

3 May 2018

## Ground geophysics results confirm priority sulphide target for drill testing at Thackaringa Project, New South Wales

Australian Mines Limited (“**Australian Mines**” or “the Company”) (ASX: AUZ; USA OTCQB: AMSLF) is pleased to announce the recently completed<sup>1</sup> high-resolution Fixed Loop Electromagnetic (FLEM) survey within the Company’s 100%-owned Thackaringa Project has successfully verified the strength of response from conductor BR\_02\_CC as being high enough to interpret the source as most probably being a massive sulphide body<sup>2</sup>.

Similar responses regionally, near Broken Hill in New South Wales, are observed from massive (cobalt-bearing) pyrite and Broken Hill-style massive base-metal sulphides<sup>3</sup>.

The report from an independent geophysical consultant has recommended follow-up drilling to determine which type of sulphide may be the source of the FLEM response.

The BR\_02\_CC conductor was first identified in the helicopter-borne electromagnetic<sup>4</sup> survey over the Thackaringa tenement package at the end of 2017.

Modelling of the recently-received Fixed Loop Electromagnetic survey data indicates that a conductive body is buried at the BR\_02\_CC location and that it appears to be quite shallow - approximately 100 metres below surface and dipping 50-70 degrees towards the southeast.

The FLEM response is located in the centre of *Target Area A* (see Figure 1), which correlates with the helicopter-borne electromagnetic (AEM) results that showed a clear, single peak response over three lines at the interpreted position of BR\_02\_CC.

The ground-based FLEM geophysical survey was primarily commissioned to better define anomaly BR\_02\_CC, but it also covered the adjacent anomalies BR\_03\_CC and BR\_05\_CC, which were interpreted as Priority 2 targets in the AEM report.

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<sup>1</sup> Australian Mines Limited, High-priority conductors detected at Thackaringa Project, released 7 March 2018

<sup>2</sup> See Appendix 1 of this report - Indicative classification scheme (EM conductors)

<sup>3</sup> Mitre Geophysics, FLEM follow up over Barrier Range VTEM anomaly BR02 – Report for Australian Mines

<sup>4</sup> Australian Mines Limited, High-priority conductors detected at Thackaringa Project, released 7 March 2018

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Initial limitations with ground access for the FLEM survey prevented definitive testing of BR\_03\_CC and BR\_05\_CC and they remain secondary priorities, particularly given the promising results from BR\_02\_CC.

Thackaringa is 100% owned by Australian Mines, with no attaching royalties or claw-back measures, and is a pure greenfields cobalt exploration project. The Company's tenements adjoin Cobalt Blue's (ASX: COB) Railway and Pyrite Hill projects.

In addition to the geophysical survey program, Australian Mines is also continuing its soil and surface sampling program at Thackaringa, which is designed to evaluate the entire tenement package. The sampling campaign has now been completed in *Target Area A* and *Target Area B*, with the field crew now focused on *Target Area C* which should be completed in May and results available from June 2018.

**Australian Mines Managing Director Benjamin Bell commented:** *"Although advancing exploration at Thackaringa, in terms of priorities, it is ranked behind completing our Feasibility Study at the Sconi Cobalt-Nickel-Scandium Project in Queensland and the resource expansion programs at both our Sconi and the Flemington Cobalt-Scandium-Nickel Project in New South Wales, the results of the Company's recent geophysical survey absolutely warrant follow-up with a maiden drill program to test the BR\_02\_CC anomaly."*

*"This region, near Broken Hill, is well-endowed with cobalt-bearing sulphide geology, and to see the potential of the area you only need to look at the recent announcement from our immediate tenement neighbour Cobalt Blue, which upgraded the tonnage of its Thackaringa cobalt resource by 31%, off the back of recent drilling."*

