

26th April 2022



Corporate Details

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

Issued Shares	343.9M
Unlisted options	14.3M
Mkt. Cap. (\$0.44)	A\$151M
Cash (31 st Dec 21)	A\$4.4M*
Equities (31 st Dec 21)	A\$9.1M
Debt	Nil

*Excludes \$6M placement to EVM
(ASX Release 13-Jan-22)

Directors

Michael Clifford	Managing Director
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Nicholas Ong	Co Sec
Nick Bishop	CFO

Major Shareholders (31st Dec 21)

Directors	3.4%
HSBC Custody Nom.	9.4%
Citicorp Nom	9.0%
BNP Paribas Nom	5.8%
Granich	3.7%

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

Level 2, 33 Ord Street
WEST PERTH WA 6005
PO Box 1426
WEST PERTH WA 6872
Telephone: (08) 9226 1110
Email: info@zenithminerals.com.au
Web: www.zenithminerals.com.au

NEW POTASH PROJECT – WESTERN AUSTRALIA

- Yalgoo potash brine project in Western Australia secured via three 100% owned exploration licences.
- Potash brine target identified during assessment of regional government airborne electromagnetic (AEM) geophysical data as part of Zenith's ongoing exploration program on its nearby Waratah Well lithium project.
- Modelling of AEM data defines a 50km long by 15km wide series of conductive layers extending from near surface to depths of 95m below surface, interpreted to be a major brine rich paleochannel.
- The Yalgoo AEM anomaly is like those coincident with salt lake targets held by competitor potash brine companies located further to the east and northeast.
- No previous drill testing of the potash brine target has been reported.
- Project has excellent logistics lying immediately south of the Geraldton – Mt Magnet Road and major gas pipeline. Project is only 250km east of the Geraldton port, potentially providing a major transport/logistics advantage compared to other Western Australian potash brine projects that are some 780km to 1100km from ports.
- To allow the Zenith team to focus on activities to generate Battery Minerals projects, ZNC is planning to demerge the non-Battery Minerals projects, including the Yalgoo potash project, into one or more new companies to be listed on ASX. Any such demerger will be subject to ZNC Board approval, tax advice favourable to ZNC, shareholders, ASX, ASIC and other regulatory approvals.
- ZNC shareholders to benefit by way of an in-specie distribution of the shares in the new listed vehicle/s. Further updates and information on the Demerger will be provided by Zenith in due course. (ASX Release 13-Jan-22).

Commenting on the Yalgoo potash project, Managing Director Mick Clifford said: “Whilst assessing regional government geophysical data on our Waratah Well lithium project, the technical team identified a very large potash brine target located southeast of Yalgoo, adjacent to the main Mt Magnet-Geraldton Road.

If drill testing is successful in confirming the presence of sub-surface potash rich brines, then this project has a potential major logistical advantage over competitor projects being located only 250km from the port of Geraldton. Most competitor Western Australian potash brine projects are located hundreds of kilometres from port facilities, with the transport of potash product to coastal port being a significant component of the total operating costs of these projects.”

Background on the Yalgoo Potash Brine Project

The Company's new Yalgoo potash brine project (Figure 1) was identified during assessment of regional government geophysical datasets as part of an exploration program on the Company's Waratah Well lithium project.

Three 100% owned exploration licences cover Zenith’s Yalgoo potash brine target, that lies immediately south of the Geraldton – Mt Magnet main road.

