METALS X LIMITED

ASX RELEASE

31 MAY 2017

SIGNIFICANT INCREASE IN NIFTY ORE RESERVES

Metals X Limited (**Metals X** or the **Company**) is pleased to announce its initial Mineral Resource and Ore Reserve estimates at its Nifty Copper Operations (**Nifty**) since taking operational control on 1 August 2016.

This is the first of two planned Ore Reserve updates for 2017. A further update is expected to be completed during the September quarter to incorporate additional drilling results (of which 20,000 metres of drilling has been completed to date) once core logging, assays and geological interpretation have been completed.

The highlights include:

- A 59% increase in contained copper in Ore Reserves (an increase of 56,700 tonnes Cu).
  - » Total Ore Reserve estimate of 9.75 Mt of ore at 1.58% Cu for 153,500 tonnes Cu compared to previous Ore Reserve estimate of 5.24 Mt at 1.85% for 97,000 tonnes of Cu.
- An increase in current underground mine life to approximately 5 years, based on current production rates, and approximately 4 years, based on 2018 targeted production levels of 40,000 tpa copper in concentrate.
- Restated Total Mineral Resource estimate (cut off 0.75% Cu) of 54.84 Mt at 1.41% Cu for 770,000 tonnes Cu.
  - » Includes an underground sulphide ore Mineral Resource estimate of 47.2 Mt at 1.51% Cu for 713,000 tonnes Cu.

Managing Director, Mr Warren Hallam, said:

"Metals X is very pleased to release its first Mineral Resource and Ore Reserve estimates for the Nifty Copper Operations which now stands at 5 years of reserves and 20 years of resource. This is one of the first steps towards transforming Nifty back into a large, long life profitable asset. Drilling has also already identified significant extensions to the east and west of the Nifty ore body which will be incorporated into a proposed further upgrade of resource and reserve estimates later in the year."

ENQUIRIES

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

Stephen Robinson
Executive Director
e. stephen.robinson@metalsx.com.au

MINERAL RESOURCE AND ORE RESERVE STATEMENT – NIFTY COPPER OPERATIONS

Table 1. Nifty Copper Operations Mineral Resource Statement at 31 March 2017

Deposit	Mineral Resource Category[1]	Mt[2]	Grade % Cu	Copper tonnes[2]
Nifty Sulphide[3]	Measured	20.30	1.81%	367,000
	Indicated	15.35	1.37%	210,000
	Inferred	11.55	1.18%	136,000
	Total	47.20	1.51%	713,000
Nifty Oxide[4]	Measured	1.43	0.91%	13,000
	Indicated	1.22	0.86%	10,000
	Inferred	1.68	0.83%	14,000
	Total	4.33	0.86%	37,000
Nifty Heap Leach[5]	Measured	-	-	-
	Indicated	2.85	0.75%	20,000
	Inferred	0.46	0.66%	3,000
	Total	3.31	0.74%	23,000
Total Nifty Copper Operations	Measured	21.73	1.81%	380,000
	Indicated	19.42	1.25%	240,000
	Inferred	13.69	1.12%	150,000
	Total	**54.84**	**1.41%**	**770,000**

Notes:

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 by deposit and to the nearest 10,000 tonnes for total Nifty; rounding may result in some slight apparent discrepancies in totals.
3. Mineral Resources are calculated at 31 March 2017, adjusted for depletion to 31 March 2017, using a lower cut-off grade of 0.75% Cu.
4. Unchanged from prior Mineral Resource estimate of Aditya Birla Minerals Ltd (ABY) at 31 March 2016. Cut-off Grade of 0.4% Cu.
5. Unchanged from prior Mineral Resource estimate of ABY at 31 March 2016. Cut-off Grade of 0.5% Cu.

Table 2. Nifty Copper Operations Ore Reserve Statement at 31 March 2017

Deposit	Mineral Resource Category[1]	Ore Mt[2]	Grade % Cu	Copper tonnes[2]
Nifty Sulphide	Proved	4.04	1.72%	69,500
	Probable	5.71	1.47%	84,000
	Total	9.75	1.58%	153,500

Notes:

1. The Ore Reserve is based on the Nifty sulphide Mineral Resource estimate at 31 March 2017, with applied modifying factors, using a copper price of US$5,750/t at an 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.

