

23rd May 2022



Corporate Details

Zenith Minerals Limited (ASX:ZNC)
ABN: 96 119 397 938

Issued Shares	343.9M
Unlisted options	14.3M
Mkt. Cap. (\$0.36)	A\$123M
Cash (31 st Mar 22)	A\$9.3M
Equities (31 st Mar 22)	A\$14.2M
Debt	Nil

Directors

David Ledger	Executive Chairman
Michael Clifford	Managing Director
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Emma Scotney	Non-Exec Director
Nic Ong	Co Sec
Nick Bishop	CFO

Major Shareholders

Directors	3.4%
HSBC Custody Nom.	8.7%
Citicorp Nom	8.3%
BNP Paribas Nom	6.2%
EV Metals Group	2.9%

Our Vision

Zenith has a vision to maximise shareholder value through superior project generation and exploration activities.

Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities.

Contact Us

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NEW LITHIUM EXPLORATION PROJECT SECURED

The Board of Zenith Minerals Limited (ASX: ZNC) ("Zenith" or "the Company") is pleased to advise that a new lithium project, Mt Ida North, has been secured in Western Australia under an option to purchase arrangement.

The project will be explored in conjunction with the EV Metals Group under the Australian Lithium Alliance (ALA) a separate arrangement to the existing Zenith Lithium Joint Venture with EV Metals Group.

Key attributes of the Mt Ida North Project, include:

- Lithium pegmatite exploration target.
- Numerous, widespread (1km x 1km), outcropping, sub-vertical pegmatite dykes up to 20m thick.
- Geological setting like that of a recent lithium pegmatite discovery at Mt Ida by ASX listed Red Dirt Metals Ltd (ASX:RDT), located approximately 15km along strike to the south, near the contact of the Copperfield granite (Figure 1).
- Pegmatite geochemistry indicative of lithium, caesium, tantalum (LCT) fertile pegmatites with strongly anomalous indicator elements such as rubidium (up to 2307 ppm Rb) and tantalum (up to 98ppm Ta).
- Lithium and rubidium soil geochemical anomalies coincident with pegmatite outcrop and extending along a 3.5km trend to the north (Figure 2).
- Drill testing planned with an initial 10 to 12-hole RC program scheduled to commence in June, subject to receipt of statutory permits of work.
- Once permitted the drill program is anticipated to take 2 - 3 weeks to complete with assays some 4 – 6 weeks thereafter.

Zenith Minerals Executive Chairman David Ledger commented: "We are pleased to have secured an additional lithium opportunity at Mt Ida North with EV Metals Group with EV Metals Group under the ALA. With widespread outcropping pegmatites located close to the Copperfield granite contact we see a strong similarity to the setting of a recent lithium pegmatite discovery at Mt Ida by ASX listed Red Dirt, some 15km along strike to the south. We are well advanced in preparation for initial drill testing and look forward to updating the market as the further assessment of this project progresses."

Background on the Mt Ida North Project

The Mt Ida North Project is located approximately 95km west of the regional town of Leonora in the Goldfields Region of Western Australia.

- Reconnaissance mapping and sampling by Zenith's technical team have identified a zone of high rubidium and tantalum bearing pegmatite dykes that crop out over a 1km x 1km area with a cluster with very high density focused in an area 1km x 500m in the southeast of the project area.
- The generally sub-vertical pegmatites dykes are up to 20m thick and lie close to the greenstone - Copperfield granite contact.

- The geological setting of Mt Ida North is like that of a recent lithium pegmatite discovery at Mt Ida by ASX listed Red Dirt, located approximately 15km along strike to the south (Figure 1).