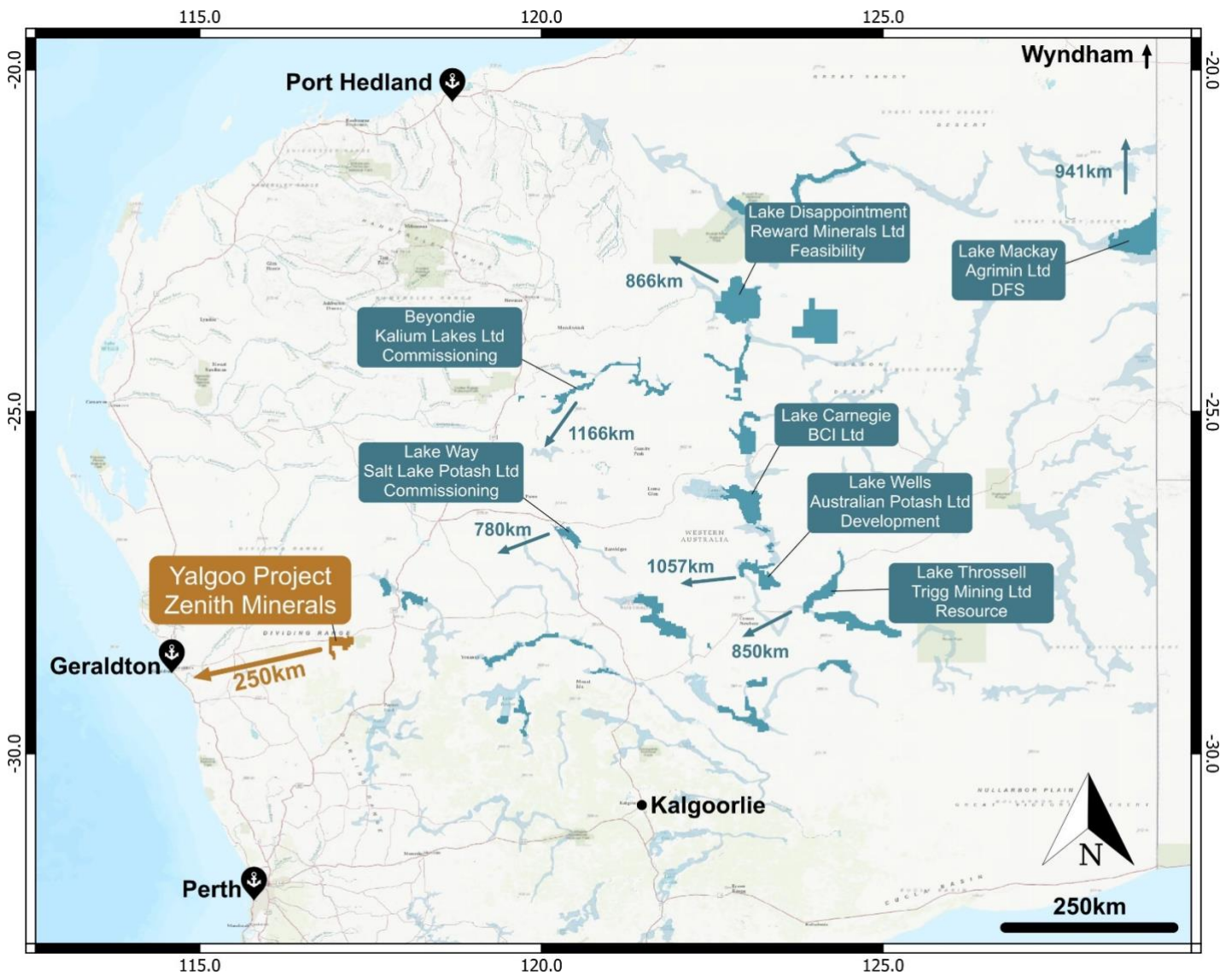


Figure 1: Yalgoo Potash Brine Project Location Map

Modelling of regional government airborne electromagnetic (AEM) geophysical data defines a 50km long by 15km wide series of conductive layers extending from near surface to depths of 95m below surface, interpreted to be a major brine rich paleochannel. The Yalgoo AEM anomaly is like those coincident with salt lake targets held by competitor potash brine companies located further to the east and northeast. One significant difference is at surface there is no single major salt lake system that can in some areas be difficult to access with heavy equipment due to cultural and heritage sensitivities.

The Project is only 250km east of the Geraldton port, potentially providing a major transport/logistics advantage compared to other Western Australian potash brine projects that are 780km to 1100km from coastal shipping ports.

No previous drill testing of the potash brine target has been reported. An initial drill test of 6 to 12 aircore drill holes to 100m depths is planned to test the target once heritage agreements and permitting are in place.

