



ASX Announcement

Aus Tin Mining Limited (ASX:ANW)

16 July 2018

Extensive Cobalt, Copper and Nickle Target Generation at Mt Cobalt

Highlights:

- 3D magnetic modelling identifies elevated magnetic susceptibility along a 3.1km trend, including three discrete targets of high magnetic susceptibility indicative of massive sulphides, which in conjunction with surface mapping and resistivity data have been used to plan three diamond drill holes to test for potential sulphides
- Combined 3D magnetic modelling and geochemistry identifies two potential shear zones that elsewhere host high cobalt grade mineralisation, and will be the target for five shallow drill holes
- A geological comparison of Mt Cobalt the Koniambo nickel / cobalt resource (New Caledonia) provides some direction for future exploration, supported by recent field work at Jackson North

The Directors of Aus Tin Mining Limited (the **Company**) are pleased to provide the following update in respect of the Company's Mt Cobalt project, approximately 40km west of Gympie, Queensland.

Nickle-Copper Sulphide Target

A 3D model of magnetic susceptibility has been generated for the Mt Cobalt Project modelling a near surface anomalous magnetic body from which elevated magnetic susceptibility (0.05 SI) is observed over approximately 3.1km in length (Figure 1). The 0.05 SI iso-layer unit is coincident to the previously interpreted concentration of high cobalt, nickel, copper, silver and gold background values and representing less magnetic alteration phases generated by the concealed Black Snake Porphyry.

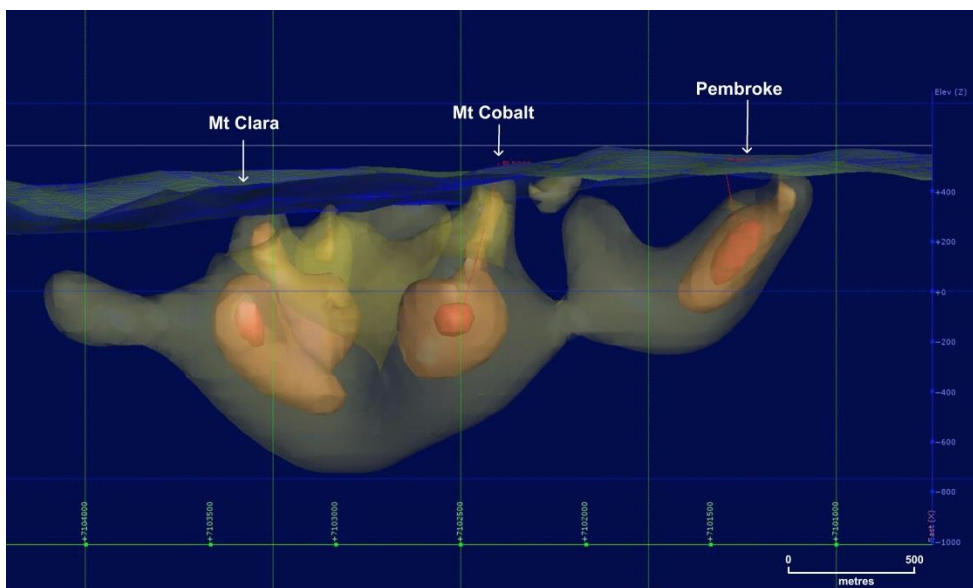
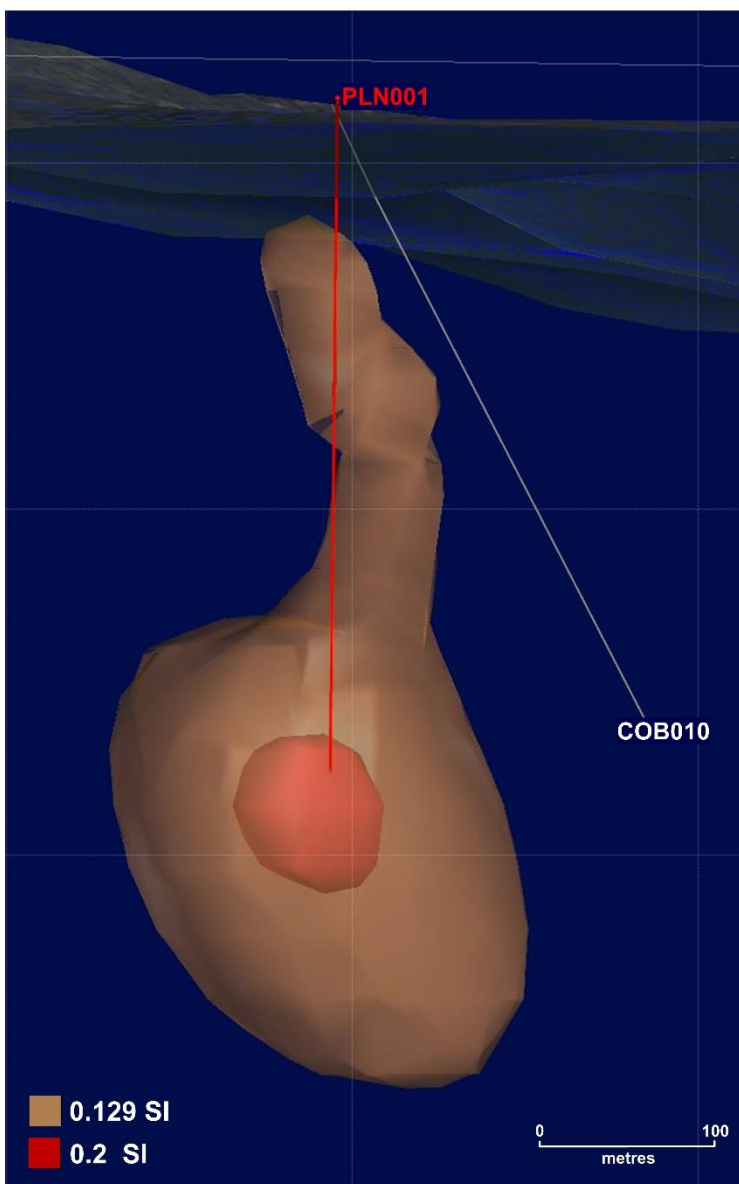


