Nifty Heap Leach Mineral Resource Estimate

Cyprium Metals Limited (ASX: CYM) (Cyprium) is pleased to announce the 2024 Mineral Resource Estimate (MRE) for the existing above-surface material stacked on the heap leach pads at the Nifty Copper Mine (Nifty) in Western Australia.

Highlights include:

- **Indicated and Inferred Mineral Resource Estimate of 12.7 million tonnes grading 0.43% Cu for contained copper of 54,050 tonnes**

- **2021 sonic drill campaign incorporated into drill database**

- **Potential for further upside as drill data does not extend to the bottom of the material on the heap leach pads**

"This is back-to-basics execution," said Cyprium Executive Chair, Matt Fifield. "Restarting the cathode plant is the next logical step for Cyprium's new management team and the first phase of Nifty's redevelopment. To move towards operations, we need comprehensive and up to date resource information. Our team produced this MRE by going back to first principles, organising and incorporating all prior existing data, and including new analysis from the 2021 sonic drill program. The result is the first updated MRE since 2015 for the unrecovered copper on Nifty's heap leach pads. It's a strong foundation on which we can build our forward plans."

The 2024 Heap Leach MRE defines an indicated and inferred copper resource containing approx. 54,000 tonnes of copper that is supported to JORC standards through drilling information – see **Table 1** below. A review of historic production data indicates that there is substantial potential resource upside from unsampled stockpiled material. This unsampled material is not able to be supported through drilling information as all drill holes were halted short of the pads to maintain the integrity of the pad and liner.

The 2024 MRE incorporates new data from a 2021 sonic drill program which was run in support of previous feasibility studies. Analysis of samples obtained from the sonic program have supported important metallurgical inputs on the drilled resource.

Table 1 – MEC August 2024 Nifty Heap Leach Mineral Resource Estimate by Resource Category.

Resource Category	Source	Volume (m³)	Density (t/m³)	Tonnes (t)	Cu (ppm)	Cu tonnes (t)	% Metal
Indicated	Stockpile from drilling	6,253,350	1.70	10,636,950	4,100	43,580	80.6%
Inferred		1,198,330	1.70	2,038,350	5,140	10,470	19.4%
TOTAL		7,451,680	1.70	12,675,300	4,260	54,050	100.00

Notes: zero Cu ppm cutoff grade, no top cut applied, numbers are rounded and may not add

Drilled Mineral Resource

The 2024 Heap Leach MRE is the first update of an MRE on this material since 2015. The mineral resource in **Table 1** represents the portion of the stockpile that was estimated from drill data in accordance with the JORC (2012) code.

An MRE was declared in 2015 after a series of internal studies during 2014 and 2015 were accompanied by drilling and sampling campaigns. A comparison of the 2015 and 2024 drilled resource estimates is presented in below:

Table 2 – Nifty Heap Leach 2024 MRE Versus 2015 MRE

Resource Category	2015 MRE			2024 MRE		
	Tonnes (t)	Cu (ppm)	Volume (m³)	Tonnes (t)	Cu (ppm)	Volume (m³)
Indicated	11,975,000	4,000	Not reported	10,636,950	4,100	6,253,350
Inferred	2,756,000	4,000	Not reported	2,038,350	5,140	1,198,330
Total	14,731,000	4,000	8,716,719	12,675,300	4,260	7,451,680

In 2021, Cyprium conducted a 24-hole sonic drilling program. The 2024 MRE incorporates this data. Figure 1 below shows the location of the drill collars from 2007 to 2021.

Figure 1 – Nifty Heap Leach Drill Hole Location
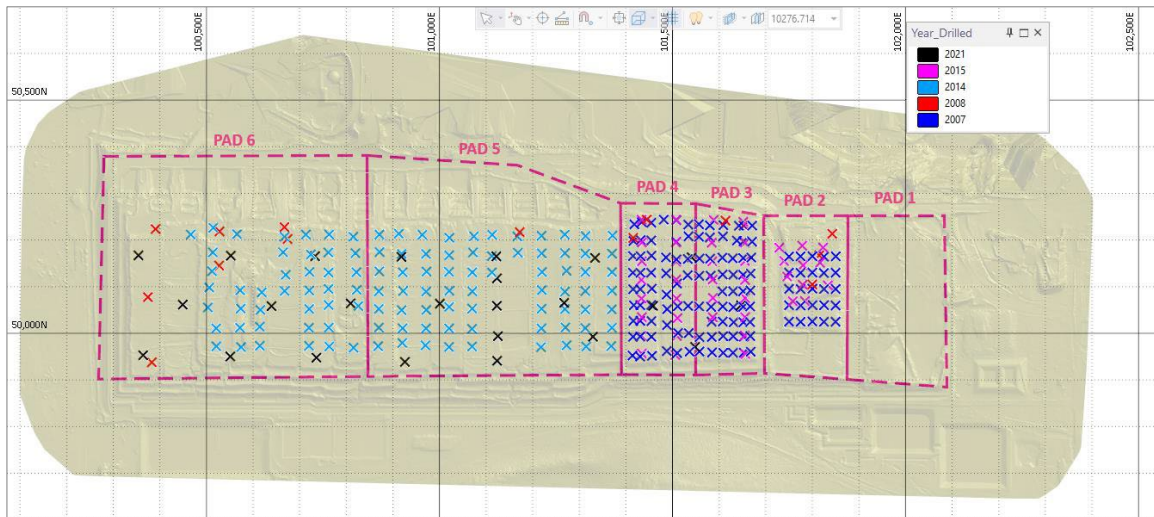
MEC Mining examined previous methods and information for adequacy under current code and recommended a number of changes to classification and drill hole inclusion. Additional information can be found in the accompanying MEC August 2024 Heap Leach MRE.

Drilled Resource Excludes Stockpile Base

This estimation of the JORC resource, using drilled intercepts only, is likely to significantly understate the amount of metal contained in the material on the heap leach pads as the drill holes stopped an estimated depth of between 3 and 4 meters above the heap leach pad lining to protect the integrity of the heap leach pad and liner. Therefore, a reasonable volume of material has been excluded from the resource calculation which was reliant on drill data.

Figures 2 and 3 below show the 2024 MRE block model in cross section and oblique view. Red and green areas correspond to drilled Indicated and Inferred resource. Blue areas correspond to unsampled material.

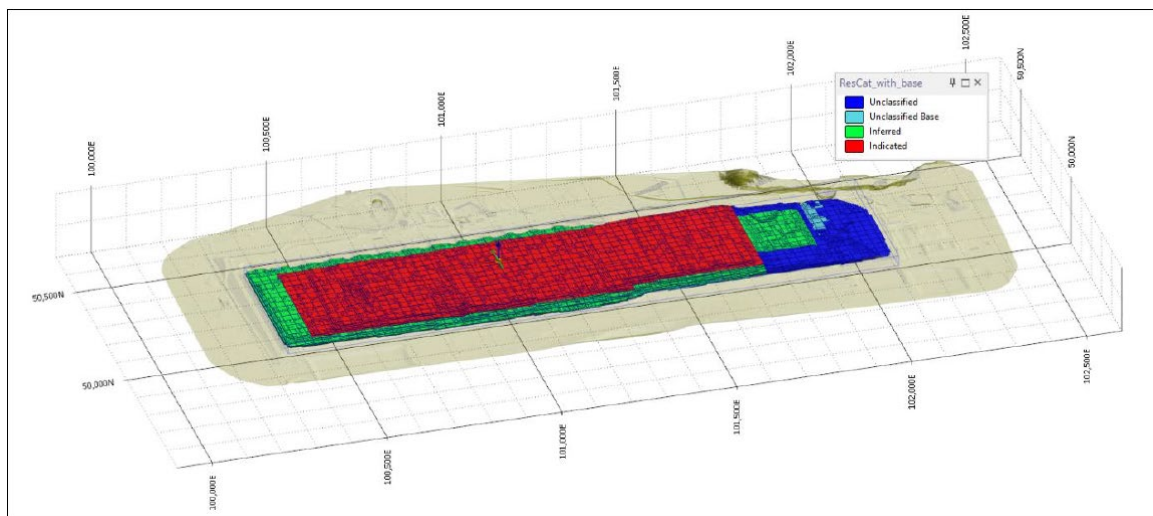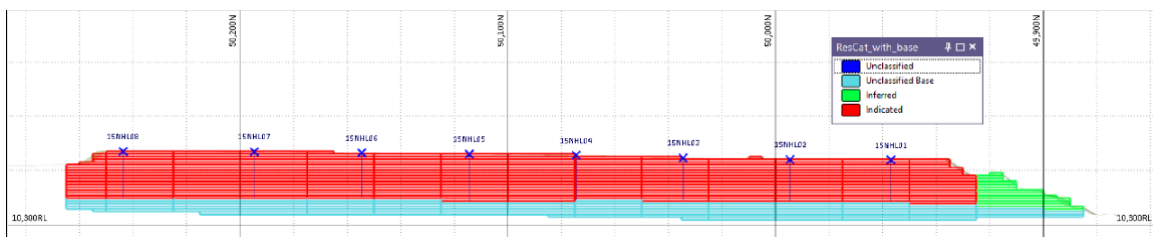**Figure 2 – Nifty Heap Leach 2024 MRE Classifications (oblique view)**

Figure 3 – Nifty Heap Leach 2024 MRE Classifications (section view)

Heap Leach Stockpile - Reconciliation to Production Records

Cyprium believes the best estimate of copper contained in the entire heap leach stockpile (e.g. inclusive of unsampled material) is obtained through reconciling metallurgical accounting records from prior operations. Experts from MEC reviewed the historical records and accounting approach and believe that this a reasonable estimation methodology and appropriate for inclusion in calculating total copper in the heap leach stockpile.

Historical records show that 17.2 million tonnes of mined material was stacked on the pads at Nifty. These tonnes contain 311,169 tonnes of copper in aggregate. Cumulative cathode production over the prior operational life of Nifty was 217,124 tonnes from inception until cathode plant operations ceased in 2009. The difference between these two figures (stacked and produced) is 91,140 tonnes.

"Looking back at the history of the site, we see that cathode production at Nifty stopped abruptly when the new underground mine began," said Fifield. "The owner at the time was primarily interested in supplying feed to the concentrate market from the now abandoned underground mine. The result was that the cathode plant was shut before its time, leaving unrecovered copper in the heap leach material. This is Cyprium's near-term commercial opportunity."

This ASX announcement was approved by the Cyprium Board of Directors.

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Competent Person Statement

The information in this report that relates to the estimation and reporting of the Nifty Heap Leach Mineral Resource Estimate dated 19 August 2024 is an accurate representation of the recent work completed by MEC Advisory Pty Ltd. Mr Dean O'Keefe has compiled the work for MEC Advisory and is a Manager of Resources for MEC Mining and a Fellow of the Australasian Institute of Mining and Metallurgy (#112948). Mr O'Keefe has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person (CP). Mr O'Keefe consents to the inclusion in the release of the matters based on this information in the form and context in which it appears.

About Cyprium Metals Limited

Cyprium Metals Limited (ASX: CYM) is an ASX-listed Australian copper company. Its flagship property is the Nifty Copper Mine in Western Australia, which previously produced significant copper from both oxide and sulphide resources. Cyprium is focused on redeveloping Nifty, which has the advantage of significant invested capital, data from a long operating history, large-scale resources, current operational approvals, and recent investment in the property.

The Company's other assets include significant copper-focused properties in the Paterson and Murchison Provinces, including multiple defined resources.

Visit www.cypriummetals.com for further information.

Material Information Summary

Please refer to Appendix 1 of the accompanying MEC August 2024 Heap Leach MRE for the full JORC Table 1. A summary as required by ASX Listing Rule 5.8.1 is provided as follows:

Geology and Geological Interpretation

The Heap leach comprises ore mined and stacked from the Nifty mine. Stacking continued until the latter part of 2008, and overall production ceased from the Heap Leach in 2009. The stacked Heap Leach material is not insitu.There is no continuity of grade or geology within the stockpile.

There are approximately 60 stockpiles over 6 pads that comprise the Heap Leach. The dimensions of each pad are ~350m long, 60-80m wide and 4-9m high. They were stacked in a westerly direction, starting with pad 1, meaning the age decreases to the west.

From east to west the copper content decreases and changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends.

For all drilling programs the drillholes were stopped around 4-5m above the base of the leach pad to prevent penetration of the liners. Two surfaces were interpreted to constrain the Heap Leach – a topographical surface for the top, and a base surface projected three meters below the deepest drillholes. These two surfaces formed the geological interpretation for the Heap Leach and was used to constrain the Mineral Resource estimate.

Drilling Techniques

The heap leach piles have been drilled over four drilling campaigns for the purpose of supporting an MRE to establish tonnage and grade. Aditya Birla completed three separate RC drilling programs (2007, 2014, 2015). In 2021 a sonic drilling program was completed by Cyprium.

- **2007:** The 2007 campaign targeted Pads 2, 3, and 4, with 124 RC drillholes, and reported a single composite total copper assay per drillhole.

- **2014:** The 2014 campaign targeted Pads 5 and 6 with 109 RC drillholes with 1m sampling, assayed for total Cu only. During a site visit on 12 March 2020 the sample coarse rejects for these drillholes were discovered in reasonable condition in a shipping container.

- **2015:** The 2015 campaign targeted Pads 2, 3, and 4, with 41 RC drillholes. Samples were at 1m intervals and were tested for total Cu only.

- **2021:** A sonic drilling program was conducted in 2021 by Cyprium, targeting pads 3, 4, 5, and 6. This consisted of 24 drillholes sampled at 1m intervals and tested for Ca, Co, Cu, Fe, Mg, Mn, S, and Si.

Sampling and Subsampling Techniques

For the 2014 and 2015 RC drilling programs, and for the 2021 sonic drilling program, sampling was conducted at 1m intervals. However, the 2007 RC program comprised a single composite sample for the entire drillhole.

Sample collection for the 2014 and 2015 RC drilling programs was via a rig mounted cone splitter attached to the cyclone. Two samples were collected for every 1m interval and labelled A and B. Sample A was sent to the laboratory and sample B was retained.

For the 2021 sonic drilling program, single samples were collected.

Sample Preparation

For the 2007 drilling a single sample (of up to 2.4kg) was collected for each hole.

For the 2014 and 2015 RC programs, 1.5-3.0kg of material was collected in a calico bag over a 1m interval from the cyclone using a cone splitter. The samples were sent to ALS laboratory for preparation (drying, crushing, splitting and pulverising) with a 50gm sample analysed using a 4-Acid ICPOES method (ME-ICP62).

For the 2021 sonic drilling program, the majority of samples were obtained at 1m intervals.

Sample Analysis Method

The 2007 RC drilling samples were analysed by Inter Mountain Laboratories, Wyoming, USA. The samples were split into three size fractions, and analysed for Cu. The total Cu value for the whole sample was calculated as a weighted average of the results from the three size fractions. Three analyticals were used: 4-Acid AAS for primary sulphide, copper in oxide by AAS after H_2SO_4 leach, and cyanide soluble copper.

The 2014 and 2015 RC program samples were analysed by ALS laboratories in Perth using a 4-Acid ICPOES method (ME-ICP62) for 16 elements: Ag, As, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, Pb, S, Sb, and Zn. Results exceeding the detection limit of the method were re-analysed with an ore-grade method, e.g. Cu-OG62 for copper which is a 4-acid digest, but with a variable finish depending on the element.

For the 2021 sonic program, samples were analysed by ALS in Perth by XRF for Cu, Ca, Co, Fe, Mg, Mn, S, and Si. In May 2024, 176 samples from 18 of the 24 sonic drillholes were re-submitted for analysis to Bureau Veritas Laboratories in Perth. These samples were analysed using a 4 acid digest then ICP-OES for Ca, Fe, Mg and S, and ICP-MS for Cu. The samples used to support the MRE were the samples analysed by XRF, as this was a complete suite for all the sonic drillholes.

Estimation Methodology

RC and sonic drillholes were used for the grade estimation. The estimate was constrained by wireframes representing the surface and the base of the heap leach stockpiles. The material is not in situ therefore there was no geological or grade continuity. As such, no lode geological interpretation or domaining was undertaken.

The estimation approach selected was Inverse Distance Weighting (IDW). A power of 3 was selected to give more weight to local samples, no top cuts were applied. The block model was populated by estimating into parent cells only, using two search passes to inform the estimate. All search ellipses were orientated at a 0° azimuth, no plunge and a -90° dip.

Classification criteria

An Indicated classification was given to the block model where the MRE is estimated from the 2014 and 2015 RC drilling, the 2021 sonic drilling, and was supported by QAQC data.

An Inferred classification has been given to blocks supported by the 2007 drilling (which comprise a single assay for the entire hole), on the periphery of the stockpile where it was not possible to drill due to slope and proximity to the edge.

Pad 1 and the periphery of pad 2 is mineralised waste, due to the lack of drilling data. Where the drillholes do not extend to depth (due to the risk of penetrating the leach pad liners) then the blocks are also considered mineralised waste. All mineralised waste is unclassified material.

Cutoff grades

The MEC August 2024 heap leach MRE is reported above a zero Cu cutoff, and no top cut was applied. A zero economic cutoff grade is applied as the heap leach MRE is a global estimate. There is no local map of grade variability, the remaining (unrecovered from previous operations) contained copper is estimated within the entire stockpile. There is no selectivity that would permit the application of an alternative cutoff grade. The ore was originally mined from the pit above an economic cutoff and stacked on the heap leach and then copper was recovered from the stockpile, not all copper was recovered, with remaining copper being the subject of the MRE.

Mining and metallurgical factors

Mining factors are not applicable, the Heap Leach ore was mined and stacked previously.

There are three main bodies of metallurgical test work that support Reasonable Prospects for Eventual Economic Extraction (*summarised in Table 3*):

Table 3 – Recovery From Metallurgical Test Work Programs

Test Data Set	RMD Stem 3m Pilot Trial (2009)	Metals X Limited Sequential Leach Testing (2020), Average	Cyprium Sequential Leach Testing (2024), Average
Recovery of Total Copper (%)	48.3	45.2	50.3

Metals X Limited 2020 sequential leach testing:

In 2020 Metals X Limited selected 10 holes from the 2014 drilling campaign for sequential leach analysis from which 152 individual samples were selected and analysed for acid and cyanide soluble copper.

The resultant data set provided calculated recoveries with a mean of 45.2% and standard deviation of 11.5% (*refer Figure 4*).

Figure 4 – Heap Leach Recovery Distribution Curve (Metals X Limited Data)
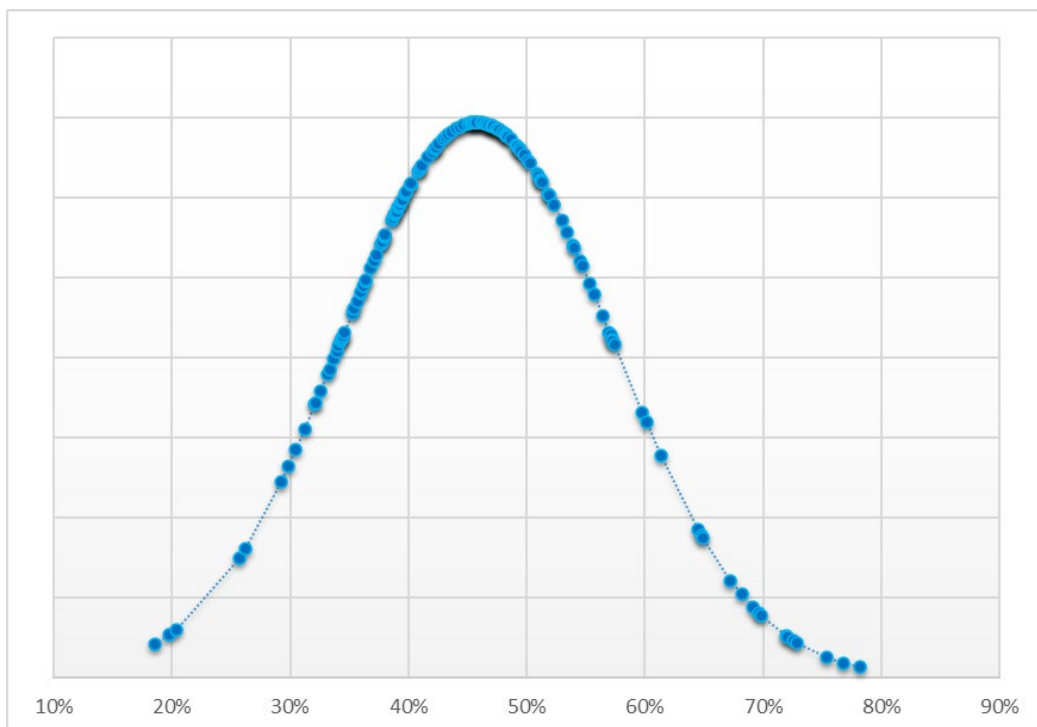
2024 Cyprium sequential leach testing:

Further drilling was conducted by Cyprium via 24 sonic drill holes across pads 3 to 6. Pulps from 18 of these holes were composited and submitted for sequential leach in 2024. The resultant data set provided calculated recoveries that supported the Metals X data set, with a mean of 50.3% and a standard deviation of 7.6% (*refer Figure 5*).

