

# QUARTERLY REPORT



Metals X Limited is a diversified group mining, developing and exploring for minerals and metals in Australia. It is Australia's largest tin producer and a significant copper producer with a pipeline of assets from exploration to development including the world class Wingellina Nickel-Cobalt Project.

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FOR THE QUARTER ENDED 31 MARCH 2018

## HIGHLIGHTS

### CORPORATE

- ▶ Operating EBITDA of \$13.5 million (December 2017 quarter \$8.5 million).
- ▶ Strong balance sheet with closing cash and working capital of \$83.0 million.

### COPPER DIVISION – FOCUS ON DEVELOPMENT, MINE LIFE AND PRODUCTION RAMP-UP

- ▶ Production of 5,003 tonnes of copper contained in concentrate was 6% higher than the December 2017 quarter of 4,726 tonnes.
- ▶ EBITDA of \$3.3 million (December 2017 quarter (\$1.5 million)).
- ▶ Significant progress made during the quarter to bring additional areas outside of the historic 'checkerboard' into production to reduce dilution and ramp-up mine tonnage.
- ▶ Implementation of business improvement and ramp-up plan continues towards the targeted 40,000tpa copper production rate, with 35,000tpa production rate expected by mid-2018.
- ▶ Delivery of two new loaders and two new charge-up machines during the quarter completed the mobile equipment refurbishment and replacement program. In addition, a raise bore machine was deployed to site to expedite stope slot rising.
- ▶ Grade control and infill drilling continues to confirm continuity of mineralisation and significantly improve geological models and mine planning.
- ▶ Review of geophysical and geochemical datasets at Maroochydore successful in identifying numerous targets.

### TIN DIVISION – STRONG PRODUCTION WHILE EXPANSION PROJECT PROGRESSES

- ▶ Production of 1,725 tonnes of tin contained in concentrate at an all-in-cost of \$17,196 per tonne of contained tin (December quarter 1,785 tonnes at \$18,101 per tonne).
- ▶ EBITDA of \$10.2 million and net cash flow of \$3.7 million (MLX 50% share).
- ▶ Construction of ore sorting circuit for a 15-20% expansion in tin production remains on budget with practical completion on track for the June 2018 quarter.
- ▶ New tailings 'D Dam' close to completion with only minor works remaining at the end of the quarter.
- ▶ Rentails environmental studies and modelling continued to advance the statutory approvals process.

*Note: EBITDA is unaudited and a non-IFRS measure.  
All \$ quoted are AUD unless stated otherwise.  
All numbers quoted are for the March 2018 quarter unless stated otherwise.  
Renison data is 100% of the operation unless stated as 'MLX 50%' share.*

Metals X Limited (**Metals X** or the **Company**) is pleased to present its activities report for the quarter ended 31 March 2018.

## COPPER DIVISION

### NIFTY OPERATIONS (MLX 100%)

Metals X is 100% owner of the Nifty Copper Operations (Nifty), located in the East Pilbara region of Western Australia.

The Company's main objective is to achieve an annualised production rate of 40,000 tonnes of contained copper in concentrate from the Nifty underground mine while extending the mine life and Ore Reserves.

#### OPERATIONS UPDATE

The Nifty production ramp-up is based on opening additional underground stoping areas and utilising the existing 40% spare capacity in the processing plant which, up until December 2017, had been running on a campaign basis of two weeks on and one week off.

During the March 2018 quarter, the operations continued to advance the mine production towards the target run rate of 35,000 tonnes of copper by the end of the June 2018 quarter. The site took delivery of two new loaders and two new charge up machines, all of which have been fully commissioned and put into service. Late in the quarter, a contract raise bore machine was deployed at site to expedite stoping slots in order to commence stoping activities on several new mining fronts. Subsequent to the end of the quarter, a fourth jumbo drill rig was contracted and is expected to be in operation by the end of April to open up additional mining areas now that there are sufficient headings available.

Underground drilling during the quarter continued to focus on infill drilling of the mining areas defined for the next 5 years. This has significantly enhanced the geological models, improving the reliability and certainty of mining schedules and designs. Approximately 85% of the planned infill drilling was completed by quarter end with circa 8 million tonnes of ore incorporated into detailed mine design.

As advised in the December 2017 quarter, a full refurbishment of the underground crusher and conveyor system was completed except for the replacement of the new underground conveyor belt. Installation of the new conveyor has commenced and is expected to result in the loss of approximately five to six days of production. This will complete the equipment replacement program to return all equipment back to the required standard to achieve the business production objectives.

The focus of development during the quarter was on continuing to establish additional mining fronts outside of the historic stope and fill mining area (the 'checkerboard'). There was significant advancement of additional development and stope drilling to enable the ramp-up of underground mining operations during the June 2018 quarter.

Ore production for the quarter was 5,003 tonnes of copper in concentrate, which was approximately 6% higher than the December 2017 quarter production of 4,705 tonnes. The mined grade of 1.44% Cu was also an improvement on the previous quarter (1.32% Cu). However, dilution from the mining of 'tertiary' stopes (stopes which are surrounded by previously mined and backfilled stopes on at least two sides) within the checkerboard continued to be a significant issue. It is anticipated that mined grade will continue to improve during the June 2018 quarter as additional stopes outside of the checkerboard come on line.

Total costs for the operation were an improvement on the previous quarter. However, unit costs will continue to remain relatively high until copper production ramps-up. The cash flow for the quarter was \$1.1 million (unaudited), with an EBITDA of \$3.3 million, compared to the December quarter cash flow of (\$3.9) million and EBITDA of (\$1.5) million. The improved financial outcome was primarily as result of the lower costs and higher copper production.

## PRODUCTION, CASHFLOW AND COST

TABLE 1: NIFTY COPPER OPERATIONS PRODUCTION AND COSTS – MARCH 2018 QUARTER

All \$ are AUD		March 2018 Quarter	Previous Quarter	Rolling 12-months
<b>Physical Summary</b>				
<b>Mine Production</b>				
Ore tonnes mined	t	361,848	393,355	<b>1,368,585</b>
Ore grade mined	% Cu	1.44	1.32	<b>1.44</b>
<b>Copper Concentrator</b>				
Tonnes processed	t	365,610	387,403	<b>1,392,955</b>
Ore grade processed	% Cu	1.46	1.32	<b>1.46</b>
Recovery	% Cu	93.78	92.05	<b>92.72</b>
Copper produced	t Cu	5,003	4,726	<b>18,863</b>
Copper sold	t Cu	7,316	4,314	<b>19,635</b>
Copper price achieved	\$/t Cu	8,842	8,879	<b>8,326</b>
<b>Cost Summary</b>				
Mining	\$/t Cu	3,812	4,750	<b>4,317</b>
Processing	\$/t Cu	1,947	1,847	<b>1,894</b>
Admin	\$/t Cu	1,111	1,278	<b>1,255</b>
Stockpile adjustment	\$/t Cu	36	(62)	<b>55</b>
<b>C1 Cash Cost</b>	<b>\$/t Cu</b>	<b>6,906</b>	<b>7,812</b>	<b>7,521</b>
Royalties	\$/t Cu	403	398	<b>371</b>
Marketing / Sales costs	\$/t Cu	817	933	<b>968</b>
Sustaining capital	\$/t Cu	362	369	<b>423</b>
Reclamation & other adjustments	\$/t Cu	56	60	<b>63</b>
<b>All-in Sustaining Costs (AISC)</b>	<b>\$/t Cu</b>	<b>8,543</b>	<b>9,572</b>	<b>9,346</b>
Project costs	\$/t Cu	-	-	<b>-</b>
Exploration costs	\$/t Cu	88	129	<b>163</b>
<b>All-in Costs (AIC)</b>	<b>\$/t Cu</b>	<b>8,631</b>	<b>9,701</b>	<b>9,509</b>

## NIFTY UNDERGROUND DRILLING

The focus of underground drilling during the quarter was on targeting extensions to the Lower Carbonate Unit (LCU) southwest of the current 16-18 levels. This drilling, together with a number of smaller grade control programs confirming upcoming production, contributed to an overall total of 7,891 metres of diamond drilling completed during the quarter.

Preliminary analysis and interpretation of the new drilling in the southwest indicated potential changes to the structural model (South Fault) in this area. Broader than expected stratigraphic units suggest a sequence of parallel faulting associated with the South Fault, which appear to have provided multiple conduits for fluid movement and remobilisation of the mineralisation. This has further added to understanding of structural controls of mineralisation within the resource.

Highlights from the southwest extension drilling included:

- NUG0302: 14.90 metres at 4.16% Cu;
- NUG0303: 13.30 metres at 2.29% Cu;
- NUG0320: 14.00 metres at 4.15% Cu.

Grade control programs targeting the SW195-198 production area commenced during February. This area will comprise a significant proportion of the stoping tonnes planned for the second half of 2018. Results from this drilling are pending.

## REGIONAL EXPLORATION

During the quarter the Company's regional exploration activities were focussed on data reviews and target generation for the forthcoming 2018 field season as the wet season restricted field activities.

Metals X holds over 3,000 square kilometres of tenure over the prospective Broadhurst Formation of the Neoproterozoic Yeneena Basin (Figure 1).

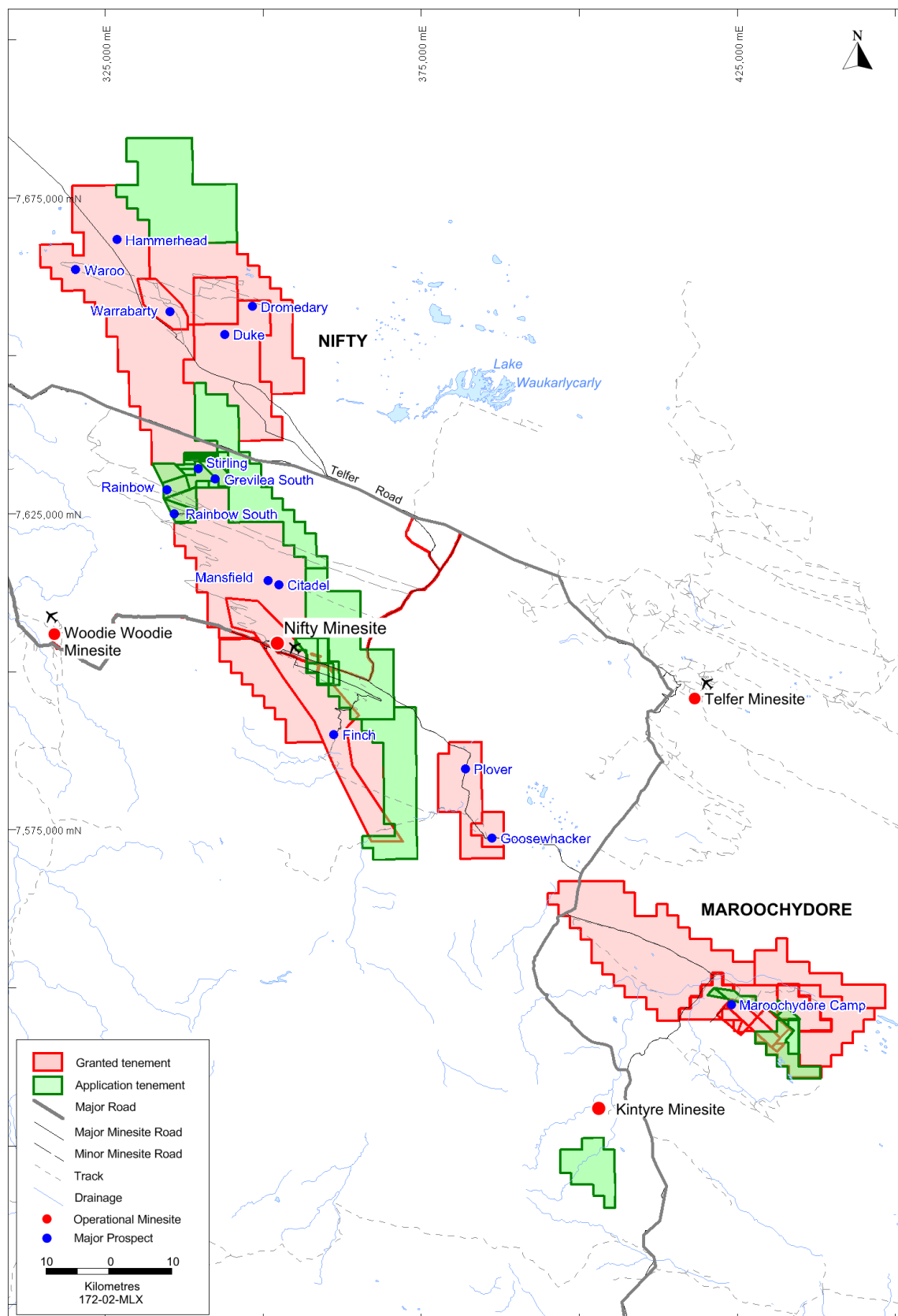


FIGURE 1: METALS X TENURE IN THE YENEENA BASIN, PATERSON PROVINCE, WESTERN AUSTRALIA, SHOWING NIFTY MINESITE AND SIGNIFICANT PROSPECT LOCATIONS

