

## 2019 RENISON RESOURCE UPDATE AREA 5 UNDERPINS A GREAT YEAR

Metals X Limited (**Metals X** or the **Company**) is pleased to provide its annual update of Mineral Resources for the Renison Tin Operations (**Renison**) in Tasmania. Renison is 50%-owned by Metals X through the Bluestone Mines Tasmania Joint Venture.

### HIGHLIGHTS (100% basis)

- ▶ 22% increase in contained tin in Mineral Resources at the Renison underground tin (**Sn**) mine, increasing from 215,700 tonnes of contained tin to 263,000 tonnes of contained tin.
  - Total Renison Measured, Indicated and Inferred Resource of 17.55Mt at 1.50% Sn for 263,000 tonnes of contained tin.
- ▶ 14.5% increase in total Mineral Resource grade from 1.31% Sn to 1.50% Sn
- ▶ 93% increase in Measured and Indicated Resources from 118,600 tonnes of contained tin to 228,800 tonnes of contained tin.
- ▶ Area 5 subset Mineral Resource of 4.47Mt at 1.91% Sn for 85,200 tonnes of contained tin represents an outstanding high grade opportunity with mining development underway.
- ▶ Resource definition and grade control drilling continues with two rigs currently in operation.
- ▶ Update of the Ore Reserve estimate and life-of-mine plan progressing well with expected completion in the September 2019 quarter.

### Managing Director, Mr Damien Marantelli, commented:

*“With 47,300 tonnes of contained tin being added to the Renison resource inventory over the past 12 months and the global resource grade increasing to 1.50% Sn, it has truly been a great year for Renison. Importantly, the high grade zones underpinning this increase are still open and drilling is continuing. This fantastic outcome is the result of the dedication and professionalism of the entire Renison team whom I congratulate”.*

*“Work has now moved onto updating the Ore Reserve estimate and a new life-of-mine plan that will include the activities and planning required to access the now defined 4.47Mt of high grade tin resources within Area 5”.*

*“I look forward to updating the market on the detailed Renison strategy in the near future, which will outline the opportunities we have identified to enhance mined and milled grade, increase mining and processing rates and improve metallurgical recovery”.*



## MINERAL RESOURCE STATEMENT - RENISON

TABLE 1: RENISON TIN OPERATIONS MINERAL RESOURCE ESTIMATE AT 31 MARCH 2019<sup>6</sup>

MLX equity share is 50% of the Mineral Resource estimate shown below.

Deposit	Mineral Resource Category <sup>1</sup>	Tin			Copper		
		'000 tonnes <sup>2</sup>	Grade % Sn	Tin tonnes <sup>2</sup>	'000 tonnes	Grade % Cu	Copper tonnes <sup>2</sup>
Renison Bell <sup>3</sup>	Measured	1,550	1.62	25,100	1,550	0.35	5,500
	Indicated	13,520	1.51	203,700	13,520	0.19	25,000
	Inferred	2,470	1.38	34,200	2,470	0.17	4,300
	<b>Total</b>	<b>17,550</b>	<b>1.50</b>	<b>263,000</b>	<b>17,550</b>	<b>0.20</b>	<b>34,800</b>
Mt Bischoff <sup>4</sup>	Measured	-	-	-	-	-	-
	Indicated	970	0.59	5,700	-	-	-
	Inferred	700	0.47	3,300	-	-	-
	<b>Total</b>	<b>1,670</b>	<b>0.54</b>	<b>9,000</b>	<b>-</b>	<b>-</b>	<b>-</b>
Rentails Project <sup>5,6</sup>	Measured	23,890	0.44	104,400	23,900	0.22	52,700
	Indicated	-	-	-	-	-	-
	Inferred	-	-	-	-	-	-
	<b>Total</b>	<b>23,890</b>	<b>0.44</b>	<b>104,400</b>	<b>23,900</b>	<b>0.22</b>	<b>52,700</b>
<b>TOTAL</b>	Measured	25,440	0.51	129,500	25,450	0.23	58,200
	Indicated	14,490	1.45	209,400	13,520	0.19	25,000
	Inferred	3,170	1.18	37,500	2,470	0.17	4,300
	<b>Total</b>	<b>43,100</b>	<b>0.87</b>	<b>376,400</b>	<b>41,450</b>	<b>0.21</b>	<b>87,500</b>