Figure 5 – Heap Leach Recovery Distribution Curve (Cyprium Data)
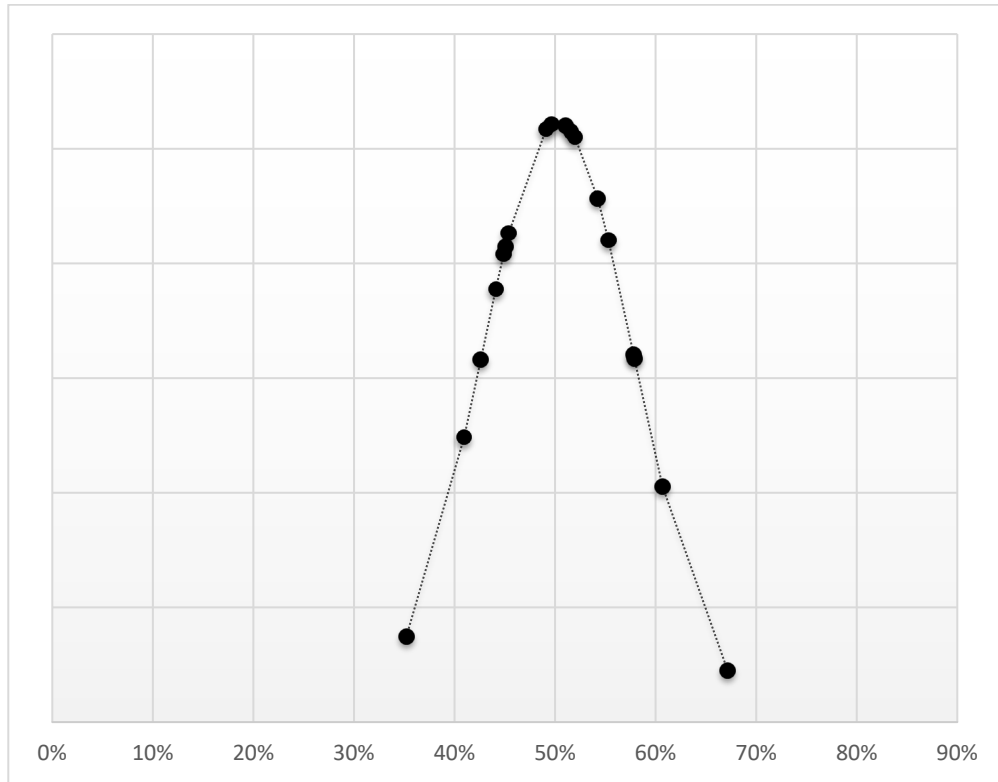
Modifying Factors

Clause 20 of the JORC (2012) Code requires that all reports of Mineral Resources must have reasonable prospects for eventual economic extraction, regardless of the classification of the resource. The Nifty heap leach resource passes the RPEEE hurdle on the basis that the material has already been extracted and stockpiled, and successfully processed in the past. The August 2024 MRE has established the presence of contained copper available for leaching and recovery.

The infrastructure required for processing is present and ready for refurbishment, including the solvent extraction plant and the electrowinning plant. The eastern end of the heap leach pad occurs within and on top of the subsidence zone boundary, however, the subsidence zone is not considered to have compromised the heap leach.

A mining study is not applicable, and metallurgical test work has been completed.

Heap Leach MRE

Nifty Project; Western Australia

Cyprium Metals Ltd

August 2024

1   EXECUTIVE SUMMARY

MEC Mining (MEC) was commissioned by Cyprium Metals Limited (Cyprium) in April of 2024 to complete a JORC 2012 compliant Mineral Resource estimation (MRE) report for the Nifty Heap Leach Project. Indicated and Inferred Mineral Resources are shown in **Table 1-1**. The grade tonnage curve is shown in **Figure 1-1**. These figures exclude mineralised waste that is not compliant with JORC 2012 MRE reporting as discussed in **Section 17**.

Table 1-1: MEC August 2024 Nifty Heap Leach Mineral Resource Estimate by Resource Category at a zero Cu ppm cutoff grade, no top-cut applied

Resource Category	Source	Volume (m³)	Density (t/m³)	Tonnes (t)	Cu (ppm)	Cu tonnes (t)	% Metal
Indicated	Stockpile from drilling	6,253,350	1.70	10,636,950	4,100	43,580	80.6%
Inferred		1,198,330	1.70	2,038,350	5,140	10,470	19.4%
TOTAL		**7,451,680**	**1.70**	**12,675,300**	**4,260**	**54,050**	**100.00**

MRE are reported above a zero Cu ppm economic cutoff with no top-cut. Mineral Resources are rounded to reflect they are an estimation, numbers may not sum due to rounding. Excludes mineralised waste.
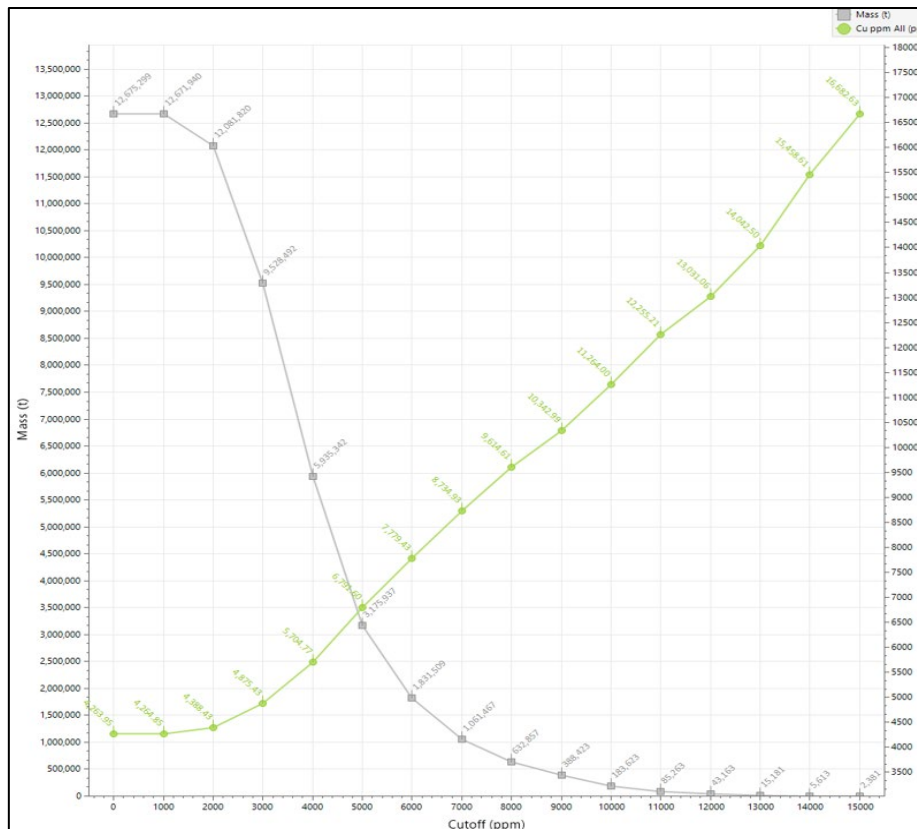

Figure 1-1: Grade tonnage curve MEC August 2024 heap leach MRE, Indicated and Inferred Mineral Resources

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2   INTRODUCTION

MEC Mining (MEC) was commissioned by Cyprium Metals Limited (Cyprium) in April of 2024 to complete a JORC 2012 compliant Mineral Resource Estimation (MRE) report, for the Heap Leach stockpiles at the Nifty project.

The only credit element for the Nifty project is copper (Cu).

2.1   SCOPE OF WORK

The scope of works provided by Cyprium was for MEC to prepare an updated MRE and report the MRE in accordance with the JORC 2012 reporting guidelines. This included the following:

- Data preparation,
- Classical statistics,
- Compositing, data assignment, and blank Ore Block Model creation,
- Search ellipsoid designs,
- Grade estimation: separate estimations for sonic drilling program and historic RC drilling programs, and comparison of estimation results,
- Tonnage estimation,
- Model validation, global and local,
- QAQC data compilation and analysis,
- Risk assessment summary and Mineral Resource classification,
- Compile Mineral Resource estimation statement tables,
- Comparison with previous Mineral Resource estimate,
- JORC report writing inclusive of Table 1.

The scope of work also included commentary on the 2014 estimate of the heap leach stockpile by Jeff West, which was derived from metallurgical balance calculations and production records.

2.2   ABOUT MEC MINING

MEC Mining is a global technical consulting firm specialising in mining services capabilities across the mining life cycle from early-stage exploration through development, mine planning, onsite management, to mine closure and rehabilitation.

3   STATEMENT OF COMPETENCE

Mr Dean O'Keefe has 35 years' experience in mining business development, and exploration/mining, with over ten years in operational roles in mines. Mr O'Keefe was Consulting Group Manager of a global consulting company for over 15 years. Mr O'Keefe is Manager of Resources for MEC Mining.

Mr O'Keefe is a qualified, geologist, geostatistician, and Quarry Manager (WA Quarry Managers Certificate of Competency #488). Mr O'Keefe is a Fellow of The Australasian Institute of Mining and Metallurgy (AusIMM, #112948) and has been involved in, or signed off on, more than 150 mineral or mining assessments to local and international standards.

4   FEES

MEC Mining will be paid a professional fee plus reasonable expenses for the preparation of this report. The fee is not contingent on the conclusions set out in the report, or the conclusion of any proposed transaction.

5   INDEPENDENCE

MEC Mining does not at this time have a business relationship with Cyprium or companies associated with Cyprium that may potentially be construed as being prejudicial to the ability of MEC Mining to give an unbiased and independent summary and assessment. At this point in time, there is no present agreement, arrangement or understanding that MEC Mining will at any time in the future undertake any assignment for Cyprium or any company or organisation associated with them.

MEC Mining assumes no responsibility whatsoever to any person other than the Company in respect of or arising out of the contents of this report. Should others choose to rely in any way on the contents of this report they do so entirely at their own risk.

6   LOCATION

The Nifty Project is located on the western edge of the Great Sandy Desert in the northeastern Pilbara district of Western Australia. The project is ~350 km SE of Port Hedland, ~200 km ESE of Marble Bar and ~65 km west of Telfer (**Figure 6-1**).

Figure 6-1: Nifty project location

7   TENEMENTS

The Nifty copper project is 100% owned by Cyprium Metals Limited and is situated within tenement M271SA (**Figure 7-1**).

MEC notes that the tenure is currently live and is due to expire 2 September 2034.
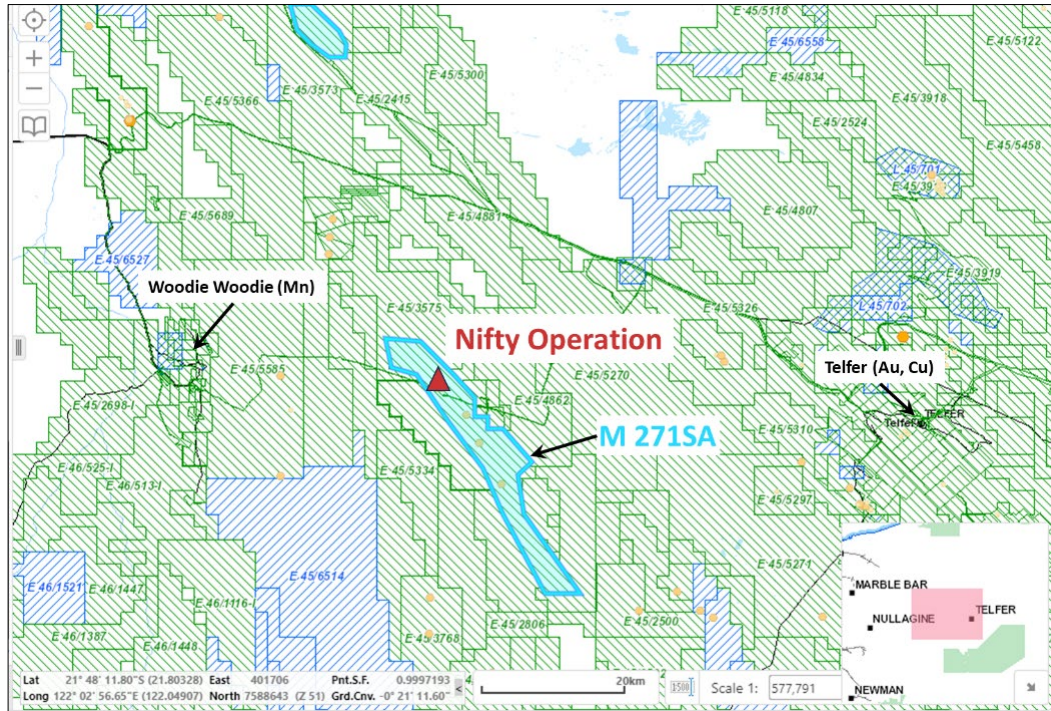
Figure 7-1: Nifty tenements

8   HEAP LEACH OPERATIONS HISTORY

The historic Nifty Heap Leach operations commenced in 1993 when the site was operated by WMC Limited (WMC). Stacking continued until the latter part of 2008, and leaching ceased in 2009 when the project was put on care and maintenance by Aditya Birla Minerals Ltd (Aditya Birla). Cyprium Metals Limited (Cyprium) acquired the Nifty project on 31st March 2021.

The location of the heap leach stockpiles at Nifty, along with key infrastructure, is shown in **Figure 8-1** (source: Nifty Copper SX-EW Restart Study[3]).

Figure 8-1: Nifty Minesite and key infrastructure (source: Nifty Copper SX-EW Restart Study)

There are approximately 60 stockpiles over 6 pads (**Figure 8-2**, source: Nifty Open Pit Scoping Study[2]). The dimensions of each pad are ~350m long, 60-80m wide and 4-9m high[2]. They were stacked in a westerly direction, starting with pad 1, so the age decreases to the west.
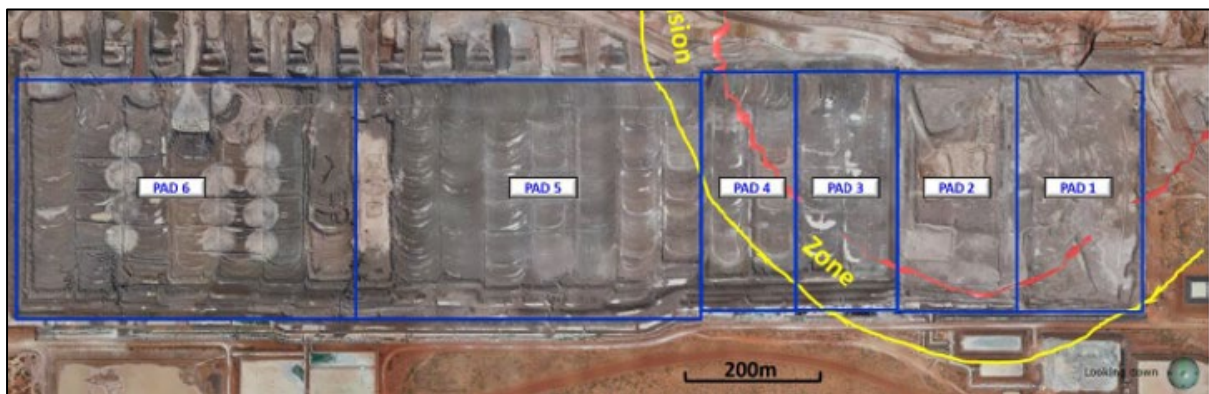
Figure 8-2: Pad locations and planned open cut pit shell outline (source: Nifty Open Pit Scoping Study[2])

From east to west the copper content decreases and changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tend to leach better, with superior copper recovery[3].

8.1 Remaining Contained Copper

There have been multiple approaches to estimating the remaining contained copper in the heap leach stockpiles:

- A 2014 metallurgical balance calculation by Jeff West (GHD) estimates 91,140 tonnes[4].
- A 2015 Mineral Resource Estimate by DataGeo based upon significant drill data, estimates ~59,000 tonnes of contained copper, within Inferred and Indicated category Mineral Resources (at 0ppm Cu cutoff grade)[5].
- A subtraction calculation in 2020 by Metals X Ltd, which reported that 296,000 tonnes of contained copper was originally stacked, therefore ~77,000 tonnes of Cu should be remaining on the heap leach stockpiles[8].

The approaches are summarised in **Table 8-1**.

Table 8-1: Estimates of remaining contained Cu on heap leach stockpiles

Company	Year	Estimation approach	Estimate of heap leach contained Cu (tonnes)
GHD	2014	Metallurgical balance calculations	91,000
Aditya Birla/DataGeo	2015	Mineral Resource Estimate	59,000
Metals X Ltd	2020	Simple subtraction calculation	77,000

9   SITE VISIT

The Competent Person ("CP") for the JORC (2012) compliant 2024 Mineral Resource estimation report is MEC Manager of Resources, Dean O'Keefe. Dean O'Keefe conducted a site visit on February 8, 2024, accompanied by MEC Resource Geologist Issam Digais, and Cyprium Metals General Manager of Geology and Exploration, Peter van Luyt. The CP visited the sites shown in **Figure 9-1**.

In addition to visiting the pit, the CP also observed the heap leach stockpiles and associated SX-EW infrastructure **(Figure 9-3** and **Figure 9-4**), including the pregnant solution ponds (**Figure 9-2**).

Figure 9-1: Locations of points visited by the CP at the Nifty Project

Figure 9-2: Pregnant leaching solution in pond

Figure 9-3: Solvent extraction plant

Figure 9-4: Electrowinning plant

10   DATABASE

10.1   Overview

The heap leach piles have been drilled over four drilling campaigns for the purpose of supporting an MRE to establish tonnage and grade. Aditya Birla completed three separate RC drilling programs (2007, 2014, 2015). In 2021 a sonic drilling program was completed by Cyprium. Also relevant to this MRE, in 2008, 15 costeans were dug for geotechnical purposes.

Drilling data was provided to MEC in the form of a Microsoft Access database for the RC drilling, and Excel files for the sonic drilling.

All programs are summarised below:

- 2007: The 2007 campaign targeted Pads 2, 3, and 4, with 124 RC drillholes, and reported a single composite total copper assay per drillhole. MEC has been informed that the drilling was conducted on areas of the leach pad which were no longer producing (prior to overall production ceasing in 2009).
- 2008: 15 costeans were dug in 2008 to a maximum depth of 4m from surface for geotechnical purposes. Six of these were used to collect density information (see **10.9 Density Data**), but no samples were assayed for geochemistry so have not been used in the MRE to estimate grade.
- 2014: The 2014 campaign targeted Pads 5 and 6 with 109 RC drillholes with 1m sampling, assayed for total Cu only. During a site visit on 12 March 2020 the sample coarse rejects for these drillholes were discovered in reasonable condition in a shipping container.
- 2015: The 2015 campaign targeted Pads 2, 3, and 4, with 41 RC drillholes. Samples were at 1m intervals and were tested for total Cu only.
- 2021: A sonic drilling program was conducted in 2021 by Cyprium, targeting pads 3, 4, 5, and 6. This consisted of 24 drillholes sampled at 1m intervals and tested for Ca, Co, Cu, Fe, Mg, Mn, S, and Si.

