

## Fast-Tracking Battery Metals Project Development with Landmark JV

Zenith Minerals (ZNC) is a highly capable, exploration-focused company which is set to spin out a portfolio of gold and base metals assets and focus on battery metals–exposed project origination, exploration and advancement through the Western Australia–based lithium projects, Waratah Well, Split Rocks and Mt. Ida North. Our valuation of A\$0.63/share compares favourably to the current share price of \$0.275

## Transition to Pure Lithium – EVM JV Unlocks Exploration and Development Potential

In January 2022, ZNC struck a transformational agreement with EV Metals (EVM) to form a JV facilitating earn-in arrangements for EVM over ZNC's lithium projects at Waratah Well and Split Rocks. Key milestones for EVM are the investment of A\$7m in exploration and the completion of a feasibility study within 24 months in exchange for a 60% share in the lithium project. We expect to see broader opportunities in lithium project development over time as the partnership evolves. This could facilitate real opportunities for ZNC to execute on its core strengths in project generation, supported by the depth of EVM's commercial and engineering capability. As such, ZNC is strongly positioned to add value and build a multi-asset lithium-focused business over time.

## Demerger of Mackerel Metals (ASX: MKM) – Spinning Off Gold and Base Metals

ZNC's existing gold and base metals project portfolio is the focus of a proposed demerger (primarily via an in-specie distribution) targeted for listing by October 2022 (Mackerel Metals: ASX: MKM). As part of this process, a \$10m raise has been flagged, with commitments in place for the majority of funds from ZNC, EVM and existing ZNC shareholders. We expect the demerger and raise will be well supported and form a capable, well-funded gold- and base metals–focused exploration company with a clear pathway to advance and develop the current portfolio (in particular Split Rocks Gold and Develin Creek CU/Zn) and secure other project opportunities as they arise.

## Valuation: A\$0.63/Share (Fully Diluted)

Our valuation for ZNC is A\$0.63/share on a fully diluted basis. The company is transforming into a lithium-focused business with a strong partner in EVM. ZNC's strengths in exploration and development are critical in bringing new supplies of battery metals to market. We believe ZNC is differentiated in this regard, driven by a strong leadership and an innovative JV agreement. We anticipate ZNC will position itself as a leader in battery metals projects and will benefit from robust demand. The company has strong prospects for significant value creation over time. Key risks include exploration risks, access to funding, and Mackerel spin out.



Zenith Minerals Ltd (ASX: ZNC) is an exploration company primarily focused on discovery and advancement of battery metals resource projects, primarily lithium deposits. The company also has a portfolio of gold and base metals deposits which are in the process of being demerged into a separate entity, Mackerel Metals, set for listing on the ASX in October 2022.

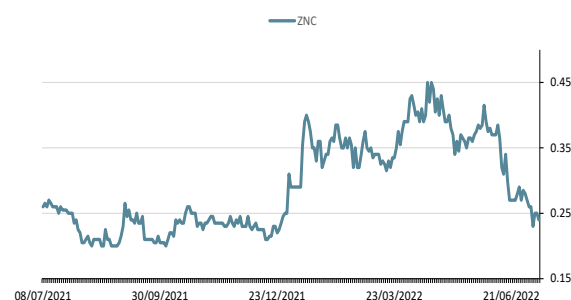
Stock	ASX: ZNC
Price	A\$0.275
Market cap	A\$95m
Valuation (per share)	A\$0.63

### Next steps

Complete MKM demerger (spin off of gold and base metals) (October 2022); Complete 45-hole drill program at Split Rocks Lithium Project (commenced July 2022); Deeper drill testing pegmatites at Waratah Well (Q32022)

[Click Here for Interview with Exec Chair David Ledger and MD Mick Clifford](#)

### ZNC share price (A\$) – 1 year



Source:Factset

Michael Bentley  
[michael.bentley@mstaccess.com.au](mailto:michael.bentley@mstaccess.com.au)

## Exhibit 1 – Zenith Minerals company summary, year-end 30 June

### ZENITH MINERALS LIMITED

ZNC.AX

#### Year end 30 June

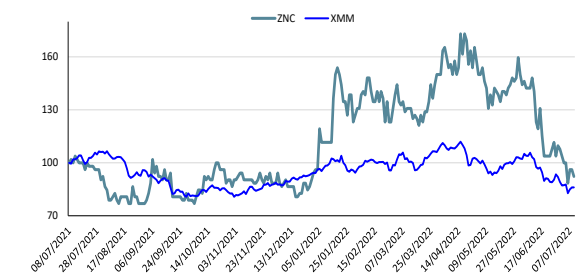
##### MARKET DATA

Share Price	A\$/sh	0.28
52 week high/low	A\$/sh	0.45 - 0.20
Valuation	A\$/sh	0.63
Market Cap (A\$m)	A\$m	95
Net Cash / (Debt) (A\$m)	A\$m	9
Enterprise Value (A\$m)	A\$m	86
Shares on Issue	m	345
Options/Performance shares	m	13
Other Equity	m	0
Potential Diluted Shares on Issue	m	358

##### INVESTMENT FUNDAMENTALS

		Jun-20	Jun-21	Jun-22e	Jun-23e	Jun-24e
Reported NPAT	A\$m	(0)	2	1	1	1
Underlying NPAT	A\$m	(0)	1	1	1	1
EPS Reported (undiluted)	¢ps	(0.2¢)	0.7¢	0.2¢	0.2¢	0.2¢
EPS Underlying (undiluted)	¢ps	(0.2¢)	0.3¢	0.2¢	0.2¢	0.2¢
Underlying EPS Growth	%	0.0%	0.0%	-28.8%	-12.8%	-6.5%
P/E Reported (undiluted)	x	n/m	n/m	n/m	n/m	174.5
P/E Underlying (undiluted)	x	n/m	n/m	n/m	n/m	174.5
Operating Cash Flow / Share	A\$	(0.00)	(0.00)	0.00	0.00	0.00
Price / Operating Cash Flow	x	(125.4)	(80.7)	56.1	56.5	56.9
Free Cash Flow / Share	A\$	(0.00)	(0.01)	0.00	0.00	0.00
Price / Free Cash Flow	x	(130.0)	(20.8)	150.9	160.3	171.2
Free Cash Flow Yield	%	-0.8%	-4.8%	0.7%	0.6%	0.6%
Book Value / Share	A\$	0.02	0.04	0.04	0.05	0.05
Price / Book	x	11.55	6.24	6.36	5.72	5.20
NTA / Share	A\$	0.02	0.04	0.04	0.05	0.05
Price / NTA	x	11.55	6.24	6.36	5.72	5.20
Year End Shares	m	243	294	345	345	345
Market Cap (spot)	A\$m	67	81	95	95	95
Net Cash / (Debt)	A\$m	1	2	2	3	4
Enterprise Value	A\$m	66	79	92	92	91
EV / EBITDA	x	(332.8)x	105.4x	95.1x	101.0x	107.9x
Net Debt / Enterprise Value		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

##### 12-Month Relative Performance vs S&P/ASX Metals & Mining



##### Profit & Loss (A\$m)

	Jun-20	Jun-21	Jun-22e	Jun-23e	Jun-24e
Sales	1	3	3	3	3
Expenses	(1)	(3)	(2)	(2)	(2)
<b>EBITDA</b>	<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
D&A	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Net Interest	0	0	0	0	0
Profit Before Tax	(0)	1	1	1	1
Tax	(0)	-	(0)	(0)	(0)
<b>Underlying NPAT</b>	<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Exceptionals	(0)	1	-	-	-
<b>Reported Profit</b>	<b>(0)</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

##### Balance Sheet (A\$m)

	Jun-20	Jun-21	Jun-22e	Jun-23e	Jun-24e
Cash	1	2	2	3	4
Receivables	0	0	0	0	0
Inventory	-	-	0	0	0
PP&E	0	0	1	2	3
Other	5	11	11	11	11
<b>Assets</b>	<b>6</b>	<b>13</b>	<b>15</b>	<b>17</b>	<b>19</b>
Creditors	0	0	0	0	0
Debt	-	-	-	-	-
Leases	0	-	-	-	-
Provisions	0	0	0	0	0
Other	-	-	-	-	-
<b>Liabilities</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Net Assets</b>	<b>6</b>	<b>13</b>	<b>15</b>	<b>17</b>	<b>18</b>

##### Cashflow (A\$m)

	Jun-20	Jun-21	Jun-22e	Jun-23e	Jun-24e
Cash From Operations	(1)	(1)	2	2	2
Interest	(0)	0	0	0	0
Tax	0	0	(0)	(0)	(0)
<b>Net Cash From Operations</b>	<b>(1)</b>	<b>(1)</b>	<b>2</b>	<b>2</b>	<b>2</b>
Capex	(0)	(0)	(0)	(0)	(0)
Exploration	-	(3)	(1)	(1)	(1)
Investments	0	1	-	-	-
<b>Free Cash Flow</b>	<b>(1)</b>	<b>(4)</b>	<b>1</b>	<b>1</b>	<b>1</b>
Equity	2	5	-	-	-
Borrowings	(0)	(0)	-	-	-
Dividend	-	-	-	-	-
<b>Net Increase / (Decrease) in Cash</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Source: ZNC, MST Access.

## Investment Thesis:

### Strong Lithium Project Strategy Underpinned by Landmark JV

#### Value-Focused Exploration and Development Company with a Strategic Edge

ZNC has a strong capability and commitment to a strategy of generating new resource projects, with a focus on battery metals-linked commodities: specifically, lithium. ZNC is differentiated by its leadership team which has a track record of taking projects from exploration onto development as well as executing innovative transactions. This gives ZNC an important advantage in project development within a market that is in need of new supplies of critical minerals. We believe that ZNC is strongly positioned for technical success and shareholder value creation.

#### Positioning for the Electrification Revolution: Key JV with EVM

ZNC has a portfolio of gold and base metals projects which is being prepared for a de-merger over the coming months. The company has focused on lithium as well as 'EV-related metals' after striking a landmark JV agreement in January 2022 with EV Metals Group (EVM). EVM is developing an integrated battery chemicals complex in Saudi Arabia, which will require significant supplies of high-quality raw materials when in production. As such, the EVM's agreement with ZNC is aimed at developing a long-term relationship with a company which has a strategic edge in identifying potential mineral deposits with high prospects of becoming reliable suppliers of required feedstock materials.

The partnership with EVM represents a major breakthrough for ZNC. It provides a potential major customer, as well as access to funding to accelerate the project discovery and advancement cycle which is fundamental to ZNC's value proposition.

Lithium prices have increased substantially in 2022, as demand from the electrifying automotive industry and an increased focus on broader battery demand for other household/industrial usage (e.g. household electricity storage) gains traction. Australia has become the world's largest exporter of mined lithium, positioning ZNC at the forefront of one of the most prospective, structurally advantaged greenfield resource project development geographies globally.

#### Key Asset Overview

##### Lithium joint venture with EVM: Split Rocks and Waratah Well

ZNC is the 100% owner of two Western Australian lithium projects: Split Rocks and Waratah Well. These assets, in conjunction with an exploration tenement at Mt Ida, underpin the JV agreement with EVM, where EVM will fund a minimum of \$7m exploration as well as the completion of a feasibility study within 24 months in return for a 60% equity stake in the assets. These assets remain at an early stage of development, with the current focus being investment in drilling of lithium-bearing pegmatites.

##### Mackerel Metals (MKM) demerger: gold and base metals spin-off

ZNC retains a broad portfolio of prospective gold and base metals assets including Earahedy (Western Australia, 25% interest), Red Mountain (Queensland, 100% interest), Cowarra (NSW, initial 22.5% interest), Split Rocks Gold (WA, 100% interest) and Develin Creek (Queensland 100% interest). After signing the EVM JV agreement, ZNC decided to spin out its gold and base metals portfolio to a dedicated management team in order to pursue a lithium-focused strategy within ZNC. The demerger is scheduled for completion by October 2022, along with a \$10m capital injection largely accounted for by existing stakeholders, shareholders, EVM and Zenith. We see significant opportunity in the spun-out entity, Mackerel Metals (MKM). Obtaining exposure to ZNC shares ahead of the in-specie distribution provides additional optionality and exposure to a solid portfolio of gold and base metals projects in development.

## Summary of Recent Events (CY2022, Year to Date)

- July 2022 – commenced 45-hole drill program at Split Rocks lithium project
- July 2022 – Earraheedy drilling update, strong zinc and lead results
- July 2022 – Waratah Well new lithium pegmatites intersected
- June – high-grade drill results from Split Rocks Gold (Dulcie Far North)
- May – high-grade drill results at Earraheedy Zinc-Lead; Mt Ida North lithium project secured; Waratah Well lithium project commences drilling
- April – significant lithium drilling results at Split Rocks
- January – lithium JV with EV Metals (EVM) agreed including A\$6m placement to EVM

## Valuation – A\$0.63/Share (Fully Diluted)

### Potential near-term catalysts and timing

- July 2022 - receive and release results of drill-tested pegmatites at Waratah Well
- Q3 CY2022 – results from Split Rocks drilling programme
- October 2022 – complete MKM demerger
- 2023/2024 – under JV agreement, EVM to complete \$7m exploration spend and feasibility study on lithium assets

### Valuation methodology and considerations

Our valuation for ZNC is A\$0.63/share, based on a sum-of-the-parts framework. Key assumptions underpinning this valuation are a conceptual mine plan at Earraheedy and comparable company valuations which we have used to infer a value for ZNC's lithium assets.

