

6 February 2019

The Manager  
Company Announcements Office  
Australian Securities Exchange Limited  
Level 40, Central Park  
152-158 St Georges Terrace  
PERTH WA 6000

## **EM SURVEY COMPLETED AT JERANGLE – BROAD STRONG BEDROCK ANOMALISM IDENTIFIED**

Ironbark Zinc Limited (ASX: IBG) ("Ironbark" or "the Company"), is pleased to announce the Heli-SAM electromagnetic survey has been successfully completed at the Jerangle Prospect within the Captains Flat base metals project.

Geophysical group, Gap Geophysics completed a HeliSAM electromagnetic (EM) survey over the proven large-scale Jerangle Prospect at Captains Flat (Figure 1). Preliminary interpretations show anomalies in several adjacent loops indicating the presence of a large, broad bed rock anomaly. Results from Loop 5 are shown in Figure 2 where there is a clear broader bedrock anomaly apparent on the north east section, at approximately 713,500mE and at depth. The broadening wavelength on the northern side of the anomalism would suggest some degree of plunge/deepening in the northerly direction.

The interpretation of the data is ongoing with a final report with drill targets expected shortly.

The survey was financed jointly by Ironbark and New South Wales Base Metals (NSW BM – a subsidiary of Glencore) on an equal basis which is the same as the project ownership.

The Captains Flat project hosts the historic and significant Lake George Mine as well as numerous highly prospective exploration targets.

Ironbark and NSW BM have already enjoyed historic exploration success with significant base metal intercepts returned from the Jerangle Prospect earlier drilling and look forward to continuing their work on this significant and underexplored proven high-grade base metals province. The geophysical survey is anticipated to better identify and detail the location, scale and geometry of the identified anomaly.

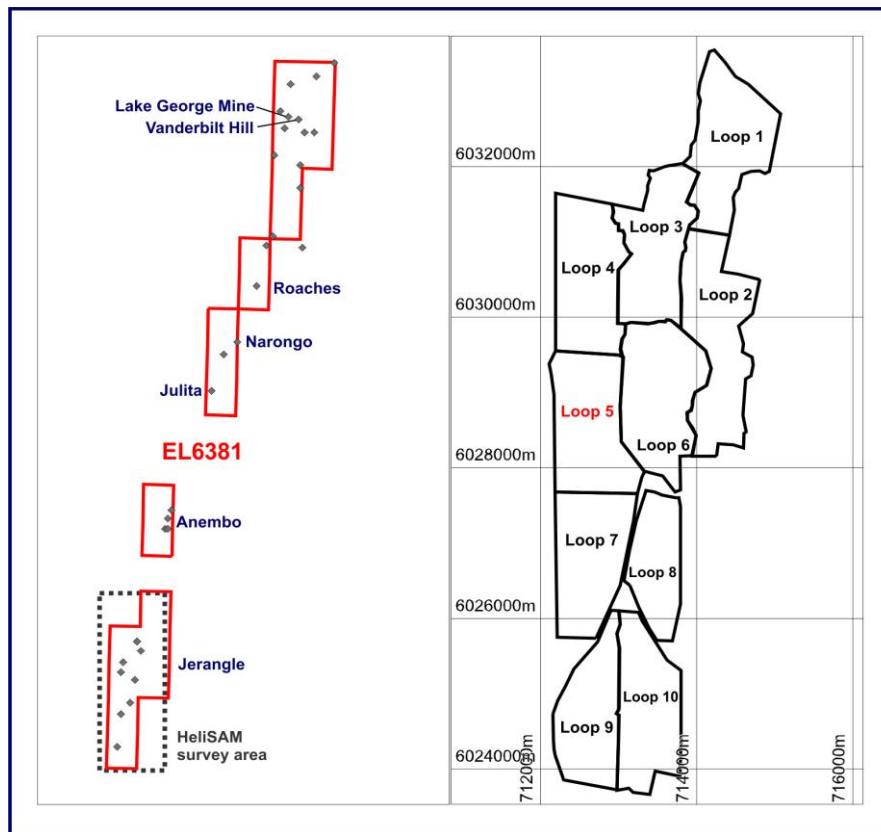


Figure 1: Exploration Licence 6381 showing prospect locations and the location of the HeliSAM survey at the Jerangle Prospect (left) and individual loop locations (right).

