



# Australian-based Mining Exploration Company

Leveraged to the developing clean  
energy world

Zenith Minerals Limited (ASX:ZNC)

COMPANY UPDATE – JANUARY 2024

# 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](http://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



Share Price  
**\$0.14**



Shares on Issue  
**352.4m**



Market Cap  
**\$49.3m**



Cash<sup>1</sup>  
**\$1.3m**



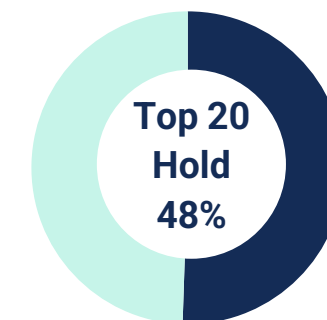
Listed Equities  
**\$2.5m**



Enterprise Value  
**\$45.5m**

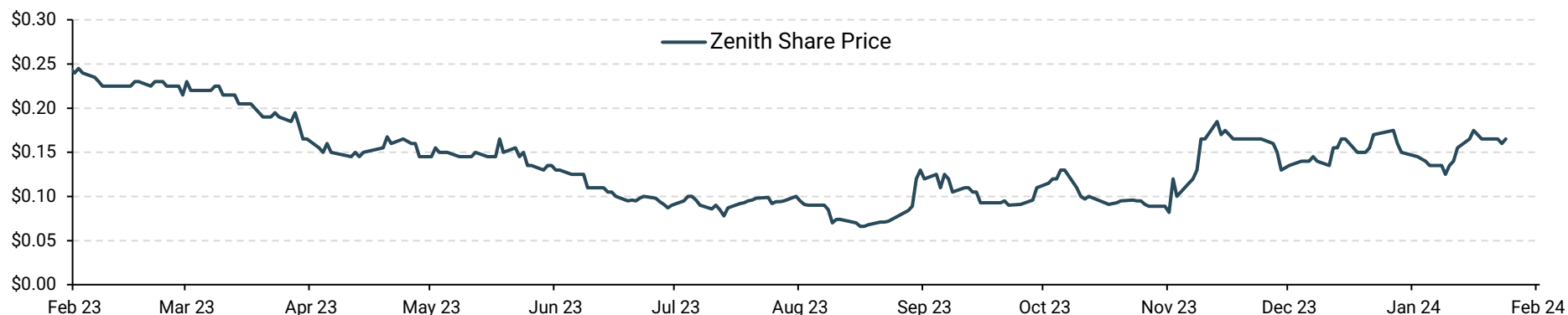
## Major Shareholders

Directors	2.7%
BNP Paribas Noms	8.7%
HSBC Custodian Noms	8.6%
Citicorp Noms	6.3%
Tilbrook	5.2%



As at 31-Dec-2023

## Share Price Last 12 Months



Notes 1. Corporate Snapshot as at 31-Dec-2023

ASX:ZNC

# Zenith Board & Management



**Michael Clifford**  
Managing Director

- Geologist (BSc (Hons) MSc) 35+ years' exploration. Senior technical and business development roles whilst at Billiton Australia, Acacia Resources and AngloGold Ashanti.
- Former Managing Director of ASX listed PacMag Metals Limited from 2005, until its successful takeover in 2010.
- International exploration & resources experience in the USA, Indonesia, Brazil, PNG, Angola, DRC, Mexico and Mongolia.



**Geoff Rogers**  
Non-Executive Director

- Corporate & resources lawyer with 40+ years' experience advising both Australian & international clients involved in the resources industry.
- He was a corporate & 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 & mid-cap resource companies.



**Andrew Grove**  
Non-Executive Director

- 30+ years' experience in the global resources sector, most recently, as Managing Director at Chesser Resources Limited, where he elicited a successful takeover by Fortuna Silver Mines with a 95% premium.
- He was Group GM Business Development & Investor Relations at Perseus Mining Limited. Andrew spent 14 years at Macquarie Bank as Division Director – Mining Finance and Risk Management.
- He held technical roles at Areva NC, Mines & Resources Australia & Acacia Resources Limited. He holds a MSc - Mineral Economics & B Eng (Minerals Exploration & Mining Geology).



**Stan Macdonald**  
Non-Executive Director

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



**Chris Shanley**  
Exploration Manager

- Chris joined Zenith Minerals Limited on 27th March 2023 as the Company's Exploration Manager. Graduating with a BSc Hons (Geosciences), Chris holds a Master's degree in Economic Geology from CODES/UTAS and has 14 years mineral exploration focused experience in Australia.
- He was previously employed as Senior Exploration Geologist at Regis Resources overseeing the exploration program covering the Duketon Greenstone Belt and was Project Exploration Geologist at both Gold Fields' (Granny Smith Mine) and for Saracen, working in the Laverton and Carosue Dam districts respectively.



**Nicholas Ong**  
Company Secretary

- Nicholas brings 18 years' experience in listing rules compliance and corporate governance. He is experienced in mining project finance, mining and milling contract negotiations, mine CAPEX & OPEX management, and toll treatment reconciliation. Nicholas is a Fellow of the Governance Institute of Australia and Fellow of Institute of Chartered Secretaries and Administrators. He holds a Bachelor of Commerce and a Master of Business Administration from the University of Western Australia. He has since worked as a company secretary and director to listed companies

# Lithium Focussed Developer

Primary focus on Split Rocks and Waratah Well Projects, with additional prospective gold and base metals exposure

Project	Ownership %	Other Interest
Waratah Well	100%	
Split Rocks	100%	
Earaheedy	JV – 25% Free Carried Interest	75% Rumble Resources (ASX:RTR)
Hayes Hill	100%	
Red Mountain	100%	