A number of targets tested by previous operators in the region outlined both copper-cobalt and lead-zinc anomalies. In addition to the regional targeting program, previous work also focussed on targets at Maroochydore and near mine at Nifty. At Maroochydore, drill targets were identified at Yeppoon and several other prospects including new prospects at M1 to M4 (refer to Figure 3).

Regional prospects at Dromedary, Warrabarty, Grevillea/Stirling and Rainbow have all been reviewed. At Dromedary, previous drilling had intersected 5 metres at 9.56% Zn from 124 metres, 5 metres at 15.35% Zn from 136 metres, and 12 metres at 1.93% Zn from 175 metres (all downhole intersections) in hole 08DKRCD011 as massive and blebby sphalerite in faulted siltstones of the Isdell Formation. The sulphide mineralisation has been interpreted to be skarn related.

## Warrabarty

At Warrabarty, discovered by WMC Resources in the 1980s, a large (5 x 5 kilometre) manganese-rich, pisolitic gravel supergene blanket with anomalous lead and zinc was outlined by RC and diamond drilling. Deeper bedrock intersections include a mineralised zone of 200 metres at 0.81% Zn from 114 metres in hole THRD0014 and 140 metres at 1.46% Zn and 0.32% Pb from 500 metres to end of hole in THRD783 ( Figure 2).

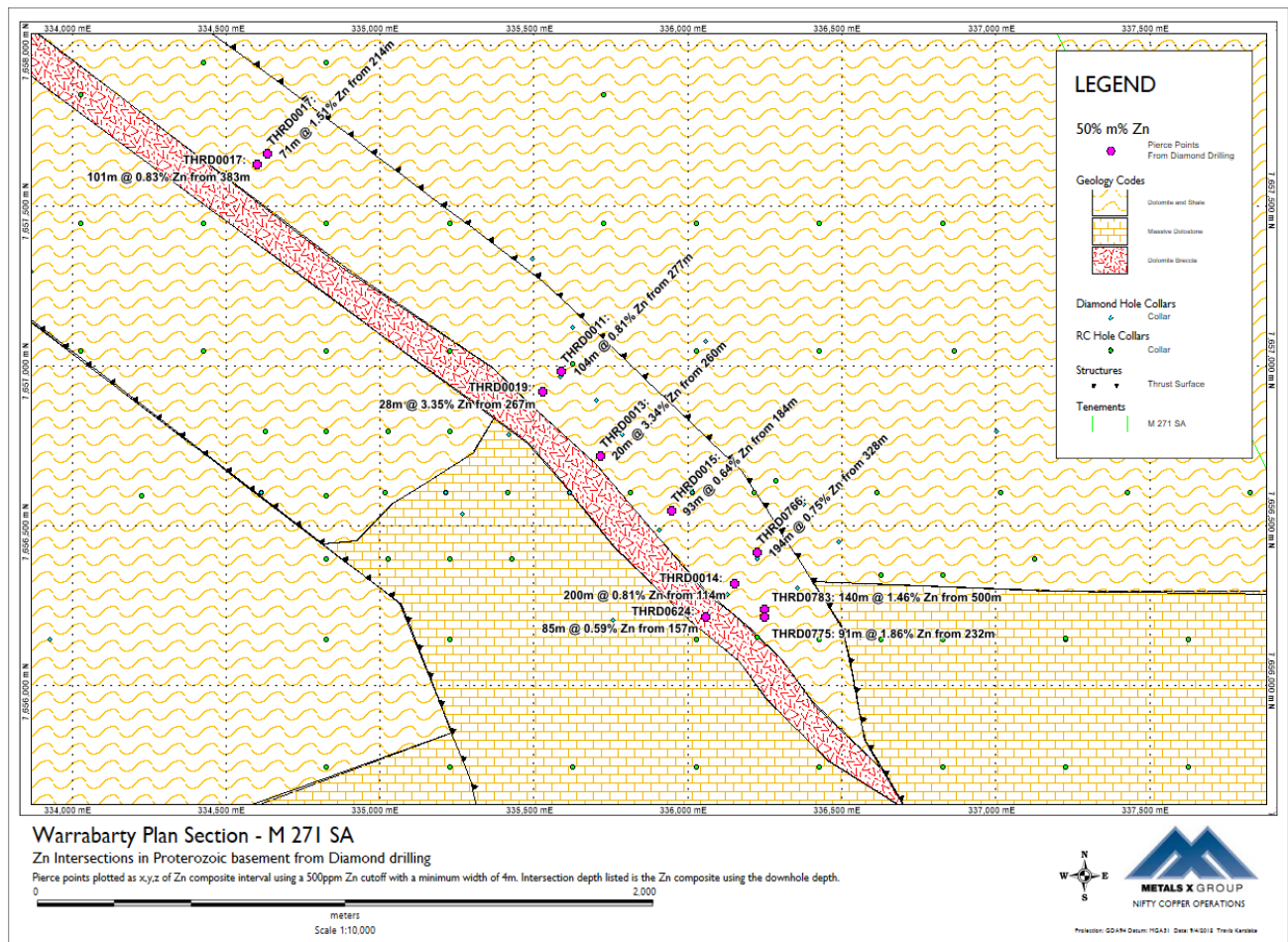


FIGURE 2: WARRABARTY MINERALISED STRUCTURE AND HISTORIC DRILL HOLES

Historical drill intercepts of greater than 0.50% Zn metres from the previous drilling at Warrabarty are summarised in Table 2. The intercepts have been calculated using a greater than 500 ppm Zn cut-off and no internal dilution. The lead value is the averaged value over the identical interval. All intercepts are length weighted averages. The Easting and Northing values are the midpoint intercept of the interval downhole. The thickness is the downhole thickness, with the true thickness expected to be a factor of 0.86 of the downhole thickness.



The mineralised dolomite fault breccia at Warrabarty extends for approximately 2.5 kilometres and is open both to the northwest and southeast and at depth. Drilling is planned to test extensions to the structure especially to the southeast where drilling is open for approximately 5 kilometres.

TABLE 2: WARRABARTY HISTORIC DRILL INTERCEPTS

Hole ID	Easting (m)	Northing (m)	Depth From (m)	Depth To (m)	Thickness (m)	Zn %	Pb %
THRD0011	335590	7656983	277	381	104	0.81	0.15
THRD0013	335715	7656719	260	280	20	3.34	0.21
THRD0014	336150	7656321	114	314	200	0.81	0.54
THRD0015	335948	7656547	184	277	93	0.64	0.26
THRD0017	334635	7657664	214	286	71	1.51	0.04
THRD0017	334602	7657628	383	484	101	0.83	0.10
THRD0019	335528	7656918	267	296	28	3.35	0.58
THRD0624	336058	7656216	157	242	85	0.59	0.20
THRD0766	336226	7656417	328	522	194	0.75	0.34
THRD0775	336249	7656216	232	323	91	1.86	0.84
THRD0783	336247	7656240	500	640	140	1.46	0.32

### Rainbow & Grevillea/Stirling

The Rainbow prospect is a large (5 x 3 kilometre) lag copper geochemical anomaly with maximum values of 0.12% Cu and 0.95% Pb. Previous significant drilling results included 54 metres at 0.4% Cu from surface and 32 metres at 0.6% Cu from surface. Work is continuing on drill targeting this prospect.

Grevillea/Stirling is a prospect located approximately 6 kilometres from Rainbow, with anomalous lead and zinc results of up to 1% within a coherent supergene anomaly of greater than 0.3% Zn over an area of 6 square kilometres. Immediately west of this anomaly, at the Stirling prospect, anomalous copper was intersected in hole THRC512 with 4 metres at 0.76% Cu reported from 74 metres to end of hole. Hole 11SRC001 recorded 1 metre at 3.85% Cu from 89 metres downhole. This area, like Rainbow, is being targeted for ongoing exploration using the new geophysical datasets obtained in the 2017 field season to target copper in structural settings analogous to Nifty.

### Maroochydhore

The Maroochydhore deposit, located approximately 85 kilometres southeast of Nifty, currently consists of a significant oxide Mineral Resource of 43.5 million tonnes at 0.91% Cu and 391ppm Co, with a small primary sulphide Mineral Resource of 5.43 million tonnes at 1.66% Cu and 292ppm Co based upon the limited drilling completed to date (refer to ASX announcement dated 18 August 2016).

Following the completion of drilling activities at Maroochydhore during the previous quarter, work has focussed on sampling the 8 PQ metallurgical drill holes. Mineralised intervals and specific ore types have been identified from the oxide resource. Metallurgical testing to determine potential treatment processes for the oxide and transitional ore zones are to be trialled during the forthcoming quarter. Results of the drilling program showed a variety of ore types including malachite, chalcocite and native copper. Anomalous cobalt was associated with mineralisation higher in the weathering profile. Results from the drilling are summarised in the table of drill intercepts for the quarter (Appendix 1, Table 6).

A comprehensive study of the geology of the Maroochydhore Project has been completed integrating the historical geological datasets with the recently acquired and interpreted VTEM, magnetics and gravity data. A total of approximately 39,000 metres of historical drilling has been identified from this work and added to the geological database.

The study has identified several additional targets to the known prospects. The location of the targets areas is shown in Figure 3.

The Yeppoon target is directly along strike from the Maroochydhore mineralisation and is an area of some 8 kilometres of untested Broadhurst stratigraphy with no effective drilling within this area.

