

26 September 2024

## Application for Bangemall Copper and Zinc Project, Western Australia

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### Highlights

#### Bangemall Base Metals Project, Western Australia

- **Oceana Lithium has applied for an exploration licence covering ~93km<sup>2</sup> within the highly prospective Bangemall Basin, WA**
  - **The license area contains a large untested EM anomaly and known copper stream sediment anomalies, with only limited shallow historical drilling**
  - **The Bangemall Project is prospective copper and other base metals across a range deposit styles including sedimentary exhalative (SEDEX), Mt Isa and Abra mineralisation types.**
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**Oceana Lithium Limited (ASX: OCN, “Oceana” or “the Company”)** is pleased to announce that the Company has applied an exploration license (ELA 52/4393) covering ~93km<sup>2</sup> in the Bangemall Basin near Meekatharra, Western Australia.

The Company’s technical team has identified the presence of strong electromagnetic (EM) anomalies in the 100-150m depth slice within the fault zone in the central part of the licence area, from work completed by the Geological Survey of Western Australia (GSWA) in 2013. Importantly, widespread zinc (Zn), copper (Cu), and cobalt (Co) anomalism has been confirmed in historical stream sediment sampling in the faulted zone stratigraphically below the Discovery Chert units, as well as mineralised veinlets of base metals mapped within the application area by the GSWA. Based on the combination of geophysics, prospective geology, and known anomalous occurrences, the Company believes the area is highly prospective for copper and other base metals.

Oceana Chairman, Dr Qingtao Zeng said:

“Despite the discovery and subsequent development of the Abra polymetallic deposit, the Bangemall basin remains considerably underexplored. We believe the area is very prospective for a range of base metal mineralisation styles, including hydrothermal, stratabound, and intrusion-related stockwork types”.

#### Regional Geology and mineralisation

The Mesoproterozoic Bangemall Basin, located between the Yilgarn and Pilbara Cratons, overlies the tectonic units of the Paleoproterozoic Capricorn Orogen. The basin unconformably overlies the Ashburton and Bresnahan Basins on its northern boundary, the Gascoyne Complex to the west and southwest, and the Bryah, Padbury, and Earahedy Basins to the south and southeast. To the east, units of the Greater Officer Basin unconformably overlie the Bangemall Basin (**Figure 1**).

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#### Directors and Management

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Non-Executive Chairman

**Aidan Platel**

Non-Executive Director

**Daniel Smith**

Non-Executive Director and Company  
Secretary

**Cintia Maia**

Corporate Director, Brazil

#### Projects

Solonópole Project

(Ceará, BRAZIL)

