22 July 2013

The Manager
ASX Market Announcements
ASX Limited
Level 4, 20 Bridge Street
Sydney NSW 2000

Dear Sir,

Further Increases in Tin Resources and Reserves at Renison

Metals X Limited (ASX: MLX) attaches a revised announcement in relation to the Mineral Resource and calculation of Ore Reserves at its Renison Tin Project (Metals X 50%). The original announcement was made on Wednesday 17 July 2012 and a revised announcement has now been made to address some technical non-compliance issues identified by the ASX in relation to the 2012 JORC Code. There is no change to the Mineral Resource or Ore Reserves as announced on 17 July.

Yours faithfully,

Fiona Van Maanen
Company Secretary

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

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PRESS RELEASE

22 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 Mineral Resource remains a globally significant 16.86 million tonnes at 0.82% Sn containing 139,000 tonnes of tin metal.

Summary of Material Information

The information in this report relates to the projects, which make up the Metals X's Tin Division, namely :

- The Renison Bell Tin Mine (50% MLX)
- The proposed Rentails (tailings re-treatment) Project (50% MLX)
- The Mt Bischoff Mine (currently on care & maintenance) (50% MLX)
- The Collingwood Mine (currently on care & maintenance) (100% MLX)

This report covers the annual variation in Mineral Resource and Ore Reserve estimates as at 30 June 2013, compared with the estimate of 12 months ago.

Material increases have resulted from the Ore Reserve estimate for the Renison Bell Tin Mine. These primarily result from extensions to the ore systems being mined, and the upgrading in classification of known resources from inferred to indicated or measured and thence into Ore Reserves following successful drilling and economic evaluation. The change occurs after the depletion of the previous reserve from mine extraction during the year.

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There has been a small immaterial increase in the Total Mineral Resources for the Renison Bell Mine but a material increase in the Indicated and Measured categories as a result of infill drilling of the Inferred Resource category, which has had a material decrease.

There has been a minor increase in the Total Mineral Resource for the Rentails Project and the same increase in the Ore Reserve, which relates directly to additions of tailings to the ponds over the current year.

There have been no changes to the Mt Bischoff or Collingwood Tin Project Mineral Resource estimates and there are no Ore Reserves on these projects.

The Renison Bell mine is an operating tin mine that has been essentially in operation in the same form for nearly 50 years. The Renison ore system contains three dominant styles of mineralisation:

1. Skarn Style – Stratabound mineralisation;
2. Skarn Style – Strata-Fault mineralisation, and
3. Fault Bound Mineralisation.

There have been over 70 individual ore bodies (lodes) mined at Renison over its life. The exploration diamond drilling from underground that has resulted in the revised estimates has occurred following many of these lodes down plunge and along strike. Further, much of the drilling has been resource definition drilling within the previously defined lodes to upgrade their confidence levels and their classification under the JORC codes.

Mineral Resource estimation is by ordinary kriging estimation methods with constrained 3D modelled wire-frames of the geological interpreted ore body shapes. Statistics and variography is applied and individual domaining of irregular and complex zones is completed. The resource is depleted for actual 3D models of the mining voids before the resource estimate is completed.

Classification of Mineral Resource blocks as Measured, Indicated or Inferred is based upon various estimation and derived parameters including the density of drilling and/or sampling data, the input data and geological/mining knowledge. The approach considers all relevant factors and reflects the competent persons view of the deposit. In no case are any resources estimated in any category without sufficient drilling and/or a sound basis for projection and assumption of continuity.

Most of the Measured and Indicated Resources at the Renison Bell mine are subjected to economic analysis using currently operating mining, processing, administration, royalty imposts, shipping and sales costs for the operation.

The cut-off grade applied to the Mining Reserve estimates is 0.80% Sn. Although co-product revenue in the form of copper does exists, no revenue or credit for revenue for any by-product is considered in the cut-off grade estimation process.

The predominant mining method at Renison is up-hole benching or long-hole stoping. Voids are filled with unconsolidated waste for waste disposal and support purposes and sometimes CAF (cement aggregate fill).

The ore system is diluted to a minimum width of 4.5m for development and 2.0m for stoping methods. In addition, dilution is added at a rate of 10% at zero grade to all shapes. A mining extraction recovery factor of 90% is applied.

All mining areas, including individual ore drives and stopes are continuously reconciled to validate the accuracy of the modification factors.

