



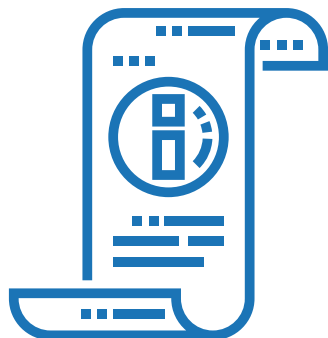
Australian-based Mining Exploration Company

Leveraged to the developing clean
energy world

Zenith Minerals Limited (ASX:ZNC)



DISCLAIMER & JORC STATEMENTS



Forward looking statements

Some statements in this presentation regarding estimates or future events are forward looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include estimates of future production, reserve and mineralised material estimates, capital costs, and other estimates or prediction of future activities. They include statements preceded by words such as “believe”, “estimate”, “expect”, “intend”, “will” and similar expressions. Actual results could differ materially depending on such things as political events, labour relations, currency fluctuations and other general economic conditions, market prices for Zenith Minerals Limited products, timing of permits and other government approvals and requirements, change in operating conditions, lower than expected ore grades, unexpected ground and mining conditions, availability and cost of materials and equipment, and risks generally inherent in the ownership and operation of mining properties and investment in foreign countries.

Information presented is a summary

This presentation aims to provide a high-level summary of various technical aspects of the Company's projects. For more details on the underlying technical parameters the reader is referred to the ASX Reports on the Zenith Minerals Limited's website: www.zenithminerals.com.au

JORC competent persons statements

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.

The information in this report that relates to the Rio Lithium Mineral Resource is based on information compiled by Mr Phil Jankowski, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a full-time employee of CSA Global. Mr Jankowski 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 Jankowski consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Dulcie Far North Mineral Resource is based on information compiled by Mr John Horton, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and a full time employee of ResEval Pty Ltd. Mr Horton 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 Horton 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. Material ASX releases related to the results reported in this report are listed on the respective project pages.

Corporate Snapshot

ASX:ZNC



Share Price
\$0.10



Shares on Issue
352.4m



Market Cap
\$35.2m



Cash¹
\$2.7m



Listed Equities
\$4.0m



Enterprise Value
\$32.5m

¹ – As at 30-Sep-2023

Corporate Snapshot

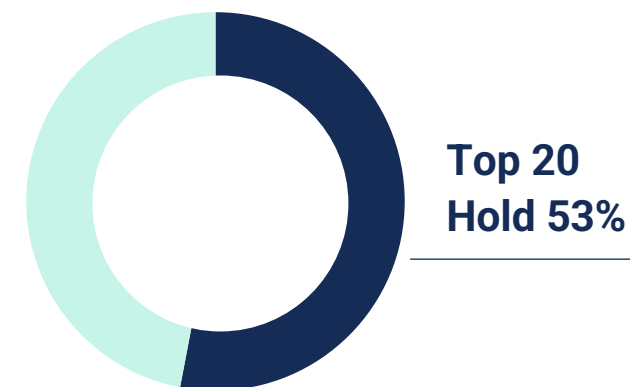
ASX:ZNC

ASX:ZNC Share Price Performance

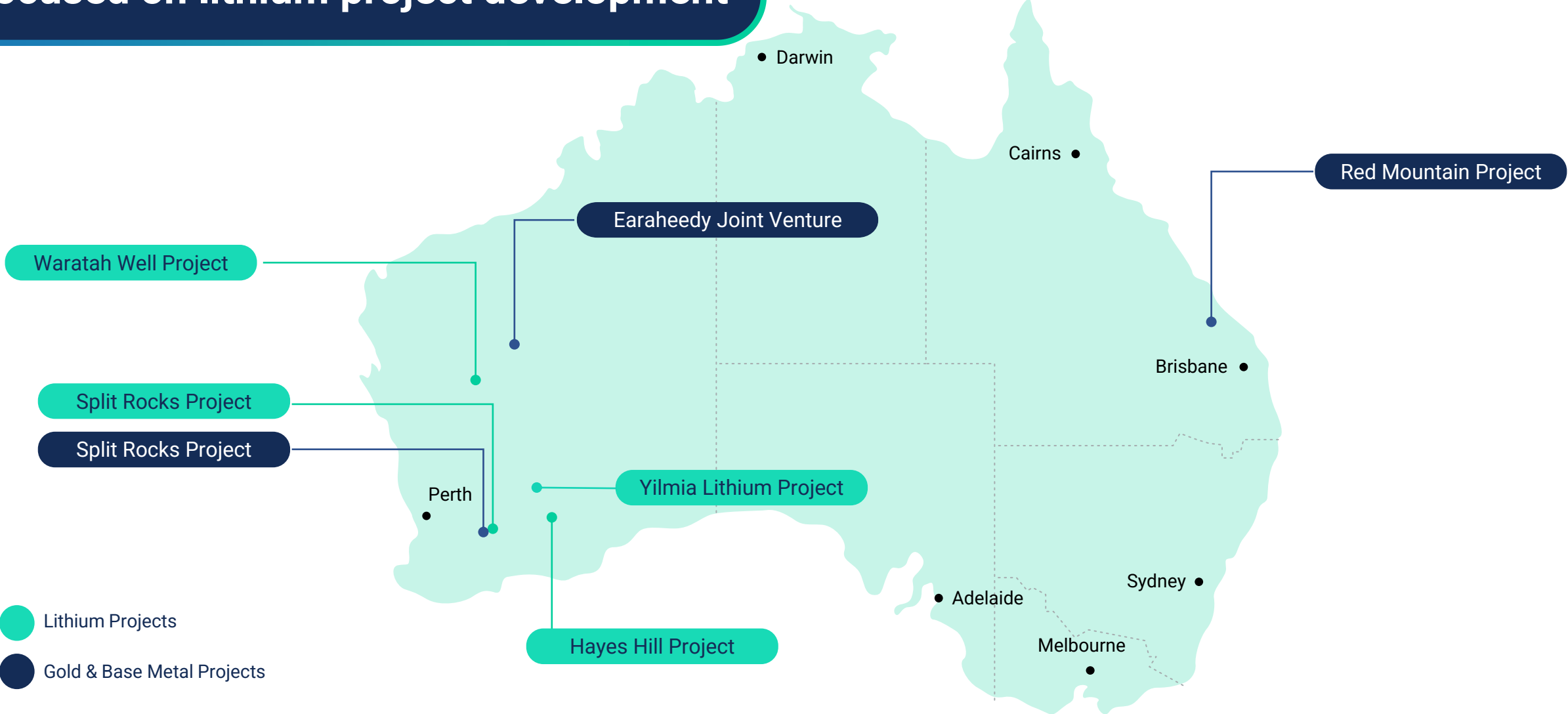


Major Shareholders

Directors	3.7%
BNP Paribas Noms	8.6%
HSBC Custodian Noms	7.9%
Citicorp Noms	6.3%
Tilbrook	5.1%



Focused on lithium project development

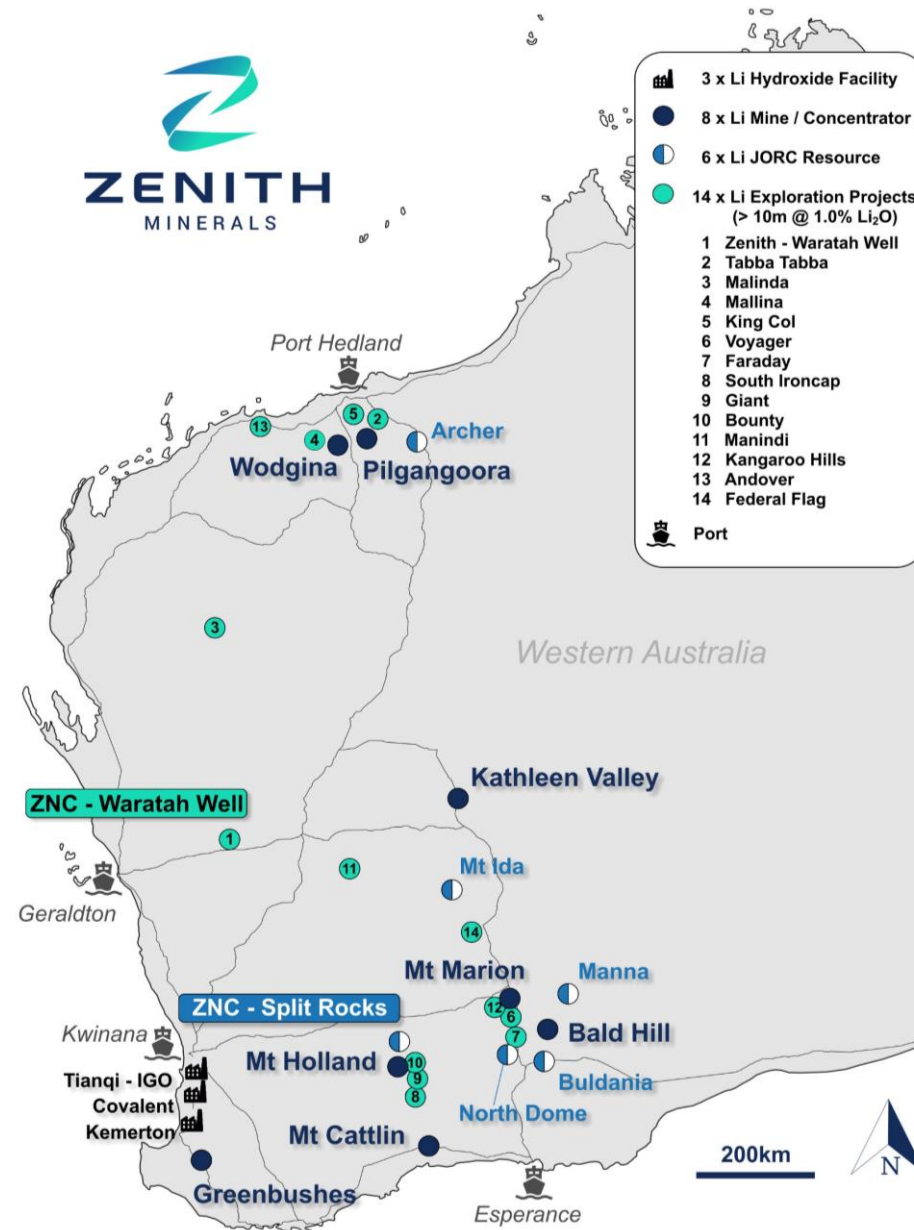


WA Lithium Projects

Zenith owns 1 of only 6 JORC lithium Mineral Resources* and 1 of the 14 best lithium exploration prospects in WA**

- ✓ There are 3 Lithium Hydroxide Facilities in WA, Tianji, Covalent and Kemerton.
- ✓ 8 Lithium Mines – highlights the need for exploration.
- ✓ 6 JORC resources* - we own one (Rio Deposit – Split Rocks).
- ✓ 14 advanced exploration plays - we own one (Waratah Well).

