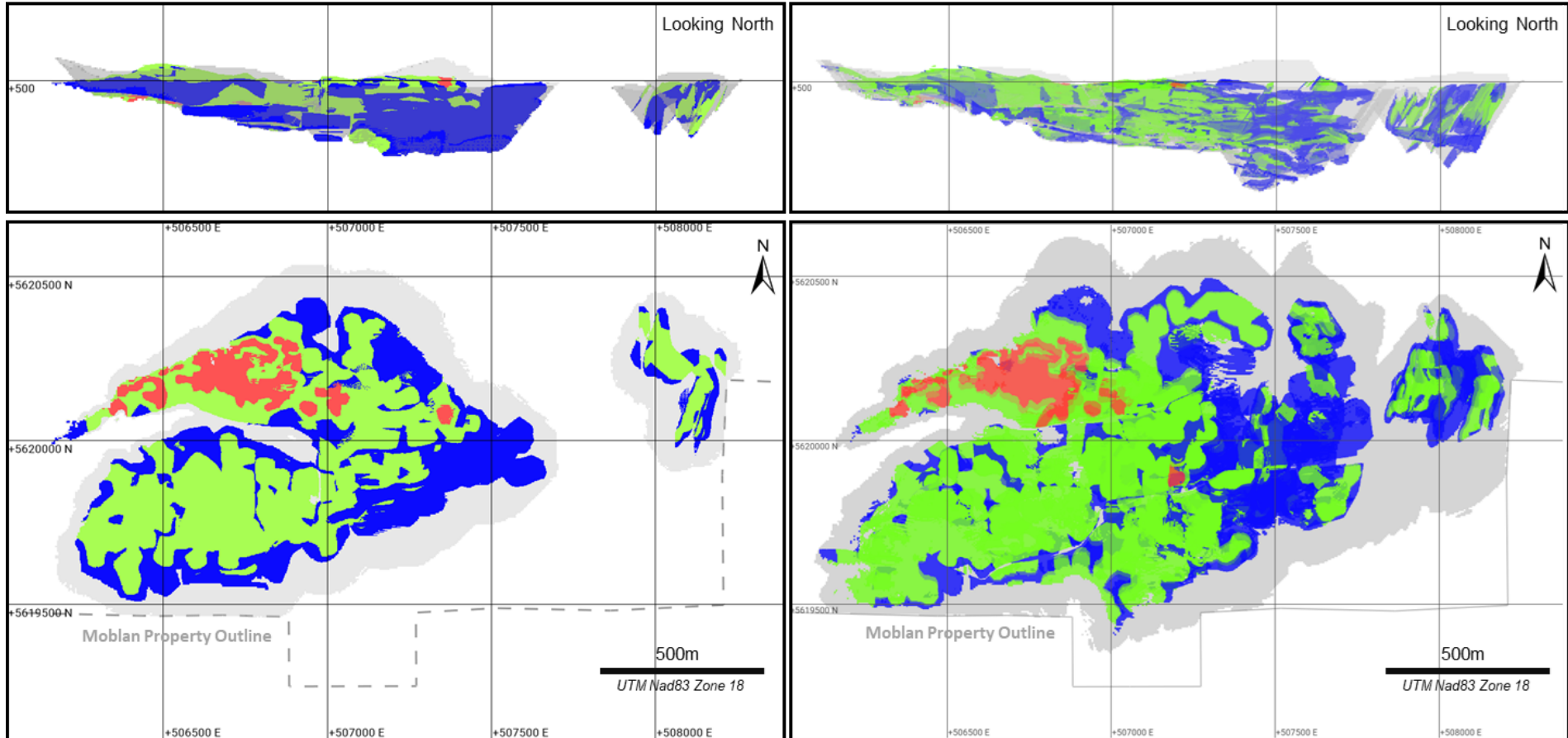




Moblan MRE

2023 Mineral Resources

2024 Mineral Resources



SAYONA

Prepared by:

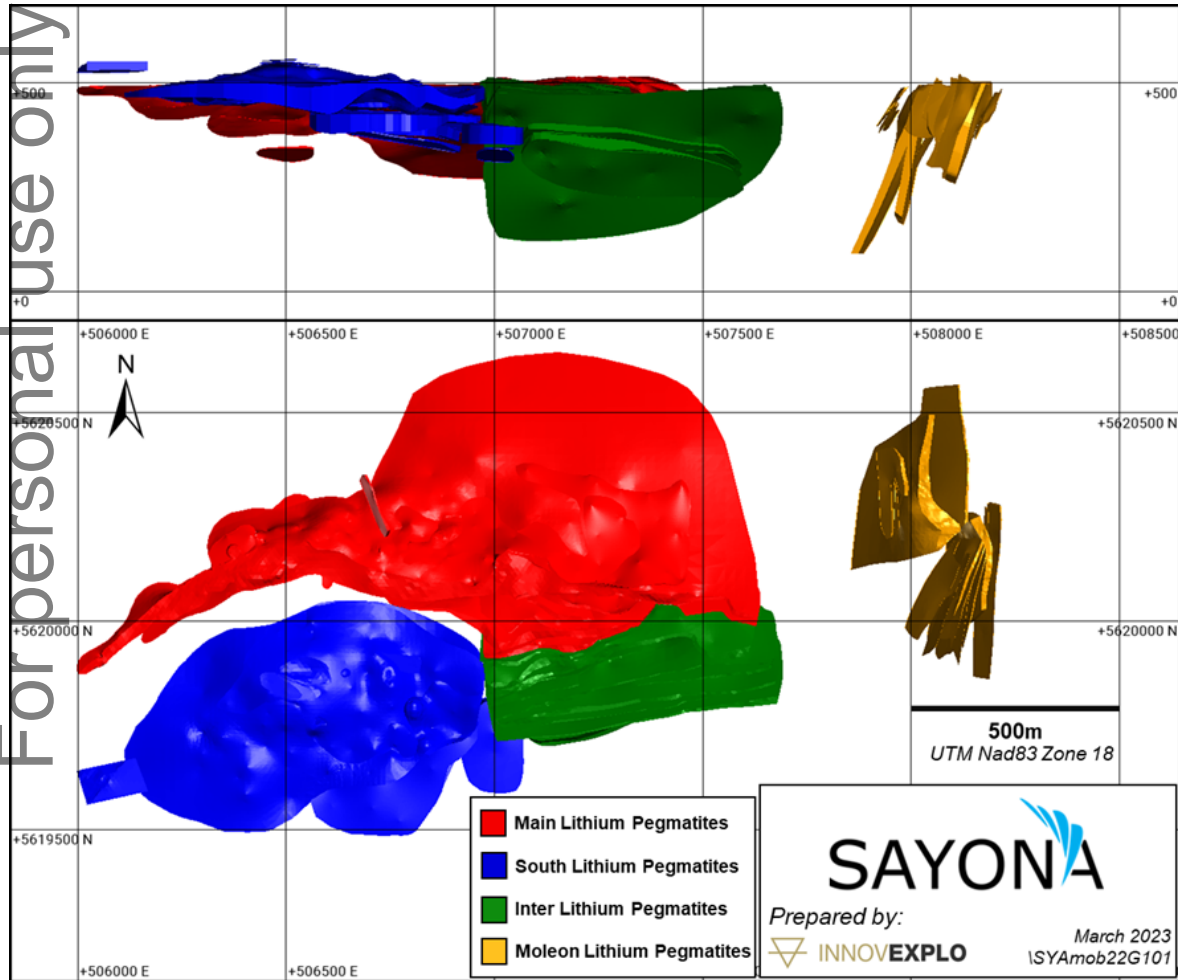
INNOVEXPLO

August 2024

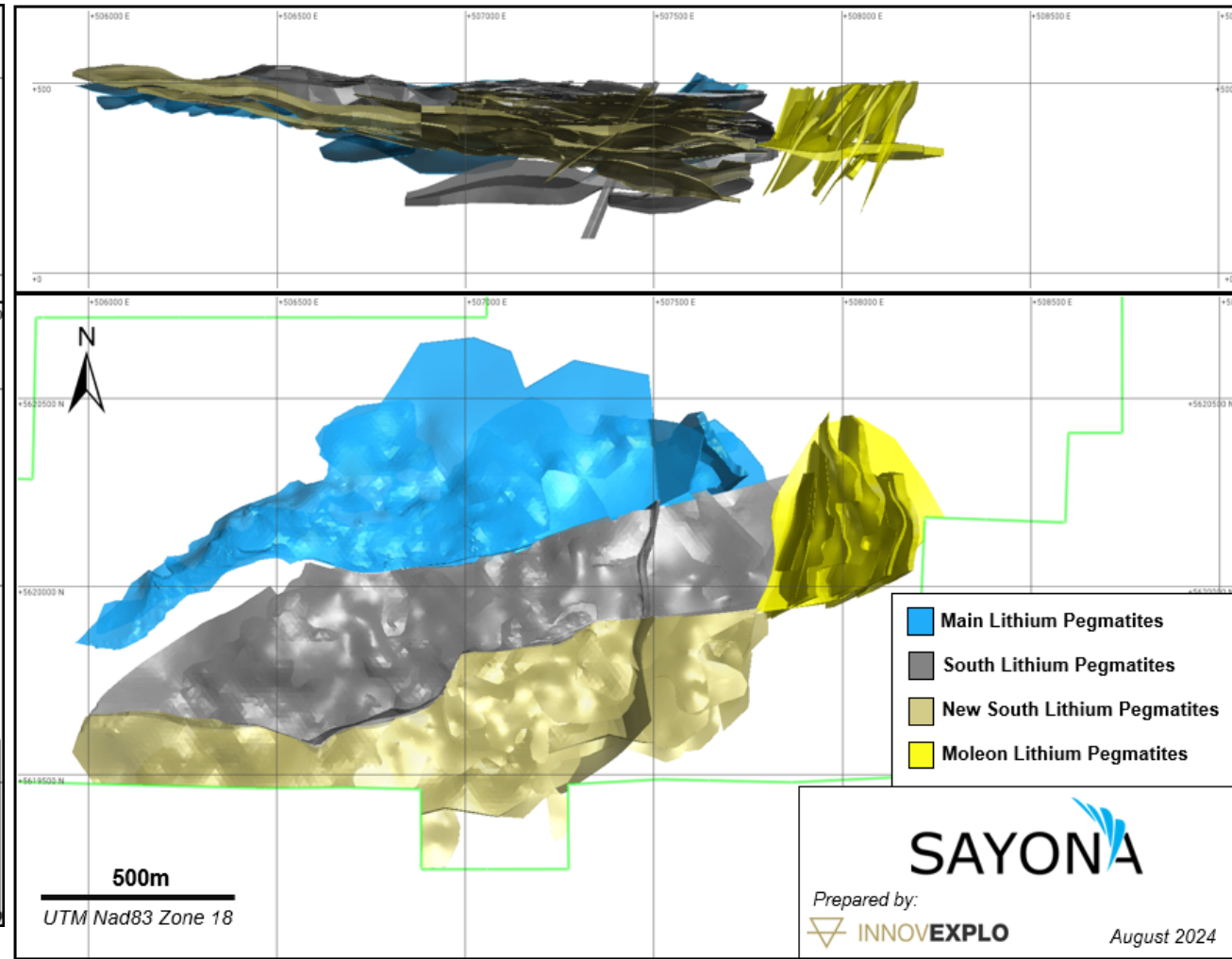
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Revised Geological Model

