



**Australian-based
mining exploration company – Immediate gold focus**

Investor update - 26 August 2024

(ASX:ZNC)

FORWARD LOOKING & JORC STATEMENTS



Forward looking statements

Some statements in this Company Update regarding prospects, estimates or future events are forward looking statements. They involve risks and uncertainties that could cause actual results to differ from estimated results. Forward looking statements include estimates or assessments of future exploration prospects, results and outcomes, production, resource, reserve and mineralised material estimates, capital costs, and other estimates or prediction of future activities. They include statements preceded by words such as “anticipate”, “believe”, “estimate”, “expect”, “forecast”, “intend”, “will”, “may”, “could” 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, ability to access mining tenements, and other government approvals and requirements, changes in operating conditions, lower than expected exploration results, ore grades, unexpected ground and mining conditions, availability and cost of materials and equipment, availability and retention of key personnel, and risks generally inherent in the exploration, 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.

Investment Highlights



“New Dawn” – New strategic focus on gold with new management



Three exciting gold projects – High quality, drill ready targets at 100% owned Dulcie Far North “DFN” (WA) and Red Mountain (QLD)



Positioned to become a multi-project gold producer



Maintaining a strategic hold on our lithium assets, with plans to advance them when market conditions are favourable

Strong Executive Team



Andrew Smith
Managing Director/CEO

Andrew Smith is a seasoned mining executive with 15 years of experience. He is the founder of British Lithium, where he led the discovery of a significant lithium deposit in the UK and developed patented technology for lithium mica beneficiation.



Geoff Rogers
Non-Executive Director

Geoff Rogers is a corporate and resources lawyer with over 40 years of experience advising clients in the resources industry, both in Australia and internationally.



Nicholas Ong
Company Secretary

Nicholas Ong has 20 years of experience in ASX compliance, corporate governance, project finance, and contract negotiations. He is a Fellow of the Governance Institute of Australia and the Institute of Chartered Secretaries and Administrators.



Andrew Grove
Non-Executive Director

Andrew Grove has over 30 years of experience in the global resources sector. He is the current Managing Director at Aura Energy Limited and has previously held numerous executive mining roles. Andrew also spent 14 years at Macquarie Bank, focusing on Mining Finance and Risk Management.



Stan Macdonald
Non-Executive Director

Stan Macdonald has extensive experience in the mining and exploration industry. He has played a key role in the formation of several ASX-listed companies, including Giralia Resources NL, where he served as Director for over 23 years.



Chris Shanley
Exploration Manager

Chris Shanley holds an MSc in geology and brings 14 years of experience in mineral exploration in Australia. He was formerly a Senior Exploration Geologist at Regis Resources, where he managed the exploration program for the Duketon Greenstone Belt.

Company Snapshot



Share Price
\$0.048



Market Cap
\$17m



Listed Equities
\$1.23m



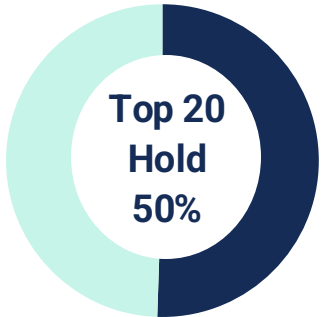
Shares on Issue
352.4m



Cash¹
\$1.1m

Major Shareholders

Directors	2.7%
HSBC Custodian Noms	9.0%
BNP Paribas Noms	8.4%
Citicorp Noms	6.3%
Tilbrook	5.2%



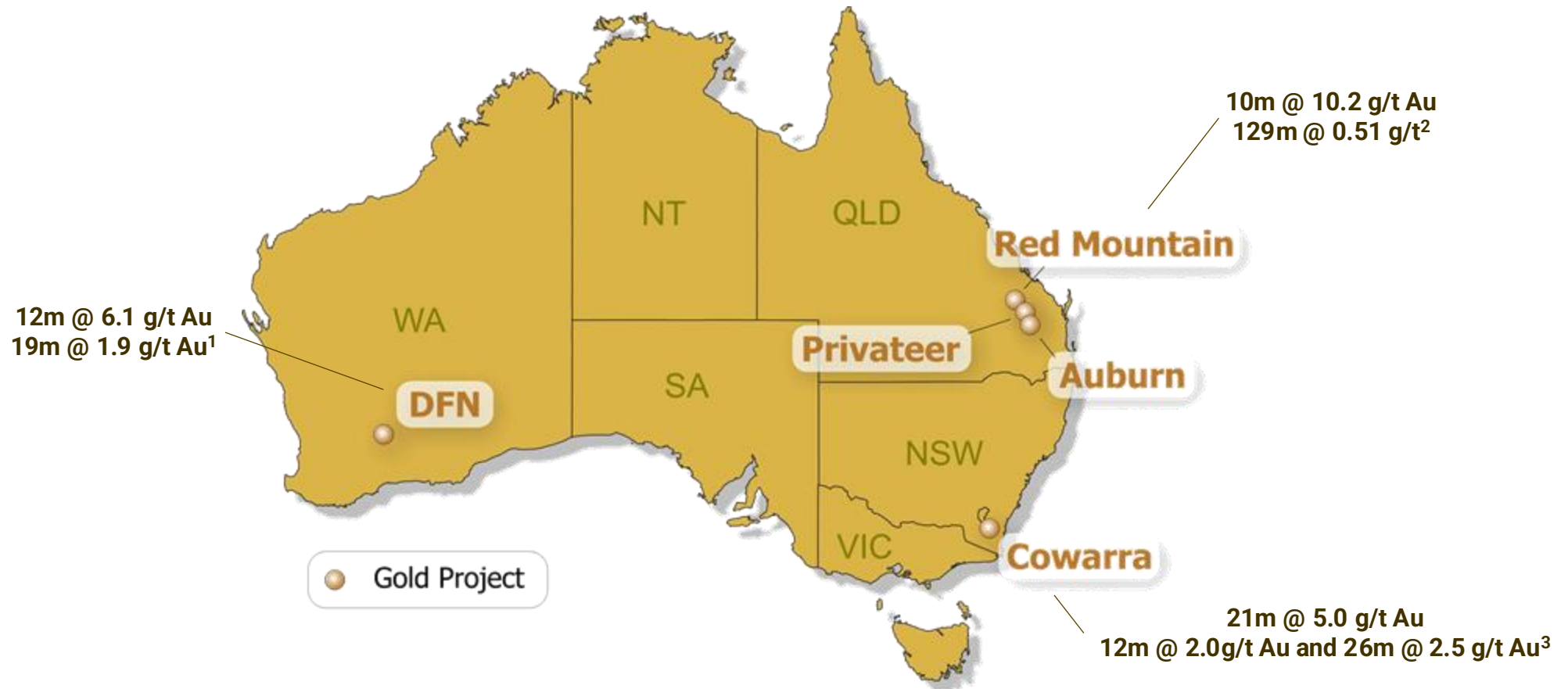
As at 19-Aug-2024

Project	Ownership %	Note
Red Mountain Gold	100%	Wide zone of mineralisation
Split Rocks		
Dulcie Far North Au	100%	150koz Gold Resource
Rio Lithium	100%	11.9Mt Li ₂ O Resource
Waratah Well Lithium	100%	Mineralised pegmatites
Earaheedy Zinc	Rumble Resources JV – 25% free Carried Interest	94Mt Pb/Zn/Ag Resource
Cowarra Gold	26% of Oxley Resources	Historical high-grade gold belt