- *6 JORC Mineral Resource excludes those at the 8 operating mines
- Refer slide 18 for details
- ** In Zenith's option based on the criteria of drill intersections >10m @ 1.0%Li₂O





Split Rocks

- JORC Inferred Mineral Resource **11.9Mt @ 0.72% Li₂O, 415ppm Cs, 75ppm Nb, 217ppm Sn and 59ppm Ta** (at a 0.5% Li₂O cut-off grade)*
- Best intersections 26m @ 1.2% Li₂O
10m @ 1.7% Li₂O
13m @ 1.9% Li₂O



Waratah Well

- 10m @ 1.4% Li₂O including 6m @ 2% Li₂O**



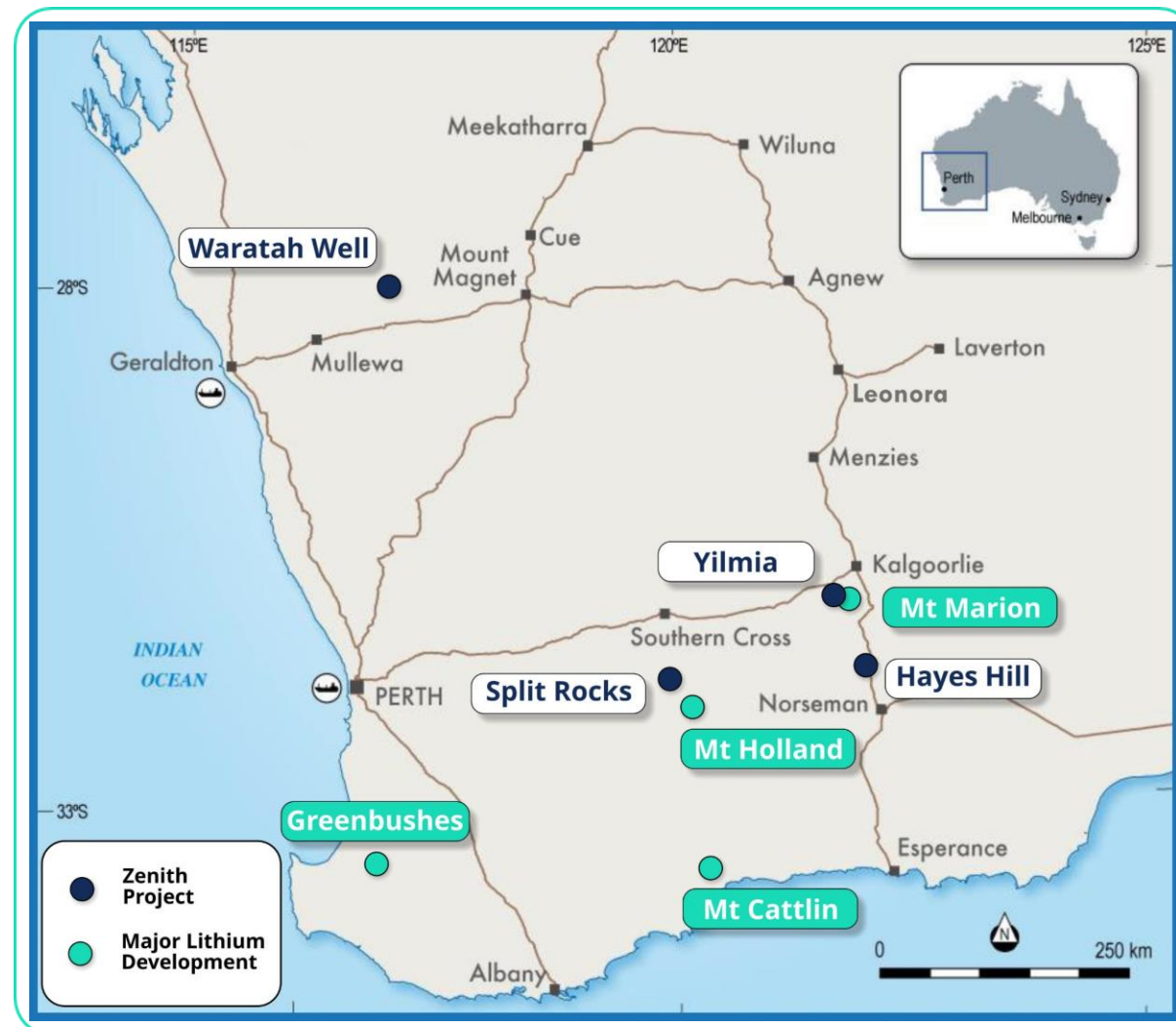
Hayes Hill

- SE of the Dome North Li deposits (ESS), immediately east of the Sinclair Cs deposit (ESS), NW of the Buldania Li deposits (LTR)
- Nickel Targets



Yilmia

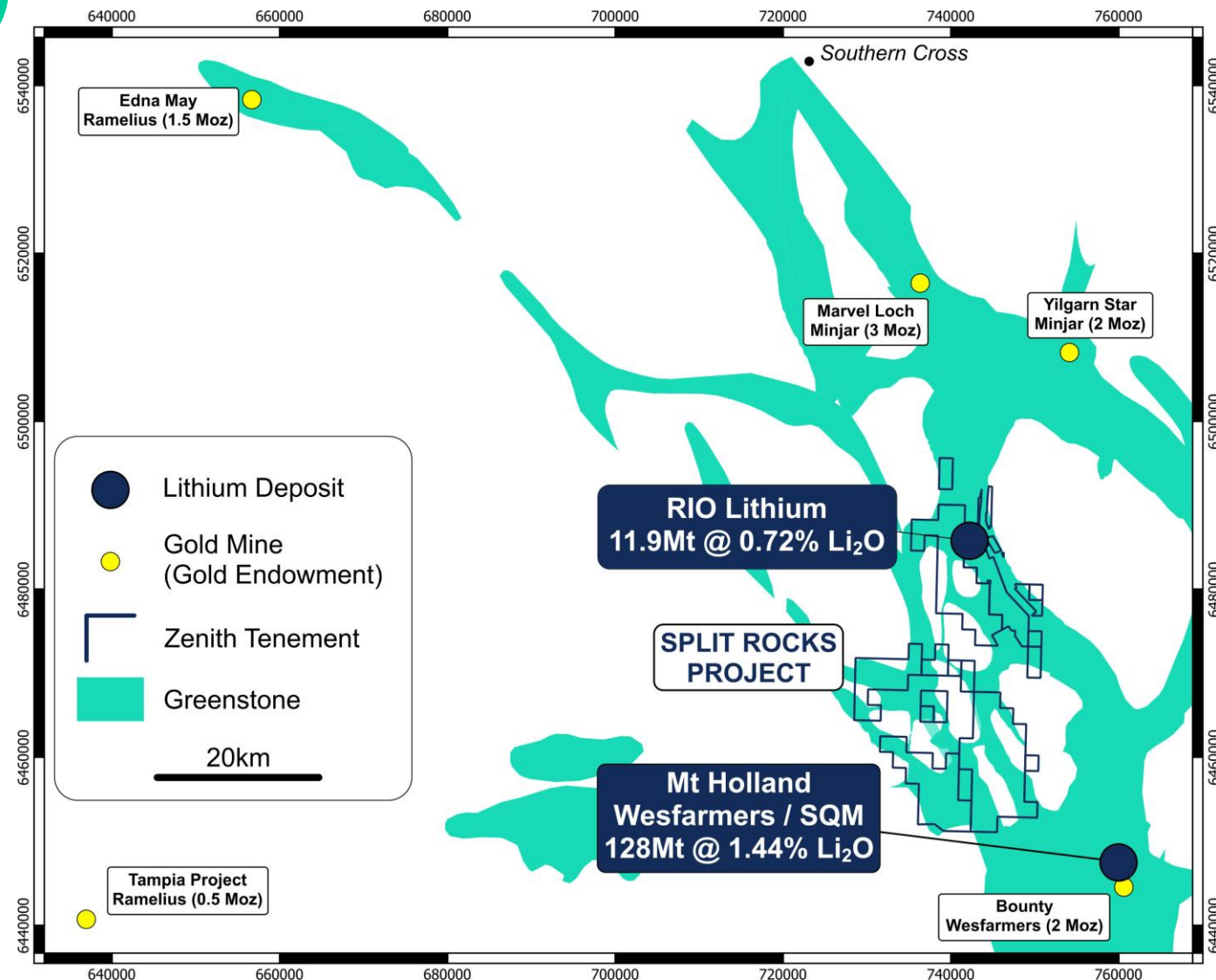
- Similar geological setting to the recent Kangaroo Hills lithium pegmatite discovery - ASX:FBM



*ZNC ASX Release 28-Sep-23, **refer slide #14

Split Rocks

- ✓ Located in the Southern Cross region midway between Perth and Kalgoorlie.
- ✓ Extensive Tenement holdings (660 sq km) in the Forrestania greenstone belt north of Mt Holland lithium.