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**\*\*\*ENDS\*\*\***

**For further information:**

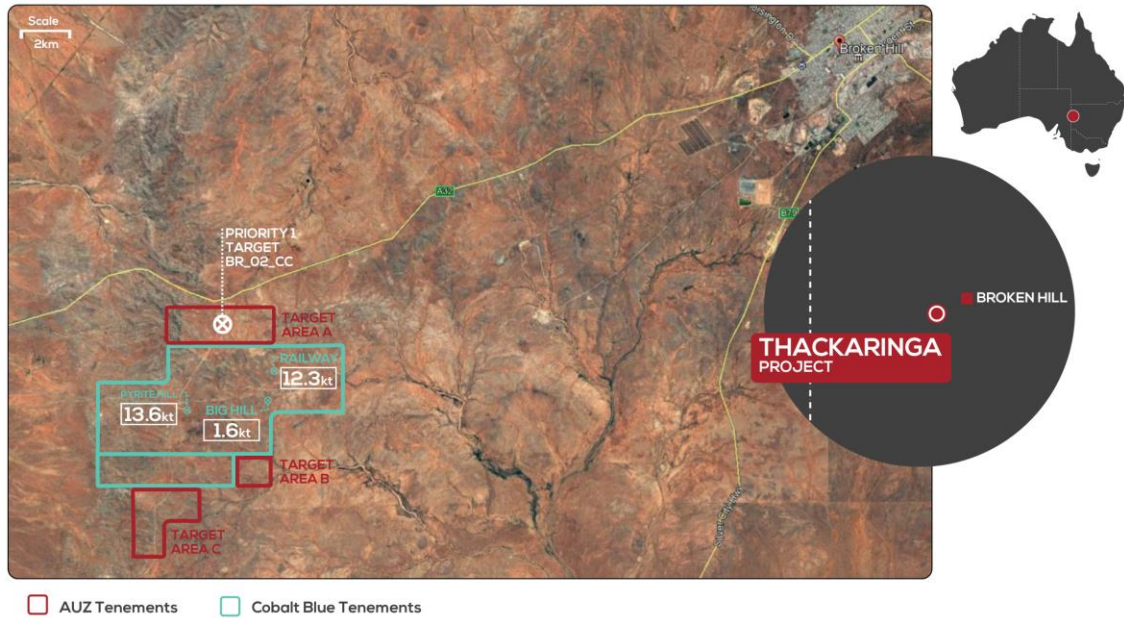
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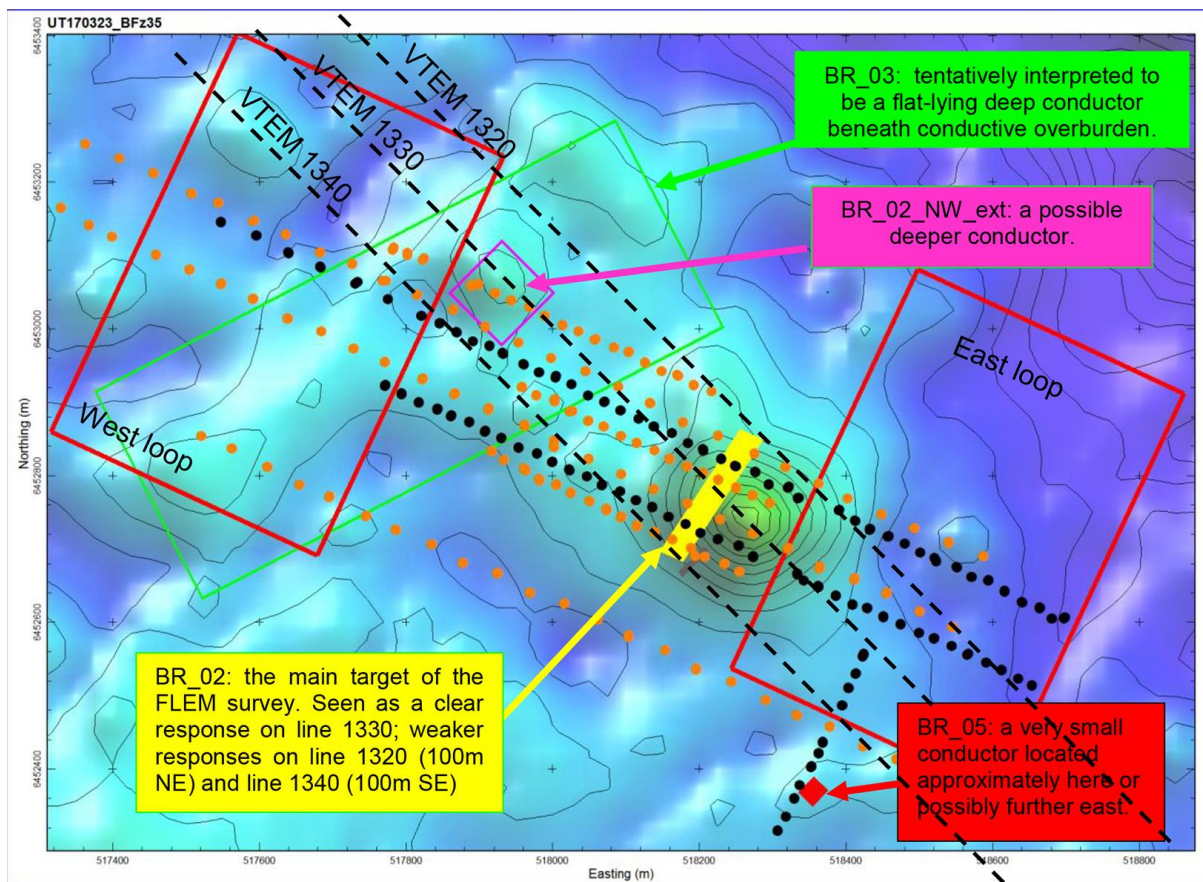
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**THACKARINGA PROJECT Tenement MAP**