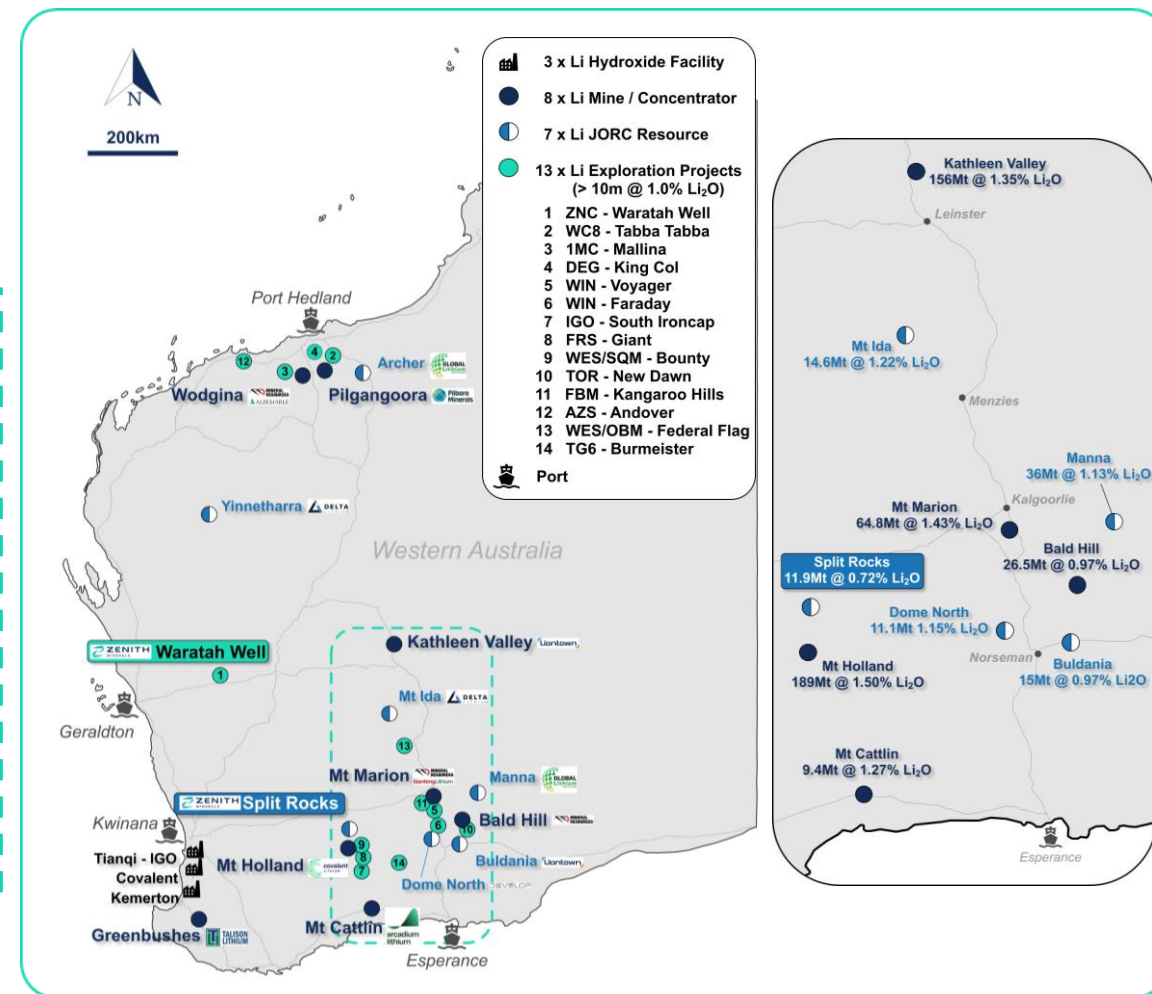
# WA Lithium Projects

Zenith owns one of only seven JORC lithium Mineral Resources<sup>1</sup> and one of the fourteen best lithium exploration prospects in WA<sup>2</sup>

## 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. Slide 15 for details, (excludes Resources at Mines)  
 2. Based on the criteria of drill intersections >10m @ 1.0%Li<sub>2</sub>O (excludes drill intersections reported as lithium mica)

# Azure Capital Appointed as Corporate Adviser

## Recent ZNC Updates

- Strategic review of Zenith’s Lithium business - maximise value for shareholders
- Zenith will assess all options for future funding including potential strategic investors
- Unsolicited inbound expressions of interest from strategic investors
- Process expected to be completed in 2<sup>nd</sup> quarter of calendar 2024
- Azure also appointed as Company’s takeover response adviser

## Recent ZNC Updates

- 1 Maiden Lithium Mineral Resource at Split Rocks
- 2 IMARC Conference - increasing awareness, ZNC expected to regain 100% control of lithium projects in Jan-24
- 3 Regained 100% Control of Split Rocks & Waratah Well
- 4 83 Targets at Split Rocks
- 5 Azure Capital Appointed Corporate Adviser

**No drilling on Split Rocks & Waratah Well lithium projects under former Earn-In Agreement during 2023**



**Strong corporate activity in the Western Australian lithium sector<sup>1</sup>**



Notes: 1. Slide 16 for Western Australian lithium transaction timeline details

# Zenith Lithium Projects



## Split Rocks

- JORC Inferred Mineral Resource **11.9Mt @ 0.72% Li<sub>2</sub>O, 415ppm Cs, 75ppm Nb, 217ppm Sn and 59ppm Ta** (0.5% Li<sub>2</sub>O cut-off grade)<sup>1</sup>
- Best intersections 26m @ 1.2% Li<sub>2</sub>O  
10m @ 1.7% Li<sub>2</sub>O  
13m @ 1.9% Li<sub>2</sub>O



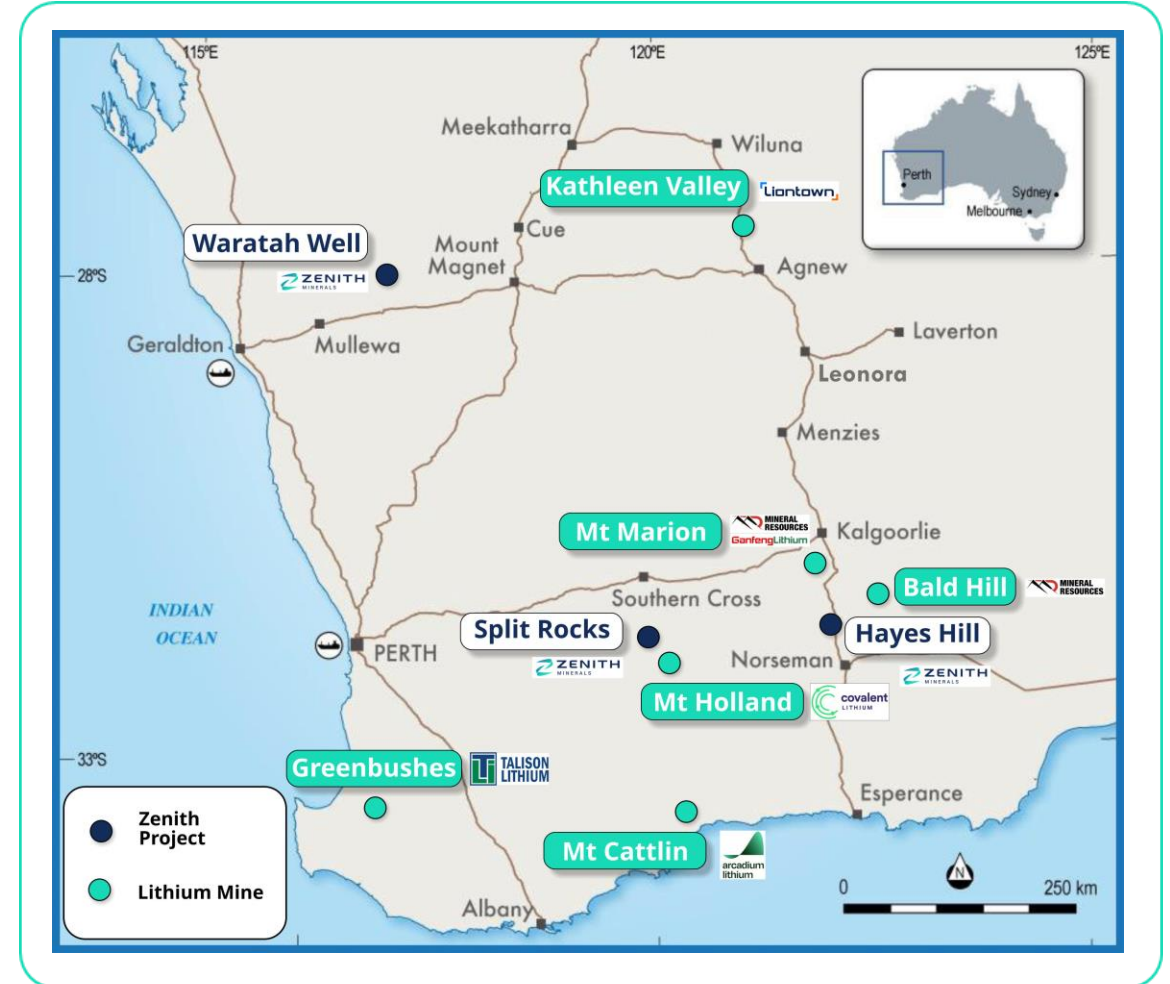
## Waratah Well

- 10m @ 1.4% Li<sub>2</sub>O including 6m @ 2% Li<sub>2</sub>O (note 2)



## Hayes Hill

- Southeast of Dome North Li deposit (ASX:DVP), northwest of Buldania Li deposits (ASX:LTR)
- Strong Nickel Sulphide Targets