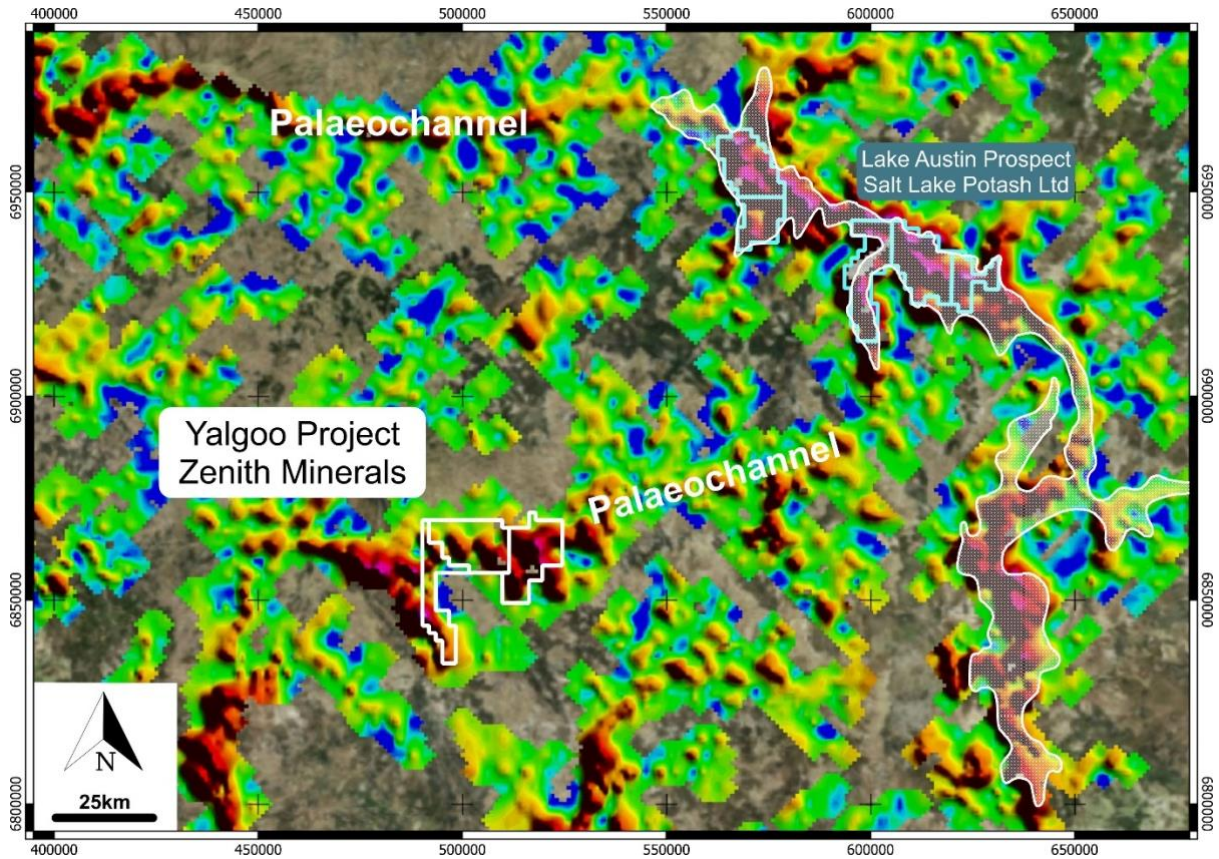


Figure 2: Yalgoo Potash Brine Project Airborne Electromagnetic (SkyTEM) Anomaly Target
Image is conductivity slice at 24-30m below surface

