

Aus Tin Mining Limited (ASX:ANW)

World scale Tin Project with JORC Reserves located in New South Wales

Tin Seminars (Brisbane 3<sup>rd</sup> November, Melbourne 5<sup>th</sup> November, Sydney 6<sup>th</sup> November)



# Important Information

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## Competent Persons 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 [www.austinmining.com.au](http://www.austinmining.com.au). 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.

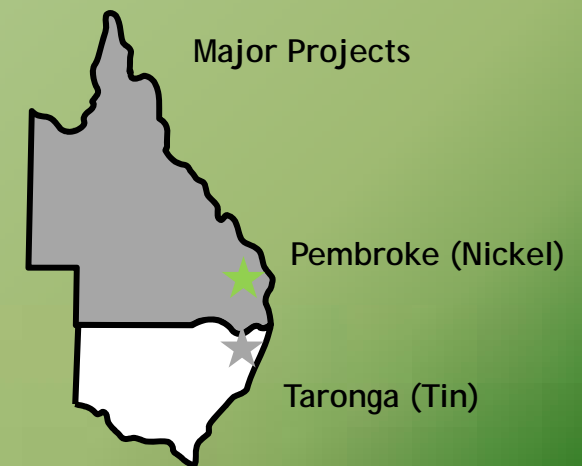
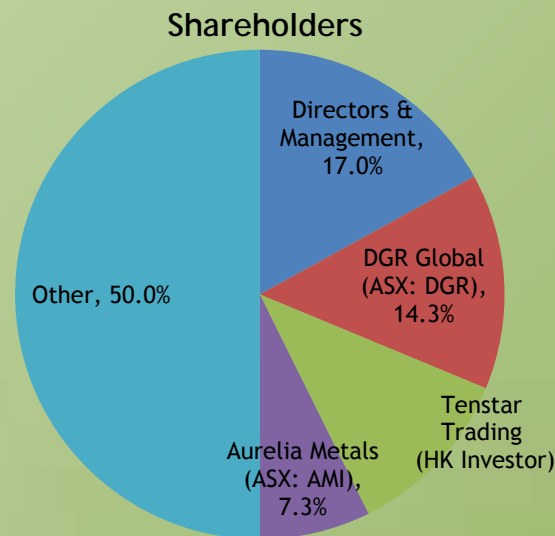
In the information in this Announcement that relates to Ore Reserves is based on information extracted from the report entitled "Pre-Feasibility Advances the Taronga Tin Project" created on 7<sup>th</sup> April 2014 and is available to view on [www.austinmining.com.au](http://www.austinmining.com.au). 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.

# About Aus Tin Mining

- ✓ Focus on those commodities forecast to be in deficit - Concerns over critical supply for tin and nickel expected to drive prices up
- ✓ Targeting development of large scale assets - Pre-Feasibility Study completed for 100% owned Taronga Tin Project; recommencement of drilling at Pembroke Ni/Co/Cu/Au target
- ✓ Exploration upside is key - Highly prospective tenement package adjacent to Taronga with advanced exploration targets for future growth; building a tenure portfolio prospective for nickel sulphide across three states
- ✓ Creating Value - Taronga Tin Project independently valued at \$60M at current tin price

## Capital Structure

ASX Ticker	ANW
Share Price	\$0.004
12 Month Range	\$0.003 - \$0.01
Shares on issue	932.2M
Options (various)	77.7M
Market Capitalisation	\$3.73M



## Experienced Board and Management Team

- ✓ Extensive experience in project discovery and development
- ✓ Strong capability in equity and debt financing
- ✓ Demonstrated track record in creating value for shareholders



**Brian Moller**

Chairman

Lawyer with more than 30 years corporate experience with a focus on capital raising and mergers & acquisitions. Directorships include DGR Global, Platina Resources, Sol Gold and Buccaneer



**Nicholas Mather**

Non-exec Director

Geologist with over 25 years experience in the generation and development of resources projects. Significant shareholder value created with Arrow Energy and more recently Orbis Gold.



**John Bovard**

Non-exec Director

Civil Engineer with over 40 years experience in mining and construction of major resources projects. Directorships include Non-Executive Chairman of Orbis Gold, creating significant shareholder value developing gold projects in Africa



**Richard Willson**

Non-exec Director

Accountant with over 20 years experience in financial management and company secretarial roles. Company Secretary & Former CFO for Aurelia Metals, instrumental in securing finance for Hera gold & base metals project in NSW



**Peter Williams**

Chief Executive Officer

Metallurgist with over 20 years experience in the development and operation of project mining projects, including base and precious metals and industrial minerals. Included is over 10 years experience in banking, finance and corporate advisory



**Karl Schlobohm**

Company Secretary

Chartered Accountant with over 20 year's experience across a range of industries and businesses.