Figure 1: 3D model of magnetic susceptibility data proximate to Mt Cobalt (looking east with Mt Cobalt central)

Contained within the 3.1km 0.05 SI iso-layer are three discrete targets with elevated magnetic susceptibilities of 0.2 SI and 0.129 SI iso-layer units, the largest lying approximately 600m below Mt Cobalt (Figure 2). A magnetic susceptibility of 0.2 may indicate elevated levels of magnetite and many occurrences of nickeliferous sulphides are associated with discrete magnetic anomalies¹. A magnetic susceptibility of 0.129 SI may indicate disseminated magnetite which again may be associated with copper, nickel and cobalt sulphides. Neither the 0.2 or 0.129 iso-layer units have previously been drill tested at Mt Cobalt with the closest hole being COB10 drilled to the east (white line in Figure 2) in which anomalous nickel sulphides were logged for 360m from 240m depth. The Company intends to test both the 0.2 and 0.129 iso-layer units with a 650m drill hole. The Company has previously reported intervals of nickel and cobalt mineralisation (up to 96m @ 0.59%Ni & 0.03%Co²) at Mt Cobalt. Based on collective work to date, the zone of 0.2 SI magnetic susceptibility may represent the sulphide source for cobalt and nickel mineralisation at Mt Cobalt.