ZNC is primarily leveraged to lithium, but also copper and zinc ahead of the demerger of MKM as a separate stand-alone business. While the strength in the underlying commodity prices are crucial to the economic viability of any potential project, exploration success is equally important to the valuation given the projects' early-stage nature. Potential value creation rests primarily upon capable strategic execution from ZNC's management team; we believe management is deeply experienced and capable at resource project generation. The company's assets are wholly located in Australia, a highly attractive and supportive jurisdiction for mining developments, particularly those that relate to decarbonisation.

### Key risks and sensitivities

Key risks include exploration risks, access to funding, project approvals, and escalation in capital and operating costs. Key sensitivities include market prices for lithium, copper and zinc; international exchange rates; and interest rates and the associated implications for discount rates.

## Financials – JV Agreement With EV Metals Provides Funding Through to Mining

At 31 March 2022, ZNC had A\$9.3m in cash as well as A\$7.8m of equity investments (nil debt). As such, the company is well funded, financially stable and positioned to advance the base metals portfolio ahead of the proposed demerger as well as consider the acquisition of further lithium opportunities as they arise.

The January 2022 JV with EVM is highly significant, underpinning ZNC's funding requirements for the program of development works required for the key Western Australian lithium projects over the next 24 months. The agreement states that, within 24 months, EVM will both solely fund the completion of a feasibility study and spend a minimum of A\$7m on exploration at the projects (Waratah Well and Split Rocks) before being able to voluntarily withdraw from the agreement. In exchange, EVM will earn a 60% interest in the lithium rights in exchange. On completion of a feasibility study, ZNC and EVM will form a JV after which each entity will fund their equity shares in the project construction cost. EVM will arrange all financing for construction (including ZNC's share) and ZNC will repay its proportionate share of project financing from its share of minerals produced, ZNC can fund itself to earn an immediate cash generating share.

As a result, ZNC has no funding requirements at its flagship lithium assets over the next 24 months as the feasibility study is completed by EVM. This extends through to production given the requirement for EVM to arrange ZNC's share of project financing which is to be repaid from mineral production.

ZNC's management has clearly and carefully considered the terms of the agreement, which facilitate a free-carried interest in a potentially significant lithium development while enabling ZNC to focus on its core capability in exploration and new project generation. Given ZNC's current market capitalisation (~A\$110m), the company is likely to have considerable access to the funding required to acquire and advance other lithium prospects as they arise. Overall, the JV agreement has put ZNC in a favourable funding position to execute on its strategic objectives.

## Company & Asset Overview: A Strategic Pivot to Battery Metals/Lithium

ZNC is an exploration company based in Australia with 100% of its asset base located in Western Australia and Queensland. It has an extensive gold and base metals portfolio. However, the company has recently indicated that going forward its focus will be on lithium assets, with its gold and base metals assets to be demerged via an in-specie distribution to existing shareholders. This strategic shift is driven by ZNC's recent landmark JV agreement with EV Metals Group.

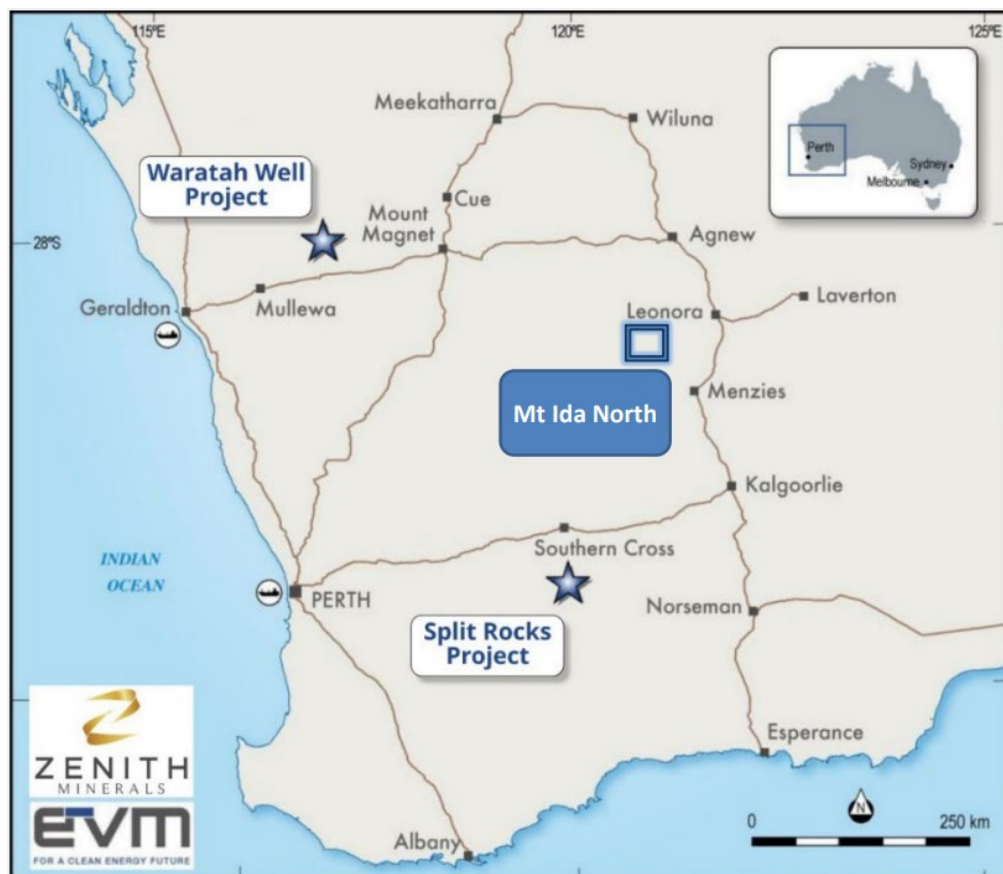
### Lithium Projects – The Future Focus

A near-term plan is underway to complete the demerger of ZNC's gold and base metal assets into a new company, Mackerel Metals (MKM), to be listed on the ASX in October 2022. This strategic decision came about through ZNC's new partnership with EV Metals Group, announced on 13 January 2022.

ZNC's strategy post the demerger will be a dedicated focus on battery metals-linked commodities, specifically lithium. The company currently has three lithium projects in Western Australia:

- the Split Rocks project, 100% owned by ZNC and folded into JV with EV Metals
- the Waratah Well project, 100% owned by ZNC and folded into JV with EV Metals
- the recently acquired Mt Ida North project, announced in May 2022; being assessed under a separate arrangement with EV Metals under the Australian Lithium Alliance

Exhibit 2 – Project portfolio summary for lithium assets in Western Australia



Source: Company reports.



## Split Rocks Lithium Project

Zenith has been systematically exploring the Split Rocks project for lithium within landholdings of approximately 660 sqkm in the Forresteria greenstone belt. Split Rocks is a large scale, emerging lithium prospective project with multiple target areas containing thick pegmatites. It is along strike from SQM Wesfarmers Covalent JV at Mt Holland/Earl Grey lithium deposit containing a Measured, Indicated & Inferred Mineral Resource of 189Mt @ 1.5% Li<sub>2</sub>O (currently under construction).

The Split Rocks project has returned high-grade lithium mineralisation at the Rio pegmatite target (see Exhibit 3).

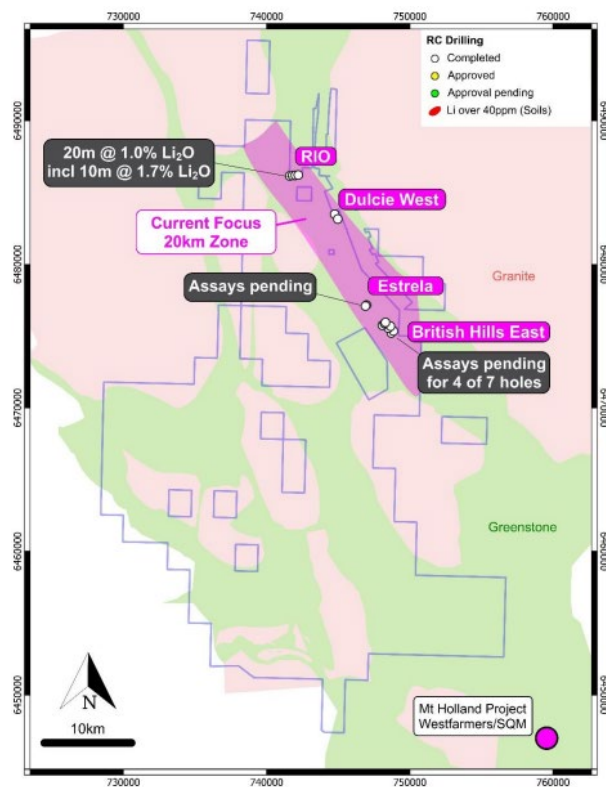
Assays for the **Rio** pegmatite target (the first target drill tested in the current program), returned wide, high-grade lithium mineralisation. This area of the project tenement has become a focus of the ongoing drilling campaigns.

A single line of 4 RC holes was drilled at 200m spacing to follow-up on historical diamond drilling that intersected a flat-lying pegmatite, located 400m northwest. The pegmatite in historical diamond holes was up to 65m thick with strongly anomalous lithium. Individual pegmatites are up to 55m in thickness, assuming a flat lying, stacked interpretation. Thick pegmatites were intersected in each of the 4 new holes, all containing anomalous lithium levels >0.1%Li<sub>2</sub>O. Individual pegmatites are up to 55m in thickness, assuming a flat lying, stacked interpretation.

The key result was

20m @ 1.0% Li<sub>2</sub>O, including 10m @ 1.7% Li<sub>2</sub>O

Exhibit 3 – Split Rocks lithium project map



Source: Company reports.

### New 45 Hole Drilling Programme

A fully permitted program of 45 initial RC holes (~9,000 metres) has commenced to follow-up on the thick, high-grade lithium mineralisation intersected in the maiden drill program at the Rio pegmatite prospect). Project-wide geochemical screening programs are also underway at Split Rocks with crews working towards systematically sampling all the prospective portions of the 660km<sup>2</sup> land package. Over 4,000 new samples collected to date, with an update on results expected shortly. Drilling of the initial 45 holes is anticipated to take approximately 6 weeks, with an additional 40 holes contingent on permitting and results of the first round of drilling.

## Waratah Well lithium project

The Waratah Well Project is located approximately 20km northwest of the regional town of Yalgoo in the Murchison Region of Western Australia.

### Brief History Of Waratah Well

Tantalum and locally lithium bearing pegmatite sills and dykes crop out over a 3km x 2km area with a range of dips. Lithium rock chip sample grades up to 2.09% Li<sub>2</sub>O in the north-western portion of the target area. The key lithium target is the blind lithium spodumene mineralisation beneath the tantalum bearing dykes, a geological architecture similar to that noted at the Bald Hills lithium mine and similar picture is also noted at Liontown's Kathleen Valley lithium project whereby relatively narrow surface pegmatite dykes merge at depth to form a thick flat lying lithium spodumene rich sill.

### Recent Drilling at Waratah Well – Near Surface Lithium

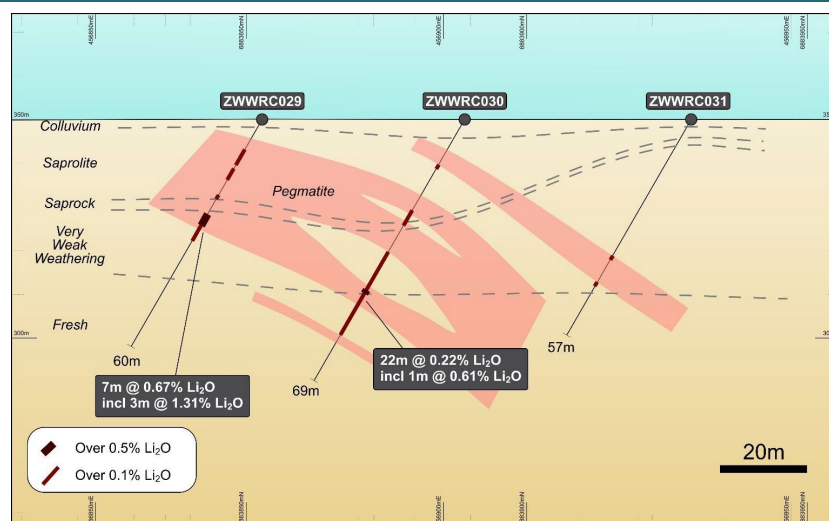
An initial phase of 7 wide-spaced (1km spacing) RC drill holes were completed in early 2022 to test the zone (>3km x >2km) of outcropping lithium-tantalum rich pegmatite dykes. That initial drilling program confirmed the presence of widespread lithium bearing pegmatite dykes over a 4km zone, open to the north and east under soil cover. Individual drill holes intersected up to 21 cumulative metres of pegmatite, with individual pegmatites up to 11 metres in thickness.

A recent drilling campaign was a total of 47 new, slimline RC holes (average depth 48m, max depth 90m) completed for a total of 2,267m. The holes were drilled on 4 fences to provide reasonable coverage of the target area. The presence of pegmatites was confirmed, with 22 out of the 47 holes intersecting pegmatites, ranging in thickness from 1m up to 24m, the thickest pegmatite identified in the project area to date. Key results were:

- 7m @ 0.67% Li<sub>2</sub>O, **including 3m @ 1.31% Li<sub>2</sub>O** in fresh rock at the base of a 24m thick pegmatite. Upper portion of pegmatite strongly weathered and possibly depleted in lithium.
- 22m @ 0.22% Li<sub>2</sub>O **including 1m @ 0.61% Li<sub>2</sub>O**, upper portion of the pegmatite also weathered.