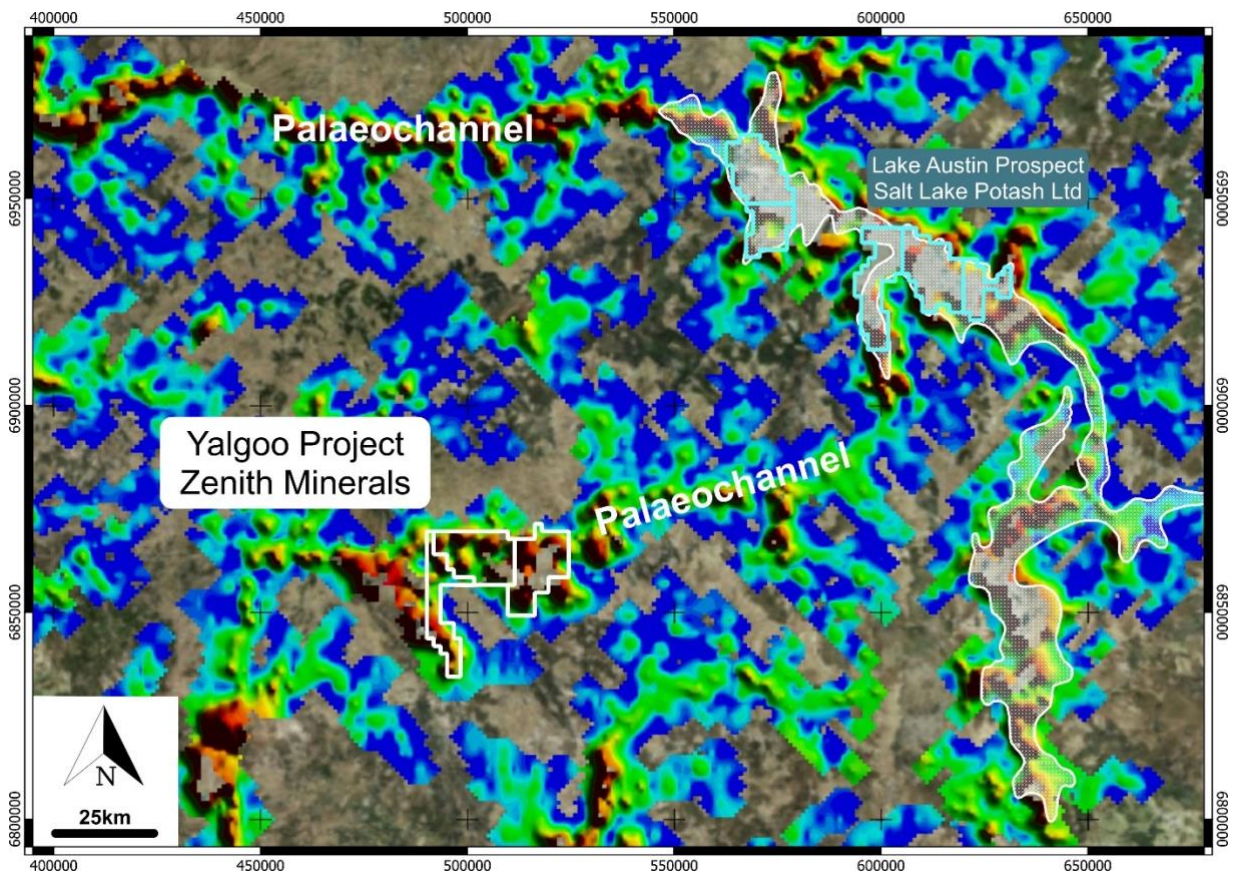


Figure 3: Yalgoo Potash Brine Project Airborne Electromagnetic (SkyTEM) Anomaly Target
Image is conductivity slice at 82 -95m below surface

Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Material ASX Releases Previously Released

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.

Authorised for release by the Zenith Minerals Limited Board of Directors – 26th April 2022

For further information contact Zenith Minerals Limited:

Managing Director: Michael Clifford E: info@zenithminerals.com.au Phone +61 8 9226 1110

ABOUT ZENITH

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 14-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, by sole funding the completion of a feasibility study within 24 months, with Zenith retaining a 40% project share.
- 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.

To allow the Zenith team to focus on activities to generate Battery Minerals projects, ZNC is planning to demerge the non-Battery Minerals projects, including base metals and gold assets into one or more new companies to be listed on ASX. Any such demerger will be subject to ZNC Board approval, tax advice favourable to ZNC, shareholders, ASX, ASIC and other regulatory approvals. ZNC shareholders to benefit by way of an in-specie distribution of the shares in the new listed vehicle/s. Further updates and information on the Demerger will be provided by Zenith in due course.

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

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

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

Red Mountain

Gold

Queensland

100% Owned

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
5m @ 10.4 g/t Au

15m @ 3.5 g/t Au
12m @ 4.9 g/t Au

Split Rocks

Gold

**Western
Australia**

100% Owned

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
Dulcie Laterite Pit

32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au
2m @ 14.5 g/t Au
14m @ 3.5 g/t Au

16m @ 1.3 g/t Au
18m @ 2.0 g/t Au

Estrella
Dulcie Far North
Water Bore
Scotts Grey

2m @ 9.8 g/t Au
5m @ 5.6 g/t Au
3m @ 6.6 g/t Au
8m @ 4.1 g/t Au

3m @ 70 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>	Helicopter-borne time domain EM survey (SkyTEM) flown for the Government of Western Australia Department of Water 18 May 2015 reference AUS_10001. Data was re-processed by geophysical consultants Resource Potentials for Zenith Minerals Limited
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	No drilling or sampling reported
	<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>	The SkyTEM survey data is mapping variable thickness of conductive regolith cover and palaeochannels along survey flight lines.
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 reported
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	- No drilling reported
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling reported
	<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 reported

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>	No drilling reported
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	No drilling reported
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling reported
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling reported
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	No drilling reported
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	No drilling reported
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No drilling reported
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>	No drilling reported
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	No drilling reported
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>	No assays reported
	<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 assays reported
	<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>	No drilling reported
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No drilling reported
	<i>The use of twinned holes.</i>	No drilling reported

