14 March 2024 **ASX ANNOUNCEMENT**

Updated Nifty Mineral Resource Estimate Reaches 1 Million Tonnes Contained Copper

HIGHLIGHTS

- **Nifty Measured and Indicated mineral resource grows to 119mt at 0.84% pct Cu for 1 million tonnes contained copper**
- **Potential to further enhance mineral resource from existing mineralised heap leach inventory**
- **Updated MRE incorporates past underground modelling of Nifty in detail and supports plans for a large-scale, open-cut mine**
- **95% of global resource now Measured and Indicated**

Australian copper company, Cyprium Metals Limited (ASX: CYM) (**Cyprium** or **the Company**), is pleased to present an updated 2024 Mineral Resource Estimate (**MRE**) for its flagship asset the Nifty Copper Mine (**Nifty**) in Western Australia.

"We're pleased to produce an updated Mineral Resource Estimate for Nifty," said Executive Chair Matt Fifield. "Nifty is one of the largest non-operational copper projects in Australia, and the only brownfield project that can be reactivated in short order. This update is the result of a disciplined process run by the Cyprium team and MEC Mining. Our objective with this MRE scope was to ensure a strong foundation for our planning work, including pit optimisation and mining studies."

Table 1: Nifty Copper Deposit March 2024 Mineral Resource Estimate (MRE) above 0.25% Cu.

OXIDATION TYPE	MEASURED			INDICATED			INFERRED			TOTAL		
	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu
OXIDE, SAP, TRANS	2,603,000	1.02	26,471	17,519,000	0.74	130,081	849,000	0.70	5,902	20,971,000	0.78	162,000
SULPHIDE	35,452,000	0.98	347,610	63,395,000	0.80	505,685	5,199,000	0.43	22,479	104,047,000	0.84	876,000
TOTAL	38,055,000	0.98	374,080	80,915,000	0.79	635,765	6,048,000	0.47	28,381	125,018,000	0.83	1,038,000

Numbers are rounded to reflect a suitable level of precision.
Numbers may not sum due to rounding.

Table 2: 2024 Nifty MRE update cut-off grades totals.

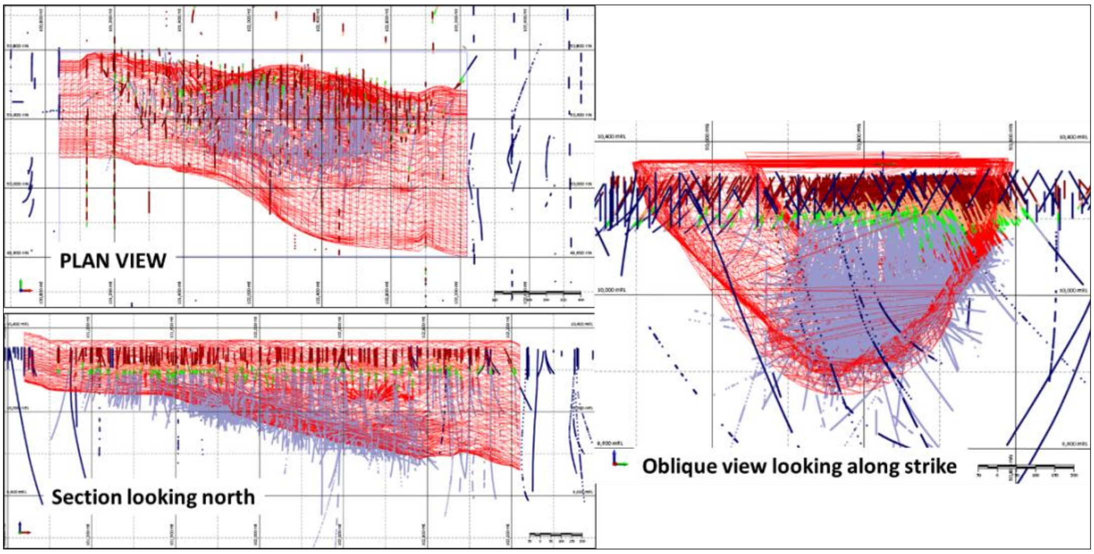
Cutoff %	0.15	0.20	0.25	0.30	0.35	0.40
Tonnage t	159,557,000	141,045,000	125,018,000	111,379,000	99,425,000	89,823,000
CuCut %	0.693	0.762	0.830	0.899	0.968	1.031

Nifty's sedimentary-hosted copper resource showcases stable mineralisation patterns, defined by comprehensive drilling and mining activities spanning more than 30 years. This robust dataset, in conjunction with geological and structural information not included in the previous estimate, has given the company a better understanding and sharper definition of the deposit and significantly upgraded the resource classifications and its economics.

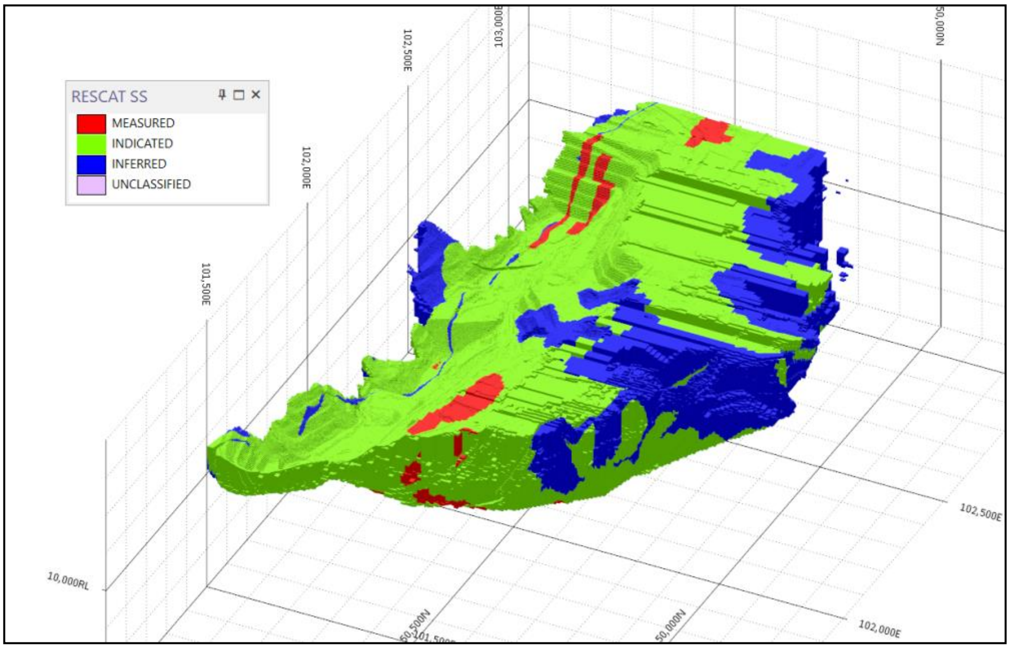
ABN 48 002 678 640
T +61 8 6374 1550
ASX: CYM

Level 1, 437 Roberts Road
Subiaco, WA, 6008
www.cypriummetals.com

Plan, long-section looking north and cross section looking west showing the Nifty Middle Carbonate Unit wireframe and drilling used in the 2024 MRE update.
(MEC Mining Nifty 2024 MRE release memorandum).



"As a result of the detailed study work, the proportion of the resource categorised as Measured & Indicated has risen from 80% to 95%, bolstering the project's feasibility and long-term economic prospects," said Fifield.



3D View of Nifty 2024 MRE resource categories.
(MEC Mining Nifty 2024 MRE release memorandum).

"This MRE is the basis for our workstreams to redevelop Nifty into a significant new copper mine," said Fifield. "With a million tonnes of contained copper, this resource should support a large scale mine. This is the long-term opportunity at Nifty."

Existing Heap Leach Inventories Not Included in MRE

The global resource figures in the 2024 MRE does not include previously mined oxide ores. In historically mined heap leach workings, previous management established a mineral inventory of 17 million tonnes at an estimated remaining grade of 0.53% copper. The Cyprium team is reviewing prior and current studies to detail the copper metal available in this potential resource and will inform the market as appropriate.

The accompanying Mineral Resource Estimate is attached and can also be found at www.cypriummetals.com/investor-centre/asx-announcements.

This ASX announcement was approved and authorised by the Board on Cyprium Metals Limited.

Further information:

Matt Fifield	Manu Trivedi	John Gardner
Executive Chair	Chief Financial Officer, Interim	Investor and Media Relations
matt.fifield@cypriummetals.com	manu.trivedi@cypriummetals.com	communications@cypriummetals.com

T +61 8 6374 1550
E communications@cypriummetals.com

Competent Person

The information in this report that relates to the estimation and reporting of the Nifty Mineral Resource Estimate dated 14 March 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 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 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.

NIFTY COPPER DEPOSIT JORC CODE TABLE 1 SECTION 1: SAMPLING TECHNIQUES AND DATA

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.	– The Nifty deposit (the Deposit) has been drilled and sampled from surface and underground, along and across strike, using various drilling techniques. The drilling programs have been ongoing since initial discovery to both expand the mineralisation and provide control for mining. – Most drilling has been designed to intersect the folded mineralisation as close as perpendicular as possible. A total of 2,340 RC, diamond, and pre-collared holes with diamond tails have been drilled at Nifty, for a total of 370,146 m of drilled metres within the immediate vicinity of the deposit. – The hole collars were surveyed by company employees or contractors with the orientation recorded. Down hole surveys were recorded using appropriate equipment. The diamond core was logged for lithology and other geological features including regolith and weathering. RC drilling was logged for lithology, regolith and weathering. – The diamond core diameter varied from NQ to HQ in diameter. Mineralised intervals were sampled by cutting the core. For the sampled core, 75% has been sampled as half core: (71% of surface and 76% of underground core). The remainder was sampled as either quarter or whole core. The submitted sample weight ranged from 2 to 3 kg. – The RC drillhole diameters have not been recorded. The submitted RC samples were collected from the cyclone on the rig and spilt at the rig to approximate 2 to 3 kg weight. The splitter was cleaned with compressed air after each sample. – No geophysical tools were employed in assessing the sample grades.
	– Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	– The drilling rate was monitored and adjusted to maximise sample recovery. – Laboratories used were/are ISO/IEC 17025 accredited.
	– 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	– Copper mineralisation is readily identified by the presence of copper oxide minerals (dominantly azurite, malachite and chalcocite) and/or copper sulphide (dominantly chalcopyrite and bornite) mineral species.

	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	– RC drilling was sampled at 1.0 m intervals using a cyclone and sub-sampled using a riffle or cone splitter to create a 2-3 kg sample in a calico bag, which was submitted for assaying. – Diamond drilling was sampled to lithological contacts, limited to nominal 1.0 m in length and predominantly sampled as sawn half core. – The sampling protocols are considered appropriate for the nature and style of the Nifty 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.).	– Drilling from surface was either reverse circulation (RC) drilling or diamond drilling. Drilling from underground was diamond drilling. – Diamond drilling was conducted using HQ to NQ diameter drilling.
Drill sample recovery	– Method of recording and assessing core and chip sample recoveries and results assessed.	– Core recovery was recorded in the database and assessed by measuring core length against total recovered core. The total core recovery averaged 94% by total number of measurements and 92% using length weighting. – RC sample weights were not recorded.
	– Measures taken to maximise sample recovery and ensure representative nature of the samples.	– The ground conditions in the mineralised zone are competent. In areas of less competent material core return was maximised by controlling drill rate. – In the case of RC samples, intervals of less competent material were identified in the log.
	– 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.	– Whilst no formal assessment has been reported, the nature and style of the copper mineralisation, and overall observed competency of the material sampled to date, would preclude potential sampling bias.

Logging	– Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	– The routine logging of core and chips informed the general geologic features including stratigraphy, lithology, mineralisation, and alteration, which was sufficient and appropriate to apply mineralisation constraints. – Some core drilling was orientated and structural measurements of bedding, joints, veins etc captured. – The level of detail is considered suitable to support all Mineral Resource classifications and future mining and metallurgical studies.
	– Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	– Geological logging is qualitative; core recovery and structural orientation was captured as quantitative data.
	– The total length and percentage of the relevant intersections logged.	– The entire length of all holes, apart from surface casing, was logged geologically.
Subsampling techniques and sample preparation	– If core, whether cut or sawn and whether quarter, half or all core taken.	– Approximately 74% of all core was sampled as half core, 13% as whole core and less than 1% as quarter core. All cut core was sawn. It is not known if the core was consistently taken from the same side of the core. – Field sub-sampling of RC chip samples and the use of core cutting equipment for the submitted core are considered appropriate sub-sampling methods.
	– If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	– RC chip samples were collected via a cyclone prior to being sub-sampled by splitter. – The splitter riffles were cleaned with compressed air between each sample. – Geological logging describes the RC samples as being predominantly dry.
	– For all sample types, the nature, quality and appropriateness of the sample preparation technique.	– All assaying for both core and RC samples was performed by contract laboratories. The majority of the assay digest used a four acid digest method. Alternatively, sample preparation was by fusion prior to XRF analysis at contract laboratories. – All sample preparation techniques are considered appropriate for the style and nature of the Nifty copper mineralisation.

	– Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	– No precision concerns were raised by the close spaced open cut and grade control data and mining.
	– 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.	– During drilling the splitter riffles were cleaned between sampling using compressed air. – The drill speed was monitored during drilling to optimise sample recovery. – The core was cleaned prior to logging and sampling. – All laboratories adopted appropriate industry best practices for splitting and comminution to the required particle size.
	– Whether sample sizes are appropriate to the grain size of the material being sampled.	– Sample sizes are considered appropriate for the style of mineralisation, mineralogy and grain size being sampled.
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.	– Prior to Cyprium's acquisition of the project, analytical techniques varied over time and included AAS (for grades > 1% Cu), ICP-AES, ICP-MS and XRF. All are considered appropriate analytical techniques and suitable for the Nifty style copper mineralisation. – The majority of this assaying used a four acid digest which is considered a total digestion method for copper analysis. A proportion of the samples were prepared using fusion prior to XRF analysis which is also considered a total analytical technique. – Since acquiring the project, Cyprium sample data was assayed at Bureau Veritas in Canning Vale, Western Australia. Samples were crushed and pulverised using a four acid digest, prior to ICP-AES analysis.
	– 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 to ascertain grade.