1. Mineral Resources are reported inclusive of Mineral Resources modified to produce the Ore Reserve;
2. Tonnes are reported as kilo tonnes ('000t) and rounded to the nearest 10,000; Sn and Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.
3. Cut-off grade of 0.7% Sn.
4. Cut-off Grade of 0.5% Sn.
5. Cut-off Grade of 0.0% Sn.
6. The Rentails Mineral Resource is at 31 May 2018.

## KEY ASSUMPTIONS AND JORC 2012 REQUIREMENTS

Mineral Resources are reported inclusive of Ore Reserves. Mining production data up to 31 March 2019 and all exploration information has been included. Mineral Resources have been depleted for mining to 31 March 2019.

The Mineral Resources have been classified in accordance with the guidelines set out in the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves, published by the Joint Ore Reserves Committee (JORC), of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia, December 2012 (the 'JORC Code' or 'JORC 2012').

The full Mineral Resource estimate for the Renison Tin Operations are tabulated in Table 1.

Material Information for the individual deposits, including a summary of material information pursuant to ASX Listing Rules 5.8 and 5.9 and the Assessment and Reporting Criteria in accordance with JORC 2012 requirements, is included in the body of this report and in Appendix A to this announcement.



## MINERAL RESOURCE GOVERNANCE STATEMENT

In accordance with ASX Listing Rule 5.21.5, governance of the Company's Mineral Resources development and management activities is a key responsibility of the Executive Management of the Company.

Senior geological and mining engineering staff of the Company oversee reviews and technical evaluations of the estimates and evaluates these with reference to actual physical, cost and performance measures. The evaluation process also draws upon internal skill sets in operational and project management, ore processing and commercial/financial areas of the business.

The Executive General Manager – Geology (in consultation with senior staff) is responsible for monitoring the planning, prioritisation and progress of exploratory and resource definition drilling programs across the Company and the estimation and reporting of resources. These definition activities are conducted within a framework of quality assurance and quality control protocols covering aspects including drill hole siting, sample collection, sample preparation and analysis as well as sample and data security.

A four-level compliance process guides the control and assurance activities:

- Provision of internal policies, standards, procedures and guidelines;
- Mineral Resource reporting based on well-founded geological and mining assumptions and compliance with external standards such as the Australasian Joint Ore Reserves Committee (JORC) Codes;
- Internal review of process conformance and compliance; and
- Internal assessment of compliance and data veracity.

The Executive Management aims to promote the maximum conversion of identified mineralisation into JORC 2012 compliant Mineral Resources and Ore Reserves.

The Company reports its Mineral Resources, as a minimum, on an annual basis, in accordance with ASX Listing Rule 5.21 and clause 14 of Appendix 5A (the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, or the "JORC Code" 2012 Edition).

Competent Persons named by the Company are members of the Australasian Institute of Mining and Metallurgy (AusIMM) and/or the Australian Institute of Geoscientists (AIG), and qualify as Competent Persons as defined in the JORC Code 2012.

## MINERAL RESOURCE ESTIMATE

Table 1 shows the updated Mineral Resource estimate for the Renison Tin Operations at 31 March 2019.

### SUMMARY OF MATERIAL INFORMATION

Appendix A to this report contains all information material to understanding the estimates of Mineral Resources. In accordance with Listing Rule 5.8.1, the following summary of material information in this regard is provided below.

**Geology and geological interpretation:** Renison is one of the world's largest operating underground tin mines and Australia's largest primary tin producer. Renison is the largest of three major Skarn, carbonate replacement, pyrrhotite-cassiterite deposits within western Tasmania. The Renison Mine area is situated in the Dundas Trough, a province underlain by a thick sequence of Neoproterozoic-Cambrian siliciclastic and volcanoclastic rocks. At Renison there are three shallow-dipping dolomite horizons which host replacement mineralisation. The major structure associated with tin mineralisation at Renison, the Federal Basset Fault, was formed during the forceful emplacement of the Pine Hill Granite during the Devonian and is also an important source of tin mineralisation.

