

LITHIUM BUSINESS UPDATE

Highlights

Zenith to recommence lithium exploration drilling on its 100% owned Split Rocks and Waratah Well lithium projects in Western Australia (Figure 1) following an 18-month hiatus. Details of the key drill targets are explained in the Company presentation titled “2024 Lithium Forward Program” released to ASX today.

Lithium Strategic Review

- Following unsolicited inbound expressions of interest from various strategic investors, the Company appointed Azure Capital in January 24 to support Zenith in a strategic review of its lithium business (ASX Release 15 Jan 24).
- Through the Azure process Zenith received expressions of interest from several parties who undertook detailed due diligence including site visits. A number of industry players advised that they were seeking more advanced stage assets and strongly indicated that as Zenith advances the projects, they would be interested in re-engaging.
- Zenith believes that significantly greater value can be delivered to shareholders through the Company advancing the numerous highly prospective targets identified at both the Split Rocks and Waratah Well lithium projects.

Lithium Exploration Update

- The drilling program will initially be focused on six key highly prospective lithium targets at Zenith’s 100% owned Split Rocks project.
- Five targets are situated along the 13.5km long Rio Lithium Mineral Resource trend plus drill testing of the previously undrilled 9km long Cielo geochemical anomaly, 35km south of Rio (Figure 2).
- More than eighty prospective lithium targets identified at Split Rocks (ASX Release 7 Dec 23) provide a robust pipeline for future exploration.
- At the Waratah Well lithium project further surface work will be undertaken prior to drill testing of high-grade targets.

Managing Director Transition

- External search process for a new Managing Director/CEO nearing conclusion. An update will be provided as soon as details are available.

Zenith Minerals Limited (**ASX:ZNC**) (“**Zenith**”, or the “**Company**”) is pleased to report that exploration is to re-commence at the Company’s 100% owned lithium projects in Western Australia (Figure 1) following a strategic review of its lithium business.

Under the former 2022 farm-in agreement, approximately A\$9.3M was spent by EVM on Zenith’s two Western Australian lithium projects - Split Rocks and Waratah Well. Most of the work under the farm-in was completed in 2022 with no drilling undertaken during 2023. Zenith shareholders are the beneficiaries of the significant amount of funds spent that saw 23,000m of drilling and over 15,000

geochemical samples completed across the two Zenith projects, culminating in the discovery of the Rio lithium deposit and definition of a 11.9Mt @ 0.72% Li₂O Maiden Mineral Resource (ASX Release 28 Sept 23) at Split Rocks and high-grade lithium mineralisation defined at the Waratah Well project.

The Company re-gained full control of the lithium projects to Zenith in Jan 24 after key milestones under the EVM farm-in agreement were not met within the required timeframe.

The Company's exploration team has assessed in detail the extensive databases generated under the former farm-in agreement. This strategic review has outlined multiple high-priority lithium exploration targets at the Company's 100% owned Split Rocks and Waratah Well projects, as detailed below. Details of these targets are explained in the **Company presentation titled "2024 Lithium Forward Program" released to ASX today.**

The Company is now in the final stages of planning to recommence drilling, initially on six key lithium targets at Split Rocks. These targets include step out drilling northwest of the Rio Lithium Mineral Resource (**NW Step-Out Target**), over a further 1km of strike and five other key targets beyond the Rio lithium deposit (**T01-02, DFN, T09-10, Rio SE and Cielo**) (Figure 2).

Additional work is likely to advance many of the other 80 plus geochemical and geological targets at Split Rocks and Waratah Well to the drilling stage, presenting the Company with a robust prospect exploration pipeline going forward.

Following numerous unsolicited expressions of interest from strategic investors during the second half of 2023 Zenith undertook with the assistance of Azure Capital a strategic review of the lithium business once full control of the Projects was returned to Zenith in early 2024. Through the Azure process Zenith received expressions of interest from several parties who undertook detailed due diligence including site visits. A number of industry players advised that they were seeking more advanced stage assets and strongly indicated that as Zenith advances the projects, they would be interested in re-engaging. The Company therefore believes that significantly greater value can be delivered to shareholders through advancing the numerous highly prospective targets identified at both Split Rocks and Waratah Well. As the Company's lithium assets are advanced and as we continue to see improvement in the lithium price there is an opportunity to re-engage with strategic parties should the Board decide that is appropriate.