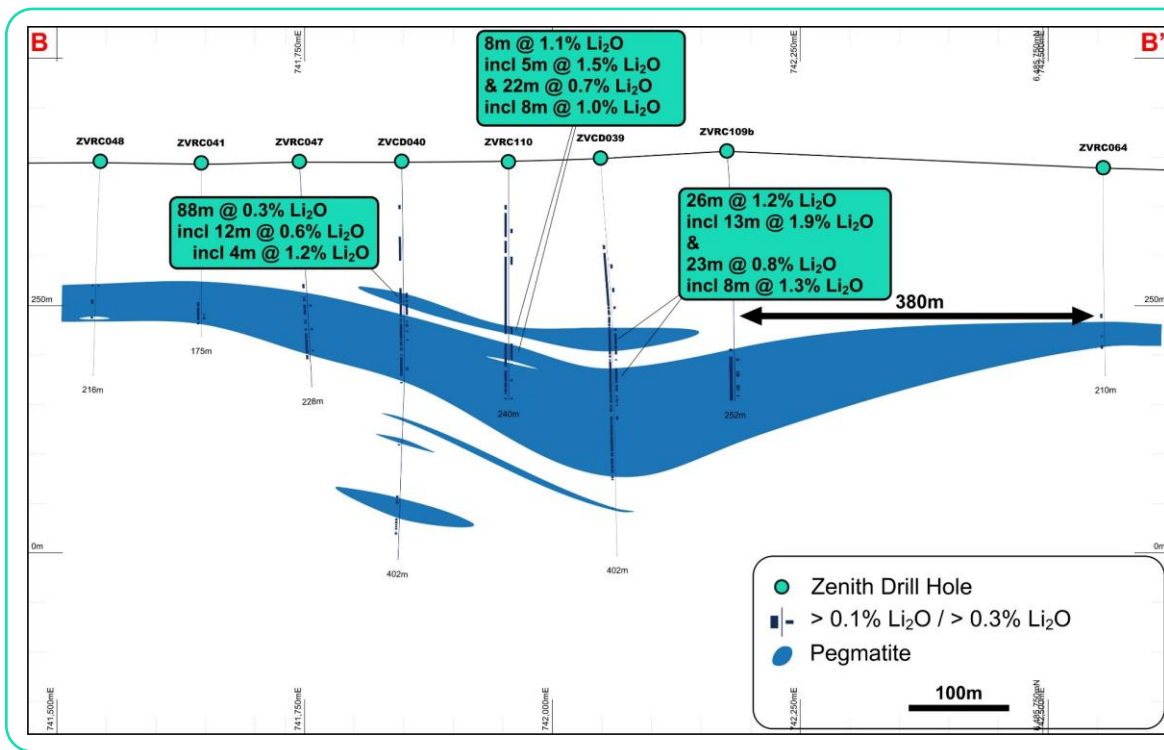
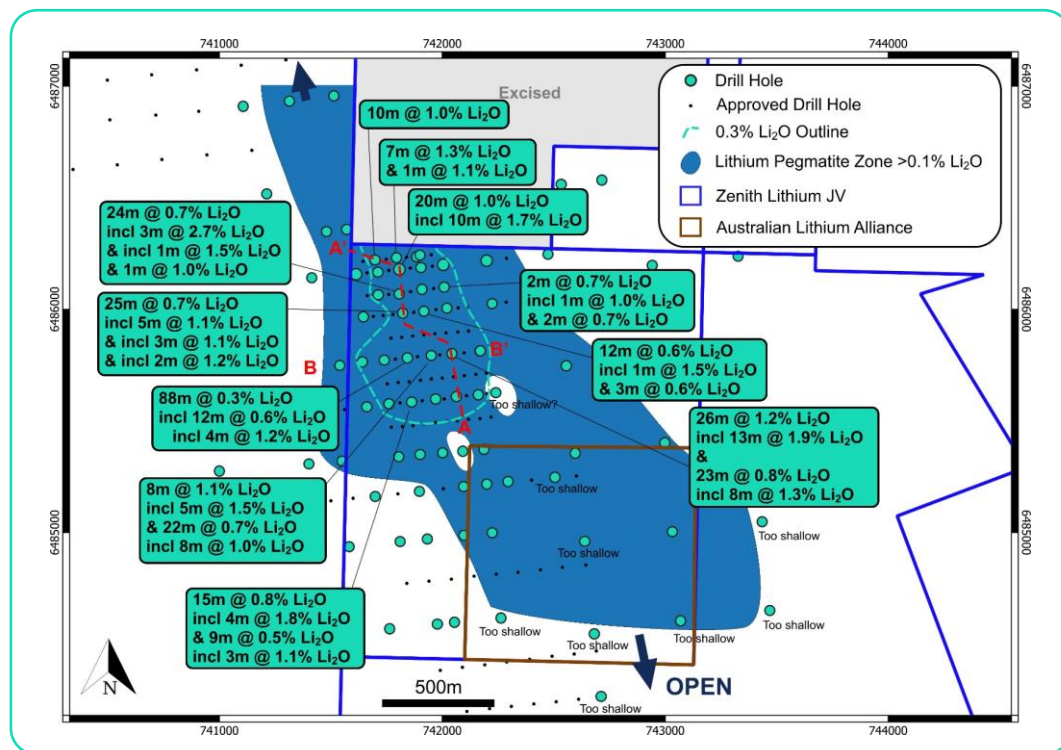
Note-Mt Holland Mineral Resource as reported in KDR:ASX Release 19-Mar-2018

Split Rocks – Rio Prospect

- ✓ 2022 Program – 100 holes for 22,369m
Best intersections include*: 26m @ 1.2% Li₂O
10m @ 1.7% Li₂O
13m @ 1.9% Li₂O

- ✓ Extensive drilling program planned to test strike extensions, geochemical targets including met test work.

- ✓ Maiden Rio Mineral Resource – Sep 2023

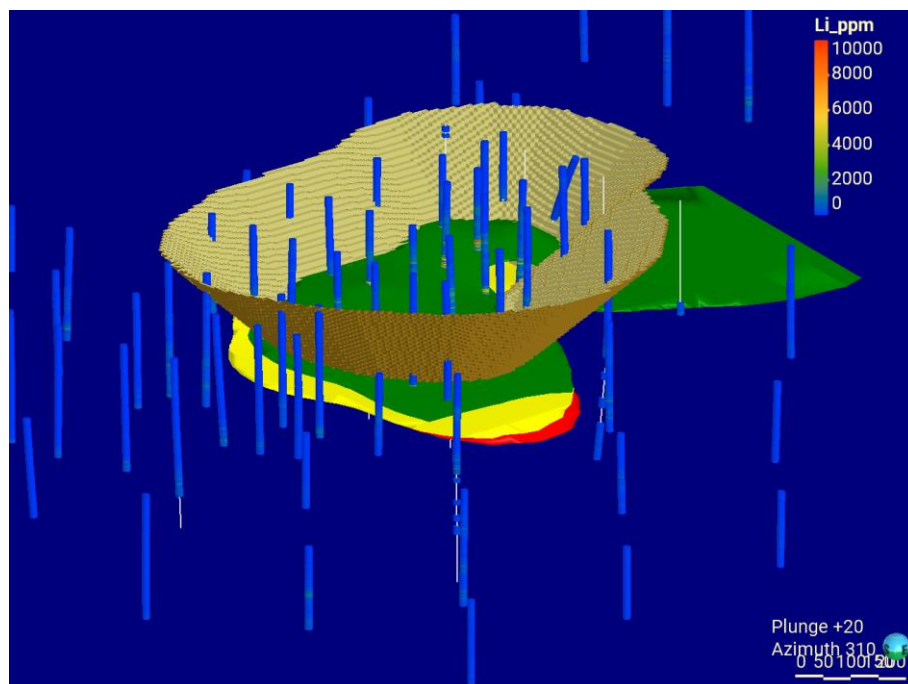


* For full results and intersections refer ASX Release 20-Sep-22 & 14-Feb-23

Split Rocks – Rio Prospect

✓ Maiden Rio Mineral Resource – Sep 2023

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



Pegmatite domains and optimised pit

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:

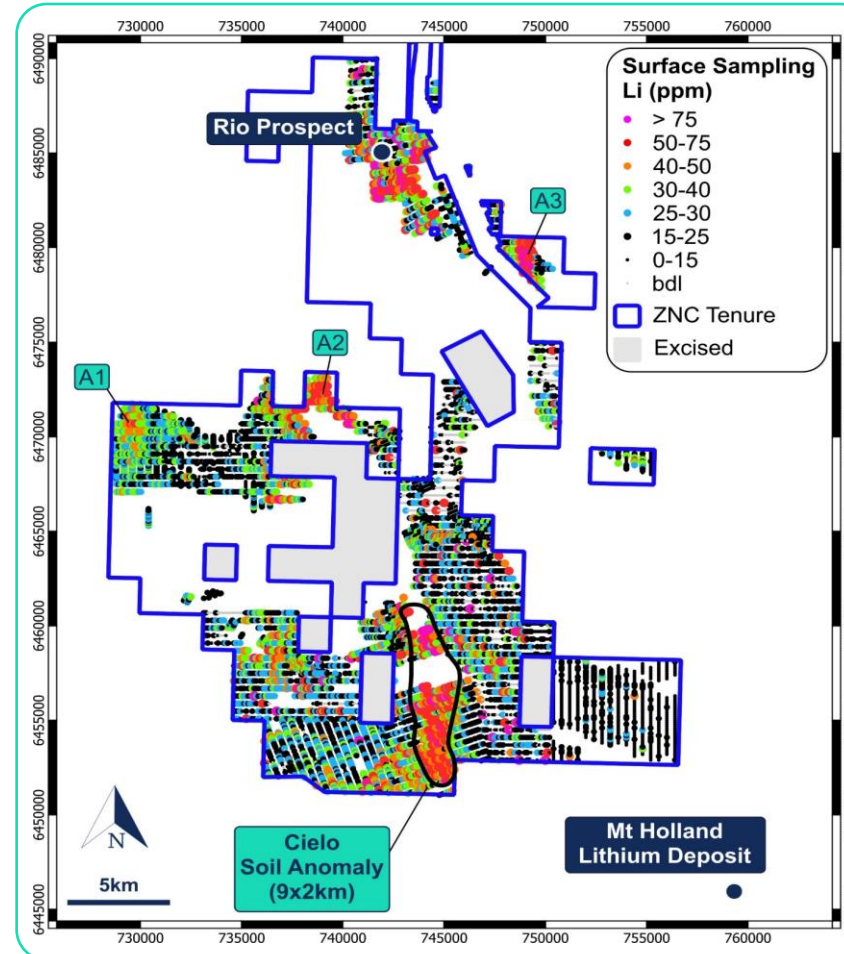
- The Mineral Resource is estimated with all drilling data available at 3rd August 2023, and reported at a 0.5% Li₂O cutoff.
- The Mineral Resource is reported in accordance with the JORC Code 2012 Edition.
- The Competent Person is Phil Jankowski FAusIMM of CSA Global
- Rounding may lead to minor apparent discrepancies