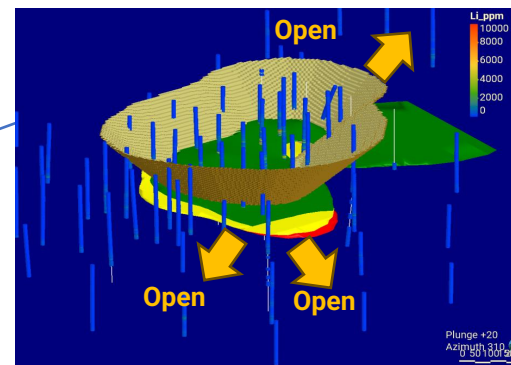
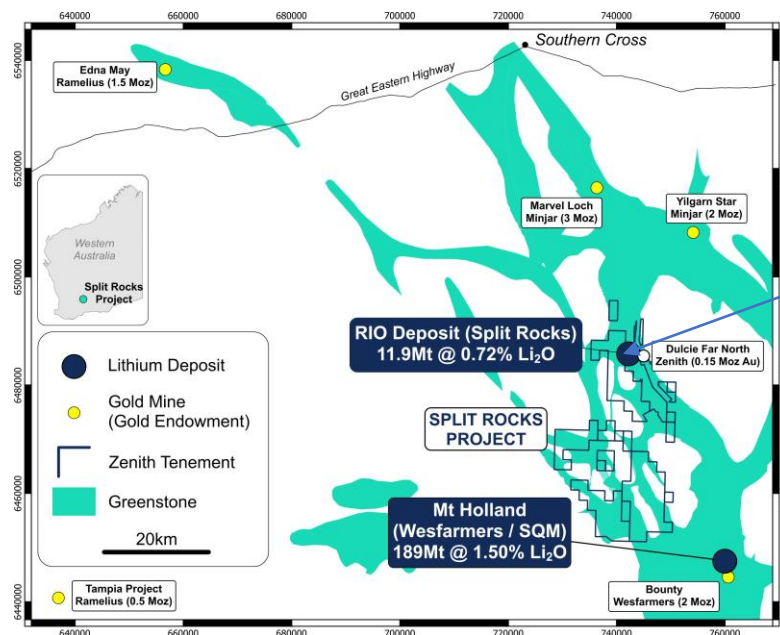
Notes: 1. ZNC ASX Release 28-Sep-23  
2. Slide 13



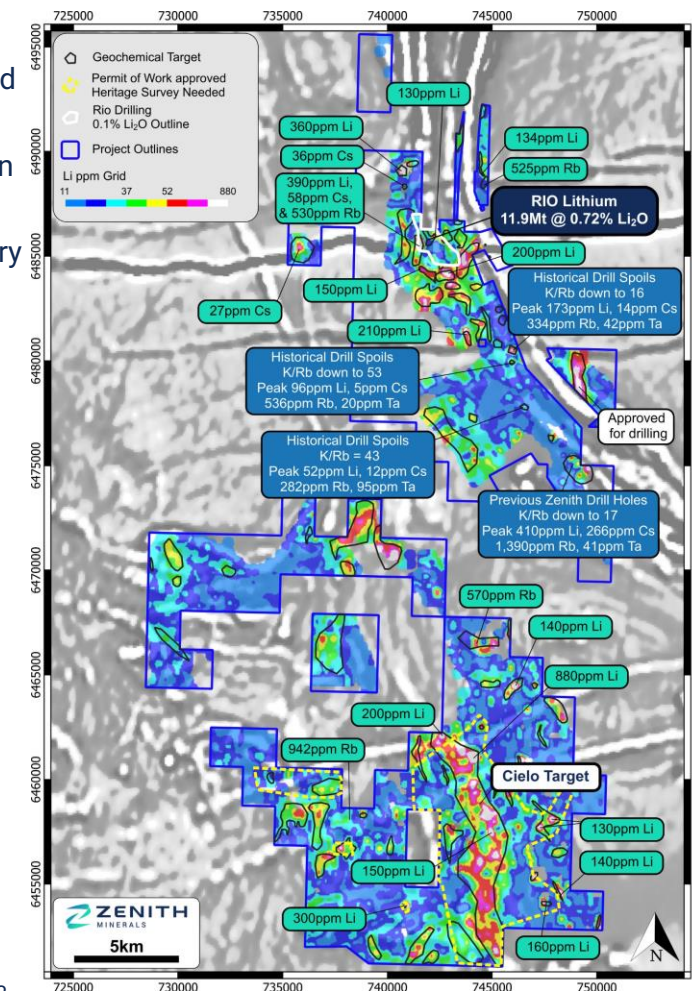
# Split Rocks – Strong Blue-Sky Potential

- ✔ 2022 Program – 100 holes for 22,369m - results include<sup>1</sup>:  
26m @ 1.2% Li<sub>2</sub>O  
10m @ 1.7% Li<sub>2</sub>O  
13m @ 1.9% Li<sub>2</sub>O
- ✔ +\$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% Li<sub>2</sub>O <sup>Note 2</sup>
- ✔ 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 upside<sup>3</sup>
- ✔ Follow up regional drill testing planned and budgeted