Moblan Spodumene pegmatite domains - 2023 MRE



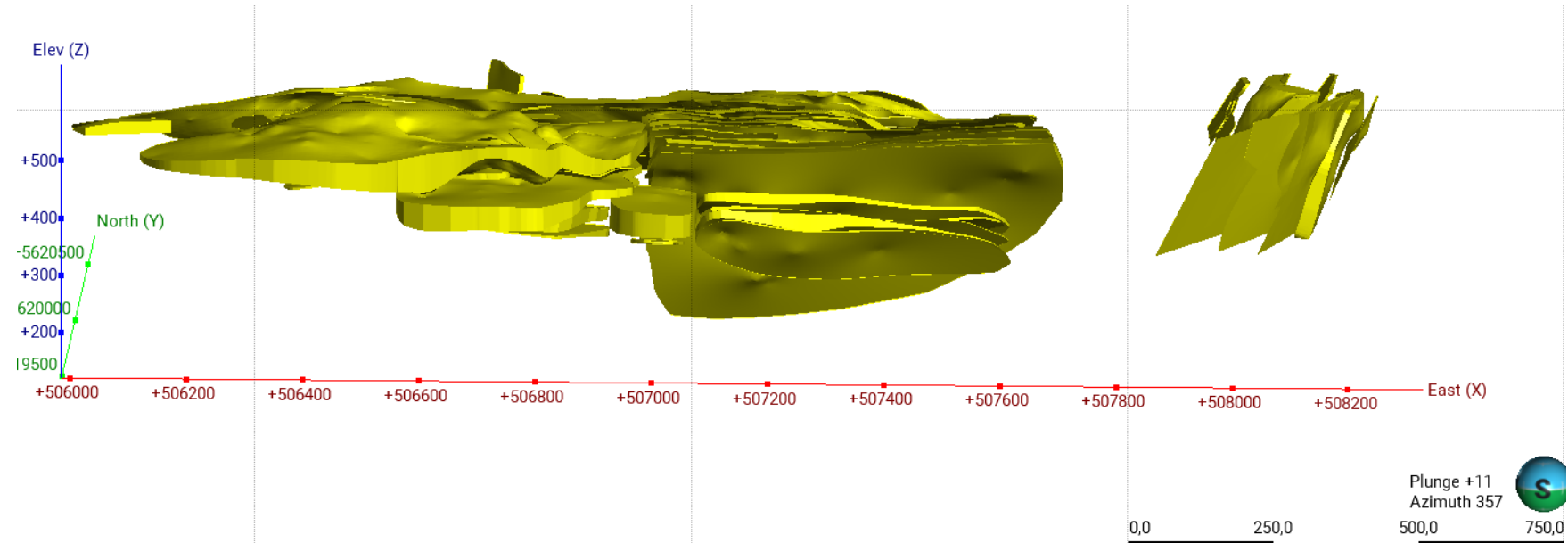
Moblan Spodumene pegmatite domains - 2024 MRE