Economic evaluation also considers actual operating costs for the tin concentrator plant and mine recoveries are estimated assuming a general residue estimation formula generated after regression analysis of actual grade recovery curves from a long operating history at the mine.

Other operating factors covering maintenance costs, administration, royalty, concentrate shipping and sales costs are considered in the economic evaluation of each block in the Ore Reserve estimation process.

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

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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)
Measured							
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%	-
Sub-total		**21,849**	**0.54%**	**118**	**21,656**	**0.22%**	**48**
Indicated							
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%	-
Sub-total		**7,917**	**1.34%**	**106**	**5,594**	**0.32%**	**18**
Inferred							
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%	-
Sub-total		**3,260**	**1.36%**	**44**	**878**	**0.40%**	**3**
Totals							
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%	-
Grand Total		**33,026**	**0.81%**	**268**	**28,128**	**0.25%**	**70**

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)
Proven						
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%	-
Sub-total	**788**	**1.50%**	**12**	**790**	**0.30%**	**2**
Probable						
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%	-
Sub-total	**23,106**	**0.56%**	**130**	**22,785**	**0.22%**	**51**
Total Ore Reserves						
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%	-
Grand Total	**23,894**	**0.59%**	**142**	**23,574**	**0.23%**	**54**

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	JORC Code Explanation	Commentary
Sampling techniques	• 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. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • 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.	• Diamond Drilling 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. • Face Sampling Each development face / round is horizontally chip sampled. The sampling intervals are domained 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.
Drilling techniques **Drill sample recovery**	• 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). • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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.	• Sludge Drilling 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 • 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.
Logging	• 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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged	• Diamond core has been logged geologically and geotechnically. • Logging is quantitative in nature. • All holes are logged completely.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • 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. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Drill core is halved for sampling. Grade control holes may be whole-cored to streamline the core handling process if required • 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. This preparation has been proven to be appropriate for the style of mineralisation being considered. • QA/QC is ensured during the sub-sampling stages process via the use of the systems of an independent NATA / ISO accredited laboratory contractor. • The sample size is considered appropriate for the grain size of the material being sampled.

Criteria	JORC Code Explanation	Commentary
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • 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. • 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.	• 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 • 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. • Specific gravity / density values for individual areas are routinely sampled during all diamond drilling where material is competent enough to do so.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Anomalous intervals as well as random intervals are routinely checked assayed as part of the internal QA/QC process. • Virtual twinned holes have been drilled in several instances with no significant issues highlighted. Drillhole data is also routinely confirmed by development assay data. • Primary data is loaded into the drillhole database system and then archived for reference. • 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. • No primary assays data is modified in any way.
Location of data points	• 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. • Specification of the grid system used. • Quality and adequacy of topographic control.	• 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. • All drilling and resource estimation is undertaken in Renison mine grid. • Topographic control is generated from remote sensing methods in general, with ground based surveys understand where additional detail is required. This methodology is adequate for the resource in question.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied.	• 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. • 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. • Compositing is carried out based upon the modal sample length of each individual domain.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • 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.	• Drilling intersections are nominally designed to be normal to the orebody as far as underground infrastructure constraints allow. • Development sampling is undertaken normal to the orebody. • It is not considered that drilling orientation has introduced an appreciable sampling bias.
Sample security	• The measures taken to ensure sample security.	• Samples are delivered directly to the on-site laboratory by the geotechnical crew where they are taken into custody by the independent laboratory contractor.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data	• Site generated resources and reserves and the parent geological data is routinely reviewed by the Metals X Corporate technical team

SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• 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. • 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.	• All resources are hosted within 12M1995 and 12M2006. • Both tenements are standard Tasmanian mining leases. • No native title interests are recorded. • Both tenements are held by the Bluestone Mines Tasmania Joint Venture of which Metals X has 50% ownership. • No royalties above legislated state royalties apply. • Bluestone Mines Tasmania Joint Venture operates in accordance with all environmental conditions set down as conditions for grant of the mining leases. • There are no known issues regarding security of tenure. • There are no known impediments to continued operation in the area.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other partie	• Both the Renison and Mount Bischoff areas have an exploration and production history in excess of 100 years. • Recent Bluestone Mines Tasmania Joint Venture exploration has generally confirmed the veracity of historic exploration data
Geology	• Deposit type, geological setting and style of mineralisation.	• 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 volcaniclastic rocks. At Renison there are three shallow-dipping dolomite horizons which host replacement mineralisation. • 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 volcaniclastic 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.