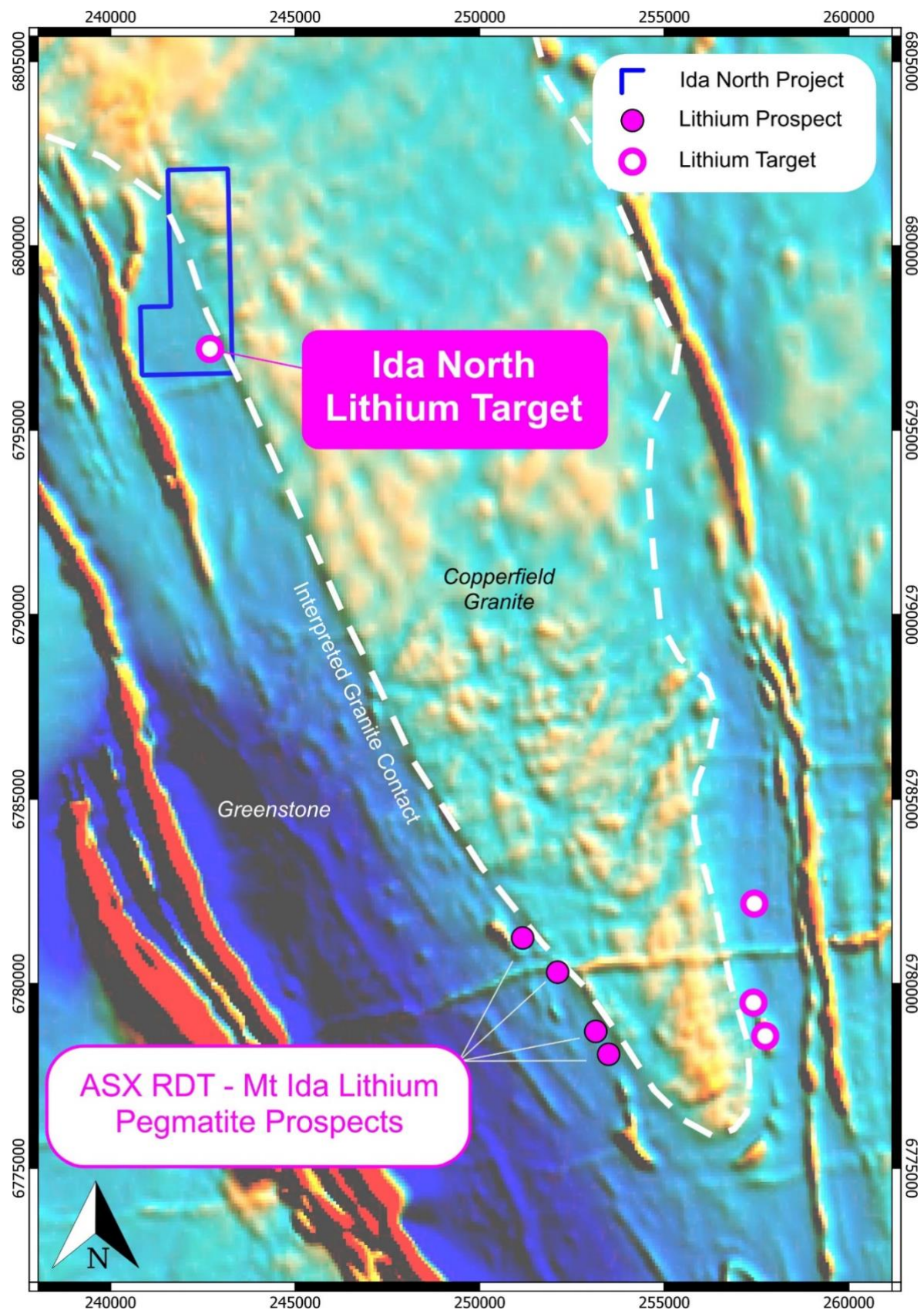


Figure 1: Mt Ida North Lithium Target Location and Regional Lithium Prospects (background image is aeromagnetics)

- Pegmatite geochemistry is indicative of lithium, caesium, tantalum (LCT) fertile pegmatites with strongly anomalous indicator elements such as rubidium (up to 2307 ppm Rb) and tantalum (up to 98ppm Ta) – Table 1.
- Lithium and rubidium soil geochemical anomalies, based on recent Zenith sampling (332 samples), are coincident with pegmatite outcrop and extending along a 3.5km trend to the north (Figures 2 and 3).