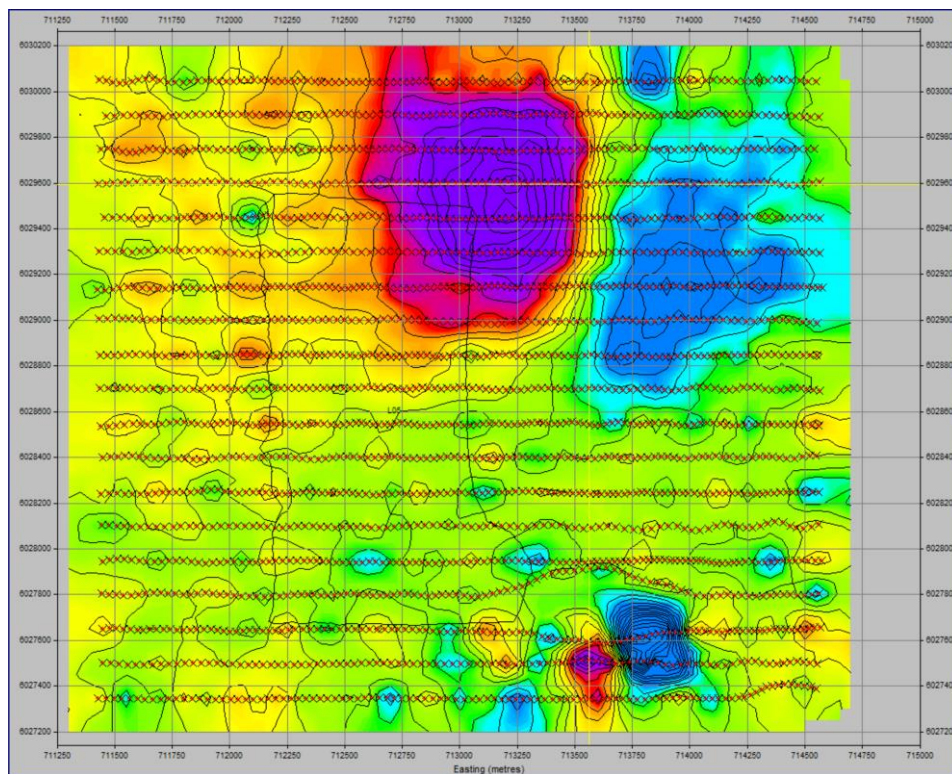


Figure 2: Preliminary results from Loop 5 of the HeliSAM survey showing broad bedrock anomalism.

## **ABOUT THE CAPTAINS FLAT BASE METAL PROJECT**

The Captains Flat Base Metal Project is located 45km south east of Canberra in New South Wales. The Project covers a strike length of 49 kilometres of a highly prospective volcanics which host the historic Lake George Mine (Figure 2).

Historic drilling has returned high grade copper and zinc drill intercepts over numerous prospects. Drilling by Ironbark also returned high-grade base metal results that warrant follow-up. Some of the identified targets that warrant follow up include:

- **Lake George Mine**

The high-grade Lake George Mine produced approximately 4Mt of ore at 10% zinc, 6% lead, 0.7% copper, 1.8 g/t gold and 55 g/t silver and remains prospective for remnant ore at current base metal prices as well as at depth where results such as 1.22m @ 12.4% zinc, 5.4% lead were returned beneath historical workings over a strike length of at least 300 metres from diamond drilling. Mineralisation is open at depth and may represent possible repeats of the historically mined areas.

- **Vanderbilt Hill**

The Vanderbilt Hill prospect is located to the east of the Lake George Mine and drilling has returned results such as 3.9m @ 10% zinc, 5.3% lead. The prospect is considered to be highly prospective with open ended historic high-grade drill results yet to be followed up.

- **Anembo Prospect**

The Anembo Prospect is located 12km north of the Jerangle prospect. Historic drilling returned 3m @ 6.9% Zn, 5.5% Pb, 21g/t Ag & 2g/t Au which has not been followed up.

**End.**

For further information please visit Ironbark's website [www.ironbark.gl](http://www.ironbark.gl) or contact us:

Jonathan Downes  
Managing Director  
T +61 8 6461 6350  
E: [info@ironbark.gl](mailto:info@ironbark.gl)