Notes:¹ Cash as at 30-Jun-24

Gold – High Quality Drill Ready Targets



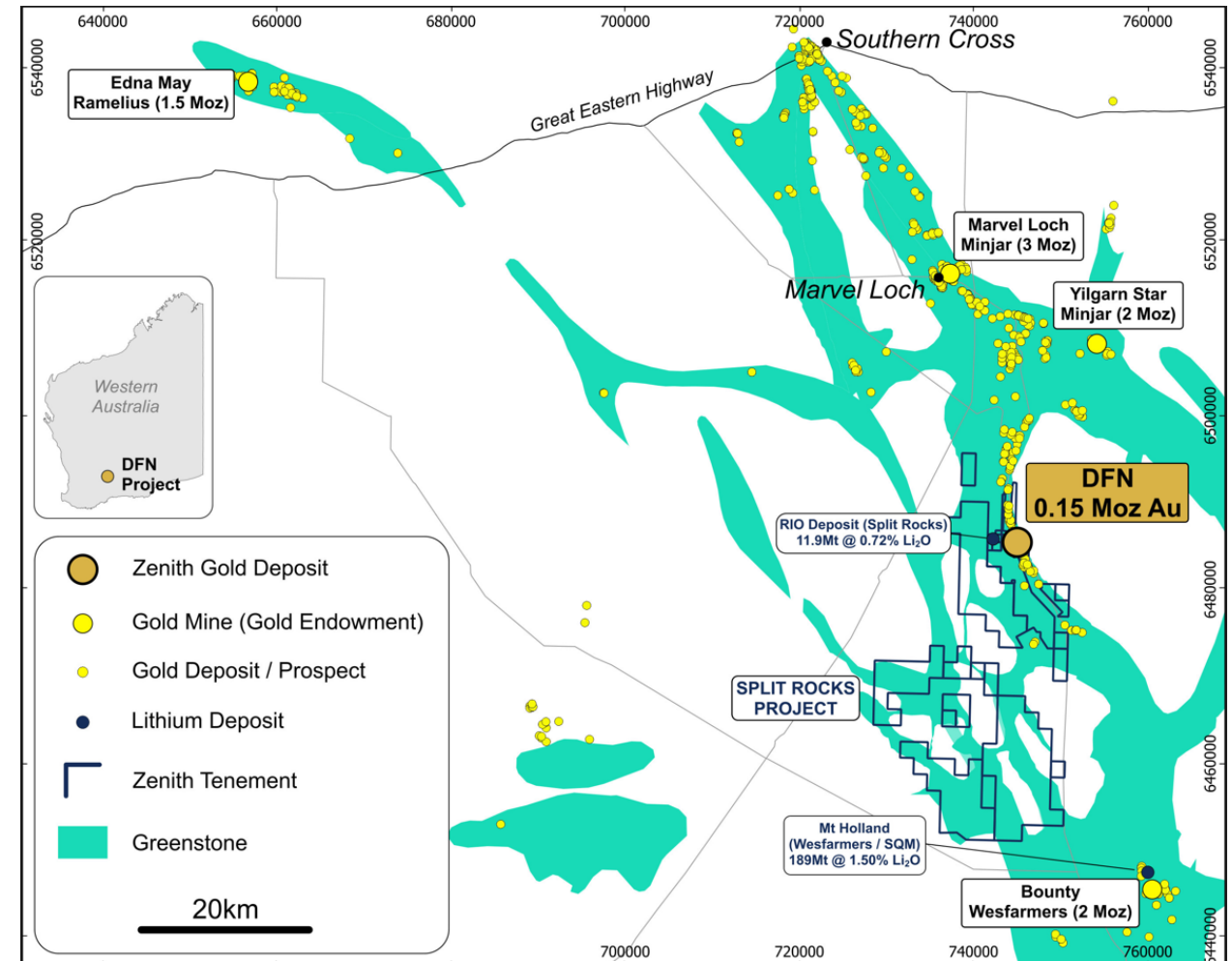
Notes: 1. ASX Releases: 13-Jun-23, 25-Jan-23 & 14-Jun-22