Managing Director Michael Clifford commented:

"I'm pleased to announce the conclusion of the strategic review of Zenith's lithium business and advise that the Company will now proceed with initially drill testing six high-priority targets on the 100% owned Split Rocks project in Western Australia. These drill targets include 1km step out drilling northwest of the Rio Lithium Mineral Resource and 5 other key targets beyond the Rio deposit, including the undrilled 9km long Cielo geochemical anomaly. These drill targets are explained in some detail in the accompanying Company presentation titled "2024 Lithium Forward Program" released to ASX today."

Although there was interest in Zenith's lithium assets from various strategics, the feedback from several parties was that they were looking for more advanced projects, but they strongly indicated that as the projects are advanced, they would consider re-engaging. The opportunity now is for the Company to progress our high-quality lithium projects with additional work, and then reassess our position in 6 to 12 months' time."

Zenith's primary long-term focus is on minerals containing lithium and related metals required for rechargeable lithium-ion batteries for electric vehicles and renewable energy storage ("Battery Minerals") – Figure 1.

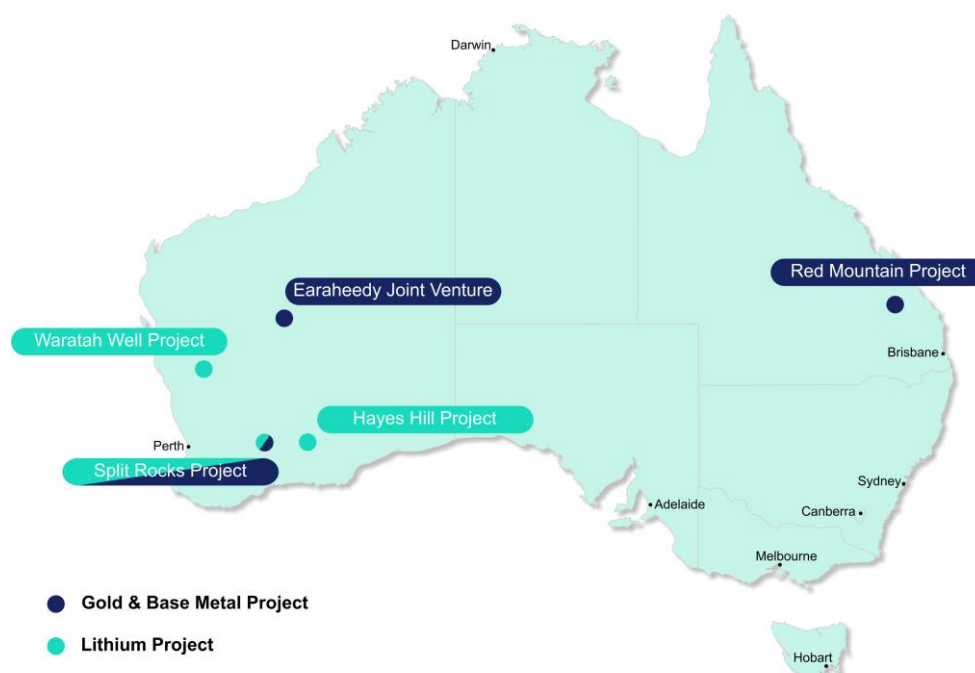


Figure 1: Zenith Lithium Project Locations

Split Rocks Project - Forward Program

An infill geochemical surface sampling program (1,100 samples) has been completed at Split Rocks to assist in refining key existing geochemical targets. Assays have now been received for the sampling. The work has confirmed but not materially changed the size or tenor of the existing geochemical anomalies.