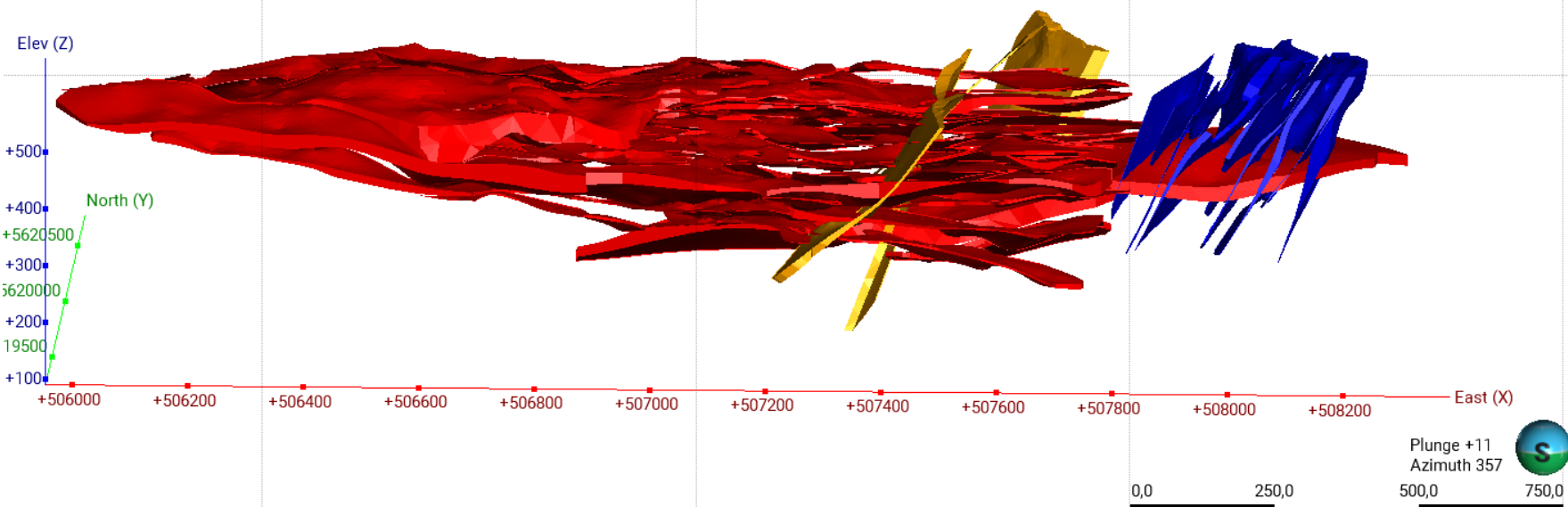


Revised Geological Model

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Moblan Spodumene pegmatite domains - 2023 MRE



