METALS X LIMITED

ASX RELEASE
10 MARCH 2020

NIFTY RESOURCE UPDATE

Metals X Limited (**Metals X** or the **Company**) is pleased to announce an updated Mineral Resource estimate for its underground sulphide deposit at the Nifty Copper Operations (**Nifty**).

HIGHLIGHTS

- 10% increase (52,900 tonnes of copper) in contained sulphide copper (**Cu**) (net of depletion) in the Mineral Resource at the Nifty underground mine, delineated from an additional 309 diamond drill holes for 29,764 metres
- Total Nifty Sulphide Measured, Indicated and Inferred Resource (cut-off grade of 0.75% Cu) of **39.66Mt at 1.51% Cu for 598,500** tonnes of contained copper
- 10% increase in Measured Mineral Resources which now stand at 25.09Mt at 1.70% Cu for 426,700 tonnes of contained copper
- Mineral Resource estimate based on a revised geological model for the Nifty deposit which has allowed for improved resolution of geological detail within the mineralised horizons
- Total combined Nifty sulphide and oxide Measured, Indicated & Inferred Mineral Resources of 47.29Mt at 1.39% Cu for 658,500 tonnes of contained copper

Executive Chairman, Mr Patrick O'Connor, commented:

"Metals X in the last nine months of 2019 invested $4.1 million in underground drilling at the Nifty Copper Mine which resulted in a 10% increase in contained sulphide copper metal to now report a combined total Measured, Indicated and Inferred Mineral Resource of 658,500 tonnes of copper".

"Nifty has a large copper endowment, impressive exploration potential and production-ready infrastructure that provides excellent leverage to any improvements in copper prices".

"Metals X is currently undertaking a strategic review of its copper assets, which include the Nifty Copper Mine, Maroochydore Copper Project and surrounding Paterson exploration tenure. The Board, in consultation with its advisors, is exploring various options for these copper assets including joint ventures and the partial or complete divestment of some or all of these assets, with a view to maximising value for MLX shareholders".

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RESOURCE DEFINITION DRILLING & REVISED GEOLOGICAL MODEL

Since the 2019 Mineral Resource estimate (31 March 2019)[1], MLX has completed substantial underground drilling programs at Nifty. A total of 309 diamond drill holes for 29,764 metres of drilling have been completed with a focus on infill and resource definition programs within southwest Region 3 & 4, Region 5 and the eastern end of Region 6 (Figure 1). Since the acquisition of Nifty in late 2016, MLX has now drilled a total of 761 diamond drill holes for 91,095 metres of drilling.

In conjunction with the additional drilling completed since the 2019 Mineral Resource estimate, the Company has also competed a revised geological model for the Nifty deposit using advanced Leapfrog™ modelling software which has allowed for improved resolution of geological detail within the mineralised horizons. Of most significance has been the modelling of narrow, effectively barren, shale interbeds within the Middle Carbonate Unit (**MCU**), which along with the Lower Carbonate Unit (**LCU**), are the primary hosts to copper mineralisation at Nifty. The revised geological model has been used within the updated 2020 Mineral Resource estimation and is being used as part of the Copper Division Strategic Review.