Lithium mineralisation at Rio remains open to the north, south, east and at depth. The immediate focus will be on testing a further 1km of strike to the northwest of the Rio deposit (**NW Step-Out Target**) where the Rio pegmatite remains open ended and coincident with strong surface lithium, caesium and rubidium geochemistry (Figure 2). A total of 35 RC holes are fully permitted and ready to drill in this target area with an initial 16 RC holes planned.

Rio is the first lithium target that was tested with extensive RC and diamond drilling and is one of > 80 targets within the Split Rocks project (ASX Release 10-Aug-23 and 7-Dec-23) - refer Figure 2. Targets include the very large (>9km long by 2km wide), untested Cielo Lithium Target previously announced to ASX on 9-Feb-23, with a peak auger soil value of 880ppm Li.

Furthermore, an additional 5 targets (**T01-02, DFN, T09-10, Rio SE and Cielo**) require drill follow-up (Figure 2). These targets contain key features such as near surface, weathered pegmatite drill intersections up to 50m thick, whilst some are considered highly significant, based on their LCT pegmatite chemistry (K/Rb ratio less than 50), with additional anomalous contents of Cs, Li, Ta, or Nb.

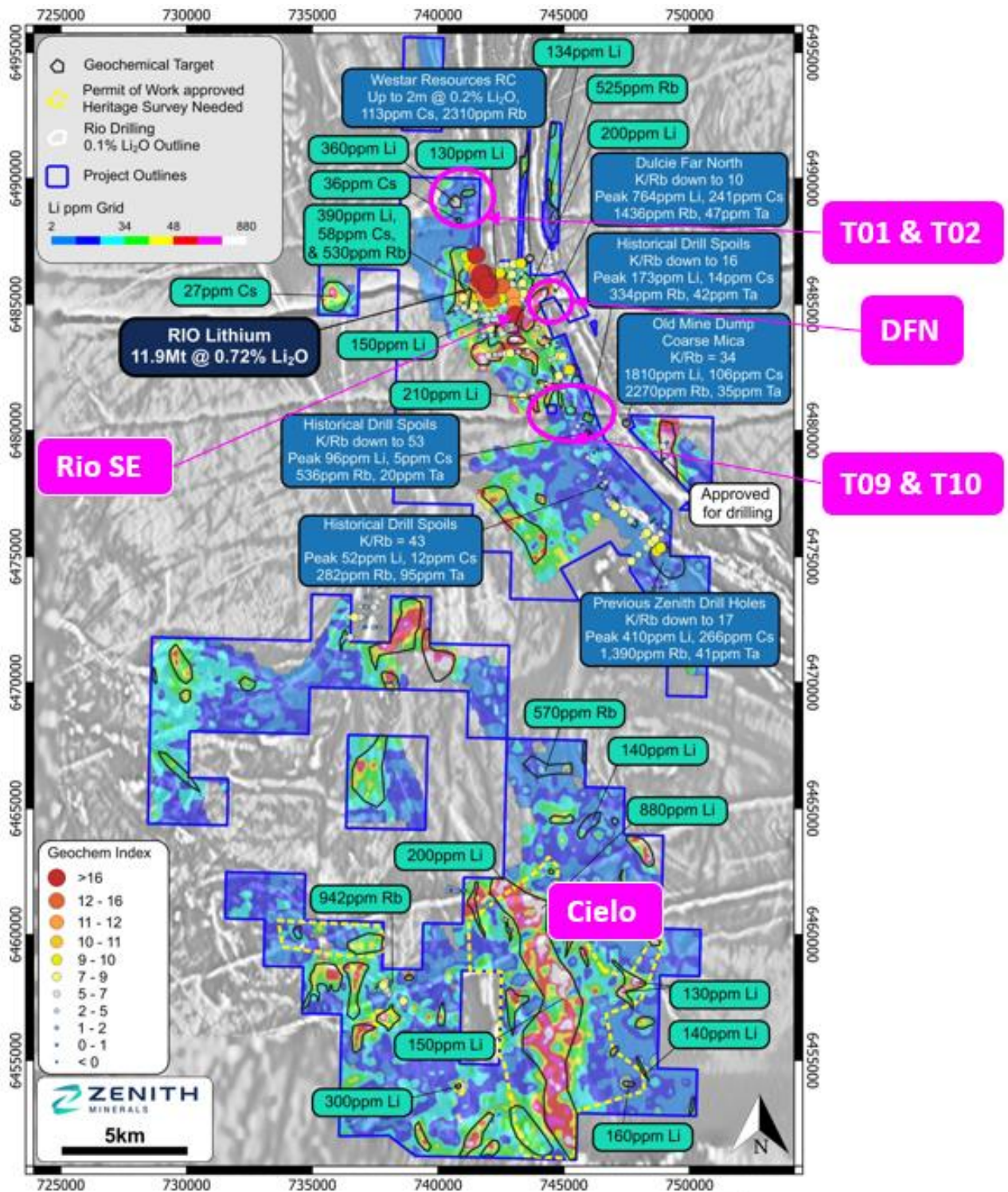


Figure 2: Split Rocks Rio Mineral Resource Location and Lithium Pegmatite Targets

Split Rocks Project – Background

The Split Rocks Lithium Project is located approximately 40km south of the regional town of Marvel Loch in the Goldfields Region of Western Australia. The project area lies immediately north of the Mt Holland Lithium Mine owned by Covalent Lithium (SQM and Wesfarmers) - (Figure 3).



Figure 2: Split Rocks Rio Mineral Resource Location and Lithium Pegmatite Targets