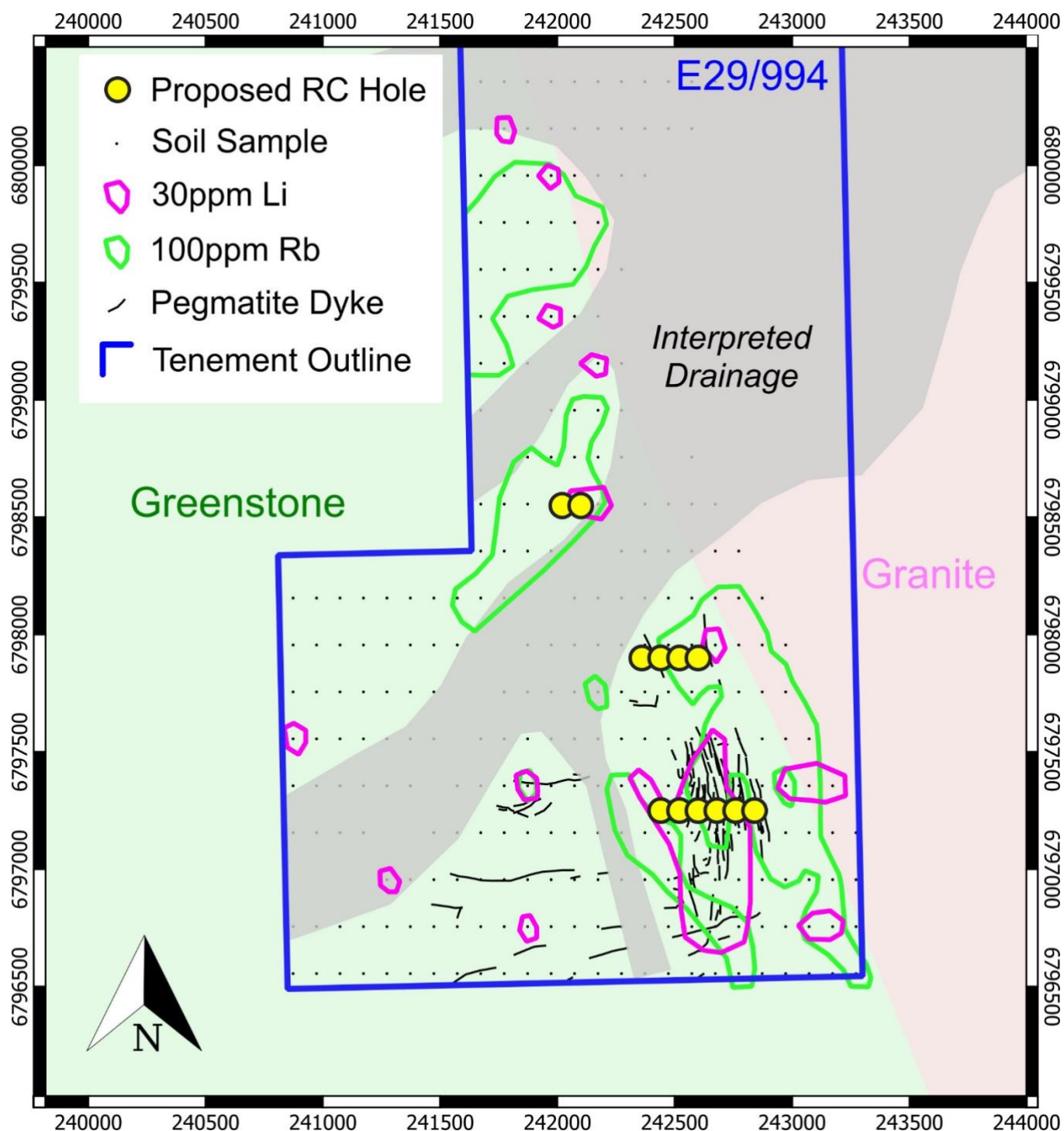


Figure 2: Mt Ida North Lithium Target Location and Regional Lithium Prospects (background image is aeromagnetics)

- Drill testing is planned with an initial 10 to 12-hole RC program scheduled to commence in June, subject to receipt of statutory permits of work.
- The program is anticipated to take 3 weeks to complete with assays some 4 – 6 weeks thereafter.