The 3D magnetic modelling was extended to the north (Mt Clara) and south of Mt Cobalt (Pembroke). Limited drilling has been undertaken at Mt Clara and no previous drilling has validly tested either the 0.2 SI or 0.129 SI zones. The Company intends to test the target with a 450m drill hole. Previous drilling at Pembroke has intersected the 0.129 SI and 0.2 SI iso-layers in four holes and whilst magnetite and sulphides (pyrrhotite, pyrite, chalcopyrite) are reported over several intervals, incomplete analytical data makes it difficult to ascertain whether the increased magnetic susceptibility response for these intercepts are related to magnetic sulphides or an increase in magnetite. The Company intends to test the southern 0.2 SI target with a 300m drill hole.

The Company is in discussions with drilling contractors and subject to receipt of all regulatory approvals, the program is expected to commence during the September 2018 quarter.

Figure 2 – 3D model of magnetic anomaly showing proposed drill hole (red line) and COB10 (grey line)

¹ Source: “Magnetic responses associated with mineral deposits”; PJ Gunn & MC Dentith; ASJO Journal of Australian Geology & Geophysics, 1997

² Refer Replacement Prospectus dated 4th August 2010

High Cobalt Grade Targets

During the March 2018 quarter the Company reported the results high cobalt grade drill results for mineralised shear hosted within a weathered serpentinite, the highest result being 28.15m @0.29%Co & 0.73%Ni, including 2.7m @ 0.74%Co & 0.89%Ni³. The Company also interpreted a north-south orientated structurally controlled target zone with the potential to extend to the north-west and south west. Subsequent field reconnaissance identified weathered serpentinite host rock at historic workings south of the target zone.

A recent review of magnetic susceptibility and VTEM resistivity data in combination with geochemistry and drill logs has identified two structures that may host the additional shear zones and represent drill targets (Figure 3 – dotted blue lines). Previous drilling has confirmed the shear zones host the high cobalt grade mineralisation at Mt Cobalt which is interpreted result from the concentration of mineralised meteoric waters rising through the shear zone.

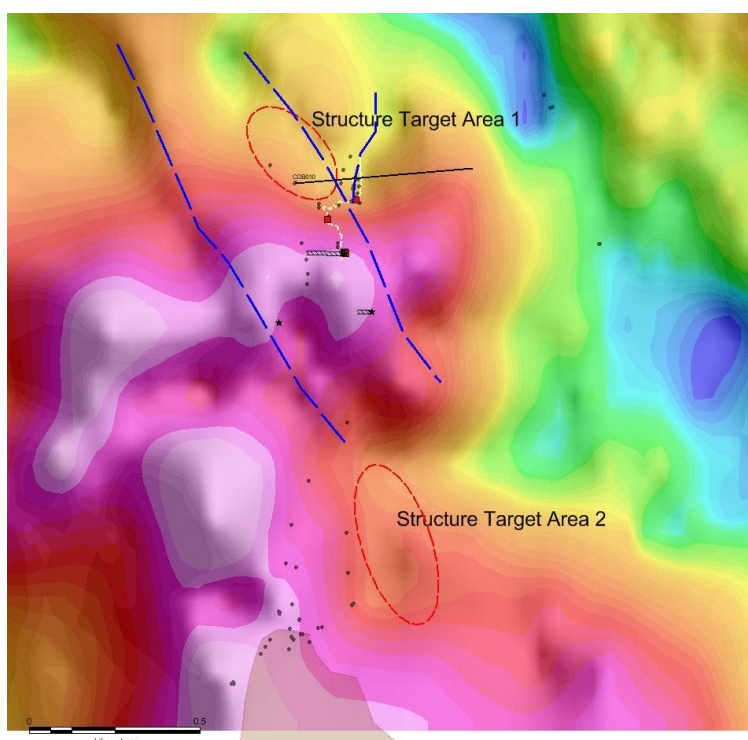


Figure 3 – Target Areas for high cobalt grade based on interpreted shear zone

A program of five holes totalling up to 300m will be undertaken in conjunction with the drill program for the massive sulphide targets, initially targeting Target Area 1 (Figure 3) approximately 150m metres north west of the drilling completed earlier this year, where results included 0.32%Co, 0.62%Ni over 25m of assayed intervals⁴.