Criteria	JORC Code Explanation	Commentary
Drill hole Information	• 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: » easting and northing of the drill hole collar » elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar » dip and azimuth of the hole » down hole length and interception depth » hole length. • 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.	• No drillhole information is being presented in this release.
Data aggregation methods	• 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No drillhole information is being presented in this release.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • 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').	• No drillhole information is being presented in this release.
Diagrams	• 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.	• No drillhole information is being presented in this release.
Balanced reporting	• 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.	• No drillhole information is being presented in this release.
Other substantive exploration data	• 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.	• No drillhole information is being presented in this release.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Normal mine extensional drilling continues to take place at Renison.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• Drillhole data is stored in a Maxwell's DataShed system based on the Sequel Server platform which is currently considered "industry standard". • 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.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Mr Jake Russell visits the site on a regular basis.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• Mining has occurred since 1800's providing significant confidence in the currently geological interpretation. • No alternative interpretations are currently considered viable. • Geological interpretation of the deposit was carried out using a systematic approach to ensure that the resultant estimated Mineral Resource figure was both sufficiently constrained, and representative of the expected sub-surface conditions. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the interpretation. • The architecture of the Renison horst / graben system is the dominant control on geological and grade continuity. Similarly at Mount Bischoff the extent of intrusive felsic dykes in proximity to carbonate horixons control the continuity of grade within the system.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• Renison has currently been mined over a strike length of >1,950m, a lateral extent of >1,250m and a depth of over 1,100m. • Mount Bischoff mineralisation has currently been defined over a strike length of >600m, a lateral extent of >250m and a depth of >250m

Criteria	JORC Code Explanation	Commentary
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• All modelling and estimation work undertaken by Bluestone is carried out in three dimensions via Surpac Vision. • 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. • 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. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the interpretation. • 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. • 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, estimation parameters and levels of informing data available. • 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. Both by-product and deleterious elements are estimated at the time of primary grade estimation. It is assumed that by-products correlate well with tin. There are no assumptions made about the recovery of by-products. • 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. • This approach has proven to be applicable to Metals X's tin assets. • Estimation results are routinely validated against primary input data, previous estimates and mining output. • Good reconciliation between mine claimed figures and milled figures is routinely achieved.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnage estimates are dry tonnes.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The resource reporting cut-off grade is 0.7% Sn.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Not considered for Mineral Resource. Applied during the Reserve generation process.

Criteria	JORC Code Explanation	Commentary
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Not considered for Mineral Resource. Applied during the Reserve generation process.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Bluestone Mines Tasmania Joint Venture operates in accordance with all environmental conditions set down as conditions for grant of the mining leases.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density of the mineralisation at Renison and Mount Bischoff 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.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• 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.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Resource estimates are peer reviewed by the site technical team as well as Metals X's Corporate technical team.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• All currently reported resources estimates are considered robust, and representative on both a global and local scale. • A continuing history of mining with good reconciliation of mine claimed to mill recovered provides confidence in the accuracy of the estimate.

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• All resources that have been converted to reserve are classified as either an Indicated or Measured Resource. Indicated Resources are only upgraded to Probable Reserves after adding appropriate modifying factors. Some Measured Resource is classified as Proved Mining Reserves and some is classified as Probable Mining Reserve based on whether is capitally or fully developed.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Mr Michael Poepjes visits Renison on a regular basis and is actively involved in physical mining process and evaluations.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered	• Mining is in progress at Renison and has occurred for nearly 50 years. Following exploration and infill drilling activity, annual resource updates and economic assessment of the measured and indicated resources is completed using actual costs, operating parameters and modifying factors. An annual update of Ore Reserves is completed on this basis. With regard to the Rentails Mineral Resource and Ore Reserve, the proposed Rentails Tailings Re-treatment Project has been subject to a Definitive Feasibility Study to validate the operating parameters applied. Increases in both the Mineral Resource and Ore Reserve for Renison are a direct reflection of total tailings output to the tailings dam from the operating Renison tin concentrator plant.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• The cut-off grade used for inclusion in the Reserve is 0.8% Sn based on economic assessment and current operating and market parameters. No consideration is given to copper co-product revenue in the economic assessment as the mining and recovery of the material is ad hoc and occurs as a consequence of mining the tin.
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• The Renison mine predominantly applies an up-hole benching with in some cases post fill and cemented aggregate fill to fill voids. The mining method has been successfully applied over the past decade with small tweaks and geotechnical considerations progressively applied. • Mining dilution for the Mining Reserve is generally 10% at zero grade. • A minimum mining width of underground development is 4.5m and for underground stoping a minimum width of 2.0m and resource models are diluted to these limits before dilution applied • A mining recovery 90% of the material developed and/or stoped is applied. • No Inferred resources are included within either the Reserve or the mine plan.