KEY ASSUMPTIONS AND JORC 2012 REQUIREMENTS

Mineral Resources are reported inclusive of Ore Reserves but do not include the resource definition drilling information carried out by Metals X since acquisition of the Nifty Copper Operations from ABY. Mining production data up to 31 March 2017 and all exploration information has been included. Mineral Resources have been depleted for mining to 31 March 2017.

The copper price assumption used to estimate Mineral Resources and Ore Reserves was US$5,750/t at an assumed exchange rate of USD/AUD 0.7419 giving a metal price of AUD $7,750/t.

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

The full Mineral Resource and Ore Reserve statements for Nifty Copper Operations are tabulated in Table 1 and Table 2 respectively.

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

MINERAL RESOURCE ESTIMATE – NIFTY COPPER OPERATIONS

Table 1 shows the updated Mineral Resource estimate for Nifty Copper Operations at 31 March 2017.

Table 3 compares the 2016 Mineral Resource estimate (reported by ABY at 31 March 2016 and re-stated by Metals X at 30 June 2016) with the updated Mineral Resources estimate at 31 March 2017 for the Nifty Sulphide deposit. The Mineral Resource estimates for Nifty Oxide and Nifty Heap Leach are unchanged from 2016.

Table 3. Comparison of Nifty Sulphide Mineral Resource Estimate at 31 March 2017 with 2016 Estimate

Mineral Resource Reporting Date	Category	Mt[4]	Grade % Cu	Copper tonnes[5]
30 June 2016[1] (1.2% Cu cut-off)	Measured	17.34	2.16%	375,000
	Indicated	3.29	1.80%	59,000
	Inferred	2.83	1.52%	43,000
	Total	23.46	2.03%	476,000
30 June 2016[2] (0.75% Cu cut-off)	Measured	31.25	1.63%	508,000
	Indicated	8.94	1.25%	112,000
	Inferred	8.07	1.15%	93,000
	Total	48.26	1.48%	713,000
31 March 2017[3] (0.75% Cu cut-off)	Measured	20.30	1.81%	367,000
	Indicated	15.35	1.37%	210,000
	Inferred	11.55	1.18%	136,000
	Total	47.20	1.51%	713,000

Notes:

1. As reported by Metals X in its Annual Update of Mineral Resources and Ore Reserves at 30 June 2016. The Mineral Resource estimate was as published by ABY at 31 March 2016 using a cut-off grade of 1.2% Cu (refer to ASX announcement dated 18 August 2016).
2. Revised prior estimate of 30 June 2016, recalculated by Metals X using a cut-off grade of 0.75% Cu, for comparative purposes.
3. Mineral Resources are calculated at 31 March 2017 by Metals X, adjusted for depletion to 31 March 2017, using a cut-off grade of 0.75% Cu.
4. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000 tonnes.
5. Copper tonnes are rounded to the nearest 1,000 tonnes. Rounding may result in some slight apparent discrepancies in totals.

The difference between the 2017 Nifty Sulphide Mineral Resource estimate and 2016 estimate include the following modifications:

- Interpretation package changed from Datamine to Surpac (representing the different package that Metals X utilise compared with ABY) - combined with this change in package, the estimation process utilised in Surpac has been updated compared with the previous model;
- Complete review of the structure of the syncline from west to east including utilisation of the underground mapping information;
- Cut-off grade reduced from 1.2% to 0.75% reflecting Metals X's reduction in operating costs; and
- Site-based review of all material considered sterilised by the previous mine operator.

Summary of material information

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

Geology and geological interpretation: 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 between 6 and 12 degrees to the southeast. The stratabound copper mineralisation occurs as a structurally controlled, chalcopyrite-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.

Sampling and sub-sampling techniques: The deposit has been drilled and sampled using various techniques with diamond and reverse circulation drilling, from both surface and underground. Total metres drilled within the immediate vicinity of the deposit are 143,497 m.

Drilling techniques: Drilling programs have been ongoing since initial discovery to both expand the mineralisation and provided control for mining. Hole collars were surveyed by Company employees/contractors with the orientation recorded. Down hole surveys are recorded using appropriate equipment with diamond core logged for lithology and other geological features.