A map of all the drilling location collars is shown in **Figure 10-1**.
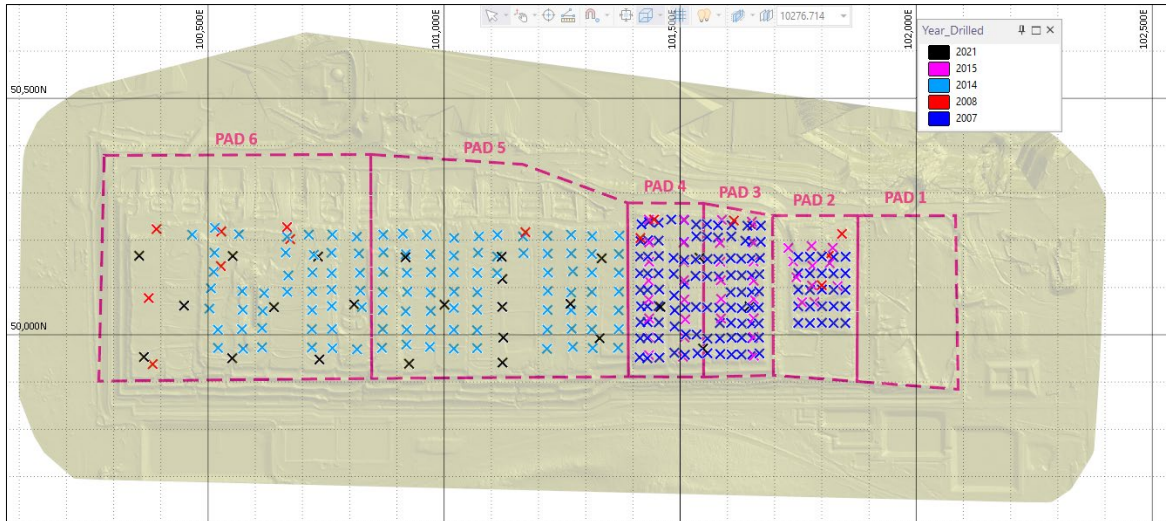
Figure 10-1: Drillhole and costean locations by year

A map showing locations by drilling type is shown in **Figure 10-2**.
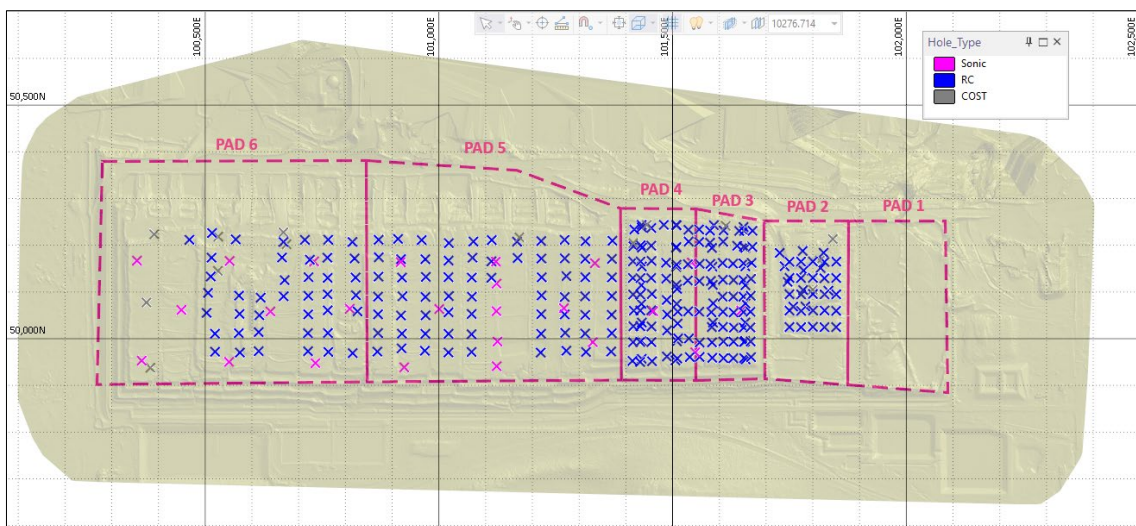
Figure 10-2: Drillhole and costean locations by type

For all drilling programs the drillholes were stopped around 4-5m above the base of the leach pad to prevent penetration of the liners. The pad footprint is approximately 1.8 km by 0.35 km wide which means there is a significant volume of undrilled material at the base[3]. This is likely where the highest grade Cu is located due to precipitation from leaching.

Drilling data was compiled into a single dataset containing information for all drilling programs. This required some standardisation for consistency: for example, for the RC data the Cu assays were reported in percent but were in ppm for the sonic drilling

assays. After compilation, the full database was then validated using tools within Micromine software. Validation checks produced the following findings:

- There were no duplicate hole IDs.
- There were no duplicate collar co-ordinates.
- There were no spurious hole locations (all drillholes are on the leach pad stockpiles).
- All drillholes have an associated orientation and inclination in the survey file.
- All drillholes have associated assay data, except for hole 07NHL1053 (2007 RC drilling program). There are also no assays associated with the costeans, which were conducted for geotechnical and density purposes.
- There are no instances of assays overlapping or extending beyond the EOH depth.

The database consists of 298 drillholes for 4,279.2m. The drillholes, metres drilled, and number of samples by drilling phase is shown in **Table 10-1**. Note that not all drillholes were used in the MRE: this is discussed in **10.10 Drillholes excluded from the MRE.**

Table 10-1: Number of drillholes, metres drilled and number of samples by drilling phase (not all drillholes included in MRE)

Drilling Phase	Number of drillholes	Metres drilled	Number of samples
2007 RC drilling	124	1,867.5	123
2014 RC drilling	109	1,466	1,466
2015 RC drilling	41	588	588
2021 Sonic drilling	24	357.7	495
TOTAL	298	4,279.2	2,672

10.2 Collar Data

The co-ordinate system used for the collar locations is the local Nifty mine grid.

The drillhole spacing for the 2007 program was ~25mE x 50mN. In 2014 it was 50m x 50m, and in 2015 it was 100mE x 50mN. The combined RC drilling covers leach pads 2 to 6. The sonic drilling was drilled at ~200mE x 200mN spacing across leach pads 3 to 6 (**Figure 10-2**).

The 2014 and 2015 RC drilling programs were completed by Mount Magnet Drilling. There is no record of the drilling contractor used for the 2007 RC drill program. The 2021 sonic program was completed by Edge Drilling (WA) Pty Ltd.

A Trimble R8 GPS RTK system was used to survey the collar locations for the 2014 and 2015 drillholes[7, 9], but there is no record of the survey method for the 2007 RC collar locations. The sonic drillhole collar locations were surveyed by DGPS by a registered Cyprium site surveyor.

10.3   Topographical survey elevations compared to drillhole collar elevations

The heap leach stockpile survey wireframe was generated by a Cyprium site surveyor in May 2022 from a drone survey. Collars were registered onto this wireframe in Micromine prior to any modelling or estimation. The mean difference between the collar RL and topography RL was 0.96m and the maximum was 7.03m (**Table 10-2**). Differences ≥3m are associated with drillholes which were not used in the MRE (see **10.10 Drillholes excluded from the MRE**). The RL of the collars is acceptable to the CP.

Table 10-2: Statistics on elevation difference between collar and heap leach surface

Statistic	Value
Mean (m)	0.96
Median (m)	0.31
Standard deviation	1.20
Minimum (m)	8.29×10^{-4}
Maximum (m)	7.03

10.4   Stockpile base elevation estimate

As this MRE is for a heap leach stockpile, the base of the stockpile is also an important consideration. Cyprium could not locate the original data, therefore provided MEC with a surface constructed from the toe of the heaps. Some of the drillholes were deeper than this surface, and the perimeter was too small to intersect the topography wireframe, therefore it was edited prior to use in the MRE:

- Where a drillhole intersected the base surface, the surface was projected to 3m below the end of that drillhole.
- Where projection was required in closely spaced drillholes, the lowermost point was selected and used.
- The perimeter of the base wireframe was expanded such that it would intersect with the surface wireframe and could then be used to create a solid to constrain the block model.

10.5 Downhole surveys

All drillholes were drilled vertically, and the drillhole races are planned only (there are no downhole gyro surveys). Given the drillholes are vertical across all stockpiles, and shallow, there is confidence in the trace locations.

10.6 Sampling

For the 2014 and 2015 RC drilling programs, and for the 2021 sonic drilling program, sampling was conducted at 1m intervals. However, the 2007 RC program comprised a single composite sample for the entire drillhole.

Statistics of sample interval lengths across all drilling programs are shown in **Table 10-3** and a histogram showing the population distribution in **Figure 10-3**. The dominant sample interval of 1m was selected as the compositing sample interval for estimation. In the previous MRE, some statistical analysis was conducted on the impact of using a composite interval of 1m versus 2m but concluded that any statistical differences were immaterial[5].

Table 10-3: Sample length statistics across all drilling programs

Statistic	Value
Mean (m)	1.60
Median (m)	1
Standard deviation	3.10
Minimum (m)	0.2
Maximum (m)	18
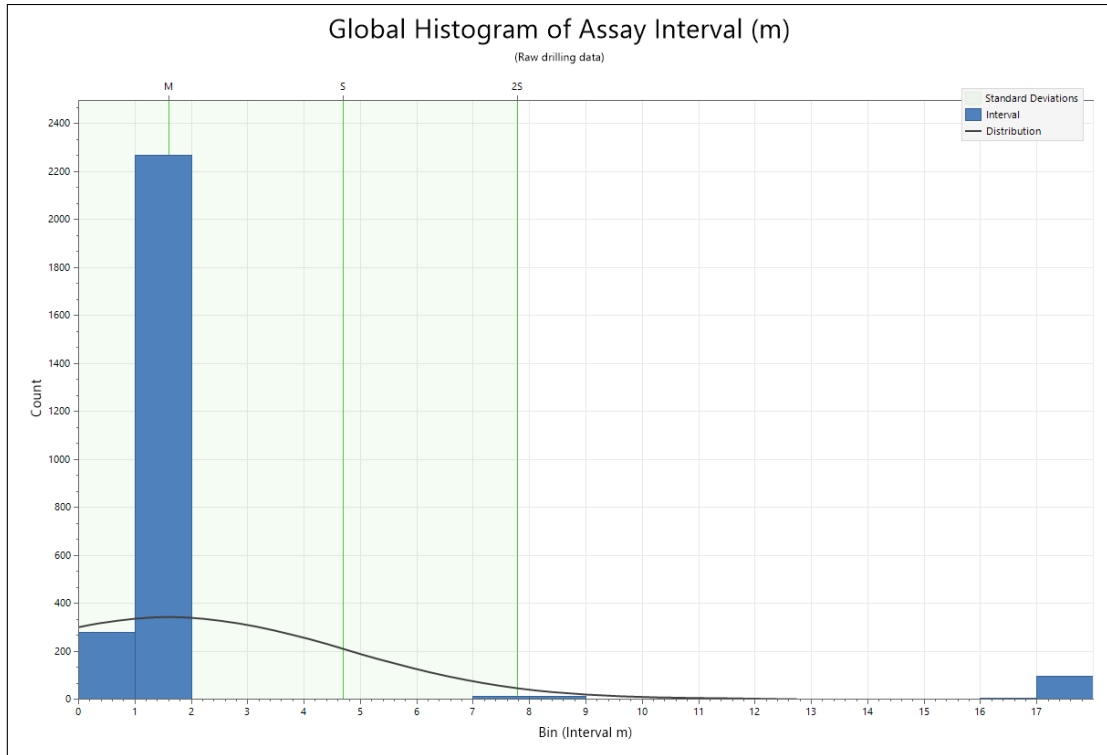
Figure 10-3: Histogram of sample interval length across all drilling programs

The sample collection method for the 2007 RC drilling program has not been documented. Sample collection for the 2014 and 2015 RC drilling programs was via a rig mounted cone splitter attached to the cyclone. Two samples were collected for every 1m interval and labelled A and B. Sample A was sent to the laboratory and sample B was retained[10]. For the 2021 sonic drilling program, single samples were collected.

10.7   Assay Data

Due to multiple phases of drilling and different operators, sample collection, preparation and analytical method is not consistent for all samples contributing to the MRE.

The 2007 RC drilling samples were sent to a laboratory identified as 'IML' which, according to a 2014 report from Aditya Birla, was Inter Mountain Laboratories, Wyoming, USA, which specialises in soil and leaching studies for mining and reclamation[10]. The samples were split into three size fractions, and each analysed for Cu and Cu only. The total Cu value for the whole sample was calculated as a weighted average of the results from the three size fractions[10]. Three analytical methods are listed but it is not clear which approach was used for which size fraction. The three methods are 4-Acid AAS for primary sulphide, copper in oxide by AAS after H_2SO_4 leach, and cyanide soluble copper[10].

The 2014 and 2015 RC program samples were analysed by ALS laboratories in Perth using a 4-Acid ICPOES method (ME-ICP62) for 16 elements: Ag, As, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, Pb, S, Sb, and Zn. Results exceeding the detection limit of the method were re-analysed with an ore-grade method, e.g. Cu-OG62 for copper which is a 4-acid digest, but with a variable finish depending on the element[10].

For the 2021 sonic program, samples were analysed by ALS in Perth by XRF for Cu, Ca, Co, Fe, Mg, Mn, S, and Si. In May 2024, 176 samples from 18 of the 24 sonic drillholes were re-submitted for analysis to Bureau Veritas Laboratories in Perth. These samples were analysed using a 4 acid digest then ICP-OES for Ca, Fe, Mg and S, and ICP-MS for Cu. The samples used to support the MRE were the samples analysed by XRF, as this was a complete suite for all the sonic drillholes.

10.8 Lithology Data

Given the drilling programs were conducted on stockpiles and not in situ material, no lithological information was recorded in the drillhole database. However, according to the Nifty Copper SX-EW Restart Study Report[3], from east to west the material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tend to leach better with superior copper recovery[3].

Waste material was used as a blend in some of the heap leach stockpiles to aid percolation during leaching. This included "low grade silicified carbonate and even barren rock" (Nifty Copper SX-EW Restart Study Report[3]).

10.9 Density Data

The density used in the previous (2015) MRE was based on dry cone density tests from six 2m x 2m x 1m pits excavated during 2008 from the surface of the leach stockpiles (**Figure 10-4**). The mean of these 6 samples was calculated and used as a nominal dry density for the estimate. This value was 1.69 t/m³.

Figure 10-4: Location of costeans where samples were sourced for cone density testing

The test locations were sparse considering the area of the footprint, and only penetrate to 1m depth. This will not be representative of the density at depth which will be higher due to compaction. As a result, the 2015 MRE may have underestimated the tonnage. Mining Plus review of the 2015 MRE also comments that the density information is sub-optimal[7].

A different approach was taken for the current (2024) MRE, where a nominal dry density value was back calculated from the recent topographic survey of the heap leach stockpiles. The density was calculated as follows:

1. Create a solid from the intersection of the surveyed surface of the stockpiles and the base.
2. Clean up the triangulation using a perimeter string.
3. Validate the resulting triangulation and fix any errors, such as overlapping triangles.
4. Calculate the volume of the triangulation (= 10,082,450m^3)
5. According to the Jeff West report, the stacked ore plus waste on the heap leach stockpiles is 17,157,633t @ 5,300ppm Cu[4]. The calculated density is therefore:

$$Density = \frac{17,157,633}{10,082,450} = 1.701 \; t/m^3$$

The nominal dry bulk density used in this MRE was therefore 1.701 t/m^3.

The volume used in the 2015 MRE was 8,720,000m³, but the previous authors noted the triangulation was not closed and therefore did not account for a significant amount of volume at the edges of the stockpiles.

It was not appropriate to use any density measurements from the in situ MRE of the Nifty deposit from which the material is sourced, as the stockpiled material has already been mined and partially leached, and contains blended waste material.

10.10 Drillholes excluded from the MRE

The 2007 RC program drillholes consist of a single assay per drillhole, which does not give appropriate representation of the variability in grade with depth. There is also little information available on the drilling program in general, including sampling approach, sample preparation, and analytical technique. Additionally, there is a lack of QAQC data. As a result, 114 out of the 124 drillholes from this program were excluded from the current MRE. Where drillholes have been excluded, there is sufficient support from drillholes in other programs.

Figure 10-5 shows the location of the 2007 RC drillholes used to inform the MRE (green), drillholes from all other programs used to inform the MRE (blue), and the 2007 RC drillholes that were excluded (red).
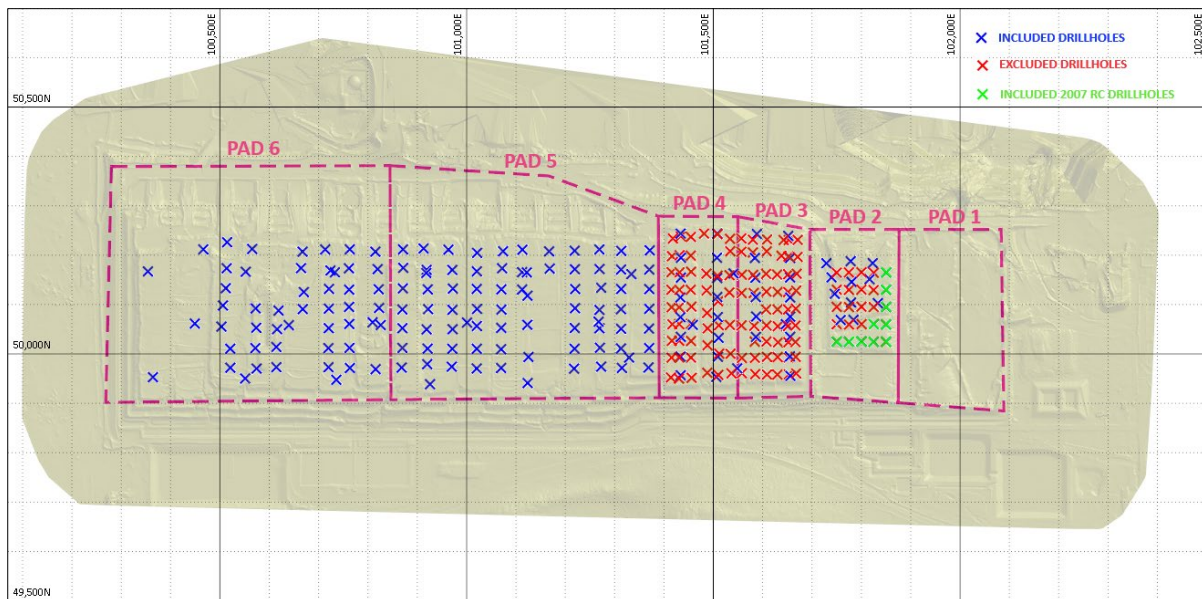
Figure 10-5: Location of excluded and included drillholes used to support the current MRE

The 10 drillholes from the 2007 RC program that were used to inform the MRE were retained on the basis that there is no support from other drillholes at the periphery. They also only inform an Inferred Resource Category (for further detail see **12.7 Classification**).

11   QAQC

Supporting QAQC data is available for the 2014 RC drilling program in the form of standards, blanks, laboratory repeats, and re-assay of pulps by an umpire laboratory (though the data for the latter is no longer available).

For the 2021 sonic drilling program where samples were analysed by XRF, QAQC is available in the form of standards. The re-assays by ICP-MS and ICP-OES have associated standards, blanks and repeats, but these samples were not used for the Mineral Resource estimate. They have however been used as umpire laboratory analytical results to assess assay bias (see **11.6 Assay bias**).

The other drilling programs do not have supporting QAQC data.

Figure 11-1 is a map showing the locations of drillholes used in the current MRE that are supported by QAQC data.
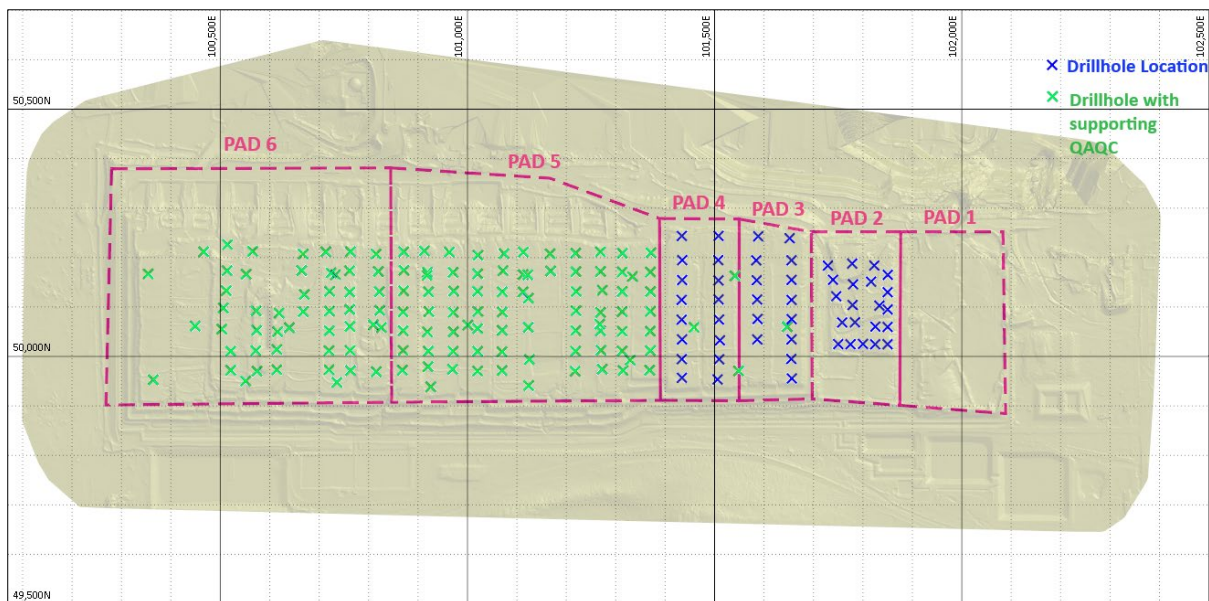
Figure 11-1: Drillhole locations with supporting QAQC data

11.1   Sample recovery

There is so sample recovery information associated with any of the drilling programs, however there is reference to an average sample weight of 1.8kg across the 2014 and 2015 RC drilling samples, but the raw data is no longer available for verification[10]. There is general commentary in the historic reports that samples were dry.

11.2 Assay precision

Precision is a measure of the reproducibility of a result when using the same process. For assay precision, an additional assay from the same pulp by the same laboratory, is compared to the original.