	– 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.	– Standard and blanks were included with all samples sent for analysis at an overall rate of 1 in 10 and 1 in 31 respectively. Available QAQC for all holes used in the estimate provide support for the quality of the copper assays. – Field duplicate information is also available for the majority of the project, with field duplicates submitted at an overall rate of 1 in 270 (due to some historic drill programs not analysing field duplicates). The most recent drilling (since August 2021) has a rate of 1:21. – Statistical analysis was conducted to assess precision and bias, and there are no material concerns with respect to the MRE. – An umpire laboratory was used to re-analyse 182 samples. There were no concerns with respect to bias.
Verification of sampling and assaying	– The verification of significant intersections by either independent or alternative company personnel.	– The extensive data set has been reviewed by previous operators of the project and the intersections within the mineralisation have been confirmed.
	– The use of twinned holes.	– 11 sets of twinned holes were identified for analysis, 9 pairs were RC/diamond twins and 2 pairs were RC/RC twins from different phases of drilling. Overall, the comparison between the twin holes is acceptable at ≤2% Cu. Above this grade there is some strong bias, generally towards the diamond holes showing higher grade than the RC holes. One hole (NPC0073) was also identified as likely being in the incorrect location however does not have a material impact on the MRE as it is above the level of depletion so has been removed from the model. – In addition to the twinned holes, there is a significant amount of supportive close spaced drilling of various orientations.
	– Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. –	– The extensive historical data set has been reviewed many times over nearly 30 years by several data management consultants. Intersections within the mineralisation have previously been confirmed. – Cyprium has adopted established data entry, verification, storage and documentation protocols commensurate with past production.
	– Discuss any adjustment to assay data.	– Other than re-setting below detection limit grades to ‘blanks’, there have been no adjustments to the assay data.

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.	– Collar positions have been surveyed on a known local grid with good, demonstrated survey control and supported both open pit and underground mining. – Drillhole collar locations are set out and surveyed using the local Nifty Mine grid. – The drillhole azimuth and dip was recorded at 30m intervals.
	– Specification of the grid system used.	– The regional grid is GDA94 Zone 50. All site survey work is completed using the local Nifty mine grid.
	– Quality and adequacy of topographic control.	– Topographic control is adequate and is derived from post-mining surface surveys.
Data spacing and distribution	– Data spacing for reporting of Exploration Results.	– Surface and underground drillholes were drilled on a nominal 40m x 20m grid, designed to specifically target the lithological and mineralisation sequence.
	– 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.	– Data spacing and distribution is sufficient to establish the degree of geological and grade continuity. The applied Mineral Resource classification is commensurate with the geological and grade continuity demonstrated.

	– Whether sample compositing has been applied.	– Samples were composite to 1 m prior to commencing the estimate.
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.	– Drillholes were designed to reflect the orientation of the stratigraphy, mineralisation, and deposit type. – Neither the drillhole design nor the sampling are believed to have introduced a sample bias.
	– 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.	– No sampling bias is considered to have been introduced by either RC or diamond drilling.
Sample security	– The measures taken to ensure sample security.	– RC samples and diamond drillhole core trays once collected from the rig, were stored at the Nifty mine site, which allowed only authorised access.
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 deposit is situated on mining lease M271/SA. – Cyprium Metals Ltd has 100% ownership of the Paterson Copper Pty Ltd entity, the owner and operator of the Nifty Copper mine.
	– 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.	– Currently there are no known impediments to Cyprium obtaining a licence to operate. The current tenure expires in September 2034.
Exploration done by other parties	– Acknowledgment and appraisal of exploration by other parties.	– The Summary Nifty project history is: – WMC Resources Ltd discovered Nifty in 1980 by using regional ironstone sampling and reconnaissance geology. Malachite staining of an outcrop and copper-anomalous ironstones from dune swale reconnaissance sampling were the initial indicators. This was followed up by lag sampling on a 500 x 50m grid that detected a 2.5 x 1.5km Cu-Pb anomaly. Secondary copper mineralisation was intersected in percussion drilling in mid-1981, with high grade fresh ore (20.8m at 3.8% Cu) discovered in 1983. WMC commenced open pit mining of the secondary oxide ore in 1992 and continued mining until September 1998 when Nifty was sold to Straits Resources Ltd. – Straights Resources Ltd sold the project to Aditya Birla Minerals Ltd, in 2003. – Open pit mining ceased in June 2006. – Underground mining of the fresh (chalcopyrite) mineralisation started in 2006. – The project was acquired by Metals X from Aditya Birla in 2016 in an on-market takeover of the ASX listed company. – Copper extraction using heap leaching ceased in January 2009. sulphide copper was processed using conventional floatation, producing a copper concentrate.

		– Underground mining and concentrate production ceased in November 2019 and the Nifty Copper mine was placed in care and maintenance. – The project was acquired by Cyprium Metals Ltd in February 2021.
Geology	– Deposit type, geological setting and style of mineralisation	– The Nifty mineralisation 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. – The Nifty mineralisation is hosted within the folded late-Proterozoic Broadhurst Formation, part of the Yeneena Group. The Broadhurst Formation is between 1,000 m to 2,000 m thick and consists of a stacked series of carbonaceous shales, turbiditic sandstones, dolomite, and limestone. – The dominant structural feature is the Nifty Syncline which strikes approximately southeast-northwest and plunges approximately 6°-12° to the southeast. The bulk of the mined sulphide mineralisation is largely hosted within the keel and northern limb of the Syncline. – Weathering and oxidation extend down to a maximum depth of 200 m vertically. – Oxide copper mineralisation is identified by the presence of azurite and malachite, as well as minor cuprite and native copper. – A lower saprolite zone is a sub-domain of the oxide zone, where the rock mass has more than 20% altered minerals but with identifiable remnant rock textures, which may contain oxide copper mineralisation. – There is development of a sub-horizontal chalcocite blanket within the transitional zone. – The transitional zone marks the gradual transition from chalcocite to fresh chalcopyrite mineralisation. – 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: – easting and northing of the drill hole collar	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

	– elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar – dip and azimuth of the hole – down hole length and interception depth – hole length. – If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	– In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. – Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. – The assumptions used for any reporting of metal equivalent values should be clearly stated.	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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.	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

	– 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').	
Diagrams	– Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
Balanced reporting	– Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
Other substantive exploration data	– Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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	– No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

	areas, provided this information is not commercially sensitive.	

Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding sections 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 has undergone rigorous checks by accredited database specialists through almost 30 years of operation.
	– Data validation procedures used.	– Drillhole collar, downhole survey, assays, geology, core recovery data was imported initially into Leapfrog and then into Micromine software. – The imported data was then compared to the database values with no discrepancies identified. – The data was desurveyed in both software packages and reviewed spatially with no discrepancies identified.
Site visits	– Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	– Dean O'Keefe, the Competent Person for this Mineral Resource estimate visited the Nifty site on February 8, 2024.
	– If no site visits have been undertaken indicate why this is the case.	– A site visit has been conducted.
Geological interpretation	– Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	– Confidence in the interpretation of the weathering and oxide zones is considered good – being well tested by surface drilling, clearly identifiable mineralogy, and rock fabric. – The confidence in the lithostratigraphic interpretation comes from thirty years' history of open pit and underground mining, and the closely spaced drilling, pit and underground mapping and other geological and sample information. – All available historical data was provided by Cyprium. – The lithostratigraphic sequence is subject to vertical and horizontal dimension changes along and across strike and in thickness. Fresh

		mineralisation occurs as either disseminated or massive chalcopyrite within the sequence. – The interpretations have been refined in conjunction with previous open pit and underground mining.
	– Nature of the data used and of any assumptions made.	– Surface RC as well as surface and underground diamond drilling have been used to inform the Mineral Resource estimate.
	– The effect, if any, of alternative interpretations on Mineral Resource estimation.	– Due to both the coverage of available data and the +30 years of exploration and mining experience at Nifty, there is limited scope for alternate interpretations in areas that have been suitably drill tested, with only minor/local scale refinements expected. – Areas with wider spaced drilling have an increased potential for alternate interpretations but are still expected to correlate well with the geological model and be commensurate with the amount of informing data.
	– The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	– The lithostratigraphic weathering/oxidation units were used as hard boundaries for estimation. – The composite and block model were unfolded prior to estimation, using the individual lithostratigraphic units to control the unfolding process. – Estimation of the weathered and chalcocite zones was completed in real space to reflect the known genetic model for these domains.
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 Nifty copper deposit occurs over a 1,200m down plunge distance; units vary individually between from 0 m to 30 m in true thickness. The limbs of the sequence are variously mineralised and up to 400 m in vertical extent.
Estimation and modelling techniques	– The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation	– The final interpretational wireframes and estimation work was completed using Micromine v2023.5. – The available samples were coded by lithostratigraphic and oxide/weathering unit (estimation domain), and 1.0 m composites were created honouring these boundaries.

	method was chosen include a description of computer software and parameters used.	– Copper geo-statistical assessment of the controlling variograms was undertaken in unfolded space, for each estimation domain, with the exception of the chalcocite domain which was estimated in true space because of its linear geometry. – The grade was estimated using ordinary block kriging of the 1.0m composite grades. – Topcuts were applied to the composite samples on individual estimation domains, to restrict the impact of a limited number of extreme (high) values. – For estimation purposes all boundaries were treated as hard boundaries. – For the transitional and fresh sulphide lithostratigraphic domains, the search orientation was derived from the continuity model in unfolded space. – The primary search was 200 m in the direction of maximum continuity, 100 m along the intermediate direction of continuity and 40 m in the minor direction of continuity. Up to 4 samples per octant sector (maximum number of informing samples was 32 samples) was used. – The secondary search was 500 m in the direction of maximum continuity, 250 m along the intermediate direction of continuity and 100 m in the minor direction of continuity, with a maximum of 32 informing samples (no octant search applied). – Estimation of the chalcocite domain was undertaken in real space, with the search ellipse orientated along the strike of the mineralisation parallel to the overall chalcocite geometry. The primary estimation pass used search distances of 200 m along strike, 100 m across strike and 40 m vertically, with up to 4 samples per octant sector (32 maximum number of informing samples). The second estimation pass expanded the search distances to 500 m along strike, 250 across strike m and 100 m vertically, with a maximum of 32 informing samples (no octant search applied). – Any blocks not estimated after two estimation runs were not estimated. – The maximum distance for extrapolation was 500 m.

	– 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 2024 MEC MRE was compared to the previous 2022 estimate. When the two estimates are suitably regularised and depleted for previously mining, the 2024 estimate has 3% more tonnes and 4% higher grade.
	– 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).	– There are no deleterious elements estimated.
	– In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	– As a function of the folded geometry, the drill spacing for the fresh mineralisation is highly variable, with a nominal drillhole spacing of 40 m east by 20 m north across strike. The block size used for estimation 20 m east x 10 m north and 5 mRL.
	– Any assumptions behind modelling of selective mining units.	– No selective mining unit assumptions were used for the Mineral Resource Estimate.
	– Any assumptions about correlation between variables.	– No assumptions have been made regarding correlated variables.
	– Description of how the geological interpretation was used to control the resource estimates.	– The estimate used the lithostratigraphic and weathering/oxidation contacts to define the estimation domains. The oxide and chalcocite estimation domains had the continuity modelling and estimate completed in true (unfolded) space to reflect the linear geometry of the mineralisation. The transitional and fresh sulphide domain continuity modelling and estimate was completed in folded space, derived by the individual lithostratigraphic folded geometry. – Density was assigned based on a combination of oxidation state and lithostratigraphy.

	– Discussion of basis for using or not using grade cutting or capping.	– To prevent extreme composite grade values exerting undue influence on the estimate, estimation domains with extreme values were topcut. The topcuts ranged from 5% to 30% copper grade, with a total of 47 composite samples being topcut, with between 2 and 9 composite samples per estimation domain being topcut.
	– 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 configuration was initially validated and no gaps or overlapping blocks existed in the ore block model. The composite and estimated block grades were then validated in a series of steps which included visual comparison on section, hole of domain validation and swath plots. – Drillhole grades were initially visually compared with cell model grades. Domain drill hole and block model statistics were then compared. Swath plots were also created to compare drillhole grades with block model grades for easting and northing slices throughout the deposit. The block model reflected the tenor of the grades in the drill hole samples both globally and locally. – Currently there is no reconciliation data available.
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 on a dry bulk density basis using density determined by copper content.
Cut-off parameters	– The basis of the adopted cut-off grade(s) or quality parameters applied	– The MRE was reported at a 0.25% total copper basis, which is the reporting cut-off used for the previous MRE.
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	– Mining at the operation has previously been undertaken by open cut (mining ceased 2006) and underground (mining ceased in 2009) methods. – Previous underground mining was by open stoping with paste fill. – Mining operation are currently under care and maintenance. – Cyprium Metals is evaluating the opportunity to re-commence mining and processing operations for both oxide and sulphide ores at Nifty.