Pegmatite Inferred Mineral Resource domains and optimised pit

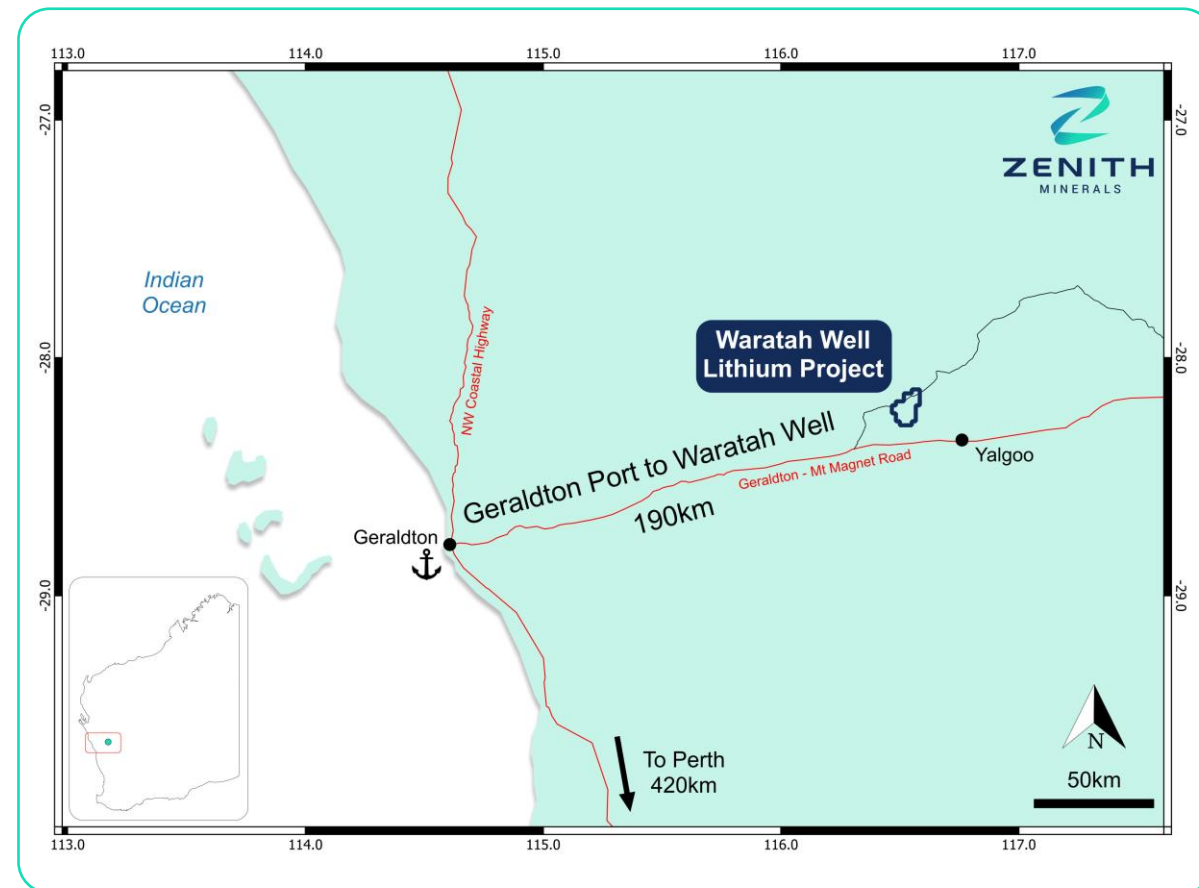


Note-Mt Holland Mineral Resource as reported in KDR:ASX Release 19-Mar-2018

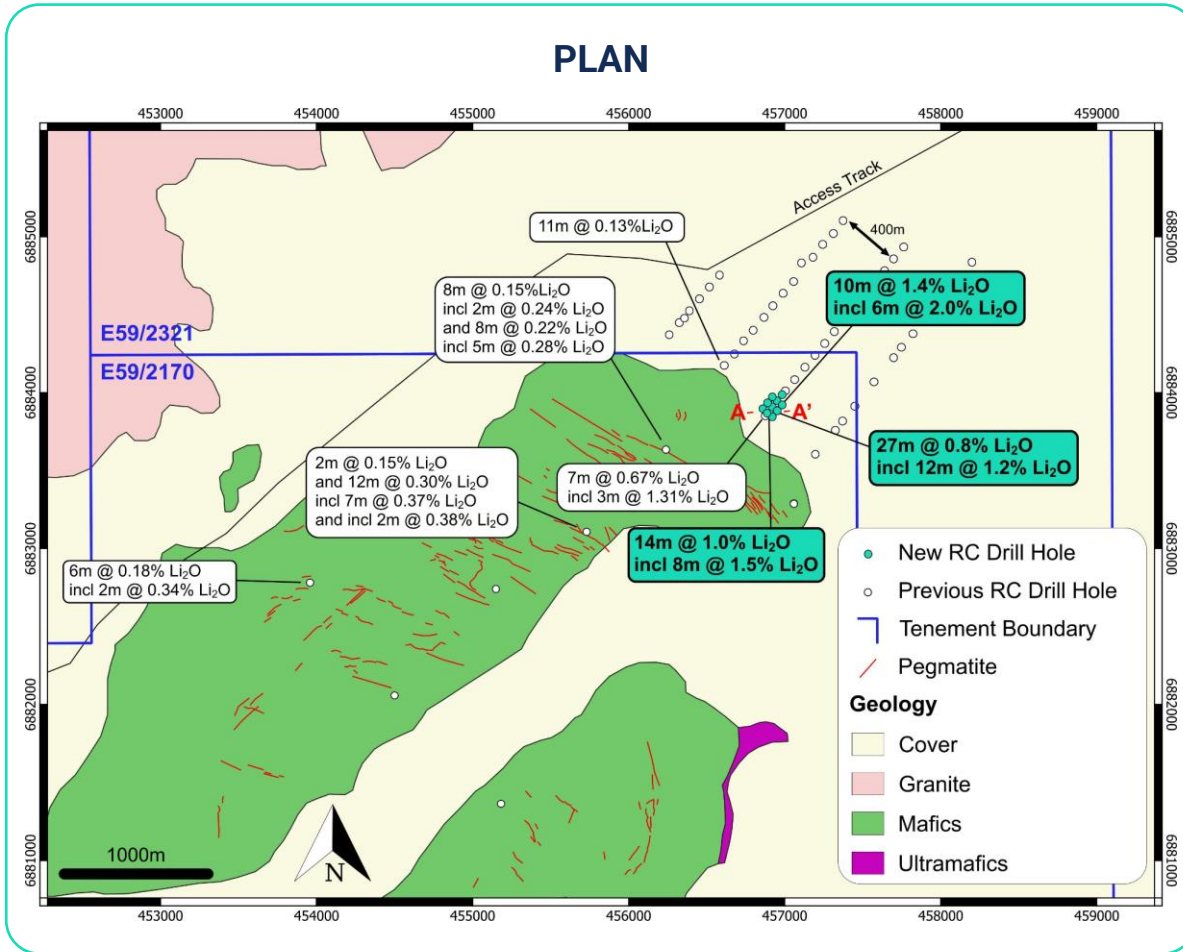
Notes: 1. ZNC:ASX Releases 20-Sep-22 & 14-Feb-23  
2. ZNC:ASX Release 28-Sep-23  
3. ZNC:ASX Release 7-Dec-23

# Waratah Well - Lithium

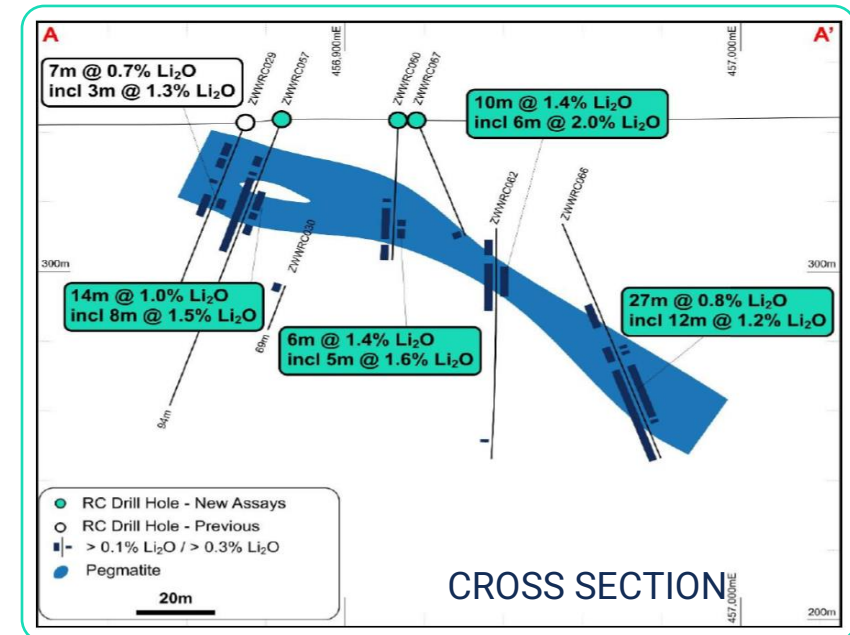
- ✓ Located 20km northwest of Yalgoo in the Murchison Region, 190km from the Geraldton Port
- ✓ Discovery of shallow blind high grade lithium mineralisation from RC drilling in pegmatites just north of an outcropping 4x2km pegmatite field.
- ✓ Pegmatites shallow dipping up to 24 metres thick
- ✓ Substantial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