## Tin Market

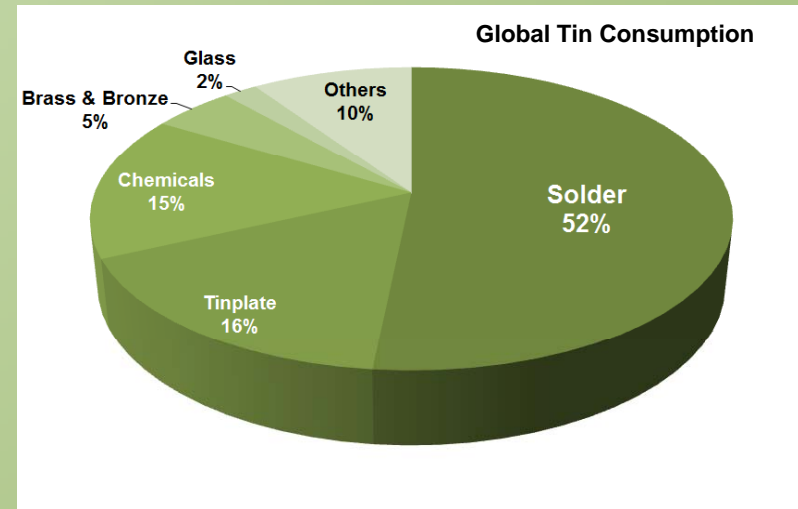


# Demand for tin is growing via expanding markets and new applications

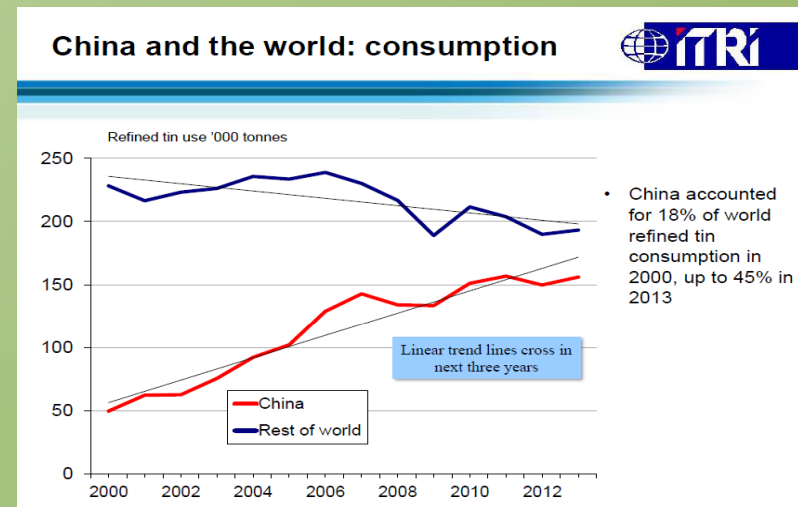
Annual refined tin consumption 351kt<sup>1</sup>

New applications coupled with increased demand for consumer goods will translate to incremental demand in growth

- Electronics (solder) has been the key driver for increased demand since introduction of lead-free solder in mid 2000's
- Increased demand in China attributable to urbanisation and rising middle class demand for electronic goods
- Increasing requirement from end-users for “sustainable tin” likely to impact third-world suppliers