**Drilling techniques, sampling and sub-sampling techniques:** The bulk of the data used in resource calculations at Renison has been gathered from diamond core using NQ2, LTK60 and LTK48 sizes. This core is geologically logged and subsequently halved for sampling. Drill hole samples may be whole-cored to streamline the core handling process if required. Each development face / round is horizontally chip sampled with the sampling intervals being dominated by geological constraints. Sludge drilling is performed with an underground production drill rig (nominal 64mm diameter hole). It is an open hole drilling method using water as the flushing medium.



Criteria for classification: Resources are classified in line with JORC guidelines utilising a combination of various estimation derived parameters, the input data and geological / mining knowledge. This approach considers all relevant factors and reflects the Competent Person's view of the deposit. At Renison, material classified as Measured must have development (with face samples) within 20m. Indicated Mineral Resource must have sufficient grade and geological continuity with drill hole intersections generally between 40m and 20m apart. Inferred Mineral Resource is material that is defined by drill holes greater than 40m apart. Geological continuity may be present but the grade estimate is lower in confidence.

Sample analysis method: Samples are dried at 90°C, then crushed to <3mm, samples are then riffle split to obtain a sub sample of approximately 100g which is then pulverized to 90% passing 75um. 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. 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. Anomalous assay results are re-assayed to ensure quality control.

Estimation methodology: All modelling and estimation work undertaken by BMTJV is carried out via Leapfrog and Surpac Vision software by creating three dimensional ore body wireframes using sectional techniques. Drill hole intersections within the three dimensional wireframes are composited and statistical analysis is conducted to determine appropriate search parameters within individual domains. An empty block model is created and grade estimation is undertaken using ordinary Kriging estimation methods. The resource is then depleted using mining voids and subsequently classified in line with JORC guidelines as above.

Cut-off grades: The resource reporting cut-off grade is 0.7% Sn at Renison.

Mining and metallurgical methods and parameters: The Renison mine predominantly applies up-hole benching and open stoping mining methods with (in some cases), post fill and cemented rock fill to fill voids. The weighted average mining dilution is 14% at zero grade. Minimum widths for underground development are 4.5m and for stoping minimum widths are 2.2m. Mining recoveries are generally between 75 and 100% with the weighted average recovery for the reserve model being 89%. No inferred resources are included within either the reserve or the mining plan.

The Renison mine produces a tin concentrate of grade varying between 50- 60% Sn with internal process designed to reduce penalty metals such as iron, sulphur, tungsten and copper. The metallurgical process is complex and applies several stages of gravity-type concentration as well as sulphide and oxide flotation, regrinding and acid leach methods. The metallurgical recovery is estimated based on regression analysis of grade recovery curves from the actual processing of ores in the plant. Metallurgical recoveries on the various ore and grades were considered as part of the cut-off grade analysis.

## **ANNUAL COMPARISON OF MINERAL RESOURCES**

Tables 2 and 3 compare the 2018 Mineral Resource estimate with the updated Mineral Resource estimate as at 31 March 2019 for the Renison Operations. The Mineral Resource estimate for Mount Bischoff is unchanged from 2017 and the Rentails Mineral Resource estimate is unchanged from 2018.

MLX equity share is 50% of the Mineral Resource estimates shown below.