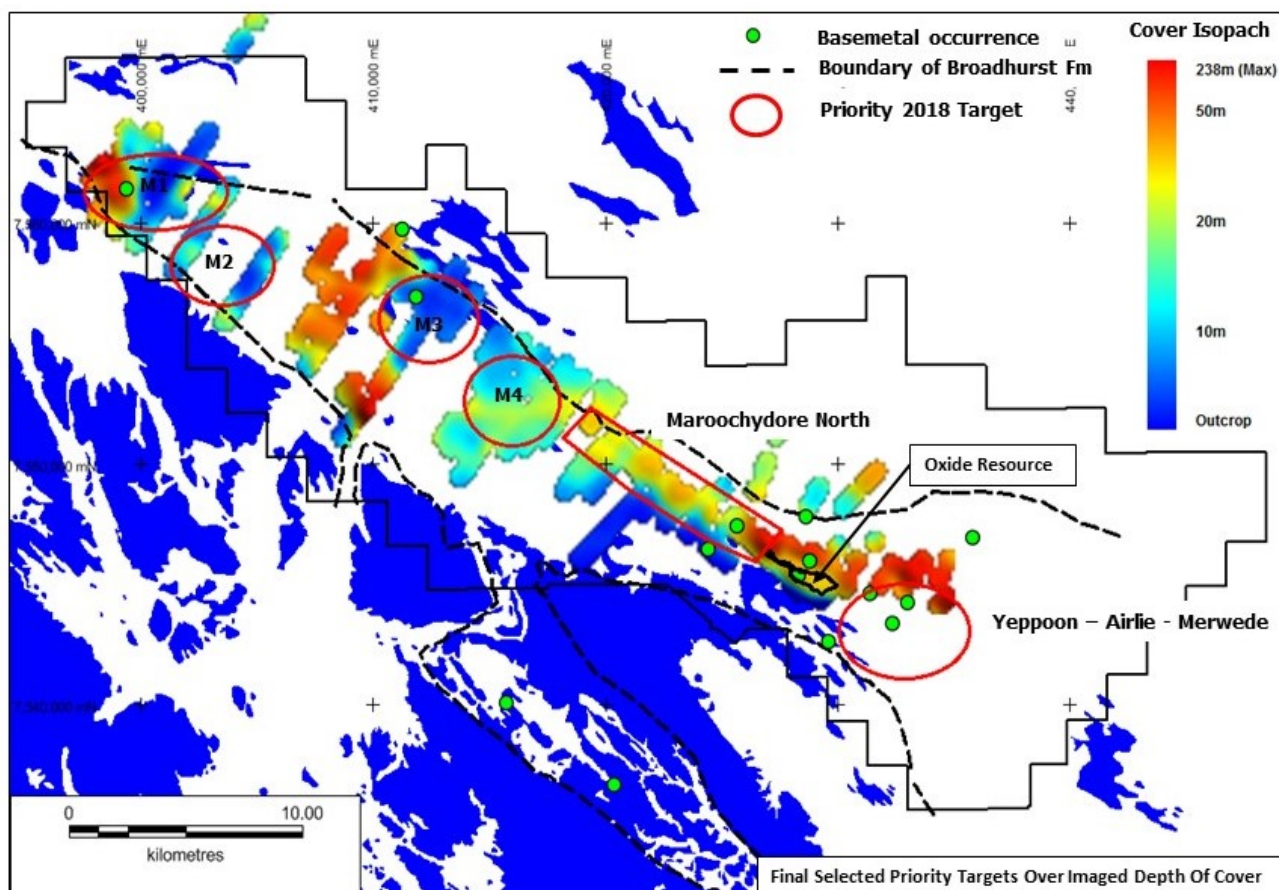


FIGURE 3: MAROOCHYDORE IDENTIFIED DRILL TARGETS INCLUDING YEPPOON AND NEWLY DEFINED M1-M4 PROSPECTS

### Nifty near mine extensional drilling

In August 2017, Metals X reported the results from drill hole 17NNMDD001, the Company's first step-out drill hole 1 kilometre down plunge of the current Nifty orebody (refer to ASX announcement dated 9 August 2017). The hole intercepted multiple mineralisation zones over 30 metres.

Results were received during the quarter for holes 17NNMDD006 to 17NNMDD008 which continued to intersect mineralisation down plunge of the Nifty syncline, both below and above hole 17NNMDD001:

- Hole 17NNMDD006 intersected 2 metres at 1.35% Cu from 320 metres; and 1.7 metres at 1.82% Cu from 420 metres;
- Hole 17NNMDD007 intersected 1 metre at 0.72% Cu from 813 metres, and 1 metre at 0.76% Cu from 820 metres;
- Hole 17NNMDD008 intersected 1.2 metres at 1.22% Cu from 566.3 metres and 1.5 metres at 0.56% Cu from 569.2 metres.

The above drilling tested mineralisation within the Nifty syncline approximately 700 to 900 metres further down plunge from the currently defined area of mineralisation. The drilling has identified the effect of a controlling structure, termed the Southern Fault, with mineralisation associated with the structure. The main mineralised position observed at the Nifty mine site, the keel position of the Lower Carbonate Unit and Middle Carbonate Unit, has not yet been intersected in this drilling.

# TIN DIVISION

## RENISON TIN OPERATIONS (MLX 50%)

Metals X owns a 50% equity interest in the Renison Tin Operations in Tasmania (**Renison**) through its 50% stake in the Bluestone Mines Tasmania Joint Venture (**BMTJV**). All data in this report is 100% of Renison unless stated as 'MLX 50%' share.

### PRODUCTION, CASHFLOW AND COST

Production for the quarter was 1,725 tonnes of tin (Sn) contained in concentrate at a C1 cost of \$11,429 per tonne of tin compared to the previous quarter of 1,785 tonnes of tin at a C1 cost of \$10,861 per tonne of tin. The all-in-sustaining cost (AISC) of \$17,196/t Sn was 5% lower than the previous quarter (\$18,101/t Sn). The process plant and underground operations continued to perform as expected.

The average tin price received for the quarter of \$26,825 per tonne was \$1,000 higher than the previous quarter, with the tin price continuing to trade within the range of \$24,600 to \$28,150 per tonne over the past 12 months at an average price of \$26,350/t Sn. EBITDA for the quarter was also consistent at \$10.21 million (MLX 50% share) compared to the previous quarter of \$10.34 million. Despite the significant investment associated with the construction of the new tails dam and the installation of the ore sorter, the operation's cash flow was \$3.7 million (MLX's 50% share).

TABLE 3: RENISON TIN OPERATIONS PRODUCTION AND COSTS – MARCH 2018 QUARTER

All \$ are AUD		March 2018 Quarter	Previous Quarter	Rolling 12-months
<b>Physical Summary</b>				
<b>Mine Production</b>				
Ore tonnes mined	t	207,639	186,492	<b>749,618</b>
Ore grade mined	% Sn	1.22	1.23	<b>1.28</b>
<b>Tin Concentrator</b>				
Tonnes processed	t	185,196	186,264	<b>722,081</b>
Ore grade processed	% Sn	1.27	1.26	<b>1.30</b>
Recovery	% Sn	73.37	75.48	<b>74.24</b>
Tails grade	% Sn	0.34	0.30	<b>0.33</b>
Tin produced	t Sn	1,725	1,785	<b>7,024</b>
Tin sold	t Sn	1,790	1,560	<b>6,850</b>
Tin price achieved	\$/t Sn	26,825	25,787	<b>26,329</b>
<b>Cost Summary</b>				
Mining	\$/t Sn	7,013	5,581	<b>6,248</b>
Processing	\$/t Sn	4,884	4,322	<b>4,674</b>
Admin	\$/t Sn	1,027	1,006	<b>1,023</b>
Stockpile adjustments	\$/t Sn	(1,495)	(49)	<b>(436)</b>
<b>C1 Cash Cost</b>	<b>\$/t Sn</b>	<b>11,429</b>	<b>10,861</b>	<b>11,509</b>
Royalties	\$/t Sn	1,373	1,267	<b>1,329</b>
Marketing / Sales costs	\$/t Sn	2,179	2,033	<b>2,150</b>
Sustaining capital	\$/t Sn	2,206	3,905	<b>3,166</b>
Reclamation & other adjustments	\$/t Sn	10	35	<b>39</b>
<b>All-in Sustaining Costs (AISC)</b>	<b>\$/t Sn</b>	<b>17,196</b>	<b>18,101</b>	<b>18,192</b>
Project costs	\$/t Sn	5,493	5,125	<b>4,087</b>
<b>All-in Costs (AIC)</b>	<b>\$/t Sn</b>	<b>22,689</b>	<b>23,226</b>	<b>22,279</b>

During the quarter, construction of the ore sorter accelerated with the completion of fabrication and the commencement of construction. Ongoing construction of the new tailings dam (Dam D), which commenced in February 2017, was almost complete by quarter end with only minor works remaining. As anticipated, project costs were higher for the quarter as ore sorter construction activities ramped-up. The ore sorter and additional mine development remain on track for the anticipated practical completion during the June 2018 quarter. Mining has commenced ramping up production in anticipation of the ore sorter coming on line with additional ore being stockpiled. Mine production for the quarter at 207,639 tonnes of ore was 11% higher than the December 2017 quarter of 186,492 tonnes of ore mined.



## RENISON EXPANSION – ORE SORTER

Metals X previously advised that it had commenced the construction of a new crusher plant and ore sorter (refer to ASX announcement dated 21 June 2017). Ore sorting trials indicated that approximately 25% of underground feed to the processing plant is essentially waste that dilutes ore feed and can be rejected with tin losses of less than 3%. The implementation of ore sorting will enable a cost-effective expansion at Renison with an increase in mining production without the requirement to expand the processing plant. The economic evaluation indicates a project payback period of less than twelve months for a total capital outlay of approximately \$14 million (100% basis). The Project remains on track to be completed in the June 2018 quarter, with engineering completion expected in May 2018.

The ore sorter design requires an increase in annualised mine production over the next twelve months to 940,000 tonnes while maintaining the processing plant at a rate of approximately 720,000 tonnes per annum. Tin production with the proposed ore sorter is expected to increase by 15-20% from the current levels of approximately 7,200 tonnes of tin per year. In addition, the resulting improved economics of Renison will facilitate a re-optimisation of the current Mineral Resource.

On-site construction of the crushing and ore sorting plant commenced in late January 2018 with construction to be completed by the end of May 2018. Underground mining continues towards opening up additional stoping areas in preparation for the commissioning of the ore sorter in the June quarter with the site currently generating ore stockpiles to assist with a smooth transition.



PHOTO 1: RENISON ORE SORTER SITE WORKS (AT 5 APRIL 2018)

## RENISON EXPLORATION AND DEVELOPMENT

During the quarter, Renison introduced a third underground diamond drill rig in anticipation of the expansion of underground production activities that will result from the installation of the ore sorter. The focus has been on further expanding the resource definition programs in the Area 5, Deep Federal, the Leatherwood and Central Federal Bassett lodes.

Results from these campaigns are continuing to flow through, with drilling demonstrating the continuance of strong mineralisation in the Area 5 zone which is an ongoing and upcoming zone of production, including:

- U6137 - 6.3 metres at 1.79% Sn from 120 metres;
- U6150 – 6 metres at 2.51% Sn from 242 metres;
- U6155 – 3 metres at 3.59% Sn from 231 metres ; 3.2 metres at 2.72% Sn from 234 metres, and 4.8 metres at 4.97% Sn from 237 metres.

Of significance is the continued delineation of extensions to the high-grade mineralisation into the Lower Federal South hanging wall ore zone where recent results have demonstrated strong mineralisation, including:

- U6422 - 0.8 metres at 9.82% Sn from 40 metres; 1.2 metres at 3.01% Sn from 119 metres; 3.2 metres at 5.08% Sn from 136 metres; 0.8 metres at 4.57% Sn from 141 metres, and 2 metres at 2.31% Sn from 153 metres;
- U6411 – 2 metres at 5.08% Sn from 72 metres.