# Waratah Well – High Grade Lithium Drill Results

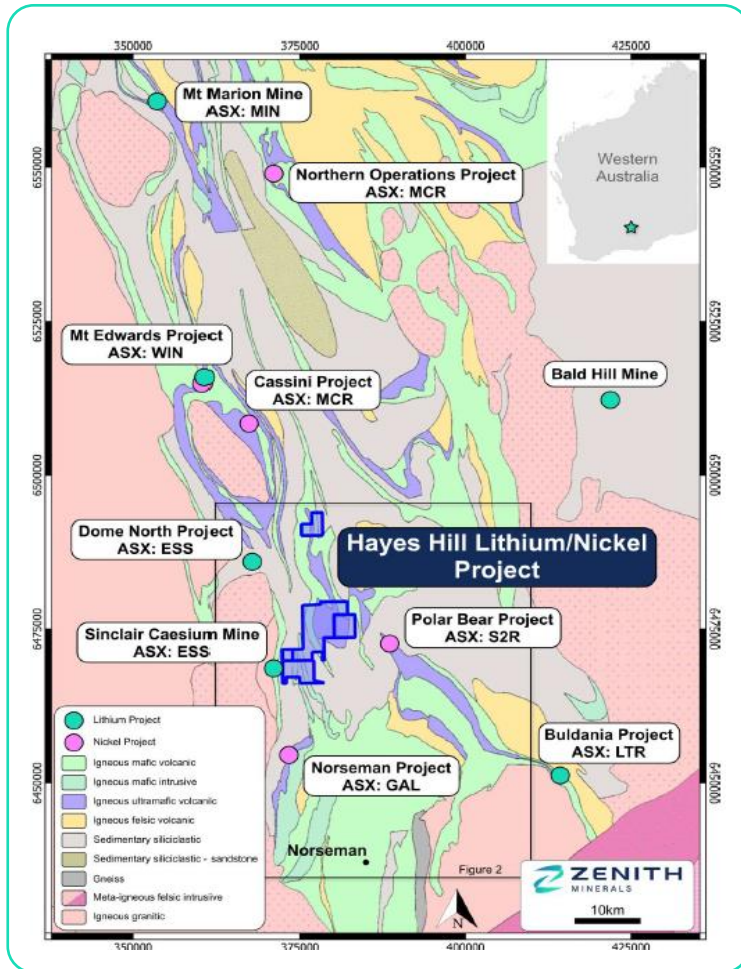


- ✓ High-grade lithium open to north, south and east under shallow soil cover
- ✓ 10m @ 1.4% Li<sub>2</sub>O including 6m @ 2% Li<sub>2</sub>O
- ✓ Significant follow-up RC drilling planned and budgeted
- ✓ Heritage cleared and ready to go



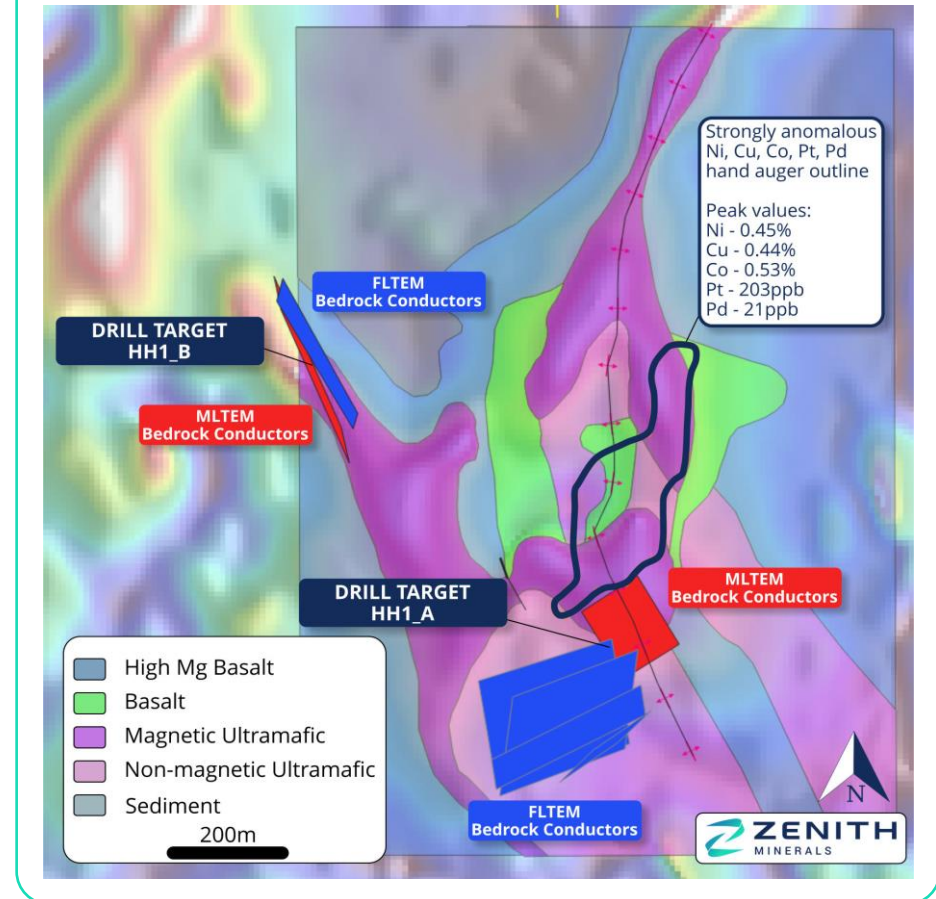
For full results drill refer ASX Release 24-Jan-23

# Hayes Hill – Lithium & Nickel



- ✓ SE of the Dome North lithium deposit (ESS)
- ✓ High-tenor Ni-Cu-Pt-Pd surface geochemical anomaly at Green Bananas north of the Calisto Ni-PGE discovery
- ✓ EM Geophysics defined two strong conductors up to 20,000 siemens
- ✓ Requires drill testing

## Green Bananas Nickel Prospect<sup>1</sup>



Notes: 1. ZNC ASX Release 5-Jul-23 & 20-Nov-23 for details

# Investment Highlights



**100% owner of the highly prospective Split Rocks and Waratah Well lithium projects in Western Australia**



**Highly leveraged to future green energy demand, along with ongoing corporate activity in the lithium sector**



**Strong board and management team to continue advancing and growing Zenith's asset portfolio**



**Undertaking strategic review of lithium business to maximise value for shareholders, Azure Capital appointed**

## Appendix – Additional Project Information and Data References

# WA Lithium Exploration Projects and Transactions

## Western Australian lithium exploration projects with drill intersections >10m @ 1%Li<sub>2</sub>O<sup>(1)</sup>

Name	Reference	Owner
Bounty	ASX: KDR 19 December 2017	Wesfarmers Limited & SQM JV (Covalent Lithium)
South Ironcap	ASX: WSA 22 April 2016	IGO Limited
Giant	ASX: MZN 20 December 2016	Forrestonia Resources Limited
Faraday	ASX: WIN 9 January 2023	Widgie Nickel Limited
Voyager	ASX: WIN 17 January 2023	Widgie Nickel Limited
Kangaroo Hills	ASX: AOU 24 November 2022	Future Battery Minerals Limited
Waratah Well	ASX: ZNC 24 January 2023	Zenith Minerals Limited
King Col	ASX: DEG 15 November 2018	DeGrey Mining Limited
Mallina	ASX: 1MC 7 December 2022	Morella Corporation Limited
New Dawn	ASX: TOR 7 December 2023	Torque Metals Limited
Andover	ASX: AZS 19 October 2022	Azure Minerals Limited
Federal Flag	ASX: OBM 26 April 2023	Ora Banda Mining Limited – Wesfarmers Limited
Tabba Tabba	ASX: WC8 12 October 2023	Wildcat Resources Limited
Burmeister	ASX: TG6 12 December 2023	TG Metals Limited

Notes: 1. Refer map on slide 6 (excludes drill intersections reported as lithium mica)