	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	No assays reported																																																
	<i>Discuss any adjustment to assay data.</i>	No assays reported																																																
<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>	<p>Table 1 - Relative positions of system components. The Z-coordinate is positive below the Tx loop wire. Positive X and Y-axes are in the flight direction and to the starboard side respectively, forming a right-handed coordinate system.</p> <table border="1"> <thead> <tr> <th rowspan="2">ITEM</th> <th rowspan="2">DESCRIPTION</th> <th colspan="3">SkyTEM³⁰⁸</th> </tr> <tr> <th>X(m)</th> <th>Y(m)</th> <th>Z(m)</th> </tr> </thead> <tbody> <tr> <td>Z-coil</td> <td>EM Z-axis sensor</td> <td>-13.25</td> <td>0.00</td> <td>-2.00</td> </tr> <tr> <td>X-coil</td> <td>EM X-axis sensor</td> <td>-14.65</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>TL1</td> <td>Tiltmeter set 1 (measures tilts from horizontal with respect to both X and Y axes)</td> <td>12.79</td> <td>1.64</td> <td>-0.12</td> </tr> <tr> <td>TL2</td> <td>Tiltmeter set 2 (measures tilts from horizontal with respect to both X and Y axes)</td> <td>12.79</td> <td>1.64</td> <td>-0.12</td> </tr> <tr> <td>HE1</td> <td>Laser Altimeter 1</td> <td>12.94</td> <td>1.79</td> <td>-0.12</td> </tr> <tr> <td>HE2</td> <td>Laser Altimeter 2</td> <td>12.94</td> <td>-1.79</td> <td>-0.12</td> </tr> <tr> <td>PaPC-GPS1</td> <td>GPS 1 Antenna (Standard)</td> <td>11.68</td> <td>2.79</td> <td>-0.16</td> </tr> <tr> <td>PaPC-GPS2</td> <td>GPS 2 Antenna (RTK DGPS)</td> <td>10.51</td> <td>3.95</td> <td>-0.16</td> </tr> </tbody> </table>	ITEM	DESCRIPTION	SkyTEM ³⁰⁸			X(m)	Y(m)	Z(m)	Z-coil	EM Z-axis sensor	-13.25	0.00	-2.00	X-coil	EM X-axis sensor	-14.65	0.00	0.00	TL1	Tiltmeter set 1 (measures tilts from horizontal with respect to both X and Y axes)	12.79	1.64	-0.12	TL2	Tiltmeter set 2 (measures tilts from horizontal with respect to both X and Y axes)	12.79	1.64	-0.12	HE1	Laser Altimeter 1	12.94	1.79	-0.12	HE2	Laser Altimeter 2	12.94	-1.79	-0.12	PaPC-GPS1	GPS 1 Antenna (Standard)	11.68	2.79	-0.16	PaPC-GPS2	GPS 2 Antenna (RTK DGPS)	10.51	3.95	-0.16
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	<i>Specification of the grid system used.</i>	The grid system used to compile data was MGA94 Zone 50																																																
<i>Location of data points - continued</i>	<i>Quality and adequacy of topographic control.</i>	Refer to table above																																																
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Flight lines at nominal 4km spacing orthogonal to inferred drainage directions. A total of 13,917.9km of production surveying and 103.3km of repeat lines.																																																
	<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																																																
<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>	No sampling or drilling reported																																																
	<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>	As above																																																
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	As above																																																
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Original data reviewed and re-processed by independent consulting geophysical company Resource Potentials for Zenith.																																																

Section 2 Reporting of Exploration

Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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 Yalgoo Project is located within the 100% Zenith owned exploration licences E59/2622, 23, 24. The project is located within the Yamatji determined Native Title Claim.
	<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>	The tenement is 100% held by a wholly owned Zenith subsidiary and is in good standing with no known impediment to future granting of a mining lease. A heritage agreement (ILUA) has been signed by Zenith but is awaiting counter signing by the heritage party. Heritage surveys will be required to be completed prior to drill testing
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	The project was previously explored as a uranium target by Spark Energy Pty Ltd in 2011.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	The project is underlain by Archaean basement granitoids within the Murchison Terrane of the Murchison Province. The Archaean basement is entirely covered by Cainozoic units. The valley floor of the palaeodrainage that runs through the project area is occupied by gypsiferous alluvial and eluvial sediments adjacent to saline playa lakes, with sandy colluviums covering the slopes draining the low granite hills. The target is palaeochannel hosted potash brines.
Drill hole Information	<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>	No drilling reported
	<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>	
Data aggregation methods	<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>	No data aggregation.
	<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 aggregation used

<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	No drilling reported
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling reported
	<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>	As above
<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 descriptions and diagrams in body of text
<i>Balanced reporting</i>	<i>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.</i>	No sampling reported
<i>Other substantive exploration data</i>	<i>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.</i>	SkyTEM airborne electromagnetic (AEM) survey flown for the Western Australian Government Department of Water. The key objective of the geophysical survey was to provide geophysical input into the investigation of the groundwater resources of the palaeochannel systems of the Murchison and Greenough catchments, to enable the production of information products relating to the available groundwater resources of the survey area.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Drill testing is planned.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to figures in body of report.