The key lithium target is to drill for blind lithium spodumene mineralisation beneath the tantalum bearing dykes, a geological architecture similar to that under investigation at the Company's Waratah Well project and noted at the Bald Hills lithium mine (formerly owned by ASX:TAW). A similar picture is also noted at Liontown's (ASX:LTR) Kathleen Valley lithium project whereby relatively narrow surface pegmatite dykes merge at depth to form a thick flat lying lithium spodumene rich sill (refer to ZNC ASX Release 24-Jan-22 for further details).



Figure 3: Mt Ida North Lithium Target - Photo Showing Outcropping Pegmatites

Table 1: Rock Chip Sample Results

Sample ID	Easting	Northing	Li ₂ O_ppm	Cs_ppm	Rb_ppm	Ta_ppm
SRK001	242619	6798060	129	7	752	9
SRK002	242676	6797865	581	7	796	14
SRK003	242633	6797603	108	12	1714	13
SRK004	242771	6797577	151	5	623	10
SRK005	242831	6797359	151	5	732	15
SRK006	242926	6797067	344	7	969	69
SRK007	242984	6796820	172	11	2307	10
SRK008	242743	6796807	86	2	176	70
SRK009	242530	6796830	108	9	482	98
SRK010	242592	6797074	86	6	1081	18
SRK011	242650	6797209	86	5	471	65
SRK012	242531	6797331	151	9	1249	25
SRK013	242547	6797565	11	2	262	29
SRK014	242432	6797882	86	13	1690	11
SRK015	242519	6797948	43	5	979	16
SRK016	243103	6797074	151	6	833	12
SRK017	243085	6796848	258	7	644	44
SRK018	242828	6797369	151	5	913	4
SRK019	242826	6797344	129	6	758	13

SRK020	242838	6797311	194	3	468	16
SRK021	242774	6797423	151	6	857	23
SRK022	242632	6797429	43	2	98	31
SRK023	242720	6797356	387	9	1129	21
SRK024	242706	6797224	65	3	158	28
SRK025	242725	6797089	65	1	90	33
SRK026	242661	6796879	65	12	1413	39
SRK027	242898	6796936	129	9	1913	41
SRK028	242873	6797064	194	6	1080	35
SRK029	242858	6797183	151	6	1042	13
SRK030	242798	6797255	172	4	656	9
SRK031	242781	6797356	108	9	1011	20
SRK032	242654	6797547	280	5	539	25
SRK033	242570	6797792	151	4	565	9
SRK034	242549	6797915	301	4	401	32

Mt Ida North Option Agreement

The Mt Ida North project is subject to an option to purchase agreement with Mr Mark Selga an individual unrelated to Zenith or EVM Group. Key terms of the option include: \$20,000 up front option fee for 90 days due diligence (DD) period with a minimum exploration spend on the project during the DD period of \$15,000 – both the upfront option fee and minimum spend have now been met and Zenith and EVM have elected to proceed to the next step of evaluation of the project, that requires a minimum of \$80,000 of exploration expenditure on the project.

The option to acquire 100% of the project can be met by paying a further \$100,000 before 7-Oct-22 with subsequent milestone-based payments of \$250,000 within 5 Business Days of the grant of a Mining Lease and a further payment of \$500,000 within 5 Business Days of commissioning of a lithium plant.

Australian Lithium Alliance (ALA)

Zenith and EV Metals Group have agreed to work together on a non-exclusive basis to assess lithium opportunities in Australia under a strategic initiative - the ALA. Zenith and EV Metals Group will each fund their respective share of costs on assessing, exploring and any future development capital on a 40% - 60% basis respectively, with EV Metals Group owning marketing rights to any offtake. Each party will bring to the arrangement their respective technical, financial and management skills to assess lithium opportunities. The Mt Ida North option agreement is being pursued under the ALA partnership.