# WA Lithium Exploration Projects and Transactions

Reference	Company	ASX:Ticker	Date	Transaction Summary <sup>1</sup>
A	Essential Metals	ESS	9/01/2023	(Takeover bid of ESS) by Tianqi Lithium Energy Australia (TLEA JV own 51% Tianqi Lithium Corporation and 49% IGO) to acquire 100% of ESS
B	Azure	AZS	11/01/2023	SQM to invest A\$20M for 19.9% of Azure for Li exploration for Li at Andover Project. Early-stage project - promising rock chip samples from numerous Pegmatites - mineralogy suggests presence of spodumene
C	Minerals 260	MI6	7/03/2023	MI6 to acquire from eMetals tenements comprising the Nardoo Project - 7 exploration licences
D	Olympio & Liontown	OLY & LTR	3/04/2023	LTR to farm into OLY Mulline and Mulwarrie Li projects (southern Mt Ida greenstone belt/fault trend)
E	Eastern Resources	EFE	8/05/2023	Eastern Resources EFE to acquire 70% interest in Lepidolite Hill Project from Lithium Australia (LIT)
F	Wildcat Resources	WC8	17/05/2023	Wildcat to acquire Tabba Tabba Project from Global Advanced Metals (GAM)
G	Delta Lithium	DLI	14/06/2023	Idemitsu Australia to invest \$46.4M at an issue price of \$0.7075 a share into DLI
H	Legacy Iron and Hawthorn Resources	LCY & HAW	15/06/2023	JV Agreement with Hancock Magnetite Holdings at Mt Bevan (My Ida Belt) to focus on Li and other critical minerals (non-iron ore)
I	Lithium Power	LPI	19/06/2023	LPI to sell its WA tenements to Albemarle for \$30M cash
J	Global Lithium and Kairos Minerals	GL1 & KAI	26/06/2023	GL1 to invest up to A\$4.6M into KAI placement
K	Essential Metals and Develop	ESS & DVP	3/07/2023	DVP to acquire 100% of ESS shares by way of Scheme of Arrangement
L	Albemarle - Patriot Battery Metals	PMT (ASX) & ALB (NYSE)	31/07/2023	Albemarle to make a C\$109M placement in PMT
M	Future Battery Minerals & Lodestar Minerals	FBM	7/08/2023	FBM to acquire remaining 20% of interest in the Kangaroo Hills lithium project from Lodestar Minerals .
N	Mineral Resources	MIN	4/09/2023	MIN announces implementation agreement to acquire - Alita Resources (Bald Hills Lithium mine)
O	Liontown Resources	LTR	11/09/2023	Albemarle - indicative proposal and due diligence to commence
P	Liontown Resources	LTR	11/10/2023	Rinehart & Hancock announce significant shareholder notice - 19.9% voting power in LTR
Q	St George & Amperex Technology Limited (ATL)	SGQ	17/10/2023	ATL enters into a JV with Lithium Star (SGQ Subsidiary company) which holds 14 Exploration licences in WA. ATL to invest \$3M in Lithium Star for 10% equity in Lithium Star
R	Azure	AZS	26/10/2023	Binding transaction implementation deed with SQM
S	Ora Banda / Wesfarmers	OBM	30/10/2023	Ora Banda sells to Wesfarmers sub. company (Brenahan Exploration) 65% of mineral rights (excluding gold) on Davyhurst tenement package for \$26M cash and a 2% royalty
T	Wildcat Resources	WC8	1/11/2023	Wildcat Welcomes Mineral Resources as New Substantial Shareholder
U	Lithium Plus	LPM	6/11/2023	LPM announce A\$8M placement - participation by Develop and Bill Beamont
V	Pantoro/Mineral Resources	PNR & MIN	10/11/2023	PNR announce sale of lithium and some Base Metal rights at Norseman for up to \$60M to Mineral Resources
W	Liontown Resources	LTR	16/11/2023	Albemarle & Liontown not proceeding with proposed scheme of arrangement
X	Charger Metals & RIO	CHR & RIO	20/11/2023	JV/Farm Agreement signed with RIO over CHR Lake Johnson Project & CHR will purchase remaining interest in the Project from Lithium Australia
Y	Novo Resources & SQM	NVO & SQM	19/12/2023	SQM to pay Novo \$10M cash for 75% interest in 5 tenements for Li and Ni in West Pilbara near Azure's Andover Project. Novo free carried until a decision to mine; transaction includes an option over additional Novo tenements
Z	Azure	AZS	19/12/2023	AZS enters joint bid TID with SQM & Hancock

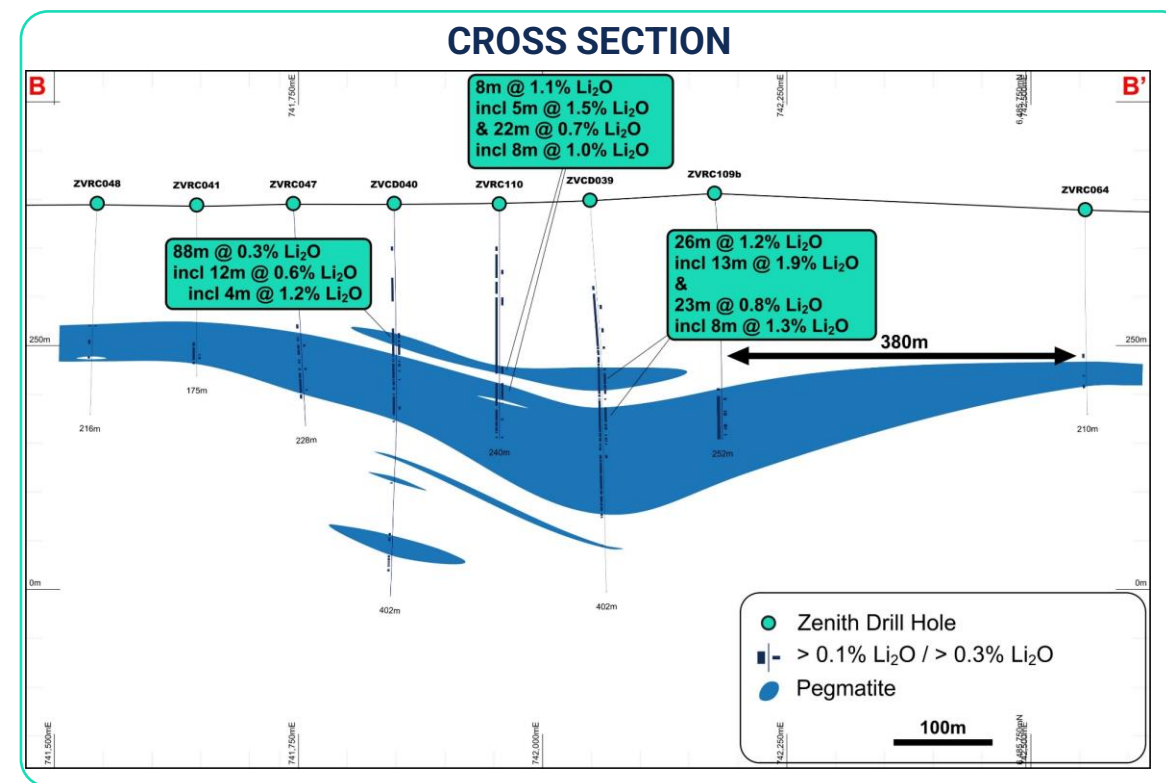
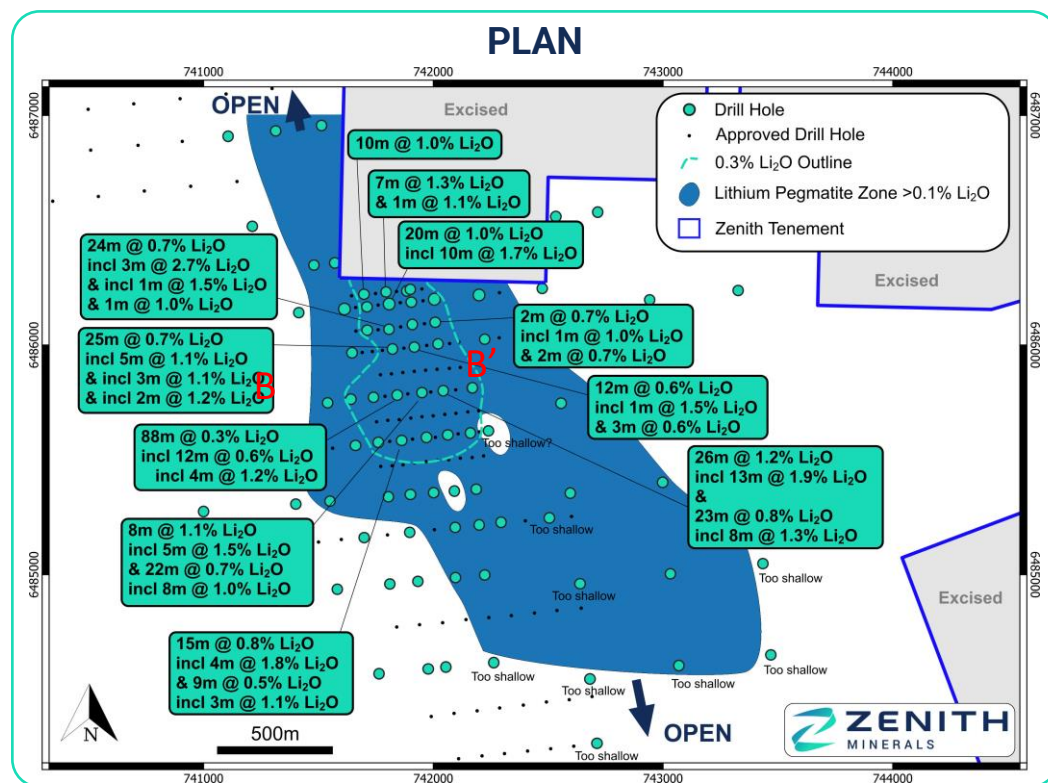
Notes: 1. Transaction timeline on slide 7