**Figure 1:** Satellite photo of Australian Mines' Thackaringa project in central New South Wales, Australia showing the location of the Company's Priority One target BR\_02\_CC with the broader *Target Area A*. Australian Mines is currently reviewing the airborne geophysical data from *Target Area B* and *Target Area C*, and follow-up exploration across these target areas is anticipated once the assay results from the surface geochemical sampling have been received. (The township of Broken Hill is seen in the top right of this image).

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**Figure 2:** Fixed Loop Electromagnetic (FLEM) survey layout superimposed on the helicopter-borne electromagnetic (AEM) results.

AEM responses BR\_02, 03 & 05 have been outlined.

The main target is BR\_02 (in yellow), but BR\_03 (green outline) and BR02\_NW\_ext (pink outline) were also considered to be potentially deep conductors (beneath conductive overburden).

BR\_05 was a small response recorded on one AEM line.

Orange dots are the west loop survey stations, black dots are the east loop survey stations.

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## **Appendix 1: Indicative classification scheme (EM conductors)**

The ranking of Australian Mines' electromagnetic (EM) anomalies are based on the following rationale:

1. Limited strike length anomalies, strong (*Priority One*) to moderate (*Priority Two*) EM conductors are considered high priority targets, especially if upgraded by;
  - a. Coincident Induced Polarisation (IP) response
  - b. Proximity to regional structures / known mineralisation / geochemistry
2. Limited strike length moderate (*Priority Three*) to weak (*Priority Four*) EM conductors are considered moderate priority, and high priority if upgraded by;
  - a. Coincident Induced Polarisation (IP) response
  - b. Proximity to regional structures
3. Broad, smoothly varying, moderate to high amplitude responses are most often due to conductive overburden, especially if over a large area. However, there is potential that a good conductor is buried beneath this, so these anomalies (*Priority Five*) cannot be ignored.
4. Strike extensive conductors are generally either stratigraphic (e.g. conductive shales) or man-made (fences, railways).
5. Very narrow, small but usually high amplitude responses are generally from man-made sources

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## Appendix 2: JORC Code, 2012 Edition

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</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 (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.</li> </ul>	<p>Under the supervision of Mitre Geophysics, geophysical contractor GEM Geophysics completed a ground-based Fixed Loop Electromagnetic (FLEM) survey. This survey was primarily commissioned to better define anomaly BR-02_CC, recorded by Australian Mines' earlier airborne electromagnetic survey.</p> <p>The parameters of this survey included:            Transmitter current: 60A            Waveform: 50% duty square wave            Turn off ramp: 0.7 msec            Station spacing: 25 metres            Data recorded: B field            Components: z, x and y            Transmitter loops: 600m x 400m</p>
<b>Drilling techniques</b>	<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>	This report does not contain any drill results
<b>Drill sample recovery</b>	<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>	This report does not contain any drill results