	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.	
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.	– Mining operation are currently under care and maintenance. – Nifty previously processed the oxide and some transitional ore as a heap leach with SX-EW copper operation from 1993-2006. – The sulphide ore was processed using conventional floatation producing a copper concentrate for sale. – Cyprium plans to re-commission mining and processing at Nifty with a similar approach: – Initial mining of oxide material and treatment using heap leaching and SX-EW to produce Cu cathode. – On-going development over several years leading to mining transitional and fresh sulphides for treatment using conventional floatation to produce a copper concentrate.
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	– Cyprium reports that it operates in accordance with all environmental conditions set down as conditions for grant of the respective mining leases.

	been considered this should be reported with an explanation of the environmental assumptions made	
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.	– Density was determined from whole core prior to the core being cut and is assumed to be on a dry basis. – There were 12,475 valid density determinations from surface drilling testing oxide, transitional and fresh copper sulphides. There were 8,881 determinations from underground drilling, testing the fresh chalcopyrite mineralisation.
	– 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,	– Prior to density determination, the core was sealed using plastic wrap to mitigate the presence of vugs and/or voids.
	– Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	– Historically, density was applied based on stratigraphy, oxidation state and copper grade basis, and this is the same approach for was used for the 2024 resource update: – The density applied to the estimate was derived by: – Lithostratigraphic domain – Oxidation/weathering domain; and – Copper grade.
Classification	– The basis for the classification of the Mineral Resources into varying confidence categories	– The criteria used to categorise the Mineral Resources included the robustness of the input data, the confidence in the geological interpretation including the predictability of both structures and grades within the mineralised zones and the distance from the data informing the estimates within the respective domains.
	– Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade	– The performance of the historical mining and well-documented understanding of the deposit geology and mineralisation controls provide significant confidence in the estimate.

	estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	
	– Whether the result appropriately reflects the Competent Person's view of the deposit.	– The Mineral Resource estimate reflects the Competent Person's view of the deposit.
Audits or reviews	– The results of any audits or reviews of Mineral Resource estimates.	– Craig Gwatkin of Palaris Australia has completed an external high level review of the MEC March 2024 MRE and no fatal flaws were identified. – The 2024 MRE has followed the same workflow and methodology as was used for the 2019 Mineral Resource estimate, which had been audited by external independent consultants who found no fatal flaws with this approach. The same approach has been used for the previous 2021 and 2022 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 March 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 estimation domain being considered and the proximity to informing samples. – No quantitative test of the relative accuracy has been done.
	– 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.	– The March 2024 Mineral Resource update is considered a global estimate. Grade control scale sampling will be required to provide sufficient local confidence prior to mining.

	Documentation should include assumptions made and the procedures used	
	– The statements of relative accuracy ad confidence of the estimate should be compared with production data, where available.	– Comparison with production data is currently not available.

MEC ADVISORY

TRUSTED EXPERTISE. PROVEN OUTCOMES.

Mineral Resource Estimation Memorandum

Nifty deposit; Western Australia

Cyprium Metals Ltd

March 2024

1 EXECUTIVE SUMMARY

Cyprium Metals Ltd (Cyprium) commissioned MEC Mining Pty Ltd (MEC) in October of 2023 to complete a Mineral Resource estimation (MRE) of the Nifty copper deposit and report the estimate in accordance with the JORC 2012 reporting code (the Code), with the objective of obtaining an MRE that better reflected the available geological understanding of the deposit. The March 2024 MRE is shown in **Table 1.1**.

Table 1-1: Nifty March 2024 MRE

OXIDATION TYPE	MEASURED			INDICATED			INFERRED			TOTAL		
	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu
OXIDE, SAP, TRANS	2,603,000	1.02	26,471	17,519,000	0.74	130,081	849,000	0.70	5,902	20,971,000	0.78	162,000
SULPHIDE	35,452,000	0.98	347,610	63,395,000	0.80	505,685	5,199,000	0.43	22,479	104,047,000	0.84	876,000
TOTAL	38,055,000	0.98	374,080	80,915,000	0.79	635,765	6,048,000	0.47	28,381	125,018,000	0.83	1,038,000

Numbers are rounded to reflect a suitable level of precision.
Numbers may not sum due to rounding.

The updated MRE will be used for Pit Optimisation and mining studies based on opencut mining as opposed to the historic underground mining scenario. The credit element for the Nifty project is copper.

1.1 Location

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

Figure 1-1: Nifty project location

1.2 Tenements

The Nifty project is 100% owned by Cyprium Metals Limited and is located on M271SA (**Figure 1-2**). 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.

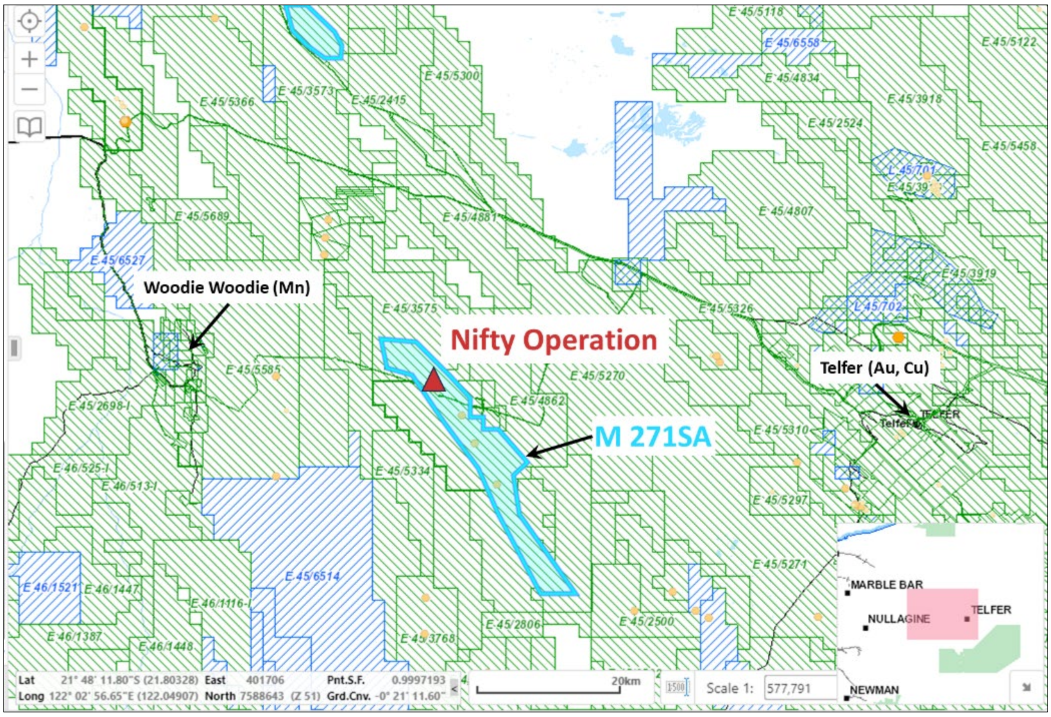


Figure 1-2: Nifty tenements

1.3 Project History

WMC Limited (WMC) discovered the Nifty deposit in 1981, with drill testing of the oxide resource leading to the discovery of the deeper sulphide resource in 1983. WMC commenced open pit mining and processing on the relatively high-grade part of the oxide mineralisation in 1993, extracting oxide, transitional and chalcocite ore from which copper cathode was recovered via a heap leach and SX-EW method.

Straits Resources Limited acquired the Nifty operation in 1998, operating it for 5 years and developing an underground hypogene resource. The project was then acquired by Aditya Birla Minerals in March 2003, along with the surrounding exploration tenements. Underground development targeting the hypogene resource commenced in January 2004, via a decline from the open pit with the first concentrate being produced in March 2006. Open pit mining operations ceased in June 2006 and heap leach operations ceased in January 2009. Metals X Limited then acquired the project on 1 August 2016, focusing on testing the underground potential.

Cyprium Metals Limited acquired the Nifty project 31 March 2021.

1.4 Regional Geology

The Nifty deposit is located within the NNW to NW trending, >1,000 km long by 150 to 200 km wide Paterson Orogen which fringes the northeastern margin of the Archean to Paleoproterozoic West Australian Craton, and merges with the Musgrave Orogen to the southeast (**Figure 1-3)**.

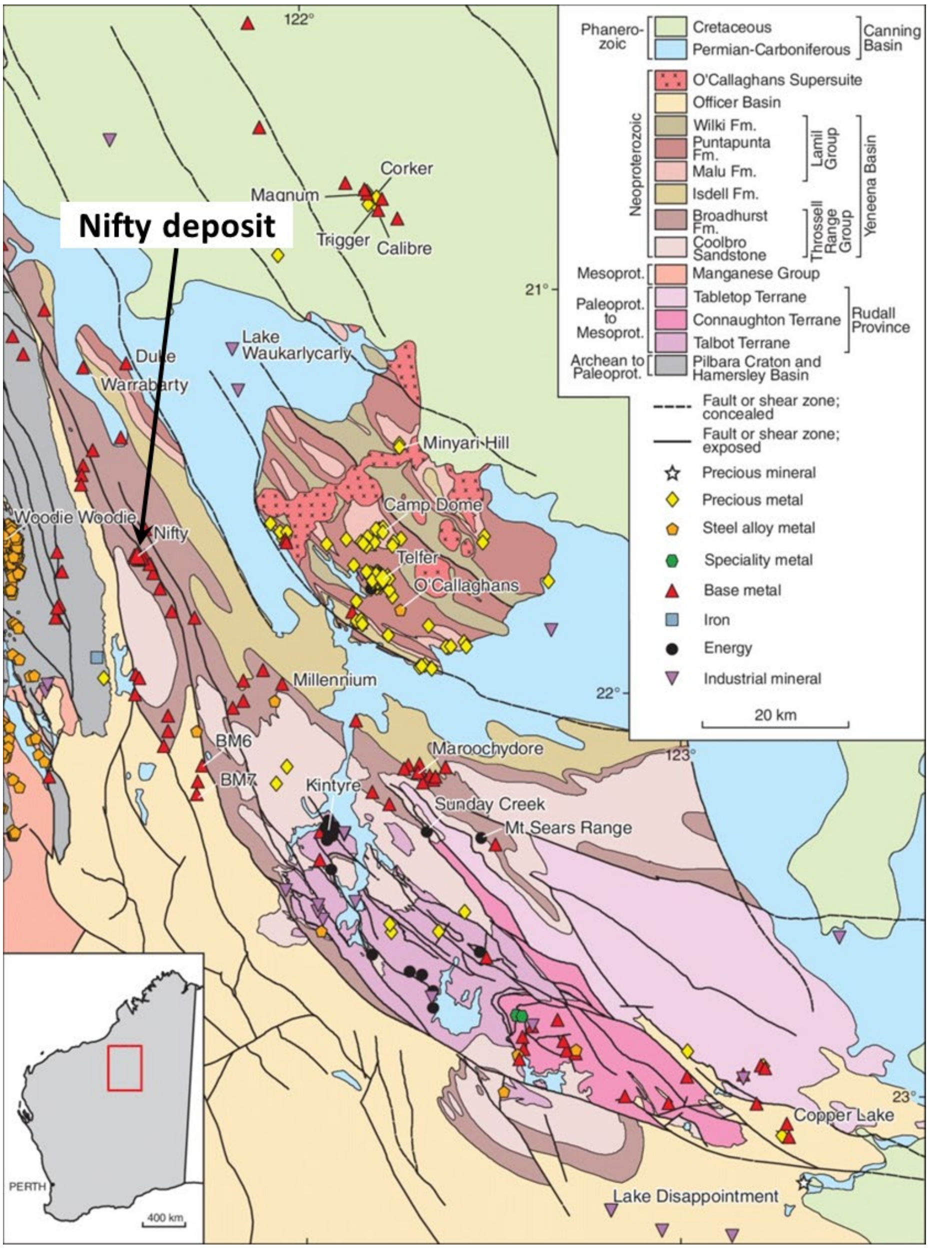


Figure 1-3: Solid Geology of the Paterson Orogen (after Maidmment et al, 2017)

The Paterson Orogen is composed of:

- The Paleo to early Mesoproterozoic metamorphosed igneous and sedimentary rocks of the Rudall Complex which hosts the Nifty deposit, and
- The unconformably overlying ~9 to 13 km thick, ~850 to 824 Ma Yeneena Supergroup of the >24,000 km^2 Neoproterozoic Yeneena Supergroup.

The Rudall Complex comprises ~2,015 to 1,765 Ma Paleoproterozoic igneous and sedimentary rocks that were subjected to regional D1 and D2 deformation, metamorphism to granulite facies and granitic intrusion during the ~1,800 Ma Yapungku Orogeny, followed by voluminous post-orogenic 1,590 to 1,310 Ma granitic intrusions only subjected to greenschist facies metamorphism. The complex also includes a domain of sheared peridotite, gabbro, pelitic schist and meta-turbidites to the south and east. The Yeneena Supergroup represents the extensional, fault controlled, northwestern extremity of the ~2 million km^2 Centralian Superbasin, developed where the latter encroached upon the Paterson orogen. The Yeneena Supergroup is the thickest measured section in the entire Super-basin, but only represents the first of four super-sequences contained therein. To the west and SW, it is in fault contact with both stratigraphically equivalent and younger rocks of the Officer Basin section of the Superbasin that laps onto the West Australian Craton. To the northeast, the Yeneena Basin and Rudall Complex are overlain by the extensive Phanerozoic Canning Basin (Huston et al., 2010).

The Yeneena Supergroup is subdivided into the Throssell Range and succeeding Lamil groups. The Throssell Range Group is composed of the Coolbro and overlying Broadhurst formations. The latter hosts both the Nifty and Maroochydore deposits.

The 2 to 4 km thick Coolbro Formation was deposited in an extensional rift setting. It commenced with a discontinuous basal conglomerate above the Rudall Complex unconformity, followed by coarse-grained planar to trough cross-bedded fluvio-deltaic sandstone which fines upwards. The upper half of the formation is more arkosic and is frequently cross-bedded, with sporadic pebbly and gritty lenses, and interbeds of shale and calcareous mudstone. The frequency of fine-grained intercalations increases upwards to transition into the overlying Broadhurst Formation.