Regional Exploration

Aus Tin Mining continues to progress definition of a significant polymetallic mineral system around the edges of the Black Snake Porphyry which is interpreted to have driven concentration of high cobalt, nickel, copper, silver and gold background values in the greenstone country rock representing an outcropping mantle over a northerly plunging nose of the Station Creek Adamellite and the Black Snake Porphyry. A review of global nickel-cobalt deposits was undertaken to identified comparable deposits and help frame geological models and exploration techniques. The occurrence of cobalt enriched mineralisation at discrete locations along the north-south trend is comparable with the nickel-cobalt mineralisation at Konimabo in New Caledonia (Table 1).

³ Refer ASX Announcement dated 23rd January 2018

⁴ Refer ASX Announcement dated 16th February 2018

Table 1: Comparison of Mt Cobalt and Koniambo deposits

Feature	Mt Cobalt	Koniambo
Occurrence of asbolite (or asbolane)	yes	yes
Low temperature hydrothermal silicious breccia	Yes in shear as replacement of quartz-carbonate followed by crack seal	Yes, in fractures as replacement of Kerolite followed by crack and seal
Tectonic	Gympie Terrane	Gympie Terrane
Ultramafic	harzburgite	harzburgite
Age of ophiolite	Permo-Carb (estimate)	85 Ma-55 Ma
Peridotite nappe + serpentinite sole	To be determined	yes
Magnetite	Yes	Microxtalline in black lizardite
Magnesite	Not at Mt Cobalt but occurs nearby	Yes
Low Ni, high Mg Kerolite (Ni-Mg talc)	yes	yes
High Ni, low Mg Pimelite (Ni talc, nontronite, smectite)	To be determined	yes
Estimated age of mineralisation	Triassic	Oligocene

Both Mt Cobalt and Koniambo are unusual, almost unique, in that they were deposited in two episodes, firstly by hydraulic fracturing and mixing of meteoric waters, followed an indeterminate time later by supergene enrichment. Both also exhibit veins of distinctive red-brown, micro crystalline hydrothermal quartz breccia which has undergone fracturing and resealing above the serpentinite (Figure 4) . Recent field reconnaissance at Jackson North identified this hydrothermal quartz breccia coincident with elevated rock chip assay results of up to 0.15%Co & 0.16%Ni⁵, and will be subject to a further round of field reconnaissance during the current quarter.