Source: ITRI



Source: ITRI “China’s Growth Challenges”, May 2014

<sup>1</sup> Source: ITRI October 2014 for the 12 months to 30/06/14



# Mine production is concentrated and global resources provide little relief

Annual refined tin production  
352kt<sup>1</sup>

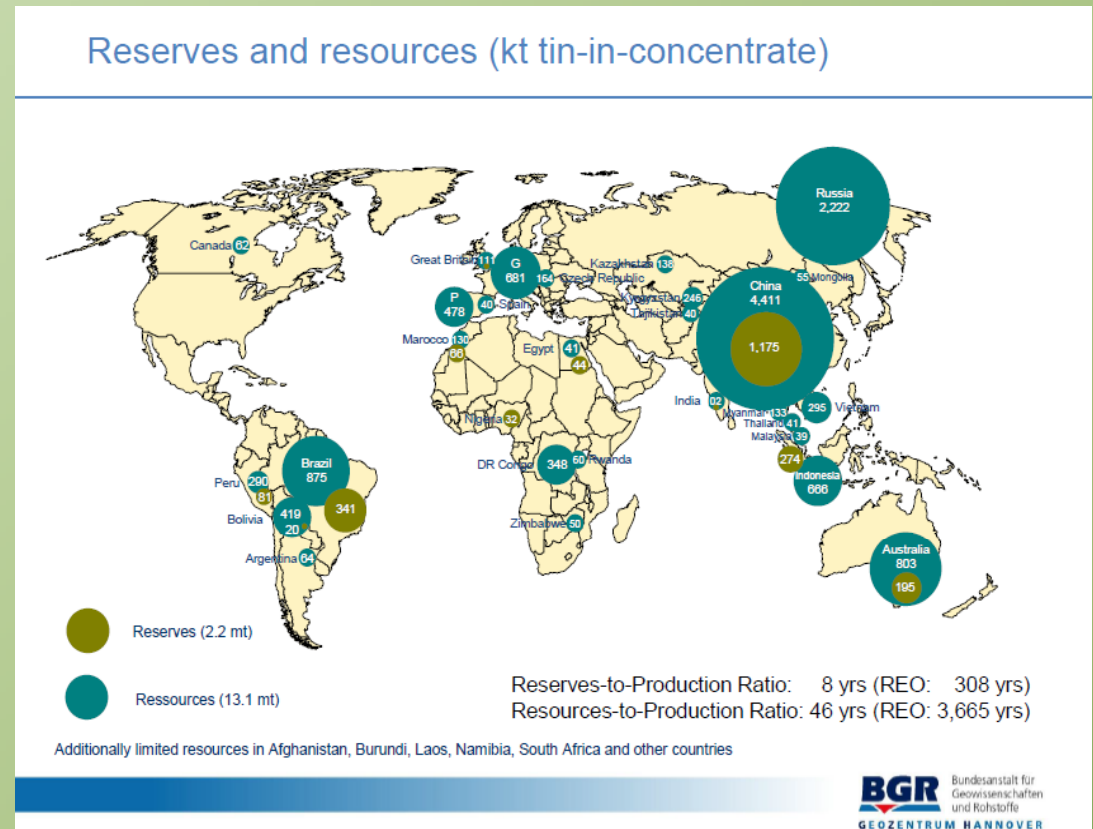
Annual mine production 296kt<sup>1</sup>

- China (33%) and Indonesia (30%) currently account for the majority of global mine production

Mine production unlikely to meet medium term demand

- Reserve-to-Production Ratio is only 8 years (for comparison Rare Earths Oxide (REO) is 308 years)
- Few new projects likely to be in production by 2018
- Political risk high for many new projects (Fraser Institute average 17) which may curtail development

<sup>1</sup> Source: ITRI October 2014 for the 12 months to 30/06/14



Source: BGR "Tin Demand and Supply to 2020", May 2014

# Tin supply & demand deficit expected to grow resulting in increased prices

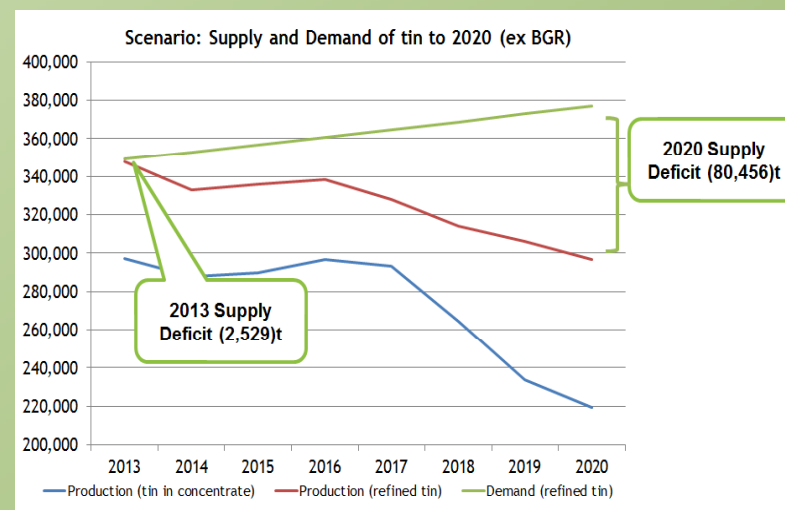
Global supply deficits for seven of last eight years and forecast to continue for 2014 & 2015<sup>1</sup>

Tin price expected to rise on strong fundamentals driven by expanding supply deficit