The Broadhurst Formation is ~2 to 3 km thick and represents sag phase deposition. It is composed of two, dominantly carbonaceous, shale to pelitic schist units, separated by up to 500m of argillaceous, turbiditic, greywacke and sandstone. Both shale-dominated sections include beds containing up to 10% pyrite and pyrrhotite, the latter identifiable in aeromagnetic data. The upper shale unit also closely coincides with conductive zones in ground and airborne electromagnetic data, interpreted to reflect carbonaceous and/or sulphide-bearing rocks. This implies the upper shale is, overall, more reduced and sulphidic than the lower shales. A few <100m thick interbeds of limestone and dolostone are associated with the carbonaceous shale members. The upper and lower shale units are inferred to have been deposited in a sediment-starved euxinic basin. The Broadhurst Formation is structurally overlain by the laterally equivalent carbonate-rich Isdell Formation, which passes up into the Malu Formation quartz sandstones, the basal unit of the Lamil Group, marking renewed extension. Within the Nifty mine area, the Broadhurst Formation is intruded by an undated post-mineralisation dolerite dyke. A composite gabbroic to intermediate sill close to nearby Maroochydore copper deposit has been dated at 816±6 Ma.

The Nifty copper mineralisation is hosted within the Throssell Formation of the Yeneena Supergroup, a Neoproterozoic sub-greenschist facies sequence, immediately to the east of the Archaean Pilbara Craton.

1.5 Deposit Geology

The Nifty local stratigraphy is dominated by carbonaceous and dolomitic shales which are folded into a pronounced syncline termed the Nifty syncline (**Figure 1-4**).

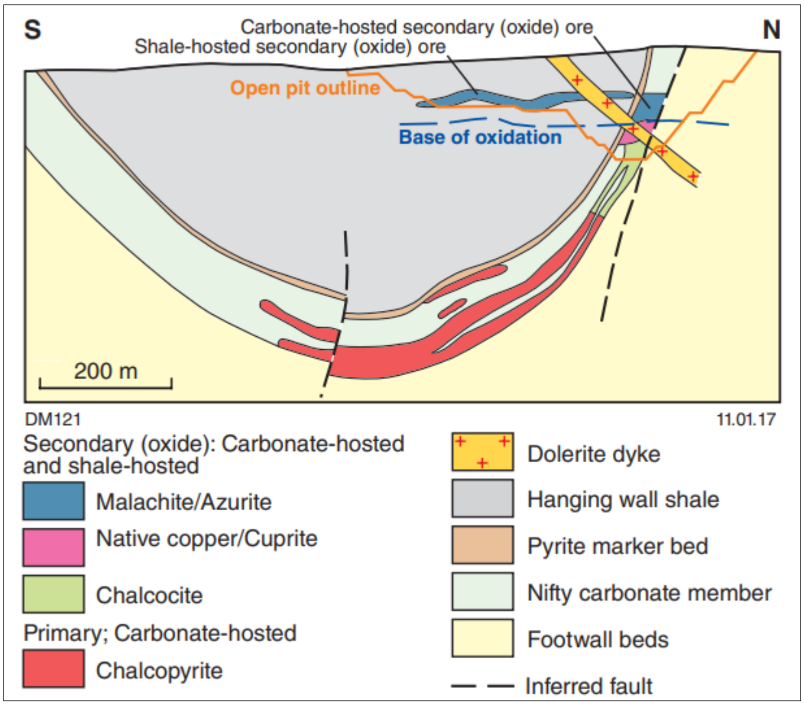


Figure 1-4: Nifty generalised geological cross-section (after Ferguson, Bagas and Ruddock, 2005)

Mineralisation has a strong lithostratigraphic control, with carbonate-rich rocks preferentially mineralised relative to carbonate-poor rocks, and silica-dolomite alteration typically accompanying the copper mineralisation, which has a positive correlation with alteration intensity. From youngest to oldest, the stratigraphic units and their relative state of mineralisation are as follows (**Figure 1-5**):

- Pyrite Marker Bed (**PMB**): The PMB is a 5m to 7m thick, vuggy carbonate and silty-shale unit containing abundant pyrite. The unit only occasionally displays silica-dolomite alteration with associated copper mineralisation.
- Upper Interbedded Shale Unit (**ISHU**): The ISHU is 25m to 50m thick and consists of interbedded siltstones and shales. This unit contains copper mineralisation associated with silica-dolomite veining and alteration.
- Lower Interbedded Shale Unit (**ISHL**): The ISHL is a 10m to 25m thick unit consisting of interbedded siltstones, dolomitic shales, and laminated carbonates. The carbonate component increases towards the base, as does the copper mineralisation, which occurs as disseminations along bedding and in the matrix of breccias.
- Middle Carbonate Unit (**MCU**): The MCU is the uppermost of four units comprising the Nifty Carbonate member (NCM) and is 20m to 40m thick, consisting of algal carbonate with minor shale interbeds. This unit is strongly altered and, along with the LCU, hosts the majority of the sulphide mineralisation.
- Barren Algal Carbonate (**BAC**): The BAC is a barren wedge ranging from 5m to 20m thickness, being thickest in the east.
- Shale Unit (**SH**): The Shale Unit is 2m to 10m thick and is generally poorly mineralised.
- Lower Carbonate Unit (**LCU**): The LCU is 15m to 30m thick and consists mostly of a marine algal limestone with common siltstone and shale interbeds, which becomes more numerous towards the basal contact with the underlying FWS, especially in the east. The LCU is strongly mineralised, particularly within a ~10m band just below the SH unit, with once again an association with strong silica-dolomite alteration. The copper mineralisation is less intense where there are shale interbeds.
- Footwall Shale (**FWS**): The FWS is gradational with the overlying LCU and the contact is defined below the last appearance of 1m thick silica-dolomite alteration. The unit is poorly mineralised and a 1m to 5m thick laterally extensive massive pyrite bed occurs 5m to 10m below the LCU contact.

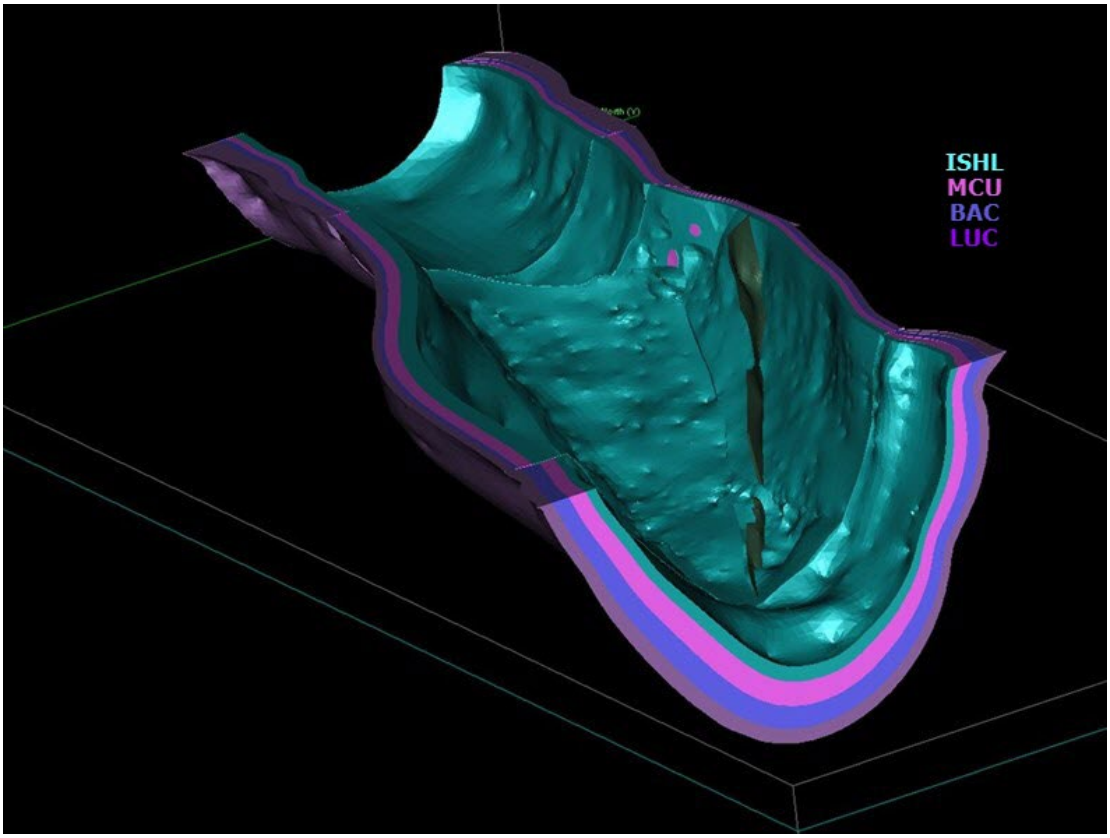


Figure 1-5: Nifty stratigraphic domains *(after CSA Global Nifty 2021 MRE update)*

The primary chalcopyrite copper mineralisation has been modified by weathering and oxidation down to a depth of 200m (**Figure 1-6**):

- The oxide copper mineral species are dominantly malachite and azurite, with some cuprite and native copper, which can extend down to 100m below surface.
- The Lower Saprolite zone potentially contains oxide mineralisation.
- The supergene or chalcocite zone generally extends from 100m to 200m below surface, consisting dominantly of chalcocite.
- The unweathered, hypogene fresh or primary sulphide zone is dominated by chalcopyrite associated with silica-dolomite alteration. Minor covellite and bornite is also present. Pyrite is a common gangue mineral, but only occurs with chalcopyrite on the margins of the deposit.

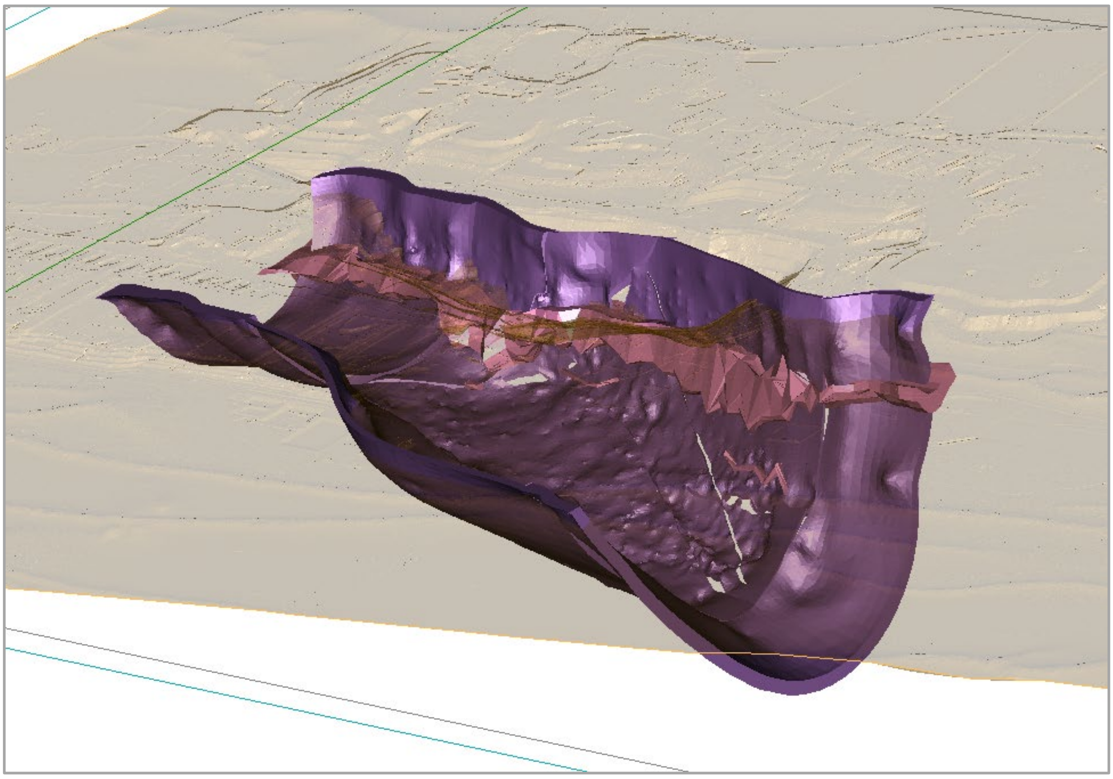


Figure 1-6: Chalcocite modelled solid in the northern limb of the Nifty syncline (*after CSA Global Nifty 2021 MRE update)*

1.6 Structural Geology

The Nifty deposit is affected by steeply dipping to vertical faulting, which has variably offset the stratigraphy and mineralisation. However, some of these faults are believed to pre-date the mineralisation and may have played a role as mineralising fluid conduits (**Figure 1-7**).

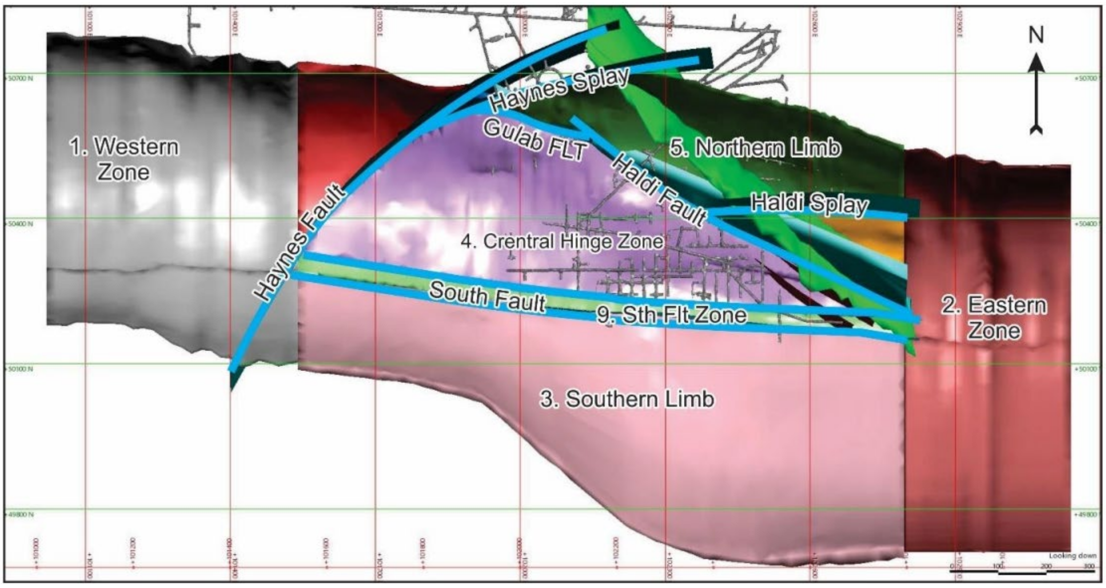


Figure 1-7: Plan view Nifty structural framework (after Davis, 2019)

The South and Haldi faults coincide with the steepening in dip of the stratigraphy out of the hinge zone and into the south and north limbs of the Nifty syncline, it is uncertain whether this is a sedimentary feature or a function of faulting. Irrespective of the cause, the deposit can be sub-divided into four areas of broadly differing copper endowment:

- Historical open pit mining was focussed on the oxide and transitional sulphide material which is largely depleted.
- Historical underground mining has been focussed on the Central Hinge zone.
- Planned mining is focussed on the north limb, and along the plunge extensions of the fold hinge.
- The south limb has historically been considered poorly mineralised, but recent drilling has identified additional prospectivity.