ZNC ASX Release 28-Sep-23

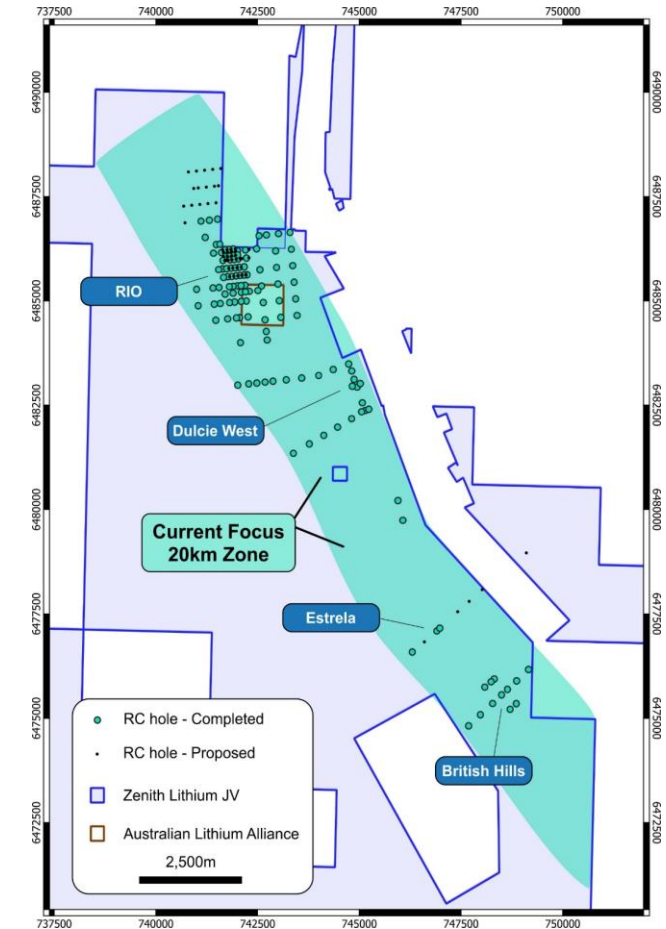
Split Rocks – Regional – Strong Blue-Sky Potential

New Lithium Target – “Cielo”

- ✓ Large Geochem anomaly 9km in length by 2km wide (Cielo).
- ✓ Immediate targets along strike from Rio.
- ✓ Follow up Regional drill testing both RC and AC planned and budgeted.



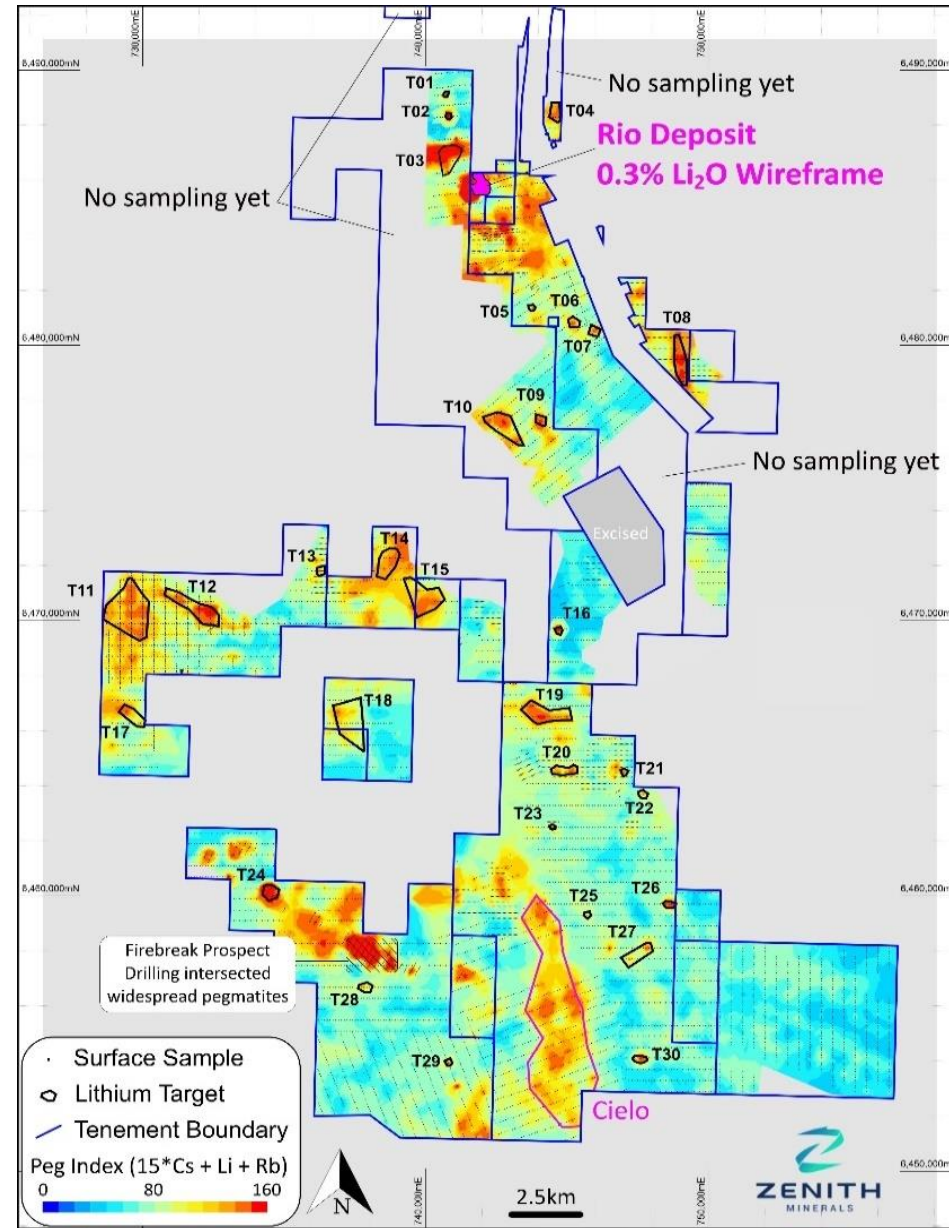
Rio Trend



ZNC ASX Release 9-Feb-23

Split Rocks – Regional – Strong Blue-Sky Potential

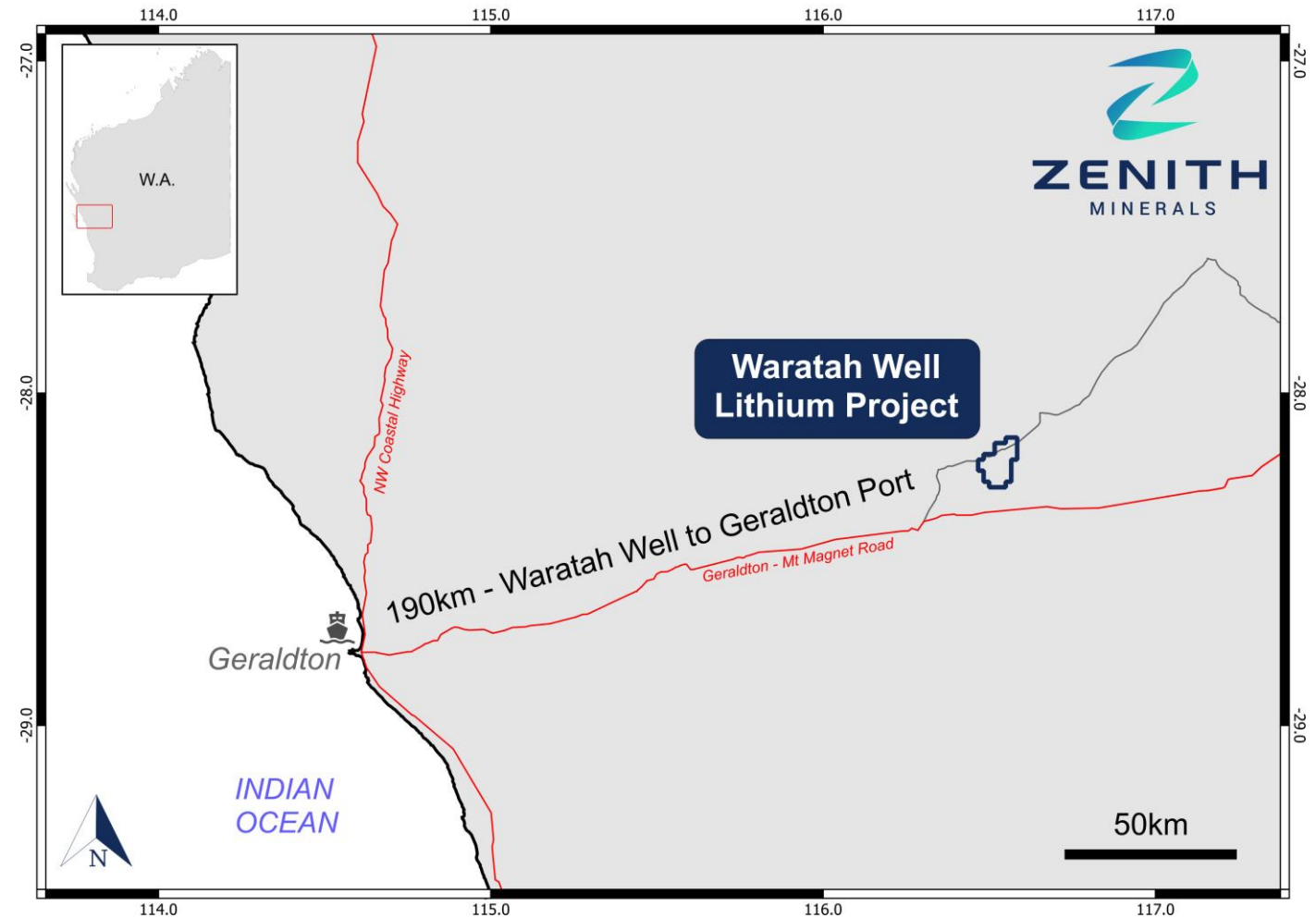
- ✓ Large Geochem anomaly 9km in length by 2km wide (Cielo).
- ✓ 30 other Geochem targets.
- ✓ Follow up Regional drill testing both RC and AC planned and budgeted.
- ✓ Auger drilling program WSW of Rio.