Analysis shows that the lithium minerals, of the better mineralised zones, are dominantly petalite with only minor lithium mica and holmquistite. The chemistry and conditions of formation of petalite are more like those of spodumene (the target lithium mineral). The intersection of thick pegmatite containing ore grade petalite (3m @ 1.31% Li<sub>2</sub>O) is considered as a positive step forward in understanding the zonation of lithium at Waratah Well. Deeper RC drilling is now planned to test these petalite rich pegmatites at depth and across strike.

### Exhibit 4 - Waratah Well Lithium Prospect Area



Source: Company reports.



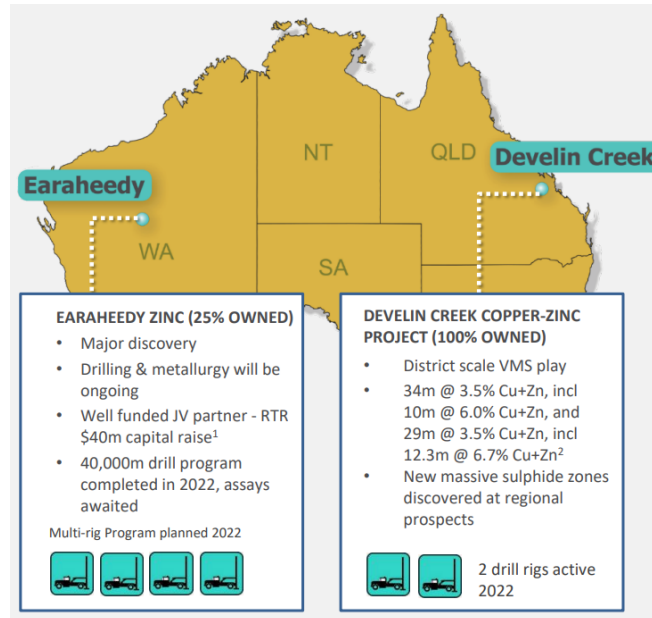


## Base Metal Projects

ZNC has two base metal projects:

- the 100%-owned Develin Creek project
- the Earraheedy Joint Venture, in which ZNC owns a 25% free-carried interest (Rumble Resources owns 75%).

Exhibit 6 – Project portfolio summary for base metals assets



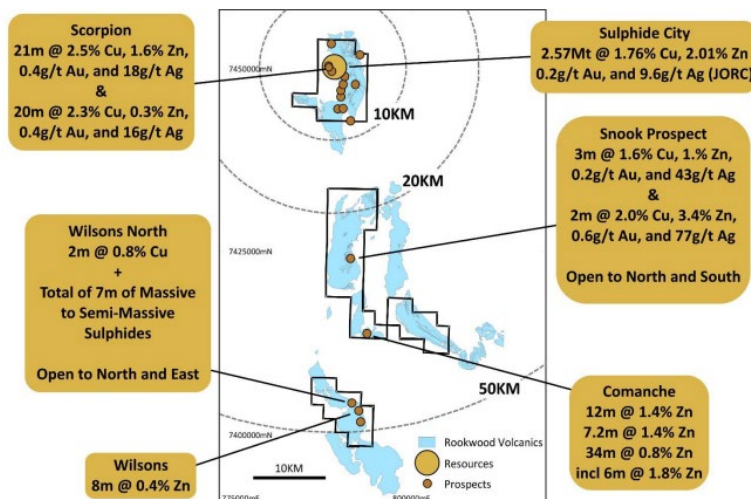
Source: Company reports.

### Develin Creek – copper–zinc project, Queensland

The 100%-owned Develin Creek project, located 80km north-west of Rockhampton, is host to several high-grade volcanogenic massive sulphide (VMS) deposits within the Rookwood Volcanics. In December 2021, a massive copper–zinc sulphide deposit was intersected at both the Wilsons North and Snook prospects. Further high-grade copper–zinc drill results were announced at Sulphide City including the highest-grade zinc intersection for the project to date returning 9m @ 1.8% Cu, 18.1% Zn, 0.6 g/t Au and 28.4 g/t Ag.

The deposit has an Inferred Mineral Resource of 2.57Mt @ 1.76% Cu, 2.01% Zn , 0.24g/t Au and 9.6g/t Ag for a Cu equivalent of 2.62%.

Exhibit 7 – Develin Creek outline and areas subject to drill testing in 2021



Source: Company reports.

## Earaheedy Zinc Project – joint venture with Rumble Resources (ASX: RTR)

### Earaheedy Zinc Project – 3D Flyover

Below is a link to a flyover for the Earraheedy project

<https://inventum3d.com/c/rumble/earraheedy>

Source: Rumble Resources

### Earaheedy Overview

Located approximately 110km north of Wiluna, Western Australia, the Earraheedy project spans an area covering the unconformity contact between the overlying Frere Iron Formation and underlying Yelma Formation of the Paleoproterozoic Earraheedy basin. ZNC has a 25% interest in the project, with ZNC's share free carried up until the completion of a bankable feasibility study. Three prospects have been defined, located approximately 18km apart, with the potential to join up upon further drill testing.

Joint venture partner Rumble Resources (ASX: RTR) has outlined an Zn-Pb exploration target for the project in the range of 100–120m tonnes at a grade ranging 3.5–4.5% Zn-Pb. The exploration target is at a shallow depth (120m), and over 40kms of prospective strike (completely open), which is an assessment of the potential of large-scale Zn-Pb deposits based on the results from drilling to date.

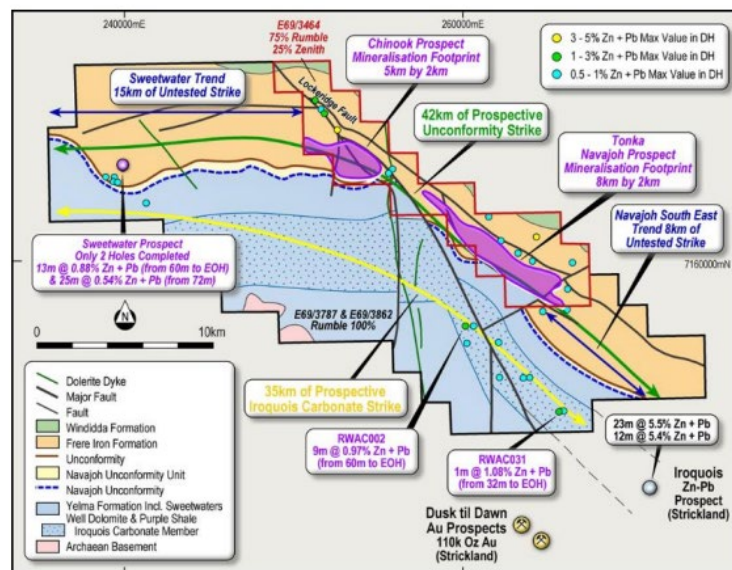
On 26 May 2022, RTR announced details of multiple new high-grade Zn-Pb zones defined at the Tonka and Chinook prospects. The Tonka Zn-Pb-Ag prospect has high-grade Zn-Pb mineralisation intercepted in the newly identified Colorado Zone. Additionally, the newly recognised Magazine Zone links the Tonka and Navajoh prospects. Chinook and Tonka have a combined strike of 13km and 2km cross strike, which remain open in all directions and at depth.

Higher-grade zones within the mineralised Navajoh Unconformity Unit and underlying dolomite (Sweetwater Well Dolomite – formerly Navajoh Dolomite) are associated with multiple inferred feeder faults/zones that are oriented both northwest and east-west.

The Tonka and Navajoh Prospects are linked by higher-grade east-west feeder fault zones within a large 8km x 2km northwest trending mineralised footprint that remains open in all directions. Two mineralised feeder faults/zones (Colorado and Magazine) have been outlined to date, with the opportunity to define multiple additional

The Chinook Prospect is a large 5km by 2km northwest trending mineralised footprint which remains open in all directions. Higher-grade zones associated with both northwest and east-west trending feeder structures with two principal feeder zones (Kalitan and Spur) interpreted to date.

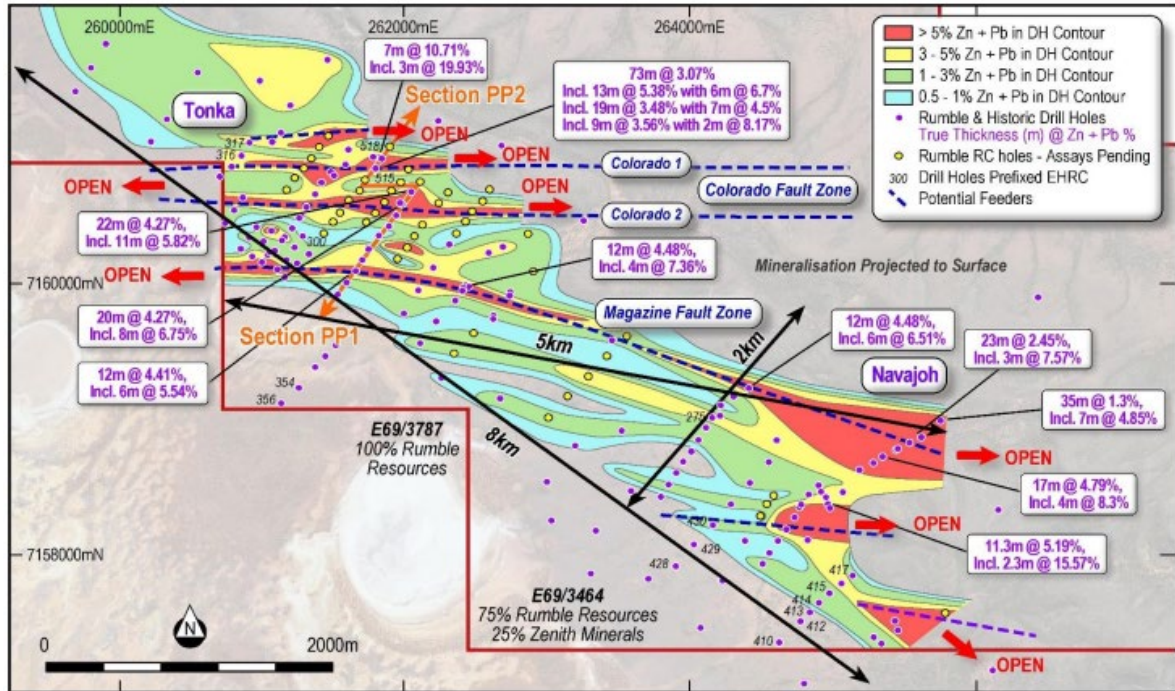
Exhibit 8 – Earraheedy Prospectivity Map – ZNC JV Outlined in Red



Source: Company reports.

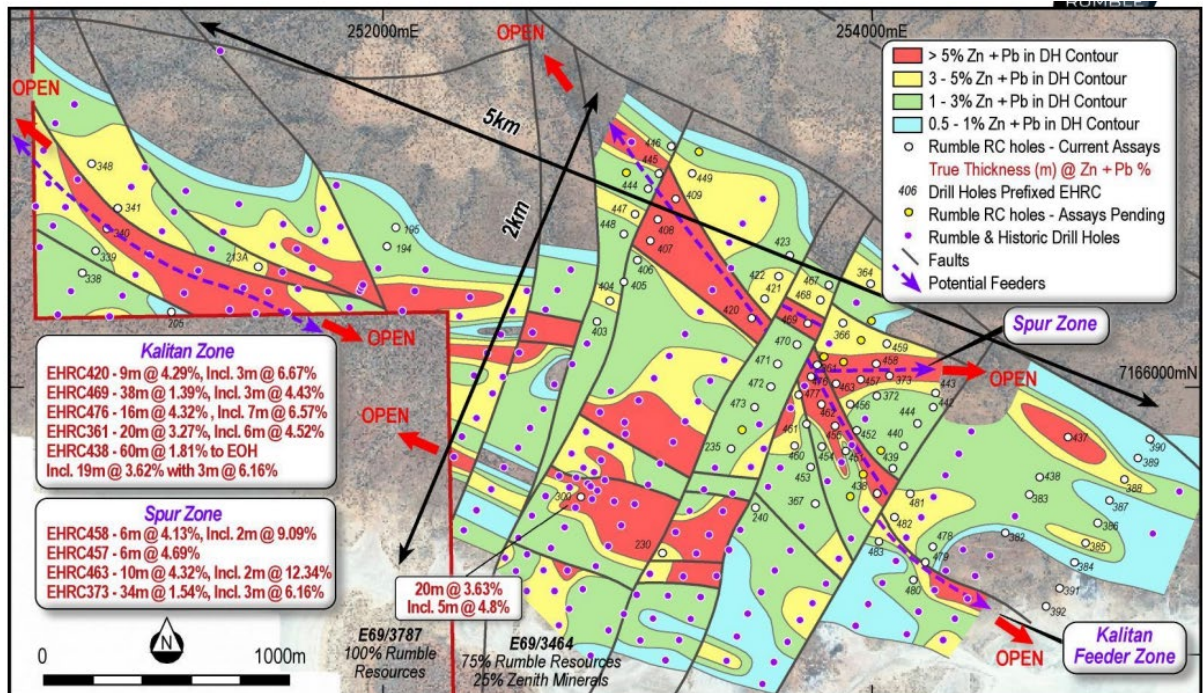


Exhibit 9 – Earaaheedy Tonka-Navajoh Prospect – drilling results



Source: Company reports.