1.7 Drillhole Spacing

As a function of the significant along strike and folded mineralised geometry, combined with the drilling data being concentrated around higher grade areas, most drillholes are concentrated on the northern limb and around the fold hinge, with significantly fewer drillholes located on the southern limb. Additionally, there are fewer drillholes at the western and eastern extents of the mineralisation (**Figure 1-8**).

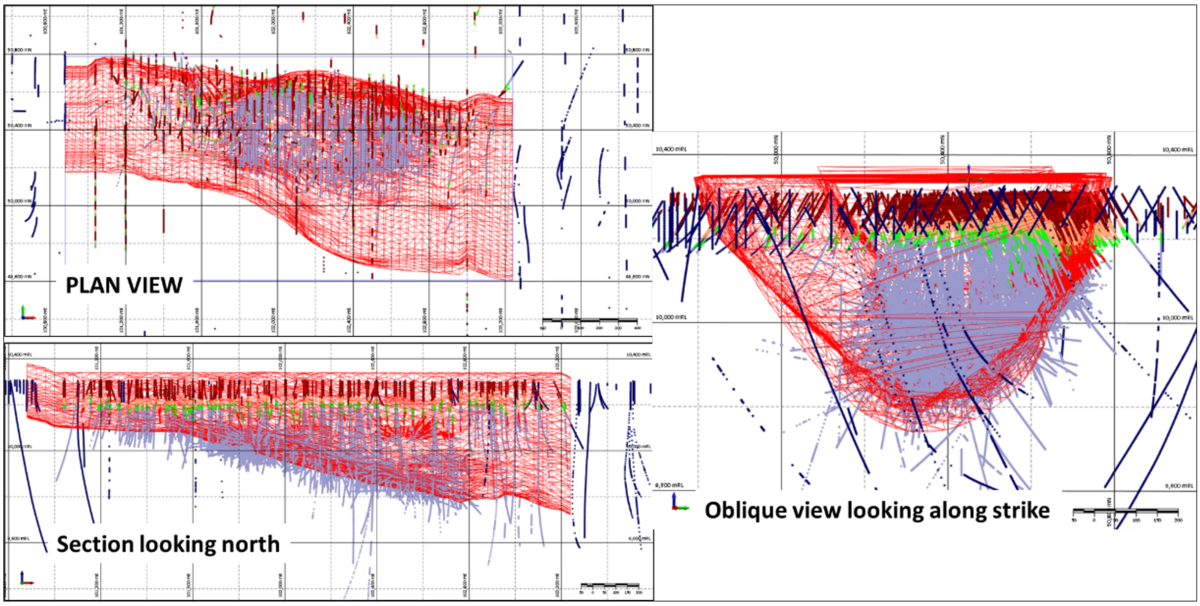


Figure 1-8: Plan, long-section looking north and cross section looking west showing the MCU wireframe and available drilling

The nominal drillhole spacing for the Nifty MRE is 40m east by 20m north around the existing open pit and underground mining, with wider spaced drillholes outside of the mined areas.

1.8 Database

The number of drillholes and samples used for the MRE are shown in **Table 1-2**.

Table 1-2: Nifty 2024 MRE Available Drillhole and Sample Lengths

Use	Hole Type	Nos Holes	Metres Drilled	Nos Samples	Sample Length (m)			
					Total	Average	Minimum	Maximum
2024 MRE	MRD	6	5,095	2,433	2,880	1.2	0.40	4.0
	RC	866	109,015	68,192	86,796	1.3	1.00	5.0
	RCD	46	14,017	924	2,541	2.8	1.00	4.0
	DD	1,422	242,019	134,717	132,037	1.0	0.02	74.0
	Total	**2,340**	**370,146**	**206,266**	**224,254**	**1.1**	**0.02**	**74.0**

1.9 Survey

All survey control for the Nifty project uses the local Nifty mine grid. The local mine grid has been used for all exploration, open pit, and underground mine work. Regional exploration uses GDA94 Zone 50 datum.

For surface drilling, most of the down hole surveying has been completed by methods which have not been documented. There are drill holes which have not had down hole surveys taken, and these have been allocated planned collar dips and azimuths in the drill hole database. All underground collared drillholes have been surveyed using a single shot reflex digital down hole camera, gyro or Deviflex tools.

A detailed topographic survey exists across the current mine project area.

1.10 Density determinations

There are a total of 21,357 density determinations in the drillhole database (**Table 1-3**). The CP considers the frequency of density measurements to be appropriate.

Table 1-3: Nifty Summary Density statistics

Methods	Nos Readings	Length (m)	Min.	Max.	Ave.	LW Ave.	Std. Dev.	CV.
DISP	464	387.3	1.13	8.72	2.80	2.80	0.61	0.22
LAB	6	0.9	2.74	3.05	2.88	2.86	0.11	0.04
MEAS	8,376	2,001.6	0.18	8.97	2.92	2.92	0.31	0.11
NR (has weights, not calculated)	588	313.9	1.64	8.50	2.90	2.94	0.51	0.18
NR (no weights with density)	11,922	11,779.0	1.05	5.26	2.69	2.68	0.35	0.13
Total	**21,356**	**14,483**	**0.18**	**8.97**	**2.79**	**2.73**	**0.37**	**0.13**

2 SITE VISIT

The Competent Person ("CP") for the JORC (2012) compliant 2024 Mineral Resource estimation report is MEC Mining Principal Advisor, 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 opencut pit, observing recently rain cleaned pit walls that clearly showed the structures, stratigraphic contacts, and intruding dyke (**Figure 2-4** and **Figure 2-5**). The backfill stockpile and mineralised waste stockpile on top of the backfill was also observed by the CP within the pit. The structures, stratigraphic units, and contacts were consistent with what has been modelled to form the geological model for the 2024 Mineral Resource estimate. The subsidence zone and sinkholes were clearly evident. The CP visited the sites shown in **Figure 2-1**.

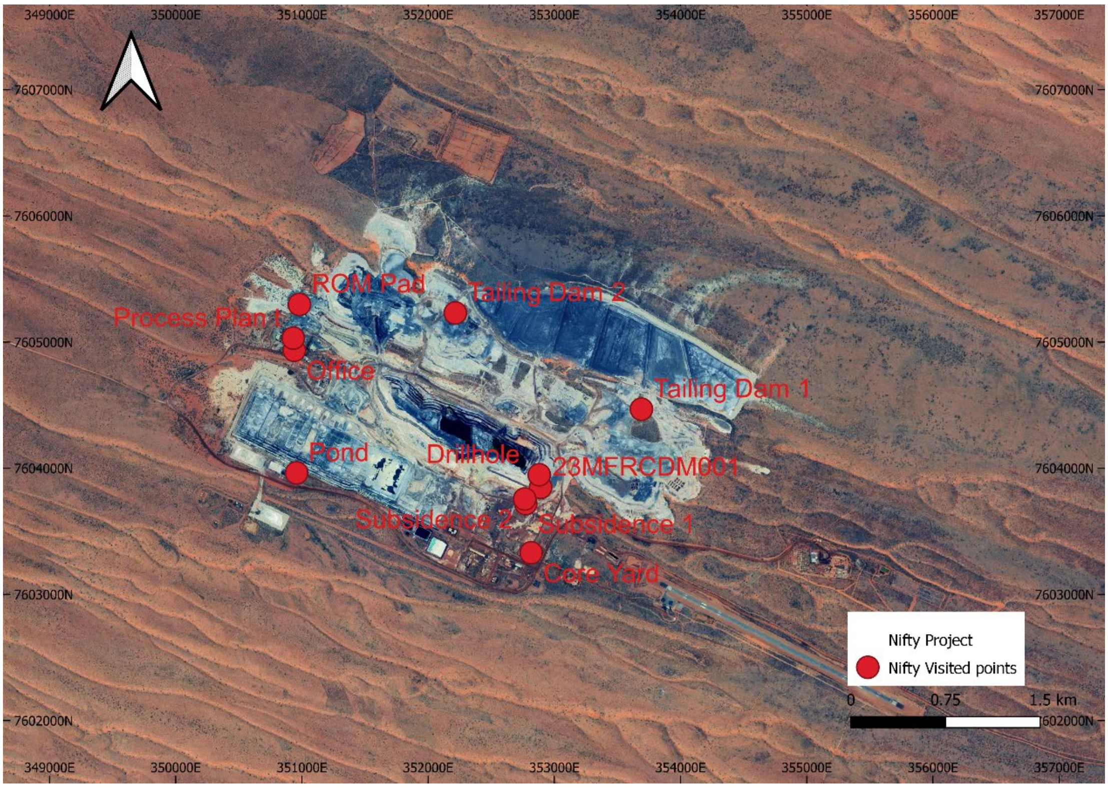


Figure 2-1: CP site visited points

The CP also visited the core yard, observing generally very competent core (**Figure 2-3**), with occasional vugs (**Figure 2-2**).

Figure 2-2: 23NFRCDM002 diamond drilled core

Figure 2-3: 23NFRCDM002 diamond drilled core, ~250m depth

Figure 2-4: Nifty pit, looking west

Figure 2-5: Nifty pit, looking south

Figure 2-6: Pregnant leaching solution in pond

Figure 2-7: Solvent extraction plant

Figure 2-8: Electrowinning

The CP also observed the SX-EW infrastructure (**Figure 2-7** and **Figure 2-8**), including the pregnant solution ponds (**Figure 2-6**).

3 QAQC

3.1.1 Pre-Cyprium QAQC Data

QAQC data is available for the Nifty project from September 2003 onwards. This includes data for operators prior to Cyprium Metals, who acquired the project in February 2021. The data includes certified reference material (CRM) standards to test analytical accuracy, blanks to test for cross contamination, laboratory repeats, field duplicates, and re-assay of a selection of pulps by an umpire laboratory.
The pre-Cyprium data was previously independently reviewed prior to Cyprium acquiring the project (Cube 2019), as well as being reviewed within the 2021 MRE update, and as part of this (March 2024) MRE update.

MEC's conclusion is that the pre-Cyprium QAQC data is of a sufficient quality to inform all JORC MRE categories.

3.1.2 QAQC data overview

Seven laboratories were used for analysis across the project. The QAQC analysis was conducted on a per-laboratory basis. A summary of all QAQC data available for the Nifty project is provided in **Table 3-1**.

Table 3-1: Summary of QAQC data for the Nifty project

Laboratory	No. of batches	No. of samples	Field duplicates		Laboratory pulp repeats		Blanks		Standards (including laboratory submitted standards)	
			Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio
ALS Nifty	396	40,310	109	1:370	2,083	1:19	1,359	1:30	4,518	1:9
ALS Perth	220	47,544	210	1:226	1,877	1:25	1,305	1:36	4,686	1:10
BVM Perth	95	22,905	1,076	1:21	1,128	1:20	1,083	1:21	2,383	1:10
Genalysis	99	17,733	272	1:75	781	1:23	735	1:24	1,864	1:10
Kalassay	56	7,176	0	N/A	423	1:17	43	1:167	561	1:13
Nifty Site Lab	81	7,557	0	N/A	961	1:8	67	1:113	551	1:14
Quantum	37	5,004	231	1:22	246	1:20	141	1:35	721	1:7
TOTAL	**984**	**148,229**	**550**	**1:270**	**7,499**	**1:20**	**4,733**	**1:31**	**15,284**	**1:10**

A breakdown of the proportion of samples processed by each laboratory and respective start and end dates is provided in **Table 3-2**. BVM Perth has conducted the most recent analyses, and all analyses since Cyprium acquired the project. ALS Perth and ALS Nifty have conducted over 60% of the analyses collectively; approximately 30% each.

Table 3-2: Summary of sample proportions by laboratory and date

Laboratory	Min Date	Max Date	Proportion of Total Samples
ALS Nifty	24th June 2017	5th December 2019	27.2 %
ALS Perth	1st September 2003	8th January 2020	32.1 %
BVM Perth	10th August 2021	20th November 2023	15.5 %
Genalysis	25th July 2012	23rd March 2017	12.0 %
Kalassay	1st August 2008	27th January 2009	4.8 %
Nifty Site Lab	24th December 2005	21st August 2009	5.1 %
Quantum	16th May 2013	8th October 2014	3.4 %

3.1.3 Topographical survey elevations compared to Drillhole collar elevation

For the drilling data used for the 2024 MRE, a check of the relative angular difference between the Map Grid Australia and Nifty Mine Grid coordinate system of the drillholes was completed. The drilling informing the 2024 MRE all had a consistent relative angular difference (0.000° to 0.017°) between the two coordinate systems, demonstrating that a consistent transformation had been applied between the two coordinate systems. Overall, there is confidence in the relative collar locations of the drillholes informing the estimate.

The collar locations were checked visually against the available topography and the underground void models and no collar discrepancies were identified.
Comparisons between the surface survey, underground workings and void wireframes did not identify any discrepancies between the two sources of data.