Drilling at the Rio Prospect has returned significant lithium mineralisation (Figures 3- 6) - refer to ASX Release 16-Nov-22, culminating in a maiden Inferred Mineral Resource of 11.9Mt @ 0.72% Li₂O (JORC 2012) - ASX Release 28-Sep-23. The mineral resource for the Split Rocks Rio lithium pegmatite deposit has been estimated, using all data available as at 3-Aug-23. Drilling is currently relatively wide spaced (generally 200m x 100m).

Significant smoothing of lithium grades in the resource estimation process due to the current wide drill spacing (generally 200m x 100m). Closer spaced drilling has the potential to define more discrete high-grade lithium zones that could enhance the overall lithium grade of the deposit.

The Mineral Resource estimate for the Split Rocks Rio project (Figures 4) reported at a 0.5% Li₂O cutoff is shown below. The entire resource is classified Inferred and is open at depth and along strike.

Rio Lithium Deposit Inferred Mineral Resource Estimate

Zone	Million Tonnes	Li ₂ O %	Cs ppm	Nb ppm	Sn ppm	Ta ppm	Domain
Upper	8.45	0.76	426	77	157	62	31
Middle	3.48	0.62	387	71	364	49	32
Total	11.9	0.72	415	75	217	59	-

Notes to Resource Table:

1. The Mineral Resource is estimated with all drilling data available at 3-Aug-23, and reported at a 0.5% Li₂O cutoff.
2. The Mineral Resource is reported in accordance with the JORC Code 2012 Edition.
3. The Competent Person is Phil Jankowski FAusIMM of CSA Global
4. Rounding may lead to minor apparent discrepancies

Lithium mineralisation remains open to the northeast, south and at depth, with further drilling required to define the full limits of mineralisation.

Lithium pegmatite mineralisation identified to date is a mixture of eucryptite with lesser spodumene, petalite and lepidolite confirmed by multiple methods including optical microscopy, SEM, Raman spectroscopy and XRD analyses.

The amenability of eucryptite mineralisation to conventional treatment processes has been shown by positive sighter flotation testwork and bench scale calcination-leach tests, hence confirming the potential of eucryptite as a viable lithium target (ASX Release 26-Jul-22).