Exhibit 10 – Earaaheedy Chinook Prospect – drilling results

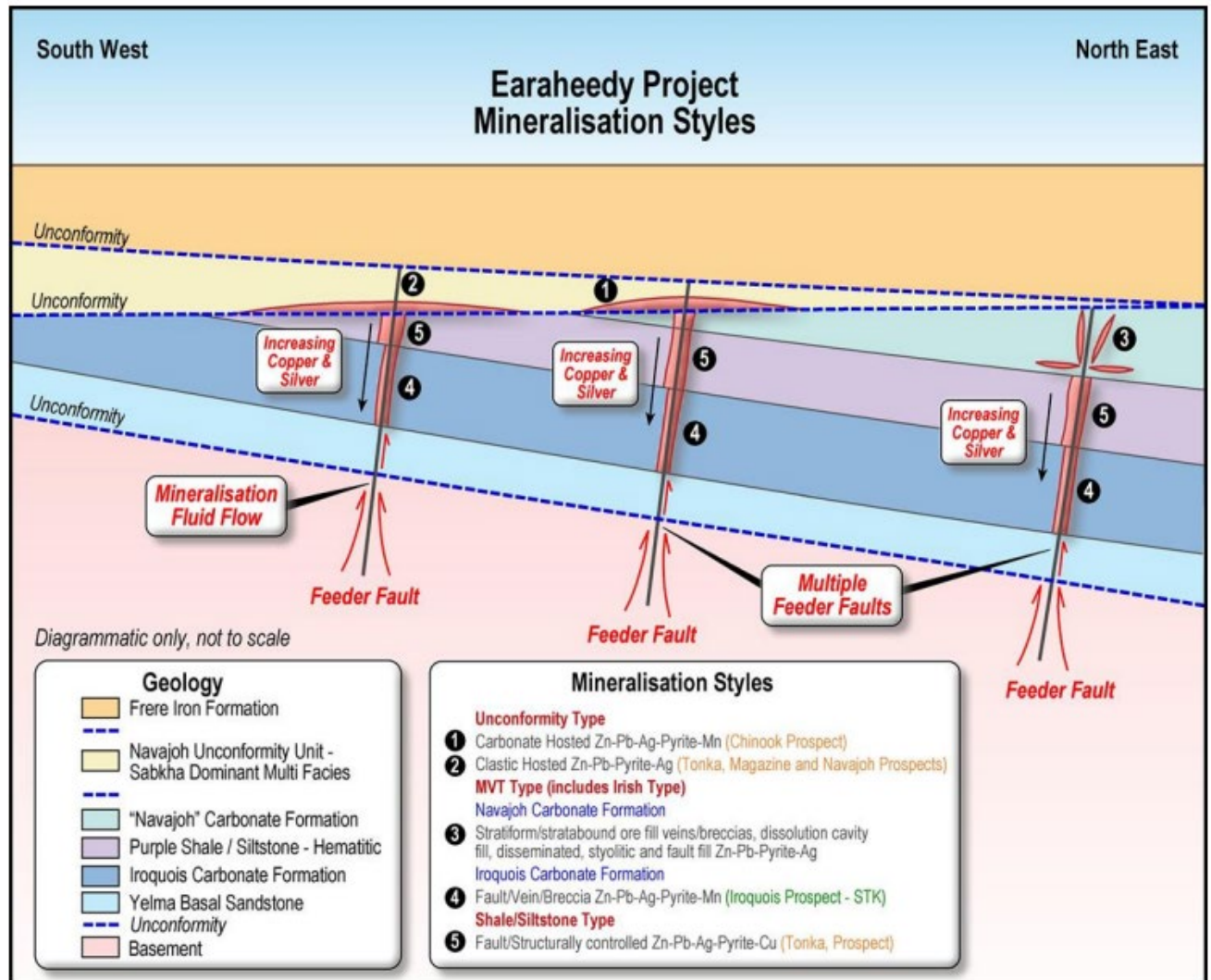


Source: Company reports.

## Earaheedy Project – Multiple Mineralisation Styles

The overall geological deposition model for the Earaheedy Base Metal Province is continually evolving with some five (5) styles of mineralisation identified. A least four of these styles have been defined within the Earaheedy Project and based on recent drilling completed by Strickland Metals. The current drilling has outlined laterally extensive flat lying unconformity related zinc-lead-silver sulphide mineralisation at the Chinook, Tonka-Navajoh Prospects.

Exhibit 11 – Earaheedy Multiple Mineralisation Styles



Source: Company reports.

### Upcoming Activity at the Earaheedy Project Tonka Navajoh Prospect

- Extension and infill RC drilling along the new high-grade Colorado Zone
- Extension and infill RC drilling along the high-grade Magazine Zone

### Upcoming Activity at the Earaheedy Project Chinook Prospect

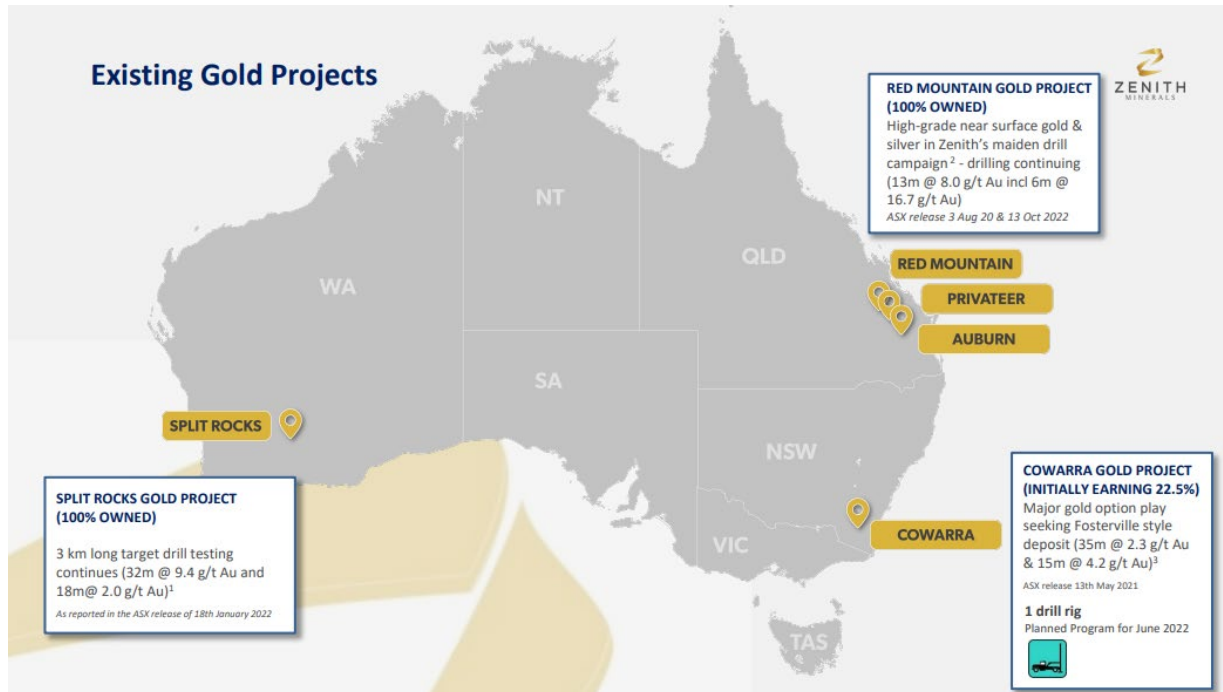
- RC infill and extension drilling to delineate further shallow high-grade Zn-Pb mineralisation in the Kalitan Feeder Zone and within the recently interpreted east-west trending mineralised "feeder" structures, including the Spur Zone



## Gold Projects – Five Projects Across Australia

ZNC continues to explore and evaluate five gold projects across Queensland, New South Wales and Western Australia. This includes two recently acquired Queensland projects, both 100% owned by ZNC: the Privateer Gold Project announced in March 2022 and the Auburn Gold Project announced in April. However, neither site has been explored recently so the potential of these projects is largely unknown.

Exhibit 12 – Project portfolio summary for gold assets



Source: Company reports.

## Gold projects – Queensland

**Red Mountain gold project located near large deposits:** The 100% ZNC-owned Red Mountain project is located in central Queensland between two existing operational gold mines: Cracow (a low-sulphidation epithermal gold deposit owned by Aeris Resources) and Mount Rawdon (an epizonal intrusion-related gold deposit owned by Evolution Mining).

The Red Mountain project continues to provide encouraging high-grade gold drilling assay results through ongoing exploration activity. Gold and silver drilling results have returned results including:

- 13m @ 8.0 g/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 Au
- 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 Au from surface, incl. 4m @ 4.9 g/t Au
- 7m @ 4.4 g/t Au.

Drilling at Red Mountain is scheduled to recommence in the second half of 2022 to follow up on these high-grade near-surface gold and silver deposits that have been intersected in the drilling programs so far.

**Other Queensland gold projects in same area:** The recently acquired Privateer and Auburn projects are located in close proximity to the Red Mountain project and both these new projects have had high-grade gold confirmed at surface through sampling.

## Cowarra Gold Project – New South Wales

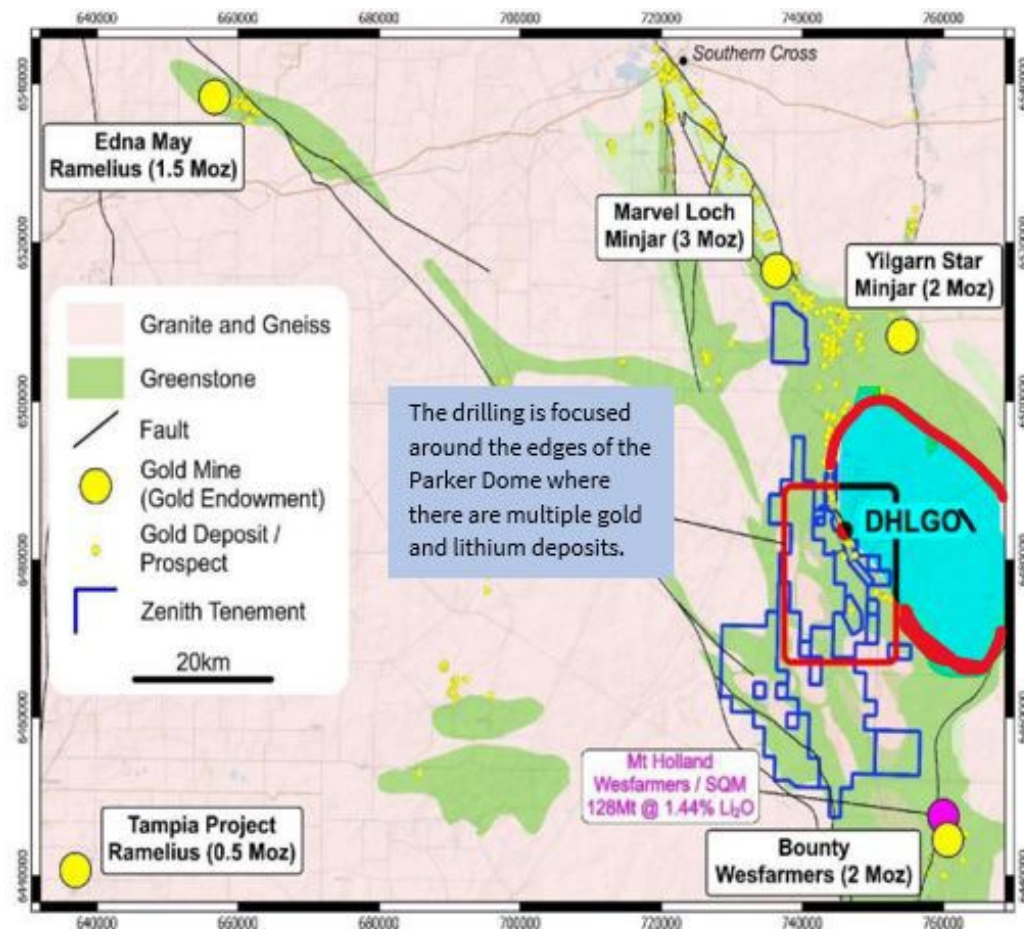
ZNC has a 22.3% interest in the Cowarra Gold project (with the potential for this to increase to 47%). The project is located south-east of Cooma in New South Wales. This equity share in the project is reflected by a holding in Oxley Resources, an unlisted entity. It consists of a single granted exploration licence and is made up of gold zones hosted in the Lachlan Orogenic Belt sedimentary rocks associated with gold mineralised strike extensive zones. 1200m drilling programme is in progress.

## Split Rocks Gold Project – Western Australia

The 100%-owned Split Rocks project is located approximately halfway between Perth and Kalgoorlie within the Southern Cross region in the Forrestania greenstone belt. This is a recognised gold district with a gold endowment of 10Moz around the Parker Dome. Management has recognised the potential for both large-scale gold and lithium deposits. Focusing on gold deposits, ZNC has identified 18 high-quality drill targets in the north-eastern portion of the project area. To date, drilling has been conducted on 14 targets, from which 6 prospects have returned outstanding results:

- Dulcie North: 32m @ 9.4 g/t Au, incl. 9m @ 31.4 g/t Au
- Dulcie Laterite Pit: 2m @ 14.5 g/t Au, 18m @ 2.0 g/t Au, 14m @ 3.5 g/t Au, 3m @ 17.9 g/t Au
- Estrella: 2m @ 9.8 g/t Au
- Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au, 4m @ 10.2 g/t Au
- Water Bore: 3m @ 6.6 g/t Au
- Scott's Grey: 8m @ 4.1 g/t Au, 12m @ 1.7 g/t Au.

Exhibit 6 – Split Rocks project map and regional gold endowment



Source: Company reports.

## Additional Assets

ZNC holds investments in various listed and unlisted companies, which have primarily been initiated as a result of project-based transactions. ZNC also has approximately a 20% interest in the Turkish-based Kavaklitepe Gold project.