The ALA is a separate arrangement to the existing Zenith Lithium Joint Venture with EV Metals Group that is detailed below and in ZNC ASX Release dated 13-Jan-22.

Zenith Lithium Joint Venture

Zenith is being developed as a pure lithium company to refocus on minerals containing lithium and related metals required for rechargeable lithium-ion batteries for electric vehicles and renewable energy storage ("Battery Minerals"), backed by a new alliance with the EV Metals Group (EVM), as detailed in ASX Release 13-Jan-22. Key commercial terms of the Zenith Lithium Joint Venture with EVM include:

- EVM may earn a 60% interest in the lithium rights in two initial 100% owned Zenith projects, namely Waratah Well and Split Rocks (Figure 4), by sole funding the completion of a feasibility study within 24 months, with Zenith retaining a 40% project share.

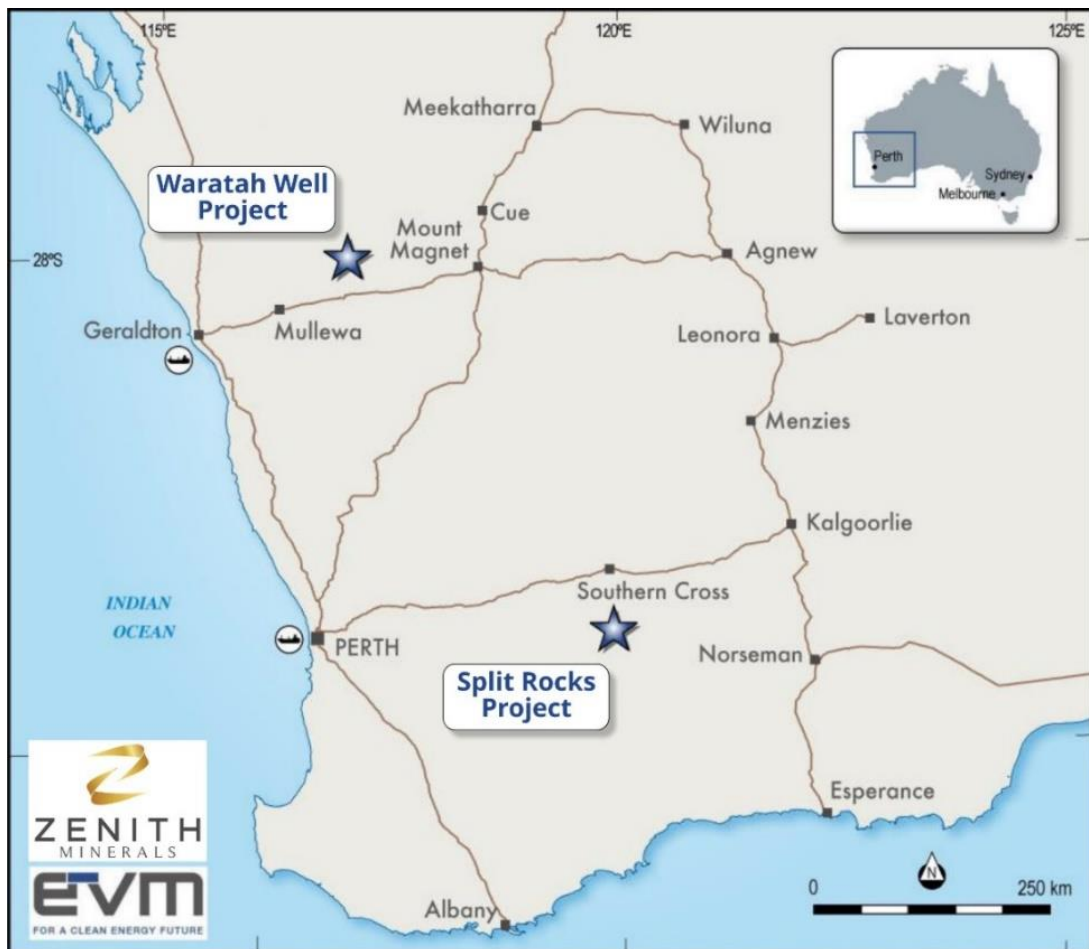


Figure 4: Zenith Lithium Joint Venture - Project Locations

- On and from completion of a feasibility study, Zenith and EVM will form a joint venture in respect of the project lithium rights. EVM will sole fund expenditure to a decision to mine, following which the parties will be required to fund future joint venture expenditure in accordance with their respective percentage shares.
- EVM must arrange all financing for the development, construction and commissioning of any future mine including Zenith's share. Zenith must repay its proportionate share of the project finance including interest from the sale of its proportionate share of minerals produced.
- EVM to spend a minimum of A\$7M on exploration on the projects, in 24 months, before being able to voluntarily withdraw provided that if EVM does not complete a feasibility study within 24 months it will be deemed to have withdrawn and will not earn an interest in the project lithium rights.
- The agreement includes a joint venture over Zenith's Split Rocks and Waratah Well projects in Western Australia, as well as a non-exclusive right to bring additional projects to the joint venture by either party, to explore for lithium/EV metals.