TABLE 2: RENISON MINERAL RESOURCE ESTIMATE – DEPLETION &amp; RESOURCE ADJUSTMENTS FROM PRIOR YEAR

Project	Tin			Copper		
	Tonnes kt	Grade % Sn	Metal kt Sn	Tonnes kt	Grade % Cu	Metal kt Cu
<b>31 March 2018</b>						
Renison Bell	16,437	1.31	216	16,236	0.21	34
Mt Bischoff	1,667	0.54	9	-	-	-
Rentails	23,886	0.44	104	23,886	0.22	53
<b>Total</b>	<b>41,990</b>	<b>0.78</b>	<b>329</b>	<b>40,122</b>	<b>0.22</b>	<b>87</b>
<b>Mining Depletion</b>						
Renison Bell	(808)	1.17	(9.5)	(808)	0.32	(2.6)
Mt Bischoff	-	-	-	-	-	-
Rentails	-	-	-	-	-	-
<b>Total</b>	<b>(808)</b>	<b>1.17</b>	<b>(9.5)</b>	<b>(808)</b>	<b>0.32</b>	<b>(2.6)</b>
<b>Resource Adjustments</b>						
Renison Bell	1,918	2.95	56.5	2,119	0.17	3.6
Mt Bischoff	-	-	-	-	-	-
Rentails	-	-	-	-	-	-
<b>Total</b>	<b>1,918</b>	<b>2.95</b>	<b>56.5</b>	<b>2,119</b>	<b>0.17</b>	<b>3.6</b>
<b>31 March 2019</b>						
Renison Bell	17,547	1.50	263	17,547	0.20	35
Mt Bischoff	1,667	0.54	9	-	-	-
Rentails	23,886	0.44	104	23,886	0.22	53
<b>Total</b>	<b>43,100</b>	<b>0.87</b>	<b>376</b>	<b>41,447</b>	<b>0.21</b>	<b>87</b>

The difference between the 2019 Renison Bell Mineral Resource estimate and 2018 estimate include the following modifications:

- All drilling data, development face and sludge data obtained between 2018 and 31 March 2019 has been included in the model;
- Updates to all wireframe models based on this data; and
- The Rentails resource was determined using the Rentails Resource Model (rtl180531) with tailings data reported to 31 May 2018.

**TABLE 3. RENISON BELL MINERAL RESOURCE ESTIMATE – ANNUAL COMPARISON**

MLX equity share is 50% of the Mineral Resource estimate shown below.

Mineral Resource reporting date	Mineral Resource Category <sup>1</sup>	Tin			Copper		
		'000 tonnes <sup>2</sup>	Grade % Sn	Tin tonnes <sup>2</sup>	'000 tonnes	Grade % Cu	Copper tonnes <sup>2</sup>
31 March 2018 <sup>3</sup>	Measured	1,540	1.69	25,900	1,540	0.36	5,500
	Indicated	7,140	1.30	92,700	6,950	0.28	19,700
	Inferred	7,760	1.25	97,000	7,750	0.11	8,700
	<b>Total</b>	<b>16,440</b>	<b>1.31</b>	<b>215,700</b>	<b>16,230</b>	<b>0.21</b>	<b>33,900</b>
31 March 2019 <sup>4</sup>	Measured	1,550	1.62	25,100	1,550	0.35	5,500
	Indicated	13,520	1.51	203,700	13,520	0.19	25,000
	Inferred	2,470	1.38	34,200	2,470	0.17	4,300
	<b>Total</b>	<b>17,550</b>	<b>1.50</b>	<b>263,000</b>	<b>17,550</b>	<b>0.20</b>	<b>34,800</b>

1. Mineral Resources are reported inclusive of Mineral Resources modified to produce the Ore Reserve;
2. Tonnes are reported as kilo tonnes ('000t) and rounded to the nearest 10,000; Sn and Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.
3. As reported by Metals X in its Annual Update of Mineral Resources and Ore Reserves at 31 March 2018, as announced on ASX on 23 August 2018. Cut-off grade of 0.7% Sn.
4. Mineral Resources are calculated at 31 March 2019 by Metals X, adjusted for depletion to 31 March 2019, using a lower cut-off grade of 0.7% Sn.