ZNC ASX Release 28-Sep-23

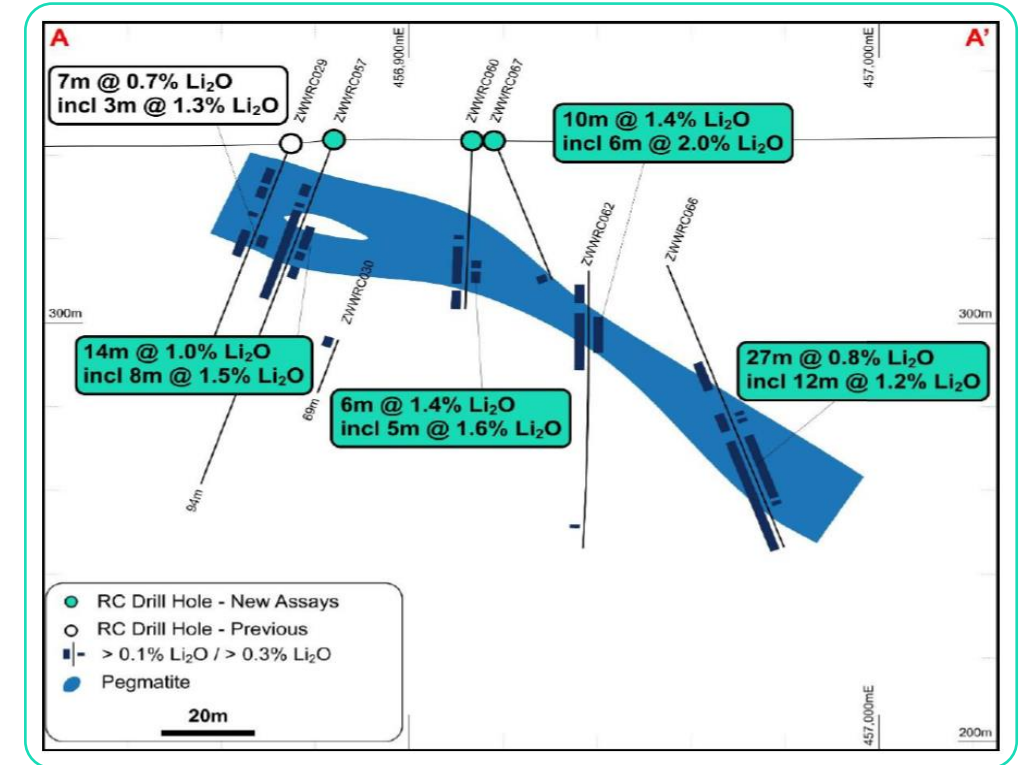
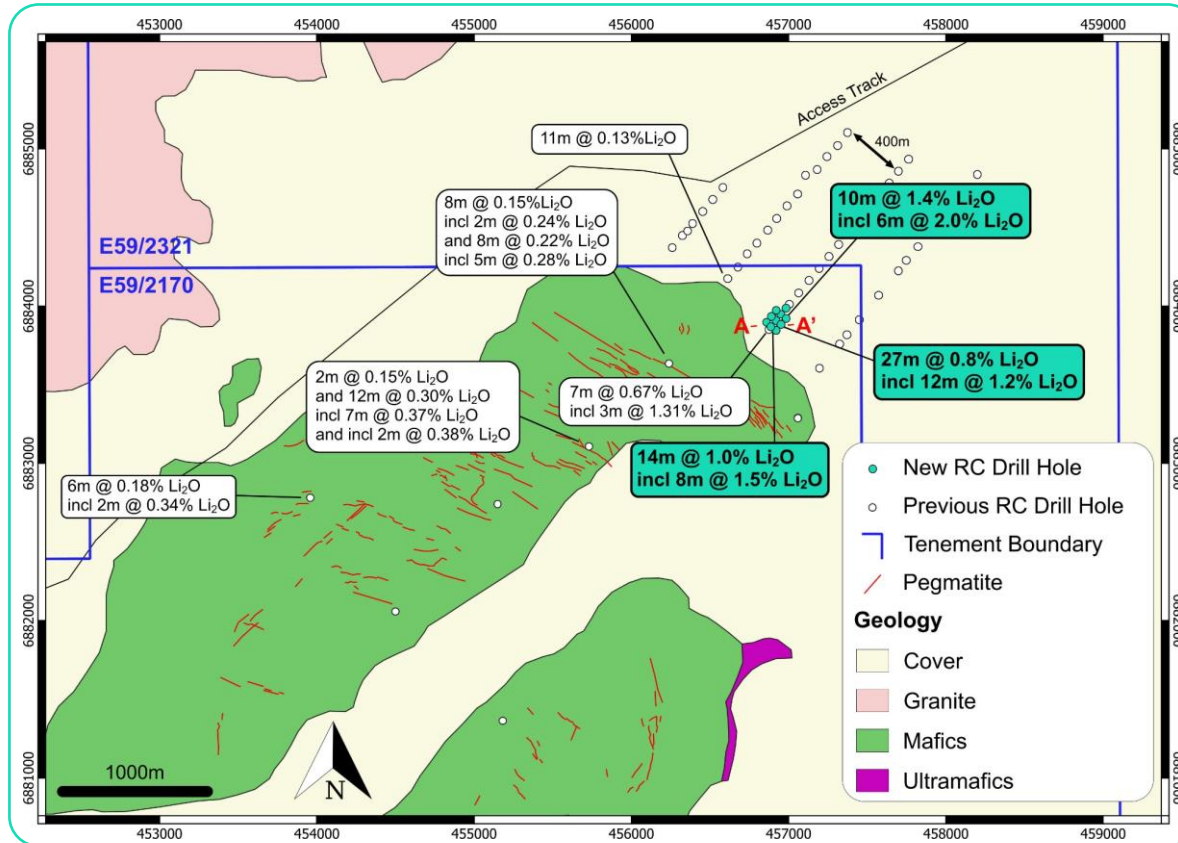
Waratah Well - Lithium

- ✓ Located 20km NW of Yalgoo in the Murchison Region, 190km from the Geraldton Port.
- ✓ Discovery of shallow blind high grade lithium mineralisation in RC drilling in pegmatites just north of an outcropping 4x2km pegmatite field.
- ✓ Pegmatites shallow dipping up to 24m thick.
- ✓ Substantial drilling program planned to define extents of lithium mineralization.
- ✓ Potential Li DSO possibilities with closeness to Geraldton Port .



Waratah Well – High Grade Lithium Drill Results

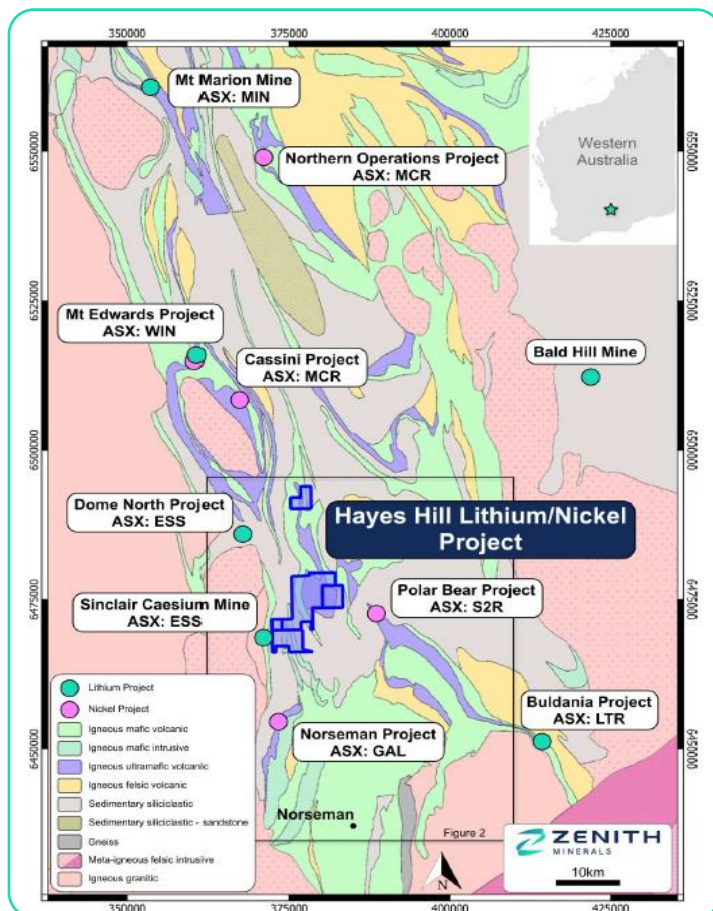
- ✓ High-grade lithium open to north, south and east under shallow soil cover.
- ✓ 10m @ 1.4% Li₂O including 6m @ 2.0% Li₂O.
- ✓ Significant follow-up RC drilling planned and budgeted. Heritage cleared and ready to go.



* For full results drill refer ASX Release 24-Jan-23

Hayes Hill – Lithium & Nickel

✓ SE of the Dome North Lithium deposits (ESS), NW of the Buldania Li deposits (LTR).