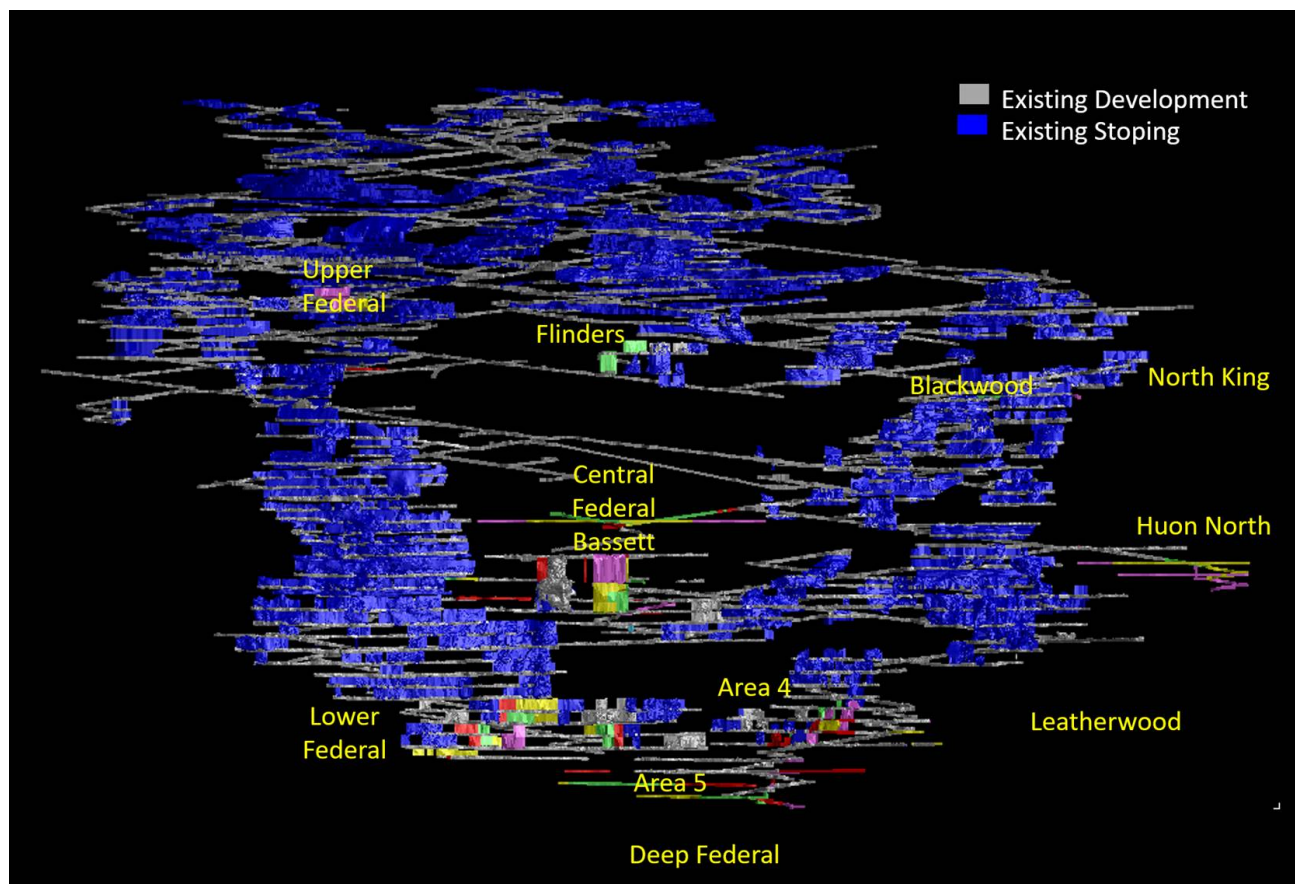


FIGURE 4: LONG SECTION OF RENISON UNDERGROUND MINE SHOWING EXTENT OF PREVIOUS MINING ACTIVITY, CURRENT DEVELOPMENT AND TARGET AREAS

## RENISON EXPANSION – RENISON TAILINGS RETREATMENT PROJECT (RENTAILS)

### Background

The objective of the Rentails Project is to re-process the estimated 22.5 million tonnes of tailings at an average grade of 0.44% tin and 0.23% copper from the historical processing of tin ore. The current tailings dams have a Probable Ore Reserve containing approximately 99,000 tonnes of tin and 51,000 tonnes of copper (refer to ASX Announcement dated 28 August 2017).

During the June 2017 quarter, the BMTJV completed an updated feasibility study (“DFS Update”) of Rentails (refer to ASX announcement dated 3 July 2017). The DFS Update confirmed a robust, high margin project including:

- NPV<sub>8%</sub> of \$260 million (pre-tax) and IRR of 37% (pre-tax) based on a tin price of US\$20,000, copper price of US\$5,000 and USD/AUD exchange rate of 0.75;
- Cash operating cost of \$13,400/t Sn (net of copper credits) providing operating cash margin of approximately \$13,000/t Sn at the current tin price of \$26,000/t Sn;
- Breakeven tin price of US\$14,000/t Sn;
- Construction capital cost of \$205 million; and
- Annual revenue of \$161 million.

The project will retreat the historical tailings and, potentially, intermediate streams from the current processing plant over an 11 year period at an average rate of 2 million tonnes per annum. The average annual production of the project will be approximately 5,400 tonnes of tin in a high grade tin fume product and 2,200 tonnes of copper in a high grade copper matte.

The combined Renison Tin Operations, following installation of the ore sorter and the commencement of Rentals, is expected to produce approximately 13,400 - 13,900 tonnes of tin per annum, which is approximately 3.75% of the global primary tin supply. The all-in sustaining cost for the combined operations is anticipated to be less than \$17,000 per tonne, which compares favourably to the prevailing tin price of approximately \$26,000 per tonne.

Following the DFS Update, the BMTJV appointed a Project Manager and Technical Manager to Rentals, commenced discussions with various parties in relation to financing options and establishing the timing of long lead time items, environmental approvals and the capacity of suppliers to service Rentals.

## **Project Update**

Metallurgical testwork required for design and environmental approvals continued during the quarter, with the majority of the testwork now complete. The metallurgical testwork has considered new technologies and improvements that have been made at Renison since the original feasibility study was completed, with some improvements likely to be included in the final design. Suppliers have been sourced for key consumables and discussions held with potential EPC contractors and engineering companies for pre-qualification ahead of proposed tendering of the construction contract later in the year. Timing of EPC and engineering tenders will be dependent upon the progress of the environmental approvals process.

## **Approvals Update**

The BMTJV commenced the environmental approvals process with the Tasmanian Government and the Commonwealth Government in September 2017. During the December 2017 quarter, the Tasmanian Environment Protection Authority (EPA) set the Level of Assessment for Rentals at Category 2C. The project was also awarded Major Project Status under the Commonwealth Department of Industry, Innovation and Science's Major Project Facility Agency. The purpose of the Agency is to assist projects of significance in achieving a timely and efficient approvals process for project development.

A Development Proposal and Environmental Management Plan (DPEMP) is required to be submitted by BMTJV and approved by the EPA, a Development Application (DA) to be approved by the local Council and, if the Project is declared of national significance under the Environmental Protection and Biodiversity Conservation (EPBC) Act, approval from the Commonwealth Minister of Environment & Energy.

During the quarter, the Commonwealth Government confirmed that approval will be required under the EPBC Act and bilateral agreement guidelines that were approved by the EPA Board. Following a two week public review period, Project Specific Guidelines were provided to the BMTJV which set the requirements for the DPEMP. The BMTJV has engaged an experienced environmental consultancy to manage the approvals process with environmental studies and modelling having commenced during the quarter.

Under the statutory process for a Level 2 assessment, the expected timeline for environmental approvals is approximately 12 months. BMTJV expects to have completed its studies and required assessments under the Project Specific Guidelines, and to lodge its DPEMP, early in the December 2018 quarter.

# NICKEL DIVISION

## WINGELLINA NICKEL-COBALT PROJECT (MLX 100%)

### Background

The Wingellina Nickel-Cobalt Project is part of Metals X's Central Musgrave Project which remains one of the largest undeveloped nickel-cobalt deposits in the world. The Central Musgrave Project has a Mineral Resource containing approximately 2.0 million tonnes of nickel and 154,000 tonnes of cobalt within which Wingellina hosts an Ore Reserve of approximately 1.56 million tonnes of nickel and 123,000 tonnes of cobalt (refer to the 2017 Annual Report).

Metals X has completed a feasibility study ( $\pm 25\%$ ) and signed an agreement with the Traditional Owners which provides consent to undertake mining activities. In November 2016 the Company received its Public Environment Review approval from the EPA.

### Project update

With the increase in cobalt price, in early 2017 Metals X undertook a review of the cobalt inventory of the deposit from which it defined a higher grade cobalt domain as follows (refer to ASX Announcement 20 March 2017):

- 29.7 million tonnes at 0.14% Co and 1.15% Ni ( $1.97\% \text{ Ni}_{\text{eq}}^1$ ) for 42,000 tonnes Co (0.1% Co cut off); or
- 110.5 million tonnes at 0.11% Co and 0.97% Ni ( $1.60\% \text{ Ni}_{\text{eq}}$ ) for 121,000 tonnes Co (0.05% Co cut-off).

Previous significant cobalt intercepts identified included:

- WPRC0576: 38.0 metres at 0.58% Co and 1.32% Ni ( $4.81\% \text{ Ni}_{\text{eq}}$ )
- RR332: 25.9 metres at 0.54% Co and 1.81% Ni ( $5.04\% \text{ Ni}_{\text{eq}}$ )
- RR130: 18.3 metres at 0.70% Co and 1.34% Ni ( $5.53\% \text{ Ni}_{\text{eq}}$ )
- WPRC0009: 9.0 metres at 0.62% Co and 2.06% Ni ( $5.79\% \text{ Ni}_{\text{eq}}$ )

In October 2017, Metals X initiated further studies on Wingellina with the objective of optimising the identified high grade cobalt-nickel open pits, within the existing Mineral Resource, and undertaking additional testing for the production of cobalt sulphate and nickel sulphate as feedstock for the battery industry.

Past drilling and mining studies at Wingellina were focused predominantly on optimisation for nickel production. However, within the Wingellina Mineral Resource, which extends over almost 10 kilometres, Metals X delineated 15 main high grade cobalt – nickel pits within the Wingellina deposit as summarised in Table 4, with pit locations shown in Figure 5.

TABLE 4: INDICATIVE HIGH GRADE COBALT-NICKEL PIT TONNAGES

Pit Shell #	Ore (Mt)	Ni <sub>eq</sub> (%)	Nickel (kt)	Cobalt (kt)
Pit 1	4.5	1.88%	59.0	4.1
Pit 2	3.7	1.65%	42.0	3.1
Pit 3	2.7	1.84%	31.0	2.9
Pit 4	2.3	1.82%	26.5	2.4
Pit 5	2.8	1.44%	28.3	2.0
Pit 6	2.0	1.67%	22.4	1.7
Pit 7	1.9	1.76%	22.6	1.7
Pit 8	1.5	1.73%	16.2	1.5
Pit 9	2.1	1.46%	22.7	1.3
Pit 10	1.5	1.38%	14.8	1.0
Pit 11	0.2	3.68%	2.6	1.0
Pit 12	0.9	1.62%	9.2	0.8
Pit 13	1.1	1.51%	11.4	0.8
Pit 14	0.9	1.57%	8.7	0.8
Pit 15	0.7	1.68%	8.6	0.5
Total Pits 1 - 15	28.5	1.69%	326.1	25.8
<b>Total Resource</b>	<b>216</b>	<b>1.33%</b>	<b>1,953</b>	<b>154</b>

<sup>1</sup> Nickel equivalent (Ni<sub>eq</sub>) calculated using a Ni:Co ratio of 6:1 based on assumed price of US\$11,000/t Ni & US\$68,000/t Co and recoveries of 92% Ni and 89% Co



Although the 15 pits identified total a significant quantity of nickel and cobalt (326,100 tonnes Ni and 25,800 tonnes Co), collectively they contain less than 20% of the total contained nickel and cobalt in the Central Musgrave Project, which demonstrates the world-scale size of the project.