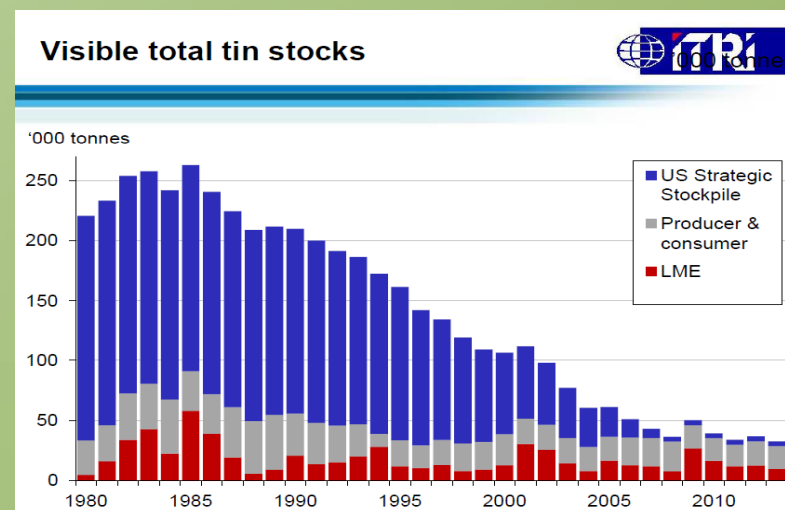
- Global stocks at record lows
- Supply deficit expected to increase from -2,529t (2013) to -80,456t (2020)
- Yunnan Tin (worlds #1 producer) expects price to rise to US\$40,000/t by 2020

Short term price softness attributed to higher refined tin production from both China and Indonesia in Q2 '14

<sup>1</sup> Source: ITRI October 2014 for the 12 months to 30/06/14



Source: BGR "Tin Demand and Supply to 2020", May 2014



Source: ITRI "Key Factors in Global Tin Outlook", May 2014





## Aus Tin Mining's Projects





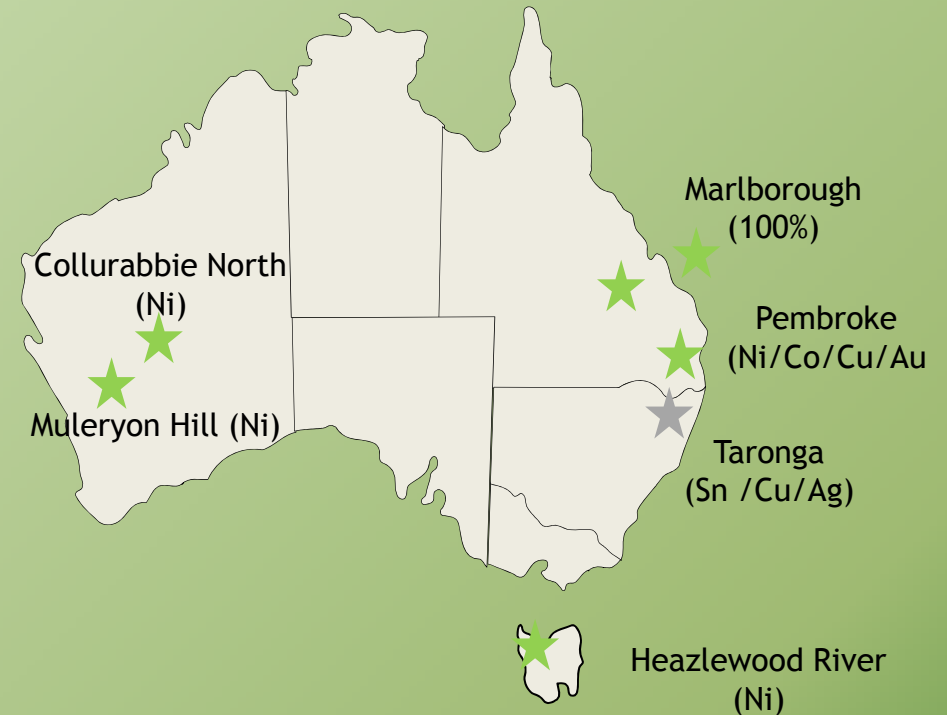
# Aus Tin Mining's highly prospective package of exploration tenements

Tin exploration is centred on the historic Emmaville field in northern NSW

- Proven Field with over 88,000t of tin produced from the region since 1870s
- Located near major regional population centres and existing infrastructure
- Taronga Pre-Feasibility Study completed