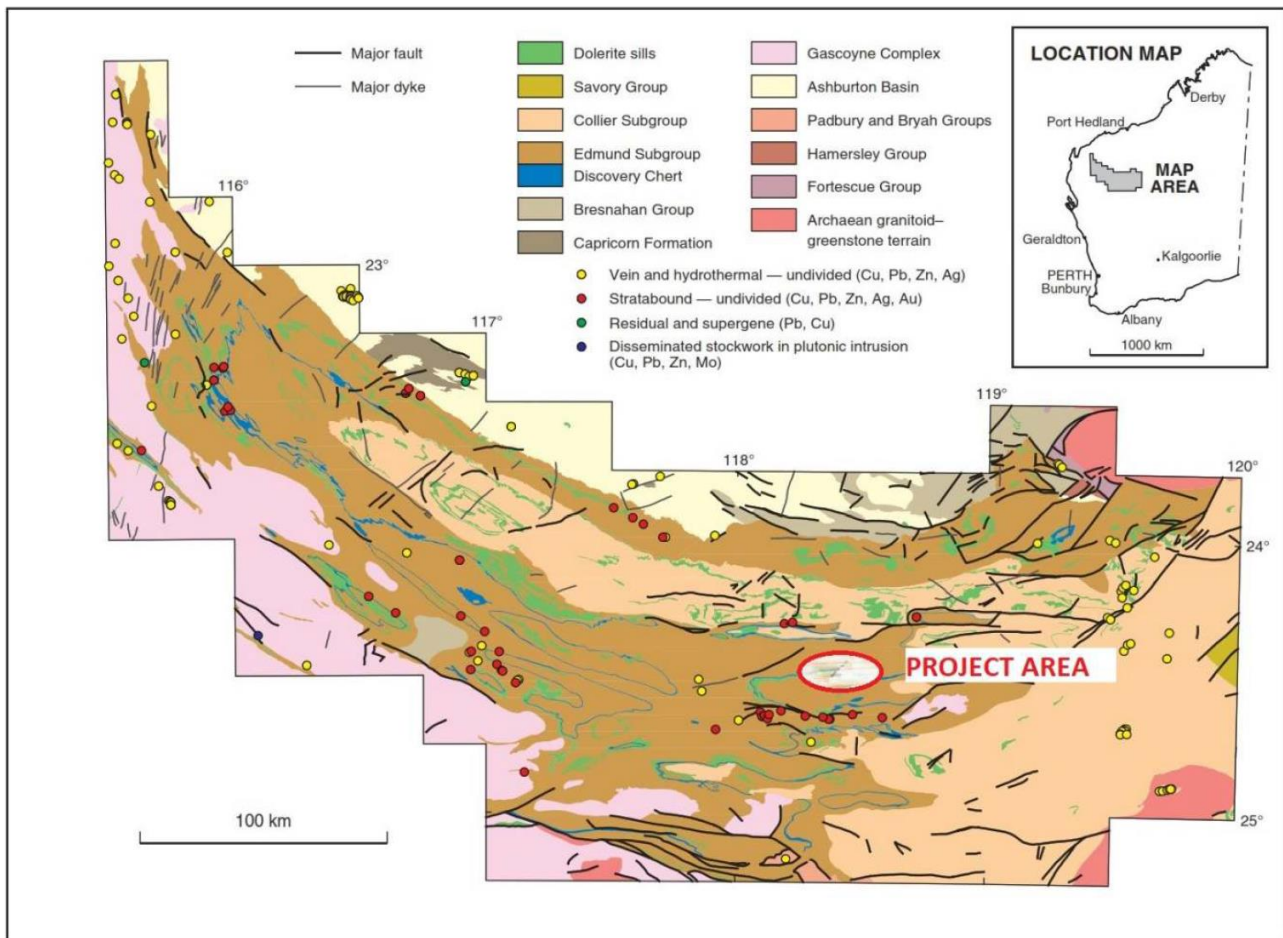
Napperby Project

(Northern Territory, AUSTRALIA)

The initial structure was probably a broad basin in which a succession of stromatolitic dolomite, chert, sandstone, and mudstone was deposited in lagoonal to shallow-marine environments. This was followed by deposition, in deeper waters, of clastic sediments including black shale, mudstone, and siltstone. The upper part of the Bangemall succession (Collier Subgroup) contains shale and siltstone, intercalated with carbonate, glauconitic sandstone, turbiditic rocks, conglomerate, and chert. Sedimentation was likely controlled by pre-existing basement structures, some of which were reactivated during the infilling of the basin. Numerous dolerite sills of tholeiitic composition intruded the Edmund and Collier Subgroups. These sills are most abundant in the western facies' domain, to the northwest and southeast, and their distribution suggests a three-armed rift zone. The 4–10 km-thick Bangemall Supergroup, comprising the Edmund and Collier Groups, was deposited between 1620 and 1070 Ma in response to intracratonic extensional reactivation of the Paleoproterozoic compressional Capricorn Orogen. The Bangemall basin sediments are intruded by extensive dolerite sills dated at 1050 Ma old. The sequence is progressively more deformed and metamorphosed to the north.

Since the 1960s there have been a number of commodity-driven cycles of exploration in the Bangemall Basin, chiefly for base metals, gold, uranium, diamonds, and manganese. Both copper and gold have been systematically explored for from 1990 to 2010, but neither are being currently mined. In-ground resources have been outlined for both the Ilgarari Mining Centre and the Hibernian Mine at the Egerton Mining Centre of 2.55Mt at 3.3% Cu and 0.17Mt at 5.5g/t Au, respectively. Lead, copper, and zinc were mined in the late 1940s from the Joy Helen deposit, 34 km northeast of Maroonah Homestead, but no production was recorded (GSWA report, Cooper etc, 1998).

Abra, discovered in 1981, is an upper Proterozoic sediment-hosted strata-bound Pb-Ag-Ba deposit located some 900 km north-northeast of Perth in Western Australia. Abra is spatially related to coincident magnetic and gravity anomalies, and is covered by 230m to 450m of unmineralised clastic sediments. Abra is owned by Galena Mining Ltd (ASX:G1A) 60% and Toho Zinc Company Ltd (TYO: 5707) 40%.

