

## PRESS RELEASE

17 JULY 2013

# FURTHER INCREASES IN TIN RESOURCES AND RESERVES AT RENISON

Following another highly successful year of exploration and resource definition drilling at the Renison Tin Project (Metals X 50%) the annual estimation of Mineral Resources and calculation of Ore Reserves has resulted in further year on year gains after mining depletion:

- The total Ore Reserve for the Renison Bell mine has increased by 16% or 7,500 tonnes, to 53,100 tonnes of contained tin metal and the total Mineral Resource has increased by 2% to 155,900 tonnes of contained tin metal.
- The stand-out result for the year was the advancement of the Central Federal Bassett zone. This area now has a Measured and Indicated Resource of 2,093,000 tonnes at 1.8% Sn containing 37,100 tonnes of tin metal. This area hosts a Probable Reserve of 922,500 tonnes at 1.4% Sn containing 12,600 tonnes of tin metal. Development into this area has already commenced.
- Across Metals X's tin division the total tin inventory remains a globally significant total of 16.86 million tonnes at 0.82% Sn containing 139,000 tonnes of tin metal.

Metals X's CEO, Mr Peter Cook said "This increase continues to demonstrate the potential of the Renison Complex. Renison Bell continues to grow in size, and with the addition of the Central Federal Bassett material we now have access to new mining zone with capital infrastructure already in place."

"Renison is Australia's only operating tin mine and Metals X is Australia's only tin producer. The size and quality of its tin inventory including the Rentails expansion project, and the significant amount of in-place capital infrastructure leaves it few peers as a Western World publicly listed tin company."

## ENQUIRIES

Peter Cook  
Executive Director & CEO  
e: peter.cook@metalsx.com.au

Warren Hallam  
Executive Director  
e: warren.hallam@metalsx.com.au



**METALS X LIMITED**

Metals X Limited is a diversified group exploring and developing metals and minerals in Australia. It is Australia's largest tin producer and holds a pipeline of assets from exploration to production, including two gold development projects and the world-class Wingellina Nickel Project.

## CORPORATE DIRECTORY

ASX Code: **MLX**  
OTCQX Code: **MTXXY**

Level 3, 123 Adelaide Tce  
East Perth WA 6004  
Australia

GPO Box 2606  
Perth WA 6001  
Australia

t: +61 8 9220 5700  
f: +61 8 9220 5757

reception@metalsx.com.au  
www.metalsx.com.au

# METALS X LIMITED – TIN DIVISION

## MINERAL RESOURCES ESTIMATES – CONSOLIDATED SUMMARY

[Calculated as at 30 June 2013]

JORC Category	Cut-off (%Sn)	Tin			Copper		
		Tonnes (kt)	Grade (% Sn)	Sn Metal (kt)	Tonnes (kt)	Grade (% Cu)	Cu Metal (kt)
<b>Measured</b>							
Renison Bell	0.80%	1,251	2.01%	25	1,057	0.36%	4
Mt Bischoff	0.50%	-	0.00%	-	-	0.00%	-
Rentails	0.00%	20,598	0.45%	93	20,598	0.21%	44
Collingwood	0.70%	-	0.00%	-	-	0.00%	-
<b>Sub-total</b>		<b>21,849</b>	<b>0.54%</b>	<b>118</b>	<b>21,656</b>	<b>0.22%</b>	<b>48</b>
<b>Indicated</b>							
Renison Bell	0.80%	6,298	1.44%	91	5,594	0.32%	18
Mt Bischoff	0.50%	968	0.59%	6	-	0.00%	-
Rentails	0.00%	-	0.00%	-	-	0.00%	-
Collingwood	0.70%	652	1.50%	10	-	0.00%	-
<b>Sub-total</b>		<b>7,917</b>	<b>1.34%</b>	<b>106</b>	<b>5,594</b>	<b>0.32%</b>	<b>18</b>
<b>Inferred</b>							
Renison Bell	0.80%	2,510	1.60%	40	878	0.40%	3
Mt Bischoff	0.50%	699	0.47%	3	-	0.00%	-
Rentails	0.00%	-	0.00%	-	-	0.00%	-
Collingwood	0.70%	51	1.39%	1	-	0.00%	-
<b>Sub-total</b>		<b>3,260</b>	<b>1.36%</b>	<b>44</b>	<b>878</b>	<b>0.40%</b>	<b>3</b>
<b>Totals</b>							
Renison Bell	0.80%	10,059	1.55%	156	7,530	0.34%	25
Mt Bischoff	0.50%	1,667	0.54%	9	-	0.00%	-
Rentails	0.00%	20,598	0.45%	93	20,598	0.21%	44
Collingwood	0.70%	702	1.49%	10	-	0.00%	-
<b>Grand Total</b>		<b>33,026</b>	<b>0.81%</b>	<b>268</b>	<b>28,128</b>	<b>0.25%</b>	<b>70</b>