## COMPETENT PERSON'S STATEMENT

The information in this report that relates to Mineral Resources has been compiled by Bluestone Mines Tasmania Joint Venture Pty Ltd technical employees under the supervision of Mr Colin Carter B.Sc. (Hons), M.Sc. (Econ. Geol), AusIMM. Mr Carter is a full-time employee of the Bluestone Mines Tasmania Joint Venture Pty Ltd and has sufficient experience which is relevant to the style 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 Carter consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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## APPENDIX A

### JORC CODE, 2012 EDITION

### JORC TABLE 1: THE INFORMATION IN THIS TABLE REFERS TO THE FOLLOWING PROJECTS AT THE RENISON TIN OPERATIONS: RENISON BELL, RENTAILS AND MOUNT BISCHOFF

### SECTION 1: SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p><b>Diamond Drilling</b></p> <ul style="list-style-type: none"> <li>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>NQ and HQ core sizes have been recorded as being used at Mount Bischoff. This core is geologically logged and subsequently halved for sampling.</li> <li>There is no diamond drilling for the Rentails Project.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</li> </ul>	<p><b>Face Sampling</b></p> <ul style="list-style-type: none"> <li>Each development face / round is horizontally chip sampled at Renison. 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. All exposures within the orebody are sampled. A similar process would have been followed for historical Mount Bischoff face sampling.</li> <li>There is no face sampling for the Rentails Project.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<p><b>Sludge Drilling</b></p> <ul style="list-style-type: none"> <li>Sludge drilling at Renison 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> <li>There is no sludge drilling for the Mount Bischoff Project.</li> <li>There is no sludge drilling for the Rentails Project.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<p><b>RC Drilling</b></p> <ul style="list-style-type: none"> <li>RC drilling has been utilised at Mount Bischoff.</li> <li>Drill cuttings are extracted from the RC return via cyclone. The underflow from each interval is transferred via bucket to a four tiered riffle splitter, delivering approximately three kilograms of the recovered material into calico bags for analysis. The residual material is retained on the ground near the hole. Composite samples are obtained from the residue material for initial analysis, with the split samples remaining with the individual residual piles until required for re-split analysis or eventual disposal.</li> <li>There is no RC drilling for the Renison Project.</li> <li>There is no RC drilling for the Rentails Project.</li> </ul> <p><b>Percussion Drilling</b></p> <ul style="list-style-type: none"> <li>This drilling method was used for the Rentails project and uses a rotary tubular drilling cutter which was driven percussively into the tailings. The head of the cutting tube consisted of a 50mm diameter hard tipped cutting head inside which were fitted 4 spring steel fingers which allowed the core sample to enter and then prevented it from falling out as the drill tube was withdrawn from the drill hole.</li> <li>There is no percussion drilling for the Renison Project.</li> <li>There is no percussion drilling for the Mount Bischoff Project.</li> <li>All geology input is logged and validated by the relevant area geologists, incorporated into this is assessment of sample recovery. No defined relationship exists between sample recovery and grade. Nor has sample bias due to preferential loss or gain of fine or coarse material been noted.</li> </ul>
<p><b>Logging</b></p>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is logged geologically and geotechnically.</li> <li>RC chips are logged geologically.</li> <li>Development faces are mapped geologically.</li> <li>Logging is qualitative in nature.</li> <li>All holes are logged completely, all faces are mapped completely.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <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></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill core is halved for sampling. Grade control holes may be whole-cored to streamline the core handling process if required.</li> <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 pulverised again for one minute. The sample is then compressed into a pressed powder tablet for introduction to the XRF. This preparation has been proven to be appropriate for the style of mineralisation being considered.</li> <li>• QA/QC is ensured during the sub-sampling stages process via the use of the systems of an independent NATA / ISO accredited laboratory contractor.</li> <li>• The sample size is considered appropriate for the grain size of the material being sampled.</li> <li>• The un-sampled half of diamond core is retained for check sampling if required.</li> <li>• For RC chips regular field duplicates are collected and analysed for significant variance to primary results.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <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></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<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%. These assay methodologies are appropriate for the resource in question.</li> <li>• All assay data has built in quality control checks. 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>• 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>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<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>• Virtual twinned holes have been drilled in several instances across all sites with no significant issues highlighted. Drillhole data is also routinely confirmed by development assay data in the operating environment.