# Split Rocks – Rio Prospect

- 2022 Program – 100 holes for 22,369m
- Best intersections include<sup>1</sup>:
  - 26m @ 1.2% Li<sub>2</sub>O
  - 10m @ 1.7% Li<sub>2</sub>O
  - 13m @ 1.9% Li<sub>2</sub>O

- Extensive drilling program planned to test strike extensions & geochemical targets
- Rio Mineral Resource (Sep 2023) - open along strike



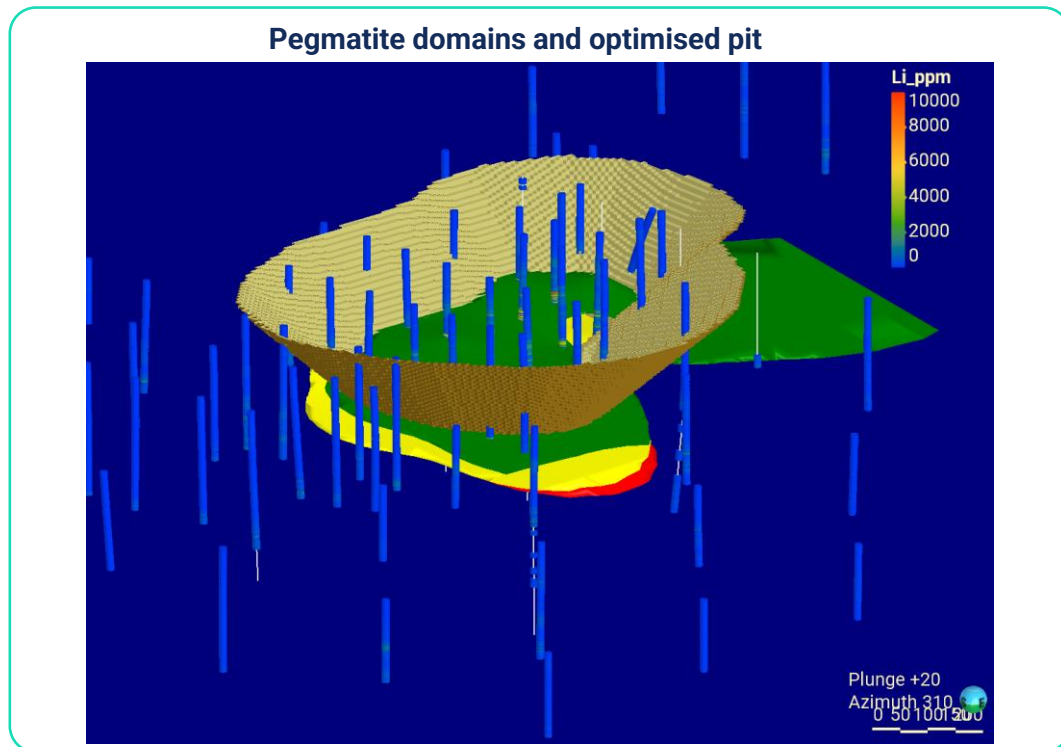
Notes: 1. For full results and intersections refer ASX Release 20-Sep-22 & 14-Feb-23

# 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% Li<sub>2</sub>O 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<sup>1</sup>

Zone	Million Tonnes	Li <sub>2</sub> 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
<b>Total</b>	<b>11.9</b>	<b>0.72</b>	<b>415</b>	<b>75</b>	<b>217</b>	<b>59</b>	<b>-</b>

### Notes to Resource Table:

- The Mineral Resource is estimated with all drilling data available at 3rd August 2023, and reported at a 0.5% Li<sub>2</sub>O 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

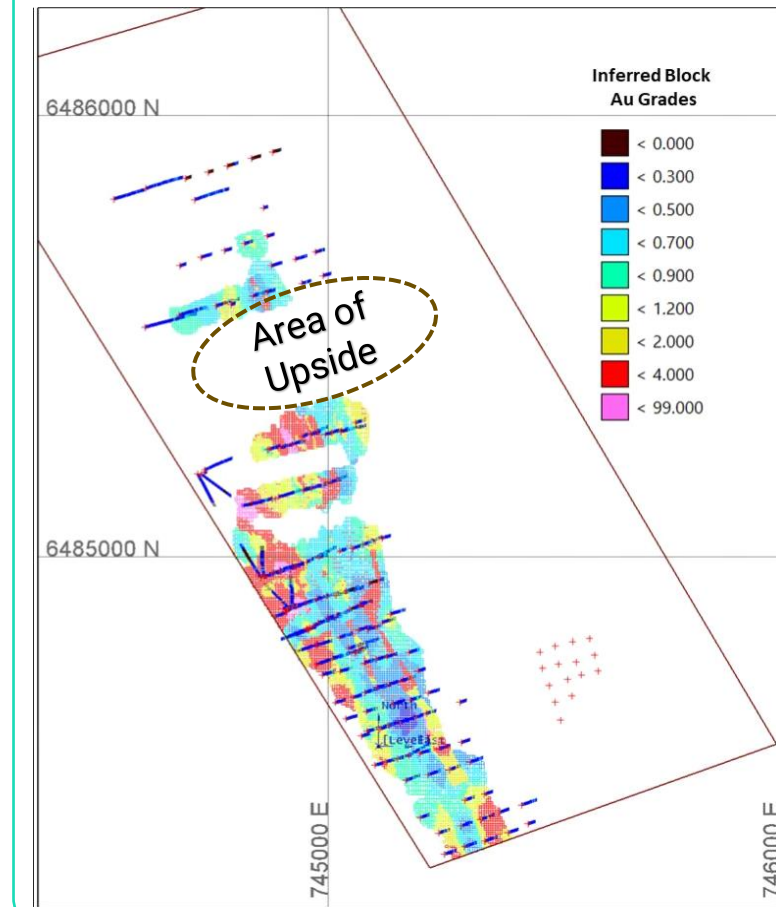
Notes: 1. ZNC ASX Release 28-Sep-23

# 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<sup>1</sup>
  
- ✓ High grade gold mineralization intersected, including:
  - 12m at 6.07 g/t Au<sup>1</sup>
  - 5m at 10.6 g/t Au
  - 12m at 2.86 g/t Au and
  - 3m at 10.7 g/t Au
  
- ✓ Resource upside:
  - Areas interpreted but not classified due to wide spaced drill sections
  - Extension of gold mineralization both to the south, north & down-dip
  - A third footwall structure is indicated by drilling but not yet adequately tested