**Note:** Renison Bell, Mt Bischoff and Rentails are 50% owned by Metals X.

### COMPETENT PERSONS STATEMENT

The information in this report that relates to Mineral Resources compiled by Metals X technical employees under the supervision of Mr. Jake Russell B.Sc. (Hons), who is a member of the Australian Institute of Geoscientists. Mr Russell is a full-time employee of the company, and has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activities 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 Russell consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

# METALS X LIMITED – TIN DIVISION

## ORE RESERVES – CONSOLIDATED SUMMARY

[Calculated as at 30 June 2013]

JORC Category	Tin			Copper		
	Tonnes (kt)	Grade (% Sn)	Sn Metal (kt)	Tonnes (kt)	Grade (% Cu)	Cu Metal (kt)
<b>Proven</b>						
Renison Bell	788	1.50%	12	790	0.30%	2
Mt Bischoff	-	0.00%	-	-	0.00%	-
Rentails	-	0.00%	-	-	0.00%	-
Collingwood	-	0.00%	-	-	0.00%	-
<b>Sub-total</b>	<b>788</b>	<b>1.50%</b>	<b>12</b>	<b>790</b>	<b>0.30%</b>	<b>2</b>
<b>Probable</b>						
Renison Bell	3,349	1.23%	41	3,028	0.30%	9
Mt Bischoff	-	0.00%	-	-	0.00%	-
Rentails	19,757	0.45%	88	19,757	0.21%	42
Collingwood	-	0.00%	-	-	0.00%	-
<b>Sub-total</b>	<b>23,106</b>	<b>0.56%</b>	<b>130</b>	<b>22,785</b>	<b>0.22%</b>	<b>51</b>
<b>Total Ore Reserves</b>						
Renison Bell	4,137	1.28%	53	3,817	0.30%	11
Mt Bischoff	-	0.00%	-	-	0.00%	-
Rentails	19,757	0.45%	88	19,757	0.21%	42
Collingwood	-	0.00%	-	-	0.00%	-
<b>Grand Total</b>	<b>23,894</b>	<b>0.59%</b>	<b>142</b>	<b>23,574</b>	<b>0.23%</b>	<b>54</b>

**Notes:** Renison Bell, Mt Bischoff and Rentails are 50% owned by Metals X.

Ore Reserves are a subset of the Mineral Resource Estimate.

Figures have been rounded for reporting.

Cut-off grades are estimated using current operating cost estimates for the projects and a tin price of A\$25,000 per tonne. Additional modifying factors to account for minimum mining width, ore loss, mining recovery and mining dilution, etc, were applied in the estimation of the Ore Reserve.

### COMPETENT PERSONS STATEMENT

The information in this Ore Reserve estimate report is compiled by Metals X technical employees under the supervision of Mr Michael Poepjes BEng (Mining Engineering), MSc (Min. Econ) M.AusIMM. Mr Poepjes is a full-time employee of the company. Mr Poepjes has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activities 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 Poepjes consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

## SECTION 1 SAMPLING TECHNIQUES AND DATA

[Criteria in this section apply to all succeeding sections.]