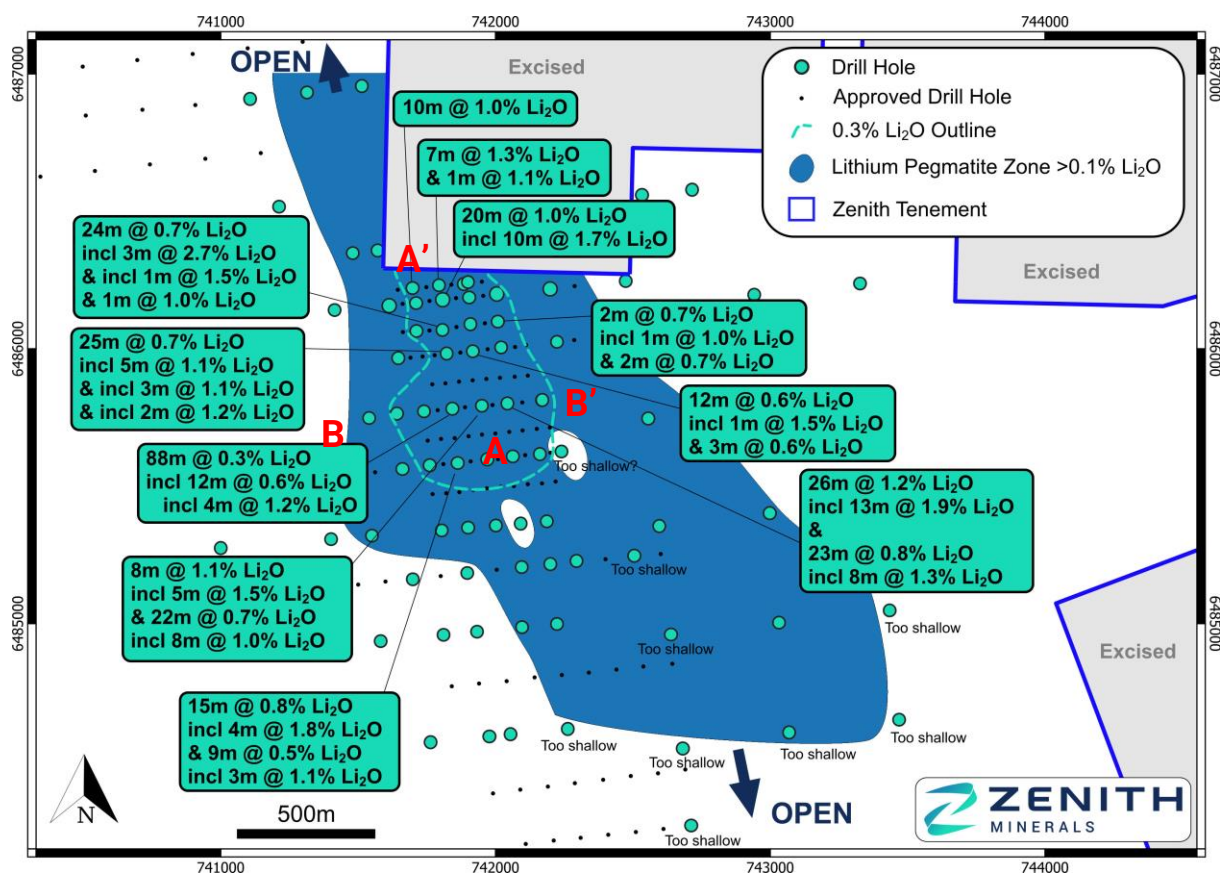


Figure 4: Rio Pegmatite – Map with Significant Lithium Drill Results

Waratah Well Project - Forward Program

Recent work by the Zenith exploration team has shown that the lithium pegmatite mineralisation, as it is defined to date, is situated on a geological host rock contact. That contact extends under cover to the northeast and southwest and remains untested (Figure 5). Further surface sampling of this contact is planned for early July 2024 ahead of drill testing.