Laboratory repeat data for 105 samples is available for the 2014 RC drill program. The mean of the original samples is 2,428 ppm Cu, and the mean of the repeat samples is 2,448 ppm Cu, with a precision of 8.6%. Scatter and Quantile-quantile (QQ) plots of the original Cu grade versus the laboratory repeat are shown in **Figure 11-2**. There are no concerns surrounding laboratory repeats for the 2014 RC drill program.
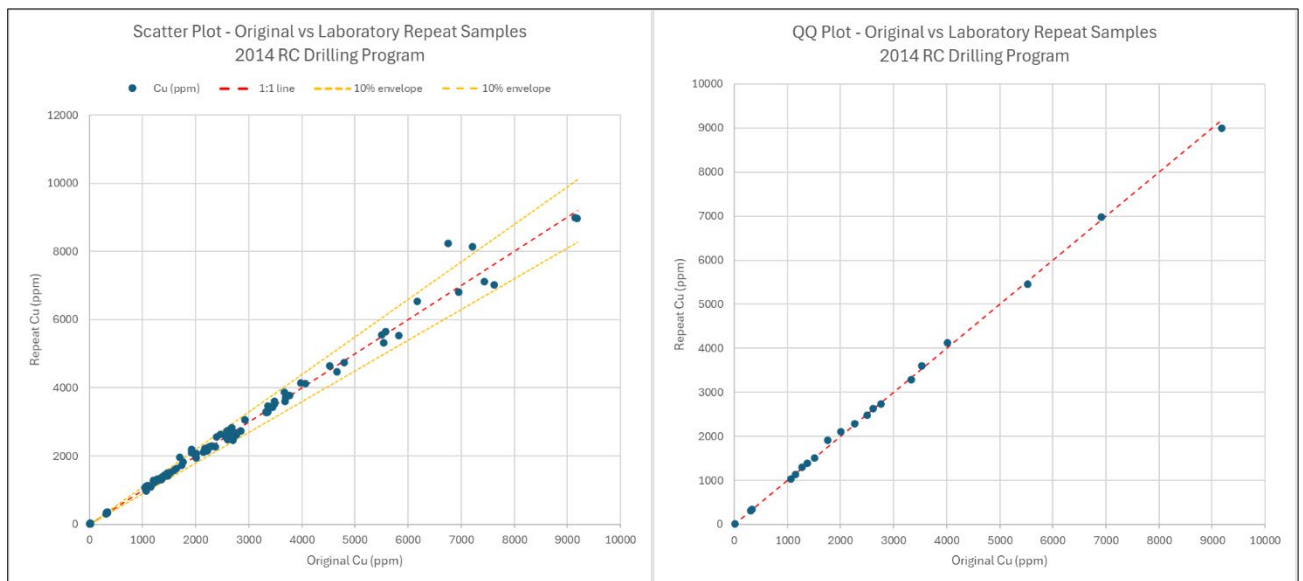
Figure 11-2: Scatter and QQ plots of original laboratory repeat samples for 2014 RC drilling

11.3 Standard results

The performance of the standards (Certified Reference Material) is judged on whether the calculated mean falls on the expected mean, whether the distribution is random around the mean, and whether all points lie within 3 standard deviations of the mean. Samples outside of 3 standard deviations of the mean are considered to have 'failed' the standard checks.

There are 39 standard samples available across 9 different Certified Reference Materials (CRMs) for the 2021 sonic drilling program. The performance of these standards were only analysed if there were ≥5 samples per CRM. For the 2014 RC drilling program, there are 111 samples across one CRM. Standard information is summarised in **Table 11-1**.

Table 11-1: Summary of standards used across 2014 RC and 2021 sonic drilling programs

CRM	Drill Program	Number of samples analysed	Expected Cu value	Lower Limit	Upper Limit	Number of 'failed' samples	'Failed' samples as % of total
OREAS 131a	2014 RC	111	322 ppm	271 ppm	373 ppm	4	3.6
OREAS 902	2021 Sonic	7	0.301 %	0.277 %	0.325 %	1	14.3
OREAS 555	2021 Sonic	7	2.29 %	2.158 %	2.422 %	2	28.6
OREAS 607	2021 Sonic	7	0.0563 %	0.0497 %	0.0629 %	1	14.3
TOTAL		138				11	7.97

In the 2014 drilling program there were 4 'failed' samples, however, the assay results suggest that two of these have been incorrectly labelled as standards when they are in fact blanks (13 and 9 ppm Cu respectively). The rate of standard insertion in the 2014 RC drilling program was 1:13[10]. A Shewhart plot of the results is shown in **Figure 11-3**. The performance of standards for this drilling program is deemed acceptable.
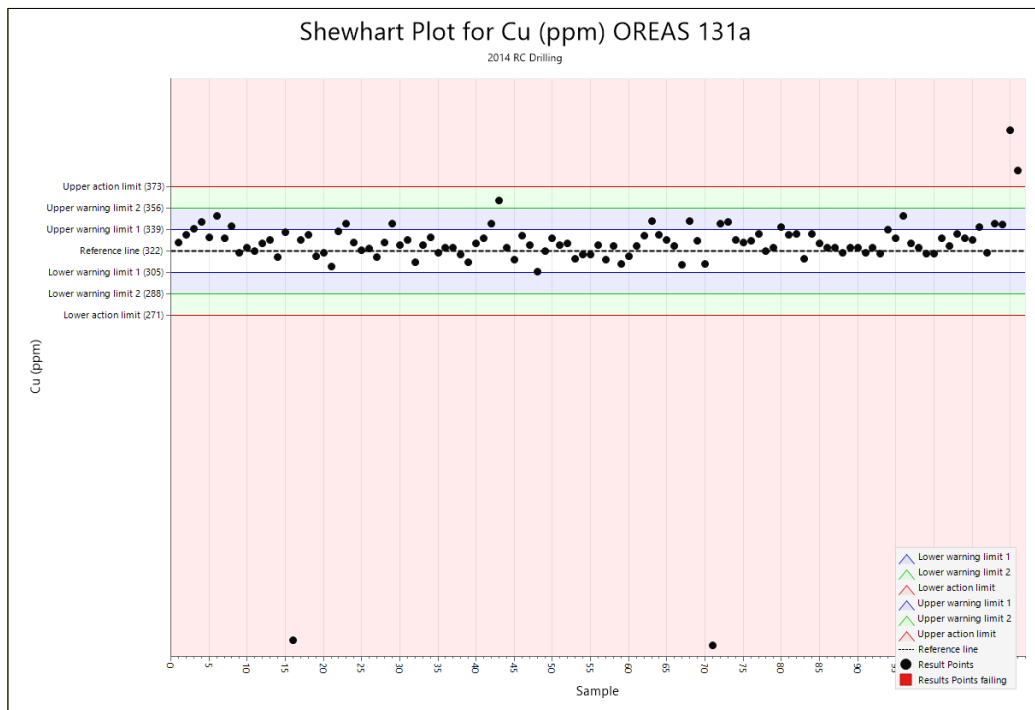
Figure 11-3: Shewhart plot for OREAS 131a, 2014 RC drilling data

Only Standard OREAS 131a had a representative population. This had an acceptable pass rate.

Shewhart plots for all standards and all drilling programs (where available) are provided in **APPENDIX 2: Shewhart plots of standard results**.

11.4 Blank results

Blank samples with no mineralised content are routinely submitted to determine if there is any unexpected grade increase resulting from the sample preparation and analytical processes which may have eventuated from poor laboratory hygiene and sample cross contamination.

123 blank samples are available for the 2014 RC drilling, with an insertion rate of 1:13[10] and a mean Cu grade of 12.6 ppm. The source of the blank material is not provided. 11 of the samples reported below detection limit for Cu (<1ppm). One sample (14NHL0094 BLANK) was excluded due to suspected incorrect labelling as blank material. The performance of blanks was deemed acceptable for this drilling program.

11.5 Duplicate results

Field duplicates are obtained from splits of the same sample interval. Duplicates may reflect the total errors inherent in the theory of sampling, plus the nugget factor, which is the natural variance in grade at short distance.

There is no field duplicate data available for any of the drilling programs, however the 2015 MRE report states that 150 field duplicate samples were collected as part of the 2014 and 2015 RC drilling programs[5], and that scatter plots showed acceptable precision and the QQ plots showed no obvious bias. A 2014 Aditya Birla report also references the field duplicate data and states that they were collected at a rate of 1:13[10]. The original data is no longer available to verify this.

11.6 Assay bias

An Umpire laboratory can be used to check if there is a bias in analytical results as compared to the primary laboratory. The means of the two populations can be compared, as well as the distributions using QQ plots to determine differences at grade ranges.

A 2014 report from Aditya Birla states that 70 randomly selected pulps from the 2014 and drilling originally analysed by ALS were sent for re-analysis to Genalysis Laboratories. The data is no longer available so this cannot be verified, however the report states the mean Cu grade from the Genalysis samples was 0.31% and from ALS

was 0.30%[10]. There is no baseline bias apparent between the two laboratories. The scatter plot from this report is shown in **Figure 11-4**.
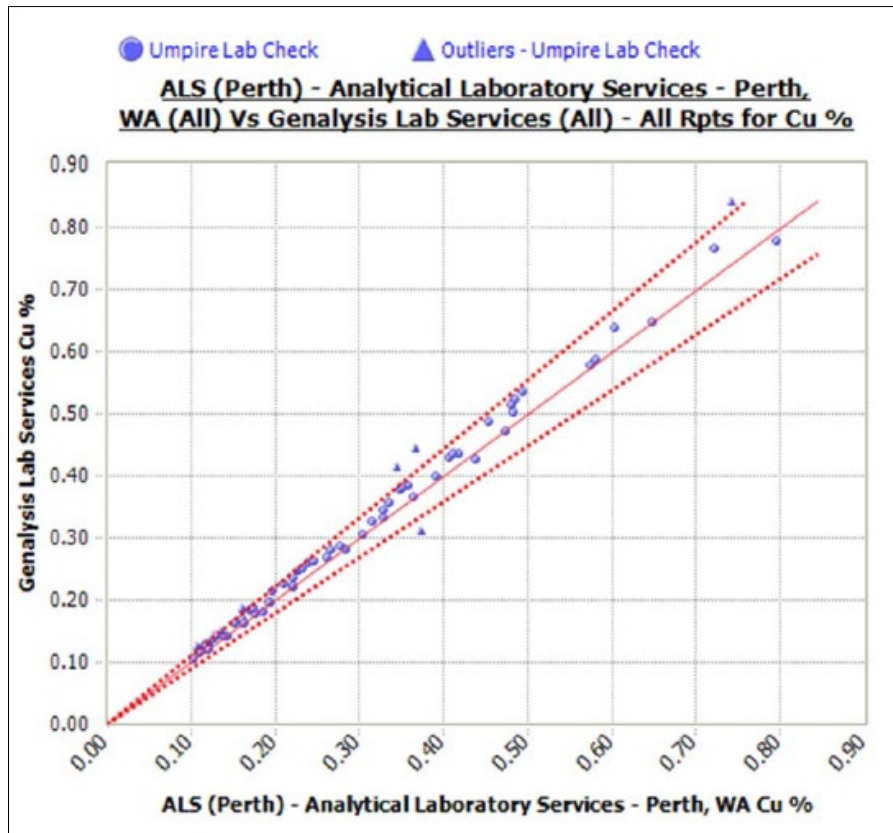
Figure 11-4: Scatter plot of umpire analysis for 2014/2015 RC drilling program samples[10]

Samples from the 2021 sonic drilling program were re-assayed by ICP-MS (Cu) and ICP-OES (Ca, Fe, Mg and S) by Bureau Veritas laboratories. The original samples were assayed by XRF by ALS laboratories. The sample intervals for the original samples are different to the re-assayed samples, therefore the original samples were length weighted to account for any bias associated with sample length. The mean grade for the original samples analysed by ALS is 4,200ppm Cu, and the mean grade for the re-assayed samples by Bureau Veritas is 3,900ppm Cu. 176 samples were compared. A scatter plot comparing the analyses is given in **Figure 11-5** and a QQ plot in **Figure 11-6**. The QQ plot shows a slight positive bias when comparing the ALS (original) results to the Bureau Veritas (re-assay) results at grades above approximately 0.55%. This could be attributed to the different analytical methods used by the two laboratories, and as such the result from the umpire checks is acceptable.
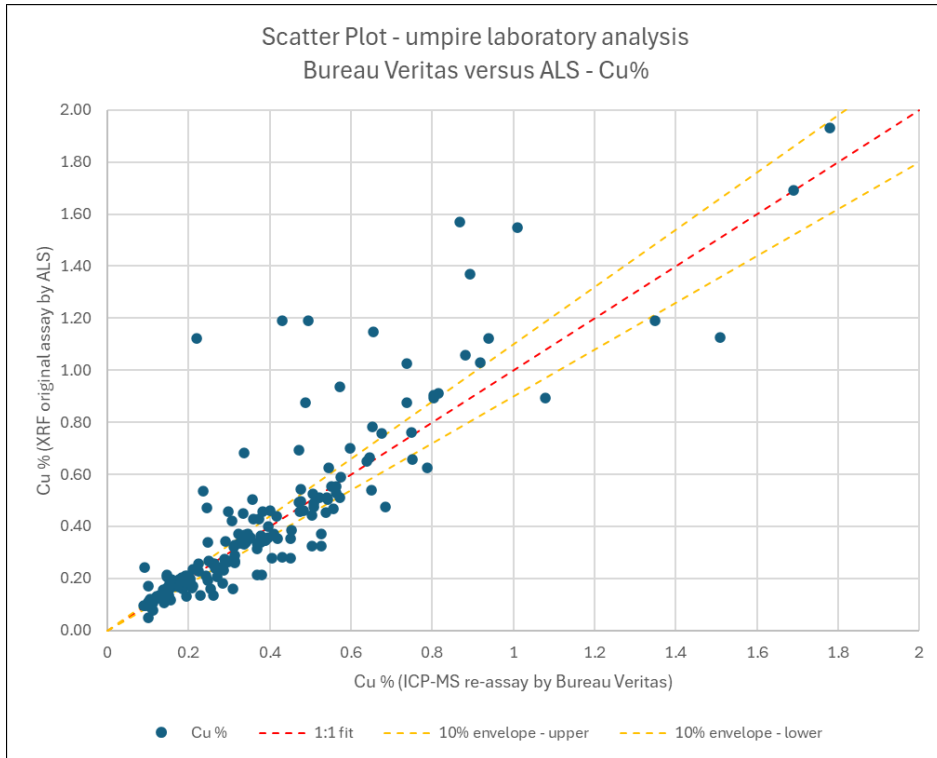
Figure 11-5: Scatter plot - umpire laboratory analysis – Bureau Veritas versus ALS (Cu%)
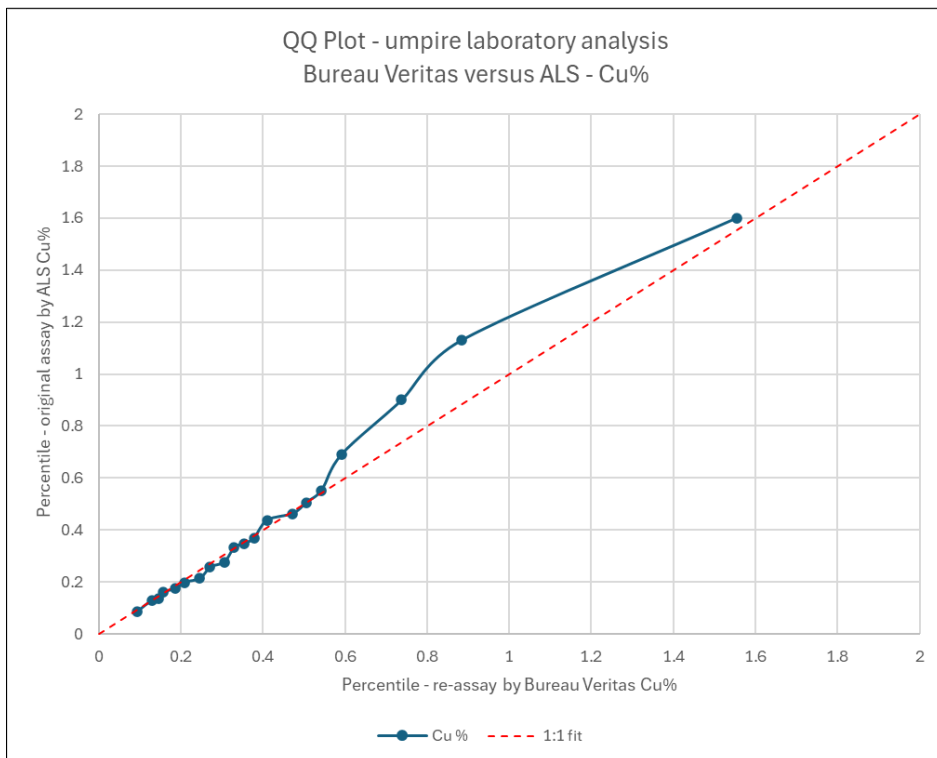
Figure 11-6: QQ plot - umpire laboratory analysis – Bureau Veritas versus ALS (Cu%)

12   MINERAL RESOURCE ESTIMATION

12.1   Methodology

RC and sonic drillholes were used for the grade estimation, however the majority (114 out of 124) of the drillholes from the 2007 RC drilling program were excluded on the basis that they consisted of a single assay composite for the entire length of the drillhole, did not have any supporting QAQC data, and little information is available on how the drilling and sampling were conducted (see **10.10 Drillholes excluded from the MRE**).

The estimate was constrained by wireframes representing the surface and the base of the heap leach stockpiles. The material is not in situ therefore there was no geological or grade continuity. As such, no geological interpretation or domaining was undertaken.

No top cuts were applied, and the Inverse Distance (IDW) method of interpolation was used, with a power of 3 to place greater weighting on local samples. The IDW method was selected on the basis that there is no geological/grade continuity warranting geospatial modelling, such as semi variograms.

12.2   Composite samples

A composite length of 1m was used for estimation based on the dominant raw sample length (see **10.6 Sampling**). Where sample lengths were >1m, they were composited to 1m intervals. For example, drillhole 07NHL0194 which is 7m deep is from the 2007 RC drilling program therefore comprised a single assay for the entire hole. During compositing this was split into 7 individual intervals.

Descriptive statistics were calculated for the raw and composite samples to compare results (**Table 12-1**). Statistics are based only on samples used to support the estimate. Compositing did not have a material impact.

Table 12-1: Composite and raw sample statistics

Statistic	Raw samples	1m composites (intervals >1m not split)	1m composites (intervals >1m split to 1m)
Mean Cu ppm	3,886	4,016	4,053
Median Cu ppm	2,715	3,000	3,040
Standard Deviation	3,573	3,480	3,484
Coefficient of Variance	0.92	0.87	0.86
Minimum Cu ppm	400	577	577
Maximum Cu ppm	37,800	36,300	36,300
Count n	1,646	2,422	2,497

The 2015 MRE report stated that statistical analysis was conducted on 1m versus 2m composites, and the differences were not found to be material[5].

12.3 Ore Block model

A parent block size of 25m east by 25m north by 1m elevation was used for the OBM, with the blocks orthogonal to the grid. The block model was constrained by a solid generated from the intersection of the heap leach surface and base wireframes. For estimation purposes, at the boundary of this solid, the block model was sub-blocked to 5m east by 5m north, by 1m in elevation. Any blocks outside were removed.

The empty block model volume and constraining wireframe volume were compared to ensure the sub-blocking provided sufficient resolution for volume. The constraining wireframe volume is $10,072,379m^3$ and the empty block model volume is $10,082,450m^3$. The difference is acceptable.

A block discretisation of 5 x 5 x 2 was applied.

The block model extents are shown in **Table 12-2** and block model attributes in **Table 12-3**.

Table 12-2: August 2024 OBM extents

	East	North	RL
Minimum	100,212.5	49,812.5	10,280.5
Maximum	102,100.5	50,400.5	10,340.5
Number of blocks	77	25	61

Table 12-3: Block model field attributes

Field Name	Type	Description
EAST	Real	Easting of block centroid
NORTH	Real	Northing of block centroid
RL	Real	RL of block centroid
_EAST	Real	Block dimension along easting
_NORTH	Real	Block dimension along northing
_RL	Real	Block dimension along RL
Cu ppm RC	Real	Cu ppm estimated from RC drilling only
RUN_RC	Numeric	Estimation run number for estimate supported by RC drilling only

POINTS	Short	Number of points (samples) used to estimate the block, in the estimate supported by all drilling
STD_DEV	Real	Standard deviation of estimate supported by all drilling
COUNT	Short	Count of drillholes used in estimate supported by all drilling
AVERAGE DISTANCE	Real	Average Euclidean distance between the block and the points used to estimate it, in the estimate supported by all drilling
CLOSEST DISTANCE	Real	Closest Euclidean distance between the block and the points used to estimate it, in the estimate supported by all drilling
NN_Cu ppm RC	Real	Cu ppm value of nearest neighbour in estimate supported by RC drilling only
NUMSECT	Short	Number of sectors used in estimate supported by all drilling
SECTOR1	Short	Number of samples in sector 1 used in estimate supported by all drilling
SECTOR2	Short	Number of samples in sector 2 used in estimate supported by all drilling
SECTOR3	Short	Number of samples in sector 3 used in estimate supported by all drilling
SECTOR4	Short	Number of samples in sector 4 used in estimate supported by all drilling
Cu ppm Sonic	Real	Cu ppm estimated from sonic drilling only
RUN_SONIC	Numeric	Estimation run number for estimate supported by sonic drilling only
NN_Cu ppm Sonic	Real	Cu ppm value of nearest neighbour in estimate supported by sonic drilling only
Cu ppm All	Real	Cu ppm estimated from all drilling
RUN_ALL	Numeric	Estimation run number for estimate supported by all drilling
NN_Cu ppm All	Real	Cu ppm value of nearest neighbour in estimate supported by all drilling
Res_Cat	Character	Mineral Resource Category
Density	Real	Density in t/m^3
High_Cu_Flag	Short	Value = 1 for all blocks in the mineralised waste material at the base of the stockpile
ResCatColour	Character	Mineral Resource Category colour field for block model visualisation

12.4   Grade estimation

The Mineral Resource has been reported based on an estimate supported by both sonic and RC drilling data (**12.10 Reported Mineral Resource**). Three estimates were completed for comparison:

1. an estimate based on RC drilling only,
2. an estimate based on sonic drilling only,
3. an estimate based on the sonic and RC drilling combined.