### Investments

ZNC's investment holdings include: % ownership

- 43.9m shares @ £0.073 in Bradda Head Holdings Limited (AIM: BHL) Value A\$5,575m
- 2.5m shares @ A\$0.23 in American Rare Earths (ASX: ARR) – Value A\$0.575m
- 3.88m shares @ A\$0.245 in Rumble Resources Limited (ASX: RTR) – Value A\$0.95m
- 0.5m shares @ A\$0.125 in Nickel-X Limited (ASX: NKL) – Value A\$0.07m
- 1.25m shares @ A\$0.195 in Bindi Metals Limited (ASX: BIM) – Value A\$0.58m
- 7.88m shares @ £0.066 in Alien Metals Limited (AIM: UFO) – Value A\$0.09m

Total value of investments is A\$7.83m

### Kavaklitepe Gold Project

Drilling at the two prospect areas at the Kavaklitepe Gold project in Turkey has returned encouraging results. ZNC owns a ~20% stake in the project, however, the company is seeking to divest its share. This potential divestment would follow the recent project disposal of the non-core Flanagans copper-gold tenement in Queensland, the Jackadgery gold project in New South Wales and the divestment of ZNC's stake in the Vivash Gorge iron ore project in Western Australia.

## ZNC's Flagship JV Agreement – EV Metals Group

In January 2022, Zenith Minerals Limited (ZNC) entered into an agreement to form a lithium joint venture (JV) with EV Metals Group plc (EVM) to explore for, mine and process mineral resources containing lithium and other battery metals (JV Agreement). EVM is a global battery materials and technology company committed to a clean energy future. The JV Agreement provides for ZNC to be developed as a pure lithium company focused on lithium and related battery metals listed on ASX.

### EVM Joint Venture Agreement

The JV Agreement includes ZNC's 100% owned Split Rocks and Waratah Well lithium projects (Initial Projects) and provides each party with the non-exclusive rights to introduce additional projects containing lithium and other battery metals (Lithium Minerals) to the JV. Both Initial Projects are 100% owned by ZNC with EVM earning a 60% interest of the rights to all Lithium Minerals in each project by sole funding the completion of the feasibility studies up to the decision to mine within 24 months from the start of the JV Agreement. EVM is required to arrange 100% of the financing for the capital costs of development, construction and commissioning of any future mine, processing plant and related infrastructure (including ZNC's share). ZNC will repay its proportional share of the project financing from its share of production.

EVM is required to spend a minimum of \$7M on exploration for Lithium Minerals in each of the Initial Projects within 24-months. If EVM fails to complete its minimum expenditure obligations, it will be deemed to have withdrawn from the projects and will not earn an interest in the project lithium rights. As part of the execution of the JV agreement between Zenith and EVM, a placement of \$6m was taken up by EVM by way of the issuance of 20m shares in Zenith at \$0.30, a 20% premium to vwap at the time.

The strategic plan for ZNC is to focus on battery metals projects and EVM has shown interest in expanding its exposure to a broader asset base from the start of the initial JV agreement. In May 2022, ZNC and EVM added a third project with the acquisition of the Mt Ida North lithium project under an option to purchase agreement. The JV agreement requires each party will fund its share of costs of the development of each lithium project in Australia on the basis of 40%/60% ZNC/EVM respectively.

### Australian Lithium Alliance: An Alternative to Chinese Dependence

In January 2022, EVM launched the Australian Lithium Alliance (ALA), a strategic initiative to partner with Australian lithium companies to accelerate the exploration, development, mining, processing and production of Lithium Minerals in Australia. The ALA also offers life of mine offtake agreements for spodumene concentrate containing 6% lithium oxide (SC6) as an alternative to Chinese chemical processing companies that dominate the purchase of SC6 from Australia. The Lithium JV with ZNC is the first entered into by ALA which will promote the development of ZNC as major producer of SC6 in Australia. In May 2022, the Lithium JV was extended to include the recently acquired Mt Ida North lithium project which falls within ALA but is part of a separate agreement with EVM.

### EV Metals Group: A Global Partner with Significant Midstream and Downstream Processing Capacity in Development

The strategy of EV Metals Group is positioned to become a global leader in battery materials and technology.

EVM's unique business model is based on the upstream, midstream and downstream integration of proprietary supply chains. EVM is fast-tracking the staged development of midstream and downstream processing facilities for production of high purity chemicals and cathode active materials (CAM) containing lithium, nickel, cobalt, manganese and other metals required in rechargeable batteries used in electric vehicles and renewable energy storage.

EVM is developing transparent and geopolitically aligned supply chains targeting electric vehicle and battery cell manufacturers in high growth markets across UK, Europe and the Kingdom of Saudi Arabia (KSA).

EVM is based in Western Australia with over 100 personnel at offices and facilities in Perth, KSA, UK, Germany and Poland. The key executive and management team have over 180 years of combined experience in midstream and downstream processing of minerals, metals and chemicals for global markets and upstream integration through exploration and mining.



## Upstream Integration of Supply Chains

EVM is fast-tracking the upstream integration and development of supply chains for critical raw materials containing lithium, nickel, cobalt, manganese and other metals from Western Australia.

EVM participates in the ownership, mining and processing of mineral resources to secure long term supplies of critical raw materials through acquisitions, joint ventures and offtake agreements.

EVM owns 100% of Range Well Ni Co Resources located in the Mid West of Western Australia which contain over 2.3 million tonnes of nickel and over 145,000 tonnes of cobalt – the largest inventory of nickel cobalt in one deposit in Australia.

## Midstream Production

EVM is currently developing the world's first integrated Battery Chemicals Complex at Yanbu Industrial City in the Kingdom of Saudi Arabia which will produce high-purity chemicals from intermediate products from upstream supply chains required in the downstream production of cathode active materials.

Yanbu provides a strategic location adjacent to a deep-water port on the Red Sea and ideally situated for importing raw materials and exporting battery chemicals to target markets. The Battery Chemicals Complex comprises staged development and expansions of a Lithium Chemicals Plant, a Nickel Chemicals Plant and Cathode Active Materials Plant.

Exhibit 12 – EVM's Yanbu Planned Plant Saudi Arabia



Source: Company reports.

## Downstream Production

In May, EVM entered into definitive agreements to acquire the global assets comprising Battery Materials Business and Technology of Johnson Matthey plc for £50m. This strategically positions EVM as the only battery materials and technology company outside of China building midstream and downstream processing capacity for the production of CAM based on upstream integration of supply chains for critical raw materials containing lithium, nickel, cobalt, manganese and other metals.

The global assets comprising Battery Materials Business and Technology include:

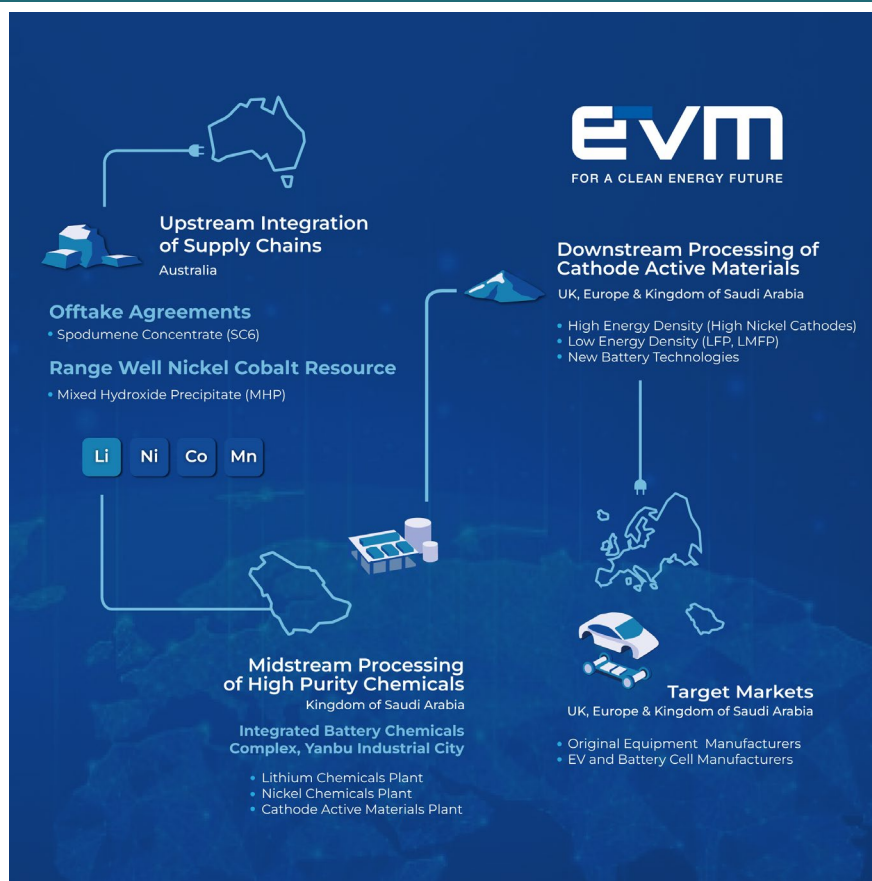
- Battery Technology Centres at Oxford and Billingham in UK and Moosburg in Germany;
- 7 CAM process technologies (4 x LFP, LMFP, NMC, eLNO);
- 3 Laboratories;
- 2 Pilot Plant Facilities;
- A unique technical team of circa 100 personnel;
- Mature customer relationships with product development and qualification in-progress;
- A commercial CAM Plant (eLNO) at Konin in Poland (under construction – 60% complete);
- Acquisition of an offtake agreement for the right to purchase lithium hydroxide monohydrate (LHM) or lithium carbonate (LC).

The acquisition of Battery Materials Business and Technology shifts global focus of EVM to growth markets for high energy density (high nickel NCM) CAM and lower energy density (LFP) CAM in UK, Europe and the Kingdom of Saudi Arabia. The acquisition is also globally strategic as it:

- Completes integration of upstream and midstream supply chains with downstream customer focused and customer facing cathode active materials business.
- Retains and preserves unique IP (know how and show how) and high value technical personnel who developed CAM Technology, Pilot Plants, Laboratories and Battery Technology Centres.
- Provides the platforms for industrialisation of CAM Technology through the development CAM Plants for electric vehicle and battery cell manufacturers in United Kingdom, Europe and the Kingdom of Saudi Arabia.

A substantial shortfall of over 600,000 tpa of cathode active materials is forecast in Europe in 2030.

#### Exhibit 13 – EVM's Supply Integrated Chain



Source: Company reports.

## Lithium Market – An Overview: Prices Skyrocket as EVs Take Off

### What Is Lithium, and Where Does It Come From?

#### Characteristics and origin

Lithium is a soft, silvery-white metal. It is the lightest metal and is highly reactive (high electrochemical potential).

Lithium does not occur naturally as a pure substance. It can be found as a chemical compound in hard rock (pegmatite), brine, clay, or other mineral deposits. These natural deposits can be extracted and refined to produce a variety of lithium products, including the lithium chemicals – **lithium carbonate** ( $\text{Li}_2\text{CO}_3$ ) and **lithium hydroxide** ( $\text{LiOH}$ ) – commonly used in lithium-ion batteries.

The four largest lithium raw material-producing countries are Australia, Chile, China, and Argentina. Australia is exclusively a hard rock producer, Argentina and Chile are exclusively brine producers, and China produces from both hard rock and brine deposits.

#### Mining and production – hard rock vs brine

For typical **hard rock deposits** (such as spodumene mines in Australia), the rock is crushed and goes through a concentration or beneficiation process to produce a product which can then be used directly for glass and ceramics but must be refined further into  $\text{Li}_2\text{CO}_3$  or  $\text{LiOH}$  to be used in batteries.

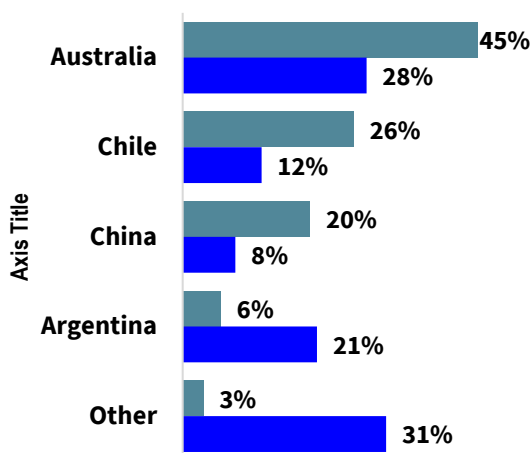
**Lithium brine bodies** are formed in basins where water has leached lithium from surrounding rock. Lithium brine is extracted from these basins and pumped into an evaporation pond. Once evaporated, the residual lithium product is processed into  $\text{Li}_2\text{CO}_3$ . Although brine deposits can also produce  $\text{LiOH}$ , the first product of extraction is typically an industrial grade  $\text{Li}_2\text{CO}_3$  product which is then refined further into  $\text{LiOH}$ .

### Uses and Applications of Lithium – Critical in EV Batteries

Lithium and its chemical compounds have a wide range of applications: heavy greases, additives for metal production and glasses/ceramics. However, the primary use of lithium more recently and into the future is in lithium-ion batteries for consumer electronics, electric vehicles (EVs) and energy storage. A typical EV battery might contain the equivalent of ~10kg of pure lithium metal, in the form of chemical compounds such as  $\text{Li}_2\text{CO}_3$  or  $\text{LiOH}$ .