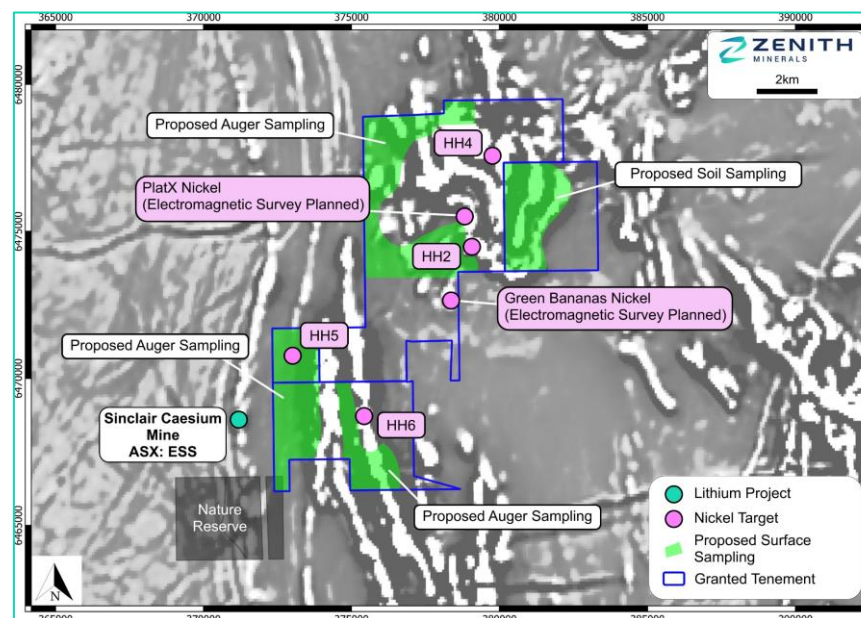


✓ Two high-tenor Ni-Cu-Pt-Pd surface geochemical anomalies (Green Bananas and Plat X) north of the Calisto Ni-PGE discovery and S2R's Polar Bear Ni prospects.

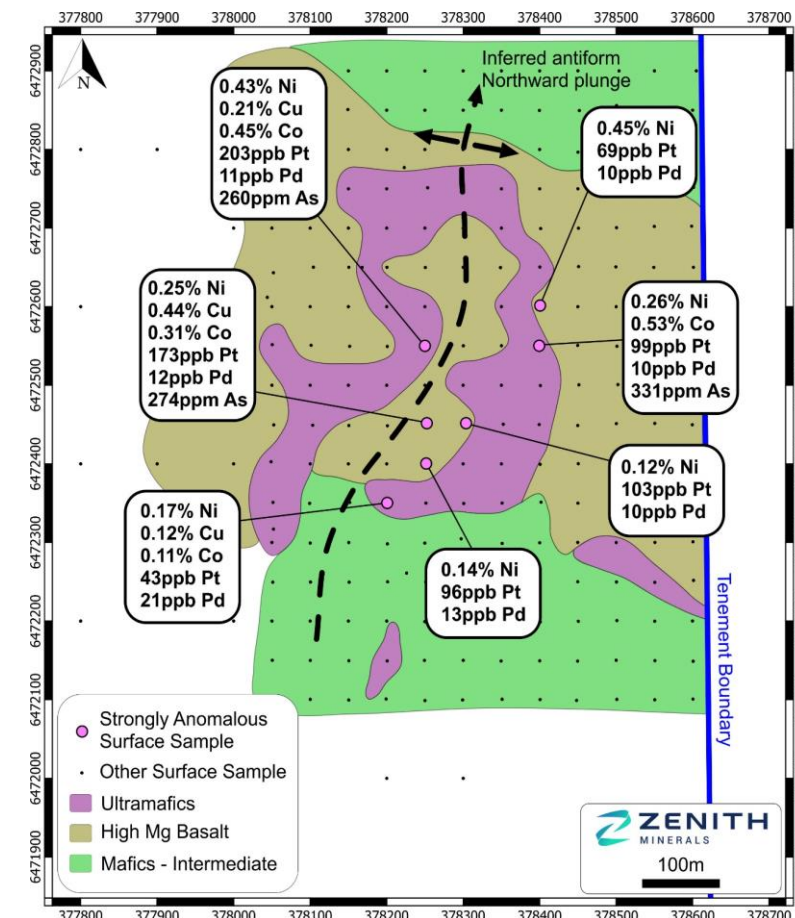
✓ Li Auger Geochem Survey underway.

✓ EM Geophysics completed – results awaited

✓ Budgeted RC drilling.