3.1.4 Field duplicate data

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 very short distance.

Table 3-3: Comparison of mean Cu grade between original and field duplicate samples

Laboratory	Global mean original (Cu %)	Global mean duplicate (Cu %)	Original mean – duplicate mean (Cu %)
ALS Nifty	0.72	0.61	0.11
ALS Perth	0.58	0.59	-0.01
BVM Perth	0.10	0.09	0.01
Genalysis	0.81	0.78	0.03
Quantum	0.02	0.02	0

For the ALS Nifty laboratory there is a consistent bias above 2.5% Cu with the original samples reporting a higher grade than the field duplicates. Generally the population means of the original versus the duplicate are similar and acceptable to the CP (**Table 3-3**).

3.2 Laboratory repeat data

Precision is a measure of the reproducibility of a result when using the same process. For assay precision, this is established by obtaining a repeat assay from the same pulp by the same laboratory and comparing the result.

A comparison of the mean grades and the precision result is shown in **Table 3-4.** Precision values of ~5% are acceptable to the CP. Some poorer precision results are attributed to outliers.

Table 3-4: Comparison of mean Cu grade between original and laboratory repeat samples

Laboratory	Global mean original (Cu %)	Global mean duplicate (Cu %)	Original mean – duplicate mean (Cu %)	Precision
ALS Nifty	0.71	0.71	0	4.99 %
ALS Perth	0.74	0.74	0	5.20 %
BVM Perth	0.09	0.09	0	4.81 %
Genalysis	0.44	0.44	0	5.91 %
Kalassay	0.88	0.89	-0.01	15.40 %
Nifty Site Lab	1.82	1.81	0	17.80 %
Quantum	0.02	0.02	0	52.77 %

3.2.1 Standards

The performance of the standards (Certified Reference Material) is judged on whether the analysed results agrees with 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. Standards were inserted across the Nifty project both by Cyprium and prior operators, and by the laboratories undertaking the analysis. Due to the longstanding nature of the project, 105 different standards have been used across the 7 laboratories. MEC has reviewed performance of all standards where there are >5 analytical results for any given laboratory. A summary is provided in **Table 3-5**.

Table 3-5: Summary of standards used per laboratory

Laboratory	# standard types used	# standard samples analysed	# 'failed' samples	'Failed' samples as % of total
ALS Nifty	29	4,518	504	11.2
ALS Perth	56	4,686	472	10.1
BVM Perth	20	2,383	13	0.5
Genalysis	29	1,864	261	14.0
Kalassay	11	561	50	8.9
Nifty Site Lab	12	551	30	5.4
Quantum	11	721	48	6.7
TOTAL	**168**	**15,284**	**1,378**	**9.0**

75% of the assays used for the MRE were analysed by ALS Nifty, ALS Perth, and BVM Perth. The combined three laboratories had a fail rate of 8.5%. Some failures can be attributed to historical data issues (pre-1990).

Overall the performance of standards was deemed to be acceptable.

3.2.2 Blanks

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.

Blanks were inserted across the Nifty project both by Cyprium and prior operators, and by the laboratories undertaking the analysis. A summary is provided in **Table 3-6**.

Overall the performance of blanks was deemed to be acceptable as the failure rate is very low.

Table 3-6: Summary of blanks used per laboratory

Laboratory	Number of blank samples analysed	Number of 'failed' blanks	'Failed' blanks as % of total	Average Cu grade of blanks (%)	Comments
ALS Nifty	1,359	9	0.66	0.0063	
ALS Perth	109	2	1.83	0.0655	
ALS Perth (Laboratory blanks)	1,196	8	0.67	0.0030	Fails all occur in later batches
BVM Perth	1,083	4	0.37	0.0064	5 extreme outliers of -5556 removed prior to plotting chart/calculating failure stats.

Laboratory	Number of blank samples analysed	Number of 'failed' blanks	'Failed' blanks as % of total	Average Cu grade of blanks (%)	Comments
Genalysis	62	1	1.61	0.0262	
Genalysis (Acid Blanks)	673	2	0.30	0.0074	
Kalassay	36	0	0	0.0221	
Kalassay (Laboratory blanks)	7	0	0	0.0004	
Nifty Site Lab	67	2	2.99	0.0791	Fails restricted to earlier batches, show decreasing variance with time
Quantum	141	0	0	0.0001	All samples take one of two values: 0.0001 or 0.00005. 2 Maroochydore samples removed from dataset.
TOTAL	**4,733**	**33**	**0.69**	**0.0217**	

3.2.3 Assay Bias

Assay bias may be measured globally and locally. An umpire laboratory may be used to check if there is a baseline difference in analytical results between the primary laboratory and the umpire laboratory. The means of the two populations may be compared, and then the populations compared using QQ plots to determine differences at different grade ranges.

182 samples out of 148,229 (0.1% of total samples for Nifty) originally assayed by ALS Perth and Quantum, were submitted to the Genalysis laboratory for re-analysis in October 2014.

Of the 182 samples submitted, 113 (62%) were originally assayed by Quantum and 69 (38%) originally assayed by ALS Perth. Given ALS Perth was responsible for approximately 32% of the total assays for Nifty, a second set of analyses were conducted, restricted to the ALS Perth re-assays only (**Table 3-7**).

Table 3-7: Umpire laboratory comparison (ALS Perth and Genalysis)

Global mean ALS Perth (Cu %)	Global mean Genalysis (Cu %)	ALS Perth mean – Genalysis mean (Cu %)
0.30	0.31	-0.01

The global means of the original laboratory analysis is very similar to the umpire laboratory mean and is an acceptable result to the CP from a small population.

3.2.4 Sample recovery

Sample recovery information was provided for 0.5% of total samples including Air Core (AC), Diamond, and Reverse Circulation (RC) hole types. Poor sample recovery may bias the sample and provide an unrepresentative assay grade. The diamond drillhole results and the reverse circulation results are acceptable, the air core sample recovery is mediocre (**Table 3-8**).

Table 3-8: Sample recovery %

Hole Type	# recovery measurements	Mean sample recovery %
AC	550	79.6
DD	176	100.0
RC	340	95.7

4 ESTIMATION

The 2024 MRE used the same drillhole database as the CSA 2022 MRE, but the interpretations have been updated to reflect improved geological understanding. Implicit models of the stratigraphy were created in Leapfrog and imported into Micromine. The weathering surfaces were created as DTMs in Micromine. The implicit models were used to guide explicit models in Micromine. These wireframe solids were then used to constrain the Ore Block Models (OBM).

Due to the folded geometry of the mineralisation within the stratigraphies, the continuity modelling and estimate for copper grade was undertaken in unfolded space. Modelling in unfolded space ensures that the search ellipse is trained along the data and is able to pick up relevant data and exclude redundant data. Unfolding also ensures that the pairing of data at different lags for variography picks up the relevant data, ensuring improved H scatterplots and more robust variograms. It should be noted that unfolded space alters the azimuth trend of data, and that the ranges of the modelled variograms are the important aspect for kriging estimation in unfolded space. Each experimental variogram was modelled separately for each stratigraphic unit; FWS, LCU, BAC, MCU, ISHL, ISHU, and HWS. Variograms were also modelled in real space for the chalcocite which was estimated separately.

The oxidation state was also used as a further subdivision of domains for modelling. As such the FWS for example was estimated independently for FWS oxide, saprolite, transitional, and fresh.

As the chalcocite mineralisation has linear geometry, the copper continuity modelling and estimate for the chalcocite mineralisation was completed in real space.

Ordinary block kriging was used for grade estimation, utilising the modelled experimental variograms to weight the estimation.

The OBM parent cell dimensions were 20m east, 10m north, and 5m in elevation. The blocks were orthogonal, with no rotation, as the model trends east west. The blocks were subcelled on wireframe boundaries to 2m east, 2m north, and 2m in elevation.

4.1 Block extents

Block extents are shown in **Table 4-1** and **Figure 4-1** to **Figure 4-2**.

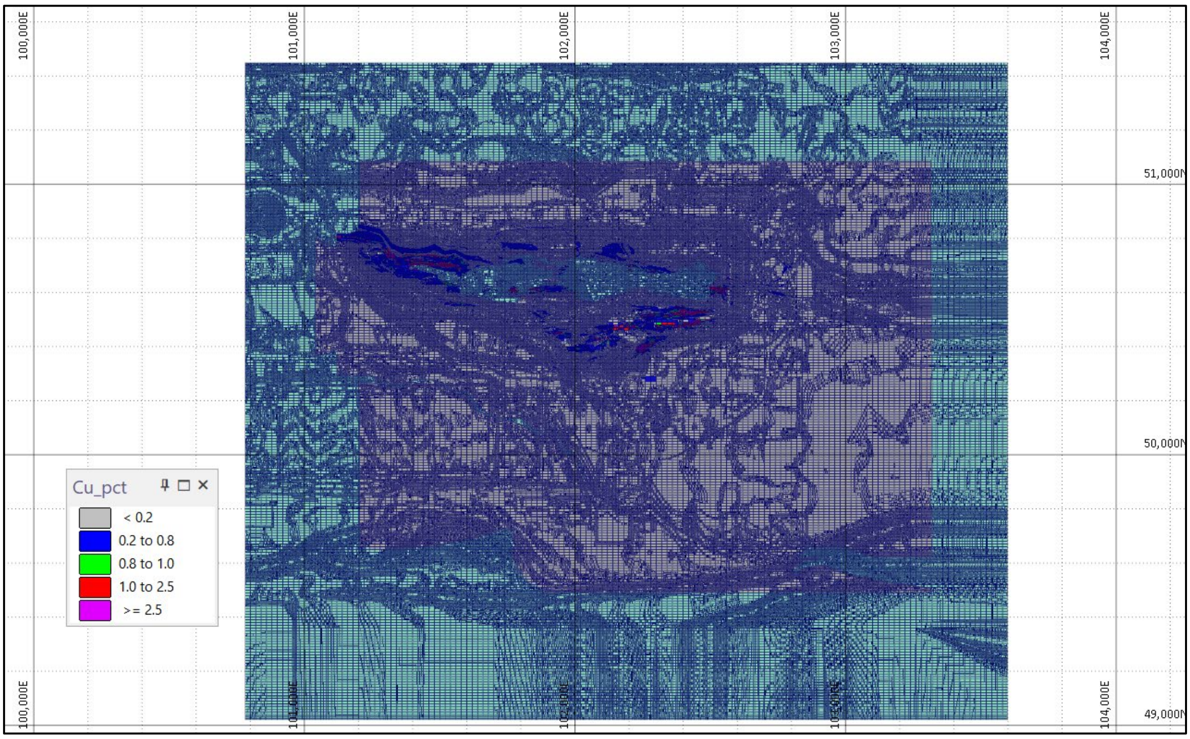


Figure 4-1: Block model extents plan view

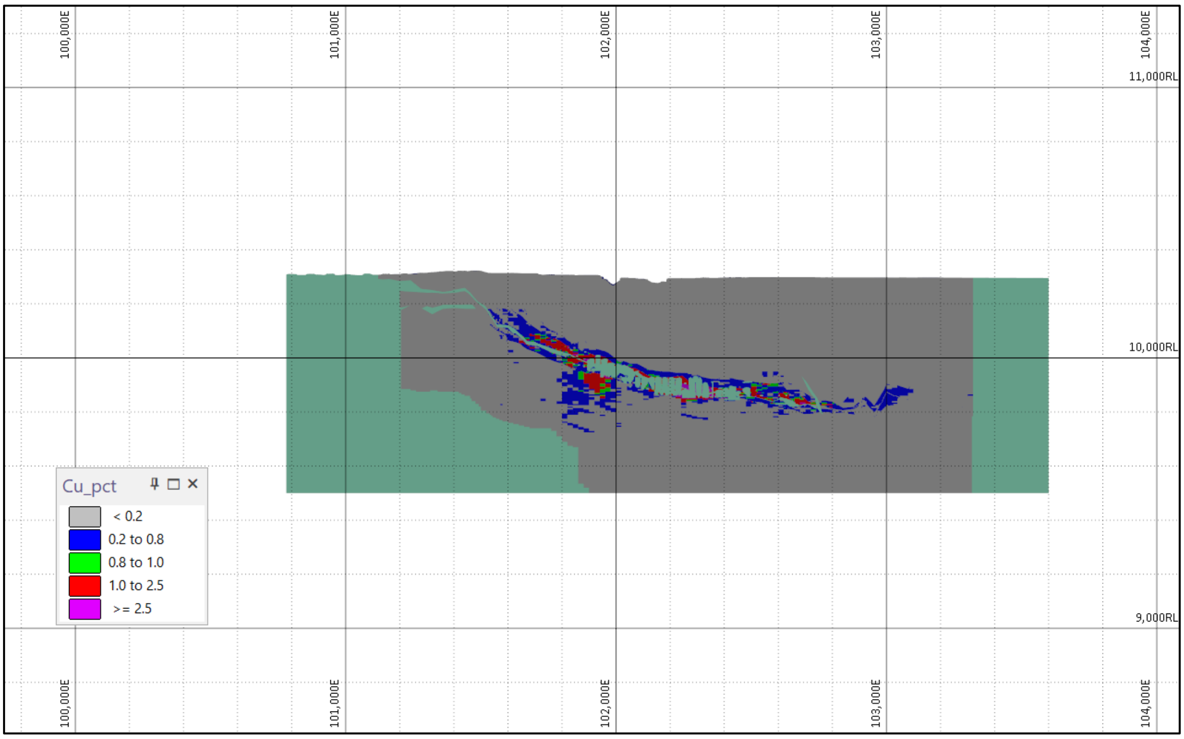


Figure 4-2: Block model extents looking north

Table 4-1: OBM extents

	North	East	m RL
Minimum	49,020	100,780	9,500
Maximum	51,450	103,600	10,330 *

*Blocks above the dtm were removed from the OBM.