2. ASX Release: 29-Aug-23

3. ASX Release: 5-Oct-22

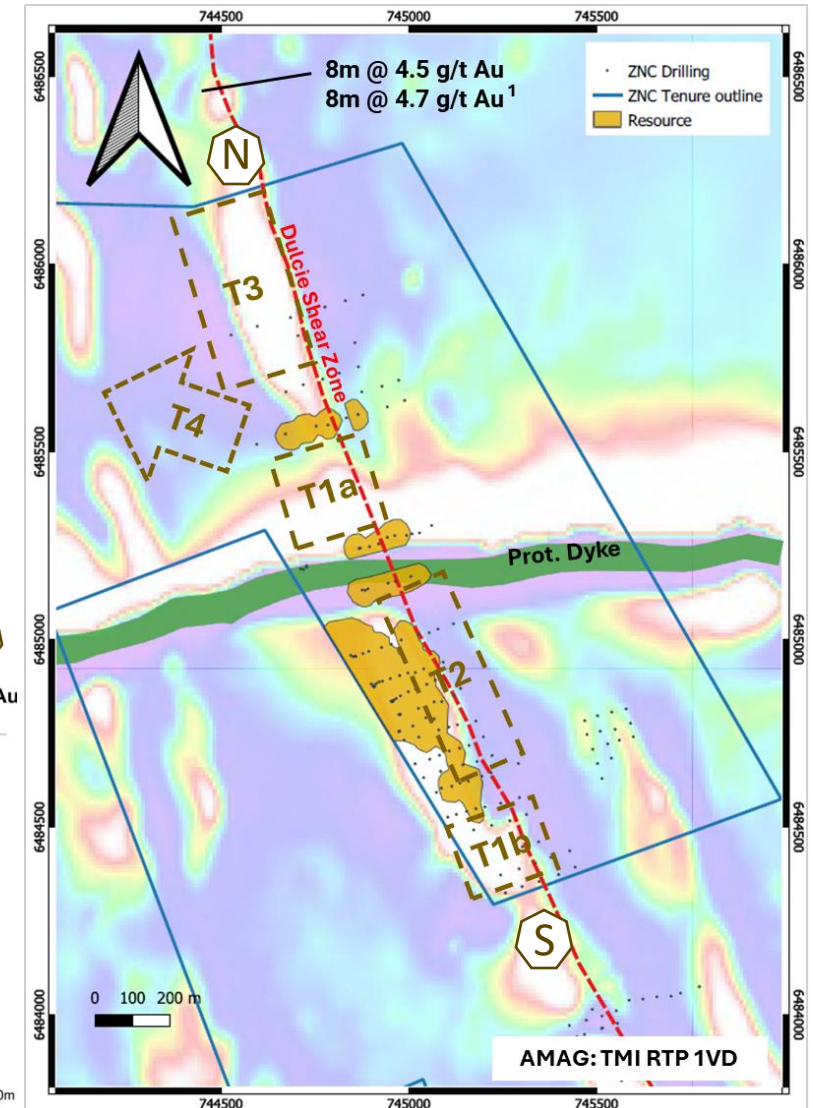
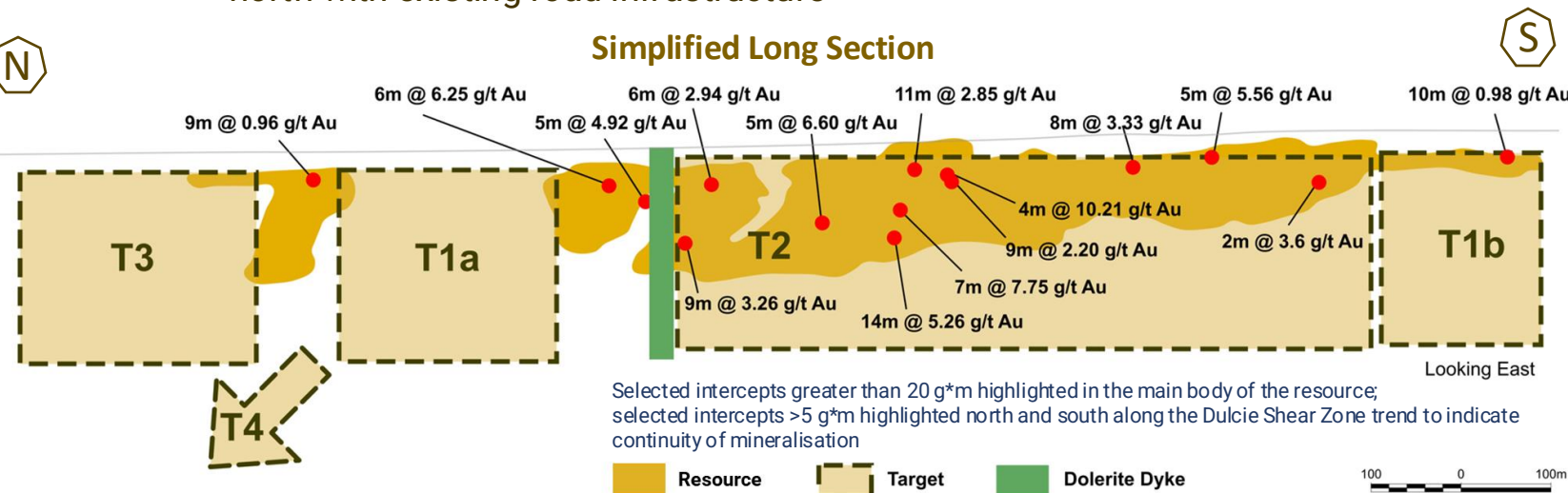
Dulcie Far North – Gold (WA)

- ✓ 100% owned¹
- ✓ Multi-million-ounce gold district
- ✓ Excellent access & infrastructure.
- ✓ **Maiden Inferred Mineral Resource – 3.3 million tonnes @ 1.4 g/t Au for 150,000 ounces¹**
- ✓ High grade gold, including:
 - 12m at 6.1 g/t Au¹
 - 5m at 10.6 g/t Au
 - 12m at 2.9 g/t Au and
 - 3m at 10.7 g/t Au



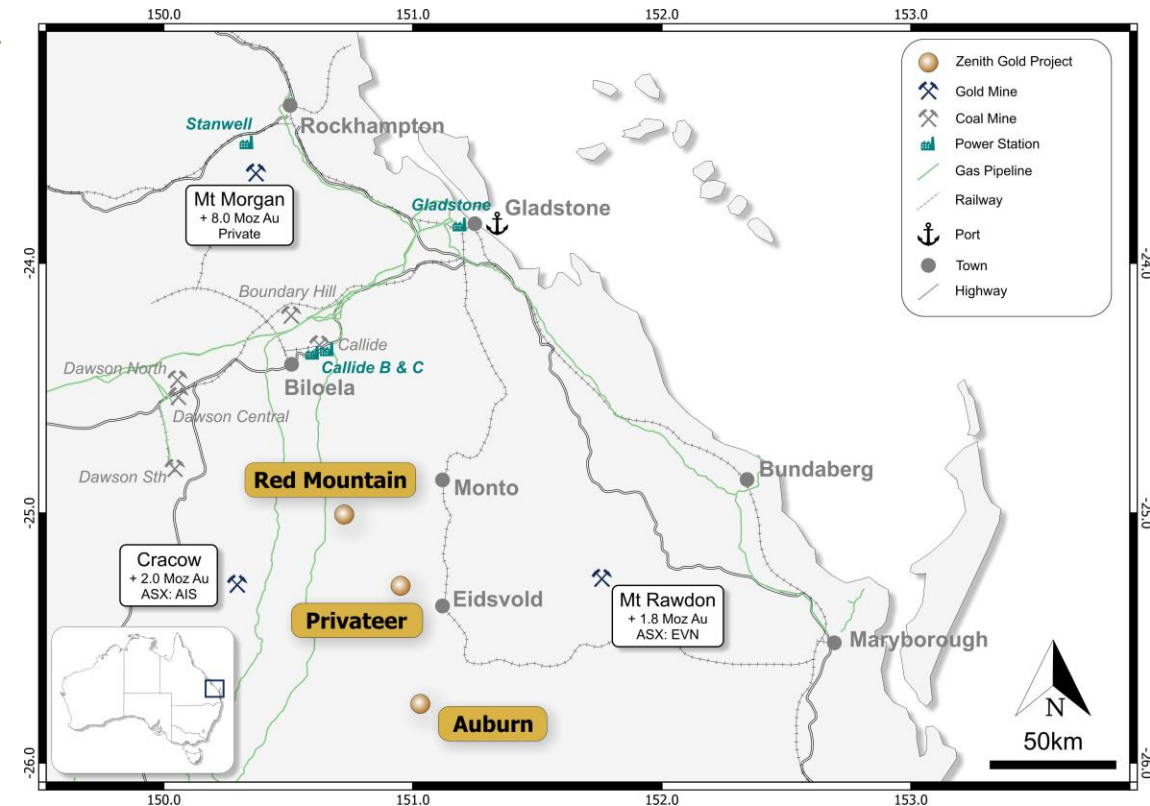
Dulcie Far North - Grow to stand-alone size

- ✓ Upside in multiple untested drill targets:
 - T1a & T1b – Mineralised zones not resource classified due to wide spaced drilling
 - T2 - Footwall untested, indications of additional lodes underneath existing drilling
 - T3 - Northern strike extension
 - T4 - High-grade plunging shoot
- ✓ Develop:
 - Grow to standalone size
 - Combine with other nearby resources, or
 - Potential to divest to developer/toll treat ore - under utilised gold plant 35km north with existing road infrastructure