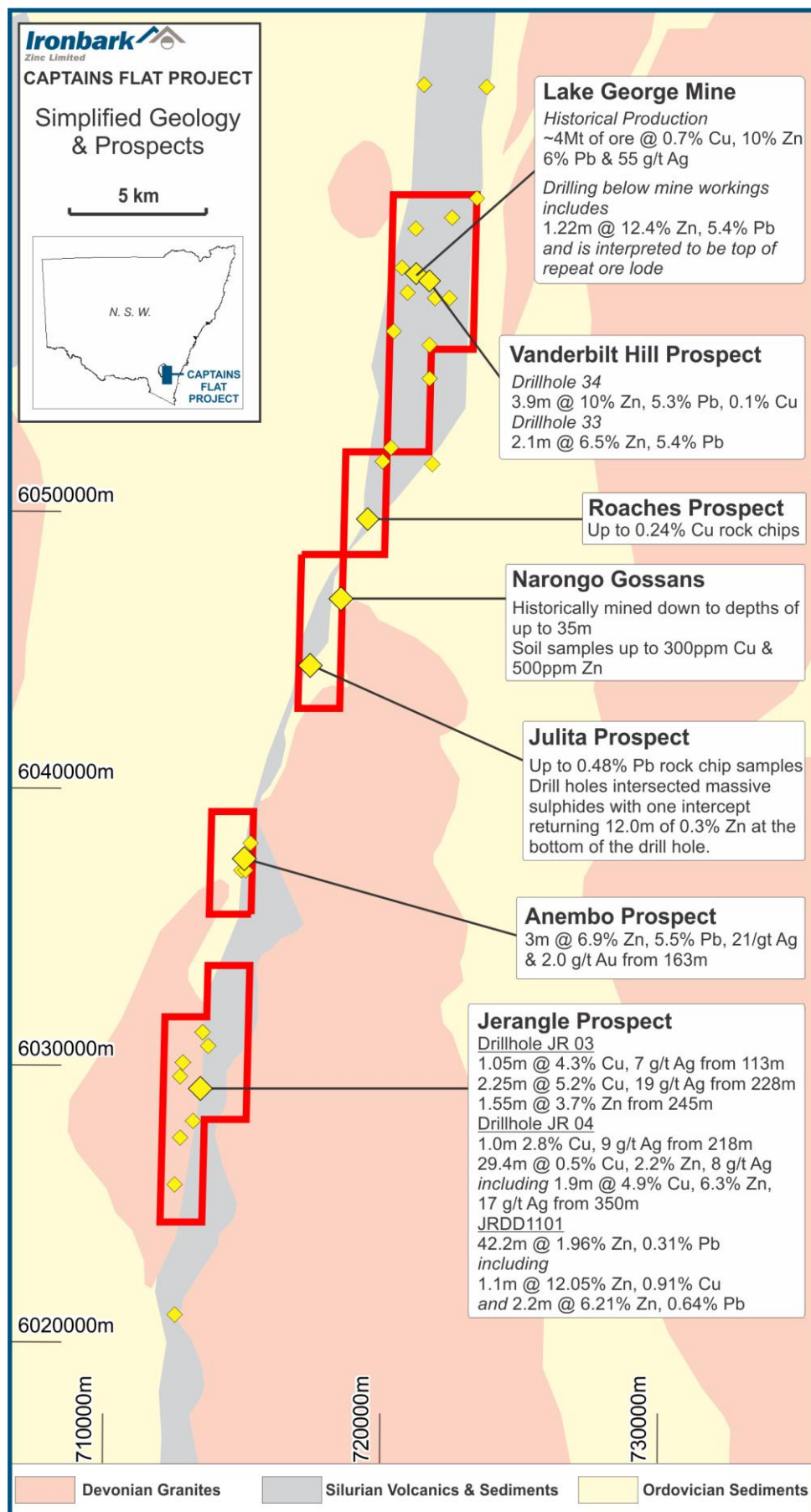


Figure 2: Plan view of the Captains Flat Licence and prospects.

## ABOUT IRONBARK

Ironbark seeks to build shareholder value through the development of the wholly owned Citronen base metal project which currently hosts in excess of 13.1 Billion pounds of zinc (Zn) and lead (Pb). For full details refer to ASX announcement 25 November 2014 – Citronen Project Resource Update – JORC 2012 compliant resource. Ironbark is not aware of any new information or data that materially affects the information included in this ASX release, and Ironbark confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the resource estimates in this release continue to apply and have not materially changed.