As part of these studies during the December 2018 quarter, the Company completed a 41 hole infill drill program, totalling 2,562 metres, which targeted six of the fifteen high grade cobalt-nickel pit shells (Pit Shell 1, 3, 4, 5, 8 and 14 - refer to Figure 5 for a plan view of the drill hole locations within the previously defined pit shells).

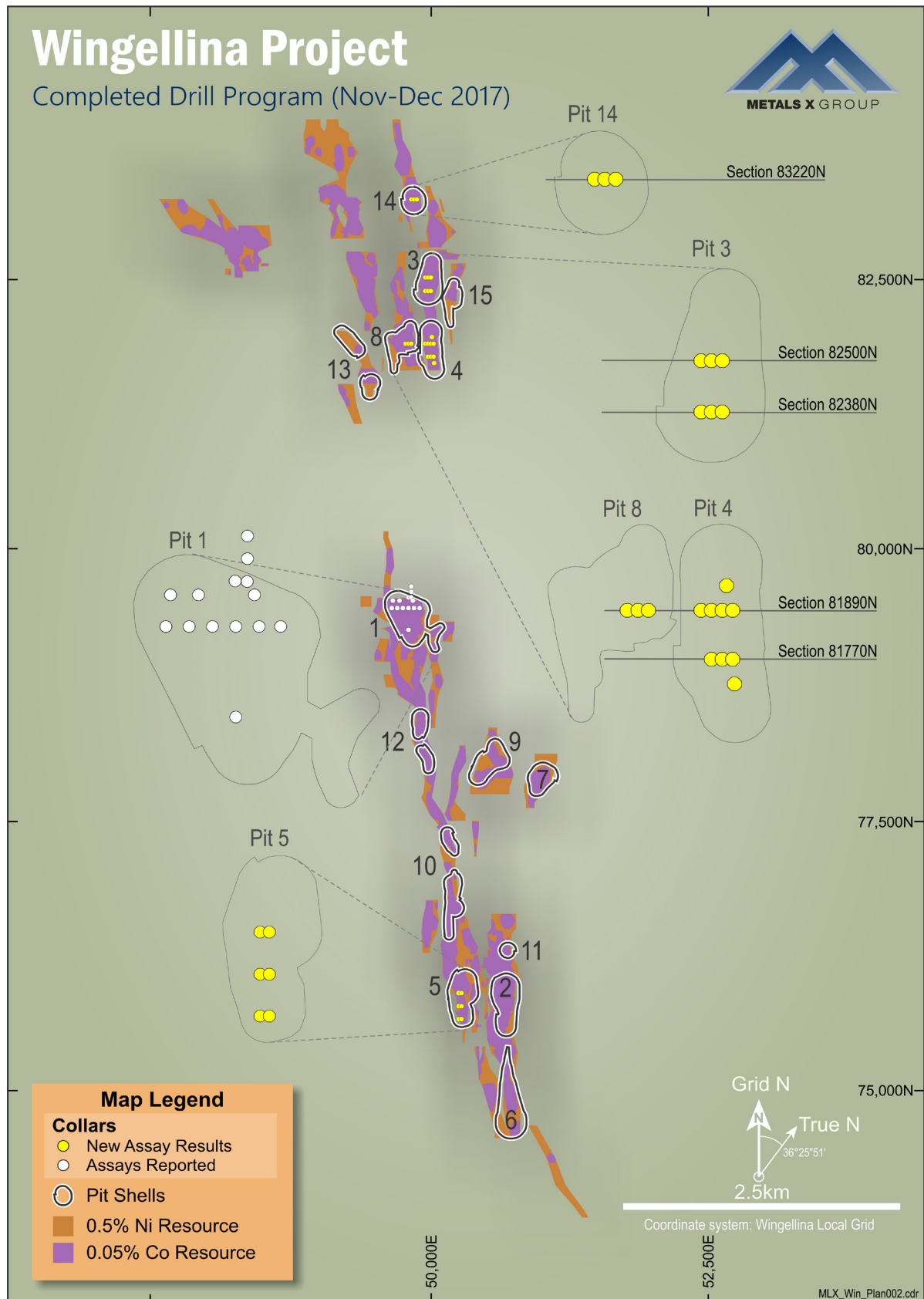


FIGURE 5: COMPLETED WINGELLINA DRILLING PROGRAM SHOWING PIT SHELLS AND DRILL HOLE LOCATIONS



Results from the drill program were announced during the quarter (refer to ASX Announcements dated 15 January 2018 and 13 February 2018). Although mineralisation was intercepted in all of the holes drilled, significant cobalt and nickel intercepts<sup>2</sup> were returned from 37 of the 41 holes, with some exceptional grades including:

- WPRC0708: 24 metres at 0.28% Co and 1.52% Ni (3.19% Ni<sub>eq</sub><sup>1</sup>) from surface  
*including 6 metres at 0.61% Co and 1.93% Ni (5.57% Ni<sub>eq</sub>) from 6 metres*
- WPRC0713: 60 metres at 0.17% Co and 1.20% Ni (2.23% Ni<sub>eq</sub>) from surface  
*including 6 metres at 0.64% Co and 1.21% Ni (5.05% Ni<sub>eq</sub>) from 12 metres*
- WPRC0718: 38 metres at 0.31% Co and 1.32% Ni (3.19% Ni<sub>eq</sub>) from surface  
*including 6 metres at 0.65% Co and 1.63% Ni (5.55% Ni<sub>eq</sub>) from 4 metres*
- WPRC0723: 86 metres at 0.22% Co and 1.04% Ni (2.37% Ni<sub>eq</sub>) from 12 metres  
*including 6 metres at 1.58% Co and 0.66% Ni (10.16% Ni<sub>eq</sub>) from 12 metres,*
- WPRC0695: 84 metres at 0.20% Co and 1.10% Ni (2.31% Ni<sub>eq</sub>) from surface  
*including 18 metres at 0.45% Co and 1.45% Ni (4.18% Ni<sub>eq</sub>) from 30 metres*
- WPRC0692: 50 metres at 0.17% Co and 1.04% Ni (2.07% Ni<sub>eq</sub>) from surface  
*including 8 metres at 0.45% Co and 1.51% Ni (4.22% Ni<sub>eq</sub>) from 16 metres*

In addition to the high grade nickel and cobalt grades as expected, several holes intercepted scandium in excess of 120ppm as detailed below:

- WPRC0700: 24 metres at 144ppm Sc, 0.06% Co and 1.06% Ni from 48 metres;
- WPRC0709: 10 metres at 204ppm Sc, 0.06% Co and 0.65% Ni from 42 metres;
- WPRC0726: 24 metres at 124ppm Sc, 0.07% Co and 0.87% Ni from 48 metres.

Optimisation of the high grade cobalt – nickel pits incorporating the latest drill results is in progress for the purpose of targeting a potential higher nickel-cobalt grade, lower capital start-up option for Wingellina.

Metallurgical testwork for the production of high quality cobalt and nickel sulphates is expected to be completed during April 2018. Previous variability testwork indicated that leach recoveries of over 94% for both nickel and cobalt are achievable with acid consumptions of less than 300kg/t.

## CORPORATE

### CASH AND WORKING CAPITAL

Metals X closed the quarter with cash and working capital of \$83.0 million.

### COPPER HEDGING

The Company has hedged 1,500 tonnes of copper per month out to July 2018 (refer to ASX announcement dated 27 July 2017). The Company granted calls up to A\$8,255 per tonne of LME copper and bought puts as low as A\$7,600 per tonne of LME copper for the purpose of protecting downside movement in copper price.

During the quarter the copper price exceeded the ceiling prices and the Company delivered 4,500 tonnes of copper into the hedges at a loss of \$3.1 million.

### ISSUED CAPITAL

During the quarter 550,000 unlisted employee options were converted into shares.

The Company has the following equities on issue:

- Fully Paid Ordinary Shares: 611,987,432
- Unlisted Employee Options (\$0.76, expiry 20/01/2020): 6,400,000
- Unlisted Employee Options (\$1.32, expiry 30/11/2020): 8,100,000

<sup>2</sup> Significant intercepts defined for reporting purposes as sections with weighted average grade of  $\geq 2.0\%$  nickel equivalent ("Ni<sub>eq</sub>").

## MAJOR SHAREHOLDERS

The current major shareholders of the Company are:

• APAC Resources (HKEX:1104)	9.18%
• Blackrock Group	8.16%
• Jinchuan Group	7.22%
• Ausbil Investment Management Limited	5.27%
• Industry Super Holdings Pty Ltd	5.00%

## COMPLIANCE STATEMENTS

The information in this presentation that relates to Exploration Results for the Nifty Copper Operations has been compiled by Metals X Limited technical employees under the supervision of Mr Kim Kremer BSc., who is a member of the Australasian Institute of Geoscientists. Mr Kremer is a full-time employee of the Company 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 Kremer consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results for the Renison Tin Operations has been compiled by Metals X Limited technical employees under the supervision of Mr Colin Carter B.Sc. (Hons), M.Sc. (Econ. Geol), MAusIMM. Mr Carter is a full-time employee of the Company 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.

The information in this report that relates to Exploration Results for the Wingellina Nickel-Cobalt Project is compiled by Metals X technical employees and contractors under the supervision of Mr. Jake Russell B.Sc. (Hons), who is a member of the Australian Institute of Geoscientists. Mr Russell is a contractor to 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.

# APPENDIX 1 – SIGNIFICANT EXPLORATION RESULTS

## COPPER DIVISION

Significant exploration results for the Nifty Copper Operations for the quarter are shown below.

TABLE 5: SIGNIFICANT EXPLORATION RESULTS FOR NIFTY COPPER OPERATIONS – MARCH 2018 QUARTER

Lode	Hole	Intercept N	Intercept E	Intercept RL	Intercept (True Width)	From (m)	Dip	Azi
Hinge (East)	NUG0222	7603773	352723	-92	10.90m at 2.21% Cu	38.0	-75	198
					10.60m at 2.25% Cu	58.0		
Hinge (East)	NUG0223	7603773	352723	-92	24.20m at 1.27% Cu	33.0	-51	203
Hinge (East)	NUG0224	7603773	352723	-92	4.75m at 1.38% Cu	60.5	-35	203
Hinge (East)	NUG0225	7603773	352723	-92	5.10m at 1.38% Cu	49.0	-48	171
					3.20m at 2.37% Cu	62.0		
					10.50m at 2.09% Cu	69.6		
					5.90m at 2.07% Cu	105.0		
Hinge (East)	NUG0226	7603773	352723	-92	6.20m at 1.79% Cu	72.0		
					10.40m at 1.40% Cu	118.8		
Hinge (East)	NUG0228	7603773	352723	-92	8.10m at 2.18% Cu	67.0	-42	151
					6.70m at 1.53% Cu	92.0		
Hinge (East)	NUG0229	7603773	352723	-92	7.15m at 1.68% Cu	82.6	-32	175
					1.80m at 5.57% Cu	124.0		
Hinge (East)	NUG0231	7603773	352723	-92	3.40m at 1.53% Cu	78.5	-31	164
					2.30m at 2.87% Cu	96.0		
Hinge (East)	NUG0233	7603773	352726	-92	6.35m at 1.20% Cu	35.0	-46	131
					14.70m at 2.54% Cu	55.0		
					1.70m at 3.32% Cu	112.3		
Hinge (East)	NUG0234	7603772	352726	-92	3.00m at 2.51% Cu	74.0	-36	143
					3.10m at 1.88% Cu	94.0		
					3.05m at 6.39% Cu	102.4		
					3.30m at 2.57% Cu	129.0		
Hinge (East)	NUG0237	7603789	352727	-92	7.20m at 1.81% Cu	48.0		
Hinge (East)	NUG0238	7603789	352727	-92	6.90m at 1.58% Cu	8.7	-59	292
					3.15m at 2.60% Cu	26.8		
GC RU233	NUG0266	7603920	352537	-116	36.40m at 2.52% Cu*	24.6	13	157
GC 12L NE-LIMB	NUG0267	7603965	352771	73	8.90m at 1.73% Cu	14.7	64	179
GC 12L NE-LIMB	NUG0268	7603966	352770	73	17.70m at 1.52% Cu	19.7	-18	213
GC 12L NE-LIMB	NUG0270	7603987	352745	70	14.80m at 1.50% Cu	11.8	27	192
GC 12L NE-LIMB	NUG0271	7603987	352745	68	2.70m at 2.54% Cu	20.8	-13	197
					3.10m at 2.08% Cu	30.6		
GC 12L NE-LIMB	NUG0273	7603987	352744	67	4.90m at 2.06% Cu	14.0	-11	229
GC 12L NE-LIMB	NUG0274	7604052	352660	67	2.20m at 2.30% Cu	0.1	9	217
					10.55m at 2.32% Cu	12.0		
GC 12L NE-LIMB	NUG0275	7604058	352647	66	16.90m at 1.85% Cu	9.0	10	217
GC 12L NE-LIMB	NUG0276	7604058	352647	65	2.10m at 4.40% Cu	0.0	-26	217
					6.60m at 1.61% Cu	10.0		
13L NW Limb (Haynes Fault)	NUG0287	7604165	352367	41	5.00m at 2.47% Cu*	1.0	24	358
					38.00m at 2.37% Cu*	10.0		
13L NW Limb (Haynes Fault)	NUG0289	7604165	352367	41	32.20m at 1.47% Cu*	1.2	36	355
					44.50m at 2.03% Cu*	44.8		
13L NW Limb (Haynes Fault)	NUG0290	7604165	352367	41	21.00m at 2.11% Cu*	0.0	36	8
					32.00m at 1.73% Cu*	33.0		