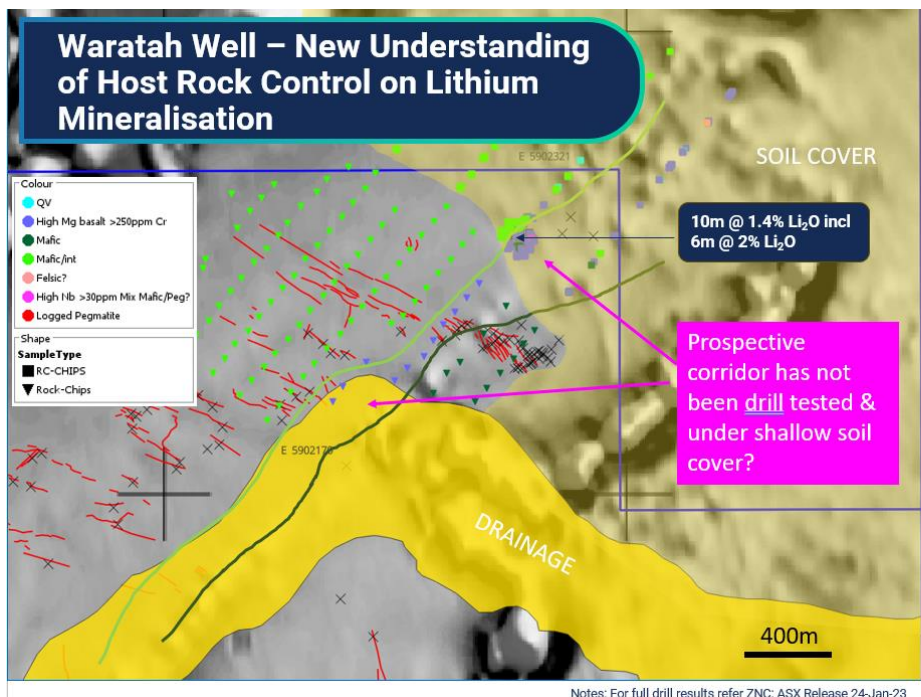


Figure 5: Waratah Well Targets

Waratah Well Project - Background

The Waratah Well Project is located approximately 20km northwest of the regional town of Yalgoo in the Murchison Region of Western Australia. An initial drilling program in early 2022 confirmed the presence of widespread lithium bearing pegmatite dykes over a 4km zone, open to the north and east under soil cover at Waratah Well (ASX Release 10-Mar-22) – Figure 6.