Criteria for classification: The criteria used to categorise Mineral Resources include robustness of the input data, confidence in the geological interpretation including the predictability of both structures and grades within the mineralised zones, the distance from data, and amount of data available for block estimates within the respective mineralised zones. The input data is consistent and closely spaced enough to support the projection of the geological interpretation which in terms of style of mineralisation is consistent with other deposits within the same geological setting. Infill drilling programs have successfully confirmed previous wider spaced drilling in terms of geological and grade predictions. The estimated grade correlates well with the input data given the nature of the mineralisation.

Sample analysis method: Diamond core varies from HQ to NQ in diameter and mineralised intervals and adjacent locations were sampled by cutting the core in half based on observation from core photographs. RC samples were collected from the cyclone of the rig and spilt at site to approximate 2 to 3kg weight. Preparation and analysis was undertaken at accredited commercial laboratories with ISO/IEC 17025 accreditation.

Estimation methodology: All modelling and estimation work undertaken by Metals X is carried out in three dimensions using Surpac. After validating the drillhole data to be used in the estimation, interpretation of the orebody is undertaken in sectional and / or plan view to create the outline strings which form the basis of the three dimensional orebody wireframe. Wireframing is then carried out using a combination of automated stitching algorithms and manual triangulation to create an accurate three dimensional representation of the sub-surface mineralised body. Once the sample data has been composited, a statistical analysis is undertaken to assist with determining estimation search parameters, top-cuts etc. Variographic analysis of individual domains is undertaken to assist with determining appropriate search parameters and incorporated with observed geological and geometrical features to determine the most appropriate search parameters. Block sizes used in modelling vary depending on orebody geometry, minimum mining units, estimation parameters and levels of informing data available and are determined using QKNA in Snowden's Supervisor software. Grade estimation uses ordinary kriging estimation method. Hard boundaries are applied to the units and grade estimated within these boundaries. The resource was then depleted for mining voids and subsequently classified in line with JORC guidelines utilising a combination of various estimation derived parameters and geological / mining knowledge.

Cut-off grades: Lithological boundaries are used to define sequence units with statistical grade assessment used for confirmation. The resource reporting cut-off grade is 0.75% Cu for the sulphide resource and 0.4% Cu for the oxide.

Mining and metallurgical methods and parameters: Mining of the sulphide deposit is by long hole open stoping and has been demonstrated as being economically viable by the ongoing operational status. The ore currently mined is processed on site to produce copper concentrate. This has been successful over the life of the project and therefore metallurgically the deposit is amenable to the method adopted.

ORE RESERVE ESTIMATE – NIFTY COPPER OPERATIONS

Table 2 shows the updated Nifty Copper Operations Ore Reserve statement at 31 March 2017. The Ore Reserve is for the Nifty Sulphide Deposit.

The updated Nifty Sulphide Ore Reserve estimate is based on the updated Mineral Resource estimate, as detailed in this announcement (refer to Table 1), with modifying factors applied. The modifying factors and associated criteria used in determining the Ore Reserve are summarised below, in accordance with ASX Listing Rule 5.9.1, and detailed in Appendix A:

- Geological models used in the estimation are summarised in Appendix A: Table 1 Report: Modelling Techniques;
- Cut-off grade was determined based on actual unit costs currently being experienced at the Nifty Copper Operations;
- Copper price assumption of US$5,750/t at an assumed exchange rate of USD/AUD 0.7419 for a price of AUD $7,750/t Cu;
- Conventional long hole stoping mining methodology with paste backfill is assumed as per current operations;
- Underground stoping uses mining recovery factor of between 45% and 95% depending on the individual block. Additionally, mining dilution of between 5% and 25% has also been applied individual blocks;
- Metallurgical recoveries applied to produce copper concentrate from ore are based on historical and current recoveries in the operating Nifty copper processing plant at 92%;
- The operation is fully permitted allowing production to continue for the life of mine.