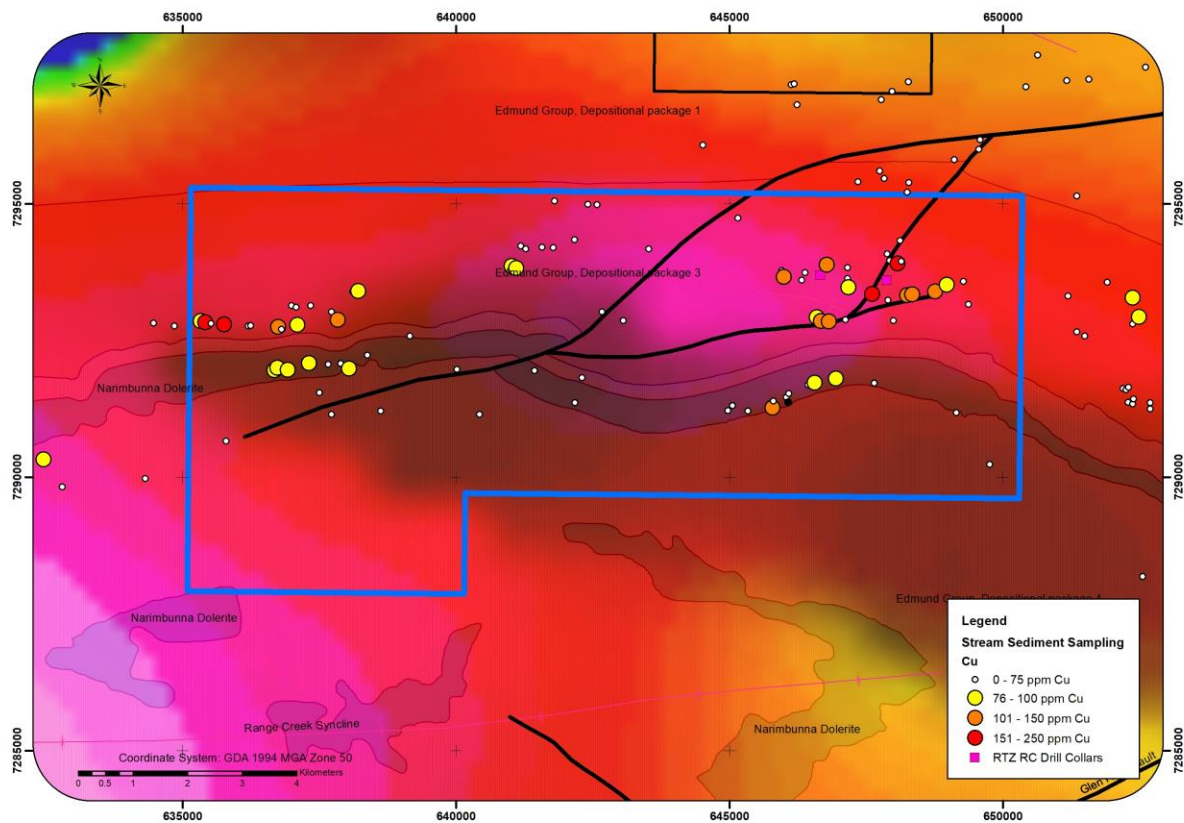


**Figure 1** - Project location map and potential mineralisation types in this region (GSWA Report 64)

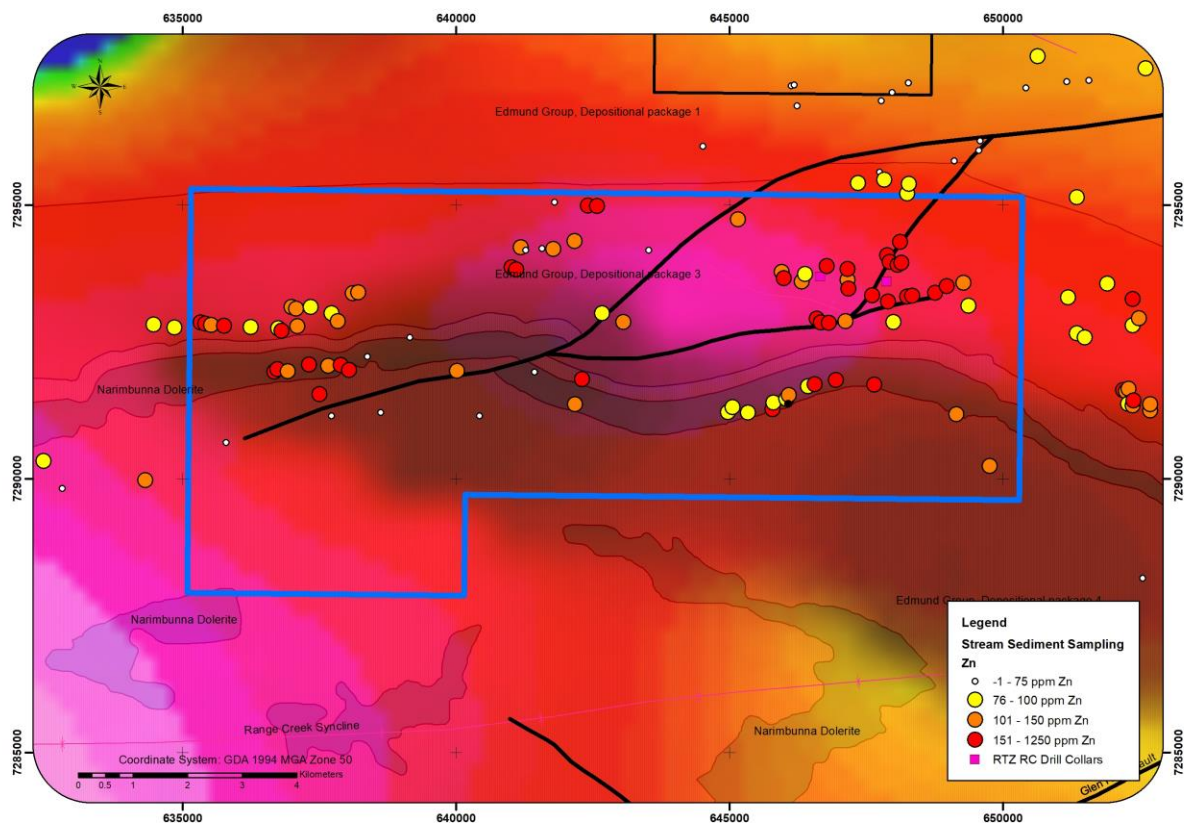
### Exploration Licence application

The exploration licence application EL52/4393 covers 93.54 km<sup>2</sup>. The area has undertaken strong faulting events, which indicates presence of a major fault in the basement parallel to Tangadee lineament, an ideal plumbing system to deliver mineralising fluids. The Abra mine is located to the northwest side of the Tangadee lineament.

Previous explorers of the project area include Rio Tinto Exploration Pty Ltd ("RTZ") to 2000 and later BHP (only for iron ore). RTZ generated base metal stream sediment anomalies and drilled two RC holes into the carbonaceous and dolomitic shales. The RC holes did NOT test the EM anomaly in full, yet still intersected base metal mineralisation up to 15m @ 0.2% Zn (Figures 2 and 3). The anomalous copper and zinc combined with the significant EM high present an excellent target to be drill tested further.



**Figure 2** – Anomalous copper stream samples over EM data. Black lines are interpreted major faults. RC drill collars are shown along the eastern boundary of the major EM high (shown in magenta).



**Figure 3** – Anomalous zinc stream samples over EM data.



## Next Steps

The Company has initiated a full desktop review of all historical data sets in order to generate and define target areas for base metal mineralisation. This will be followed by non- ground-disturbing field work including mapping, soil and stream sampling, and rock chip samples of any prospective outcrops, with the intention of defining and prioritising targets for drill-testing.

## Authorised for release by the Board of Oceana Lithium Ltd.

For further information please contact:

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## Competent Person Statement

The information in this announcement that relates to exploration results is based on information reviewed, collated and fairly represented by Dr Qingtao Zeng who is a Member of AusIMM. Dr Zeng has NOT visited the project site and but has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Zeng consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. Dr Zeng confirms information in this market announcement is an accurate representation of the available data for the exploration areas mentioned herein.

References: R. W. Cooper, R. L. Langford, and F. Pirajno, 1998. MINERAL OCCURRENCES AND EXPLORATION POTENTIAL OF THE BANGEMALL BASIN, GSWA Report 64.