Lode	Hole	Intercept N	Intercept E	Intercept RL	Intercept (True Width)	From (m)	Dip	Azi
GC UVW203-213	NUG0293	7604144	352374	39	43.40m at 1.97% Cu*	0.0	-33	139
					8.00m at 4.63% Cu*	51.0		
Hayne Fault	NUG0294	7604094	352094	-9	20.00m at 0.90% Cu*	13.0	0	21
Hayne Fault	NUG0295	7604094	352094	-9	3.60m at 2.31% Cu*	203.4	0	13
LCU West End	NUG0298	7604085	352102	-9	1.70m at 3.52% Cu	49.7	0	272
					7.60m at 2.22% Cu	61.0		
LCU West End	NUG0299	7604085	352102	-9	13.70m at 3.78% Cu	55.8		
16L SW (South Fault)	NUG0302	7604085	352102	-9	14.90m at 4.16% Cu	86.0	0	209
					7.30m at 1.29% Cu	144.0		
16L SW (South Fault)	NUG0303	7604085	352100	-7	10.00m at 1.83% Cu	12.0	19	202
					6.20m at 1.65% Cu	59.0		
					13.30m at 2.29% Cu	162.0		
Hinge (East)	NUG0307	7603793	352729	-92	5.00m at 1.14% Cu	18.1	-79	286
Hinge (East)	NUG0308	7603778	352722	-92	3.70m at 1.72% Cu	45.0	-29	293
					3.75m at 2.25% Cu	55.5		
					4.50m at 2.10% Cu	81.0		
Hinge (East)	NUG0310	7603778	352722	-92	7.60m at 1.25% Cu	44.9	-21	286
					4.10m at 3.07% Cu	65.7		
					2.25m at 2.85% Cu	83.0		
Hinge (East)	NUG0311	7603778	352722	-92	3.40m at 2.23% Cu	55.0		
16L Hinge LCU (West)	NUG0315	7604101	352081	-11	8.30m at 2.31% Cu	43.9	-21	21
16L Hinge LCU (West)	NUG0316	7604101	352081	-11	2.70m at 2.34% Cu	28.8	-31	19
16L Hinge LCU (West)	NUG0317	7604101	352081	-11	8.30m at 2.11% Cu	20.1	-52	11
16L SW (South Fault)	NUG0320	7604096	352079	-11	13.70m at 1.72% Cu	63.7	-6	190
					14.00m at 4.15% Cu	118.6		
16L Hinge LCU (West)	NUG0323	7604108	352067	-9	7.50m at 1.87% Cu	38.9	-6	329
16L Hinge LCU (West)	NUG0328	7604100	352070	-11	14.40m at 2.31% Cu	25.0	-7	231
16L Hinge LCU (West)	NUG0329	7604107	352061	-8	10.80m at 2.38% Cu	39.4	8	290

Notes to table:

- Widths are true unless notated with '\*\*'
- Coordinates are intersection.
- Significant = >5% Cu.

TABLE 6: SIGNIFICANT EXPLORATION RESULTS FOR NIFTY REGIONAL EXPLORATION – MARCH 2018 QUARTER

Lode	Hole	Intercept N	Intercept E	Intercept RL	Intercept (Down hole Width)	From (m)	Depth (m)	Dip	Azi
NIFTY Down Plunge	17NNMDD006	7603499	353222	296	2.0m at 1.35% Cu	320	502	-70	27
					1.7m at 1.82% Cu	420			
NIFTY Down Plunge	17NNMDD007	7603049	353159	296	1m at 0.72% Cu	813	865	-70	22.5
					1m at 0.76% Cu	820			
NIFTY Down Plunge	17NNMDD008	7602941	353586	295	1.2m at 1.22% Cu	566.3	784	-75	22.5
					1.5m at 0.56% Cu	569.2			
Maroochydore Oxide	17MCHMET001	7545417	428149	315	4m at 0.98% Cu and 729 ppm Co	58	104.1	-90	0
Maroochydore Oxide	17MCHMET002	7545313	428271	315	11m at 1.32% Cu & 692 ppm Co	80	113	-90	0
Maroochydore Oxide	17MCHMET003	7545313	428435	313	7m at 0.92% Cu & 190ppm Co	79	137.1	-90	0
Maroochydore Oxide	17MCHMET004	7545441	428534	315	7m at 1.48%Cu & 80 ppm Co	80	99.1	-90	0
Maroochydore Oxide	17MCHMET005	7545121	428785	313	11m at 0.65% Cu & 388ppm Co	31	105	-90	0
Maroochydore Oxide	17MCHMET006	7545291	428957	311	6m at 0.99% Cu & 526ppm Co	19	60	-90	0
Maroochydore Oxide	17MCHMET007	7544962	429044	310	9m at 1.5% Cu & 541 ppm Co	44	85.7	-90	0
					4m at 1.54% Cu & 111ppm Co	75			
Maroochydore Oxide	17MCHMET008	7545077	429006	311	8m at 1.72% Cu & 546ppm Co	35	68	-90	0

- Northing, Easting and RL are all as at the drill hole collar. Coordinates are MGA94 Zone 51 grid. All are reported in metres. Coordinates are GPS survey until final collar surveys are completed
- Azimuth and Dip are from collar and are in degrees
- Depth is end of hole depth in metres.
- Intercept is downhole length, estimated true width is unable to be determined with any confidence at this time of the exploration process. When further confidence with orebody geometry is obtained, true width values will be reported.



## TIN DIVISION

Significant exploration results for the Renison Tin Operations for the quarter are shown below.

TABLE 7: SIGNIFICANT EXPLORATION RESULTS FOR RENISON TIN OPERATIONS – MARCH 2018 QUARTER

Lode	Hole	Intercept N	Intercept E	Intercept RL	Intercept (True Width)	From (m)	Dip	Azi
Area 5	U6292	66000	44597	1057	1.1m at 3.98% Sn & 0.18% Cu	146.24	-46.5	316.2
Area 5	U6137	66414	44646	1109	6.3m at 1.79% Sn & 0.11% Cu	119.67	-15.3	293.3
Area 5	U6135	66297	44593	1083	5.3m at 1.75% Sn & 0.15% Cu	183	-16.98	245.3
Area 5	U6135	66294	44585	1080	3m at 5.8% Sn & 0.08% Cu	191.71	-16.98	245.3
Area 5	U6158	66395	44605	1093	3.2m at 2.3% Sn & 0.05% Cu	157.15	-29.5	279.6
Area 5	U6136	66347	44676	1116	1.3m at 5.77% Sn & 0.1% Cu	82	-15.42	254.6
Area 5	U6136	66328	44597	1091	2.2m at 2.02% Sn & 0.16% Cu	167.09	-15.42	254.6
Area 5	U6146	66682	44617	1151	5.6m at 1.26% Sn & 0.24% Cu	186	3.25	300.4
Area 5	U6281	65992	44623	1147	2.2m at 2.45% Sn & 0.14% Cu	80	-11.5	325.9
Area 5	U6159	66498	44646	1141	0.9m at 6.19% Sn & 0.09% Cu	110.16	291.98	0.2
Area 5	U6131	66139	44575	1110	0.6m at 11% Sn & 0.03% Cu	272	232.45	-6.2
Area 5	U6160	66483	44602	1108	1m at 4.69% Sn & 0.09% Cu	152	218.46	-11.8
Area 5	U6185	66470	44645	1131	3.9m at 2.34% Sn & 0.23% Cu	104.68	277.133	-5.2
Area 5	U6236	66048	44621	1225	5m at 1.45% Sn & 0.72% Cu	77.6	116.774	50.9
Area 5	U6150	66781	44622	1127	6m at 2.51% Sn & 0.15% Cu	242	-3.28	320.2
Area 5	U6251	66738	44602	1101	3.8m at 3.83% Sn & 0.26% Cu	77.6	-10.1	309.1
Area 5	U6155	66251	44576	1096	3m at 3.59% Sn & 0.12% Cu	230.63	-11.2	260.3
Area 5	U6155	66250	44573	1095	3.2m at 2.72% Sn & 0.1% Cu	233.76	-11.2	260.3
Area 5	U6155	66250	44570	1094	4.8m at 4.94% Sn & 0.09% Cu	237	-11.2	260.3
Area 5	U6154	66211	44575	1083	5m at 3.69% Sn & 0.11% Cu	244.43	-11.97	251.9
Area 5	U6315	66371	44563	1139	1.9m at 2.56% Sn & 0.13% Cu	0	-5.73	120.8
Area 5	U6326	66069	44637	1121	2.1m at 2.51% Sn & 0.14% Cu	65.54	-17.58	103.3
Area 5	U6308	66308	44599	1144	3.2m at 3.39% Sn & 0.59% Cu	46.36	4.836	86.1
Area 5	U6415	66053	44616	1143	0.8m at 7.27% Sn & 0.23% Cu	49	-22.662	122.3
Area 5	U6415	66050	44621	1140	1.6m at 2.38% Sn & 0.06% Cu	56	-22.662	122.3
Area 5	U6408	66095	44693	1253	1.3m at 2.24% Sn & 0.07% Cu	128.4	14.365	79.2
Area 5	U6422	66112	44604	1147	0.8m at 9.82% Sn & 0.07% Cu	40.02	-20.656	100.2
Area 5	U6422	66098	44678	1119	1.2m at 3.01% Sn & 0.03% Cu	119	-20.656	100.2
Area 5	U6422	66095	44694	1113	3.2m at 5.08% Sn & 0.01% Cu	136.42	-20.656	100.2
Area 5	U6422	66094	44698	1111	0.8m at 4.57% Sn & 0.03% Cu	140.7	-20.656	100.2
Area 5	U6422	66092	44708	1107	2m at 2.31% Sn & 0.03% Cu	152.78	-20.656	100.2
Area 5	U6411	66059	44642	1215	2m at 5.08% Sn & 0.46% Cu	71.78	-4.449	100.1
Area 5	U6416	66060	44627	1120	1m at 6.36% Sn & 0.33% Cu	67.13	-38.041	110.5
Area 5	U6416	66059	44630	1117	0.6m at 2.8% Sn & 0.04% Cu	71	-38.041	110.5
Upper Federal	U6121	65748	44420	1805	2.5m at 1.72% Sn & 1.77% Cu	83.02	-6.5	119.2
Upper Federal	U6278	65774	44397	1790	0.7m at 10.28% Sn & 0.19% Cu	57.18	-24.5	115.9

Notes to table:

- Widths are true
- Coordinates are intersection.
- Grid is Renison Mine Grid.
- Significant = >4% Sn.

