



## ASX Announcement

### Aus Tin Mining Limited (ASX:ANW)

18 February 2019

### Mining of Initial Ore Block at Granville Tin Project

#### Highlights:

- Tin mining commenced with first mining block an estimated 430 tonnes.
- Grade control drilling confirms zones of high-grade mineralisation including 4m @ 6.56%Sn (R3C) & 4m @4.34%Sn (R4D), with arithmetic average grade for mining block 2.1%Sn.

The Directors of Aus Tin Mining Limited (the **Company**) are pleased to advise that tin mining has commenced at the Company's Granville East Mine in Tasmania. Run-of-Mine material from the first mining block will be transported to the processing plant enabling plant feed to transition from low-grade stockpiles to high-grade mine material.

The first mining block is located at the southern end of the open cut pit and was extracted from the hanging wall shale that overlies the cassiterite-magnetite skarn. The first mining block is estimated at 430 tonnes based on eight sub-blocks each 3m x 1.5m x 4m and a specific gravity for mineralised material of 3t/m<sup>3</sup>. Assay results from blast hole samples collected for grade control purpose confirm the high-grade mineralisation at the Granville East Mine, including drill intersections of 4m @ 6.56%Sn (R3C) & 4m @4.34%Sn (R4D). The arithmetic average tin grade for the eight blast holes contained within the mining block was 2.1%Sn<sup>1</sup>.



Figure 1 – Truck-load from first mining block - hanging wall shale (left) and skarn (right)

<sup>1</sup> Individual grades for 8 x 4m deep blast holes within the mining block were 4.34%Sn, 2.25%Sn, 6.56%Sn, 0.57%Sn, 0.83%Sn, 0.94%Sn, 0.66%Sn & 0.75%Sn – Refer Appendix 1 for further details.

CEO Peter Williams said of mining the first block of high-grade material “*we are delighted to have achieved this major milestone as we transition to Level 2 operations and will now move to processing this material. We are particularly delighted with the grade of the first block which across eight holes averaged 2.1%Sn and is more typical of underground mines*”.

As previously reported<sup>2</sup>, the Company has been seeking to directly procure certain services contracted to the civil and mining contractor. To minimise further delays to the operations, the Company has now assumed additional components of the contract, including blasting services and fuel supply. Furthermore, the Company has removed the crushing component of the contract and is currently in discussions with alternative parties as well as examining capacity for utilising surplus equipment at the processing plant. The Company is working with the civil and mining contractor to maintain mining operations and will update the market as appropriate.



On behalf of the Board  
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Electronic copies and more information are available on the Company website: [www.austinmining.com.au](http://www.austinmining.com.au)

Company Twitter account: [@AusTin\\_Mining](https://twitter.com/AusTin_Mining)

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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.

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<sup>2</sup> Refer ASX Announcement dated 19 December 2018

**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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Nothing in this material should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities. It does not include all available information and should not be used in isolation as a basis to invest in Aus Tin Mining Limited.

**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
<b>Sampling techniques</b>	<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>	Sub surface samples were collected as drill core from percussion blast hole drilling (Atlas Copco ECM585 II – 63mm hole). Within the first mining block a total of 32 percussion holes were completed for a total of 128m. Samples submitted for assay typically weighed 1-3kg
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Samples were taken from drill cuttings collected for the entire hole (4m depth) and were then cone & quartered as necessary. Sub-samples were submitted in entirety for analysis.
	<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>	Sub-samples were packaged at site and delivered to SGS labs at Renison (Tasmania) and assayed using XRF (XRF75E).
<b>Drilling techniques</b>	<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>	Percussion (Atlas Copco ECM 585 II – 63 mm hole) blast hole drilling, hole depth 4m
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Not recorded for blast hole, grade control drilling
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Not recorded for blast hole, grade control drilling
	<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>	Not recorded for blast hole, grade control drilling
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource</i>	Not recorded for blast hole, grade control drilling