Table 4. Comparison of Nifty Ore Reserve Estimate at 31 March 2017 with 2016 Estimate

Ore Reserve reporting date	Ore Reserve Category	Mt[4]	Grade % Cu	Copper tonnes[5]
30 June 2016[1]	Proved	3.63	1.88%	68,000
	Probable	1.61	1.78%	29,000
	Total	5.24	1.85%	97,000
31 March 2017[2]	Proved	4.04	1.72%	69,500
	Probable	5.71	1.47%	84,000
	Total	9.75	1.58%	153,500

Notes:

1. As reported by Metals X in its Annual Update of Mineral Resources and Ore Reserves at 30 June 2016. The Ore Reserve estimate was as published by ABY at 31 March 2016 (refer to ASX announcement dated 18 August 2016).
2. Ore Reserves as calculated at 31 March 2017 by Metals X, adjusted for depletion to 31 March 2017, based on the Mineral Resource estimate of 31 March 2017.
3. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000 tonnes.
4. Copper tonnes are rounded to the nearest 500 tonnes. Rounding may result in some slight apparent discrepancies in totals.

Note that both the 2016 and 2017 Ore Reserve estimates relate only to the Nifty Sulphide deposit.

The difference between the 2017 Nifty Sulphide Ore Reserve estimate and 2016 Ore Reserve estimate include the following modifications:

- An expansion of the mine to include mineralisation to the west, east and south of the "checkerboard" (historic stope and fill mining area);
- A decrease in the cut-off grade from 1.2% to 0.75% due to both a reduction in operating costs and an increase in long term copper price forecast;
- Removal of rib pillars in the northern limb area with the expectation that paste fill will be used; and
- Reconsideration of stope design protocols to better align stoping plans to the orebody, which has increased the quantity of material above the cut-off grade.

Mineral Resource and Ore Reserve Governance Statement

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

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

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

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

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

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

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

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

Competent Persons Statements

The information in this presentation that relates to Mineral Resources 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 presentation that relates to Ore Reserves has been compiled by Metals X Limited technical employees under the supervision of Mr Michael Poepjes BEng Mining Engineering), MSc (Min. Econ), MAusIMM. Mr Poepjes is a full time employee of the Company. Mr Poepjes 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 Poepjes consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Mr Poepjes is eligible to participate in the Company's short and long term incentive plan and holds performance rights in the Company as has been previously disclosed.

APPENDIX A – INFORMATION MATERIAL TO UNDERSTANDING THE EXPLORATION RESULTS, MINERAL RESOURCES AND ORE RESERVES

JORC CODE, 2012 EDITION

JORC TABLE 1: 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	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• 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 143,497m. The holes are drilled on most occasions to intersect as near as possible perpendicularly the synclinal east plunge mineralisation. • 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. • The diamond core varied from HQ to NQ in diameter and mineralised intervals and adjacent locations were sampled by cutting the core in ½ 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 25g with an ICPAES finish. Over limit results (>1% Cu) are re-analysed using the ME-OG62 method, which involves subjecting a 40g sample to a four acid digest with an ICPAES finish. Intertek Genalysis use a four acid digest using a 25g sample with an ICP-OES finish. Over limit results (>1% Cu) are re-assayed using an ore grade four acid digestion of 25g sample, and an AAS finish. • 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. • 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. • 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. • Whilst no assessment has been reported the competency of the material sampled would tend to preclude any potential issue of sampling bias.
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). • Method of recording and assessing core and chip sample recoveries and results assessed.	
Drill sample recovery	• Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	

Criteria	JORC Code Explanation	Commentary
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged	• 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. • 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. • The entire length of all holes, apart from surface casing, was logged.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• All core to be sampled was believed to be ½ cored, based on observations from photographs, using a mechanical saw. It is not known if the core was consistently taken from the same side of the stick. • 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. • 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. • 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. • No field duplicate information was observed. • 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.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• The assay techniques are appropriate for the determination of the level of mineralisation in the sample. The technique is 4 acid digest with ICP finish. • No geophysical tools were utilised to ascertain grade. • 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.

Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• The extensive data set has been reviewed by various parties including Maxwell Geoscience and DataGeo and the intersections within the mineralisation have been confirmed. • No twinned holes observed but there is a significant amount of closely spaced supportive drilling results. • 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.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• 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. • The regional grid is GDA94 Zone 50 and the drilling is laid out on a local grid. • Topographic control is from surface survey - note the deposit modelled is totally underground and is not influenced by surface topography.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• The majority of drilling utilised is on 40m x 20m grid specifically targeting lithological and hence mineralisation sequence definition. • 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 • 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.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• 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. • No sampling bias is considered to have been introduced.
Sample security	• The measures taken to ensure sample security.	• 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.

