

#### **ASX Announcement**

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

## 2 July 2018

### **Successful Ore Sorting Trial for Taronga Tin Project**

# Highlights:

- > Preliminary ore-sorting test work indicates effective separation of ore from waste for Taronga ore with the next stage pilot work to be accelerated.
- ➤ Increased liberation may improve ore sorting performance, with test work for the +8mm to -25mm size fraction achieving a 240 percent increase in head grade at 93 percent tin recovery, marking an improvement on parameters adopted for the 2014 Pre-Feasibility Study.

The Directors of Aus Tin Mining Limited (the **Company**) are pleased to advise that test results for preliminary ore-sorting test work for the Taronga Tin Project (**Taronga**) have been received from TOMRA Sorting Solutions Pty Ltd (**TOMRA**), the results indicating that ore sorting is effective for Taronga ore.

TOMRA undertook a suite of standard static tests on a 60kg parcel of Taronga ore using X-Ray Transmission (XRT) ore sorting technology. The XRT tests proved the Taronga ore could viably separate the high density tin mineral cassiterite, from the low density waste material. Analytical results for the standard static test indicate an overall 54 percent increase in head grade (0.56%Sn to 0.86%Sn) whilst achieving 96 percent tin recovery (Appendix 1 - Table 1). The Company will accelerate the next stage of test work with a two-tonne bulk sample through TOMRA's pilot facility in Sydney, NSW, the results from bulk test work generally providing sufficient information for scale-up to a full-scale production plant.



Figure 1: Assay results for sorted and unsorted fractions using TOMRA contrast-XRT (graph provided by TOMRA)

Of significance were the results for the +8mm to -25mm size fraction where the head grade was increased 240 percent whilst achieving tin recovery of 93 percent, and 66 percent of the mass being rejected as waste. The 2014 Pre-Feasibility Study for Taronga assumed pre-concentration of the ore would be undertaken by Heavy Medium Separation technology, with tin recovery of 85 percent and a mass rejection of 60 percent. Based on the results for the +8mm to -25mm size fraction, ore-sorting at Taronga could provide for increased mass rejection (lower CAPEX) and higher tin recovery (increased revenues).

Ore-sorting is not practical for minus 8mm material, and in operations a screened undersize would be directed to the processing plant. In conjunction with the next program of bulk test work, the Company will evaluate the optimal process to upgrade the -8mm material. Figure 1 illustrates for the -8mm fraction an increase in grade from a calculated head grade of 0.56%Sn to 1.75%Sn resulting from beneficiation and test work which will likely incorporate gravity separation.

Ore-sorting is becoming increasingly widespread in minerals processing for the upgrading of tin ores. Minsur S.A. installed TOMRA XRT ore sorters at its San Rafael Mine (3<sup>rd</sup> largest mine globally¹) in 2016 enabling it to treat previously sub-economic material and increase tin production. It is reported the capital cost of the ore sorter was repaid within four months. Metals X Limited are installing TOMRA ore sorters at their Renison Mine (6<sup>th</sup> largest mine globally¹) and have forecast their tin production to increase by 15 to 20 percent.

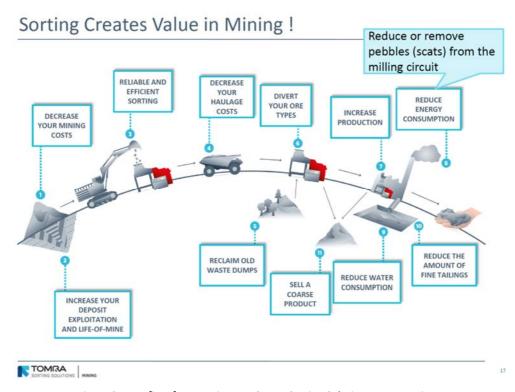


Figure 2: Benefits of ore sorting ex TOMRA Sorting Solutions Presentation

The Company has received from TOMRA an agreement to lease/purchase a XRT ore sorting facility similar to that seen in Figure 3. Subject to the outcome of the program of bulk test work the Company may consider progressing an agreement for the Taronga Stage 1 Project. The Company has previously reported on the amenability of ore-sorting for the high cobalt grade mineralisation at Mt Cobalt<sup>2</sup> and if the Company purchased an ore sorter, consideration could be given to the potential employment of the ore sorter at Mt Cobalt once Taronga Stage 1 is completed. The Company will also evaluate the potential application of oresorting at the historic sub-economic mine dumps at the Granville East Mine.

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<sup>&</sup>lt;sup>1</sup> Data ex International Tin Association, June 2018

<sup>&</sup>lt;sup>2</sup> Refer ASX Announcement dated 31 March 2017



Figure 3: TOMRA 1200 XRT Ore Sorter and ancillary equipment

The Company will continue to update the market as the test work progresses.

On behalf of the Board

Helwhol

KM Schlobohm

**Company Secretary** 

Email: info@austinmining.com.au

Electronic copies and more information are available on the Company website: www.austinmining.com.au

Company Twitter account: @AusTin\_Mining

For further information contact:

Mr. Peter Williams

CEO, Aus Tin Mining Limited

Ph: 07 3303 0611

**Karl Schlobohm** 

Company Secretary, Aus Tin Mining Limited

Ph: 07 3303 0680

#### **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.

Table 1 – Analytical re	esults for prelimina	ry ore-sorting test work

Size Fractions	Mass Rejection to Waste	Sn Recovery to Product (%)	Sn Grade of Product (%Sn)
Calculated Head	-	100%	0.56
+25mm to -75mm	36%	96%	0.76 (+35% upgrade)
+8mm to -25mm	66%	93%	1.90 (+239% upgrade)
-8mm*	Nil	100%	1.75 (+213% upgrade)
Overall	37%	96%	0.86 (+53% upgrade)

 $<sup>^{</sup>st}$  The -8mm fraction was not tested through the ore-sorter so 100 percent of mass and tin reports to product

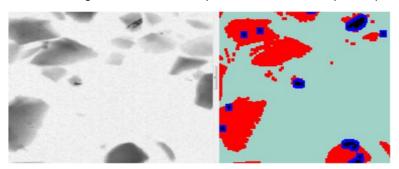


Figure 4: Raw (left) and processed (right) XRT images of high and low-density particles for feed material using contract-XRT (high density particles are shown in blue/black, while low density particles are shown in red)



Figure 5: Images of Product and Waste streams generated using contracts XRT ore sorting

#### **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.

The information in this Announcement that relates to Mineral Resources is based on information extracted from the report entitled "Maiden JORC Resource Estimated for the Taronga Tin Project" created on 26<sup>th</sup> August 2013 and is available to view on <a href="www.austinmining.com.au">www.austinmining.com.au</a> Aus Tin Mining confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

In the information in this Announcement that relates to Ore Reserves is based on information extracted from the report entitled "Pre-Feasibility Advances the Taronga Tin Project" created on 7<sup>th</sup> April 2014 and is available to view on <a href="www.austinmining.com.au">www.austinmining.com.au</a>. Aus Tin Mining confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.