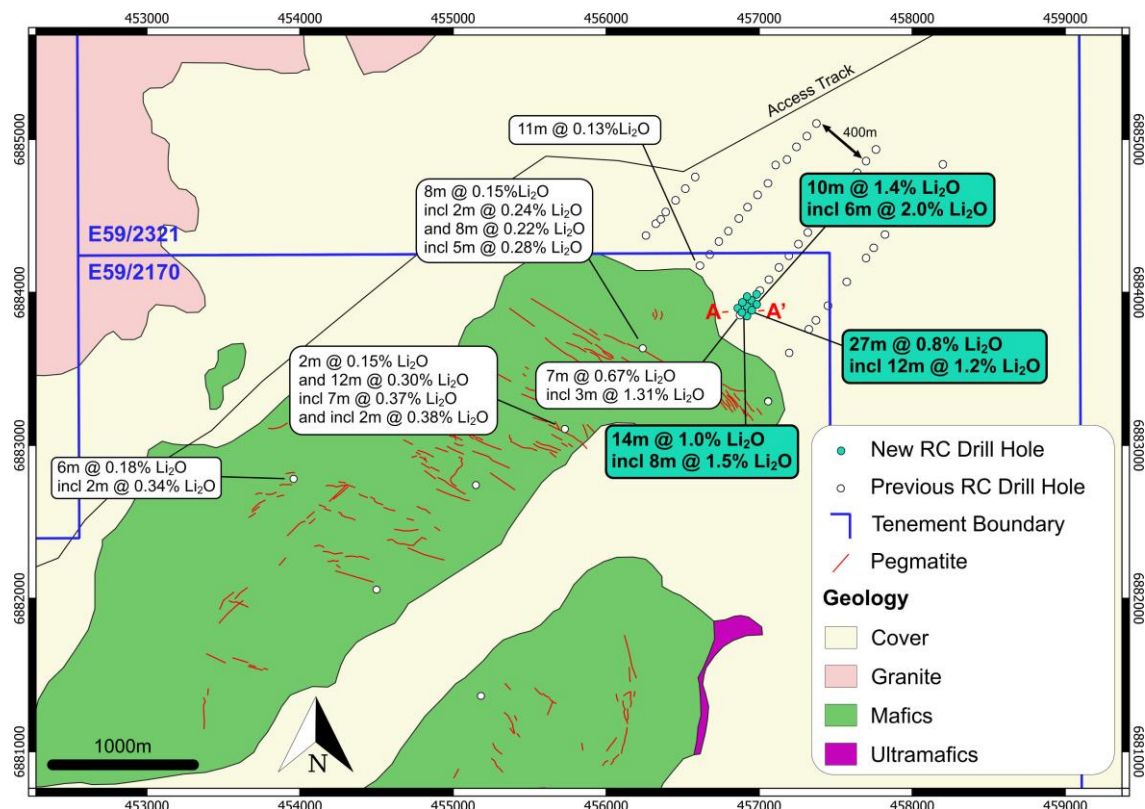


Figure 6: Waratah Well Lithium Prospect Area – Lithium Drilling Results and Location of Cross Section A-A'

Drilling to date has confirmed the presence of high-grade lithium below the depth of weathering, refer Figures 7, (ASX Release 24-Jan-23), including:

- 14m @ 1.0% Li₂O, incl 8m @ 1.5% Li₂O.
- 10m @ 1.4% Li₂O, incl 6m @ 2.0% Li₂O.
- 27m @ 0.8% Li₂O (true width 10m), incl 12m @ 1.2% Li₂O (true width 6m).