Results of all three estimates are stored in different fields in the same block model (**Table 12-3**).

The estimation approach selected was Inverse Distance Weighting (IDW). A power of 3 was selected to give more weight to local samples. The block model was populated by estimating into parent cells only, using two search passes to inform the estimate. All search ellipses were orientated at a 0° azimuth, no plunge and a -90° dip. The search parameters are shown in **Table 12-4**. No grade top cuts were applied.

Table 12-4: Neighbourhood search parameters for August 2024 heap leach MRE

Search pass	Parameter	Estimate using RC drilling only	Estimate using sonic drilling only	Estimate using both RC and sonic drilling
First pass	Ellipse dimensions	100 x 100 x 4	300 x 300 x 9	100 x 100 x 4
	Sectors	Quadrants	One	Quadrants
	Min drillholes	3	3	3
	Min samples per drillhole	2	2	2
	Max samples per drillhole	10	10	10
	Min total samples	3	3	3
Second pass	Ellipse dimensions	200 x 200 x 15	450 x 450 x 18	200 x 200 x 15
	Sectors	Quadrants	One	Quadrants
	Min drillholes	2	1	2
	Min samples per drillhole	1	3	1
	Max samples per drillhole	N/A	N/A	N/A
	Min total samples	3	3	3

Blocks not estimated after the second search were assigned the median composite Cu grade of 3,040 ppm. The median was selected on the basis that the Cu population distribution is positively skewed. This only applied to a small percentage of blocks: 0.04% for the estimates supported by all drilling and RC drilling only, and 1.12% for the estimate completed with just the sonic drilling (**Table 12-5**). The unpopulated

blocks were located at the southeastern periphery of the block model, which is considered to be mineralised waste.

Table 12-5: Percentage of block estimated at each estimation pass

Estimate type	Blocks estimated after first pass		Blocks estimated after second pass		Cumulative total blocks estimated after both passes		Remaining unestimated blocks after both passes	
	Count	%	Count	%	Count	%	Count	%
RC drilling only	14,889	66.5	7,475	33.4	22,364	99.9	9	0.04
Sonic drilling only	19,823	88.6	2,299	10.3	22,122	98.9	251	1.12
All drilling	15,632	69.9	6,733	30.1	22,365	99.9	8	0.04

The majority (114) of the 2007 RC drillholes were excluded from all estimates as they comprise a single assay for the entire drillhole, have no supporting QAQC, and were drilled prior to the end of the heap leach processing in 2009. The 10 drillholes from this program that were included lie on the periphery of all the drilling where there are no drillholes from other programs to support the estimate. They only support Inferred resources (see **12.7 Classification**).

12.5   Bulk density

A bulk density of 1.701 t/m^3 was assigned to every block in the block model.

12.6   Geostatistics

There is no lithological continuity in the heap leach piles which warrants the modelling of spatial continuity. The selected estimation method IDW, does not require geostatistical inputs, such as semi variogram models.

12.7   Classification

Inferred Mineral Resources are defined by the JORC code as follows –

> *An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.[1]*
>
> *An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is*

reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. [1]

Indicated Mineral Resources are defined by the JORC code as follows –

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. [1]

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered. [1]

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve. [1]

As the material would have been mined from Indicated and Measured Resources, it could be argued that the heap leach stockpiles would have a similar level of classification. However, this is not the case due to the following factors:

- Waste materials were used as a blend in some of the stockpiles
- Leaching processes and associated processing will have altered the chemistry and physical properties of the material on the stockpiles.
- There is potential that further oxidation of the material has occurred since being mined, as these stockpiles are up to 30 years old.

An Indicated classification has been given to the block model where the MRE is supported by drilling data from the 2014 and 2015 RC drilling, the 2021 sonic drilling, and QAQC data.

An Inferred classification has been given to blocks supported by the 2007 drilling (which comprise a single assay for the entire hole) and on the periphery of the stockpile where it was not possible to drill due to slope and proximity to the edge.

Pad 1 and the periphery of pad 2 is mineralised waste, due to the lack of drilling data. Where the drillholes do not extend to depth (due to the risk of penetrating the leach pad liners) then the blocks are also considered mineralised waste. The mineralised waste material at the base of the stockpile is believed to be a higher grade. The grade of this material was derived from the metallurgical accounting completed by Jeff West.

An oblique view of the block model coded by Resource classification is shown in **Figure 12-1**, and a cross section view in **Figure 12-2**.
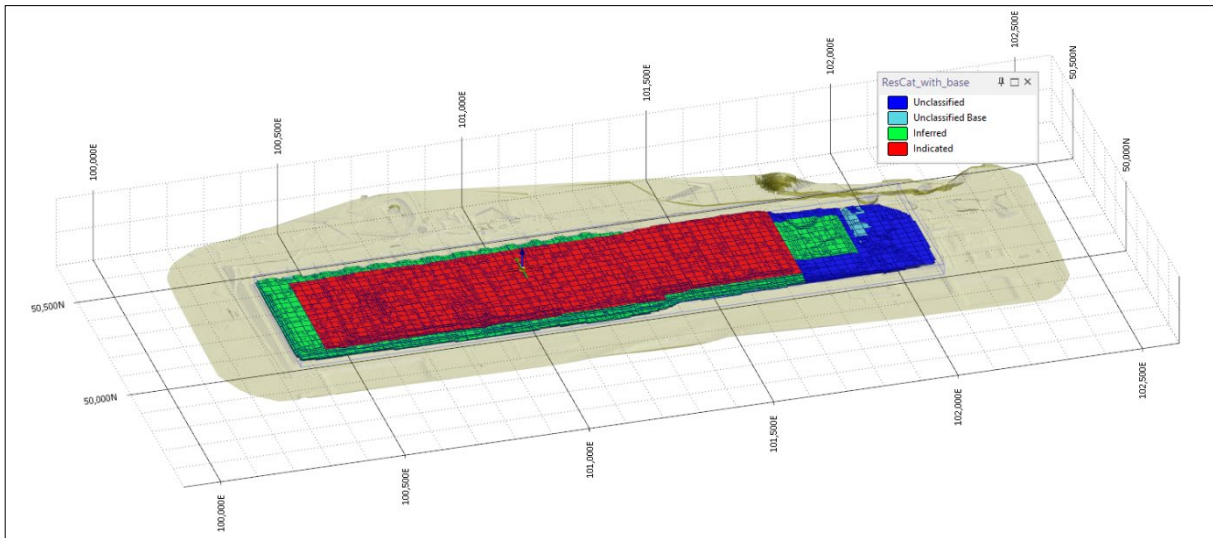
Figure 12-1: Oblique view of August 2024 MRE block model, coloured by Mineral Resource Category
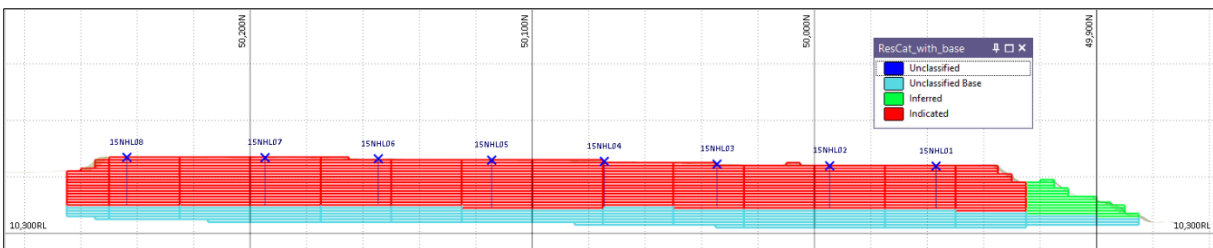
Figure 12-2: Section view (101435mE looking east) of 2024 MRE block model coloured by Mineral Resource Category

Mineral Resource classification was assigned into the block model using wireframes. This was reviewed and manually tidied up where applicable to remove isolated blocks.

12.8 Validation

All ore block models were validated globally and locally at key stages during the construction and estimation processes.

Basic block model checks such as reporting on the minimum and maximum of each attribute were used to ensure all blocks were populated. A check was also performed for overlapping blocks, there were none.

Local validation was completed by comparing the block grade to the drillhole grade. Cross sections are shown in **Figure 12-3** and **Figure 12-4**. There was close correlation between the assay grades and the estimated block grades.
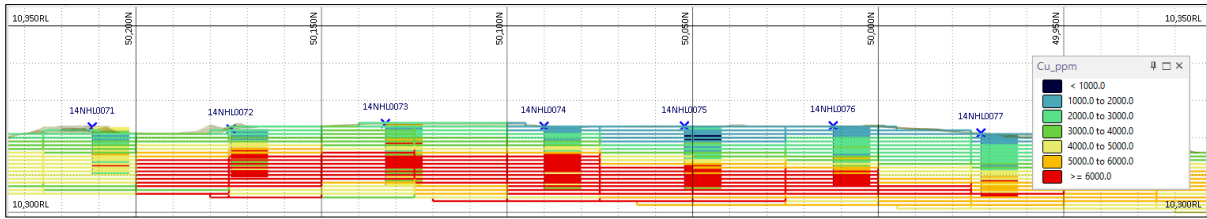
Figure 12-3: Block model validation, 100865mE looking north
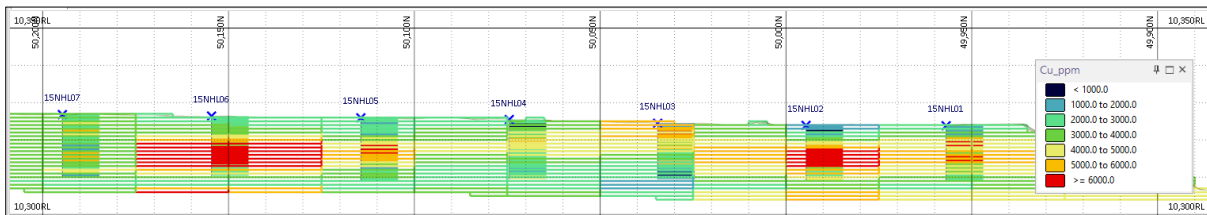
Figure 12-4: Block model validation, 101430mE looking north

Descriptive statistics were calculated to compare the raw, composite and estimated (block) Cu grades for each estimation approach. These are shown in **Table 12-6**.

Table 12-6: Comparison of raw, composite and block grade statistics for Cu (ppm)

Statistic	Raw	Composite	Blocks – RC drilling estimate	Blocks – sonic drilling estimate	Blocks – sonic and RC drilling combined
Mean ppm	3,886	4,053	3,858	4,394	4,892
Median ppm	2,715	3,040	3,578	4,026	4,471
Standard Deviation	3,573	3,484	1,570	1,953	2,016
Coefficient of variance	0.92	0.86	0.41	0.44	0.41
Range	37,400	35,723	21,387	16,366	16,155
Minimum	400	577	1,141	1,050	802
Maximum	37,800	36,300	22,528	17,416	16,957
Count	1,646	2,497	22,373	22,373	22,373

Local validation can be shown visually in the form of swath (or trend) plots, where the number of supporting samples, mean block grade, and mean composite grade at a given 'slice' are plotted on a graph. The swath plots by easting, northing, and RL for the estimate using both RC and sonic drilling data are shown in **Figure 12-5**, **Figure 12-6**, and **Figure 12-7**. The x axis on the swath plot by RL (**Figure 12-7**) shows the Cu grade against depth. This also serves to illustrate the general trend that the Cu grade increases with depth in the leach stockpiles.
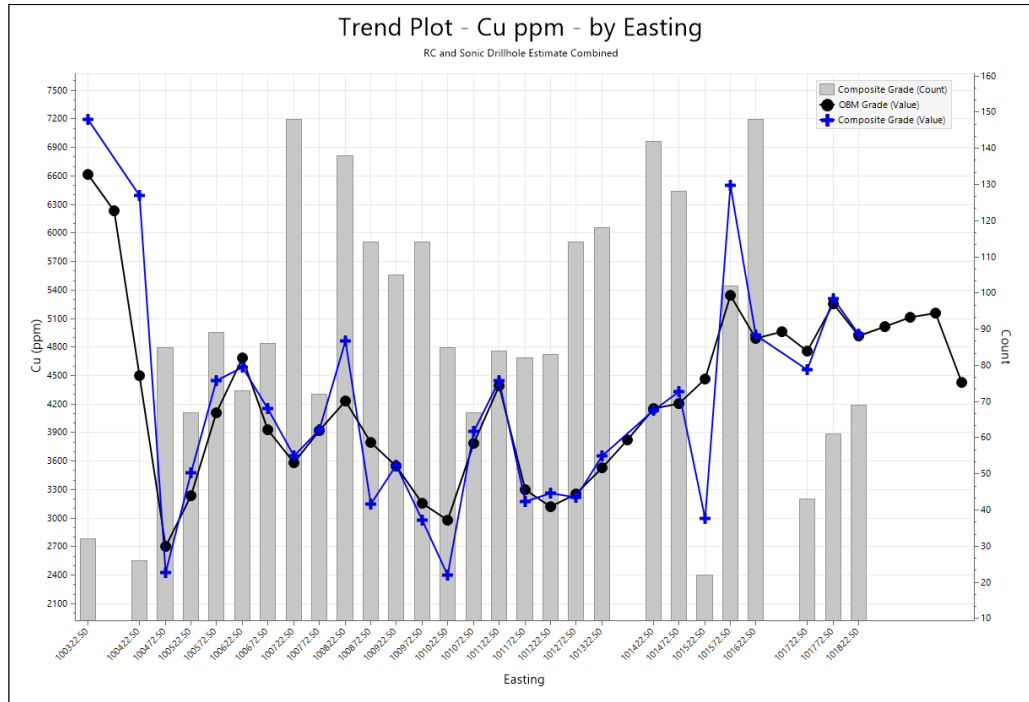
Figure 12-5: Swath plot by easting
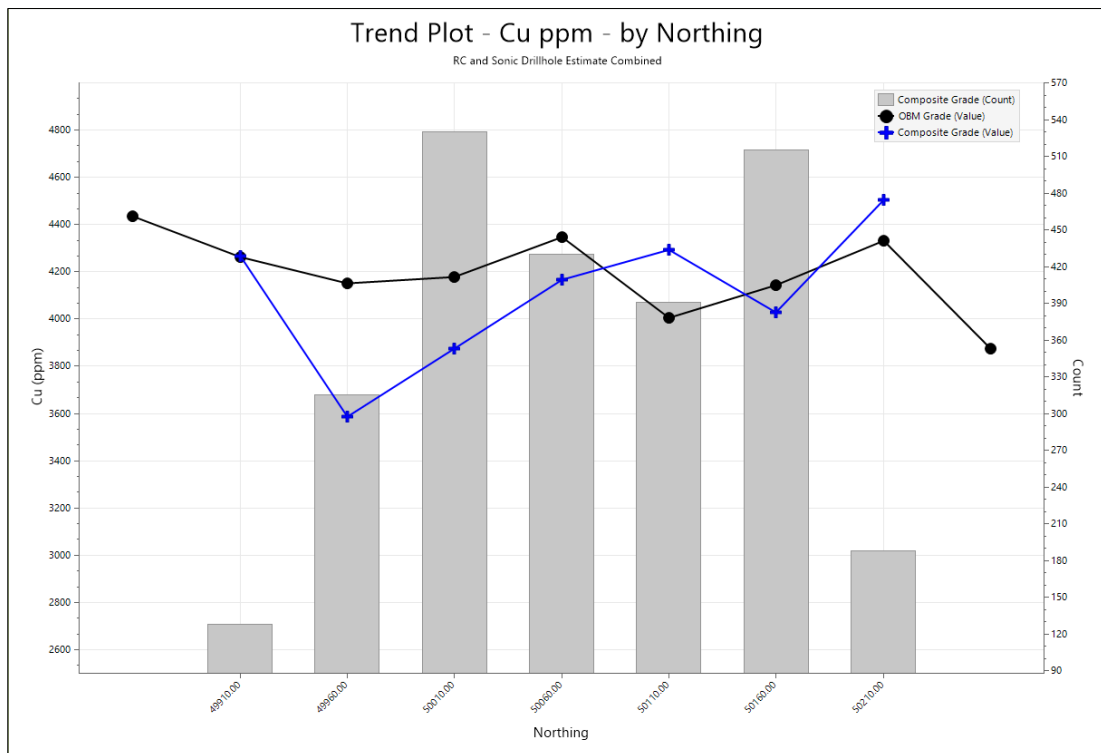
Figure 12-6: Swath plot by northing
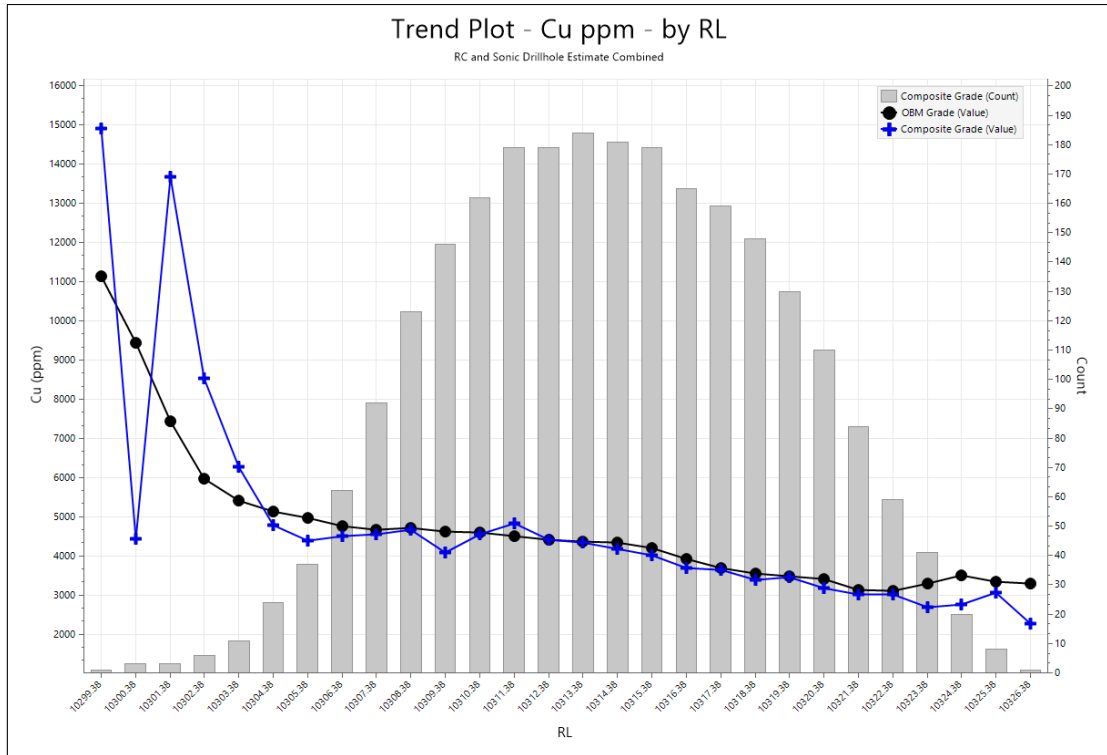
Figure 12-7: Swath plot by RL

12.9 Reasonable prospects hurdle

Clause 20 of the JORC (2012) Code requires that all reports of Mineral Resources must have reasonable prospects for eventual economic extraction, regardless of the classification of the resource. The Nifty heap leach resource passes the RPEEE hurdle on the basis that the material has already been extracted and stockpiled, and successfully processed in the past. The August 2024 MRE has established the presence of contained copper available for leaching and recovery. The infrastructure required for processing is present and ready for refurbishment, including the solvent extraction plant and the electrowinning plant. The eastern end of the heap leach pad occurs within and on top of the subsidence zone boundary, however, the subsidence zone is not considered to have compromised the heap leach.

12.10 Reported Mineral Resource

The MEC August 2024 heap leach MRE is reported above a zero Cu cutoff, and no top cut was applied. The Mineral Resource for Indicated and Inferred material is shown in **Table 12-7**. The grade tonnage curve for the MRE is shown in **Figure 12-8.**

Table 12-7: MEC August 2024 Nifty Heap Leach Mineral Resource Estimate by Resource Category at a zero Cu ppm cutoff grade, no top-cut applied

Resource Category	Source	Volume (m³)	Density (t/m³)	Tonnes (t)	Cu (ppm)	Cu tonnes (t)	% Metal
Indicated	Stockpile from drilling	6,253,350	1.70	10,636,950	4,100	43,580	80.6%
Inferred		1,198,330	1.70	2,038,350	5,140	10,470	19.4%
TOTAL		7,451,680	1.70	12,675,300	4,260	54,050	100.00

MRE are reported above a zero Cu ppm economic cutoff with no top-cut. Mineral Resources are rounded to reflect they are an estimation, numbers may not sum due to rounding. Excludes mineralised waste.