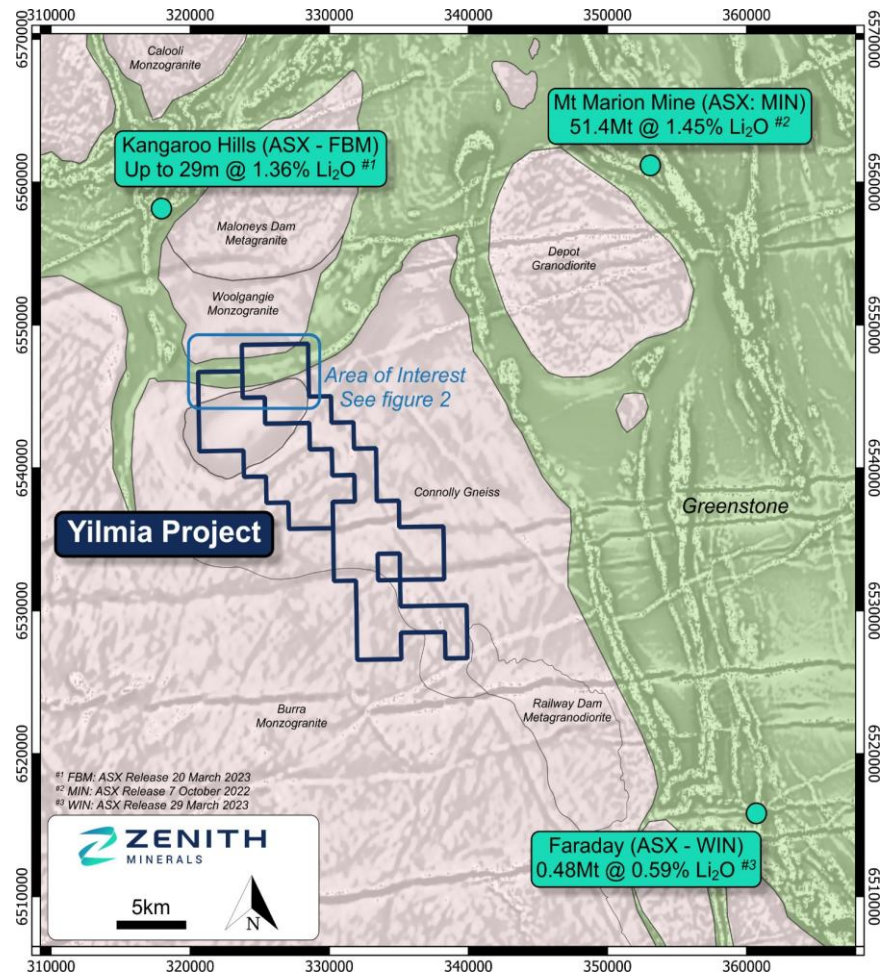


Green Bananas Nickel Prospect

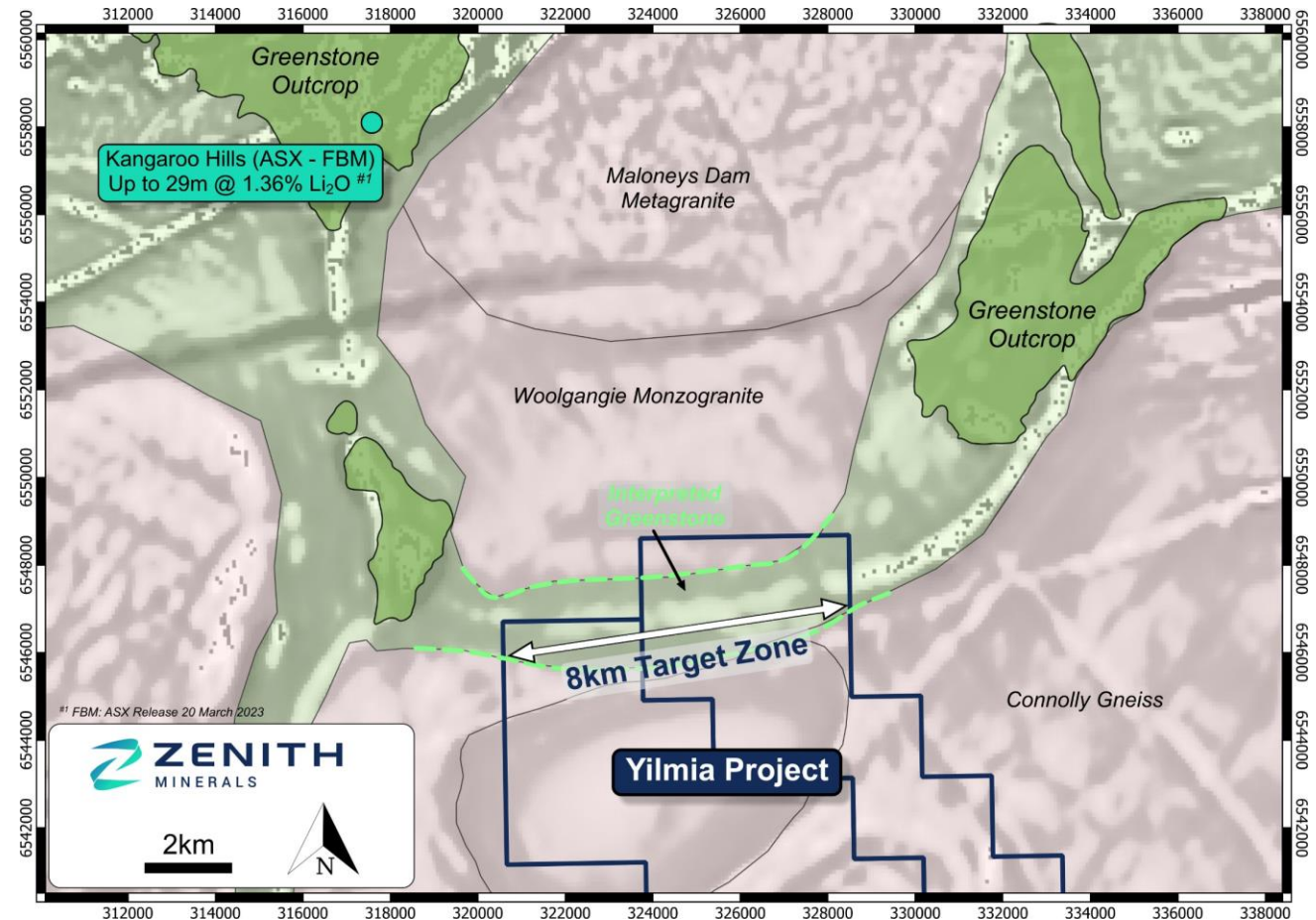


refer ZNC ASX Release 5-Jul-23 for details

Yilmia Lithium



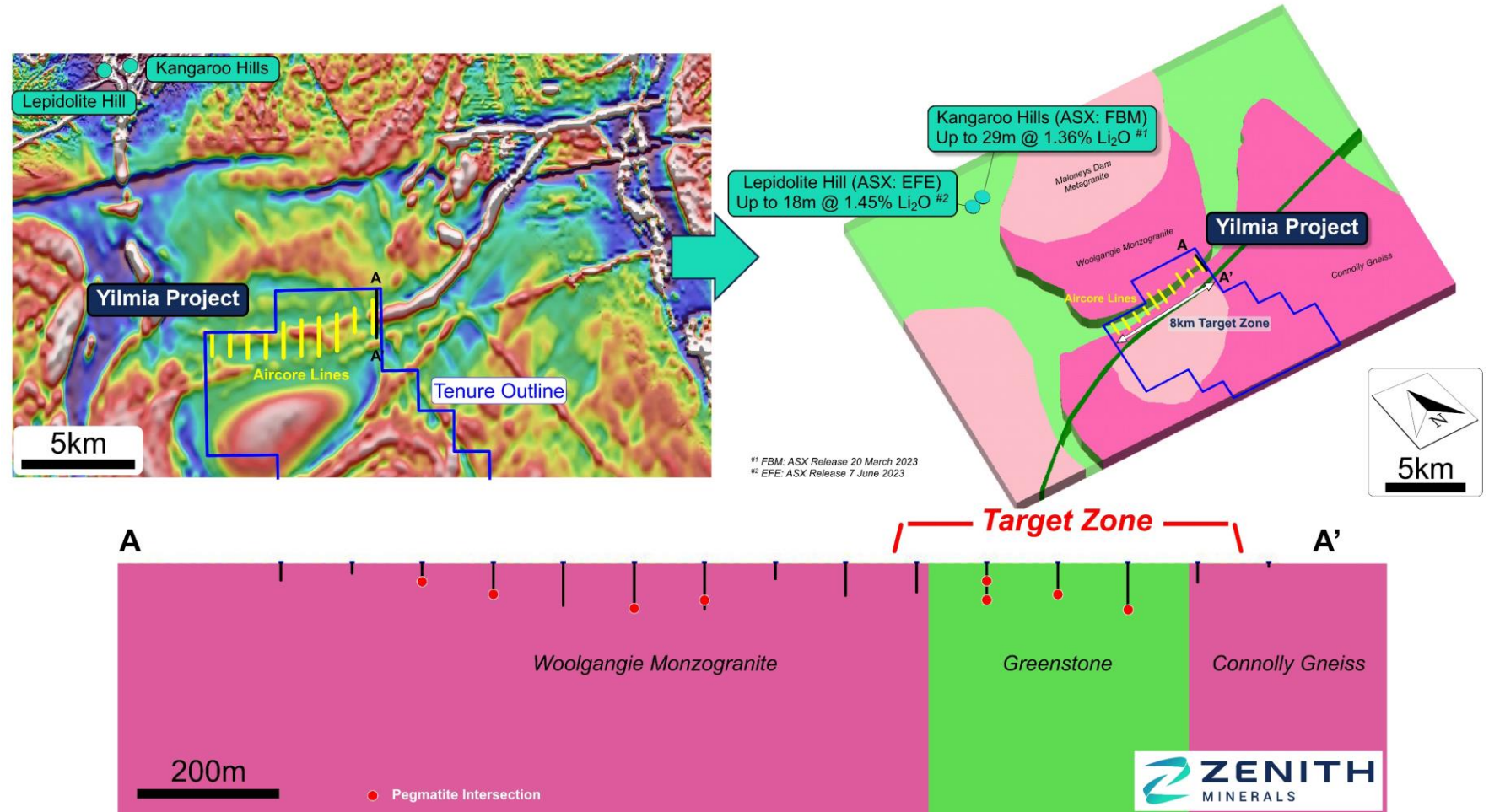
✓ Lithium endowed neighbourhood.



✓ 8km long lithium target zone at Yilmia.

Yilmia Program

- ✓ Drill Target
- ✓ Initial 800m spaced drill lines.
- ✓ 100 Aircore holes for 5000m.
- ✓ Zenith's first drill line confirms greenstone host extends under soil cover into the project area, with three holes within that drill line intersecting pegmatites, up to 20m thick*



*ZNC ASX Release 4-Oct-2023

WA Lithium Exploration Projects

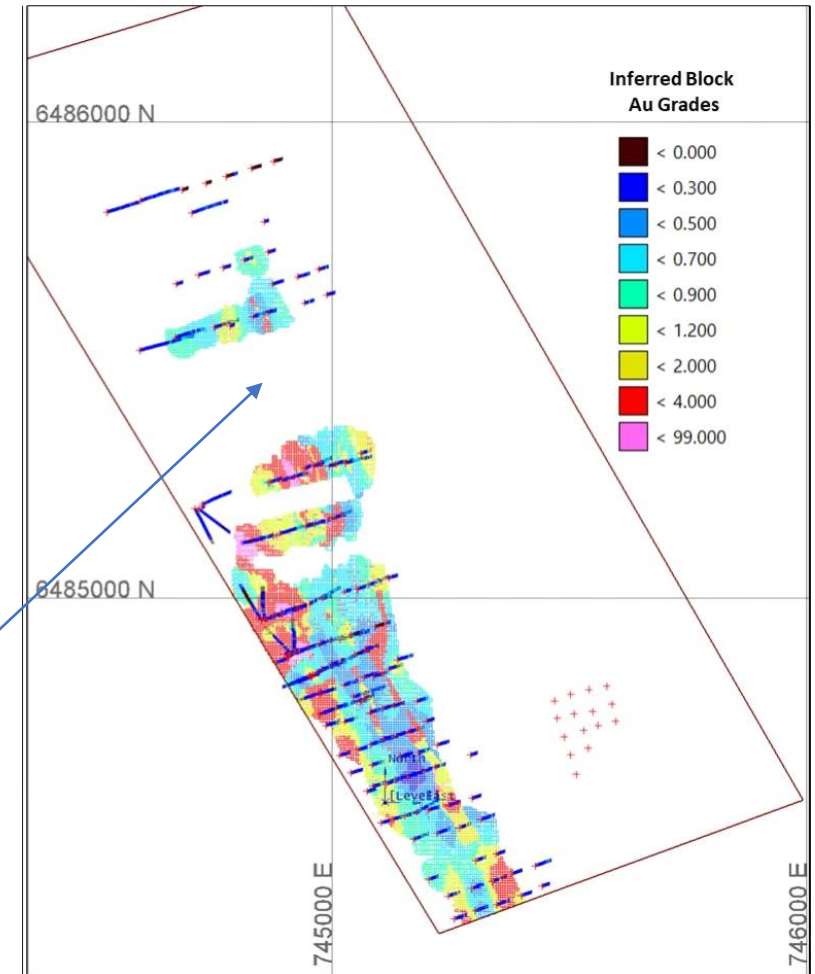
Western Australian Lithium Exploration Projects with drill intersections >10m @ 1%Li₂O

Name	Reference	Owner
Bounty	ASX: KDR 19 December 2017	Westfarmers & SQM JV -Covalent Lithium
South Ironcap	ASX: WSA 22 April 2016	IGO -Western Areas
Giant	ASX: MZN 20 December 2016	Forrestonia
Faraday	ASX: WIN 9 January 2023	Widgie Nickel
Voyager	ASX: WIN 17 January 2023	Widgie Nickel
Kangaroo Hills	ASX: AOU 24 November 2022	Future Battery Minerals
Rio	ASX: ZNC 4 April 2022	ZNC
Waratah Well	ASX: ZNC 24 January 2023	ZNC
King Col	ASX: DEG 15 November 2018	DeGrey
Mallina	ASX: 1MC 7 December 2022	Morella Corporation
Malinda	ASX: RDT 20 January 2023	Delta Lithium
Manindi	ASX: MLS 19 July 2022	Metals Australia
Andover	ASX: AZS 19 October 2022	Azure
Federal Flag	ASX: OBM 26 April 2023	Ora Banda Mining
Tabba Tabba	ASX: WC8 12 October 2023	Wildcat Resources

Split Rocks (Dulcie Far North) – Gold Exploration

Dulcie Far North Resource Expansion

- ✓ Maiden Inferred Mineral Resource 3.4 million tonnes @ 1.4g/t Au for 150,000 ounces*
- ✓ High grade gold mineralisation intersected, including:
 - 12m at 6.07 g/t Au*
 - 5m at 10.6 g/t Au
 - 12m at 2.86 g/t Au and
 - 3m at 10.7 g/t Au
- ✓ Resource upside:
 1. Areas interpreted but not classified due to wide spaced drill sections
 2. Extension of gold mineralisation both to the south, north & down-dip
 3. A third footwall structure is indicated by drilling but not yet adequately tested