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Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<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>	This report does not contain any drill results or core / chip logging
<b>Sub-sampling techniques and sample preparation</b>	<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>	This report does not contain any drill results or core / chip sampling
<b>Quality of assay data and laboratory tests</b>	<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>	<p>This report does not contain any drill results or core / chip sampling</p> <p>During the course of the survey, Mitre Geophysics reviewed all data on a daily basis for quality and completeness.</p> <p>All acquired data was subject to digital processing by Mitre Geophysics to reduce any system noise, following which, base level adjustments were made to the EM profile data, as required.</p>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>	This report does not contain any drill results or core / chip sampling
<b>Location of data points</b>	<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>	<p>Location of the sample points and survey surveys were obtained via hand-held GPS, which are accurate to +/- 3 metres. This level of accurate is considered more than satisfactory for a geophysical survey of this type.</p> <p>All data is presented in GDA94 / MGA zone 54</p>
<b>Data spacing and distribution</b>	<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>	The FLEM data were acquired on tight line spacing of 25 metres, which is deemed suitable for the geological terrain and targeted mineralisation styles.
<b>Orientation of data in relation to geological structure</b>	<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>	The FLEM survey was completed on northwest-southeast orientated survey lines being perpendicular to the predominant geological strike.
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	No sampling was undertaken
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits or reviews have been carried out.



## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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>	<p>The Thackaringa Project is located 22 kilometres southwest of Broken Hill (in New South Wales, Australia) and comprises Exploration Licence numbers (EL) 8477</p> <p>Australian Mines is the registered owner of EL8477 and holds 100% interest in this tenement.</p> <p>There are no third-party agreements, royalties or similar associated with this tenement.</p>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>1970s – MacPhar Frequency Domain IP</p> <p>1984 – Geoterrex FLEM</p> <p>1996 – BHP Geotem</p> <p>2000 – NSW Government magnetic survey</p>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>Australian Mines' 100%-owned Thackaringa project lies 22 kilometres southwest of Broken Hill.</p> <p>The tenement is considered prospective for Broken Hill-type lead-zinc-silver and cobalt mineralisation.</p> <p>The area consists of the highly metamorphosed packages of the Thackaringa Group, Sundown Group, and Parnell Formation.</p> <p>Several large retrograde schist shear zones cross cut the tenement</p> <p>Importantly, from the perspective of ground and airborne electromagnetic (EM) surveys, the area has minimal conductive overburden and graphitic shales have not (yet) been detected.</p> <p>This result of minimal conductive overburden being present is that:</p> <p>a) depth of investigation using EM methods is much improved</p> <p>b) there are likely to be less non-prospective responses to distract from sulphide EM responses</p>

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Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<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>	This report does not contain any drill results
<b>Data aggregation methods</b>	<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>	This report does not contain any drill results, core / chip sampling or assays
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>	This report does not contain any drill results, core / chip sampling or assays

Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<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>	Appropriate maps and sections are included in the body of this report.
<b>Balanced reporting</b>	<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>	This report does not contain any drill results, core / chip sampling or assays
<b>Other substantive exploration data</b>	<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 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.</li> </ul>	Other exploration data collected by the company is not considered as material to this report at this stage. Further data collection will be reviewed and reported when considered material.
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<p>Further exploration work for Australian Mines' Thackaringa project may include a reverse circulation (RC) drill program, which would be designed to test the conductive body detected via the Company's recent Fixed Loop Electromagnetic (FLEM) geophysical survey.</p> <p>All drill holes would be cased with PVC to enable down-hole electromagnetic (DHEM) surveys to be completed once each hole has been drilled. The proposed DHEM survey will not only allow Australian Mines to confirm that the drill hole intersected the source of the surface and airborne geophysical response, but also to test for off-hole conductors that may have been obscured in the data from the surface survey by conductors closer to the surface.</p>

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### **Appendix 3: Competent Person's Statement**

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#### **Thackaringa Cobalt Project**

Information in this report that relates to the Thackaringa Project's Exploration Results are based on information compiled by Benjamin Bell who is a member of the Australian Institute of Geoscientists. Mr. Bell is a full-time employee and Managing Director of Australian Mines Limited. Mr. Bell has sufficient experience that is relevant to the styles of mineralisation and types 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. Bell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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