Nickel/Copper/Gold exploration is focussed at Pembroke in southern QLD

- Historic field with copper and gold mining since 1860's located one hour west of major regional centre (Gympie)
- 5 hole drill program at Pembroke being finalised
- Building a portfolio of other exploration assets across Australia



# Taronga Tin is the flagship project

## What makes Taronga a good project

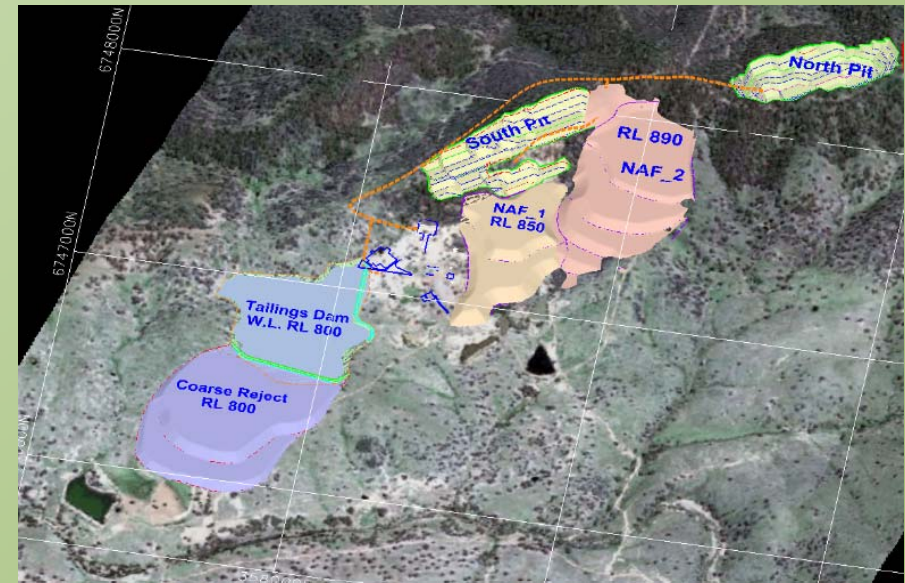
- ✓ Established JORC (2012) Reserves
- ✓ Open-cut mining and simple metallurgy
- ✓ Significant upside with metallurgy & exploration
- ✓ Community supportive of mining

## Summary of Pre-Feasibility Study (April 2014)<sup>1</sup>

- LOM of over 9 years
- Leverage of existing infrastructure
- Open cut mining with low strip ratio 1.35x
- Conventional processing using gravity spirals for majority of tin recovery
- LOM average 2,815tpa of tin in concentrate
- Capital Costs A\$87.8M
- Operating Costs A\$16,553/t recovered tin<sup>2</sup>

<sup>1</sup> 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 [www.austintinmining.com.au](http://www.austintinmining.com.au). 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

<sup>2</sup> C1 Cash Operating Costs for Years 1 to 4. LOM C1 Cash Operating Costs A\$17,935/t recovered tin



Site layout as developed by GHD

## Current Resource & Reserve base provides the platform for development

- ✓ Only one of three ASX listed tin companies with JORC (2012) Ore Reserves
- ✓ Future drilling at Taronga limited to shallow, infill program to secure financing

### Taronga Tin Deposit - Mineral Resource (JORC 2012), 0.1% Sn Cut-off grade

	Indicated			Inferred			Total		
	Mt	Assay	Contained Metal	Mt	Assay	Contained Metal	Mt	Assay	Contained Metal
Northern & Southern Zones	26.9	0.17% Sn	45,200t Sn	9.4	0.13% Sn	12,000t Sn	36.3	0.16% Sn	57,200t Sn
				36.3	0.07% Cu	26,400t Cu	36.3	0.07% Cu	26,400t Cu
				36.3	3.8g/t Ag	4.4Moz Ag	36.3	3.8g/t Ag	4.4Moz Ag

### Taronga Tin Project - Ore Reserves (JORC 2012)

	Proven			Probable			Production Target		
	Mt	Assay	Contained Metal	Mt	Assay	Contained Metal	Mt	Assay	Contained Metal
Northern & Southern Zones	-	-	-	22.0	0.16% Sn	35,600t Sn	23.2	0.16% Sn	37,100t Sn



# Secret to unlocking Taronga is the open cut mining and simple metallurgy

## Open Cut Mining

- ✓ Low strip ratio and no material pre-production capital costs

## Simple Metallurgy

- ✓ Coarse grained yields higher recoveries and lower power consumption
- ✓ Increasing the ROM grade from 0.16%Sn to 0.46%Sn using Heavy Medium Separation