A zero economic cutoff grade is applied as the heap leach MRE is a global estimate. There is no local map of grade variability, the remaining contained copper is estimated within the entire stockpile. There is no selectivity that would permit the application of an alternative cutoff grade. The ore was originally mined from the pit above an economic cutoff and stacked on the heap leach and then copper was recovered from the stockpile, not all copper was recovered, with remaining copper being the subject of the MRE.

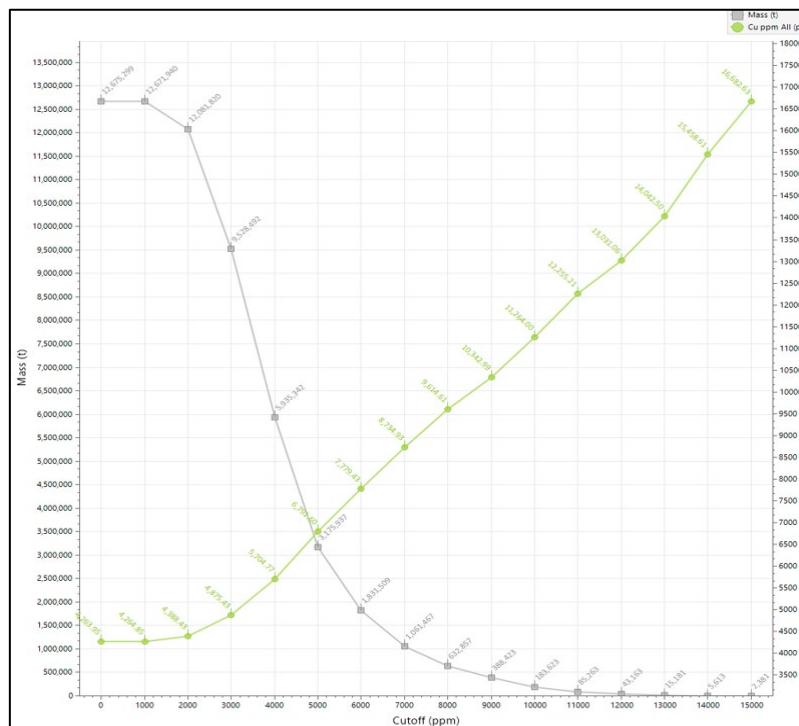**Figure 12-8: Grade tonnage curve MEC August 2024 heap leach MRE- Indicated and Inferred material only**

A comparison of the reported Mineral Resource against the other estimation approaches (using RC drilling data only, and using sonic drilling data only) is shown in **Table 12-8**. Note that this table only compares Indicated and Inferred Mineral Resources. The MRE created from both RC and sonic data was selected for the final

MRE reporting on the basis that it maximises the use of available data and provides the best coverage of the area of the heap leach stockpiles.

Table 12-8: Comparison of August 2024 heap leach Mineral Resource Estimates for Indicated and Inferred material only, at zero cutoff Cu ppm

Resource Category	Tonnes (t)	All drillholes (reported MRE)		RC drillholes MRE		Sonic drillholes MRE	
		Cu (ppm)	Cu tonnes (t)	Cu (ppm)	Cu tonnes (t)	Cu (ppm)	Cu tonnes (t)
Indicated	10,636,950	4,100	43,580	3,870	41,190	4,210	44,780
Inferred	2,038,350	5,140	10,470	3,680	7,490	5,280	10,760
Total	12,675,300	4,260	54,050	3,840	48,680	4,380	55,540

13 COMPARISON WITH PREVIOUS MINERAL RESOURCE ESTIMATE

In March of 2015, Peter Ball of DataGeo Geological Consultants (DataGeo) completed an MRE on the Nifty heap leach stockpiles at the request of Aditya Birla. The MRE is shown in **Table 13-1** (based on the 2007, 2015 and 2015 RC drilling).

The 2015 MRE stated 58,974 tonnes of contained copper, as compared to the 54,110 tonnes of contained copper (Indicated and Inferred Mineral Resources) reported in the 2024 MRE.

Heap leach pad 1 and part of pad 2 were not in included in the 2015 MRE.

Density in the 2015 MRE was based on cone density testing (see **10.9 Density Data**).

Table 13-1: 2015 heap leach MRE, Aditya Birla (Source: Nifty Open Pit Scoping Study[2]) at zero cutoff Cu ppm

Indicated		Inferred		Total	
Tonnes	Cuppm	Tonnes	Cuppm	Tonnes	Cuppm
11,975,000	4,000	2,756,000	4,000	14,731,000	4,000

The 2015 MRE was estimated using IDW to the power 3[9]. There was no continuity analysis performed as the material is not in-situ. No top cuts were applied. A block size of 25m x 25m x 2m was used in drilled areas, and 25m x 50m x 2m elsewhere. The grade was estimated into parent cells and unpopulated blocks were assigned the average composite grade[11].

The classification of the 2015 heap leach MRE was based on pad survey confidence, input data confidence and data density/spacing, with most confidence assigned to the more recent (2014 and 2015) drilling[3, 7].

The 2014 and 2015 drilling areas are classified as Indicated. The 2007 drilling areas are classified as Inferred due to poor quality supporting data and unknown information (such as drilling technique). The periphery of the stockpiles, regardless of drilling program area, was classified as Inferred due to lack of drilling support[7]. Blocks that were not interpolated were classified as Inferred due to being populated with average composite grades.

The differences in approach between the 2015 (previous) MRE and the 2024 (current) MRE can be summarised as follows:

- In the current MRE, where there is no drillhole support at the base of the pads, the Resource Category has been downgraded from Indicated to mineralised waste.
- The minimum number of samples to support an estimate in the current MRE was set to 3 whereas previously it was 1.
- The current MRE incorporates the sonic drilling data which had not been completed at the time of the previous MRE. Also, the majority of the 2007 RC drilling data has been excluded in the current MRE, except at the periphery where there was no other supporting data.
- A new volume was created to constrain the current MRE. A different nominal density value was used (1.701 t/m^3 versus 1.69 t/m^3), which was back calculated using the new volume combined with stacked tonnage sourced from the Jeff West report[4].
- A comparison of both MREs reported at zero Cu ppm cut off is shown in **Table 13-2**. There may be discrepancies in figures due to rounding. The MRE comparison shows a small difference in tonnes and grade, and a -9% difference in contained Cu.

Table 13-2: 2015 and 2024 MRE comparison at zero cutoff Cu ppm

Resource Category	2015 MRE			2024 MRE		
	Tonnes (t)	Cu (ppm)	Volume (m^3)	Tonnes (t)	Cu (ppm)	Volume (m^3)
Indicated	11,975,000	4,000	Not reported	10,636,950	4,100	6,253,350
Inferred	2,756,000	4,000	Not reported	2,038,350	5,140	1,198,330
Total	**14,731,000**	**4,000**	**8,716,719**	**12,675,300**	**4,260**	**7,451,680**

14 HEAP LEACH STOCKPILE

MEC Mining was commissioned in March of 2024 to provide a commentary on the reasonableness of the current Cyprium heap leach stockpile, listed as 17,157,633t @ 5,300ppm Cu.

"The overall grade of the spent ore can be considered as 0.53% Cu with tonnage of 17,157,633. The stacked copper remaining in heap leach stockpile is 91,140 tonnes. These results are documented in or calculated from monthly, and directors reports of 2008 and 2009. Results are metallurgical accounting figures produced from physical measurement, assay results and calculations, which are considered accurate[4]". This is the comment from Jeff West, 2014.

Jeff West summarises the metallurgical accounting calculation as follows: "From the 17,157,633 total tonnes stacked, which contained 311,169 tonnes of copper, a total of 217,124 tonnes of cathode were produced. Thus there were 94,045 tonnes of copper remaining in the spent ore at the end of this period. Further flushing of the heaps over the next 12 months allowed a further 2,905 tonnes of cathode to be produced. At the end of all processing, 91,140 tonnes Cu remained on the pads giving a calculated residual grade of 0.53% Cu[4]". The figures for the stacked tonnes and contained copper were sourced from the April 2008 Monthly Report[4].

MEC comments that the current metallurgical accounting balance of 17.16 Mt @ 5,300ppm Cu is reasonable. Based upon depletion of the stacked materials at 1.81% Cu with recovery of ~70% for 5,300ppm Cu. No errors or balance issues were identified in the provided production records reported in the Nifty Site Monthly Report of the stacked tonnage and depleted grade.

15 METALLURGICAL TESTWORK RESULTS

Details on the three main bodies of work that support Reasonable Prospects for Eventual Economic Extraction are provided in the ensuing sections. Importantly, Cyprium's recently completed sequential leach testing correlates with and is supportive of the significant body of historical testwork performed historically[12].

15.1 RMD Stem 3m Pilot Trial

The 2009 RMD Stem 3m pilot heap trial, achieved an extraction / recovery of 50.8% of total copper, later revised by a METS review to 48.3% based on the initial calculation lacking a solution evaporation factor during the 145-day trial.

The points of note during the pilot trial were that:
- The 3m heap irrigated at 5.5 L/m2/h was considered successful.

- The 3m heap ran for 145 days before becoming impermeable due to a noted combination of compaction and internal chemical precipitation of iron.
- The heap exhibited a linear copper extraction rate rather than the diminishing returns style curve, attributed to the presence of previously precipitated water-soluble copper.
- Source ore for the trial heaps was from Heap 3.

This provides very applicable data for the current SXR project in terms of recoverable copper via acid leaching in a ~3m flitch of between 45 and 55%, duration of leaching of circa 6 months, a linear leach recovery curve and a sustainable irrigation rate of 5.5 L/m2/h.

15.2 Metals X Sequential Leach Analysis

Heap leach drilling has occurred a number of times over the years. Drilling occurred three times by Aditya Birla in 2007, 2014 and 2015. In 2020 Metals X Limited selected 10 holes from the 2014 drilling campaign for sequential leach analysis from which 152 individual samples were selected and analysed for acid and cyanide soluble copper.

Of note, the selected holes for sequential leach testing were all from pads 5 and 6, containing portions of known chalcocite and therefore by definition the lowest ratio of acid soluble copper to total copper of the heap system.

The results were provided in the Metals X Limited Scoping Study Report (Nifty Heap Leach/SX/EW Restart Project), summarised as follows:

Figure 15-1 shows a distribution curve for heap leach recovery based on the 152 samples selected for analysis by Metals X Limited, with the data normally distributed around a mean of 45.2% with a standard deviation of 11.5%.
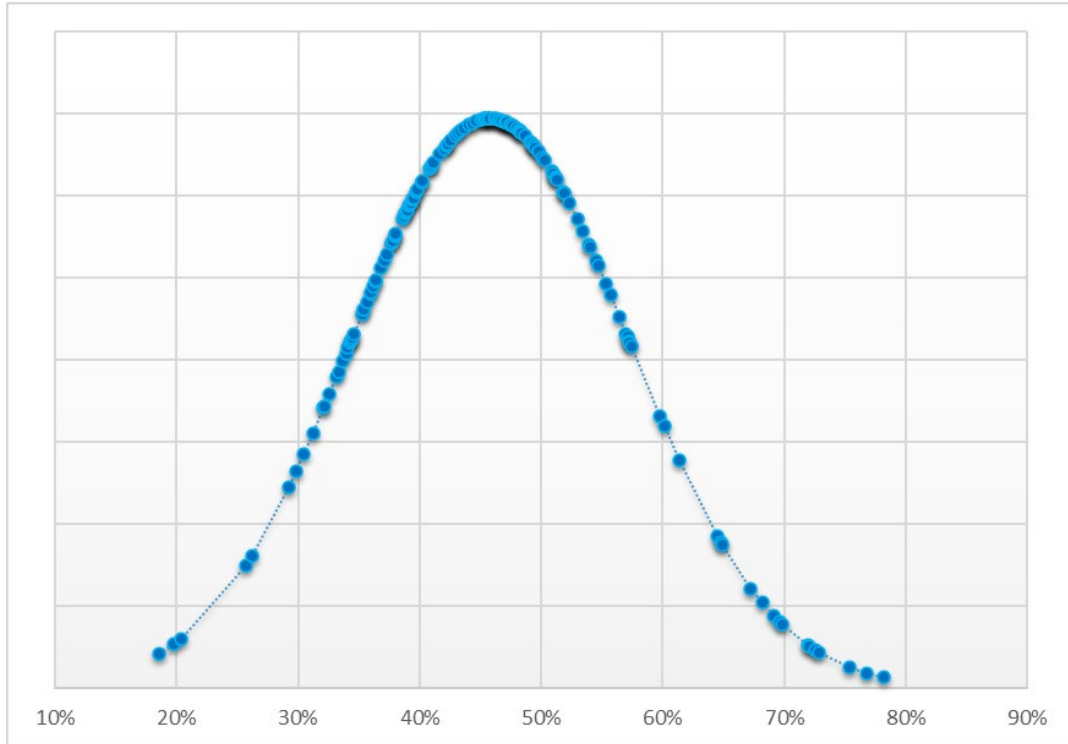
Figure 15-1: Heap Leach Recovery Distribution Curve – Metals X Data

15.3   2024 Cyprium Sequential Leach Analysis

In 2021 further drilling was conducted by Cyprium via 24 sonic drill holes across pads 3 to 6. Pulps from 18 of these holes were composited and submitted for sequential leach assay.

Despite the non-homogeneity of the heap leach and the fact that the 2014 data was tested purely from pads 5 and 6, the resultant data set provided calculated recoveries that supported the Metals X data set, with a mean of 50.3% and a standard deviation of 7.6% (refer **Figure 15-2**).

The 2021 data would be expected to contain a slightly higher percentage of acid soluble copper as a function of including samples from pads 3 and 4 which are known to contain a higher percentage of oxide material relative to pads 5 and 6.

Figure 15-2: Heap Leach Recovery Distribution Curve – Cyprium Data

16   RISK ASSESSMENT

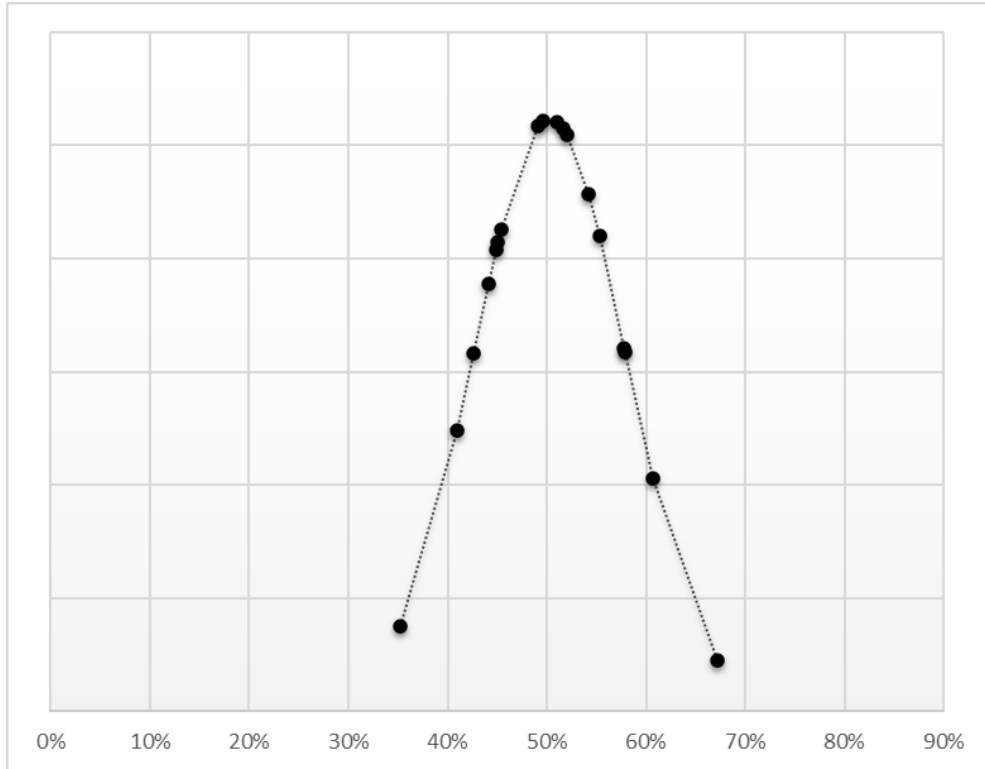The risk rating was considered for the main aspects of the work process that contributed to the data used for the Mineral Resource estimation. Low risk correlates with High confidence (**Table 16-1** and **Table 16-2**).

Table 16-1: Risk assessment matrix

Table 16-2: Risk summary

Items	Discussion	Risk
Density	A nominal value representing density has been applied to the 2024 heap leach MRE. This value was calculated using tonnages from production records and volume from the solid wireframe used to constrain the MRE. It has not been interpolated from drillhole data and the single nominal value does not represent the variability due to compaction at depth.	Medium
Volume	The upper surface of the heap leach stockpile is an accurate representation, however the wireframe representing the base was constructed from a survey of the toe of the leach pads. Drillholes were known to stop short of the base to avoid penetrating the liners, however some drillhole paths intersect the basal wireframe implying the surface is not accurate. This has an impact on volume and therefore also density.	Medium
Mineralisation at base of stockpiles	The mineralisation at the base of the stockpiles is untested due to the risk of penetrating the pad liners with the drillholes. Cu is likely most concentrated in the base due to previous leaching.	Medium
Age of stockpiles	Leach pad operations first began in 1993. There is a risk associated with the time the material has been sitting on the pads. Leaching processes will have altered the chemistry and physical properties of the material. There is potential that further oxidation of the material has occurred since being mined, due to the age of the stockpiles.	Low
Grade continuity	There is no geological or grade continuity to support and guide the interpolation as the material is no longer in situ.	Low

17   CONCLUSIONS

The August 2024 MRE reports 54,050t of contained copper (Indicated and Inferred Mineral Resources) and a further 37,070t of contained copper within mineralised waste, for **91,140**t (projecting the base of the heap leach pad 3 metres below the bottom of the drillholes), to align with the metallurgical accounting of 91,140t contained copper that was based on metallurgical balance calculations and production data. The August 2024 MRE Mineral Resource estimate used sonic and RC drilling data.

The Jeff West 2014 estimate is derived from metallurgical balance calculations. "The overall grade of the spent ore can be considered as 0.53% Cu with tonnage of 17,157,633. The stacked contained copper is **91,140**t. These results are documented in or calculated from monthly, and directors reports of 2008 and 2009. Results are metallurgical accounting figures produced from physical measurement, assay results and calculations, which are considered accurate."[4]

The MRE includes Indicated and Inferred Mineral Resources. The base of the heap leach is mineralised waste due to the lack of assay data. The CP used the drillhole assays to estimate into the Ore Block Model ("OBM") where there was assay coverage, and for the unassayed heap leach base used the metallurgical accounting to estimate contained copper. The CP considers the use of post leach assays for estimation, and in the absence of assays the balance to be estimated from the metallurgical accounting, to be reasonable.

18   RECOMMENDATIONS

18.1   Survey

A review of the wireframe that represents the base of the Heap Leach stockpiles is recommended due to the intersection with some of the drillhole traces. If possible, a new survey should be conducted around the toe of the heaps to assist modelling of the surface.

18.2   Density

The density is a back-calculated value based on known tonnages from production records and the volume of the Heap Leach stockpiles from the surveyed surface. Any discrepancies with the volume and tonnes will carry forward into the density calculation. The density is also likely variable within the heap leach stockpile, for example increasing with depth due to compaction. To determine the density more accurately it is recommended that samples should be obtained and tested from deeper within the stockpiles.

19   DISCLAIMER

Mr Dean O'Keefe of MEC Mining compiled this document for "Cyprium Metals Limited (Cyprium)" based on the assumptions therein identified and upon reports, drawings, designs, data, and other information provided by Cyprium and others. MEC Mining was unable to check the veracity of much of the supplied data. MEC Mining has relied upon some data prepared by non-qualified persons during the preparation of this report. MEC Mining are not in a position to, and do not, verify the accuracy of, or adopt as their own, the information and data supplied by others. Parts of the document have been prepared by others or extracted from documents prepared by others, as identified in the document; the documents have not been audited by MEC Mining.

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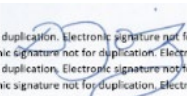
20   ACKNOWLEDGEMENTS

MEC Mining acknowledges the assistance of Cyprium Metals Ltd (Cyprium)

21   COMPETENT PERSONS STATEMENT

I, Dean O'Keefe confirm that:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code, 2012 Edition").

- I am a Competent Person as defined by the 2012 JORC Edition, having five years' experience which is relevant to the style of mineralisation and type of deposit described in this report, and to the activity for which I am accepting responsibility.

- I am a Fellow of the Australasian Institute of Mining and Metallurgy, #112948.

- I am a full-time employee of MEC Mining.

- I have disclosed to the reporting Company the full nature of the relationship between myself and the Company, including any issue that could be perceived by investors as a conflict of interest.