EM data from <https://geodownloads.dmp.wa.gov.au/downloads/geophysics/70825/>

**Table 1:** Rio Tinto Drill hole information (Geodetic datum GDA94)

Hole	Easting	Northing	Depth (m)	Dip
RC001	647870	7293599	153	60
RC002	646657	7293686	153	60

**Table 2:** Rio Tinto Drill Historical drill results

Hole	From	To	Interval (m)	Zn (ppm)
RC002	0m	15m	15	1985

## APPENDIX 1

### 1 JORC CODE, 2012 EDITION – TABLE 1

#### 1.1 Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration results contained in this announcement were taken directly from Geological Survey of Western Australia, Report 64, completed by R. W. Cooper, R. L. Langford, and F. Pirajno</li> <li>Soil Stream sample survey were performed in part of the EL application area;</li> <li>Two RC drilling holes were performed and sampled.</li> <li>RTZ drilling in WAMEX A62384</li> <li>RTZ Stream sediment sampling raw data in WAMEX A47808, and A44417</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul style="list-style-type: none"> <li>Two RC holes were performed by RTZ, drilled in 2016 for a total of 216m.</li> <li>Drilling focussed on targets developed during the previous periods. Targeting was based on work developed from the publicly available GSWA regional AEM survey. Drilling was restricted to tracks only as no heritage work has been done to allow for the clearing of undisturbed ground. Actual drill sites did not always overlap entirely with the intended target due to the availability of existing tracks.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Limited data available on the recovery.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>No holes were open hole logged.</li> <li>An inrod gamma was captured by McKay using the REFLEX wireline logging tool.</li> <li>All holes were logged in the field by a BHP geologist and data entered into a Panasonic Tough Book</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed sample techniques were not available to the Company.</li> <li>All drill hole has been submitted to the GSWA in the 2016 CMER</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the</li> </ul>	<ul style="list-style-type: none"> <li>All major element assays were acquired with XRF (%). All trace analysis was done using laser ablation techniques (ppm).</li> <li>The historical assays were performed and supervised by BHP geologist base on their reports</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <ul style="list-style-type: none"> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>All data undergoes a thorough data validation process prior to entry to the master database. Samples were collected in the field and sent to Ultratrace in Perth for analysis by BHP geologists back to 2015 to 2017</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar locations were surveyed (GDA94, MGAz50) by BHP surveyors using a GPS unit</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>It is early stage exploration. Not applicable</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>It is early stage exploration. Not applicable</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Sample security is unknown.</li> <li>The Company has no reason to believe the</li> </ul>



Criteria	JORC Code explanation	Commentary
		sample security was not done properly.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>There has been no review of the sampling techniques and data.</li> </ul>

## 1.2 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>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>E52/4393 is 100% owned by Oceana NT Pty Ltd.</li> <li>Oceana NT Pty Ltd is a fully owned subsidiary of Oceana Lithium Ltd.</li> </ul>									
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>All open-file Company Reports relating to the Bangemall Tenements have been assessed and those directly relevant are summarised in the announcement.</li> <li>Oceana has no reason not to trust the sampling positions, method, or results provided by previous explorers.</li> </ul>									
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>In the Bangemall Basin, Three groups of stratabound mineralization can be recognized in the Bangemall Basin: the Abra and associated deposits and occurrences in the Jillawarra Subbasin, mineralization related to dominantly carbonaceous and pyritic shale at various stratigraphic levels, and dolostone-hosted occurrences</li> </ul>									
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><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> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>RTZ had drilled two RC holes total 216 m</li> <li>Limited data available regarding the RL, drilling dip and azimuth.</li> <li>Drilling collars are as following: <table> <tr> <td>HOLE NO</td><td>East AMG84</td><td>North</td></tr> <tr> <td>RC1</td><td>647870</td><td>7293599</td></tr> <tr> <td>RC2</td><td>646657</td><td>7293686</td></tr> </table> </li> </ul>	HOLE NO	East AMG84	North	RC1	647870	7293599	RC2	646657	7293686
HOLE NO	East AMG84	North									
RC1	647870	7293599									
RC2	646657	7293686									

Criteria	JORC Code explanation	Commentary
	<p>depth</p> <ul style="list-style-type: none"> <li>○ hole length.</li> <li>• 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.</li> </ul>	
Data aggregation methods	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• The only significant results is 10 m at 0.2% Zinc.</li> <li>• It is not documented regarding the aggregate methodology.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• The project is in the very early stage of exploration. It is unclear what relationship between in the intercept and the potential mineralization.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The stream soil results and regional EM conductivity diagram were completed by GSWA and it is too early to correlate these EM to any potential mineralization yet.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant historical data to copper and zinc was included in the announcement.</li> <li>• Only meaningful exploration results were highlighted in this announcement. It is early stage exploration.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>All meaningful available exploration data, previous geological mapping and geochemical sampling has been considered herein.</li> <li>New meaningful and material data will be reported on as it becomes available.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>The next phases of work may include soil sampling, trenching and mapping &amp; channel sampling.</li> <li>Further work will be detailed in future announcements.</li> </ul>