The current JORC 2012 compliant resource for Citronen:

### 70.8 million tonnes at 5.7% Zn + Pb

Category	Mt	Zn%	Pb%	Zn+Pb%
Measured	25.0	5.0	0.5	5.5
Indicated	26.5	5.5	0.5	6.0
Inferred	19.3	4.9	0.4	5.3

*Using Ordinary Kriging interpolation and reported at a 3.5% Zn cut-off*

Including a higher grade resource of:

### 29.9 million tonnes at 7.1% Zn + Pb

Category	Mt	Zn%	Pb%	Zn+Pb%
Measured	8.9	6.6	0.6	7.2
Indicated	13.7	6.8	0.5	7.3
Inferred	7.3	6.2	0.5	6.6

*Using Ordinary Kriging interpolation and reported at a 5.0% Zn cut-off*

---

***“Ironbark is an emerging leader amongst Australia’s mineral resource companies, dedicated to the development of its major base metal mining operation in Greenland – the world class Citronen Project, and the acquisition of quality base metals projects.”***

---

## **Disclosure Statements and Important Information**

### **Forward Looking Statements**

The following information is not intended to guide any investment decisions in Ironbark Zinc Limited. This material contains certain forecasts and forward-looking information, including possible or assumed future performance, costs, production levels or rates, reserves and resources, prices and valuations and industry growth and other trends. Such forecasts and information are not a guarantee of future performance and involve many risks and uncertainties, as well as other factors. Actual results and developments may differ materially from those implied or expressed by these statements and are dependent on a variety of factors. The Company believes that it has a reasonable basis for making the forward looking statements in the announcement, based on the information contained in this and previous ASX announcements.

The Citronen Zinc Project is considered to be at an early development stage and will require further regulatory approvals and securing of finance and there is no certainty that these will occur. Nothing in this material should be construed as either an offer to seek a solicitation or as an offer to buy or sell Ironbark securities. Consideration of the technical and financial factors requires skilled analysis and understanding of their context.

Ironbark is not aware of any new information or data that materially affects the information included in this ASX release, and Ironbark confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the estimates in this release continue to apply and have not materially changed.

### **Competent Persons Statement**

The information included in this report that relates to Exploration Results & Mineral Resources is based on information compiled by Ms Laursen (B.Sc Hons (Geol), GradDip App. Fin., MSEG, MAIG), an employee of Ironbark Zinc Limited. Ms Laursen has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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. Ms Laursen consents to the inclusion in the report of the matters based on this information in the form and context in which it appears

### **Competent Persons Disclosure**

Ms Laursen is an employee of Ironbark Zinc Limited and currently holds securities in the company.

# JORC Code, 2012 Edition – Table 1 report

## 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><i>Nature and quality of sampling (eg 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></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg '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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Survey type: Inductive loop source HeliSAM (Helicopter borne sub-audio magnetics)</li> <li>10 loops</li> <li>150m survey line spacing</li> <li>Approximately 552 line-km of survey traverses</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling was undertaken.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>No drilling was conducted.</li> </ul>
Logging	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>No drilling or logging was conducted.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	
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>No drilling was conducted.</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 analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <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>	<ul style="list-style-type: none"> <li>Gap GeoPak high power geophysical transmitter.</li> <li>Gap TM-7 magnetometer receiver sampling at a minimum of 2400Hz.</li> <li>Differential GPS accurate to 0.1m.</li> <li>Base station magnetometer capable of recording 0.1nT for temporal monitoring.</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>No verification has been completed to date.</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>Location of survey shown in Figure 1.</li> </ul>
Data spacing	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>150m spaced lines.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>and distribution</i>	<ul style="list-style-type: none"> <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>	
<i>Orientation of data in relation to geological structure</i>	<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>Survey line orientation approximately perpendicular to the strike of mineralisation</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Not relevant for EM data.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews have been completed to date.</li> </ul>

## 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>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The survey was conducted at the Jerangle Prospect, which is Part of the Captains Flat Project within Exploration Licence 6381. The Project is in Joint Venture with NSW Base Metals Pty Ltd, a subsidiary of Glencore.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration at the Jerangle Prospect was previously conducted by various explorers including Lake George Mines Pty Ltd, Getty Oil, Amoco Minerals &amp; Denehurst.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation at Jerangle is hosted within the same suite of Volcanic rocks (Hoskintown Group) that host the historic Lake George Mine to the north. The Lake George Mine was a very large VMS deposit. The style of mineralisation at Jerangle shows properties of both VMS and Skarn types.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </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>	<ul style="list-style-type: none"> <li>Survey area is shown in Figure 1.</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>No data aggregation.</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>No drilling was conducted.</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>See Figures 1 and 2.</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>All results reported are representative.</li> </ul>
Other substantive	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical</li> </ul>	<ul style="list-style-type: none"> <li>No other results to report.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>exploration data</i>	<i>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>	
<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>Detailed Interpretation of the survey results following by drill target planning.</li> </ul>