Comparison of Taronga (open cut) vs Australian Underground Project <sup>1</sup>					
	Reported C2 Unit Cost (\$/t)	Grade (%Sn)	Normalised C2 Unit Cost (\$/t/1%)	Pre-production CAPEX (\$M)	Capital Intensity (CAPEX/annual tin production)
Taronga Mining	10.1	0.16	62.9		
Taronga Processing	7.6	0.16	47.3		
Taronga Total	17.6	0.16	110.2	88.7	\$31,190/t
Underground Mining	79.1	1.06	74.6		
Underground Processing	33.1	1.06	31.2		
Underground Total	112.2	1.06	105.8	126.6	\$29,258/t

- ✓ Conclusion - Taronga OPEX and CAPEX is comparable with a >1.0%Sn underground mine

<sup>1</sup> Analysis comparing Taronga Tin Project PFS (refer ASX announcement 7/4/14) and Heemskirk Tin PFS (refer ASX announcement 24/7/13)

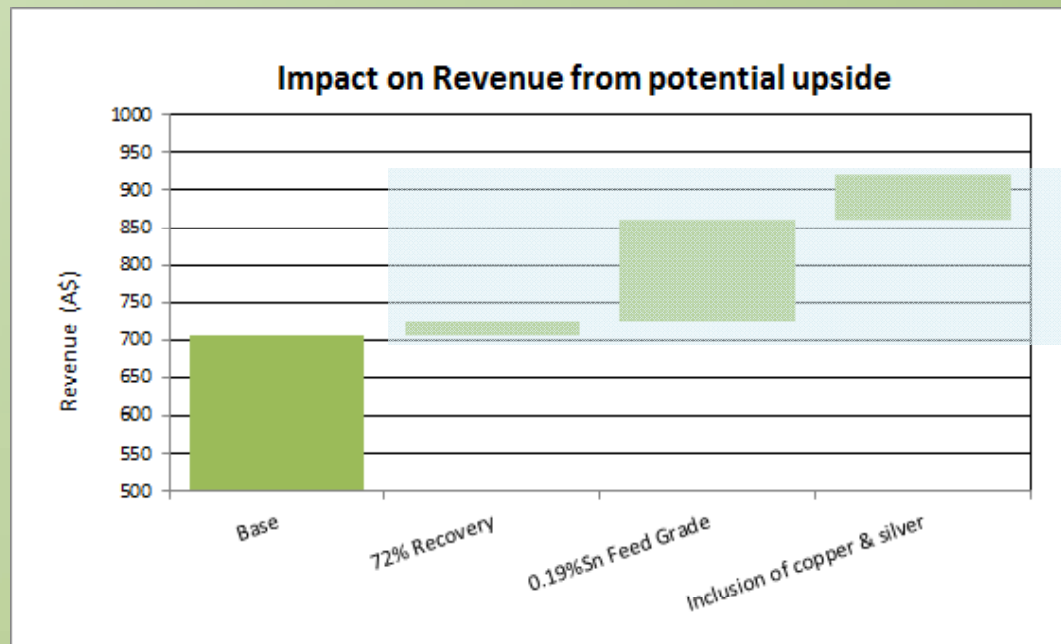
# Elevating Taronga from a good project to a great project

## Resource / Reserve Grade

- Increased tin grade with larger samples (Newmont in 1984 concluded for Northern Zone, values below 0.28%Sn were higher for bulk sample compared to core, and in Southern Zone a similar situation for values below 0.22%Sn)

## Metallurgical

- Increased tin recovery (improved recovery of tin by gravity and flotation)
- Recovery of copper & silver as by-product credits (encouraging initial metallurgical results)