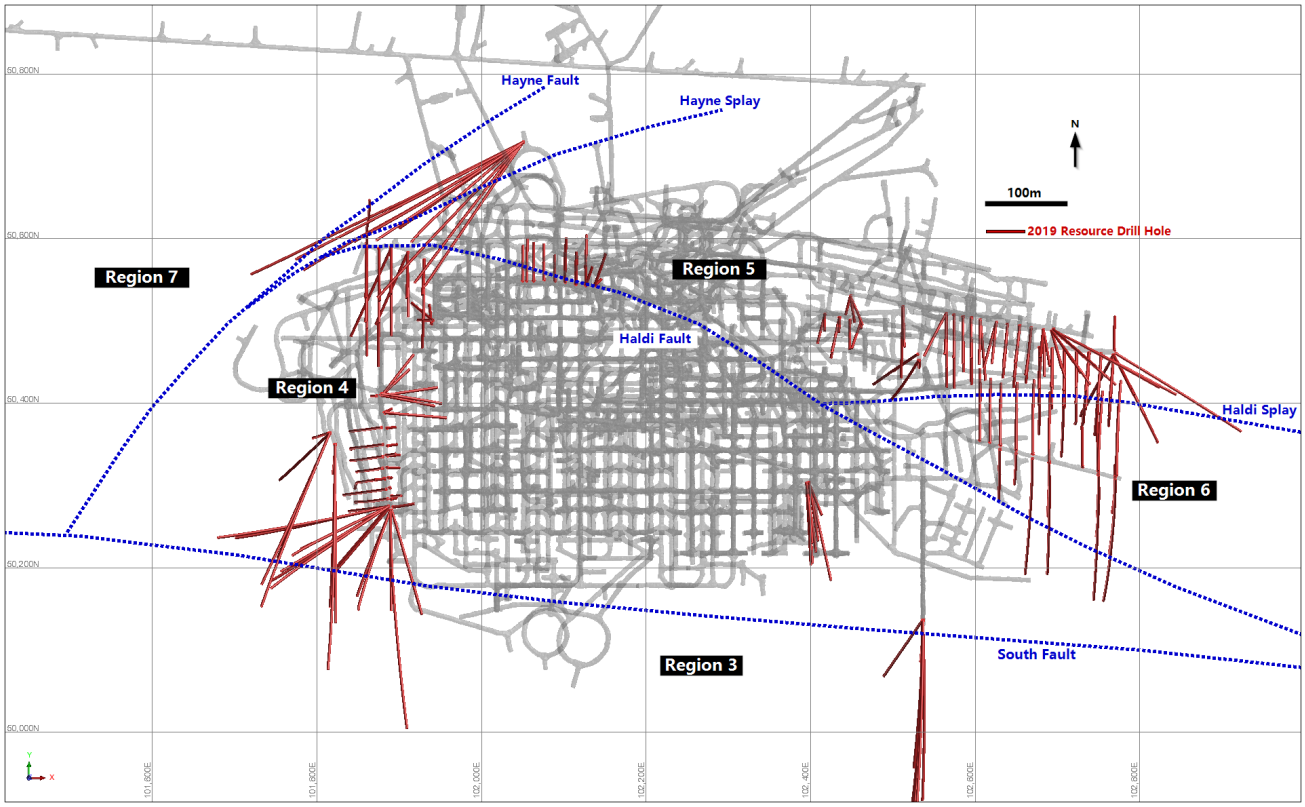

FIGURE 1: NIFTY DEVELOPMENT PLAN SHOWING MINING REGIONS AND RESOURCE DRILLING COMPLETED SINCE 31 MARCH 2019

MINERAL RESOURCE STATEMENT

This 2020 Mineral Resource estimate for the Nifty Sulphide Copper Deposit is at 31 December 2019 (Table 1). Mineral Resource estimates for the Nifty Oxide and Nifty Heap Leach remain unchanged from those reported on 31 May 2017.

[1] Refer ASX Announcement: 28 August 2019. 2019 Nifty Resource Update.

TABLE 1: NIFTY MINERAL RESOURCE ESTIMATE AT 31 DECEMBER 2019

Deposit	Mineral Resource Category[1]	Mt[2]	Grade % Cu	Copper tonnes[2]
Nifty Sulphide[3]	Measured	25.09	1.70	426,700
	Indicated	7.46	1.32	98,400
	Inferred	7.10	1.03	73,400
	Total	39.66	1.51	598,500
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 Oxide[5]	Measured	-	-	-
	Indicated	2.85	0.75	20,000
	Inferred	0.46	0.66	3,000
	Total	3.31	0.74	23,000
TOTAL	Measured	26.52	1.66	439,700
	Indicated	11.53	1.11	128,400
	Inferred	9.24	0.98	90.400
	Total	**47.29**	**1.39**	**658,500**

1. Mineral Resources are reported inclusive of Mineral Resources modified to produce an Ore Reserve;
2. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000; Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.
3. Cut-off grade of 0.75% Cu.
4. Nifty Oxide Mineral Resource is at 31 March 2016 and reported using a cut-off grade of 0.40% Cu
5. Nifty Heap Leach Resource is at 31 March 2015 and reported using a cut-off grade of 0.50% Cu

KEY ASSUMPTIONS AND JORC 2012 REQUIREMENTS

Mining production data up to 31 December 2019 and all exploration information has been included. Mineral Resources have been depleted for mining to 31 December 2019.