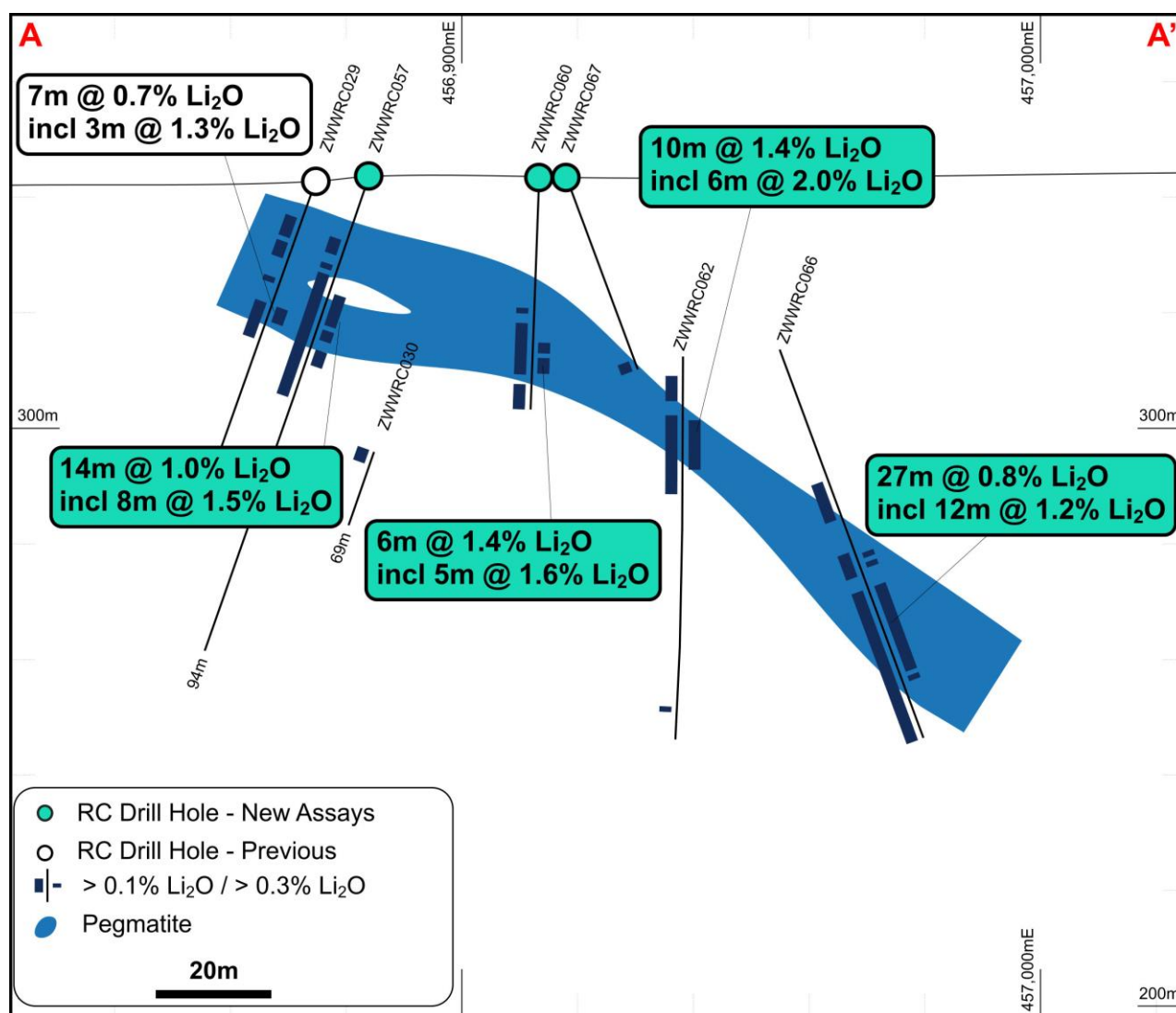


Figure 7: Waratah Well Lithium Prospect Drilling Cross Section A-A'

Heritage surveys have been completed and permits are in place to allow a substantial follow-up drill program to define the extents of lithium mineralisation that remains open to the north, south and east under shallow soil cover at Waratah Well.

This release was authorised by the Board of Directors of Zenith Minerals Limited.

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About Zenith Minerals

Zenith Minerals Limited (ASX:ZNC) is an Australian-based minerals exploration company leveraged to the increasing global demand for metals critical to the production processes of new energy industrial sectors. The Company currently has four lithium projects all located in Western Australia. The 100% owned Split Rocks and Waratah Well projects are the two most advanced lithium projects in Zenith's portfolio:

Split Rocks Lithium Project

- Split Rocks Lithium Project (covering ~367km²) is located in the Forrestania greenstone belt 30km north of the established Mt Holland Lithium Deposit (Sociedad Química y Minera and Wesfarmers).
- Maiden Inferred Mineral Resource for the Rio Lithium Pegmatite Deposit at Split Rocks of **11.9Mt at 0.72% Li₂O** (ASX Release 28-Sep-23).
- 83 advanced lithium targets identified in December 2023.
- **Split Rocks is 1 of only 6 lithium deposits with a JORC mineral resource in Western Australia, outside existing lithium mining operations.**

Waratah Well Lithium Project

- Waratah Well Project (covering ~123km²) located approximately 20km northwest of the regional town of Yalgoo in the Murchison Region holds an advanced lithium exploration target.
- Multiple drill intersections at Waratah Well **>10m @ 1.0%Li₂O** (ASX Release 24-Jan-23).
- Permits are in place to commence a drilling program to further test these targets, which remain open in all directions.

The Hayes Hill project, located in the Norseman – Widgiemooltha area of Western Australia contains gold and nickel sulphide drill targets.

In addition to its battery metal assets Zenith owns a portfolio of gold and base metal projects. It retains a 25% free carried interest (to end bankable feasibility study) on the Earraheedy Zinc discovery, in Western Australia, with Rumble Resources Limited (ASX:RTR) and two main gold projects – Red Mountain in Queensland and Split Rocks in Western Australia.

To learn more, please visit www.zenithminerals.com.au

Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Material ASX Releases Previously Released

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.