- In addition, EVM or its nominees subscribed for 20,000,000 ordinary ZNC shares @ \$0.30 cents per share (representing a premium of 20% above the then VWAP for ZNC shares for the preceding 10 Business Days) raising A\$6M (Placement), with funds applied to source new lithium opportunities, near term advancement of its gold and base metals portfolio and working capital (ASX Release 19-Jan-22).

Authorised for release by the Zenith Minerals Limited Board of Directors – 23rd May 2022

For further information contact Zenith Minerals Limited:

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Zenith Minerals Limited (ASX:ZNC)

Zenith has a vision to maximise shareholder value through superior project generation and exploration activities.

Key Australian gold and base metal projects include:

Earaheedy	Zinc	Western Australia	25% free carry to BFS
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New major zinc discovery to be fast tracked with extensive accelerated exploration program underpinned by a recent \$40M capital raising by partner Rumble Resources Limited (ASX:RTR) (ASX Releases 28-Apr-21, 2-Jun-21, 8-Jun-21, 18-Oct-21, 13-Dec-21, 21-Dec-21, 31-Jan-22, 7-Feb-22, 21-Feb-22, 9-Mar-22).

Develin Creek	Copper - Zinc	Queensland	100% Owned
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Inferred Mineral Resource 2.57Mt @ 1.76% Cu, 2.01% Zn, 0.24g/t Au & 9.6g/t Ag (ASX Release 15-Feb-15). Massive sulphides intersected at 2 new prospects Wilsons North & Snook.

Sulphide City (ASX Release 5-Jul-21).	34m @ 3.5% Cu+Zn incl 10m @ 6.0% Cu+Zn	29m @ 3.5% Cu+Zn incl 12.3m @ 6.7% Cu+Zn
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Red Mountain	Gold	Queensland	100% Owned
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Drilling is following-up the high-grade near surface gold and silver intersected in the maiden & subsequent drill programs (ASX Releases 3-Aug-20 & 13-Oct-20, 9-Nov-20, 21-Jan-21, 19-May-21).

Results incl:	13m @ 8.0 g/t Au	15m @ 3.5 g/t Au
	5m @ 10.4 g/t Au	12m @ 4.9 g/t Au

Split Rocks	Gold	Western Australia	100% Owned
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Zenith drilling returned - high-grade near surface gold mineralisation at multiple targets (ASX Release 5-Aug-20, 2-Sep-20, 19-Oct-20, 28-Oct-20, 15-Jan-21, 11-Mar-21, 21-Apr-21, 24-Jun-21, 30-Sep-21, 18-Jan-22). Results include:

Dulcie North	32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au	16m @ 1.3 g/t Au
Dulcie Laterite Pit	2m @ 14.5 g/t Au	18m @ 2.0 g/t Au
	14m @ 3.5 g/t Au	
Estrella	2m @ 9.8 g/t Au	
Dulcie Far North	5m @ 5.6 g/t Au	3m @ 70 g/t Au
Water Bore	3m @ 6.6 g/t Au	
Scotts Grey	8m @ 4.1 g/t Au	4m @ 4.8 g/t Au

Investments



43.9M shares in Bradda Head Holdings Limited (AIM)



3.88M shares in Rumble Resources Limited (ASX:RTR)



2.5M shares in American Rare Earths (ASX:ARR)



0.5M shares in Nickel-X Limited (ASX:NKL)

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	Rock samples were collected by hand, at the surface, from in-situ outcrops. ~200g of soil samples were sieved to -2mm on 200m x 100m spaced grid lines.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Grab samples are believed to be representative of the outcrops they come from.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	1-2kg rock samples were collected by a geologist, samples were broken using a hammer from outcrop. Rock samples were crushed in the laboratory and then pulverised before analysis.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	No drilling results reported this release.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling results reported this release.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling results reported this release.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No drilling results reported this release.

Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	Rock samples were geologically described.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Qualitative logging.
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling results reported this release.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling results reported this release.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	No drilling results reported this release.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Samples were analysed at Nagrom Laboratories in Perth, the samples were crushed, pulverised and assayed by ICP for a lithium suite after Sodium Peroxide Fusion.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	~2kg of rock was crushed and pulverised and a sub-sample was taken in the laboratory and sent for analysis. 200g soil samples were pulverised and a sub-sample was taken in the laboratory and sent for analysis.
Sub-sampling techniques and sample preparation - continued	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Sampling was selective and based on geological observations.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each rock sample was 1kg to 2kg in weight which is appropriate to test for the grain size of material.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Surface rock chip and soil samples analysed at Nagrom Laboratory in Perth. Analysis using Sodium peroxide fusion and ICP analysis, analysis consider near total.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	No geophysical tools used this sampling program.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Certified reference material was included in the soil sample batch (1:30 samples) and internal laboratory samples were included with rock samples
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Company personnel have observed the assayed samples
	<i>The use of twinned holes.</i>	Not applicable

	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field notebooks and sample record books and then entered into a database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
<i>Location of data points</i>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	No new drilling results reported this release.
	<i>Specification of the grid system used.</i>	The grid system used to compile data was MGA94 Zone 51
<i>Location of data points - continued</i>	<i>Quality and adequacy of topographic control.</i>	Topography control is +/- 5m
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Refer to figure in body of this report.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The data alone will not be used to estimate mineral resource or ore reserve
	<i>Whether sample compositing has been applied.</i>	No compositing applied.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Rock samples were taken randomly, all soil samples on systematic grid lines.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No drilling.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered and secured bags until delivered to the laboratory
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	The Ida North Project is located within the 100% Selga owned exploration licence E29/994. The project is subject to an option to purchase agreement as detailed in the body of this release. In addition, the project is part of the Australian Lithium Alliance between Zenith and EV Metals Group also detailed in the body of this release. The project is located within a pastoral grazing lease.

	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	Tenure is in good standing with no known impediment to future granting of a mining lease.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	No previous exploration activities reported for lithium-tantalum pegmatites.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	LCT type lithium pegmatite, with target being spodumene.
<i>Drill hole Information</i>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <i>o easting and northing of the drill hole collar</i> <i>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>o dip and azimuth of the hole</i> <i>o down hole length and interception depth</i> <i>o hole length.</i> <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	No drilling reported this ASX Release
<i>Data aggregation methods</i>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i> <i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No drilling reported this ASX Release No drilling reported this ASX Release
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No drilling reported this ASX Release
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	No drilling reported this ASX Release No drilling reported this ASX Release No drilling reported this ASX Release
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to figures

Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	No drilling reported this ASX Release
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Nil
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Drilling of the pegmatite swarm is proposed.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to figures in body of report.