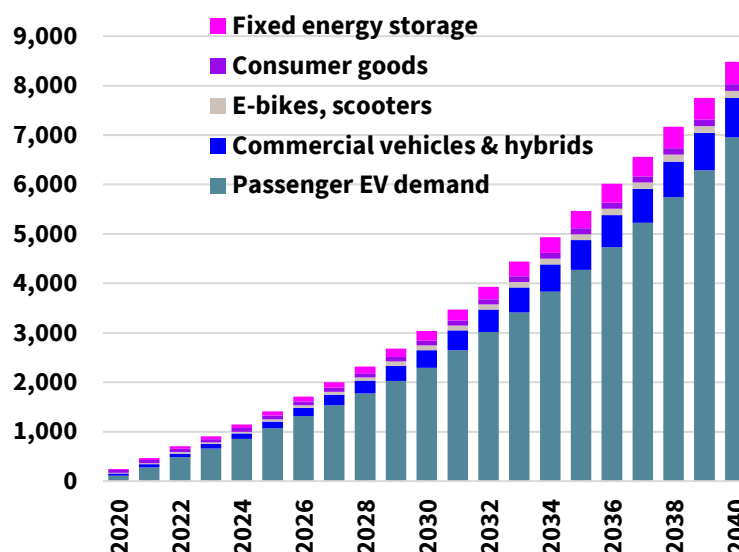
Exhibit 14 – Geographic split of Lithium Carbonate Equivalent production

2022 / 2030



Source: MST

Exhibit 15 – Assumed global lithium-ion battery installations – demand is dominated by EVs (Gwh)



Source: MST

## How lithium is used in batteries

LiOH and  $\text{Li}_2\text{CO}_3$  are key materials in the production of lithium-ion batteries. Lithium is present predominantly in the battery cathode (the positive side of the battery). The cathode plays a critical role in determining the characteristics of the battery including energy density, cost, discharge/recharge performance, operating safety, and cycle life (The cycle life is the number of complete charge/discharge cycles that the battery is able to support before that its capacity falls under 80% of its original capacity).

Of the most common battery chemistries,  $\text{Li}_2\text{CO}_3$  is used in lithium iron phosphate (LFP) batteries, while LiOH is used in nickel manganese cobalt oxide (NCM) and lithium nickel cobalt aluminium oxide (NCA) batteries. The nickel-rich chemistries of NCM and NCA batteries require the use of LiOH when producing the cathode.

Ongoing development and advancement of battery design continues to improve performance while lowering cost (raw material price increases notwithstanding). LFP performance is sufficient for many consumers, and given LFP's lower manufacturing cost, it has become the dominant chemistry for new battery capacity installations in China.

## Factors Affecting Demand – EVs Are the Dominant Driver

Fully electric passenger EVs (also known as Battery Electric Vehicles or BEVs) will be the key driver of lithium-ion battery demand, and therefore lithium, for decades to come.

If we assume global sales of 33.3m vehicles in 2030 and 86.9m vehicles in 2040, this implies a BEV penetration rate of 35% and 75%, respectively, of total passenger vehicle sales. These assumptions imply that the crossover point, when BEVs will become the majority of sales, will occur in ~2034.

Other sources of demand for lithium-ion batteries include commercial vehicles and hybrids, e-bikes, scooters, consumer electronics and tools, and fixed energy storage. Under these assumptions, lithium-ion battery installations would grow at ~23% CAGR to 2030 and ~16% CAGR to 2040. Given current lithium use intensity in batteries (t/GWh), and only very modest growth in industrial applications and other uses, these assumptions suggests lithium demand will grow from ~550kt LCE in 2021 to 2,745kt in 2030 (5x) and 7,400kt in 2040 (13.5x).



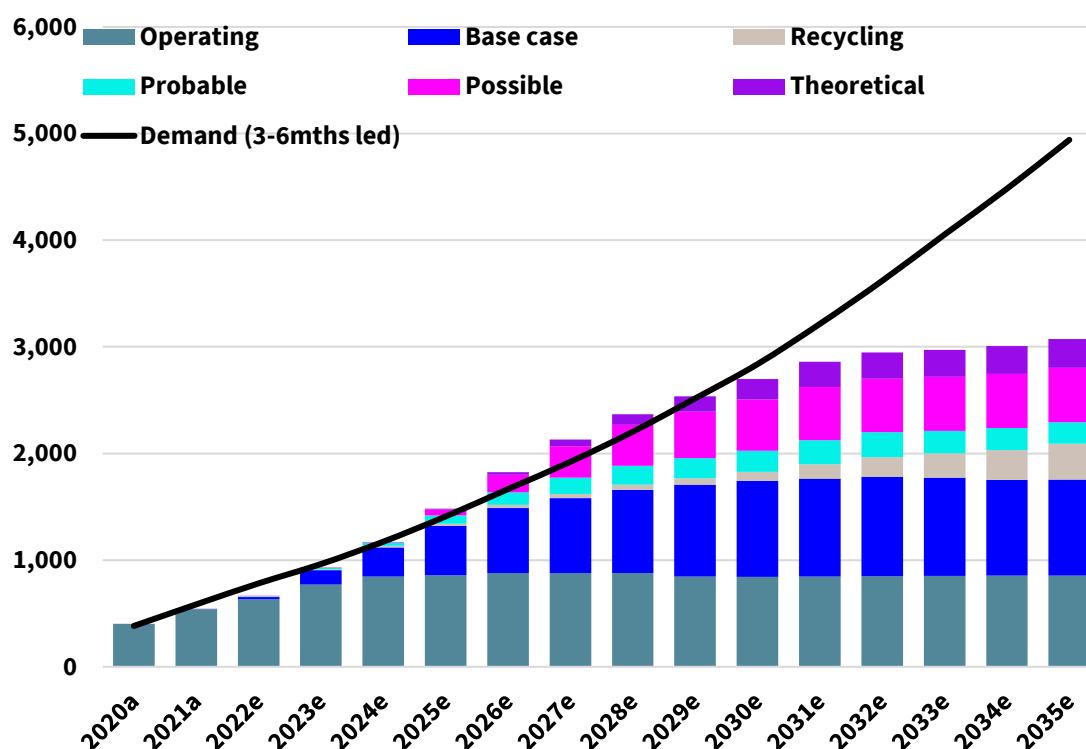
## Factors Affecting Supply – Just 3 Countries and 5 Companies Dominate

Australia, Chile and China account for ~90% of current raw lithium production.

Around 65% of production in 2022 will come from just five companies: Albemarle, SQM, Mineral Resources, Pilbara Minerals and Tianqi Lithium Energy Australia (IGO JV). Given our demand assumptions, we expect established producers will continue to expand their assets; however, many new projects will also be required to meet the significant demand growth.

Even with full utilisation of existing installed capacity ('Operating' in Exhibit 16) and construction/ramp up of all known well-advanced projects ('Base case'), the market would remain in deficit for the foreseeable future.

Exhibit 16 – Forecast lithium supply growth, by project type (kt LCE)



Source: EVM.

## Pricing Dynamics

Lithium compounds do not have an exchange-traded market. Prices for lithium compounds are typically set through negotiation between producers and consumers through private agreements. For battery applications, customers have stringent quality assurance testing requirements ('qualification'), and so meeting product specifications on impurities will also have an influence on price (battery grade vs. technical grade).

The market for lithium has three key products:

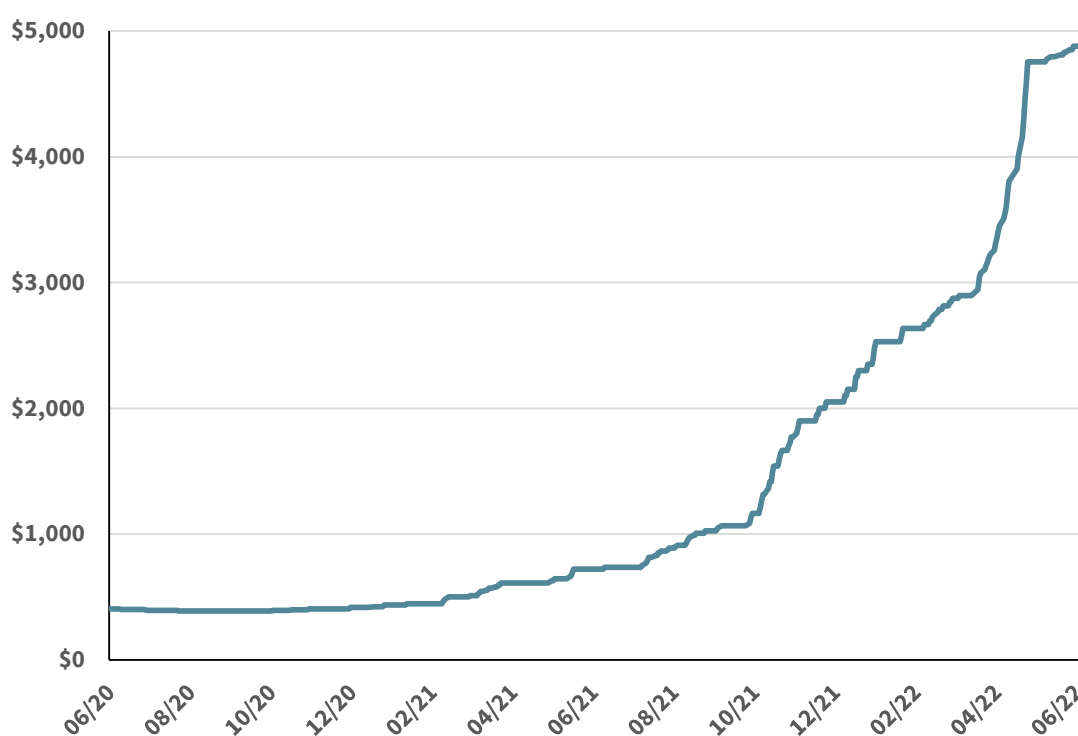
- **spodumene concentrate:** valued based on  $\text{Li}_2\text{O}$  (lithia) content. 6.0%  $\text{Li}_2\text{O}$  standard concentrate has become the de-facto benchmark (\$US5000/t)
- **lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) (industrial grade and battery grade):** may be produced from spodumene conversion or directly from brines, with varying degrees of purification to create a battery-grade product. Spot prices can be quoted ex-South America (where most brine production is), or ex-works from China (where most production is) (US\$70,000/t)
- **lithium hydroxide ( $\text{LiOH}$ ):** historically, the majority of  $\text{LiOH}$  was produced from  $\text{Li}_2\text{CO}_3$ , which was sourced from lithium brine. Therefore, there was a strong relationship between the price of  $\text{LiOH}$  and  $\text{Li}_2\text{CO}_3$ , whereby,  $\text{LiOH}$  prices would be approximately equal to the price of  $\text{Li}_2\text{CO}_3$  plus the cost to process  $\text{Li}_2\text{CO}_3$  into  $\text{LiOH}$ . (US\$70,000/t)

## Recent Pricing Movements in Lithium

Lithium prices declined over 2019 due to high inventories in China combined with significant supply entering the market from new Australian spodumene projects, as well as Chile and Qinghai brines. In response, several lithium producers curtailed production and deferred expansion plans. The combination of declining lithium inventory and reduced production levels globally over 2020 led to upwards pricing pressure just as electric vehicle demand, particularly in China, was rapidly accelerating.

Prices increased dramatically over 2021 as a result, with battery grade chemicals (carbonate and hydroxide) currently trading near record highs at ~US\$70,000/t, and spodumene spot sales continue to set new highs, currently at ~US\$5,000/t. It should be noted that lithium products remain an opaquely traded market, with much of the volume across feedstock and chemicals being sold into longer term contracts and offtake arrangements with a variety of pricing mechanisms, meaning not all producers are fully exposed to current spot pricing strength across all sales volumes.

Exhibit 17 – Spodumene concentrate pricing, 3 years (US\$/tonne)



Source: Metal.com.

## Valuation: Quality Portfolio With Considerable Exploration Upside

### Valuation of A\$0.63/Share Based on Sum-of-the-Parts

Our base-case valuation for ZNC is A\$0.63/share. Exhibit 18 summarises each of the components of our sum-of-the-parts-based valuation.

Exhibit 18 – Valuation summary for ZNC

NPV OF PROJECTS	A\$M	EQUITY VALUE A\$/SHARE FULLY DILUTED	Valuation Methodology
Earaheedy Zinc/Lead Project	58	0.16	Riskd Project NPV
Other Gold & Base Metals	30	0.08	MST Estimate
Investments in Listed Companies	8	0.02	Listed Value
Lithium Projects	140	0.39	Comparable Companies
<b>ENTERPRISE NPV</b>	<b>236</b>	<b>0.66</b>	
Add: Cash	9	0.03	Actual at 31-March 2022
<b>EQUITY VALUE PRE SG&amp;A</b>	<b>245</b>	<b>0.69</b>	
SG&A	(20)	(0.06)	NPV of Corporate Costs
<b>EQUITY VALUE</b>	<b>225</b>	<b>0.63</b>	

Source: MST Access.