4.2 Bulk density

Dry bulk density was applied to the 2024 MRE using the same Methodology as that adopted for the 2021 and 2022 MRE: by applying a combination of conditional means and grade-density regressions, based on the lithostratigraphic and oxide codes (**Table 4-2**). These values were coded to the OBM for the tonnage estimation.

Table 4-2: March 2024 Applied Bulk Density

Dry bulk Density (t/m^3)								
Domain	Oxide & Lower saprolite		Transition	Chalcocite		Sulphide		
	<0.2% Cu	>0.2%Cu		<0.1% Cu	>0.1%Cu	<0.5% Cu	0.5-1% Cu	>1% Cu
HWS	1.90	2.10	2.75	2.75	2.75	2.7701	2.7539	0.0210 * Cu% + 2.7421
ISHL	1.90	2.10	2.33	2.45	2.45	2.7575	2.7089	0.0280 * Cu% + 2.6874
MCU	2.37	2.37	2.52	2.55	0.01 * Cu% + 2.55	2.8417	2.7385	0.0416 * Cu% + 2.6366
BAC	2.37	2.37	2.52	2.45	3.0864	3.0864	3.0864	3.0864
LCU	2.37	2.37	2.52	2.55	0.01 * Cu% + 2.55	2.8105	2.701	0.0400 * Cu% + 2.6156
FWS	1.90	2.10	2.33	2.45	2.45	2.7659	2.7395	0.0275 * Cu% + 2.7798
Mineralised / Ore	N/A		2.60	N/A		2.76		
Waste	1.93		2.57	N/A		2.78		

Type		Applied density t/m^3
Engineering	**Void - backfill (IPBF)**	2.21
	Voids - stopes	1.66
	Voids and development	0.0

4.3 Geostatistics

Unfolding of data resulted in an azimuth trend of ~50°, as such variograms were trained along this azimuth (**Figure 4-3** and **Figure 4-4**).

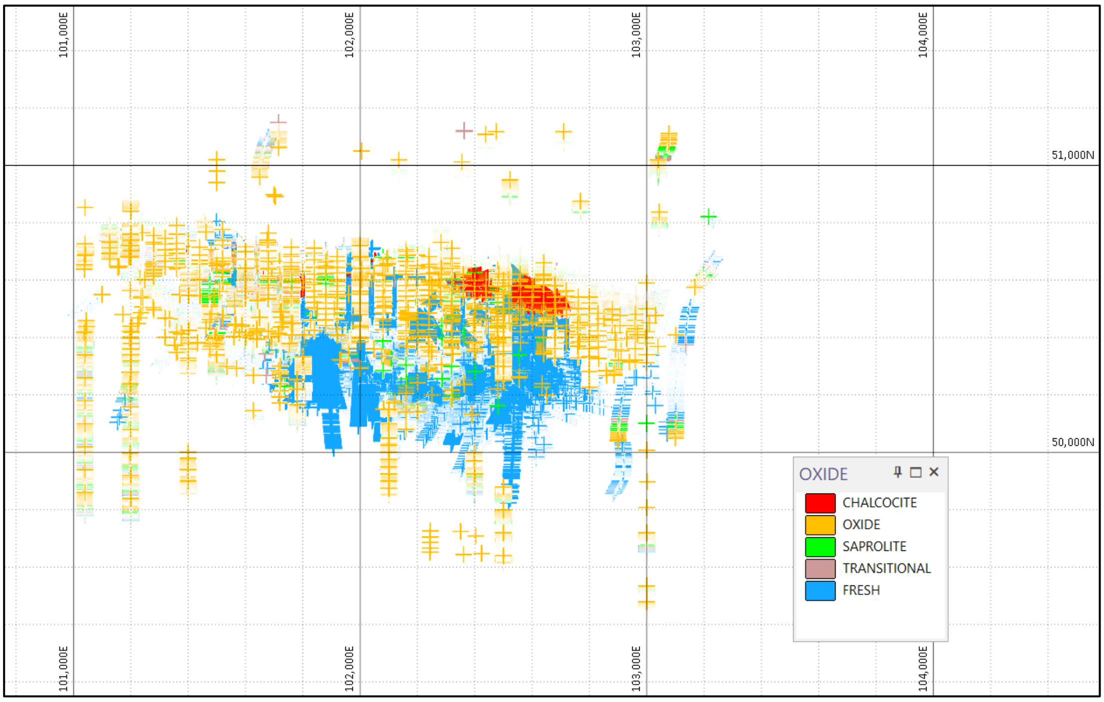


Figure 4-3: Sample data in normal space by oxidation state, plan view

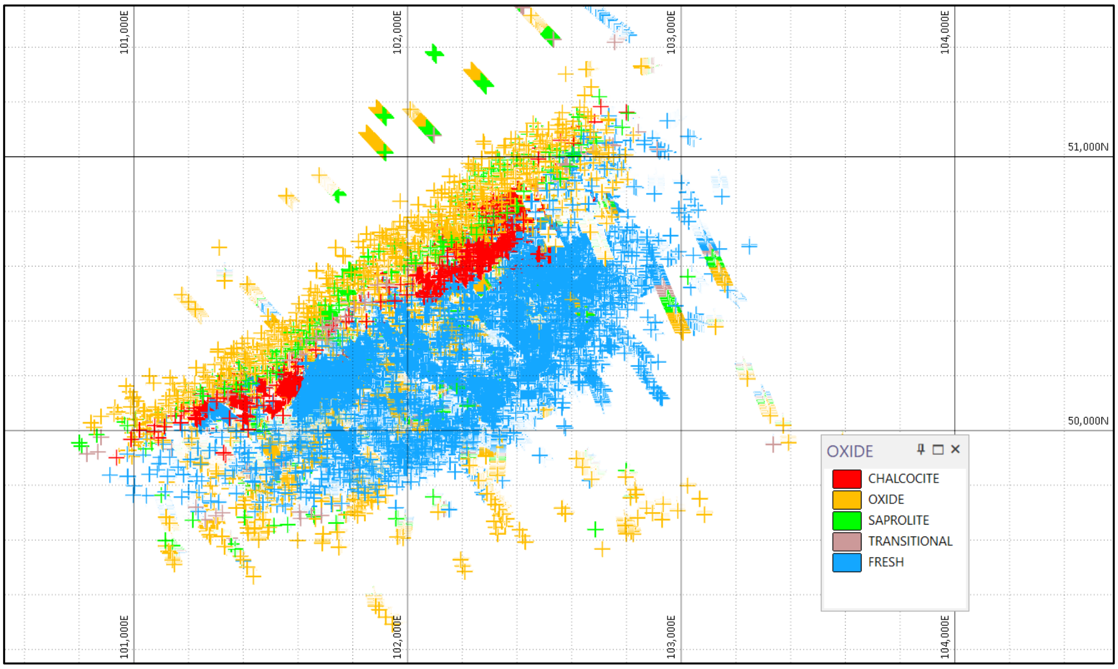


Figure 4-4: Sample data in unfolded space by oxidation state, plan view

The downhole variogram was modelled for each stratigraphic unit to establish the nugget effect. This nugget effect percentage was then assigned to the directional variograms. For the FWS unit this was 13% (**Figure 4-5**).

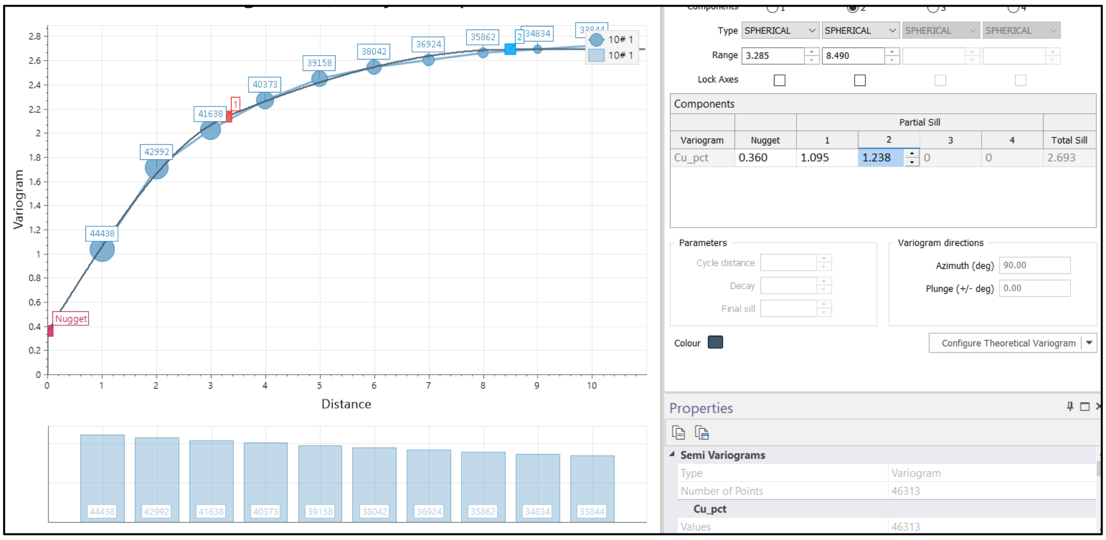


Figure 4-5: FWS downhole variogram

Directional variograms for the FWS unit are shown in **Figure 4-6** to **Figure 4-8**.

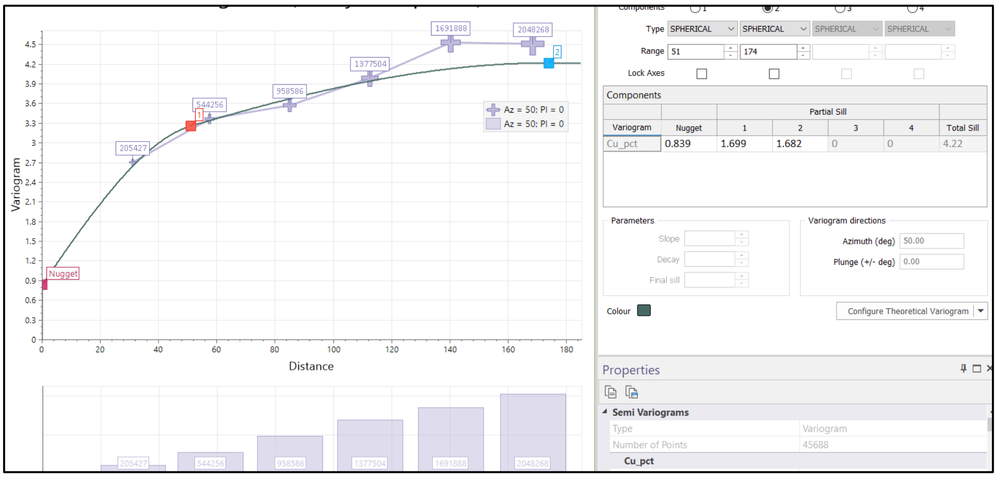


Figure 4-6: FWS Directional variogram, 50° azimuth

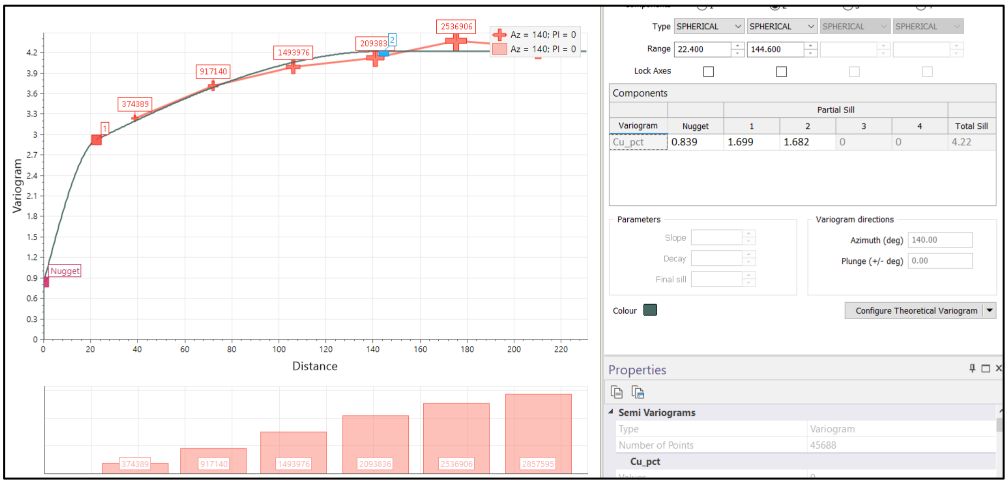


Figure 4-7: FWS Directional variogram, 140° azimuth

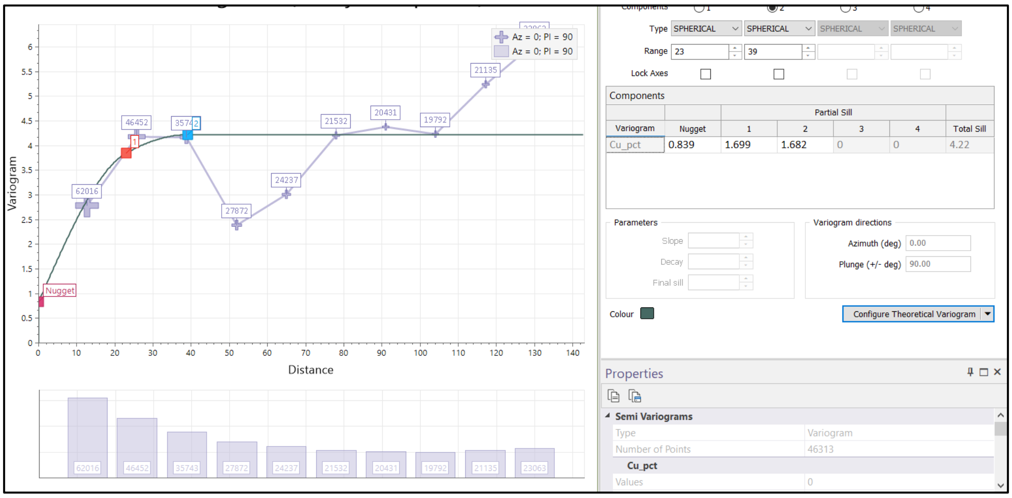


Figure 4-8: FWS Directional variogram, 0° azimuth, -90° dip

All experimental variograms were modelled with spherical models with two components. The semivariogram parameters are shown in **Table 4-3**. Geometric anisotropy was modelled, as such the nugget, partial sill 1 and partial sill 2, are the same for the directional variograms for each unit.