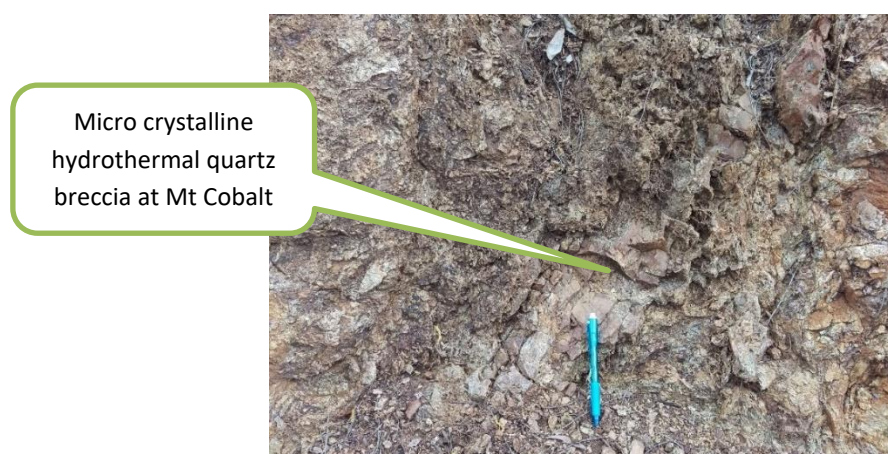


Figure 4 – Mt Cobalt red-brown, micro crystalline hydrothermal quartz breccia

Koniambo is located on the 20km-long and 5km-wide Koniambo massif in the North Province of New Caledonia, which is situated 930m above sea level and 15km away from the shore. Economically potential laterite is found along the ridge of the massif and on isolated terraces in scattered pockets, with the quality of the nickel, cobalt, iron and other oxidised ores varying with depth. ⁶ Within EPM 19366 (that hosts Mt Cobalt) a number of ridgelines run north-south, which based on the Koniambo geological model, could host mineralisation similar to that found at Mt Cobalt. At Mt Cobalt, the Black Snake Porphyry and Station Creek Adamellite also appear to have had a role in the mineralisation. The Company intends to employ radiometric techniques to identify potential nickel cobalt targets across the region. The Company has previously undertaken radiometric surveys at Mt Cobalt and Pembroke, and with subsequent soil sampling and drilling, established an inverse correlation between the radioelement element potassium and nickel-cobalt mineralisation.

⁵ Refer Appendix 1

⁶ Source: www.mining-technology.com



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About Aus Tin Mining (the Company)

Aus Tin Mining Limited (ASX: ANW) has a vision to become a major Australian tin producer. The Company has recommenced production at the high grade Granville Tin Project located north of Zeehan (TAS) and the Company intends to expand the Granville Tin Project and undertake exploration to extend the Life of Mine. The Company is also developing the world class Taronga Tin Project located near Emmaville (NSW). The Company defined and announced its maiden JORC compliant resource for the Taronga Tin Project in late 2013 and test work and exploration activities on site have revealed potential credits for copper, silver, tungsten, molybdenum, lithium and rubidium. Highly prospective regional targets have also been established within the Company's broader tenement footprint, and within trucking distance of the proposed processing site at Taronga. In December 2017 the Company received approval for the first stage of development at Taronga for a trial mine and pilot plant.

The Company is also actively exploring for cobalt at its Mt Cobalt project west of Gympie (QLD). Recent drilling has returned high grades for an enriched cobalt-manganese oxide zone. In addition the Company is exploring an approximately 4km arc along the contact with the Black Snake Porphyry which is prospective for cobalt, nickel, copper and gold.

Forward Looking Statement

This announcement may contain certain statements and projections provided by or on behalf of Aus Tin Mining Limited (Aus Tin Mining) with respect to the anticipated future undertakings. These forward-looking statements reflect various assumptions by or on behalf of Aus Tin Mining. Accordingly, these statements are subject to significant business, economic and competitive uncertainties and contingencies associated with exploration and/or mining which may be beyond the control of Aus Tin Mining which could cause actual results or trends to differ materially, including but not limited to price fluctuations, exploration results, reserve and resource estimation, environmental risks, physical risks, legislative and regulatory changes, political risks, project delay or advancement, ability to meet funding requirements, factors relating to property title, native title and aboriginal heritage issues, dependence on key personnel, share price volatility, approvals and cost estimates. Accordingly, there can be no assurance that such statements and projections will be realised. Aus Tin Mining makes no representations as to the accuracy or completeness of any such statement of projections or that any forecasts will be achieved.

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COMPETENT PERSON STATEMENT

The information in this presentation that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Nicholas Mather B.Sc (Hons) Geol., who is a Member of The Australian Institute of Mining and Metallurgy. Mr Mather is employed by Samuel Capital Pty Ltd, which provides certain consultancy services including the provision of Mr Mather as a Director of Aus Tin Mining. Mr Mather has more than five years experience which is relevant to the style of mineralisation and type of deposit being reported 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, Minerals Resources and Ore Reserves' (the JORC Code). This public report is issued with the prior written consent of the Competent Person(s) as to the form and context in which it appears.