Dulcie Far North plan projection of Inferred Mineral Resource Gold Grade

* ASX ZNC Releases 25-Jan-23 and 11-Jul-23

Red Mountain Gold-Silver; Intrusion Related Breccia Pipe

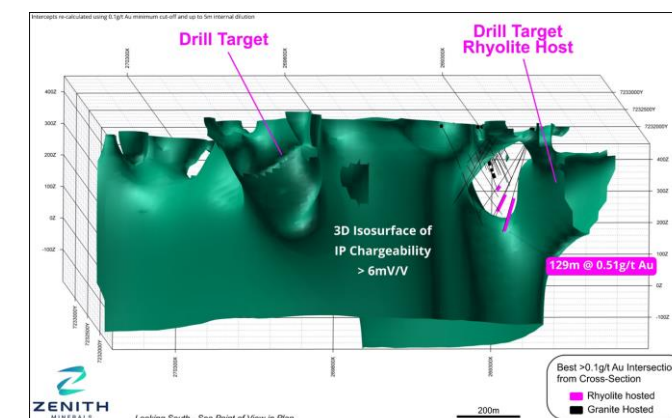
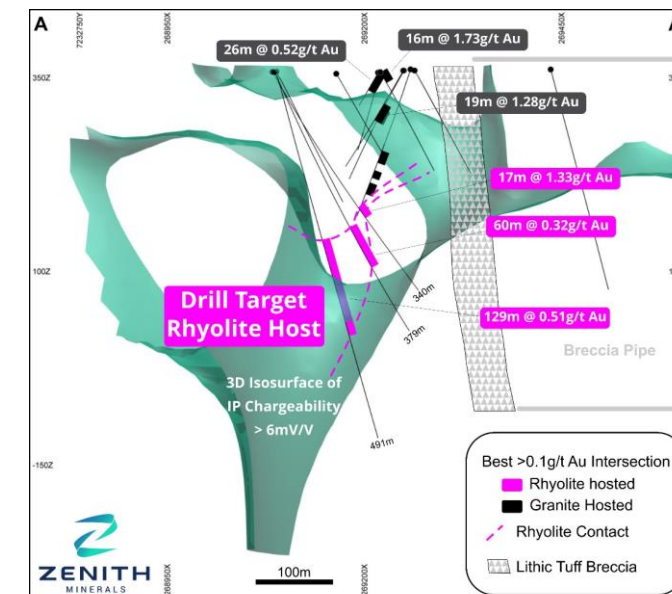
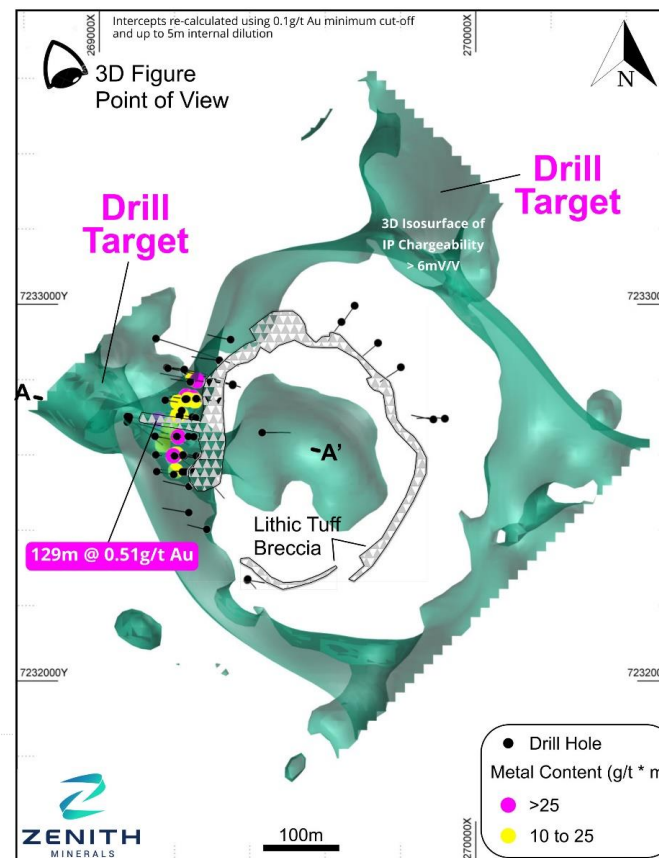
Located 400km NW of Brisbane in central Queensland - between Cracow (Aeris Resources) and Mt Rawdon (Evolution Mining)

✓ Zenith's drilling has returned compelling high-grade gold and silver intersections including*:

- 13m @ 8.0g/t Au from surface incl. 6m @ 16.7 g/t Au
- 15m @ 3.5 g/t Au incl. 2m @ 22.4 g/t Au
- 12m @ 4.9 g/t Au incl. 6m @ 9.4 g/t
- 5m @ 10.4 g/t Au incl. 1m @ 49.9 g/t Au
- 5m @ 3.5 g/t Au and 54.3 g/t Ag
- 10m @ 2.7 g/t from surface incl. 4m @ 4.9 g/t Au

✓ Wide open ended gold system: 118m @ 0.54g/t Au – follow-up drilling required*

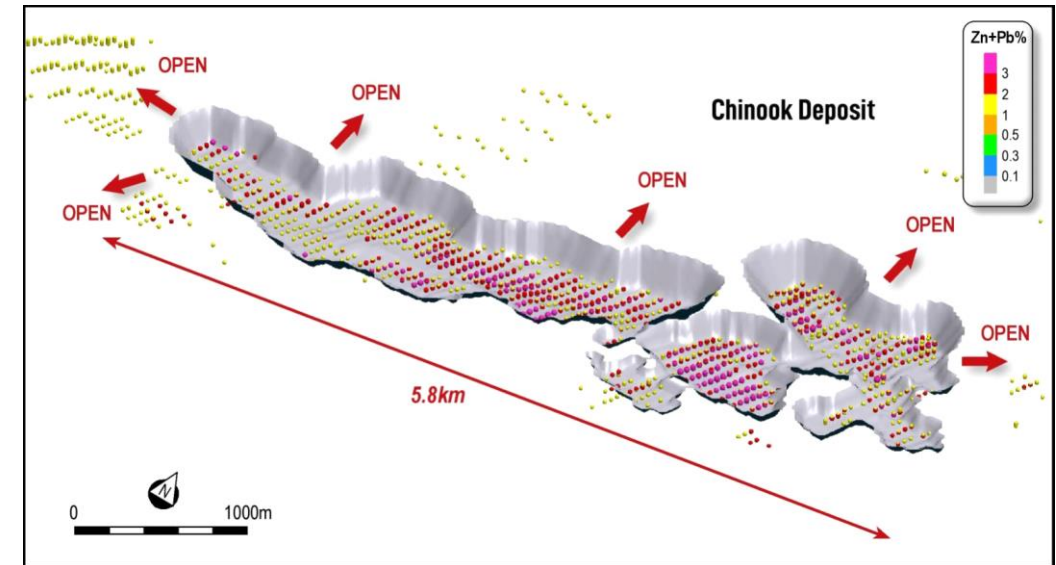
* For full drill results refer ASX Release 19-May-21 & 29-Aug-23



Earaheedy – Zinc/Lead/Silver (25% free carry to Completion of BFS)

- ✓ Zenith Minerals Ltd (ASX: ZNC) holds a 25% free carried interest in the Earaheedy Joint Venture (EJV) – an emerging Tier-1 base metal province
- ✓ Maiden EJV Zn Pb Ag resource on a 100% basis stands at:
94Mt @ 3.1% Zn+Pb and 4.1 g/t Ag (using a 2% Zn+Pb cutoff) and constrained within optimised pit shells. (Refer to RTR : ASX Release 19-Apr-23, for full details)
- ✓ Outstanding initial flotation testwork results from zinc sulphide dominant ores including*:
 - **High zinc recoveries to 90% Zn in cleaner concentrates**
 - **Course primary grind size of 150 microns**
 - **Zinc concentrate grades to 59% Zn with no significant deleterious elements**
- ✓ Outside the EJV, Zenith is looking to sell/JV its 100% owned Earaheedy Zinc Project encompassing 7 EL's with 100km strike around the basin margin

*RTR ASX Release 17-Nov-22



Maiden EJV Zn Pb Ag resource on a 100% basis (ZNC 25% free carry to BFS)

Zenith Board

Geoff Rogers

Non-Executive Director

- Geoff is a corporate and resources lawyer with over 40 years' experience advising both Australian and international clients involved in the resources industry.
- He was a corporate and resources partner in the law firm Mallesons Stephen Jaques for 27 years until his retirement in 2012.
- From 2013 to 2017 Geoff was in-house counsel for Panoramic Resources Limited
- He has been a sole practitioner from July 2017 mainly advising small and mid-cap resource companies.

David Ledger

Executive Chairman

- Over 35 years in investment banking, with experience working in the United Kingdom and Australia.
- Former Executive Director of a major European Bank and has been advising institutional and corporate clients throughout his career.
- Currently works in Sydney as a Corporate Advisor with MST Financial, a specialist investment firm that provides research, sales trading and corporate finance solutions for domestic institutional clients and corporates.

Andrew Bruton

Non-Executive Director

- Experienced director, listed company CEO and corporate advisor.
- Over 20 years of direct experience in advancing complex mining, oil & gas and energy projects and transaction within Australia and overseas.
- Former CEO of MacArthur Minerals delivering the feasibility study on their iron ore assets.
- Previously a specialist lawyer for 20 years for one of the leading national firms and was awarded "Most Trusted Mining and Resource CEO 2022" by CEO Monthly Magazine.
- Bachelor of Business and a Bachelor of Laws from Queensland University and is a Member of the AICD.

Michael Clifford

Chief Executive Officer

- Geologist (BSc (Hons) MSc) 35+ years' exploration.
- Senior technical and business development roles whilst at BHP Billiton Australia, Acacia Resources and AngloGold Ashanti rising to Regional Exploration Manager Australia.
- Former MD of ASX listed PacMag Metals from 2005, until its takeover in 2010, when he co-founded private explorer S2M2 Coal Pty Ltd.
- International exploration experience in the USA, Indonesia, Brazil, PNG, Angola, DRC, Mexico and Mongolia.

Stan Macdonald

Non-Executive Director

- Associated with the mining and exploration industry for many years, having been instrumental in the formation of numerous ASX listed companies, including Giralda Resources NL, where he was Director for over 23 years.



AUSTRALIAN-BASED MINERALS EXPLORER FOR THE PRODUCTS OF TOMORROW

Zenith Minerals Limited (ASX:ZNC)
October 2023

www.zenithminerals.com.au