### Valuation Methodology: Per-Share Valuation of A\$0.63

#### Finding an alternative to DCF for early-stage projects

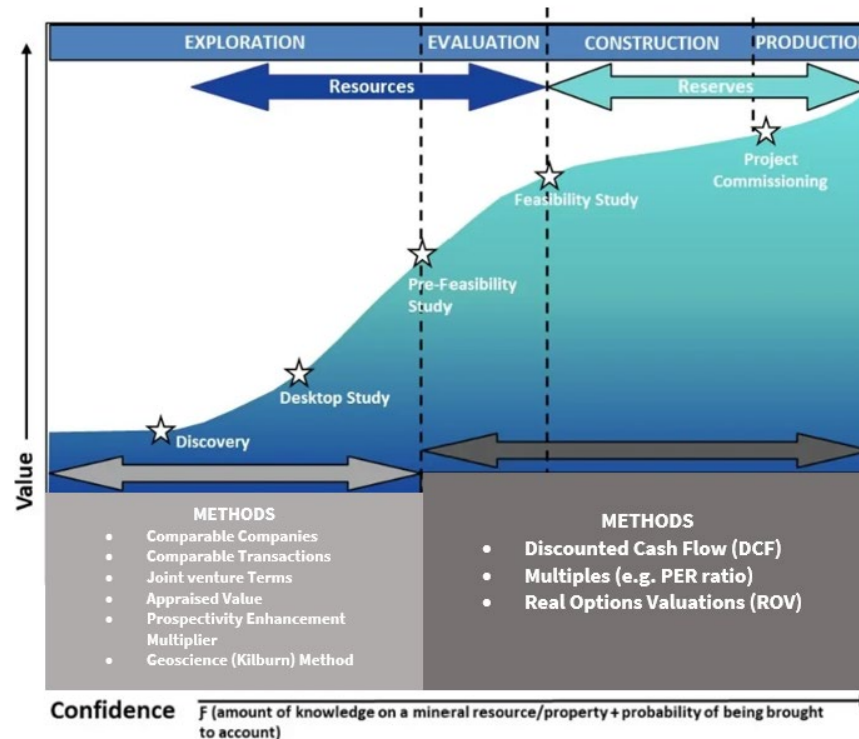
Discounted cash flow (DCF) analysis is generally accepted as the most suitable valuation methodology for mining projects in operation or with a reasonably predictable operating framework, such as that defined in a feasibility study. Another valuation method for projects that have a defined resources is to look at the EV/Resource being paid and compare to a market multiple to ascertain if the underlying resource of the company is being valued in line with market multiples.

However, earlier-stage mining projects, such as those which make up most of ZNC's current suite of assets, require alternative valuation methodologies to be used, given the inputs required to formulate a reasonable DCF are yet to be defined and we do not have a resource on which to to a market multiple. These alternative methods, commonly deployed by experienced industry practitioners, include:

- **comparable companies:** infers a valuation for a company based on the observed market valuation (market capitalisation) of comparable listed companies. Note that this is the method that we use for ZNC's lithium projects as we compare underlying value of exploration tenements,
- **comparable transactions:** the value of similar properties which have been exchanged, commonly referencing value per unit of contained metal or ground area
- **joint venture terms:** the value implied by terms agreed under a JV to acquire an interest in an asset
- **Appraised Value (or past exploration expenditure):** the total of prior expenditure incurred on an exploration tenement
- **prospectivity enhancement multiplier:** an applied multiple of past exploration expenditure incurred depending on an assessment of whether the expenditure has added value and the stage of development to which the project has advanced
- **geoscience (Kilburn) method:** a technical assessment of exploration property value based on factors such as the location relative to other known mineralisation, drilling intercepts available, exploration targets defined and geological patterns.

Exhibit 19 shows a useful framework for selecting an appropriate valuation methodology for early-stage mineral exploration tenements

Exhibit 19 – Valuation methods by stage of development



Source: <https://www.csaglobal.com/valuation-for-mineral-projects-part-1/>.

## Projects Included in our ZNC Sum-of-the-Parts Valuation

The following projects form the basis of our valuation of ZNC, discussed in more detail below:

**Early-stage lithium projects**, including:

- Split Rocks
- Waratah Well
- Mount Ida North

**Earaheedy zinc/lead project**: the most advanced project in the portfolio, with a currently defined exploration target

**Early-stage gold and base metals exploration projects**, including:

- Develin Creek (copper/zinc)
- Split Rocks (gold)
- Red Mountain (gold)
- Cowarra Option (gold)
- Privateer (gold)
- Auburn (gold)

### Investments

- 43.9m shares @ £0.073 in Bradda Head Holdings Limited (AIM: BHL) Value A\$5,575m
- 2.5m shares @ A\$0.23 in American Rare Earths (ASX: ARR) – Value A\$0.575m
- 3.88m shares @ A\$0.245 in Rumble Resources Limited (ASX: RTR) – Value A\$0.95m
- 0.5m shares @ A\$0.125 in Nickel-X Limited (ASX: NKL) – Value A\$0.07m
- 1.25m shares @ A\$0.195 in Bindi Metals Limited (ASX: BIM) – Value A\$0.58m
- 7.88m shares @ £0.066 in Alien Metals Limited (AIM: UFO) – Value A\$0.09m

Total value of investments is A\$7.83m



## Lithium projects - Valuation method: comparable companies

Post the spinoff of the gold and base metals assets to Mackerel Metals, the lithium assets will be the core of Zenith's portfolio.

The lithium assets within the portfolio are early stage but have shown early promise from exploration. Split Rocks is currently engaging a 45-hole drilling programme. We believe a comparable companies valuation methodology is the most appropriate way to value ZNC's lithium assets. We also look at the value in the EMV Joint Venture and assess the value of that with reference to the free carry and spend by EMV to a DFS level for the lithium projects.

We have assessed a number of lithium-based early-stage companies on the ASX and have concluded that the closest comparable to ZNC's lithium business is Morella Ltd (ASX: 1MC). Although there is no perfect comparison Morella represents a relatively strong comparison to ZNC's in terms of the type of prospects and the stage of development.

### Valuation on Zenith Lithium – Morella Comparison – A\$141m

Exhibit 20 shows our comparison between Zenith's lithium assets and those of Morella. By applying an EV / km<sup>2</sup> value to Morella's net 465km<sup>2</sup> of active exploration tenements, we derive a value of A\$141m for Zenith's Lithium assets.

We allocate 100% value to the Zenith tenements as the EVM JV agreement prescribes that the projects revert to ZNC if EVM do not advance them to DFS.

Exhibit 20 – Comparison Zenith vs Morella

	Zenith	Morella
<b>Assets</b>	Split Rocks WA; Waratah Well WA; Mt Ida North WA	Mallina WA; Fish Lakes USA
<b>Description of Work Completed</b>	<b>Split Rocks:</b> Thick pegmatites were intersected in each of the 4 new holes, all containing anomalous lithium levels >0.1%Li <sub>2</sub> O. Individual pegmatites are up to 55m in thickness, assuming a flat lying, stacked interpretation. <b>Waratah Well:</b> A recent drilling campaign was a total of 47 new, slimline RC holes	Right to earn a 51% interest in the lithium rights of Sayona's lithium portfolio. <b>Mallina Lithium Project (E47/2983)</b> – subject of detailed mapping, sampling, study and RC drilling (for a combined total of 3,568m drilled and 653 samples assayed). Morella's maiden drill program underway and target sub-surface primary pegmatites. <b>Mt Edon and Mt Edon West (E59/2092/E59/2055)</b> – Morella conducted mapping and sampling in March 2022, final outcomes are pending
<b>Key Exploration Highlights</b>	<b>Split Rocks:</b> The key result was 20m @ 1.0% Li <sub>2</sub> O, including 10m @ 1.7% Li <sub>2</sub> O <b>Waratah Well:</b> 7m @ 0.67% Li <sub>2</sub> O, including 3m @ 1.31% Li <sub>2</sub> O	<b>Mallina:</b> outcrop sample results ranging from 0.74-3.98% Li <sub>2</sub> O, and Eastern No.3 Pegmatite with a strike extent of 1.4km and sample results of up to 1.95% Li <sub>2</sub> O.
<b>Square Kilometres</b>	795sqkm	Net total 465sqkm - 51% of 906sqkm Mallina / Mount Eden plus 100% of 28sqkm Fish Lake
<b>EV / Sqkm</b>		\$A178.5k
<b>Enterprise Value</b>	A\$141m	A\$82m (Market Cap A\$88m - A\$6m cash)

Source: MST Access.

### Nevada USA Lithium Project - Morella

- Fish Lake Valley Project located in Nevada
- Regional precedence of lithium exploration and project development
- Fish Lake Valley Lithium Project area covers approximately 44.4 km<sup>2</sup>, Geophysical exploration has demonstrated depth and volume potential, drilling targets have been identified

### Value of EVM Joint Venture – EVM Acquiring 60% to Take to DFS

ZNC's JV partner EVM is acquiring a 60% stake in the 2 existing lithium assets at Waratah Well and Split Rocks for A\$7m exploration expenditure as well as the expenditure associated with completion of a feasibility study. We expect that in total this is likely to be in the order of A\$20m. The key to this agreement is that if EVM decides not to take the projects to DFS then they revert back 100% to ZNC.

It would be reasonable to expect that a large JV partner is able to earn-in to early-stage projects at a significant discount given the capability it brings to the JV as well as its financial strength and the general uncertainty which is associated with the projects at this stage of advancement.

It can also be expected that the EVM agreement adds significant value to ZNC via a significant drilling programme.

We believe that the terms of EVM's earn-in support our comparable company valuation conclusions outlined above.

We examine the upside potential for ZNC of EVM taking the project to DFS by reviewing the market capitalisation of companies at DFS / near production stage.

### Value of More Advanced Lithium Plays – Potential Upside for ZNC

As a look into the potential value that can be created by developing lithium assets, we have detailed below the market cap of a selection of ASX listed companies with projects at various stages of development with similar underlying commodity exposures.

The developers shown in Exhibit 21 are substantially more advanced in general relative to ZNC and show the potential for value accretion as lithium projects are advanced.

Exhibit 21 – Battery metals/lithium developers comparable

Developers	Status	Market Cap
Liontown Resources	DFS	\$ 2,444
Core Lithium	Construction	\$ 1,733
Lake Resources	DFS	\$ 973
Leo Lithium	DFS	\$ 491
Sayona Mining	Resource	\$ 1,319
Ioneer Ltd	BFS	\$ 1,028
Vulcan Energy Resources	Pilot Plant	\$ 933
<b>AVERAGE</b>		<b>\$ 1,274</b>

Source: MST Access.

## Valuation of Gold and Base Metals Projects

### Earaheedy zinc/lead project (75% Rumble Resources, 25% ZNC)

#### Valuation method: risked project NPV

The Earraheedy zinc/lead project is a significant discovery and has a stated exploration target of 100–120mt at 3.5–4.5% Zn-Pb sulphide. While the project remains subject to continuous drilling and advancement, the exploration target allows for a conceptual valuation estimate using DCF analysis. We highlight that our assumptions are based on high-level MST estimates with reference to the size of the current exploration target, and the actual operational parameters under any future feasibility study may turn out to be significantly different to those assumed. Further, an economically viable project may not emerge from the current exploration target.

In order to populate our DCF analysis, we make the following assumptions:

- at the midpoint of the current exploration target (110mt), conversion into an Ore Reserve of 60% is possible, with a grade marginally above the current range of 5.0%, implying a higher-grade subset is defined for plant feed
- a 12-year mine-life
- mill throughput rates of 5mtpa
- pre-production capital expenditure of A\$700m
- zinc price of US\$3,500/t
- lead price of US\$2,000/t
- 50/50 zinc/lead production split
- life-of-mine EBITDA margins of 50%.

On this basis we derive an unrisked NPV for the Earraheedy Project of A\$932m, to which we apply a 75% risk discount given the early stage of development.

ZNC's equity stake has an implied valuation on this basis of A\$58m.

### Other gold & base metals exploration projects

#### Valuation method: high-level MST estimate

We apply a nominal valuation of A\$30m to the remaining gold and base metals projects. This is a high-level MST estimate based on a review of the projects and their current prospectivity and potential.

We see strong option value in these assets. Particularly the split rocks asset in WA.

This recognised gold district with a gold endowment of 10Moz around the Parker Dome. Management has recognised the potential for large-scale gold deposits. Outstanding results include:

- Dulcie North: 32m @ 9.4 g/t Au, incl. 9m @ 31.4 g/t Au
- Dulcie Laterite Pit: 2m @ 14.5 g/t Au, 18m @ 2.0 g/t Au, 14m @ 3.5 g/t Au, 3m @ 17.9 g/t Au
- Estrella: 2m @ 9.8 g/t Au
- Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au, 4m @ 10.2 g/t Au
- Water Bore: 3m @ 6.6 g/t Au
- Scott's Grey: 8m @ 4.1 g/t Au, 12m @ 1.7 g/t Au.

## Positive Catalysts for the Share Price and Valuation

We believe that ZNC has significant potential for further valuation upside and highlight a number of key milestones/catalysts which may deliver valuation upside over the near term.

### Successful lithium exploration results

Exploration success at Split Rocks and Waratah Well would accelerate the potential to develop the project and provide further optionality, as well as potentially improve the valuation if exploration results support the advancement of an economic feasibility study.

### Completion of Split Rocks and Waratah Well feasibility studies

EVM needs to fund and complete the feasibility studies for Split Rocks and Waratah Well by January 2024 to earn a 60% share in the lithium rights at these sites. The completion of these studies will be a significant milestone for these projects and would substantially clarify the potential project parameters at the assets as well as de-risk the project and likely increase the valuation.

### Additional lithium project

Management has indicated that the company is looking for opportunities to acquire new lithium assets and has acquired a new exploration project, Mt Ida North. The addition of additional prospective lithium projects would be a positive for the company and would potentially be a catalyst for an increase in the valuation.

### Further exploration results

Exploration success at any of ZNC's gold and base metal projects would be a significant positive for the stock if a viable project begins to take shape ahead of the de-merger.

### Early project delivery

The early commencement of the projects relative to the currently outlined timeline of development would provide earlier cash flows and reflect positively on management, which would likely increase the valuation.

### Price increases in key commodities

The valuation is sensitive to the underlying commodity prices, especially lithium, gold, copper and zinc. Price increases in these key commodities would have a positive effect on the valuation and share price.

