

29 June 2020

Drilling of base metal targets commences at Thackaringa Project, New South Wales

Advanced battery materials development company Australian Mines Limited (“Australian Mines” or “the Company”) (Australia ASX: AUZ; USA OTCQB: AMSLF; Frankfurt Stock Exchange: MJH) is pleased to announce the commencement of a drill program designed to test high-priority base metal targets within the Company’s Thackaringa Project in New South Wales, Australia.

Thackaringa is a 100%-owned, early stage exploration project of Australian Mines located in the Broken Hill region of New South Wales. The project’s proximity to the regional mining town of Broken Hill, where mining major BHP originated mining the supergiant Broken Hill lead-zinc-silver orebody, allows access to an established local mining culture and highly skilled workforce.

An airborne Versatile Time Domain Electromagnetic (VTEM) survey commissioned by Australian Mines over its entire Thackaringa project area in 2017¹, which was designed to detect potential base metal mineralisation at depth, successfully revealed a total of nine separate anomalies.

Of these anomalies, Target A1 and Target A5 in the northern section of the tenement (see Table 1 and Figure 1 of this report) were subsequently classified as “high priority targets²” by two separate and independent consulting firms, Mitre Geophysics and Newexco Exploration, who both concluded these targets represent areas of potential base metal mineralisation that warrant follow-up drill testing.

Accordingly, this morning Australian Mines commenced a targeted, low-cost reverse circulation (RC) drilling program of the Target A1 conductor to verify the presence, if any, of base metal mineralisation at this location.

This drill program is anticipated to take up to three weeks to complete, with the results to be announced in accordance with the Company’s continuous disclosure obligations.

¹ Australian Mines Limited, Helicopter-borne geophysical survey to test greenfield Thackaringa cobalt project, New South Wales, released 29 September 2017

² See Appendix 1 of this report for full details of the indicative classification scheme (EM conductors) that supports this statement.

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Australian Mines Managing Director, Benjamin Bell, commented: “It is too early to speculate on what type of conductive source may be causing the high priority anomalies at Thackaringa. It is, however, important to continue with our drilling and exploration activity at this project, which is relatively low cost, as we look to unlock further value for our shareholders.”

“We are, as ever, maintaining our focus on progressing our flagship Sconi Project to meet the huge demand for technology metals from the electric vehicle revolution and rapidly expanding energy storage industries. However, our longer-term strategy is all about maximising the value from each of our projects; Sconi, Flemington and Thackaringa, for the benefit of our shareholders and all our stakeholders.”

*** ENDS ***

This ASX announcement has been approved and authorised for release by Benjamin Bell, Managing Director of Australian Mines Limited.

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Table 1: Summary of the anomalies resulting from a Versatile Time Domain Electromagnetic (VTEM) survey commissioned by Australian Mines over its Thackaringa Project in New South Wales

High Priority Targets	Other targets	Priority Rating	Comment
A1		1	Strong anomaly on Bz and dB/dt (z), but weak response on Bx, likely sourced by bedrock conductor such as massive sulphides.
A5		1	Twin peak response at late times on Bz, short wavelength response, likely sourced by bedrock source.
	A2	2	Broad response on Bz and no/weak response on Bx
	A4	2	Weak twin peaks response at late times on Bz
	C1	2	Broad response on Bz and no/weak response on Bx
	C4	2	Single peak response on Bz corroborating response on Bx
	A3	3	Weak twin peaks response at late times on Bz, but no response on Bx
	C2	3	Broad response on Bz and no/weak response on Bx
	C3	3	Single peak response on Bz and no/weak response on Bx





Figure 1: Australian Mines' 100%-owned Thackaringa Project is located 22 kilometres southwest of Broken Hill, New South Wales. Exploration by the Company since 2017 has successfully resulted in two high priority targets³ being identified within the project area; namely Target A1 and Target A5 (as shown). Drill testing of the interpreted bedrock conductor at Target A1 has now commenced with a high-resolution ground-based geophysics survey scheduled to commence over Target A5 in the coming weeks.

³ See Appendix 1 of this report for full details of the indicative classification scheme (EM conductors) that supports this statement.

Appendix 1: Indicative classification scheme (EM conductors)

The ranking of Australian Mines' electromagnetic (EM) anomalies is 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 generally high amplitude responses are generally from man-made sources



Appendix 2: JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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> <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <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> 	<p>UTS Geophysics flew a Versatile Time domain Electromagnetic (VTEM-max) survey over Australian Mines Thackaringa tenement EL8477 on 100 metre spaced northwest-southeast lines.</p> <p>The VTEM system recorded the total magnetic intensity and the Z and X component of the coil EM response (SF(z,x)). The SF(z,x) which was then transformed to give an estimate of the B-field EM response (BF(z,x)). The Bfield transformation is useful because it highlights the responses from better conductors and dampens the overburden/weathering response.</p> <p>The VTEM data is digitally recorded with 50 channels for each of the Z+X SF coil responses, and 50 channels for each for the (calculated) Z+X Bfield responses.</p>
Drilling techniques	<ul style="list-style-type: none"> <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> 	This report does not contain any drill results
Drill sample recovery	<ul style="list-style-type: none"> <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> <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> 	This report does not contain any drill results
Logging	<ul style="list-style-type: none"> <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation,</i> 	This report does not contain any drill results or core / chip logging