</li> <li>• Primary data is loaded into the drillhole database system and then archived for reference.</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>• No primary assays data is modified in any way.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<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 at Renison, and a multishot camera for the typically short surface diamond holes.</li> <li>• All drilling and resource estimation is undertaken in local mine grid at the various sites.</li> <li>• Topographic control is generated from remote sensing methods in general, with ground based surveys undertaken where additional detail is required. This methodology is adequate for the resource in question.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• 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.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling in the underground environment at Renison 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. A lengthy history of mining has shown that this data spacing is appropriate for the Mineral Resource estimation process and to allow for classification of the resource as it stands.</li> <li>• Drilling at Mount Bischoff is variably spaced. A lengthy history of mining has shown that this data spacing is appropriate for the Mineral resource estimation process and to allow for classification of the resource as it stands.</li> <li>• Drilling at Rentails is usually carried out on a 100m centres. This is appropriate for the Mineral resource estimation process and 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>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling intersections are nominally designed to be normal to the orebody as far as underground infrastructure constraints / topography allows.</li> <li>• Development sampling is nominally undertaken normal to the various orebodies.</li> <li>• It is not considered that drilling orientation has introduced an appreciable sampling bias.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• At Renison, Mount Bischoff and Rentails 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>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<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 2: REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All Tasmania resources are hosted within 12M1995 and 12M2006. Both tenements are standard Tasmanian mining leases.</li> <li>No native title interests are recorded against the Tasmanian tenements.</li> <li>Tasmanian tenements are held by the Bluestone Mines Tasmania Joint Venture of which Metals X has 50% ownership.</li> <li>No royalties above legislated state royalties apply for the Tasmanian tenements.</li> <li>Bluestone Mines Tasmania Joint Venture operates in accordance with all environmental conditions set down as conditions for grant of the mining leases.</li> <li>There are no known issues regarding security of tenure.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Renison and Mount Bischoff areas have an exploration and production history in excess of 100 years.</li> <li>Bluestone Mines Tasmania Joint Venture work has generally confirmed the veracity of historic exploration data.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Renison is one of the world's largest operating underground tin mines and Australia's largest primary tin producer. Renison is the largest of three major Skarn, carbonate replacement, pyrrhotite-cassiterite deposits within western Tasmania. The Renison Mine area is situated in the Dundas Trough, a province underlain by a thick sequence of Neoproterozoic-Cambrian siliciclastic and volcanoclastic rocks. At Renison there are three shallow-dipping dolomite horizons which host replacement mineralisation.</li> <li>Mount Bischoff is the second of three major Skarn, carbonate replacement, pyrrhotite-cassiterite deposits within western Tasmania. The Mount Bischoff Mine area is situated within the Dundas Trough, a province underlain by a thick sequence of Neoproterozoic-Cambrian siliciclastic and volcanoclastic rocks. At Mount Bischoff folded and faulted shallow-dipping dolomite horizons host replacement mineralisation with fluid interpreted to be sourced from the forceful emplacement of a granite ridge and associated porphyry intrusions associated with the Devonian Meredith Granite, which resulted in the complex brittle / ductile deformation of the host rocks. Lithologies outside the current mining area are almost exclusively metamorphosed siltstones. Major porphyry dykes and faults such as the Giblin and Queen provided the major focus for ascending hydrothermal fluids from a buried ridge of the Meredith Granite. Mineralisation has resulted in tin-rich sulphide replacement in the dolomite lodes, greisen and sulphide lodes in the porphyry and fault / vein lodes in the major faults. All lodes contain tin as cassiterite within sulphide mineralisation with some coarse cassiterite as veins throughout the lodes.</li> <li>The Rentails Mineral Resource is contained within three Tailing Storage Facilities (TSF's) that have been built up from the processing of tin ore at the Renison Bell mine over the period 1968 to 2013.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• 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:               <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No relevant information to be presented.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration assessment and normal mine extensional drilling continues to take place at Renison.</li> <li>Exploration assessment continues to progress at Mount Bischoff.</li> <li>Project assessment continues to progress at Rentails.</li> </ul>