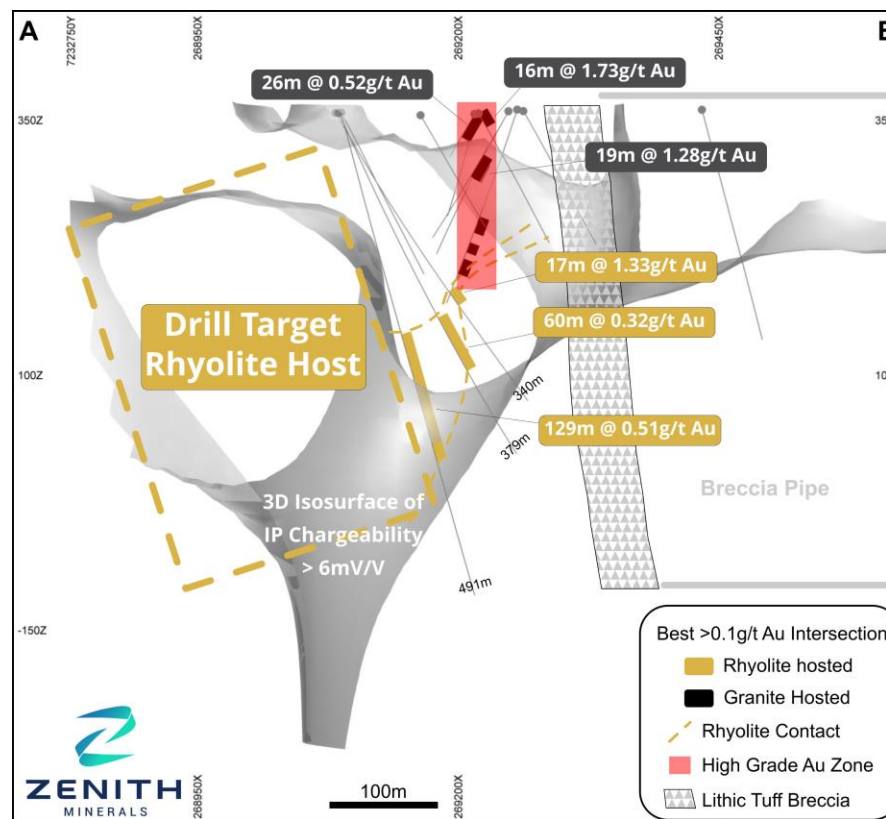
Red Mountain – aim at Company making discovery

- ✓ Multi-million-ounce gold region.
- ✓ Confirmation of prospectivity and ability to operate mines in this area.
- ✓ Geological analogues - Mt Wright, Mt Leyshon and Mount Rawdon Gold Mines.
- ✓ Extensive visible gold and strong gold grades in upper levels of breccia pipe system, including:¹
 - 13m @ 8.0 g/t Au
 - 15m @ 3.5 g/t Au
 - 12m @ 4.9 g/t Au
 - 5m @ 10.4 g/t Au
 - 10m @ 2.7 g/t
- ✓ Second style: wide open-ended, rhyolite hosted - 129m @ 0.51g/t Au¹
- ✓ Strong encouragement to explore deeper.
- ✓ Infrastructure rich region, operating gold mines, coal mines, power stations, railways, industrial port, excellent road network.

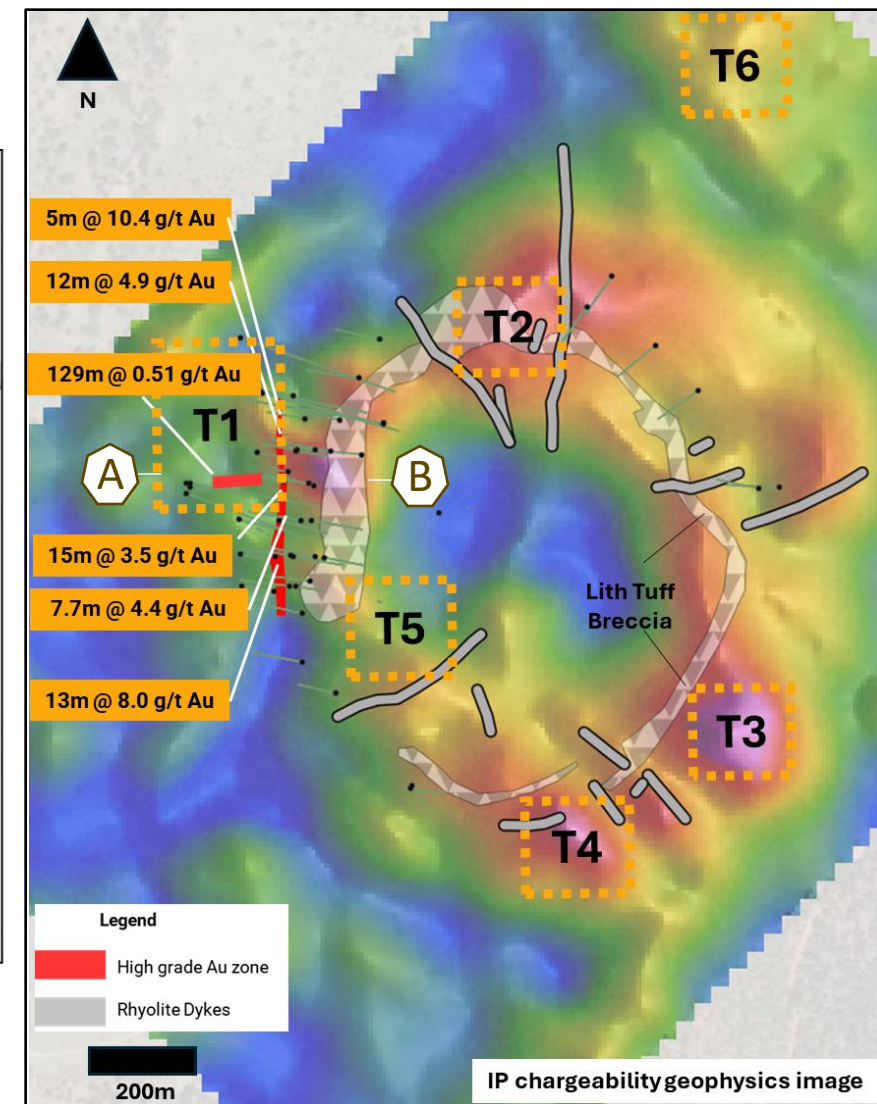


Red Mountain Gold-Silver – Exciting Results to Date but Still Wide Open

- ✓ Wide open-ended gold system.
- ✓ High-grade gold in western zone.
- ✓ Very thick gold mineralised intervals in rhyolite host.
- ✓ Reinterpretation of data sets including IP geophysics provides multiple new targets ready to drill test (Targets T1 – T6).



CROSS SECTION



PLAN

Cowarra Gold Project - Forgotten gold mine

Location & Ownership

- Situated in the Lachlan Fold Belt, New South Wales – a region renowned for high-grade gold deposits. Indirectly owned through a 26% stake in Oxley Resources, positioning Zenith with strategic influence over project development.

Historical Highlights:

- **Rich Mining History:** High-grade production history with notable yields, including 54,500 tonnes at 8.5 g/t Au in the 1930s and 95,000 tonnes at 6.7 g/t Au in the 1980s.
- **Proven Gold Mineralisation:** Recent exploration has identified both shallow and deep gold targets, indicating strong potential for significant resource expansion.