Criteria	Commentary
<p><b>Sampling techniques</b></p> <p><b>Drilling techniques</b></p> <p><b>Drill sample recovery</b></p>	<ul style="list-style-type: none"> <li>• <b>Diamond Drilling</b> The bulk of the data used in resource calculations at Renison has been gathered from diamond core. Three sizes have been used historically NQ2 (45.1mm nominal core diameter), LTK60 (45.2mm nominal core diameter) and LTK48 (36.1mm nominal core diameter), with NQ2 currently in use. This core is geologically logged and subsequently halved for sampling. Grade control holes may be whole-cored to streamline the core handling process if required.</li> <li>• <b>Face Sampling</b> Each development face / round is horizontally chip sampled. The sampling intervals are dominated by geological constraints (e.g. rock type, veining and alteration / sulphidation etc.). Samples are taken in a range from 0.3m up to 1.2m in waste / mullock. All exposures within the orebody are sampled.</li> <li>• <b>Sludge Drilling</b> Sludge drilling is performed with an underground production drill rig. It is an open hole drilling method using water as the flushing medium, with a 64mm (nominal) hole diameter. Sample intervals are ostensibly the length of the drill steel. Holes are drilled at sufficient angles to allow flushing of the hole with water following each interval to prevent contamination.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• Diamond core has been logged geologically and geotechnically.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• Samples are dried at 90°C, then crushed to &lt;3mm. Samples are then riffle split to obtain a sub-sample of approximately 100g which is then pulverized to 90% passing 75µm. 2g of the pulp sample is then weighed with 12g of reagents including a binding agent, the weighed sample is then pulverized again for one minute. The sample is then compressed into a pressed powder tablet for introduction to the XRF.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• Assaying is undertaken via the pressed powder XRF technique. Sn, As and Cu have a detection limit 0.01%, Fe and S detection limits are 0.1%. Each XRF batch of twenty consists of one blank, one internal standard, one duplicate and a replicate, anomalies are re-assayed to ensure quality control.</li> <li>• All data used in the calculation of resources and reserves are compiled in databases (underground and open pit) which are overseen and validated by senior geologists.</li> <li>• All geology input is logged and validated by the relevant area geologists, incorporated into this is assessment of sample recovery.</li> <li>• All assay data has built in quality control checks.</li> <li>• Specific gravity / density values for individual areas are routinely sampled during all diamond drilling where material is competent enough to do so.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• Anomalous intervals as well as random intervals are routinely checked assayed as part of the internal QA/QC process.</li> <li>• Primary data is loaded into the drillhole database system and then archived for reference.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• All data is spatially oriented by survey controls via direct pickups by the survey department. Drillholes are all surveyed downhole, currently with a GyroSmart tool in the underground environment, and a multishot camera for the typically short surface diamond holes.</li> <li>• All drilling and resource estimation is undertaken in Renison mine grid.</li> </ul>

Criteria	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Drilling in the underground environment is nominally carried-out on 40m x 40m spacing in the south of the mine and 25m, x 25m spacing in the north of the mine prior to mining occurring.</li> <li>• A lengthy history of mining has shown that this data spacing is sufficient to allow for classification of the resource as it stands.</li> <li>• Compositing is carried out based upon the modal sample length of each individual domain.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Drilling intersections are nominally designed to be normal to the orebody as far as underground infrastructure constraints allow.</li> <li>• Development sampling is undertaken normal to the orebody.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• Samples are delivered directly to the on-site laboratory by the geotechnical crew where they are taken into custody by the independent laboratory contractor.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• Site generated resources and reserves and the parent geological data is routinely reviewed by the Metals X Corporate technical team.</li> </ul>

### SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

[Criteria listed in section 1 also apply to this section.]

Criteria	Commentary
<b>Database integrity</b>	<p>Drillhole data is stored in a Maxwell's DataShed system based on the Sequel Server platform which is currently considered "industry standard".</p> <p>As new data is acquired it passes through a validation approval system designed to pick up any significant errors before the information is loaded into the master database. The information is uploaded by a series of Sequel routines and is performed as required. The database contains diamond drilling (including geotechnical and specific gravity data), face chip and sludge drilling data and some associated metadata. By its nature this database is large in size, and therefore exports from the main database are undertaken (with or without the application of spatial and various other filters) to create a database of workable size, preserve a snapshot of the database at the time of orebody modelling and interpretation and preserve the integrity of the master database.</p>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• Mr Jake Russell visits the site on a regular basis.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>• Active mine. Mining has occurred since 1960's providing significant confidence in the currently geological interpretation.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• Renison has currently been mined over a strike length of &gt;1,950m, a lateral extent of &gt;1,250m and a depth of over 1,100m</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Tonnage estimates are dry tonnes.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The resource reporting cut-off grade is 0.7% Sn.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Not considered for Mineral Resource.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Not considered for Mineral Resource.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