Criteria	JORC Code Explanation	Commentary
Audits or reviews	• The results of any audits or reviews of sampling techniques and data	• Resources and reserves are routinely reviewed by the Metals X Corporate technical team. • Database management companies have over the past 2 years audited the drill hole database and found it representative of the information contained.

SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• 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.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other partie	• 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. • The project was subsequently purchased from Straits Resources by Aditya Birla Minerals Ltd in 2003. • Open pit mining ceased in June 2006. • Copper extraction using heap leaching ceased in January 2009. • Underground mining of the primary (chalcopyrite) mineralisation started in 2009. • The project was purchased from Aditya Birla in 2016 by Metals X Ltd.
Geology	• Deposit type, geological setting and style of mineralisation.	• 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 between 6 and 12 degrees to the southeast. The stratabound copper mineralisation occurs as a structurally controlled, chalcopyrite-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.

Criteria	JORC Code Explanation	Commentary
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: » easting and northing of the drill hole collar » elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar » dip and azimuth of the hole » down hole length and interception depth » hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• NA
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• NA
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• NA
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• NA

Criteria	JORC Code Explanation	Commentary
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• NA
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• NA
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Open pit and underground feasibility works; • Validation drilling in areas of potential economic mineralisation; • Infill drill areas of data paucity proximal to the underground development. This will increase resource confidence and resultant classifications. • Validation of the underground void model.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

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

Criteria	JORC Code Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• Drillhole data is stored in a Maxwell's DataShed system based on the SQL Server platform which is currently considered "industry standard". • As new data is acquired it passes through a validation approval system designed to pick up any significant errors before the information is loaded into the master database. The information is uploaded by a series of SQL routines and is performed as required. The database contains diamond drilling (including geotechnical and specific gravity data) and some associated metadata. By its nature this database is large in size, and therefore exports from the main database are undertaken (with or without the application of spatial and various other filters) to create a database of workable size, preserve a snapshot of the database at the time of orebody modelling and interpretation and preserve the integrity of the master database.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The competent person works on the site and commutes weekly.

Criteria	JORC Code Explanation	Commentary
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The confidence in the geological interpretation comes from the history of underground mining and the closely spacing drill and other sample information. • Only physical data obtained from the drilling and underground workings was utilised. • The application of hard boundaries to reflect the position of the mineralised sequence was supported by the underground and drilling observations. No other assessment style is thought appropriate at this time. • The sequence units are subject to vertical and horizontal dimension changes along and across strike and in thickness. The mineralisation occurs as either disseminated or massive within the sequence and thus influences the grade continuity.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The Deposit occurs over a 1,200m down plunge distance and units vary individually between 0m to 30m in true thickness. The limbs of the sequence are variously mineralised and to 400m in vertical extent.

Criteria	JORC Code Explanation	Commentary
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• All modelling and estimation work undertaken by Metals X is carried out in three dimensions via Surpac. • After validating the drillhole data to be used in the estimation, interpretation of the orebody is undertaken in sectional and / or plan view to create the outline strings which form the basis of the three dimensional orebody wireframe. Wireframing is then carried out using a combination of automated stitching algorithms and manual triangulation to create an accurate three dimensional representation of the sub-surface mineralised body. • Drillhole intersections within the mineralised body are defined; these intersections are then used to flag the appropriate sections of the drillhole database tables for compositing purposes. Drillholes are subsequently composited to allow for grade estimation. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the interpretation. • Once the sample data has been composited, a statistical analysis is undertaken to assist with determining estimation search parameters, top-cuts etc. Variographic analysis of individual domains is undertaken to assist with determining appropriate search parameters. Which are then incorporated with observed geological and geometrical features to determine the most appropriate search parameters. • An empty block model is then created for the area of interest. This model contains attributes set at background values for the various elements of interest as well as density, and various estimation parameters that are subsequently used to assist in resource categorisation. The block sizes used in the model will vary depending on orebody geometry, minimum mining units, estimation parameters and levels of informing data available. This is determined via QKNA in Snowden's Supervisor software. • Grade estimation was then undertaken, with the ordinary kriging estimation method considered as standard. There are no assumptions made about recovery. • Hard boundaries where applied to the units. Grade was estimated within these boundaries. • The resource was then depleted for mining voids and subsequently classified in line with JORC guidelines utilising a combination of various estimation derived parameters and geological / mining knowledge. • This approach has proven to be applicable to Metals X's assets. • Estimation results are routinely validated against primary input data, previous estimates and mining output. • There are no by-products. • There are no deleterious elements recorded.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• The tonnages were estimated using density determined by copper content thus can be considered dry.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Lithological boundaries are used to define sequence units with statistical grade assessment used for confirmation. • The resource reporting cut-off grade is 0.75% Cu for the sulphide resource and 0.4% Cu for the oxide.