Potential

- **Untapped High-Grade Potential:** Recent exploration has identified the potential for multiple high-grade shoots within a strike-extensive mineralised corridor, significantly enhancing the resource potential.
- **Significant Exploration Upside:** With historical surface drilling not sufficiently testing depth extent, the mineralisation remains open down-plunge to the north and at depth, offering substantial discovery opportunities
- **Expansive Exploration Targets:** Recent soil analyses and IP surveys have identified numerous drill targets across the largely untested 20 km strike, positioning Cowarra as a prime candidate for large-scale gold discoveries.



Investment

ASX:ZNC



Driving Growth with New Leadership

Led by our new Managing Director, we are committed to a strategic growth plan that leverages both our gold and lithium assets to enhance shareholder value.



Expanding Resource Base for Sustainable Development

Focused on growing our gold resource base to a size that supports sustainable mining operations and long-term profitability.



Strategic Timing for Lithium Asset Advancement

Optimising lithium asset development by aligning activities with favourable market conditions and adopting a counter-cyclical approach.



Lithium – Long term view

- Expansive tenure (470 sq. km) in the Forrestania Greenstone Belt south of Marvel Loch, covering the Split Rocks holding.
- Adjacent to Mt Holland.
- One of Nine undeveloped JORC Resources in Western Australia.
- Waratah Well – Discovery of Li-pegmatites ~20km north of Yalgoo, largely untested by drilling; favourable stratigraphy extends NE under cover.

Zenith Lithium Projects



Split Rocks

- JORC Inferred Mineral Resource **11.9Mt @ 0.72% Li₂O, 415ppm Cs, 75ppm Nb, 217ppm Sn and 59ppm Ta** (0.5% Li₂O cut-off grade)¹
- Best intersections
 - 26m @ 1.2% Li₂O
 - 10m @ 1.7% Li₂O
 - 13m @ 1.9% Li₂O



Waratah Well

- 10m @ 1.4% Li₂O including 6m @ 2% Li₂O ⁽²⁾

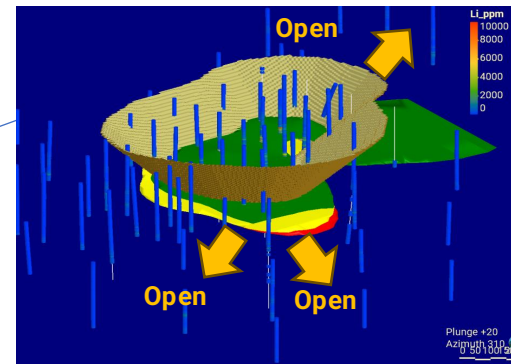
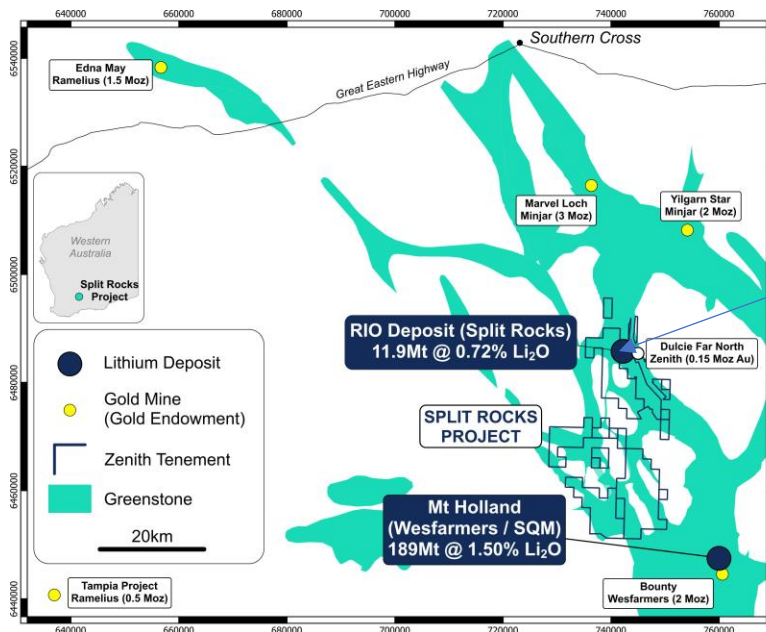


Notes: 1. ZNC ASX Release 28-Sep-23
2. For full drill results refer ASX Release 24-Jan-23 and 6-Jul-22

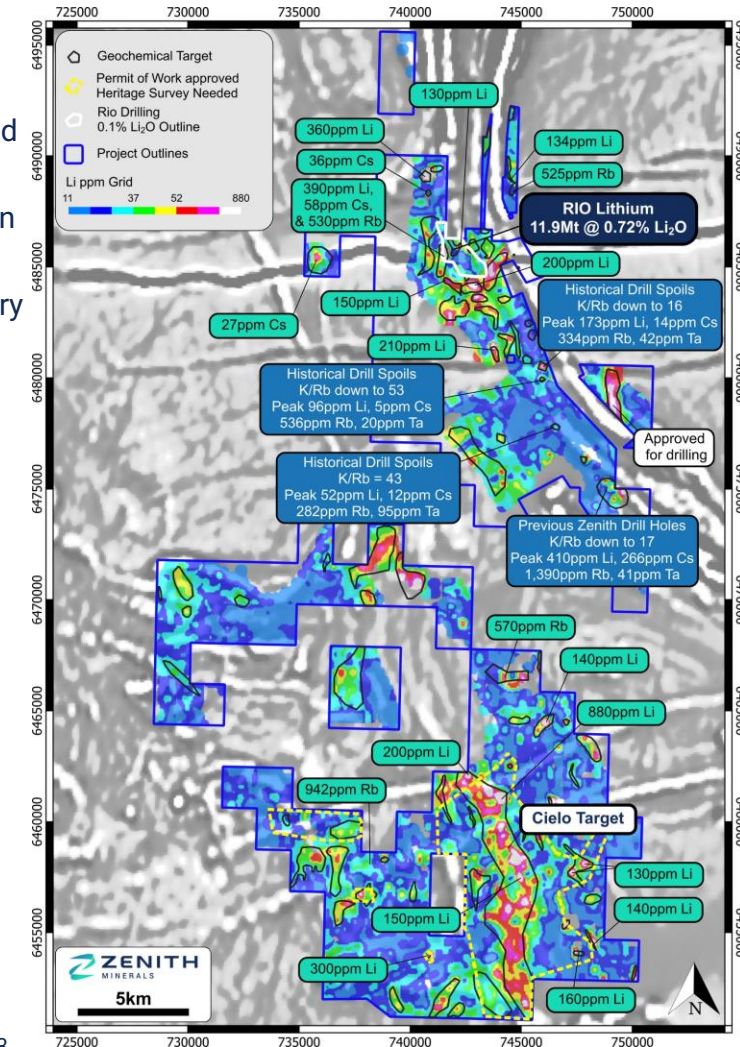
Split Rocks – Strong Blue-Sky Potential

- ✓ 2022 Program – 100 holes for 22,369m - results include¹:
26m @ 1.2% Li₂O
10m @ 1.7% Li₂O
13m @ 1.9% Li₂O
- ✓ +\$9.4M spend on Split Rocks & Waratah Well via previous earn-in (2022-2023)
- ✓ Rio Lithium Deposit – Inferred Mineral Resource of 11.9Mt @ 0.72% Li₂O ^{Note 2}
- ✓ Upside with resource remaining open ended
- ✓ Infill drilling likely to increase resource grade – currently wide drill spacing