Criteria	Commentary
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>• All modelling and estimation work undertaken by Bluestone is carried out in three dimensions via Surpac Vision.</li> <li>• After validating the drillhole data to be used in the estimation, interpretation of the orebody is undertaken in sectional and / or plan view to create the outline strings which form the basis of the three dimensional orebody wireframe. Wireframing is then carried out using a combination of automated stitching algorithms and manual triangulation to create an accurate three dimensional representation of the sub-surface mineralised body.</li> <li>• Drillhole intersections within the mineralised body are defined, these intersections are then used to flag the appropriate sections of the drillhole database tables for compositing purposes. Drillholes are subsequently composited to allow for grade estimation.</li> <li>• Once the sample data has been composited, a statistical analysis is undertaken to assist with determining estimation search parameters, top-cuts etc. Variographic analysis of individual domains is undertaken to assist with determining appropriate search parameters. Which are then incorporated with observed geological and geometrical features to determine the most appropriate search parameters.</li> <li>• An empty block model is then created for the area of interest. This model contains attributes set at background values for the various elements of interest as well as density, and various estimation parameters that are subsequently used to assist in resource categorisation. The block sizes used in the model will vary depending on orebody geometry, minimum mining units, and levels of informing data available.</li> <li>• Grade estimation is then undertaken, with ordinary kriging estimation method is considered as standard for all BMTJV work at Renison, although in some circumstances where sample populations are small, or domains are unable to be accurately defined, inverse distance weighting estimation techniques will be used.</li> <li>• The resource is then depleted for mining voids and subsequently classified in line with JORC guidelines utilising a combination of various estimation derived parameters and geological / mining knowledge.</li> <li>• This approach has proven to applicable to Metals X's tin assets.</li> <li>• Estimation results are routinely validated against previous estimates.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• Bulk density of the mineralisation at Renison is variable. Bulk density sampling is undertaken via assessments of drill core (BMTJV practice is to undertake bulk density determinations on a representative selection of drill core sent for assay), and are reviewed constantly (BMTJV practice is to collect check SG samples as a regular part of the mining cycle). Where no drill core or other direct measurements are available, SG factors have been assumed based on similarities to other zones of mineralisation</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• Resources are classified in line with JORC guidelines utilising a combination of various estimation derived parameters and geological / mining knowledge.</li> <li>• This approach considers all relevant factors and reflects the Competent Person's view of the deposit.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• Resource estimates are peer reviewed by the site technical team as well as Metals X's Corporate technical team.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>• All currently reported resources estimates are considered representative on both a global and local scale.</li> </ul>

## SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

[Criteria listed in section 1, and where relevant in section 3, also apply to this section.]

Criteria	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<ul style="list-style-type: none"> <li>All resources that have been converted to reserve are classified as either an Indicated or Measured Resource.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Mr Michael Poepjes visits Renison on a regular basis.</li> </ul>
<b>Study status</b>	<ul style="list-style-type: none"> <li>Mining is in progress for Renison. Rentails has been completed to a Bankable Feasibility Study level.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The cut-off grade used for inclusion in the Reserve is 0.8% Sn. No consideration is given to copper, as copper is only mined as a by-product of tin mining.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Minimum dilution of 10% has been included, along with a minimum mining width of underground development of 4.5m (current site size) and for underground stoping a minimum width of 2.0m.</li> <li>It has been assumed that 90% of the material will be recovered.</li> <li>No Inferred resources are included within either the Reserve or the mine plan.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The metallurgical recovery was considered as part of the cut-off grade analysis.</li> <li>The metallurgical process used at Renison has a 40+ year operational history.</li> <li>The process proposed by Rentails is the Ausmelt process.</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Waste is generally stored underground, however surface waste dumps have been approved.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>The Renison mine, is currently active.</li> <li>There is sufficient land set aside for the Rentails expansion.</li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li>Costs for Renison based on Mining Contractor Costs and realised costs for other departments.</li> <li>Costs for Rentails have been defined through a Definitive Feasibility Study.</li> </ul>
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li>Credits for copper have been included within the Rentails work.</li> <li>No credits for copper are considered within Renison.</li> <li>Treatment charges are based on current contracts.</li> </ul>
<b>Market assessment</b>	<ul style="list-style-type: none"> <li>Active Mine</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>Active Mine</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>Active Mine</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>Active Mine</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>Basis for classification is Resource Classification.</li> <li>Some Measured Resources have been classified as Probable Reserves.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>Site generated reserves and the parent data and economic evaluation data is routinely reviewed by the Metals X Corporate technical team.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>All currently reported reserve calculations are considered representative on both a global and local scale.</li> </ul>