Plan projection of Inferred Mineral Resource Gold Grade



Notes: 1. ASX ZNC Releases 25-Jan-23 and 11-Jul-23

# Red Mountain Gold-Silver Intrusion Related Breccia Pipe

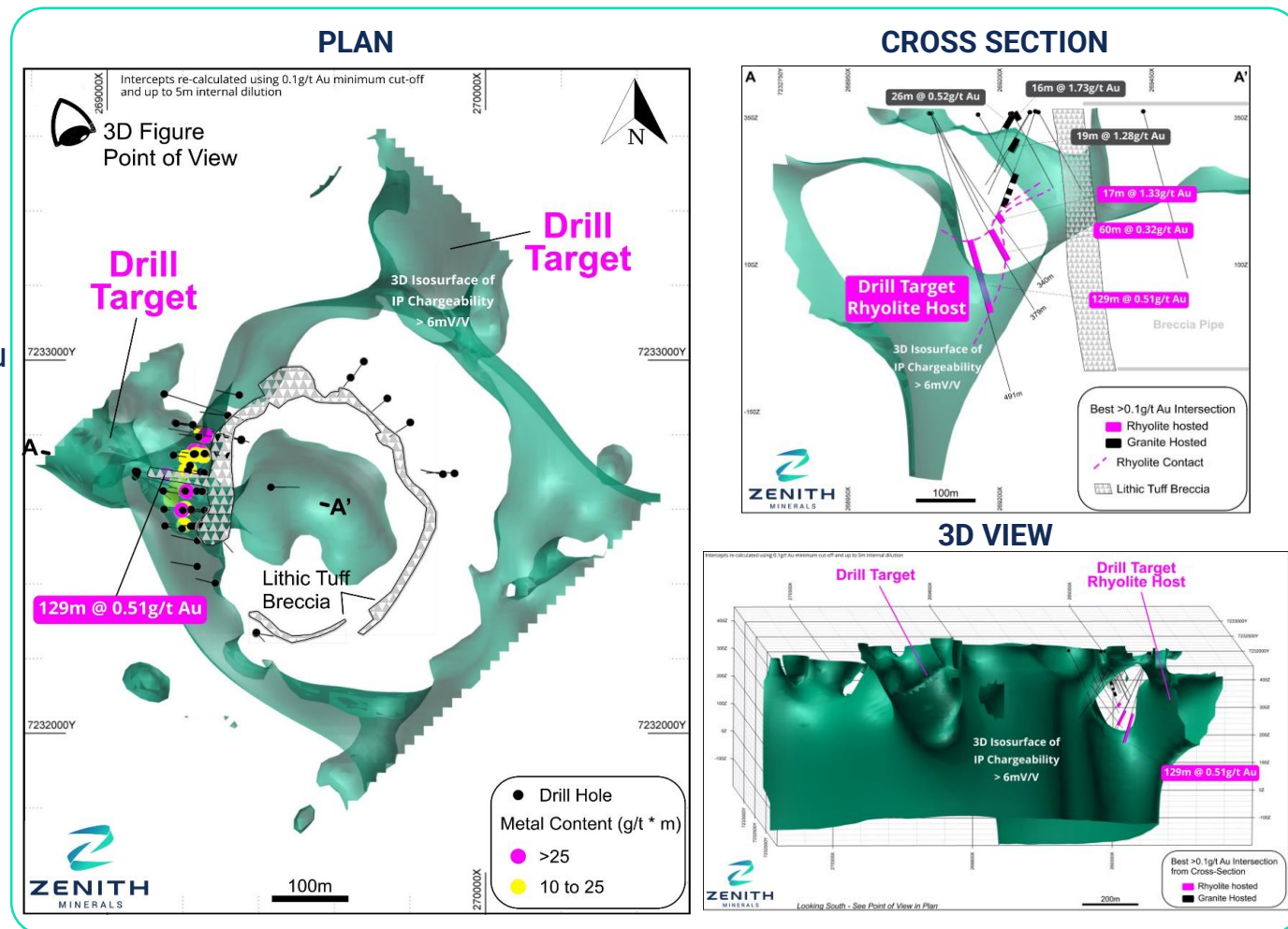
Located 400km northwest of Brisbane in central Queensland - between Cracow (Aeris Resources) and Mt Rawdon (Evolution Mining) gold mines

✓ **Compelling high-grade gold and silver intersections including:<sup>1</sup>**

- 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**

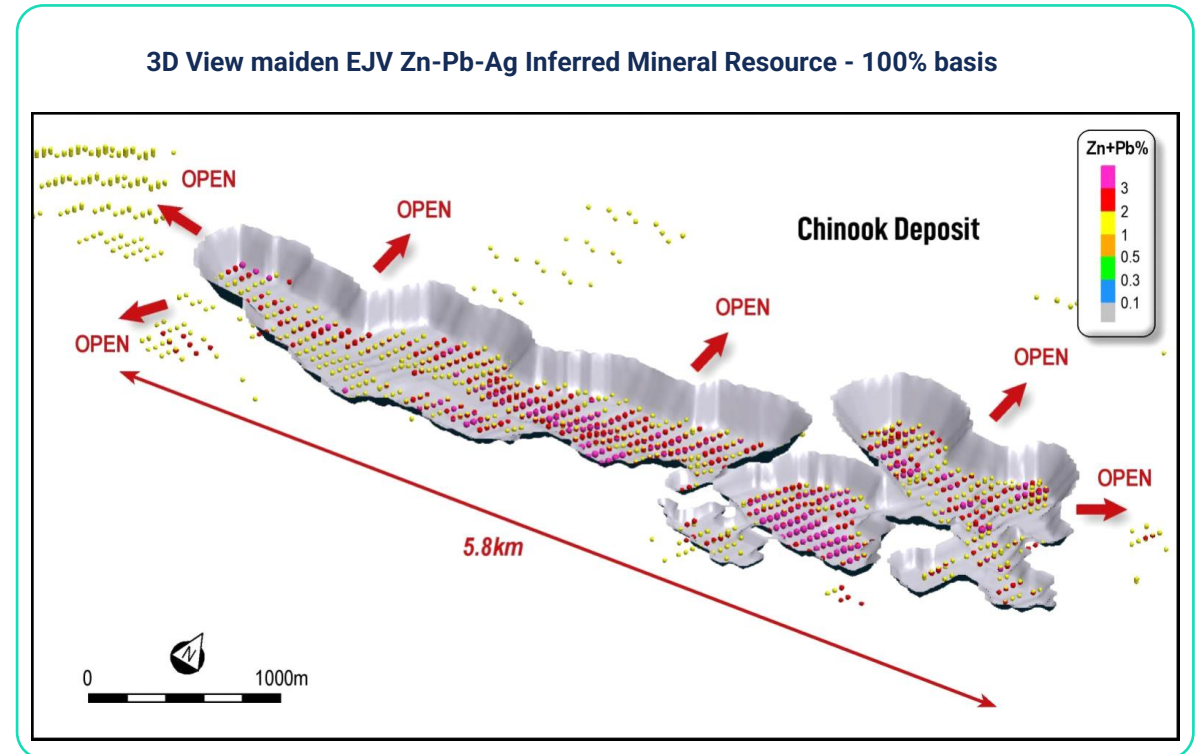
✓ **118m @ 0.54g/t Au – follow-up drilling required<sup>1</sup>**



Notes: 1. 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 holds a 25% free carried interest in the Earaheedy 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 Ag<sup>1</sup>**
- ✓ Outstanding initial flotation test work results from zinc sulphide dominant ores including<sup>\*\*</sup>:
  - 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 Earaheedy project



Notes: 1. 2% Zn+Pb cut-off - RTR ASX Release 19-Apr-23  
2. RTR ASX Release 17-Nov-22



**AUSTRALIAN-BASED  
MINERALS EXPLORER  
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TOMORROW**

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