- ✓ Extensive tenement holdings (367 sq km) in the Forrestania greenstone belt north of Mt Holland lithium mine (SQM-Wesfarmers)
- ✓ Large geochemical anomaly 9km in length by 2km wide (Cielo Target)
- ✓ 83 other geochemical targets – very strong upside³
- ✓ Follow up regional drill testing planned and budgeted



Pegmatite Inferred Mineral Resource domains and optimised pit



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

Notes: 1. ZNC:ASX Releases 20-Sep-22 & 14-Feb-23
2. ZNC:ASX Release 28-Sep-23
3. ZNC:ASX Release 7-Dec-23

Additional Information

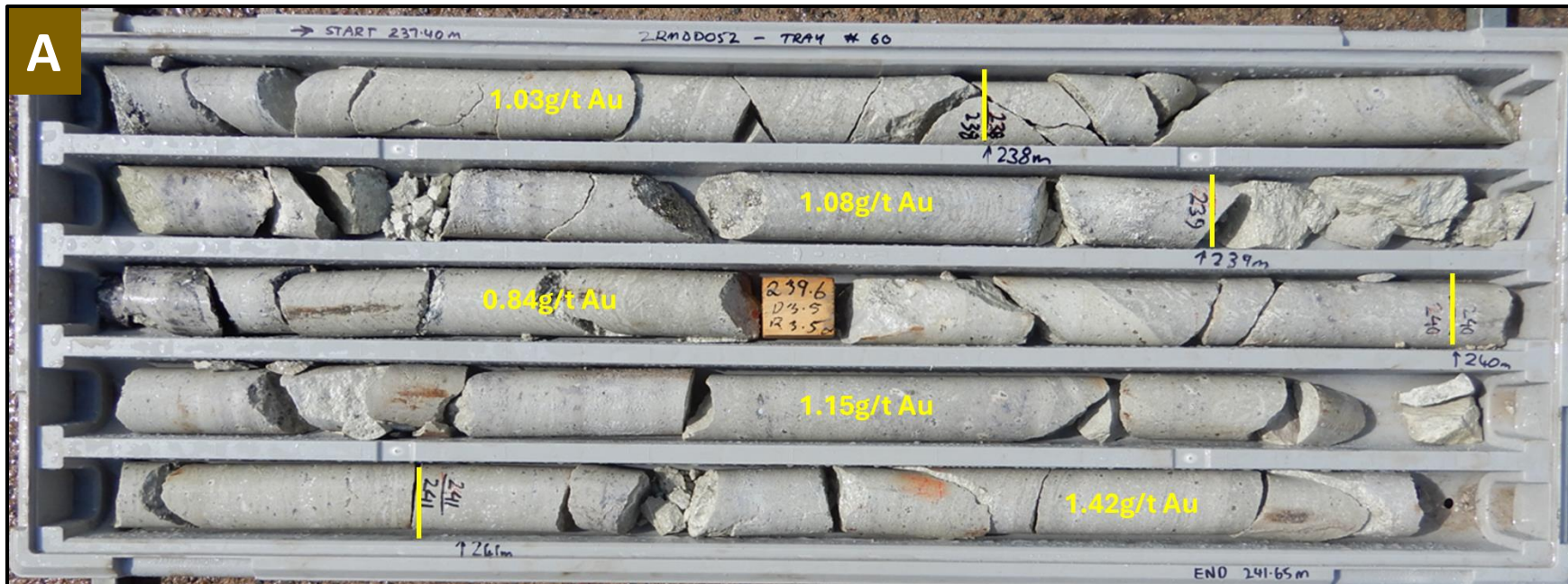


Red Mountain- IP Geophysics Showing the Way

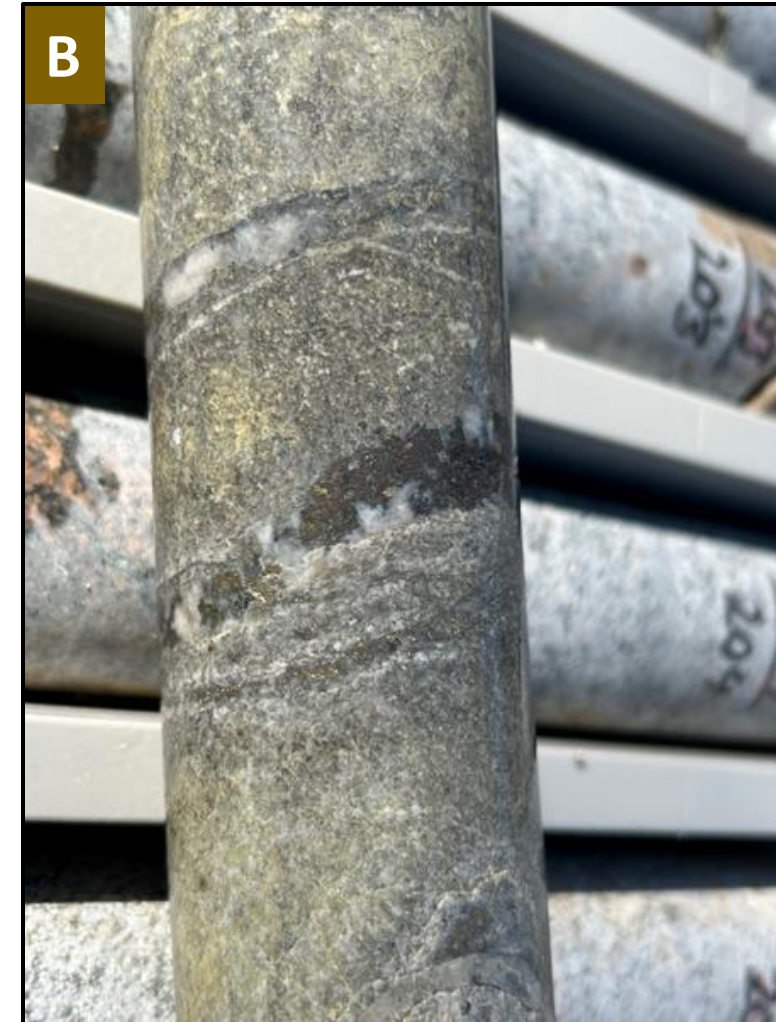
Mineralised rhyolite unit from ZRMDD052 (129m @ 0.51 g/t Au) demonstrates strong correlation between IP chargeability anomaly and wide zones of gold mineralisation:

- A. Example section of main mineralised interval.
- B. Example of disseminated sulphides - hanging wall to main mineralised interval.