Signed by

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Dean O'Keefe

Manager of Resources

MEC Mining

Date: August 19 2024

22   REFERENCES

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11. Nifty Copper Open Pit Cutback Mining Study. Mining Plus. February 2020.

12. Cyprium Metals Limited.

23   APPENDIX 1: JORC CODE TABLE 1

Section 1: Sampling Techniques and Data

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 downhole 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*	• Sampling techniques used for the Nifty Heap Leach MRE include both RC chips and sonic drilling samples. The number of drillholes, metres drilled and number of samples are summarised below. NB not all the samples were used to support the MRE. Table below: • For the 2007 drilling a single sample (of up to 2.4kg) was collected for each hole (method unknown). The sample length therefore varies depending on hole depth but is a mean depth of 15.2m. The samples were split into three size fractions, and each was analysed for Cu only. The total Cu value for the whole sample was calculated as a weighted average of the results from the three size fractions. Three analytical methods are listed but it is not clear which approach was used for which size fraction. The three methods are 4-Acid AAS for primary sulphide, copper in oxide by AAS after H_2SO_4 leach, and cyanide soluble copper. • For the 2014 and 2015 RC programs, 1.5-3kg of material was collected in a calico bag over a 1m interval from the cyclone using a cone splitter. The samples were sent to ALS laboratory for preparation (drying, crushing, splitting and pulverising) with a 50gm sample analysed using a 4-Acid ICPOES method (ME-ICP62). • For the 2021 sonic drilling program, the majority of samples were obtained at 1m intervals. Samples were analysed by ALS in Perth by XRF. No further information is available on sampling technique. • The sampling approach is considered appropriate for the nature and style of the Nifty Heap Leach copper mineralisation.
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.).*	• The Nifty Heap Leach stockpiles have been drilled and sampled from surface using both RC and sonic drilling techniques across 4 different drilling programs. • Three of the drilling programs (in 2007, 2014 and 2015) were RC, and sonic was used in 2021. • The 2014 and 2015 RC drilling programs used a face sampling bit and a hole diameter of 150mm. There is no information available on the details of the 2007 RC drilling program. • There is no information available on the details of the 2021 sonic drilling program.

Table (embedded in Commentary cell):

Drilling Phase	Number of drillholes	Metres drilled	Number of samples
2007 RC drilling	124	1,867.5	123
2014 RC drilling	109	1,466	1,466
2015 RC drilling	41	588	588
2021 Sonic drilling	24	357.7	495
TOTAL	**298**	**4,279.2**	**2,672**

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.*	• There is no quantitative information available on sample recovery therefore no analysis has been conducted on this, or any relationships between sample recovery and grade. • There is reference to an average sample weight of 1.8kg across the 2014 and 2015 RC drilling samples from a Drilling QC report, but the raw data is no longer available for verification. • There is no information available on measures taken to maximise sample recovery and ensure representivity. • Sonic drilling samples have been used to support the MRE, which is known to be a particularly effective drilling technique in unconsolidated material due to providing continuous, undisturbed and high-recovery samples with minimal contamination. • It is noted that RC drilling can potentially over-represent fines in unconsolidated material such as stockpiles. It has not been possible to verify any bias due to this as there are no sonic and RC sample pairs within an acceptable distance of each other (<5m), or the pairs are with 2007 RC samples where a single sample represents the entire hole.
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 chips were not geologically or geotechnically logged as the material is on a stockpile and therefore no longer in situ. As such there is no geological continuity. • According to the Nifty Copper SX-EW Restart Study Report, from east to west the stockpile material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. Waste material was used as a blend in some of the Heap Leach stockpiles to aid percolation during leaching. This included "low grade silicified carbonate and even barren rock."
Subsampling 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 subsampling 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.*	• Samples available were from the 2021 sonic drilling. • For the 2014 and 2015 drilling, sampling of chips was conducted using a cone splitter from material taken from the cyclone on the rig. No information is available on how the sample was split for the 2007 RC drilling. • All material is dry on the Heap Leach stockpiles. • The use of a cone splitter for sample collection during RC drilling is an industry standard approach and considered appropriate in terms of obtaining a representative sample. • For the 2014 and 2015 drilling programs, QC procedures were in place to ensure sample representivity. This included field duplicates as documented in the 2015 MRE report which states that 150 field duplicate samples were collected as part of the 2014 and 2015 RC drilling programs, and that scatter plots showed acceptable precision and the QQ plots showed no obvious bias. A 2014 Aditya Birla report also references the field duplicate data and states that they were collected at a rate of 1:13. The original data is no longer available to verify this. Additional QC procedures included the submission of standards, blanks, laboratory repeats and umpire laboratory analytical results. For the sonic drilling, the QC procedures included the submission of standards and umpire laboratory analytical results. There are no documented QC procedures for the 2007 RC drilling. • Sample sizes are considered appropriate to the grain size of the material being sampled.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Due to multiple phases of drilling and different operators, sample collection, preparation and analytical method is not consistent for all samples contributing to the August 2024 MRE. • The 2007 RC drilling samples were sent to a laboratory identified as 'IML' which, according to a 2014 report from Aditya Birla, was likely Inter Mountain Laboratories, Wyoming, USA. Samples were split into three size fractions, and each analysed for Cu only. Total Cu was calculated as a weighted average of the results from the three size fractions. Three analytical methods are listed but it is not clear which approach was used for which size fraction. The three methods are 4-Acid AAS for primary sulphide (near-total technique), copper in oxide by AAS after H_2SO_4 leach (partial technique), and cyanide soluble copper (partial technique). Due to lack of information on the 2007 RC drillholes, 114 out of 124 were excluded from the MRE. The 10 included drillholes inform Inferred resources only. • The 2014 and 2015 RC program samples were analysed by ALS laboratories in Perth using a 4-Acid ICPOES method (ME-ICP62, near-total technique) for 16 elements: Ag, As, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, Pb, S, Sb and Zn. Results exceeding the detection limit of the method were re-analysed with an ore-grade method, e.g. Cu-OG62 for copper which is a 4-acid digest, but with a variable finish depending on the element. • For the 2021 sonic program, samples were analysed by ALS in Perth by XRF for Cu, Ca, Co, Fe, Mg, Mn, S and Si. In May 2024, 176 samples across 18 of the 24 sonic drillholes were re-submitted for analysis to Bureau Veritas Laboratories in Perth. These samples were analysed using a 4 acid digest then ICP-OES for Ca, Fe, Mg and S, and ICP-MS for Cu. The samples used to support the August 2024 MRE were the samples analysed by XRF.
	• *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.*	• No geophysical tools were used as part of the analysis.
	• *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.*	• Supporting QAQC data is available for the 2014 RC drilling program in the form of standards, blanks, and laboratory repeats (analytical precision). For the 2021 sonic drilling program, QAQC consists of standards and the re-assay of pulps by an umpire laboratory. The other drilling programs do not have supporting QAQC data. Further QAQC data is mentioned in historical reports, but the data is no longer available to verify the conclusions. This includes reference to field duplicate data for the 2014 and 2015 RC drilling programs, which reportedly showed no obvious bias, and re-assay of pulps by an umpire laboratory for the 2014 RC drilling, which showed all values were within acceptable results. • For the 2014 drilling program, four (3.6%) of the standard samples were outside the acceptable limits of 3 standard deviations from the mean. Two (1.6%) of the blank samples were outside the acceptable limits. For the laboratory repeats (analytical precision), the mean of the original samples was 2,428 ppm Cu and the mean of the repeats was 2,448 ppm Cu.

Criteria	JORC Code explanation	Commentary
		Only Standard OREAS 131a had a representative population. This had an acceptable pass rate. It should be noted that some failures by other standard results were by small margins and if rounded to two decimal points they would not have failed. • 174 samples were re-assayed by an umpire laboratory (Bureau Veritas) in 2024. The re-assayed samples had a mean grade of 0.39% Cu and the original samples had a mean grade of 0.42% Cu. The positive bias when comparing the original results to the umpire laboratory results is attributed to the difference in analytical technique: the original samples were assayed by XRF and the re-assayed samples by ICP-MS. There are no concerns surrounding the QAQC data for the 2021 sonic drilling program.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• NA, as all material in the Heap Leach will be leached.
	• *The use of twinned holes.*	• There are no twinned drillholes, no twin analysis was undertaken. • Visual checks of proximal drillholes show that grades are similar.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Primary data for the 2014 and 2015 drilling programs was recorded directly onto electronic spread sheets and validated by the database manager. • There is no information regarding the data collection for the 2007 RC drilling program. • Cyprium has adopted established data entry, verification, storage and documentation protocols which were adopted for the 2021 sonic drilling program. • Drilling data was provided to MEC in the form of a Microsoft Access database for the RC drilling, and Excel files for the sonic drilling.
	• *Discuss any adjustment to assay data.*	• No adjustments have been made to the assay data, except where composited to 1m for estimation. • Cu assay units were converted between ppm and % where required. • NB: the 2007 RC drilling assays are a total copper value determined from the weighted average of the results from three size fractions.
Location of data points	• *Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• A Trimble R8 GPS RTK system was used to survey the collar locations for the 2014 and 2015 drillholes, there is no record of the survey method for the 2007 RC collar locations. The sonic drillhole collar locations were surveyed by DGPS by a Cyprium site surveyor. • Drillhole collar elevations were assigned from the topographic surface wireframe prior to any modelling or estimation. Prior to adjustment the mean difference between the collar RL and topography RL was 0.96m and the maximum was 7.03m • No downhole surveys were conducted on any of the drillholes. Azimuth and inclination were obtained from the planned orientations. Given all the drillholes are vertical and shallow, there is confidence in the drillhole trace locations.
	• *Specification of the grid system used.*	• The regional grid is GDA94 Zone 50. All site survey work, including collar locations use the local Nifty mine grid.

Criteria	JORC Code explanation	Commentary

	• *Quality and adequacy of topographic control.*	• The Heap Leach stockpile surface wireframe was generated by a Cyprium site surveyor in May 2022 from a drone survey.
		• The surface representing the base of the stockpile was constructed from a survey of the toe of the heaps. Some drillholes were deeper than this surface, and the perimeter was too small to intersect the topography wireframe, therefore it was edited as follows prior to use in the MRE:
		  o Where a drillhole intersected the base surface, the surface was projected to 3m below the end of that drillhole.
		  o Where projection was required in closely spaced drillholes, the lowermost point was selected and used.
		  o The perimeter of the base wireframe was expanded such that it would intersect with the surface wireframe and could then be used to create a solid to constrain the block model.

Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• The drillhole spacing for the 2007 RC program was ~25mE x 50mN. The 2014 RC program was 50m x 50m, and the 2015 RC program was 100mE x 50mN. The combined RC drilling covers leach pads 2 to 6. • The sonic drilling was drilled at a ~200mE x 200mN spacing across leach pads 3 to 6.
	• *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.*	• Given the material type being drilled there is no geological continuity. The drill spacing is considered appropriate for an MRE. • The applied Mineral Resource classification is commensurate with drillhole spacing.
	• *Whether sample compositing has been applied.*	• Samples were composited to 1m based on the dominant original sample length. • Where sample lengths were >1m, they were split into 1m intervals. • Descriptive statistics were calculated for the raw and composite samples, including statistics on composites where the intervals >1m were split and where they were not split, to compare the effect. Splitting did not have a material impact. • The March 2015 MRE report stated that statistical analysis was conducted on 1m versus 2m composites, and the differences were not found to be material.
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.*	• The drilling is vertical as required for stockpile drilling. The sampling is thought to be unbiased on the basis that the stockpiles were constructed by vertical lift stacking, with an overall east to west construction.

Criteria	JORC Code explanation	Commentary
	• *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.*	• Previous leaching of the stockpiles means that grade generally increases with depth, therefore the drillholes are perpendicular to the orientation of the mineralisation trend. • No sampling bias is considered to have been introduced.
Sample security	• *The measures taken to ensure sample security.*	• Samples from the 2014, 2015 RC, and 2021 sonic drilling programs were stored at the Nifty minesite.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Over several years, database management companies have audited the drill hole databases and found them to be 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 Nifty project is 100% owned by Cyprium Metals Limited and is situated within mining lease M271SA.
	• *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.*	• MEC has not assessed the tenure status in detail but notes that the tenure is currently live and is due to expire 2 September 2034.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The historic Nifty Heap Leach operations commenced in 1993 when the site was operated by WMC Limited (WMC). Stacking continued until the latter part of 2006, and leaching ceased in 2009 when the project was put on care and maintenance by Aditya Birla Minerals Ltd (Aditya Birla). Cyprium Metals Limited (Cyprium) acquired the Nifty project in 2021. • The 2007, 2014 and 2015 RC drilling programs were conducted by Aditya Birla. There is limited documentation on the 2007 drilling program still available. • The 2021 sonic drilling program was conducted by Cyprium.
Geology	• *Deposit type, geological setting and style of mineralisation*	• There is no geological continuity within the Mineral Resource given it is a heap leach stockpile. • From east to west the copper content decreases and the material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tend to leach better with superior copper recovery. • The Nifty mineralisation from which the stockpiled material has been extracted is a strata-bound copper deposit, is structurally controlled, with fresh mineralisation being chalcopyrite-quartz-dolomite replacement of carbonaceous and dolomitic shales within a folded sequence. It is hosted within the folded late-Proterozoic Broadhurst Formation, part of the Yeneena Group. The bulk of the mined sulphide mineralisation is largely hosted within the keel and northern limb of the Nifty Syncline. Oxide copper mineralisation is identified by the presence of azurite and malachite, as well as minor cuprite and native copper. Fresh mineralisation consists of chalcopyrite, with minor covellite and bornite.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	• N/A. Drilling results reported previously.

Criteria	JORC Code explanation	Commentary
	o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	
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.*	• There has been no truncation or top cutting of grades.
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').*	• Drillholes are vertical to test the horizontal Heap Leach dumps.
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*	• N/A, the Heap Leach is a stockpile and does not possess any natural grade continuity or grade intersections.
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.*	• All assay results are relevant to the Heap Leach, as a zero economic cut-off grade has been applied.
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*	• The Heap Leach occurs on the edge an above a subsidence zone. However, the subsidence zone is not considered to have impacted the Heap Leach dumps.

Criteria	JORC Code explanation	Commentary
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.*	• There is no planned further work on the Heap Leach stockpiles, other than restarting production and recovering the remaining copper.

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.	• The Nifty databases have undergone checks by accredited database specialists throughout the operation of the site, most recently by MaxGeo at the beginning of 2024. • The most recent database has been compiled by MaxGeo and is suitably protected and version controlled. • The Heap Leach drilling data for the RC drilling programs was provided to MEC in a Microsoft Access database. The data for the sonic drilling programs was supplied in Excel spreadsheets.
	• Data validation procedures used.	• The database was validated using tools within Micromine software and no discrepancies were identified. • Validation checks included searching for duplicate hole IDs and co-ordinates, spurious hole locations, checking all drillholes have associated orientation and inclination records, checks for overlapping records or missing data. • One drillhole from the 2007 RC drilling program (07NHL1053) did not have any assay results, this drillhole was not used to support the August 2024 MRE.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• The CP, Dean O'Keefe, visited the site on February 8th, 2024, accompanied by MEC Resource Geologist Issam Digais and the Cyprium General Manager of Geology and Exploration, Peter van Luyt. • The CP observed the Heap Leach stockpiles, the Nifty pit, and SX-EW infrastructure and the pregnant solution ponds.
	• If no site visits have been undertaken indicate why this is the case.	• N/A, a site visit was conducted

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.*	• There is no geological interpretation for the Nifty Heap Leach mineral resource as the Mineral Resource comprises stockpiled material. As such, there are no assumptions or any alternative interpretations that would affect the Mineral Resource estimation. • A qualitative assessment of the general geology of the stockpiles is as follows, but the estimate is based on grade only with no geospatial relationships assumed: o From east to west the copper content decreases and the material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tends to leach better with superior copper recovery. • Factors affecting the continuity of the grade include both the stacking order (stockpiles were constructed by vertical lift stacking, with an overall east to west construction) and the previous leaching which results in higher Cu concentrations at the base of the stockpiles.
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 total footprint of the Heap Leach stockpiles is approximately 1,750m in an east-west direction and 400m in a north-south direction. The height varies from approximately 18m at the western end to approximately 5m at the eastern end.
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.*	• Estimation were completed using Micromine version 2023.5. • Estimation was supported by both sonic and RC drilling data. A composite length of 1m was selected based on the dominant sample length. • No top cutting of extreme grade values was applied. • No domaining was completed as the stockpiled material is not in situ and has no geological continuity. • The estimation method was Inverse Distance Weighting to a cubed power (IDW3) to apply more weighting to local samples. The block model was populated by estimating into parent cells, using two search passes to populate the blocks. No geospatial analysis such as variography was used to inform the estimate, as the material is not in situ and there is no geological continuity. • The maximum distance of extrapolation from data points was 200m. • A bulk density of 1.701 t/m3 was assigned to every block in the block model, the bulk density was derived from the production records tonnage of 17.158Mt divided by the constraining block model volume of 10,082,450m^3.
	• *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 March 2015 MRE stated 58,924 tonnes of contained copper, as compared to the 54,050 tonnes of contained copper reported in the 2024 MRE (not including mineralised waste material). The 2015 MRE did not include heap leach pads 1 and 2, and used a lower default density based on cone density testing.