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

The full Mineral Resource estimates for the Nifty Sulphide deposit at the Nifty Copper Operations are reported in Table 1.

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

MINERAL RESOURCE GOVERNANCE STATEMENT

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

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

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

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

- Provision of internal policies, standards, procedures and guidelines;
- Mineral Resource reporting based on well-founded geological and mining assumptions and compliance with external standards such as the JORC Code;
- 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 Mineral Resources compliant with JORC 2012.

The Company reports its Mineral Resources, as a minimum, on an annual basis, in accordance with ASX Listing Rule 5.21 and clause 14 of Appendix 5A (the JORC Code).

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.

MINERAL RESOURCE ESTIMATE

Table 1 shows the updated Mineral Resource estimate for the Nifty Sulphide deposit at the Nifty Copper Operations at 31 December 2019.

Tables 2 & 3 compare the 31 March 2019 Mineral Resource estimate (reported by Metals X on 28 August 2019) with the updated Mineral Resource estimate at 31 December 2019 for the Nifty Sulphide deposit. The Mineral Resource estimates for Nifty Oxide and Nifty Heap Leach are unchanged from 2016 and as reported in May 2017.

The difference between the 31 December 2019 Nifty Sulphide Mineral Resource estimate and 31 March 2019 estimate include the following modifications:

- Included all underground diamond drill information collected since 31 March 2019; and
- Reinterpretation of the 2018/19 stratigraphic boundaries using Leapfrog™ modelling software to more tightly constrain the interpolation within discrete mineralised horizons.

TABLE 2: COMPARISON OF NIFTY SULPHIDE MINERAL RESOURCE ESTIMATE: 31 DECEMBER 2019 VERSUS 31 MARCH 2019

Reporting date	Category	Mt[3]	Grade % Cu	Copper tonnes[4]
31 March 2019[1] (0.75% Cu cut-off)	Measured	23.43	1.66	388,100
	Indicated	7.12	1.32	94,300
	Inferred	5.73	1.10	63,100
	Total	**36.28**	**1.50**	**545,600**
31 December 2019[2] (0.75% Cu cut-off)	Measured	25.09	1.70	426,700
	Indicated	7.46	1.32	98,400
	Inferred	7.10	1.03	73,400
	Total	**39.66**	**1.51**	**598,500**

1. As reported by Metals X on 28 August 2019;
2. Mineral Resources are calculated at 31 December 2019 by Metals X, adjusted for depletion to 31 December 2019, using a cut-off grade of 0.75% Cu.
3. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000.
4. Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.

TABLE 3: NIFTY MINERAL RESOURCE ESTIMATE – DEPLETION & RESOURCE ADJUSTMENTS FROM PRIOR YEAR

Project	Mt[1]	Grade % Cu	Metal t Cu[2]
31 March 2019			
Nifty Sulphide	36.28	1.50	545,600
Nifty Oxide	4.33	0.86	37,000
Nifty Heap Leach	3.31	0.74	23,000
Total	**43.92**	**1.38**	**605,600**
Mining Depletion			
Nifty Sulphide	(0.683)	1.40	(9,500)
Nifty Oxide	-	-	-
Nifty Heap Leach	-	-	-
Total	**(0.683)**	**1.40**	**(9,500)**
Net Adjustments[1]			
Nifty Sulphide	4.05	1.54%	62,400
Nifty Oxide	-	-	-
Nifty Heap Leach	-	-	-
Total	**4.05**	**1.54%**	**62,400**
31 December 2019			
Nifty Sulphide	39.66	1.51	598,500
Nifty Oxide	4.33	0.86	37,000
Nifty Heap Leach	3.31	0.74	23,000
Total	**47.29**	**1.39**	**658,500**

1. Tonnes are reported as million tonnes (Mt) and rounded to the nearest 10,000.
2. Cu tonnes are rounded to the nearest 100 tonnes; rounding may result in some slight apparent discrepancies in totals.

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 comprises 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 283,227m.

Drilling techniques

Drilling programs have been ongoing since initial discovery to both expand the mineralisation and provide control for mining. Hole collars were surveyed by Company employees/contractors. 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 the 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 contacts of lithology and other geological features. RC samples were collected from the cyclone of the rig and spilt at site to approximately 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 Leapfrog™ and/or Surpac™ software. After validating the drillhole data to be used in the estimation, Wireframing is then carried out using a combination of implicit algorithms and manual explicit 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 and top-cuts. 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 Supervisor™ software. Grade estimation uses ordinary kriging estimation methodology. 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 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.