Criteria	JORC Code explanation	Commentary
	<i>estimation, mining studies and metallurgical studies.</i>	
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Not Applicable
	<i>The total length and percentage of the relevant intersections logged.</i>	Not Applicable
<b>Sub-sampling techniques and sample preparation</b>	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	All samples were from percussion core, and were cone & quartered.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratory.
	<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>	Regular cleaning of sampling equipment was undertaken to prevent contamination.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for the rock type, style of mineralisation, the thickness and consistency of the intersections.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Assay and laboratory procedures have been selected following a review of techniques provided by internationally certified laboratories.
	<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>	None used
	<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>	Assaying was carried out by SGS, an accredited laboratory. No duplicates or standards were submitted
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Not applicable
	<i>The use of twinned holes.</i>	No twinned holes were undertaken
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All field data is manually collected and noted on field sheets.  Hard copies are stored at site office and electronic data is stored on the Brisbane server.  All electronic data is routinely backed up.

Criteria	JORC Code explanation	Commentary
	<i>Discuss any adjustment to assay data.</i>	None required
<b>Location of data points</b>	<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>	Not applicable as for blast hole drilling
	<i>Specification of the grid system used.</i>	Not applicable
	<i>Quality and adequacy of topographic control.</i>	Not applicable
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	1.5m x 3m grid
	<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>	Not applicable for blast hole, grade control drilling
	<i>Whether sample compositing has been applied.</i>	4m holes were composited.
<b>Orientation of data in relation to geological structure</b>	<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>	Not applicable for blast hole, grade control drilling
	<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>	Vertical holes into 60 degree plunging zone of mineralisation
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Not applicable for blast hole, grade control drilling
<b>Audits or reviews</b>	<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
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	Granville East Mine is located wholly within Mining Lease 2M/2018 and is 100% held by Ten Star Mining, a wholly owned subsidiary of AusTin Mining.
	<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.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Reference made to results previously reported by the Company

Criteria	JORC Code explanation	Commentary																																								
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The Granville Tin Project is part of a larger tin mineralisation province. The deposit is hosted in metamorphosed Neo-Proterozoic black carbonaceous shale and calcareous quartzite rocks of the Oonah formation. Mineralisation is summarised by Geopeko (1983) as occurring in a strata-bound banded magnetite replacement skarn horizon.																																								
<b>Drill hole Information</b>	<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 elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> <li><i>o dip and azimuth of the hole</i></li> <li><i>o down hole length and interception depth</i></li> <li><i>o hole length.</i></li> </ul> <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>	<p>Summary of results for 4m intervals used for grade estimate:</p> <table border="1"> <thead> <tr> <th>Hole ID</th> <th>%Sn</th> <th></th> <th>Hole ID</th> <th>%Sn</th> </tr> </thead> <tbody> <tr> <td>R4C</td> <td>0.42</td> <td></td> <td>R2C</td> <td>0.75</td> </tr> <tr> <td>R4D</td> <td>4.34</td> <td></td> <td>R3E</td> <td>0.83</td> </tr> <tr> <td>R4E</td> <td>2.25</td> <td></td> <td></td> <td></td> </tr> <tr> <td>R3C</td> <td>6.56</td> <td></td> <td></td> <td></td> </tr> <tr> <td>R3D</td> <td>0.57</td> <td></td> <td></td> <td></td> </tr> <tr> <td>R3F</td> <td>0.94</td> <td></td> <td></td> <td></td> </tr> <tr> <td>R2B</td> <td>0.66</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Hole ID	%Sn		Hole ID	%Sn	R4C	0.42		R2C	0.75	R4D	4.34		R3E	0.83	R4E	2.25				R3C	6.56				R3D	0.57				R3F	0.94				R2B	0.66			
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<b>Data aggregation methods</b>	<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>	Not applicable for blast hole, grade control drilling																																								
<b>Relationship between mineralisation widths and intercept lengths</b>	<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 effect (eg ‘down hole length, true width not known’).</i></p>	Vertical holes into 60 degree plunging zone of mineralisation																																								
<b>Diagrams</b>	<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>	Not applicable for blast hole, grade control drilling																																								
<b>Balanced reporting</b>	<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>	Results are only reported for grades greater than 0.3%Sn																																								
<b>Other substantive exploration data</b>	<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</i>	Not applicable for blast hole, grade control drilling																																								

Criteria	JORC Code explanation	Commentary
	<i>contaminating substances.</i>	
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><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>	Blast hole, grade control drilling will be on-going for the remainder of the open cut pit