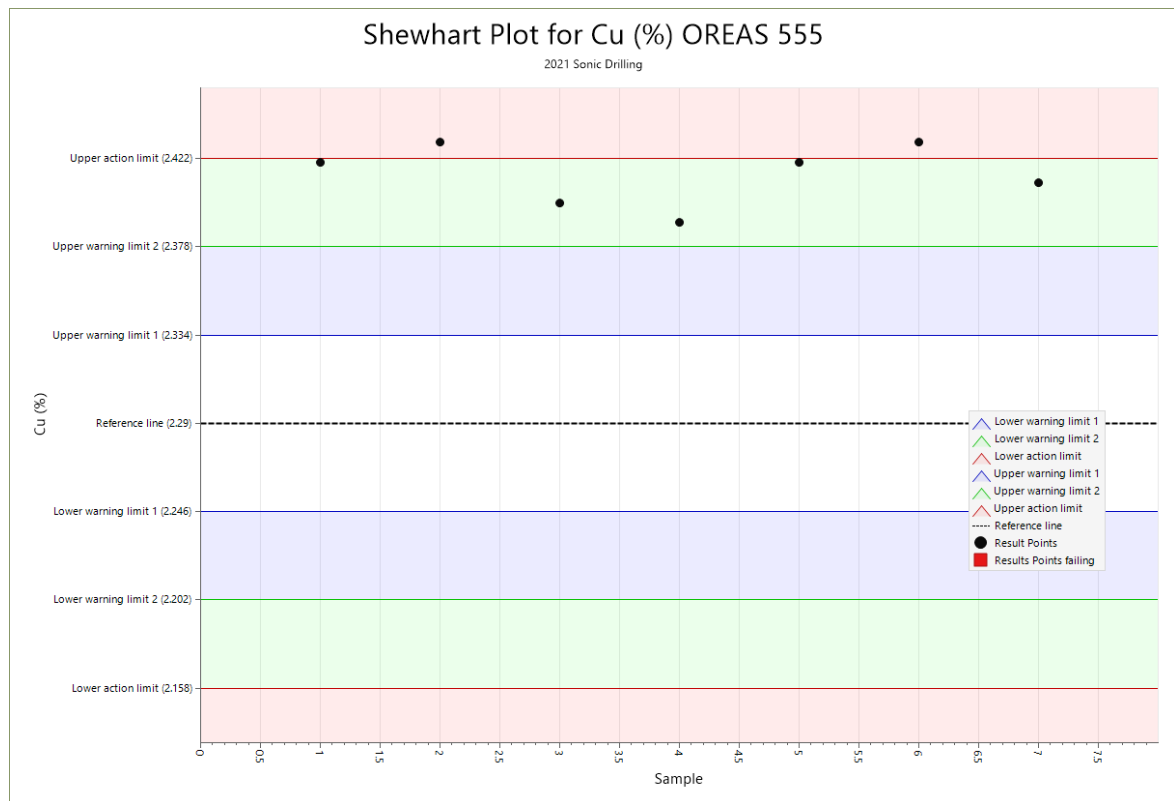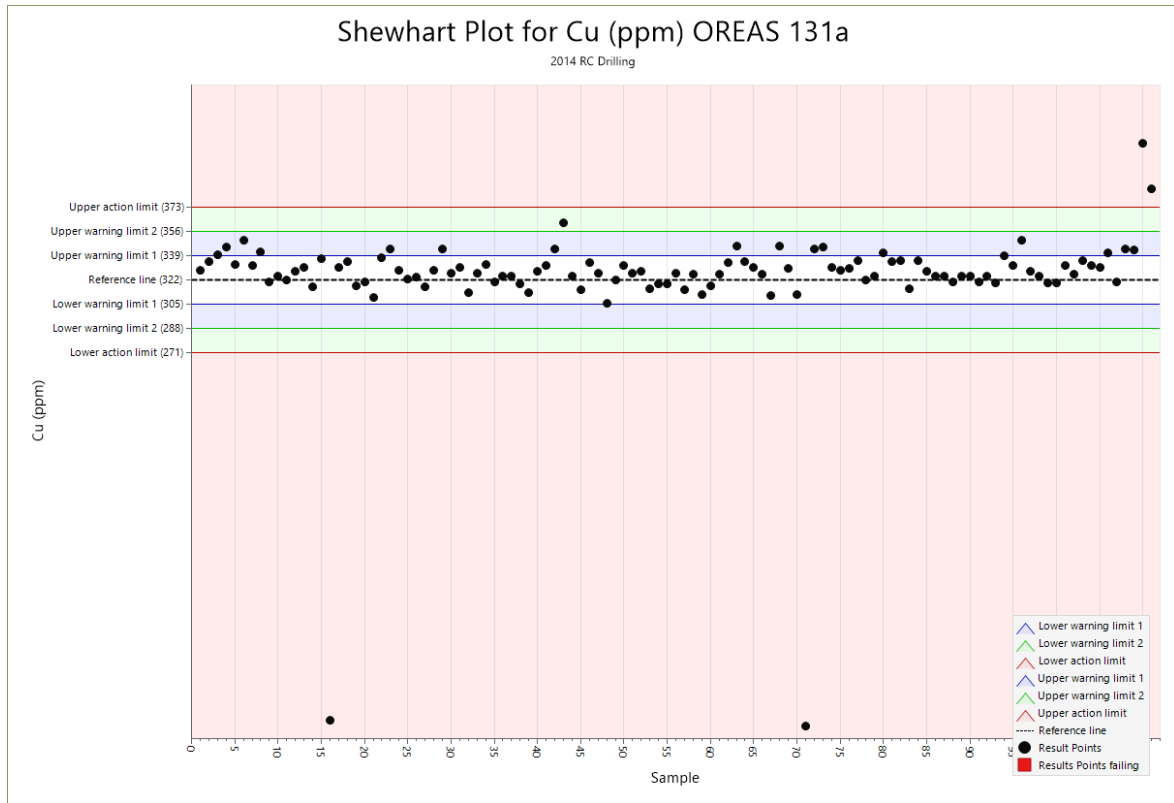| Criteria	JORC Code explanation	Commentary
		• A 2014 mineral inventory derived from metallurgical balance calculations and production records estimated the stacked copper remaining in the heap leach stockpiles was 91,140 tonnes. • The August 2024 MRE is based on a combination of the sonic and RC drilling; however, two additional estimates were completed on the RC drilling alone and the sonic drilling alone as check estimates for comparison. The reported MRE states 4,260 Cu ppm; the MRE based on the RC drillholes alone is 3,840 Cu ppm; and the MRE based on the sonic drillholes alone is 4,380 Cu ppm. Note these figures are for Indicated and Inferred material only and do not include the mineralised waste material.
	• *The assumptions made regarding recovery of by-products.*	• There are no by-products.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*	• Deleterious elements were not estimated.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• A parent block size of 25m east by 25m north by 1m elevation was used, with the blocks orthogonal to the grid. • The block model was constrained by a solid generated from the intersection of the Heap Leach surface and base wireframes. For estimation purposes, at the boundary of this solid, the block model was sub-blocked to 5m east by 5m north, by 1m in elevation. A block discretisation of 5 x 5 x 2 was applied. • Estimation was completed in two runs. All search ellipses were orientated at a 0° azimuth, no plunge and a -90° dip. Search ellipse run1 dimensions are 100m x 100m x 4m, with minimum 3 drillholes and sector quadrants with a minimum of three samples in the search ellipse. Search ellipse run2 dimensions are 200m x 200m x 8m, with minimum 3 drillholes and sector quadrants with a minimum of three samples in the search ellipse. • The empty block model volume and constraining wireframe volume were compared to check the volume resolution. The constraining wireframe volume is $10,072,379m^3$ and the empty block model volume is $10,082,450m^3$, a difference of $10,071m^3$ in the block model (0.1%). • Blocks not estimated after the second search run were assigned the median composite Cu ppm grade. Unestimated blocks comprised 0.01% of the total. They are located at the southeastern periphery of the block model, which is considered to be mineralised waste.
	• *Any assumptions behind modelling of selective mining units.*	• No assumptions were made regarding selective mining units.
	• *Any assumptions about correlation between variables*	• No assumptions were made about correlations between variables, only Cu was estimated.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• No geological interpretation was used to control the resource estimate as the stockpiled material is no longer in situ.

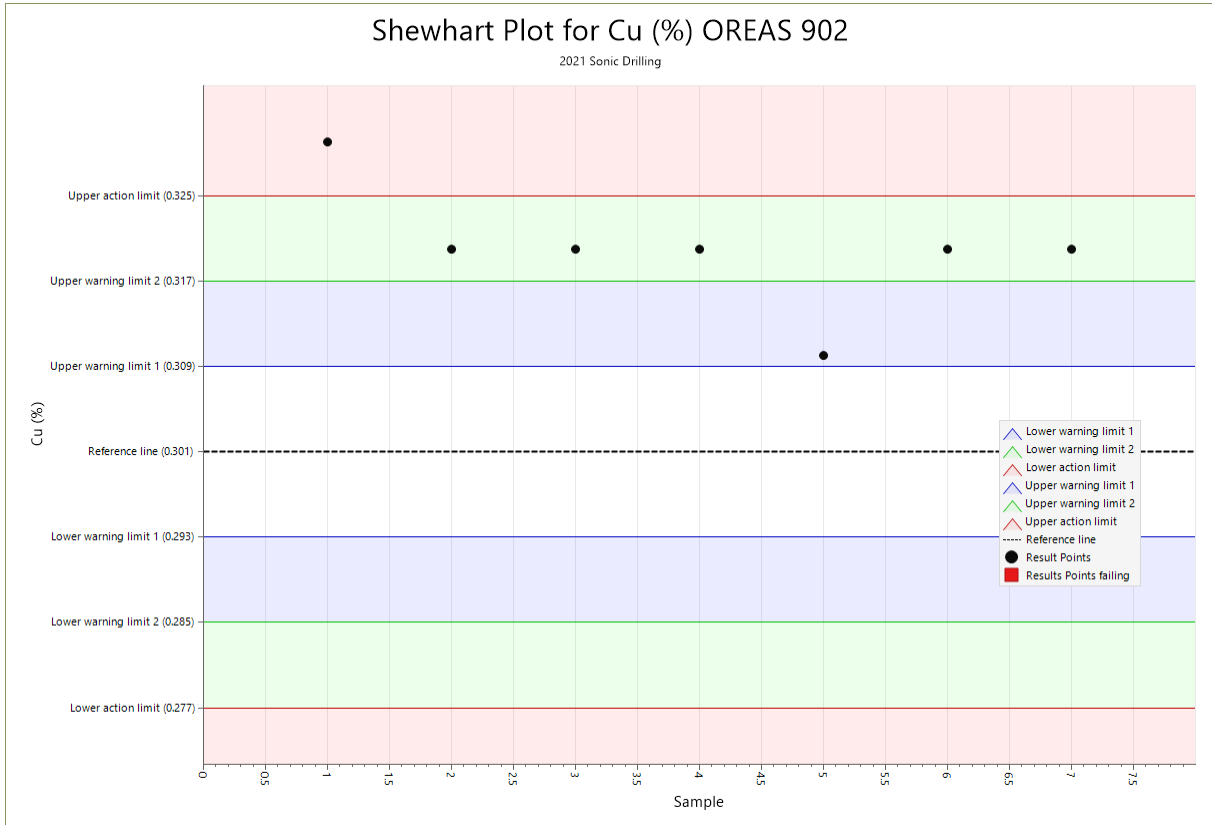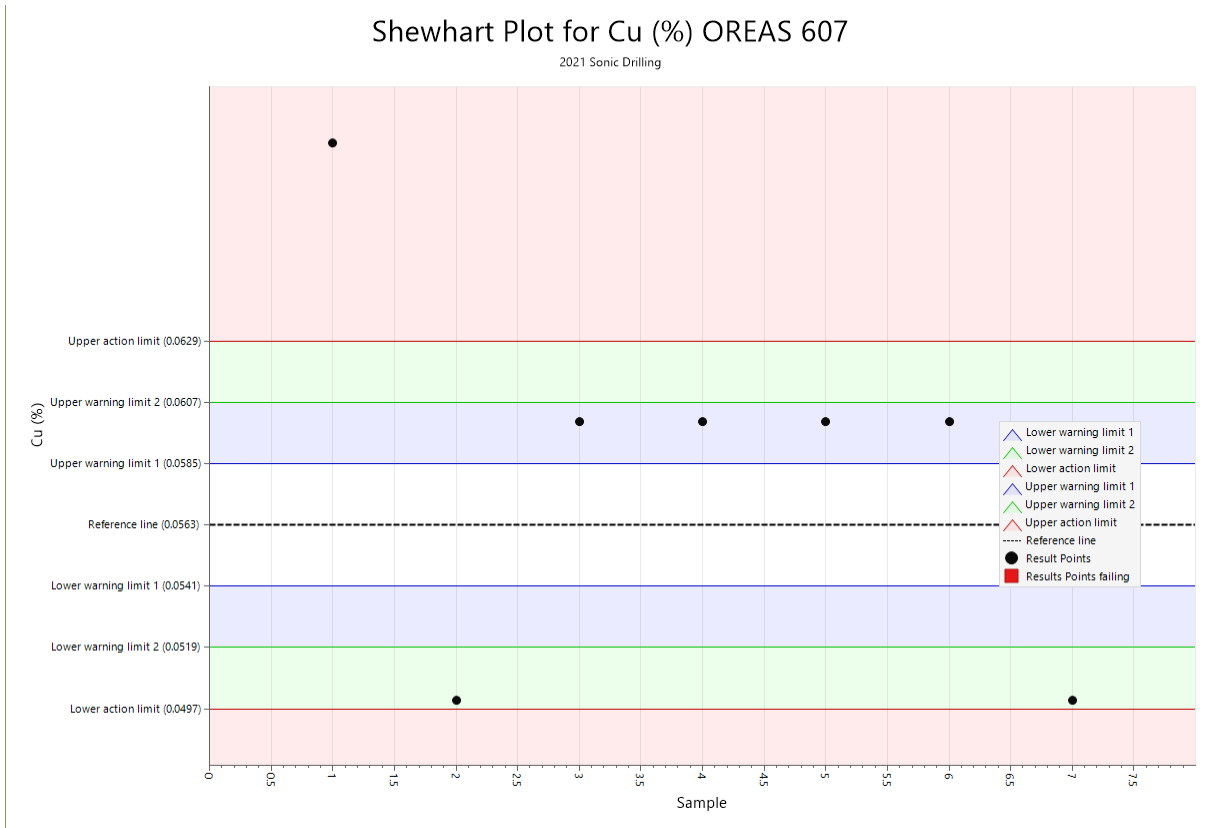| Criteria	JORC Code explanation	Commentary
	• Discussion of basis for using or not using grade cutting or capping.	• No extreme values were apparent that could bias the estimation, and as such no grade cutting or capping was applied.
	• The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• The block model was validated globally and locally at key stages during the construction and estimation processes. • Basic block model checks such as reporting on the minimum and maximum of each attribute were used to ensure all blocks were populated. A check was also performed for overlapping blocks, of which there were none. • Visual validation was completed by comparing the block grade to the drillhole grade. There was close correlation between raw and modelled grades. • Global statistical validation was completed by comparing statistics between the composited, and estimated Cu grades. • Local validation was completed by using trend/swath plots by easting, northing and RL slices. • There were no concerns with the outcomes of the validation checks. • Reconciliation is not possible, however, the metallurgical accounting was compiled from production records and may in future be reconciled when further production from the Heap Leach is conducted.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages were estimated as dry as this is stockpiled material. • A nominal dry density value of t/m^3 was applied and was back calculated from Heap Leach stockpile volume divided by MI reported production tonnage.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The MRE was reported at 0 ppm Cu cutoff, as all the material on the stockpiles is planned to be processed.
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 material has already been mined, crushed and stacked. • The stockpiles will be processed as they were previously, by heap leaching and SX-EW to produce Cu cathode. The infrastructure is already in place.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• 152 samples from 10 drillholes from the 2014 RC drilling of the Heap Leach stockpiles were submitted to ALS Metallurgy in Perth for metallurgical testing in 2020. The samples covered a broad range of Cu grades and depths. • This was followed by composites of 18 sonic holes from the 2021 drilling campaign, which supported the 2020 results. • A 145-day Pilot rial conducted by RMD Stem in 2009 provided supporting recovery data.
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.*	• Cyprium reports that it operates in accordance with all environmental conditions set down as conditions for grant of the respective mining leases. • The infrastructure and licensing is in place to conduct all aspects of a mining, processing and waste disposal operation.
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.*	• A nominal bulk density of 1.701 t/m^3 was assigned to all blocks. • Bulk density was derived from the production records tonnage of 17.158Mt divided by the constraining block model volume of 10,082,450m^3. It was not deemed appropriate to use the cone density tests for determining density, as used in the historic MRE, as the test locations were sparse considering the area of the stockpile, and they only penetrate to 1m depth. This will not be representative of the density at depth which will be higher due to compaction.
	• *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.*	• The material in the pad is relatively uniform in particle size given that it has been crushed and stacked.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The Heap Leach stockpiles are treated as all the same material given, they are no longer in situ and have been mined, crushed and stacked. • The density profile is expected to increase with depth due to previous leaching operations concentrating the Cu at the base. However, there is no means of testing this as drilling to depth carries a high risk of penetrating the liners at the base of the stockpiles.

Criteria	JORC Code explanation	Commentary
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	• An Indicated classification has been assigned where the August 2024 MRE is supported by drilling data from the 2014 and 2015 RC drilling, the 2021 sonic drilling, and QAQC data. • An Inferred classification has been assigned to blocks supported by the 2007 drilling (which comprise a single assay for the entire hole) and the periphery of the stockpile where it was not possible to drill due to slope and proximity to the edge. • Pad 1 and the periphery of pad 2 is mineralised waste due to the lack of drilling data. Where the drillholes do not extend to depth (due to the risk of penetrating the leach pad liners) then the blocks are also mineralised waste. This mineralised waste material at the base of the stockpile is believed to have the highest grade based on extrapolation of the grade profile from the drilling samples above, and the concentration of Cu from previous leaching operations. As such, the grade of this material was balanced to the known metal content derived from the metallurgical accounting
	• 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).	• The correlation of the drill data to the MI provides reasonable confidence in the August 2024 MRE, which is reflected in the MRE classifications of Indicated and Inferred Mineral Resources , and mineralised waste materials.
	• Whether the result appropriately reflects the Competent Person's view of the deposit.	• The Mineral Resource estimate reflects the Competent Person's view of the Heap Leach stockpiles.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Metals X reviewed the previous 2015 MRE in 2020 and stated the tonnages were likely conservative based on the cone density tests, that grade was likely higher at the base of the stockpiles due to previous leaching and re-precipitation, that the minimum number of samples used in the estimate should be increased and that a new wireframe should be used to more accurately constrain the volume. • No audit has been completed on the current MRE.
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 August 2024 MRE accuracy and confidence is commensurate with the applied Mineral Resource classification. • Factors that could affect the relative accuracy and confidence in the estimate are the lack of geospatial continuity due to material no longer being in situ, as well as the true basal surface of the stockpiles being unknown. • No quantitative test of the relative accuracy has been completed. • There were no concerns with the block model validation checks which included global mean comparisons, visual checks of composite versus block grades, and swath plots by easting, northing and RL. • Relative confidence in the underlying data, drillhole spacing, geological continuity and interpretations has been appropriately reflected by the CP in the Resource Classification.

Criteria	JORC Code explanation	Commentary
	• *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.*	• The August 2024 Mineral Resource estimate is considered a global estimate of the Heap Leach stockpiles.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The estimate of recoverable Cu within the Heap Leach stockpiles has been determined from the metallurgical accounting balance. • The August 2024 MRE has been estimated, and mineralised waste material grade aligned with the metallurgical accounting.

24 APPENDIX 2: SHEWHART PLOTS OF STANDARD RESULTS

Shewhart Plot for Cu (ppm) OREAS 131a
2014 RC Drilling

Shewhart Plot for Cu (%) OREAS 555
2021 Sonic Drilling

Shewhart Plot for Cu (%) OREAS 607
2021 Sonic Drilling

Shewhart Plot for Cu (%) OREAS 902
2021 Sonic Drilling

25 APPENDIX 3: GLOSSARY

3D	Three-dimensional.
%	Percent.
Anisotropy	Quality of a variable having different properties when measured in different directions, such as grade continuity.
Assay	A measured quantity of material within a sample.
Au	The element gold.
Azimuth	Azimuth angle on which an exploration hole was drilled (deviation to North).
Classification	Mineral resource classification, reflecting the confidence in the estimation and the underlying contributing data. Classification for Mineral Resources is specified under the JORC code as Inferred, Indicated, and Measured with increasing confidence from Indicated to Measured categories.
Coefficient of variation (CV)	In statistics, a normalised measure of the variation present in a sample population.
Collar	Geographical co-ordinates of a drillhole or shaft starting point.
Compositing	In sampling and Mineral Resource estimation, the process designed to adjust all samples to certain equal length along with grade.
Correlation coefficient	A statistical measure of the degree of similarity between two parameters.
CP	The Competent Person according to the JORC code is required to sign off on the Mineral resource estimation result. The CP must have a minimum of 5 years' experience in the deposit style or mineralisation type that is being estimated.
Cu%	Copper %

Cumulative frequency graph	Graphical representation of data ranked in ascending or descending order, which are shown in a nondecreasing function between 0% and 100%. The percent frequency and cumulative percent frequency forms are interchangeable, since one can be obtained from the other.
Cut-off grade	The threshold above which material is selectively mined or queried.
Data Search	The ellipse or sphere used to include relevant and exclude redundant samples for the estimation of a block in the OBM.
Declustering	In geostatistics, the procedure allowing for restricted grouping of samples within sectors where a restriction on allowable samples contributing to estimation may be applied.
Geostatistics	Science studying and describing the spatial continuity of any kind of natural phenomena: Cu grades in this study.
Histogram	A graphical presentation of the distribution of data by frequency of occurrence.
IDW	Inverse Distance Weighting.
Indicator	Transformed value.
Inverse Distance Weighting	Geostatistical method to calculate mineral resource. Since this method makes the weight for each sample inversely proportional to its distance from the point being estimated it gives more weight to the closest samples and less to those that are farthest away. Method works very efficiently with regularly gridded data. Extreme versions of inverse distance weighting are the global declustering methods like the polygonal method and the local sample mean method.
JORC Code	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC Code).
Lognormal	Refers to the distribution of a variable where the distribution of the logarithm of that variable is normal.
m	Metre.
M	Million or mega (10^6).
Mean	Average.
Median	Value of the middle sample in a data set arranged in rank order.
MICROMINE.	Mining and exploration software.

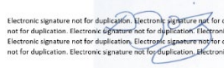| MRE	Mineral resource estimate, compliant with JORC 2012 standards.
Mt	Million tonnes.
Nugget effect	Measure of the variability in re-analysing a sample due to sampling errors or short scale variability. Though the value of a variogram at 0 distance should be 0, several factors, such as sampling errors and short scale variability, may cause sample values to be separated by extremely small distances. The vertical jump at the origin of a variogram graph from 0 to a certain value at extremely small separation distance is called the nugget effect.
OBM	Ore Block Model.
Omni	In all directions.
OK	Ordinary Kriging interpolation method.
Percentile	One hundredths of the total data. 50th percentile correspond to the median.
Population	In geostatistics population encompasses grades which show the same or close geostatistical characteristics. Ideally, one population is characterised by linear distribution.
Ppm	Parts per million, equivalent to grams per tonne.
Probability plot	Plot showing cumulative frequencies over different intervals on a log scale probability plot.
QQ Plot	The Quantile quantile plot is used to compare populations by sorting each population from lowest to highest and then plotting the result. Identical populations would plot as a straight line at 45 degrees.
Range	Distance at which variogram reaches its plateau.
Resource	Geological Mineral Resource (potentially economically extractible).
RL	Reduced level i.e. elevation relative to a local datum.
RPEEE	Reasonable Prospects of eventual Economic Extraction is a criterion that the CP must assess before reporting Mineral Resources to determine factors that may limit any potential future exploitation of the Mineral Resource.
SG	Specific gravity (no unit) is a measure of the density of a substance in comparison to the density of water.

Sill	Distance at which variogram reaches its sill. Physically, there is no correlation between paired samples at that distance.
SMU	Smallest mining unit.
Spatial continuity	The description or function how continuous are the data values over a certain distance in three dimensions.
Standard deviation	A statistical measure of the dispersion of sample data around the mean value.
Support correction	A correction applied to the raw data to reduce variance but to retain the mean of the dataset, prior to interpolation to adjust for lower variance displayed by the SMU.
t	Metric Tonne.
t/m^3	Tonne per cubic metre.
TO	End of an intersection.
Variance	In statistics, a measure of dispersion about the mean value of a data set.
Wireframe	Three-dimensional surface defined by triangles.
Wireframe solid	Closed wireframe.

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DOCUMENT REVIEW AND SIGN OFF

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