Criteria	JORC Code explanation	Commentary
	<p><i>mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <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> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<p>This report does not contain any drill results or core / chip sampling</p>
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <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> • <i>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.</i> 	<p>This report does not contain any drill results or core / chip sampling</p>
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<p>This report does not contain any drill results or core / chip sampling</p>
<p>Location of data points</p>	<ul style="list-style-type: none"> • <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</i> 	<p>GPS navigation system utilising the Novatel GPS receiver provided in-flight navigation control. This system determines the absolute position of the helicopter in three dimensions</p>

Criteria	JORC Code explanation	Commentary
	<p><i>estimation.</i></p> <ul style="list-style-type: none"> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<p>with as many as 11 GPS satellites monitored at any one time. This is deemed to provide an in-flight accuracy of approximately 3 metres.</p> <p>A radar altimeter system records the ground clearance to an accuracy of approximately 1 metre</p> <p>All data is presented in GDA94 / MGA zone 54</p>
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <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> • <i>Whether sample compositing has been applied.</i> 	<p>The VTEM data were acquired on tight line spacing of 100m which is deemed suitable for the geological terrain and targeted mineralisation styles.</p>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <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> • <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> 	<p>The VTEM survey was completed on northwest-southeast orientated flight lines being perpendicular to the predominant geological strike.</p>
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<p>No sampling was undertaken</p>
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<p>No audits or reviews have been carried out.</p>



Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 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. 	<p>The Thackaringa Project is located 22 kilometres southwest of Broken Hill (New South Wales, Australia) and comprises Exploration Licence number (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>
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<p>1970s – MacPhar Frequency Domain IP</p> <p>1984 – Geoterrex FLEM</p> <p>1996 – BHP Geotem</p> <p>2000 – NSW Government magnetic survey</p>
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<p>The Thackaringa tenement EL8477 lies 22 kilometres southwest of Broken Hill.</p> <p>The tenement is considered prospective for Broken Hill-type lead-zinc-silver, tin, and cobaltiferous pyrite.</p> <p>The area consists of the highly metamorphosed packages of the Thackaringa Group, Sundown Group, and Parnell Formation. Several large retrograde schist shear zones cross cut the tenement</p> <p>Importantly, from the perspective of airborne EM, the area has minimal conductive overburden and graphitic shales have not (yet) been detected. This means that:</p> <ol style="list-style-type: none"> depth of investigation using EM methods is much improved compared to areas with conductive overburden and there are likely to be fewer non-prospective responses to distract from sulphide EM responses
Drill hole Information	<ul style="list-style-type: none"> 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"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth 	<p>This report does not contain any drill results</p>

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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> ○ hole length. ● 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. 	
Data aggregation methods	<ul style="list-style-type: none"> ● 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. ● 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. ● The assumptions used for any reporting of metal equivalent values should be clearly stated. 	This report does not contain any drill results, core / chip sampling or assays
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> ● These relationships are particularly important in the reporting of Exploration Results. ● If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. ● 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'). 	This report does not contain any drill results, core / chip sampling or assays
Diagrams	<ul style="list-style-type: none"> ● 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. 	Appropriate maps and sections are included in the body of this report.
Balanced reporting	<ul style="list-style-type: none"> ● 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. 	This report does not contain any drill results, core / chip sampling or assays
Other substantive exploration data	<ul style="list-style-type: none"> ● 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 	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.

Criteria	JORC Code explanation	Commentary
	<p><i>characteristics; potential deleterious or contaminating substances.</i></p>	
<p>Further work</p>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <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> 	<p>Further exploration work for Australian Mines' Thackaringa project is likely to include a high-resolution ground-based geophysics survey scheduled over Target A5.</p> <p>Further exploration work may also include a reverse circulation (RC) drill program, which would be designed to test any conductive body detected via a ground-based geophysics survey.</p> <p>Drill holes may be cased with PVC to enable down-hole electromagnetic (DHEM) surveys to be completed once each hole has been drilled.</p> <p>Any 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>



Appendix 3: Competent Person's Statement

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.



Appendix 4: Forward Looking Statements

This announcement contains forward looking statements. Forward looking statements can generally be identified by the use of forward looking words such as, 'expect', 'anticipate', 'likely', 'intend', 'should', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target', 'outlook', 'guidance', 'potential' and other similar expressions within the meaning of securities laws of applicable jurisdictions.

Any forward-looking statement is included as a general guide only and speak only as of the date of this document. No reliance can be placed for any purpose whatsoever on the information contained in this document or its completeness. No representation or warranty, express or implied, is made as to the accuracy, likelihood or achievement or reasonableness of any forecasts, prospects, returns or statements in relation to future matters contained in this document. Australian Mines does not undertake to update or revised forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.

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