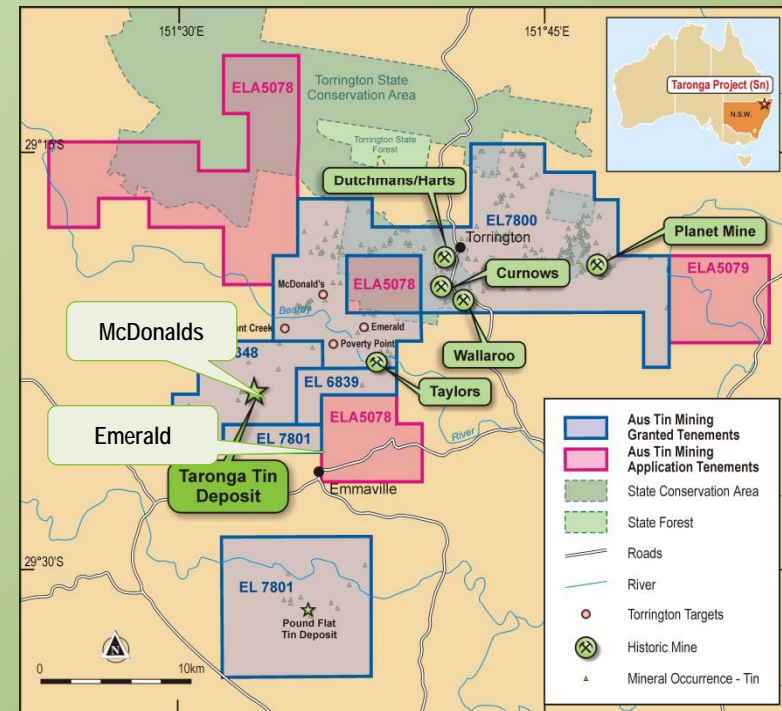


Targeted revenue increase of 30%

# Significant potential to expand production with exploration success

## Highly prospective exploration tenement package

- 305 tin prospects and historic mines identified within exploration licences
- Previous exploration undertaken by leading resources companies highlighting the quality of the field
  - BHP & Newmont (Taronga)
  - BHP, MIM, North Broken Hill (Torrington)
- Two large targets anomalous to Taronga at McDonalds and Emerald
- Six key high grade targets within close trucking distance of Taronga provided the basis an Exploration Target of approximately 150kt to 265k at approximately 2.3% to 2.5%Sn. The Exploration Target is conceptual in nature, noting there has been insufficient exploration to estimate a Mineral Resource and that it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Company is planning an exploration program to test the targets over the next 12 months as detailed in the announcement made on 2 September 2014.