# APPENDIX 2 – MINERAL RESOURCE ESTIMATES

## COPPER DIVISION

The Mineral Resource estimates for Nifty Copper Operations are in compliance with the JORC Code (2012 Edition). The Nifty Oxide and Heap Leach Mineral Resource estimates are at 31 March 2017 and were published on 31 May 2018. The Nifty Sulphide Mineral Resource is at 31 August 2017 and was published on 12 October 2017. The Maroochydore Copper Prospect Mineral Resource estimate is at 31 March 2016 and was published by Aditya Birla Minerals on 16 May 2016. There have been no material changes to these Mineral Resource estimates since the dates of these publications.

TABLE 8: NIFTY COPPER OPERATIONS MINERAL RESOURCE ESTIMATE

Deposit	Mineral Resource Category <sup>1</sup>	Mt <sup>2</sup>	Grade % Cu	Copper tonnes <sup>2</sup>
Nifty Sulphide <sup>3</sup>	Measured	25.36	1.68%	426,000
	Indicated	8.10	1.31%	106,000
	Inferred	8.12	1.11%	90,000
	<b>Total</b>	<b>41.58</b>	<b>1.50%</b>	<b>622,000</b>
Nifty Oxide <sup>4</sup>	Measured	1.43	0.91%	13,000
	Indicated	1.22	0.86%	10,000
	Inferred	1.68	0.83%	14,000
	<b>Total</b>	<b>4.33</b>	<b>0.86%</b>	<b>37,000</b>
Nifty Heap Leach <sup>5</sup>	Measured	-	-	-
	Indicated	2.85	0.75%	20,000
	Inferred	0.46	0.66%	3,000
	<b>Total</b>	<b>3.31</b>	<b>0.74%</b>	<b>23,000</b>
<b>TOTAL NIFTY OPERATIONS</b>	Measured	26.79	1.64%	439,000
	Indicated	12.17	1.12%	136,000
	Inferred	10.26	1.04%	107,000
	<b>Total</b>	<b>49.22</b>	<b>1.39%</b>	<b>682,000</b>

1. Mineral Resources are reported inclusive of Mineral Resources modified to produce the Ore Reserve;
2. Tonnes are reported as million tonnes (Mt) and rounded to nearest 10,000; Cu tonnes are rounded to nearest 1,000 tonnes; rounding may result in some slight apparent discrepancies in totals.
3. Cut-off grade of 0.75% Cu.
4. Cut-off Grade of 0.4% Cu.
5. Cut-off Grade of 0.5% Cu.

TABLE 9: MAROOCHYDORE COPPER PROSPECT MINERAL RESOURCE ESTIMATE

Deposit	Mineral Resource Category	Mt <sup>1</sup>	Copper		Cobalt	
			Grade % Cu	Copper tonnes <sup>2</sup>	Grade ppm Co	Cobalt tonnes <sup>2</sup>
Oxide <sup>3</sup>	Measured	-	-	-	-	-
	Indicated	40.80	0.92%	375,000	388	15,800
	Inferred	2.40	0.81%	19,000	451	1,100
	<b>Total</b>	<b>43.20</b>	<b>0.91%</b>	<b>394,000</b>	<b>391</b>	<b>16,900</b>
Sulphide <sup>4</sup>	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Inferred	5.43	1.66%	90,000	292	1,600
	<b>Total</b>	<b>5.43</b>	<b>1.66%</b>	<b>90,000</b>	<b>292</b>	<b>1,600</b>
<b>TOTAL<sup>5</sup></b>	Measured	-	-	-	-	-
	Indicated	40.80	0.92%	375,000	388	15,800
	Inferred	7.83	1.40%	110,000	341	2,700
	<b>Total</b>	<b>48.63</b>	<b>1.00%</b>	<b>486,000</b>	<b>380</b>	<b>18,500</b>

1. Tonnes are reported as million tonnes (Mt) and rounded to nearest 10,000;
2. Cu tonnes are rounded to nearest 1,000 tonnes; Co tonnes are rounded to the nearest 100 tonnes;
3. Cut-off Grade of 0.5% Cu;
4. Cut-off Grade of 1.1% Cu;
5. Rounding may result in some slight apparent discrepancies in totals.

## TIN DIVISION

The Mineral Resource estimate for the Renison Tin Operations is in compliance with the JORC Code (2012 Edition) and is at 31 March 2017 and was published on 28 August 2017. There has been no material change to the Mineral Resource estimates since the date of this publication.

Metals X's equity share is 50% of the Mineral Resource estimates shown below.

TABLE 10: RENISON TIN OPERATIONS MINERAL RESOURCE ESTIMATE

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 Tin Mine <sup>3</sup>	Measured	1,452	1.85%	26,900	1,452	0.39%	5,600
	Indicated	6,731	1.28%	86,300	6,538	0.30%	19,800
	Inferred	6,791	1.32%	89,700	6,782	0.14%	9,200
	<b>Total</b>	<b>14,974</b>	<b>1.35%</b>	<b>202,900</b>	<b>14,772</b>	<b>0.23%</b>	<b>34,600</b>
Mt Bischoff <sup>4</sup>	Measured	-	-	-	-	-	-
	Indicated	968	0.59%	5,700	-	-	-
	Inferred	699	0.47%	3,300	-	-	-
	<b>Total</b>	<b>1,667</b>	<b>0.54%</b>	<b>9,000</b>	<b>-</b>	<b>-</b>	<b>-</b>
Rentails Project <sup>5</sup>	Measured	23,220	0.44%	103,000	23,220	0.23%	52,700
	Indicated	-	-	-	-	-	-
	Inferred	-	-	-	-	-	-
	<b>Total</b>	<b>23,220</b>	<b>0.44%</b>	<b>103,000</b>	<b>23,220</b>	<b>0.23%</b>	<b>52,700</b>
<b>Total</b>	Measured	24,672	0.53%	129,800	24,672	0.24%	58,300
	Indicated	7,699	1.19%	92,000	6,538	0.30%	19,800
	Inferred	7,490	1.24%	93,000	6,782	0.14%	9,200
	<b>Total</b>	<b>39,861</b>	<b>0.79%</b>	<b>314,800</b>	<b>37,993</b>	<b>0.23%</b>	<b>87,300</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 nearest 1,000; 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.

## NICKEL DIVISION

The Mineral Resource estimate for the Central Musgrave Project is in compliance with the JORC Code (2012 Edition) and is at 30 June 2016 and was published on 18 August 2016. There has been no change to the Mineral Resource estimate since the date of this publication.

Metals X's equity share is 50% of the Mineral Resource estimates shown below.

TABLE 11: CENTRAL MUSGRAVE PROJECT MINERAL RESOURCE ESTIMATE

Deposit	Mineral	Mt <sup>2</sup>	Nickel		Cobalt	
			Grade	Nickel	Grade	Cobalt
Wingellina (cut-off 0.50% Ni)	Measured	37.6	0.98%	368	0.07%	28.0
	Indicated	130.9	0.91%	1,193	0.07%	94.6
	Inferred	14.1	0.87%	122	0.06%	9.1
	<b>Total</b>	<b>182.6</b>	<b>0.92%</b>	<b>1,684</b>	<b>0.07%</b>	<b>131.7</b>
Claude Hills (cut-off 0.50% Ni)	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Inferred	33.3	0.81%	270	0.07%	22.7
	<b>Total</b>	<b>33.3</b>	<b>0.81%</b>	<b>270</b>	<b>0.07%</b>	<b>22.7</b>
<b>Total Central Musgrave Project</b>	Measured	37.6	0.98%	368	0.07%	28.0
	Indicated	130.9	0.91%	1,193	0.07%	94.6
	Inferred	47.4	0.83%	392	0.07%	31.8
	<b>Total</b>	<b>215.8</b>	<b>0.91%</b>	<b>1,953</b>	<b>0.07%</b>	<b>154.4</b>

1. Mineral Resources are reported inclusive of Mineral Resources modified to produce the Ore Reserve;
2. Tonnes are reported as million tonnes (Mt) and rounded to nearest 100,000; nickel tonnes are reported as thousand tonnes (kt) and rounded to the nearest 1000 tonnes; cobalt tonnes are reported as thousand tonnes (kt) and rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.

# APPENDIX 3 – ORE RESERVE ESTIMATES

## COPPER DIVISION

The Ore Reserve estimate for Nifty Copper Operations is in compliance with the JORC Code (2012 Edition) and is at 31 August 2017 and was published on 12 October 2017. There has been no material change to the Ore Reserve estimate since the date of this publication.

TABLE 12: NIFTY COPPER OPERATIONS ORE RESERVE ESTIMATE

Deposit	Ore Reserve Category	Ore Mt <sup>2</sup>	Grade % Cu	Copper tonnes <sup>2</sup>
Nifty Sulphide <sup>1</sup>	Proved	11.75	1.76%	207,000
	Probable	2.15	1.42%	30,500
	<b>Total</b>	<b>13.90</b>	<b>1.71%</b>	<b>237,500</b>

1. The Ore Reserve is based on the Nifty sulphide Mineral Resource estimate at 31 August 2017, with applied modifying factors, at a 1.0% Cu cut-off grade, using a copper price of US\$5,750/t and assumed exchange rate of USD/AUD 0.7419 for a price of AUD \$7,750/t Cu
2. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000; copper tonnes are rounded to the nearest 500 tonnes; rounding may result in some slight apparent discrepancies in totals.

## TIN DIVISION

The Ore Reserve estimate for the Renison Tin Operations is in compliance with the JORC Code (2012 Edition) and is at 31 March 2017 and was published on 28 August 2017. There has been no material change to the Ore Reserve estimate since the date of this publication.

Metals X's equity share is 50% of the Ore Reserve estimate shown below.

TABLE 13: RENISON TIN OPERATIONS ORE RESERVE ESTIMATE

Project	Ore Reserve Category <sup>1</sup>	Tin			Copper		
		Ore '000 tonnes	Grade % Sn	Tin tonnes <sup>2</sup>	Ore '000 tonnes	Grade % Cu	Copper tonnes <sup>2</sup>
Renison Tin Mine	Proved	1,267	1.46%	18,500	1,267	0.35%	4,400
	Probable	5,554	0.97%	53,900	5,232	0.25%	13,000
	<b>Total</b>	<b>6,821</b>	<b>1.06%</b>	<b>72,400</b>	<b>6,499</b>	<b>0.27%</b>	<b>17,400</b>
Rentails	Proved	-	-	-	-	-	-
	Probable	22,313	0.44%	98,900	22,313	0.23%	50,700
	<b>Total</b>	<b>22,313</b>	<b>0.44%</b>	<b>98,900</b>	<b>22,313</b>	<b>0.23%</b>	<b>50,700</b>
Renison total	Proved	1,267	1.46%	18,500	1,267	0.35%	4,400
	Probable	27,867	0.55%	152,800	27,546	0.23%	63,700
	<b>Total</b>	<b>29,134</b>	<b>0.59%</b>	<b>171,400</b>	<b>28,812</b>	<b>0.24%</b>	<b>68,100</b>

1. The Ore Reserve is based on the Renison Mineral Resource estimate at 31 March 2017, with applied modifying factors, at a cut-off grade of 0.8% Sn for the Renison Tin Mine and 0.0% Sn for Rentails;
2. Sn and Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.