ZRMDD052 -237.4 -241.65m



ZMRDD052 -213m, brown (Fe-rich) sphalerite in an extension vein, surrounded by disseminated pyrite (1m @ 1.1 g/t Au, 29.9 g/t Ag)



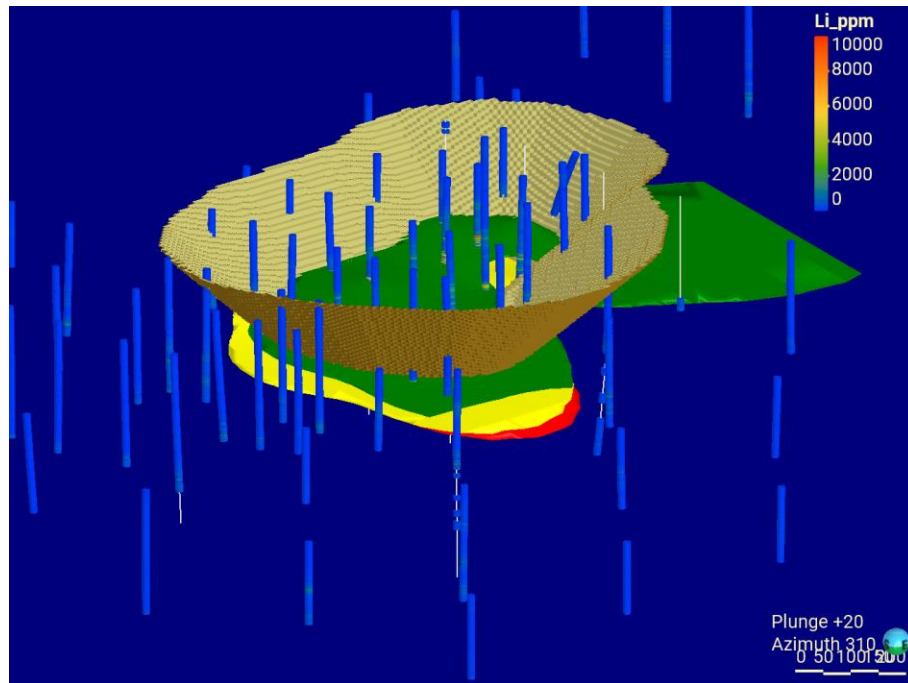
Split Rocks – Rio Prospect



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 Estimate¹

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	-

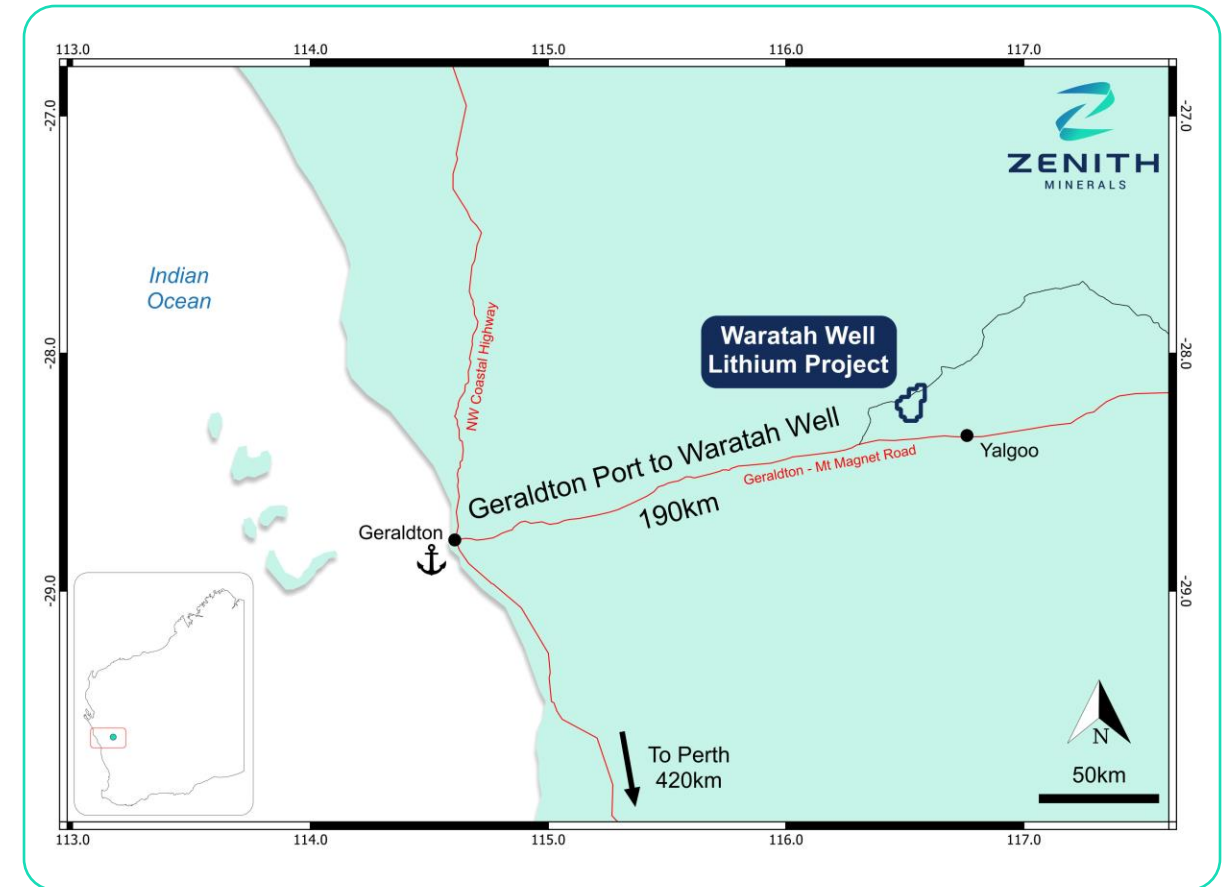
Notes to Resource Table:

- 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

Notes: 1. ZNC ASX Release 28-Sep-23



Waratah Well - Lithium

- ✓ Located 20km northwest of Yalgoo in the Murchison Region, 190km from the Geraldton Port
- ✓ Discovery of shallow blind high grade lithium mineralisation from RC drilling in pegmatites just north of an outcropping 4x2km pegmatite field.¹
- ✓ Pegmatites shallow dipping; up to 24 meters true width.
- ✓ Substantial drilling program planned to define extents of lithium mineralisation
- ✓ Potential lithium direct shipping opportunities with closeness to Geraldton Port