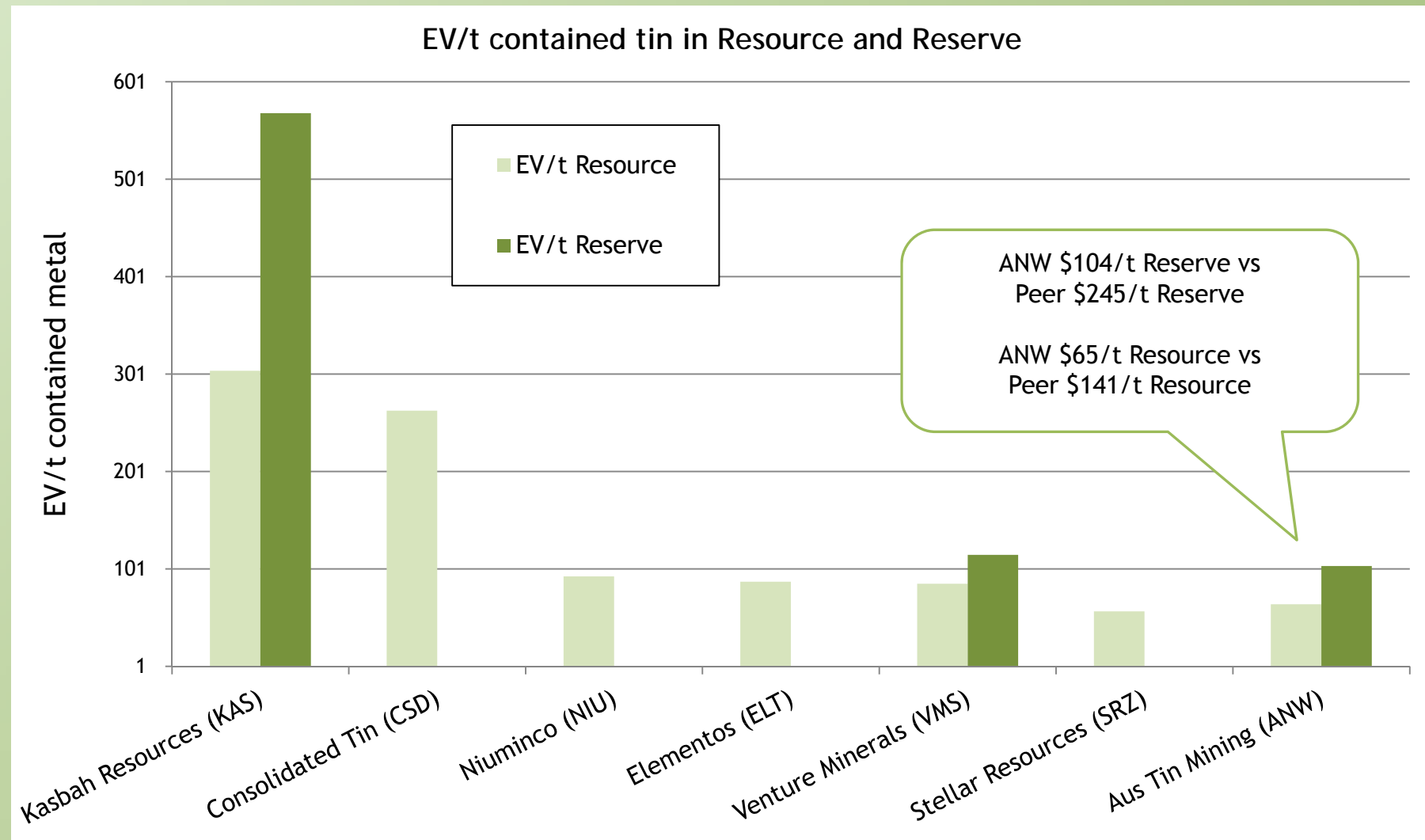




## Aus Tin Mining Value Proposition



## ANW trading at a discount to peers



Peer multiple based on closing data for 31/10/14

## ANW trading at discount to Taronga valuation even at today's tin price

- Independent assessment of Taronga Tin Project undertaken by MineInvest with valuation parameters determined independent of ANW (refer below)
- MineInvest calculated a valuation of A\$60M (post-tax, unrisked) using a tin price of US\$19,600/t<sup>1</sup>

Parameter	PFS	MineInvest Assumption	Justification
Reserve (Mt)	23.2	28.0	Based on potential for converting more resource to reserve
Mine Life (2.5mtpa)	9.3	11.2	Consequence of higher reserves
Grade (% Sn)	0.16	0.19	Based on probable range of true grades as identified in PFS
Recovery (%Sn)	70	73	Based on expectation of recovering additional tin from flotation
Annual Prod (kt Sn)	2.79	3.5	Consequence of higher feed grade & tin recovery
Opex (A\$/t)	20	21	Slightly higher mining costs for increased strip ratio (with additional reserves) and recovery of copper & silver
Capex (A\$m)- LOM	98.3	100	Higher to accommodate copper & silver recovery
Tin price (A\$/t)	27,778	22,273	Spot price as at 28/10/14
Off-site costs (Sn only)	A\$1593/t	A\$1650/t	Includes anticipated transport costs and treatment charges for tin smelting
Net Cu Revenue	NA	A\$3.5mpa*	Based on net payability of recovered metal
Net Ag Revenue	NA	A\$1.5mpa*	Based on net payability of recovered metal
Cash cost (LOM, C1)	A\$18.0k/t	A\$13.5k/t	Cash Costs net of by-product credits (copper & silver)



<sup>1</sup> MineInvest report "Taronga Valuation Update" available from [www.austinmining.com.au](http://www.austinmining.com.au)

## ANW to undertake a program of work targeting areas of upside

Target increased grade at Taronga - going from 0.16%Sn to 0.19%Sn makes a good project great

- Bulk sampling program to enable comparison against the reserve model
- Even at today's tin price, an increase in grade to 0.19% could generate IRR >20%

Target increased tin, copper and silver recoveries that could reduce cash costs dramatically

- Metallurgical test work program to evaluate ore-sorting, centrifugal concentration and flotation for tin recovery and expand on previous flotation work for copper & silver
- Increase in feed grade to 0.19%Sn would reduce LOM C1 cash costs by 15%
- Inclusion of \$5Mpa net revenue from copper & silver would reduce LOM C1 cash costs by further 10%

Target potential high-grade supplementary feed sources

- Preliminary evaluation of potential high grade tin targets close to Taronga, including
  - Dutchman & Harts underground target of 122kt @ 2.3%Sn based on previous feasibility studies <sup>1</sup>
  - Planet Mine with most significant intersection being 1.0m @ 16%SN from 90m<sup>2</sup>

<sup>1</sup> Based on work completed by North Broken Hill Limited, 1967 - refer ASX Announcement 2/9/14 for further details

<sup>2</sup> Source: Pacific Copper Limited, Final Report November 1984, refer ASX announcement 2/9/14 for further details

## Four reasons to hold Aus Tin Mining

- ✓ Tin price set for a correction given the anticipated supply deficit
- ✓ Taronga Tin Project well located and well advanced with Ore Reserves
- ✓ Significant opportunity to increase value through program of metallurgical work and exploration
- ✓ Discount to Taronga valuation provides significant upside potential

Thank you and for further details please contact

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