Mining and metallurgical methods and parameters

Mining of the sulphide deposit has historically been by long hole open stoping. The mined ore is processed on site to produce copper concentrate. This has been successful over the life of the project (>10yrs) and therefore metallurgically the deposit is amenable to the method adopted. It is noted that Nifty Copper Operations were placed in Care and Maintenance in late November 2019[2].

COMPETENT PERSON'S STATEMENT

The information in this report that relates to Mineral Resources has been compiled by Metals X Limited technical employees under the supervision of Mr Kane Hutchinson BSc., who is a member of the Australasian Institute of Mining and Metallurgy. Mr Hutchinson 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 Hutchinson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

[2] ASX Announcement: 26 November 2019. Suspension of Operations at Nifty Copper Mine

APPENDIX A

INFORMATION MATERIAL TO UNDERSTANDING THE 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 (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.* • *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 (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.*	• 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 283,227m. 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 provide control for mining. The hole collars were surveyed by Company employees/contractors with the orientation recorded. Down hole 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 1/2 based on contacts of lithology and other geological features. • 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 (>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 (>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.
Drilling techniques	• *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.).*	

Criteria	JORC Code Explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• 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% within the fresh/sulphide zones. 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.
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 ½ cored 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.

Criteria	JORC Code Explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• The assay techniques are appropriate for the determination of the level of mineralisation in the sample. • 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 50. The most recent reporting covering the majority of holes used in the estimate provide support for the quality of the Cu assays.
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 administrator 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. Accuracy tests in downhole surveys have been conducted on recent drilling, and show negligible variation against 'Gyro' survey by independent third party. • 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.

Criteria	JORC Code Explanation	Commentary
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 pattern drilled from surface specifically targeting lithological and hence mineralisation sequence definition, while current underground drill spacing is 20m to 25m on average. • 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 2m composite length was chosen to reduce composite copper grade variability and facilitate variogram modelling, why still maintaining reasonable resolution for estimation.
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. • 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 site core yard. Each sample bag is securely tied with the pre-printed sample number on the bag and transported to either the onsite laboratory or by commercial contractors to Perth. Upon receipt at the laboratory the samples are checked against the dispatch sheets to ensure all samples are present.
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 3 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 parties.*	• 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 about 6-12 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.*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.
Data aggregation methods	• *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.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.
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 (e.g. 'down hole length, true width not known').*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.

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.*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are reported as part of this release, results relating to the deposit have been previously released.
Further work	• *The nature and scale of planned further work (e.g. 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.*	• The Nifty resource currently remains open to the east. • 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.
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 spaced drilling 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.
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.*	• Geological modelling was undertaken in Leapfrog Geo, while estimation work undertaken by Metals X is carried out in three dimensions via GEOVIA Surpac. • After validating the drillhole data to be used in the estimation, interpretation of the orebody is undertaken in Leapfrog Geo to form three-dimensional orebody wireframes. Wireframing is then carried out using a combination of implicit algorithms and manual explicit triangulation to create an accurate three-dimensional representation of the sub-surface mineralised body.

Criteria	JORC Code Explanation	Commentary
	• *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. 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.*	• 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 were 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 other than occasional slightly elevated fluorine
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.*	• The operation is currently in 'Care and Maintenance'. Past mining of this deposit was by long hole open stoping and has been demonstrated as being technically achievable
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 operation is currently in 'Care and Maintenance'. Previously ore mined was processed on site to produce Cu concentrate. This has been successful over the life of the project and thus metallurgically 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.*	• Determined by extensive testwork, density is applied based on oxidation intensity, stratigraphic unit and Cu grade (for copper grades in excess of 1% copper, a regressed density value has been calculated based on linear fit to the slope of the graph).

Criteria	JORC Code Explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. 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. The 2019 Mineral Resource Estimate was externally audited by Cube Consulting Pty Ltd, who found no fatal flaws and deemed the estimation 'fit for purpose' for global mine planning. The 2020 Mineral Resource Estimate follows similar methodology.
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 resource 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.