Appendix 1 - JORC Code, 2012 Edition – Table 1

1.1 Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><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></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><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>	<p>Surface samples were collected as rock samples comprising multiple chips considered to be representative of the horizon or outcrop being sampled</p> <p>Samples for geochemical analysis were selectively collected and considered to be representative of the horizon or outcrop being sampled.</p> <p>A total of 13 samples were collected with sample weights typically 300g.</p> <p>Samples were packaged in the field at the time of collection and delivered to ALS labs in Brisbane to be assayed using Nitric aqua regia digestion followed by ICP AES finish (ALS ME-ICP41).</p>
Drilling techniques	<p><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></p>	No new drilling reported
Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><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></p>	No new drilling reported
Logging	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support</i></p>	No new drilling reported

Criteria	JORC Code explanation	Commentary
	<p>appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	
Sub-sampling techniques and sample preparation	<p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>No new drilling reported</p> <p>Sample sizes are considered appropriate for the rock type, style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	<p>Assay and laboratory procedures have been selected following a review of techniques provided by internationally certified laboratories.</p> <p>Appropriate analytical method using Nitric aqua regia digestion with ICP-AES finish (ME_ICP41)</p> <p>Assaying was carried out by ALS, an accredited laboratory.</p> <p>No duplicates or standards were submitted</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p>	<p>No new drilling reported</p> <p>All field data is manually collected and noted on field sheets then later entered into excel spreadsheets.</p> <p>Hard copies are stored within a local office and electronic data is stored on the Brisbane server.</p> <p>All electronic data is routinely backed up.</p>

Criteria	JORC Code explanation	Commentary
		No adjustment to assay data has been made
	<i>Discuss any adjustment to assay data.</i>	None required
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	No new drilling reported
	<i>Specification of the grid system used.</i>	All rock samples are initially located using a hand held GPS with a 3m lateral accuracy. The grid system used is MGA_GDA94 Zone56.
	<i>Quality and adequacy of topographic control.</i>	The accuracy is adequate for collection of early exploration data
Data spacing and distribution	<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>	
Orientation of data in relation to geological structure	<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>	
Sample security	<i>The measures taken to ensure sample security.</i>	Company geologist supervises all sampling and subsequent storage in the field. The samples are delivered to ALS Brisbane by either company management or recognized freight service. Sample submission forms are submitted both electronically and with the samples. Upon receipt of samples, ALS delivers by email to the Company's CEO confirmation of arrival of samples.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	None completed

2 Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park</i>	Mt Cobalt is located wholly within Exploration Permit 19366 approximately 40km West of Gympie and is 100% held by AusTin Mining.

Criteria	JORC Code explanation	Commentary
	<i>and environmental settings.</i>	
	<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>	All granted tenements are in good standing and there are no impediments to operating in the area.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The Mt Cobalt project is part of a larger Nickel mineralisation province.</p> <p>The prospect setting is a structurally controlled nickel/cobalt mineralising system hosted in Carboniferous Serpentinite rocks of the Wandilla Province.</p> <p>The mineralisation is associated with an almost North/South master shear that deepens steeply to the West. The cobalt-Manganese enriched mineralisation is a result of the weathering of a polymetallic lode system.</p> <p>The principle ore minerals identified at the Mt Cobalt prospect include, Asbolite and garnierite.</p> <p>Asbolite occurs as bluish black dendrites and fracture coatings throughout the laterite profile.</p>
Drill hole Information	<p><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></p> <p><i>easting and northing of the drill hole collar</i> <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	No new drilling reported
Data aggregation methods	<p><i>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.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No data aggregation reported
Relationship between mineralisation widths and intercept lengths	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this</i></p>	No new drilling data reported

Criteria	JORC Code explanation	Commentary
	<i>effect (eg 'down hole length, true width not known').</i>	
Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	No new drilling reported
Balanced reporting	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	All relevant results have been incorporated into diagrams used within the release. Only results of economic interest have been reported in a tabular form to highlight their relevance.
Other substantive exploration data	<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>	No other relevant data to report
Further work	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). 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>	Details of further work are yet to be determined