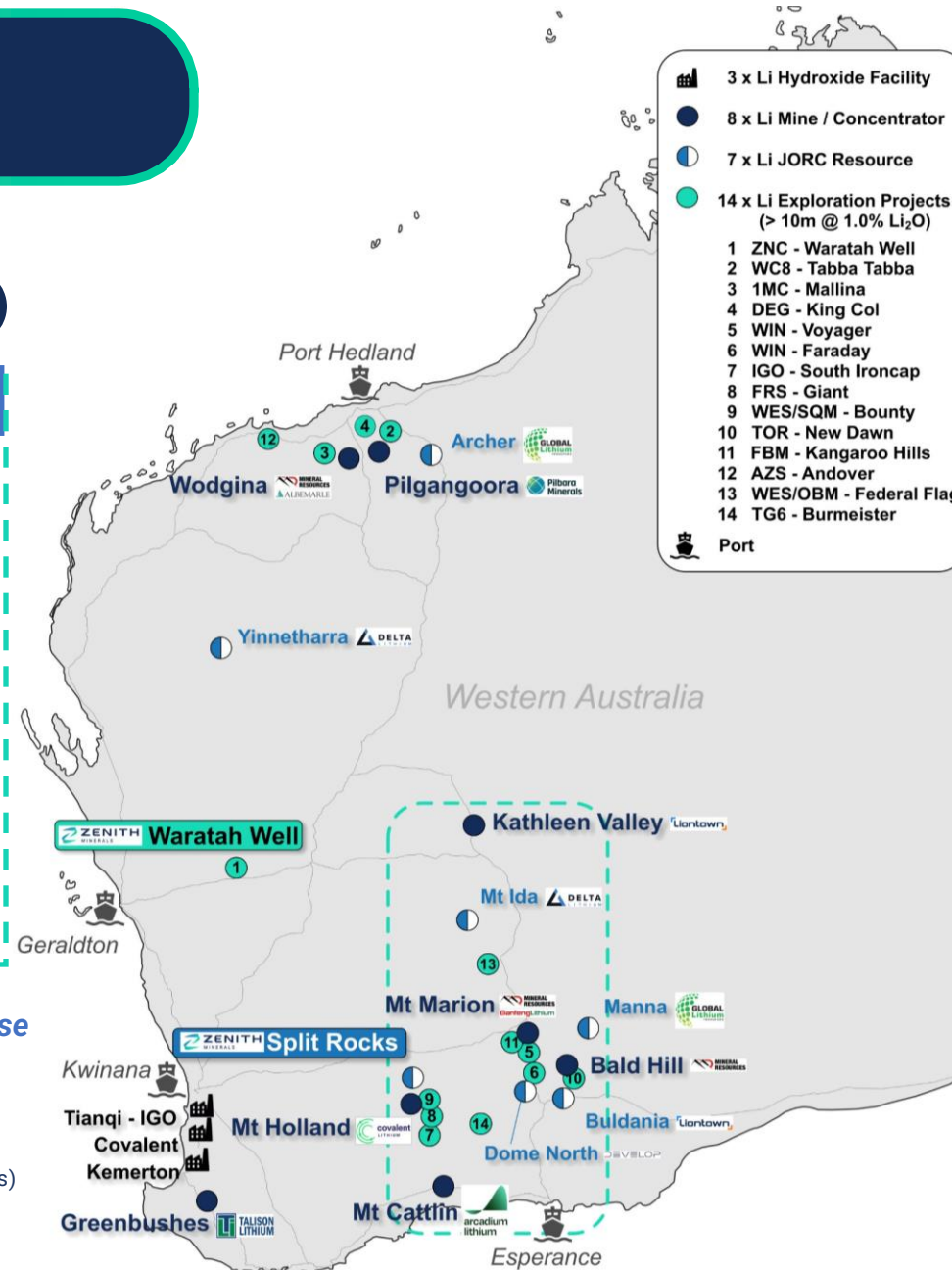


WA Lithium Projects

Western Australian Lithium Landscape

3	8	7	14
Lithium Hydroxide Facilities (Tianqi, Covalent and Kemerton)	Lithium Mines	JORC Resources	Advanced exploration plays
		    	

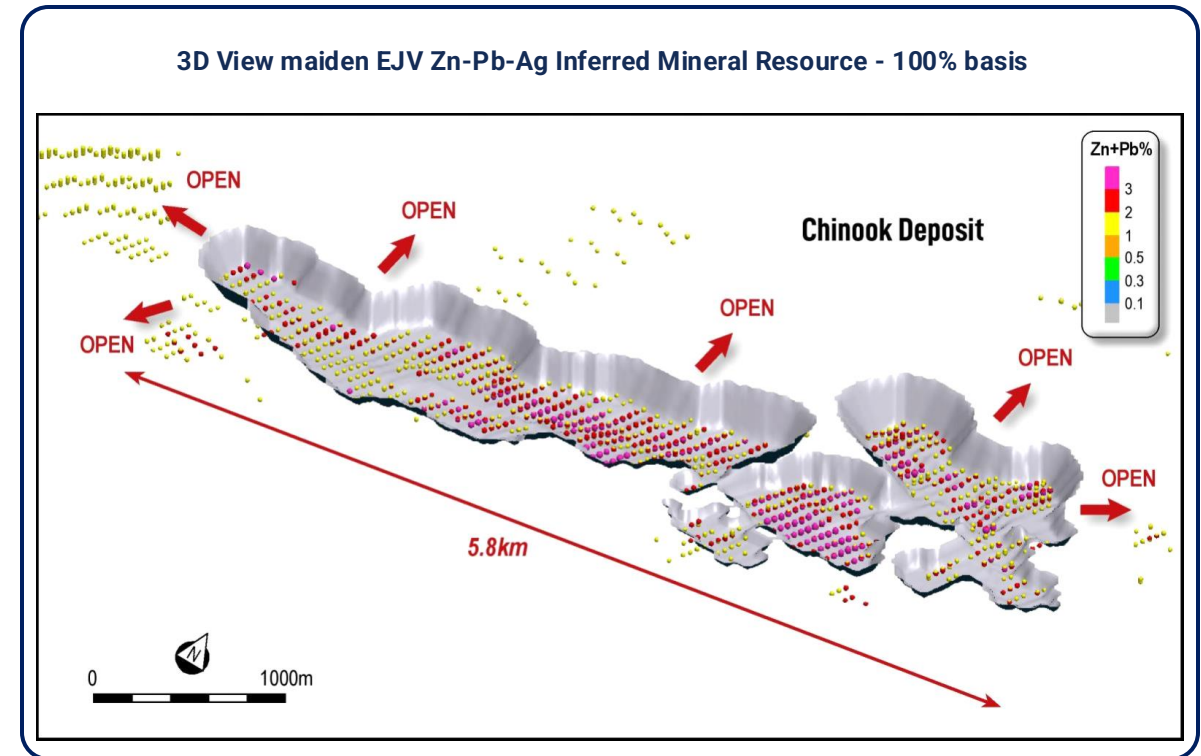
Zenith owns one of each of these



Notes: 1. ASX Release 3-Jul-24 Slide 23 for Exploration Project details, (excludes Resources at Mines)
2. Based on the criteria of drill intersections >10m @ 1.0%Li₂O (excludes those reported as lithium mica)

Additional Zinc Exposure via Earraheedy JV – Free Carry

- ✓ Zenith holds a 25% free-carried interest in the Earraheedy Joint Venture (EJV) with Rumble Resources Ltd (ASX:RTR)
- ✓ An emerging Tier-1 base metal province in WA
- ✓ Maiden Zn Pb Ag Inferred Mineral Resource (100% basis) **94Mt @ 3.1% Zn+Pb and 4.1 g/t Ag¹**
- ✓ Outstanding initial flotation test work results from zinc sulphide dominant ores including²:
 - 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 holds additional 100% owned tenure contiguous with the Earraheedy project





AUSTRALIA-FOCUSED DIVERSIFIED MINERAL DEVELOPER

Zenith Minerals Limited (ASX:ZNC)

www.zenithminerals.com.au