### Development of strategic partnership

The strategic partnership with EVM has the potential to unlock value at ZNC's lithium projects with the contribution of financial resources to progress exploration and the completion of feasibility studies. Strengthening this partnership and leveraging EVM's resources to advance other lithium projects would be a positive for the stock.

### Gain on investments

ZNC holds listed and unlisted shares in various companies. Any appreciation in the value of these holdings would be a positive for the share price.

## Risks

### Disappointing lithium exploration results

Any disappointment in further lithium exploration results would undermine the economic viability of the projects and reduce the likelihood of an economic project proceeding into development and construction. This would be a negative development for the valuation, especially as ZNC turns its focus to lithium assets.

### Delays in completion of Split Rocks and Waratah Well feasibility studies

The feasibility studies are a significant step in the development of the projects. Delays to the feasibility studies would be detrimental to the commencement of the project and the valuation given the impact of the timing of potential cash flows.

### Partnership risk

Progress on both the Split Rocks and Waratah Well projects relies on funding contributions from the JV partner, EVM. Any issues with these contributions would slow the development timeline of the projects and hurt the share price.

### Reserves and Resources risk

The testing and appraisal of existing projects may not lead to reserve definition, which would be negative for the stock as it would undermine the potential of developing an economically viable project.

### Commodity price decreases

As a key driver of the valuation, any decrease in lithium, gold, copper and zinc prices would be a negative for the valuation.

### Delays in obtaining required approvals

Any delays to the approvals process would be detrimental to the project timeline and the valuation.

### Changes in regulatory framework

Regulatory changes such as royalty rates or changes to permitting requirements may alter the risk profile of the company and would potentially be detrimental to the stock price.

### Loss on investments

Any depreciation in the value of ZNC's listed and unlisted holdings would be a negative for the valuation and reduce funding optionality.



## Financials: EVM JV Lets Management Retain Focus on Generative Edge

### Overall Strong Financial Position

At 31 March 2022, ZNC had A\$9.3m in cash as well as A\$14.2m of equity investments (nil debt). The company is well funded, financially stable and positioned to advance the base metals portfolio ahead of the proposed demerger as well as to consider the acquisition of further lithium opportunities as they arise.

### Funding – Joint Venture With EV Metals Group (EVM)

With the gold and base metals assets earmarked for a demerger in October 2022, ZNC's funding requirements are framed around the commitments required to advance its remaining portfolio of battery metals exposed assets which at present is focused on lithium.

The January 2022 JV secured with EVM included favourable terms for ZNC. EVM has committed to:

- solely funding the completion of a feasibility study within 24 months
- spending a minimum of A\$7m on exploration at the projects (Waratah Well and Split Rocks) within 24 months before being able to voluntarily withdraw from the agreement
- earning a 60% interest in the lithium rights in exchange
- on completion of a feasibility study, forming a JV with ZNC, after which each entity will fund their equity shares in the project construction cost
- arranging all financing for construction (including ZNC's share) and ZNC will repay its proportionate share of project financing from its share of minerals produced.

The essence of this agreement implies that ZNC receives a free-carried 40% equity interest in the Waratah Well and Split Rocks lithium projects through to production, which we would suggest is as close to an optimal solution as any junior resources company could hope for. In addition to the supportive funding terms, ZNC has access to a larger partner with processing capacity in development, as well as potential for the scope of the current JV to expand to include other projects over time. At execution of the EVM JV a A\$6m placement was provided to Zenith @A\$0.30 per share, bolstering the balance sheet.

### ZNC Can Focus on Adding Further Value

The significance of the EVM JV agreement is clear. The broader benefit to ZNC is that management can maintain an intense focus on its key strategic edge: securing further prospective assets to add to the portfolio where capable exploration can be conducted, and value added to generate a broader suite of prospective assets and build the pipeline of opportunities for ZNC.

## Environmental, Social and Governance (ESG)

ESG factors play an integral role in many investors' decision-making.

### Environmental

ZNC has shifted its strategic focus away from gold and base metals assets toward lithium assets with its partnership with EVM. This partnership has enhanced ZNC's ESG credentials, as it paves the way for an increased focus on lithium projects which are crucial to the electrification thematic.

The company has flagged environmental issues as a consideration moving forward, and ZNC looks to work towards targets to limit its carbon footprint. It also aims to 'enhance biodiversity protection by assessing and considering ecological values and land-use aspects in investments, operational and closure activities'. Management aims to regularly review its progress in these areas, and to ensure that it complies with all relevant environmental legislation.

### Social

The social aspects of ZNC's business are key to operating successfully in the community.

The company seeks to act in the interest of its workforce and the community in which it operates. This includes promoting and improving the health of these stakeholders while managing the risks to employees, contractors, the environment and the community. It aims to seek input from people affected by operations, and to develop meaningful partnerships in its host communities.

ZNC also recognises the importance of creating a diverse workforce and has a diversity policy to ensure that its objectives are achieved. The company is focused on building a diverse workforce with respect to gender, age, ethnicity and cultural background. These diversity objectives extend to the composition of the board. ZNC has highlighted the following gender diversity programs and initiatives targeting employee development:

- mentoring programs
- networking opportunities
- professional development programs that are targeted at helping women and men develop skills and experience for advancement to senior management and board positions
- flexible work arrangements
- management support for the promotion of talented women and men into leadership roles.

### Governance

The Board is responsible for ZNC's corporate governance: developing, reviewing, and monitoring performance against strategic objectives.

The Board has adopted a remuneration structure, risk assessment and policies that are predominantly in line with market practices. Separate committees on the Board have been established for remuneration and nominations, as well as audit, business risk and compliance

ZNC's governance is documented in its Corporate Governance Statement. Highlights include the following:

- The company applies the ASX Corporate Governance Council Principles and Recommendations.
- The board's qualifications are appropriate for the business.
- The board has five members.
- The Board has three independent directors, satisfying ASX guidelines of 50% independent directors.
- The board has adopted a remuneration structure, risk assessment and policies that are predominantly in line with market practices.

Exhibit 22 – Board Skills Matrix

Board Skill	Executive Chairman	MD	Ind Non-Exec	Ind Non-Exec	Ind Non-Exec
	David Ledger	Mick Clifford	Stanley MacDonald	Julian Goldsworthy	Emma Scotney
Leadership	✓	✓	✓	✓	✓
Strategy	✓	✓	✓	✓	✓
Financial & Legal	✓	-	-	-	✓
Geology	✓	✓	✓	✓	-
Project Development	-	✓	✓	✓	-
Mining	✓	✓	✓	✓	✓
International Experience	✓	✓	✓	✓	✓
Health, Safety and Environment	✓	✓	✓	✓	✓
Stake Holder Management	✓	✓	✓	-	✓
Corporate Governance	✓	✓	✓	✓	✓

Source: MST Access.

## Board of Directors and Executive Team

**David Ledger – Executive Chairman:** Mr Ledger has spent over 35 years in investment banking, with experience working in the UK and Australia. He is a former Executive Director of a major European bank and has advised institutional and corporate clients throughout his career. He currently works in Sydney as corporate advisor for MST Financial.

**Michael Clifford (BSc (Hons), MSc, MAIG) – Managing Director:** Mr Clifford is a geologist (BSc (Hons) 1987, MSc) with over 30 years' experience in the exploration industry. He held senior technical and business development roles and explored for most major metal commodities during a successful career with Billiton Australia, Acacia Resources and AngloGold Ashanti, rising to the position of Regional Exploration Manager Australia. Mr Clifford was Managing Director of ASX-listed PacMag Metals Ltd from 2005 until its takeover in 2010, when he co-founded private explorer S2M2 Coal Pty Ltd. He is experienced in international exploration and has had exposure to mining and exploration in the USA, Indonesia, Brazil, PNG, Angola, Democratic Republic of Congo, Mexico and Mongolia.

**Nick Bishop (CA, ATIA, GradDipACG, FGIA) – Chief Financial Officer:** Mr Bishop is a member of the Institute of Chartered Accountants Australia, the Tax Institute Australia and a fellow member of the Governance Institute Australia. He has significant experience in the financial reporting, auditing and taxation of a number of ASX-listed and unlisted companies in Australia, Asia, Africa and the UK.

**Stanley Allan Macdonald – Non-Executive Director:** Mr Macdonald has been associated with the mining and 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.

**Julian Goldsworthy (B.App.Sc. MAusIMM, MAIG) – Non-Executive Director:** Mr Goldsworthy was formerly Chief Geologist at Gascoyne Resources Ltd; prior to that, Exploration Manager at Giralia Resources NL until its takeover by Atlas Iron Ltd. He has over 30 years' experience in the minerals industry, in particular with Newcrest Mining (and its predecessor Newmont Australia), where he led and conducted successful exploration programs for gold in Australia and South America.

**Emma Scotney (LLB (Hons), B.A., GAICD, GradDip Adv Mgmt) – Non-Executive Director:** Ms Scotney is a highly experienced business advisor and corporate lawyer with over 25 years' combined experience in the property, agricultural and mining industries. Ms Scotney provides in-house legal counsel services to an ASX-listed global mining technology company, advising on corporate and commercial matters (including M&A and corporate governance policy). She is currently a Non-Executive Director of ASX-listed Minerals 260 Limited (ASX:MI6) and a Commissioner of the Insurance Commission of Western Australia.

## Disclaimers and Disclosures

MST Access is a registered business name of MST Financial Services Pty Ltd (ACN 617 475 180 "MST Financial") which is a limited liability company incorporated in Australia on 10 April 2017 and holds an Australian Financial Services Licence (Number: 500 557). This research is issued in Australia through MST Access which is the research division of MST Financial. The research and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by MST Access is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a financial product you should read any relevant Product Disclosure Statement or like instrument.

This report has been commissioned by Zenith Minerals Limited and prepared and issued by Michael Bentley of MST Access in consideration of a fee payable by Zenith Minerals Limited. MST Access receives fees from the company referred to in this document, for research services and other financial services or advice we may provide to that company.

MST Financial also provides equity capital markets ("ECM") and corporate advisory services through its capital markets division, MST Capital Markets ("MST Capital"). MST Capital provides these services to a range of companies including clients of the MST Access service. As such, MST Capital may in future provide ECM and/or corporate advisory services to the company that is the subject of this research report and, accordingly, may receive fees from the company for providing such services. David Ledger, the Executive Chairman of Zenith Minerals Limited is an authorised representative of Arlington Capital Pty Ltd, which is a corporate authorised representative of MST Financial.

MST Financial has measures in place to ensure the independence of its research division is maintained, including information barriers between its Capital Markets and Research teams. In addition, neither MST Access, nor any of its research analysts, receive any financial benefit that is based on the revenues generated by MST Capital Markets or any other division of MST Financial.

The analyst has received assistance from the company in preparing this document. The company has provided the analyst with communication with senior management and information on the company and industry. As part of due diligence, the analyst has independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in the report. Diligent care has been taken by the analyst to maintain an honest and fair objectivity in writing this report and making the recommendation. Where MST Access has been commissioned to prepare content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid will either directly or indirectly impact the content provided.

**Accuracy of content:** All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently certified. Opinions contained in this report represent those of MST Access at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results and estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

**Exclusion of liability:** To the fullest extent allowed by law, MST Access shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out of or in connection with the access to, use of or reliance on any information contained in this report. No guarantees or warranties regarding accuracy, completeness or fitness for purpose are provided

by MST Access, and under no circumstances will any of MST Financials' officers, representatives, associates or agents be liable for any loss or damage, whether direct, incidental or consequential, caused by reliance on or use of the content.

## General Advice Warning

MST Access Research may not be construed as personal advice or recommendation. MST encourages investors to seek independent financial advice regarding the suitability of investments for their individual circumstances and recommends that investments be independently evaluated. Investments involve risks and the value of any investment or income may go down as well as up. Investors may not get back the full amount invested. Past performance is not indicative of future performance. Estimates of future performance are based on assumptions that may not be realised. If provided, and unless otherwise stated, the closing price provided is that of the primary exchange for the issuer's securities or investments. The information contained within MST Access Research is published solely for information purposes and is not a solicitation or offer to buy or sell any financial instrument or participate in any trading or investment strategy. Analysis contained within MST Access Research publications is based upon publicly available information and may include numerous assumptions. Investors should be aware that different assumptions can and do result in materially different results.

MST Access Research is distributed only as may be permitted by law. It is not intended for distribution or use by any person or entity located in a jurisdiction where distribution, publication, availability or use would be prohibited. MST makes no claim that MST Access Research content may be lawfully viewed or accessed outside of Australia. Access to MST Access Research content may not be legal for certain persons and in certain jurisdictions. If you access this service or content from outside of Australia, you are responsible for compliance with the laws of your jurisdiction and/or the jurisdiction of the third party receiving such content. MST Access Research is provided to our clients through our proprietary research portal and distributed electronically by MST to its MST Access clients. Some MST Access Research products may also be made available to its clients via third party vendors or distributed through alternative electronic means as a convenience. Such alternative distribution methods are at MST's discretion.

## Access and Use

Any access to or use of MST Access Research is subject to the [Terms and Conditions](#) of MST Access Research. By accessing or using MST Access Research you hereby agree to be bound by our Terms and Conditions and hereby consent to MST collecting and using your personal data (including cookies) in accordance with our [Privacy Policy](#) (<https://mstfinancial.com.au/privacy-policy/>), including for the purpose of a) setting your preferences and b) collecting readership data so we may deliver an improved and personalised service to you. If you do not agree to our Terms and Conditions and/or if you do not wish to consent to MST's use of your personal data, please do not access this service.

Copyright of the information contained within MST Access Research (including trademarks and service marks) are the property of their respective owners. MST Access Research, video interviews and other materials, or any portion thereof, may not be reprinted, reproduced, sold or redistributed without the prior written consent of MST.