Criteria	JORC Code Explanation	Commentary
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• 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 method is proved and has successfully operated for over 45 years. • The metallurgical recovery as 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. • The process proposed by Rentails project is to regrind the ores to a finer grind, the pre-concentration using sulphide and oxide flotation , and high-g-force gravity separation to produce a low-grade concentrate which is planned to be processed using an Ausmelt process to fume the tin to a high grade concentrate tap out a copper matte.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• Waste is generally stored underground in old mine voids. Smaller amounts are placed on approved dumps. • The Renison mine operates under and in compliance with a number of operating permits, which cover its environmental impacts and outputs.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• The Renison mine is currently active and has substantial in place infrastructure in place including a large amount of mine infrastructure, major electrical and pumping networks, and underground primary crusher and automated shaft hoist system, a 650,000tpa tin concentrator plant, a fully equipped laboratory, extensive workshop, administration facilities and a 100 person single person quarters nearby.. • The Rentails Project will be integrated wit the Renison Project. There is sufficient land set aside for the Rentails expansion and future infrastructure requirements including tailings storage.
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Mining costs for the Renison mine are based on Actual Mining Contractor Costs and actual realised costs and future budget estimates for all other functions at the existing mine. • Costs for the Rentails Project have been defined through a Definitive Feasibility Study.
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• For the Renison Mine, revenue is based upon existing smelter contract costs and a base international tin price of A$25,000. No co-product revenue is considered in Mining Reserve or cut-off grade estimation. • For the Rentails Project, similar industry based smelter contracts is considered. Credits for sale of a high-grade copper matte product are considered and applied as a co-product revenue in the estimation of operating costs

Criteria	JORC Code Explanation	Commentary
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Detailed economic studies of the tin market and future price estimates are considered by Metals X and applied in the estimation of revenue, cut-off grade analysis and future mine planning decisions. • There remains strong demand and no apparent risk to the long term demand for the tin products and/or copper products generated from the project.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• As an operating mine, internal cash flow estimates and impairment models apply an implied 8% real discount rate for NPV analysis and only economically viable ores are considered for mining. The mine is operated in a JV and carries no external debt forces. • For the Rentails Project, which is yet to be funded, an 8% real discount rate is applied to NPV analysis. • Sensitivity analysis of key financial and physical parameters is applied to future development project considerations and mine.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• The Rension mine is fully permitted and a major contributor to the local and regional economy. It has no external pressures that impact its operation or which could potentially jeopardise its continuous operation/ • The Rentails Project is yet to start and will require environmental and other regulatory permitting. • The Collingwood mine is an existing operation, currently on care and maintenance with a decision to re-start still to be made. • The Mt Bischoff Project is currently closed and the site is under care and maintenance whilst addition drilling and economic evaluation or remaining resources is considered.
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• Renison is an active mining project.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• The basis for classification of the resource into different categories is made on a subjective basis. Simply, Measured Resources have a high level of confidence and are generally defined in three dimensions and have been accurately defined or capitally and normally developed. Indicated resources have a slightly lower level of confidence but contain substantial drilling and are in most instances capitally developed or well defined from a mining perspective. Inferred resources always contain significant geological evidence of existence and are drilled, but not to the same density. There is no classification of any resource that isn't drilled or defined by substantial physical sampling works. • Some Measured Resources have been classified as Proved and some are defined as Probable Reserves based on subjective internal judgements, but generally based upon the intensity of capital and normal development they have been subjected to.

Criteria	JORC Code Explanation	Commentary
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• Site generated reserves and the parent data and economic evaluation data is routinely reviewed by the Metals X Corporate technical team. Resources and Reserves have in the past been subjected to external expert reviews, which have ratified them with no issues. There is no regular external consultant review process in place.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• All currently reported reserve calculations are considered representative on a local scale. Regular mine reconciliations occur to validate and test the accuracy of the estimates.