Moblan Spodumene pegmatite domains - 2024 MRE

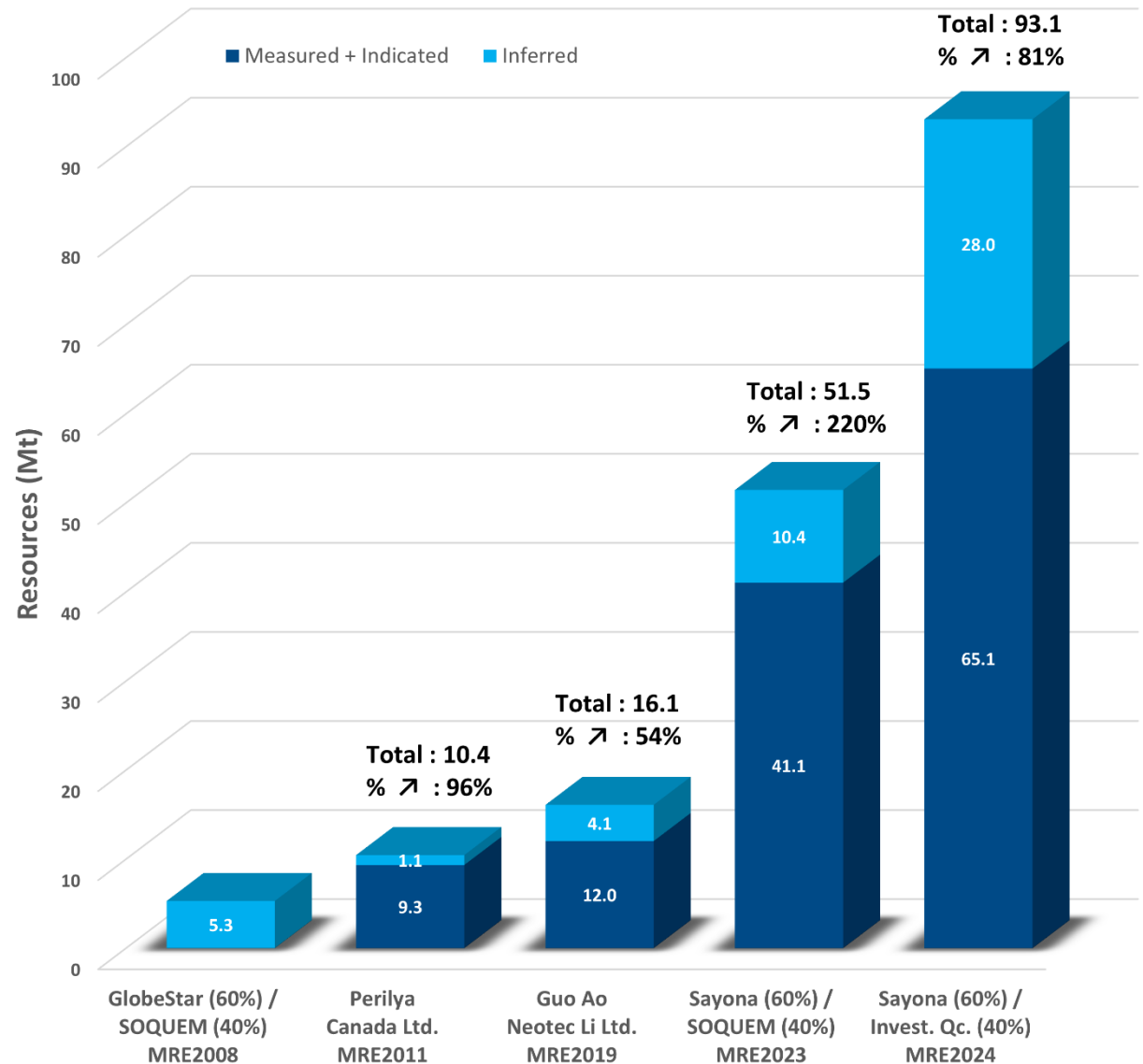
Moblan MRE

October 2021: Sayona Acquisition of 60%

- Total JORC Mineral Resource (Measured, Indicated and Inferred) **increased by 81% totaling 93.1 million tonnes (Mt) at 1.21% Li₂O** (cut-off of 0.55% Li₂O), up from 51.4Mt @1.31% Li₂O (at 0.55% Li₂O).
- Measured and Indicated categories are **up 59% to 65.1 million tonnes @ 1.25% Li₂O** and account for 70% of the total resource
- The exceptional increase in mineral resources at Moblan reflects the addition and integration of all the drilling results from the 2023 program and from a major revision of the geological model

Drilling by Sayona has added materially to the total resource

Mineral Resources Estimation for the Moblan Li Project





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