Criteria	JORC Code Explanation	Commentary
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Mining of this deposit is by long hole open stoping and has been demonstrated as being economically viable.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• The ore currently mined is processed on site to produce Cu concentrate. This has been successful over the life of the project and thus metallugically the deposit is amenable to the method adopted.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Metals X operates in accordance with all environmental conditions set down as conditions for grant of the respective mining leases.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Density is applied based on lithological unit and Cu grade based on test work.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The criteria used to categorise the Mineral Resources include the robustness of the input data, the confidence in the geological interpretation including the predictability of both structures and grades within the mineralised zones, the distance from data, and amount of data available for block estimates within the respective mineralised zones. • The input data is consistent and closely spaced enough to support the projection of the geological interpretation which in terms of style of mineralisation is consistent with other deposits within the same geological setting. Infill drilling programs have successfully confirmed previous wider spaced drilling in terms of geological and grade predictions. The estimated grade correlates well with the input data given the nature of the mineralisation. • The Mineral Resource estimate reflects the Competent Person's understanding of the Deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Resource estimates are peer reviewed by the site technical team as well as Metals X's Corporate technical team.

Criteria	JORC Code Explanation	Commentary
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• All currently reported resources estimates are considered robust, and representative on both a global and local scale. This is derived primarily through Metal X's understanding of the geology of the deposit and global mineralisation controls. • The statement relates to global estimates of tonnes and grade.

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

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

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The "nifty_1612_reporting_reclassf.mdl" was used for the production of the reserve. The model is a Surpac model. • The reserve is a subset of the resource presented.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The competent person works on the site and commutes weekly.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered	• The proven reserves are considered to be a Bankable feasibility level and form the basis of the Site's Budget plan for FY18. • The probable reserves are considered to be at a Prefeasibility level. • The modifying factors applied are discussed below (in Mining factors or assumptions). • A life of mine schedule was developed utilising the results after modifying factors had been applied. This Schedule was then evaluated utilising current site budgeted costs and the revenue factor to ensure economic success.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• A cut-off grade of 1.0% was used for the reserve. • Material contained within designed stope shapes below this grade has been included as internal dilution. • No quality parameters have been applied.

Criteria	JORC Code Explanation	Commentary
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• For the proved reserve, designed stopes were utilised. For probable reserve, broader optimised shapes were used to with material being above a minimum width (both development and stoping) of 5.0m and above the required cut-off grade (1.0%). From these shapes, tonnes and grades were extracted with modifying factors subsequently applied. A life of mine plan was then developed to create a mining schedule to evaluate the required material. • The mining method chosen is Long Hole Open stoping which has been successfully used at Nifty for the past 10 years. Limited additional capital access is required to extract the ore and the cost of this access has been included within the capital costs. • Geotechnical parameters considered have come from the on-site Geotechnical Engineers who oversee the project on a daily basis which are current site parameters. • Modifying factors have been applied to all material. Material within the Proven reserves are designed stopes and have been 75% to 95% mining recovery (depending on the location of the stope and the surrounding material) and between a 5% to 25% dilution factor. Probable stopes have not been designed fully, so have been factored down further. Modifying factors of between 45% and 75% for mining recovery have been applied to the blocks in conjunction with 10% to 15% dilution factors. • No inferred material has been considered either as part of the study or within the reserves. The inclusion of any additional inferred resources which exist which would further enhance the project. • No significant infrastructure requirements are needed as the mine is operational. An allowance has been made in the cash flow analysis for sustaining capital requirements.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• The Nifty project has an operating process plant (running for the past 10 years). This plant was designed for the Nifty ore body. • The actual process used is a grid and floatation process which is proven. • A recovery of 92% has been applied which is below the historic average. A further 'recovery' factor of 96% has been applied later to represent the Net Smelter Return. • The Nifty orebody contains no significant amounts of deleterious elements. The current sales contract has been utilised to apply the appropriate penalty. • The material contained within the reserve is considered consistent with the material that has been processed through the Nifty Plant over the past 10 years.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• An approved Tailings Storage Facility is onsite. Further approvals (for the expansion of the existing facility) to mine the entirety of the Reserve will be required but should not be an issue. It is expected that the existing Facility will be able to be lifted to the required height. • The site does produce potentially acid forming material, however this is disposed of in the existing Open Pit as per the current Mining Agreement and is fully permitted to do. • The site is currently active. No future environmental issues are expected.