## NICKEL DIVISION

The Ore Reserve estimate for the Wingellina Nickel-Cobalt Project is in compliance with the JORC Code (2012 Edition) and is at 30 June 2016 and was published on 18 August 2016. There has been no change to the Ore Reserve estimate since the date of this publication.

TABLE 14: WINGELLINA NICKEL-COBALT PROJECT ORE RESERVE ESTIMATE

Project	Ore Reserve Category <sup>1</sup>	Ore Mt <sup>2</sup>	Nickel		Cobalt	
			Grade % Ni	Nickel kt Ni <sup>2</sup>	Grade % Co	Cobalt kt Co <sup>2</sup>
Wingellina	Proved	-	-	-	-	-
	Probable	168.4	0.93%	1,561	0.07%	122.6
	<b>Total<sup>2</sup></b>	<b>168.4</b>	<b>0.93%</b>	<b>1,561</b>	<b>0.07%</b>	<b>122.6</b>

1. The Ore Reserve is based on the Wingellina Mineral Resource estimate at 30 June 2016 with applied modifying factors, at a cut-off grade of 0.5% Ni;
2. Tonnes are reported as million tonnes (Mt) and rounded to nearest 100,000; nickel tonnes are reported as thousand tonnes (kt) and rounded to the nearest 1000 tonnes; cobalt tonnes are reported as thousand tonnes (kt) and rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.



## APPENDIX 4 – JORC CODE (2012) TABLE 1

## COPPER DIVISION

## INFORMATION MATERIAL TO UNDERSTANDING THE EXPLORATION RESULTS

THE INFORMATION IN THIS TABLE REFERS TO THE FOLLOWING PROJECTS AT THE NIFTY COPPER OPERATIONS: NIFTY SULPHIDE, NIFTY OXIDE AND NIFTY HEAP LEACH

## SECTION 1: SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>	<ul style="list-style-type: none"> <li>The deposit has been drilled and sampled using various techniques with diamond and reverse circulation drilling utilised for mineral estimation. This information comes from surface and underground and is on variable spacing along and across strike. The total metres within the immediate vicinity of the Deposit are 249,973m. The holes are drilled on most occasions to intersect as near as possible perpendicularly the synclinal east plunge mineralisation.</li> <li>The drilling programs have been ongoing since initial discovery to both expand the mineralisation and provided control for mining. The hole collars were surveyed by Company employees/contractors with the orientation recorded. Down holes survey is recorded using appropriate equipment. The diamond core was logged for lithology and other geological features.</li> <li>The diamond core varied from HQ to NQ in diameter and mineralised intervals and adjacent locations were sampled by cutting the core in 1/2 based on observation from the core photographs. The RC samples were collected from the cyclone of the rig and spilt at site to approximate 2 to 3Kg weight. The preparation and analysis was undertaken at accredited commercial laboratories, ALS or Intertek Genalysis. Both laboratories have attained ISO/IEC 17025 accreditation. ALS uses the ME-ICP61 four acid digest methods using a sample of 0.2g with an ICPAES finish. Over limit results (&gt;1% Cu) are re-analysed using the ME-OG62 method, which involves subjecting a 0.4g sample to a four acid digest with an ICPAES finish. Intertek Genalysis use a four acid digest using a 0.2g sample with an ICP-OES finish. Over limit results (&gt;1% Cu) are re-assayed using an ore grade four acid digestion of 0.2g sample, and an AAS finish. The analysis and preparation of recent diamond drilling by Metals X has been undertaken at the onsite Nifty laboratory which has been contracted to accredited analytical testing service ALS. On-site, ALS uses a Fusion XRF15C method for analysis.</li> </ul>
Drilling techniques	<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> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <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>	<ul style="list-style-type: none"> <li>The drilling was completed using a combination of surface and underground drilling. In general the orientation of the drilling is appropriate given the given the strike and dip of the mineralisation.</li> <li>The core recovery is recorded in the database and in most instances was in excess of 95%. This was assessed by measuring core length against core run. There is no record of the quantity (weight) of RC chips collected per sample length.</li> <li>The ground conditions in the mineralised zone are competent. In areas of less competent material core return is maximised by controlling drill speed. In the case of RC samples areas of less competent material are identified in the log.</li> <li>Whilst no assessment has been reported the competency of the material sampled would tend to preclude any potential issue of sampling bias.</li> </ul>
Drill sample recovery		
Logging	<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>The routine logging of core and chips describes the general geology features including stratigraphy, lithology, mineralisation, alteration etc. For the majority of holes this information is sufficient and appropriate to apply mineralisation constraints. Some core drilling is orientated and structural measurements of bedding, joints, veins etc. has occurred as well as fracture densities.</li> <li>Geological logging has recorded summary and detailed stratigraphy, lithology, mineralisation content, and alteration, some angle to core axis information, vein type, incidence and frequency, magnetic content.</li> <li>The entire length of all holes, apart from surface casing, was logged.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• All core to be sampled was ½ cored using a mechanical saw. It is not known if the core was consistently taken from the same side of the stick.</li> <li>• RC chip samples are collected via a cyclone which is cleaned with air blast between samples. The samples riffled to collect between 2 and 3kg. Most samples are dry with any moisture noted on the logs.</li> <li>• Field sub-sampling for chip samples appears appropriate as is the use of core cutting equipment for the submitted core. Procedures adopted in the laboratories are industry standard practises including that in the mine site facility.</li> <li>• In field riffles are cleaned between sampling using compressed air. The diamond cutting equipment is cleaned during the process using water. All laboratories adopt appropriate industry best practises to reduce sample size homogeneously to the required particle size.</li> <li>• No field duplicate information was observed.</li> <li>• The style of mineralisation and high sulphide content does not rely on grain size as being influential on grade. Thus there is confidence in the overall grade of the deposit being fairly represented by the sampling.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The assay techniques are appropriate for the determination of the level of mineralisation in the sample.</li> <li>• No geophysical tools were utilised to ascertain grade.</li> <li>• Standard and Blanks are included with all samples sent for analysis in the rate of between 1 in 20 and 1 in 30. The most recent reporting covering the majority of holes used in the estimate provide support for the quality of the Cu assays.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• The extensive data set has been reviewed by various parties including Maxwell Geoscience and DataGeo and the intersections within the mineralisation have been confirmed.</li> <li>• No twinned holes observed but there is a significant amount of closely spaced supportive drilling results.</li> <li>• Field data is captured electronically, validated by the responsible geologist and stored on corporate computer facilities. Protocols for drilling, sampling and QAQC are contained with the company operating manuals. The information generated by the site geologists is loaded into a database by the company database manager and undergoes further validation at this point against standard acceptable codes for all variables.</li> </ul>
<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>• The collar positions were resurveyed by the Company surveyor or their contractors from a known datum. The survey is on a known local grid with demonstrated control. The orientation and dip at the collars is checked (aligned) by the geologist and down hole recording of azimuth and dip are taken at 30m intervals on most occasions using appropriate equipment.</li> <li>• The regional grid is GDA94 Zone 50 and the drilling is laid out on a local grid.</li> <li>• Topographic control is from surface survey - note the deposit modelled is totally underground and is not influenced by surface topography.</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>• The majority of drilling utilised is on 40m x 20m grid specifically targeting lithological and hence mineralisation sequence definition.</li> <li>• The geological sequence is well understood from the mining which supports the current drill spacing as adequate for both grade continuity assessment and lithological modelling</li> <li>• The sampling reflects the geological conditions. For mineral resource estimation a 1m composite length was chosen given that this is the dominant sample length in dataset.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>Given the shape of the sequence, the drilling as best as practically possible, is orientated to intersect the sequence perpendicularly. This is limited to drill sites from underground and surface.</li> <li>No sampling bias is considered to have been introduced.</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>The samples once collected and numbered are stored in the lockable site core yard. Each sample bag is securely tied with the sample number on the bag and inside on metal tags transported by commercial contractors to Perth. Upon receipt at the laboratory the samples are checked against the dispatch sheets to ensure all samples are present.</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>Resources and reserves are routinely reviewed by the Metals X Corporate technical team.</li> <li>Database management companies have over the past 2 years audited the drill hole database and found it representative of the information contained.</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>The Nifty deposit is situated on mining lease M271/SA, which is 100% held by Nifty Copper Pty Ltd, a wholly owned subsidiary of Metals X.</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>WMC Resources Ltd discovered Nifty in 1980 by using regional ironstone sampling and reconnaissance geology. Malachite staining of an outcrop and Cu-anomalous ironstones from dune swale reconnaissance sampling were the initial indicators. This was followed up by lag sampling on a 500 x 50m grid that detected a 2.5 x 1.5km Cu-Pb anomaly. Secondary Cu mineralisation was intersected in percussion drilling in mid-1981, with high grade primary ore (20.8m at 3.8% Cu) discovered in 1983. WMC commenced open pit mining of the secondary oxide ore in 1992 and continued mining until September 1998 when Nifty was sold to Straits Resources.</li> <li>The project was subsequently purchased from Straits Resources by Aditya Birla Minerals Ltd in 2003.</li> <li>Open pit mining ceased in June 2006.</li> <li>Copper extraction using heap leaching ceased in January 2009.</li> <li>Underground mining of the primary (chalcopryite) mineralisation started in 2009.</li> <li>The project was purchased from Aditya Birla in 2016 by Metals X Ltd.</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>The Nifty deposit is hosted within the folded late-Proterozoic Broadhurst Formation which is part of the Yeneena Group. The Broadhurst Formation is between 1000 m to 2000 m thick and consists of a stacked series of carbonaceous shales, turbiditic sandstones, dolomite and limestone. Structurally, the dominant feature is the Nifty Syncline which strikes approximately southeast-northwest and plunges at about 6-12 degrees to the southeast. The stratabound copper mineralisation occurs as a structurally controlled, chalcopryite-quartz- dolomite replacement of carbonaceous and dolomitic shale within the folded sequence. The bulk of the primary mineralisation which is currently being mined is largely hosted within the keel and northern limb of the Syncline.</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>NA</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>NA</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>NA</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>NA</li> </ul>
<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>NA</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>NA</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature &amp; 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>Open pit and underground feasibility works;</li> <li>Validation drilling in areas of potential economic mineralisation;</li> <li>Infill drill areas of data paucity proximal to the underground development. This will increase resource confidence and resultant classifications.</li> <li>Validation of the underground void model.</li> </ul>

# TIN DIVISION

## INFORMATION MATERIAL TO UNDERSTANDING THE EXPLORATION RESULTS

THE INFORMATION IN THIS TABLE REFERS TO THE FOLLOWING PROJECTS AT THE RENISON TIN OPERATIONS: RENISON BELL, RENTAILS AND MT 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 (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.</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 (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.</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> <li>Face Sampling</li> <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> <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. There is no sludge drilling for the Rentails Project.</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>
<b>Logging</b>	<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>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</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>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometres, 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.</li> <li>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.</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>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</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>
<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>

Criteria	JORC Code Explanation	Commentary
<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 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>Excluded results are non-significant and do not materially affect understanding of the Renison deposit.</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 (eg 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>Results are reported on a length weighted average basis.</li> <li>Results are reported above a 4%<i>m</i> Sn cut-off.</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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Interval widths are true width unless otherwise stated.</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 new discoveries reported.</li> </ul>
<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>Presented above.</li> <li>Excluded results are non-significant and do not materially affect understanding of the Renison deposit.</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 (eg 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>