Criteria	JORC Code Explanation	Commentary
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• All infrastructure required for the mining of these reserves have been constructed. Costs have been included within the economic evaluation for sustaining capital requirements. • The current facilities include an accommodation village, transport corridors, power and water plant. As the operation is ongoing, a workforce is already in place.
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Capital costs for sustaining capital has been estimated at $2/ore tonne. • Operating costs have been derived from actual current operating costs. No significant cost increases are expected to be incurred. • Penalty costs for deleterious elements (Fluorine) within the final concentrate although small have been included within the operating costs. • Transportation costs for both local and international freight are based on current costs. • The current smelting and refining costs based on the existing Contract have been included in the operating costs. • No private royalties are payable. Government royalties (5% ad valorem) have been included. • All costs were considered in Australian dollars.
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Net Smelter return of 96% was used to calculate the revenue. Smelting and refining costs have been included within the cost of processing the material. • A commodity price of US$5,750/t was used at an assumed exchange rate of 0.7419 giving a metal price of AUD$7,750/t. • Grade of the project has been taken from the planned mining schedule. Recovery factors have been applied (based on actual recovery parameters) over yearly production. • No co-products are included nor are expected to be produced on a commercial level. • Commodity prices and exchange rates are based on internal Metals X forecasts.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• There remains strong demand and no apparent risk to the long term demand for the copper generated from the project. • A free market trading system exists for the sale of copper. • Price forecasts have been based on Copper Future Markets. • Not an industrial Mineral. • All concentrate produced from site is sought by the Smelter. A life of Mine agreement exists for the treatment of all concentrate produced.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• An 8% real discount rate is applied to NPV analysis (although not applicable as no significant start-up costs are required). • Sensitivity analysis of key financial and physical parameters is applied to future development project considerations. • The project will be internally funded, but no significant funding is required.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Nifty is currently operating. We have a good relationship with the local indigenous people. • We have a Social licence to operate.

Criteria	JORC Code Explanation	Commentary
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• No material naturally occurring risks have been identified. • All native tittle agreements are established. • Metals X sells the Copper Concentrate produced to Hindalco. A Life of Mine agreement is in place for the off take of this concentrate. • Statutory approvals and license applications are in place. • Nifty is currently operating.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• The proven reserves are within the existing development area, whilst the probable reserves still need to be developed. No significant variances are expected. • The results reflect the view of the Competent Person. • Minimal probable reserves have been derived from the measured resource component.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• Site generated reserves and the parent data and economic evaluation data is routinely reviewed by the Metals X Corporate technical team. Resources and Reserves have in the past been subjected to external expert reviews, which have ratified them with no issues. There is currently no regular external consultant review process in place.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The probable ore reserve has been completed to prefeasibility standard whilst the proven ore reserve has been completed to a bankable feasibility standard. Both reserves have been benchmarked against local site historical production and experience hence confidence in the estimate is high. Actual current costs have been used to evaluate the project. • Internal peer reviews are conducted on all designs, schedules and cost estimation. • The ore reserve is global. • The modifying factors applied have minimal impact on the viability of the ore reserve or the project as a whole. As the modifying factors have been applied to designed stope shapes and development designs they are considered to reflect the eventual outcome of the project.