Table 4-3: Semivariogram parameters by Unit

UNIT	Nugget, X	P Sill1, X	P Sill2, X	Range 1, m	Range 2, m
FWS	0.9	1.95	1.7	93.5	192.1
				25.5	176.6
				31.5	136.1
LCU	0.23	0.41	0.68	72	155

UNIT	Nugget, γ	P Sill1, γ	P Sill2, γ	Range 1, m	Range 2, m
				32	123
				2	6
BAC	0.0424	0.0337	0.0541	32.3	117.5
				26.1	36.4
				2.31	4.97
MCU	0.76	1.289	1.673	37.7	110.6
				27.7	49.3
				29.24	48.26
ISHL	0.363	0.737	0.515	10.5	55.7
				17.5	97.2
				19.1	22.4
ISHU	0.0424	0.0337	0.0541	36.6	156.4
				13.1	53.9
				2.31	4.97
HWS	0.215	0.37	0.965	105.7	200.9
				12.2	41.4
				49.3	165.3
CHALCOCITE	1.03	0	4.31	73.1	139.4
				21.3	44.4
				1.6	3.1

Two search ellipses were used for estimation, the Run1 search ellipse used 50° azimuth, no plunge and -90° dip, minimum 5 drillholes, 200m along azimuth, 100m 140°, and 40m -90°, 8 sectors, maximum points of 4 per sector. The Run2 search ellipse used 50° azimuth, no plunge and -90° dip, minimum 3 drillholes, 500m along azimuth, 250m 140°, and 100m -90°, no sectors, in order to populate remaining blocks. Blocks beyond the Run2 search were not estimated.

The estimated grades are shown in **Figure 4-9** to **Figure 4-11.**

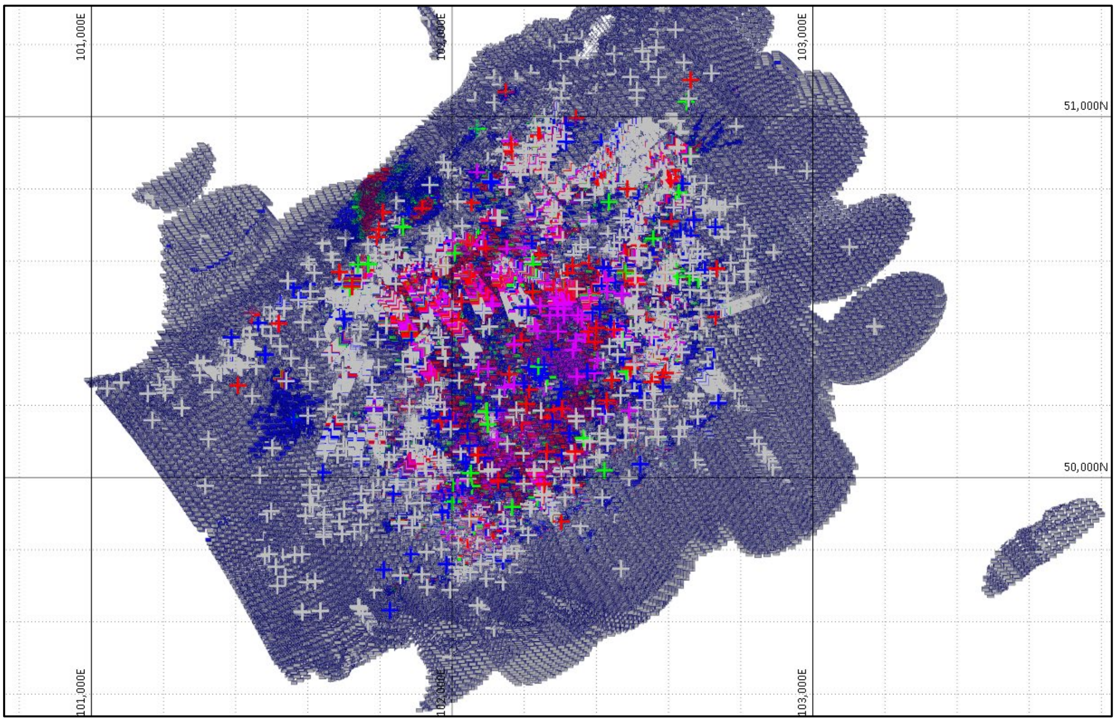


Figure 4-9: FWS fresh unfolded OBM with samples, plan view

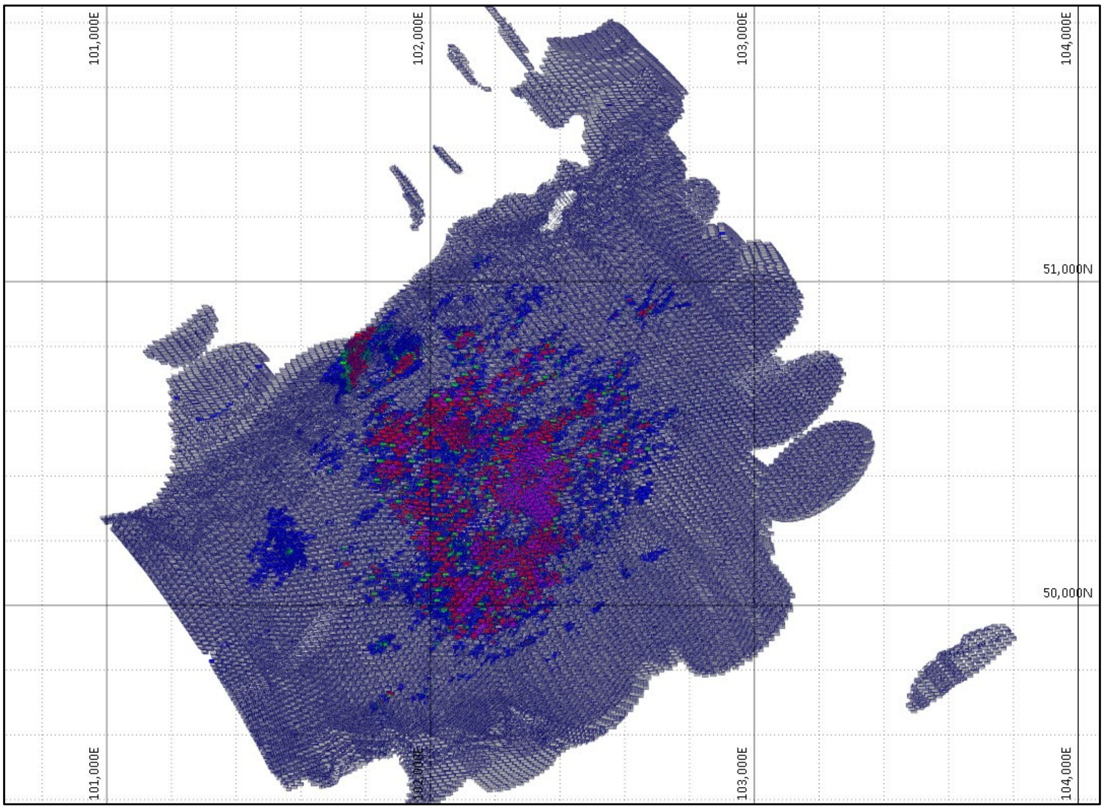


Figure 4-10: FWS fresh unfolded OBM, plan view

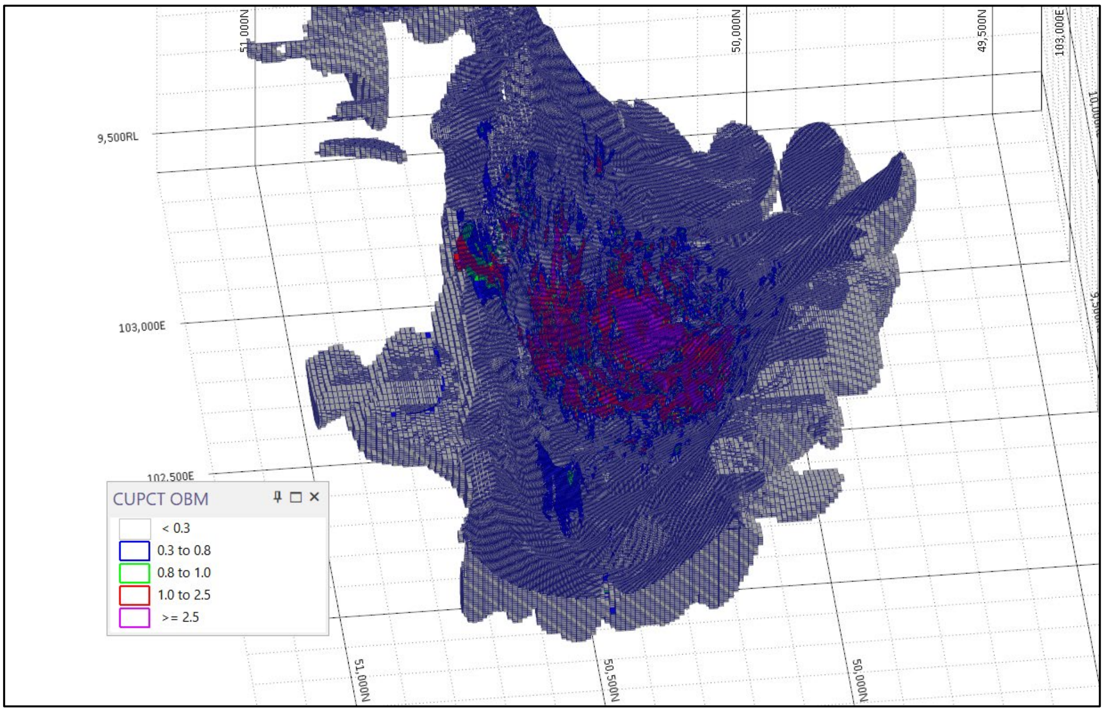


Figure 4-11: FWS fresh normal space OBM, 3d view

The Run1 search ellipse dimensions were the same for the chalcocite model with the exception of the azimuth, as the chalcocite was modelled in real space (**Figure 4-12**).

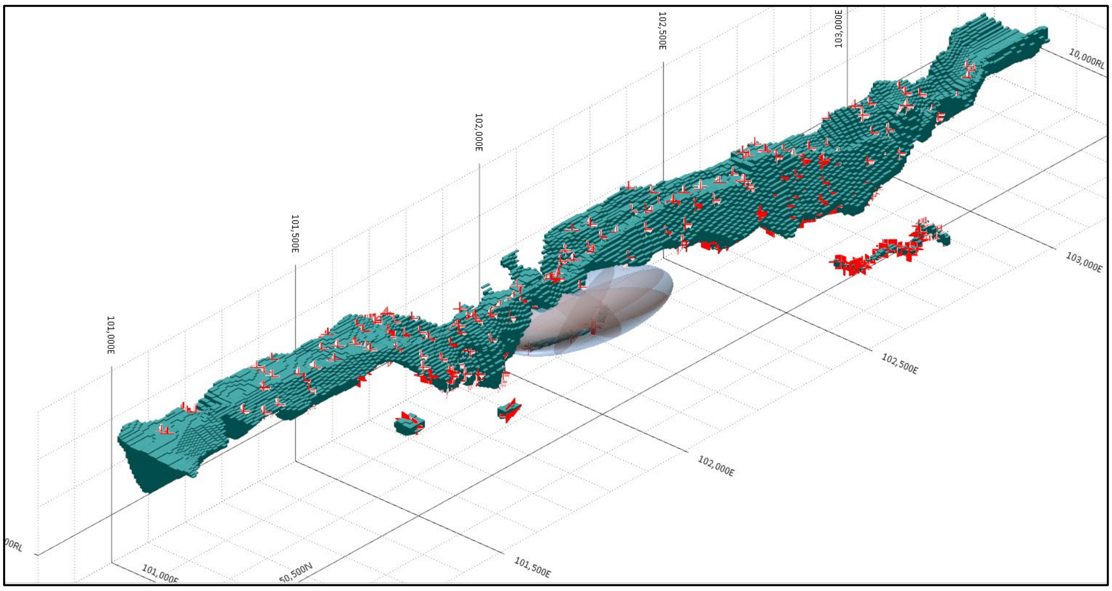


Figure 4-12: Chalcocite OBM with Run1 search ellipse

Ordinary block kriging using discretisation of 2 x 2 x 2 was used for estimation. Negative kriging weights were reset to zero.

Two grade variables were estimated, Cu%, and CuCut%. Grades were topcut in order to reduce the influence of extreme values. Top cut grades are shown in **Table 4-4**.

Table 4-4: Cu% topcut grades

Stratigraphy	Oxidation state	CuCut %	# grades cut
FWS	Fresh	30	9
LCU	Fresh	20	3
	Transitional	-	-
	Saprolite	5	1
	Oxide	5	2
BAC		-	-
MCU	Fresh	25	9
	Transitional	-	
	Saprolite	-	
	Oxide	25	2
ISHL	Fresh	25	8
	Transitional	-	-
	Saprolite	8	3
	Oxide	25	5
ISHU	All	20	3
HWS	All	25	2

4.4 MRE Classification

The Mineral Resource classification for the MEC March 2024 MRE was updated to reflect the current geological understanding and available data. Classification was based on distance, established in real space -

- Measured Mineral Resources were determined using a minimum of five drillholes at 25m.
- Indicated Mineral Resources were determined at 50m.
- Inferred Mineral Resources were determined at 100m.

Following assignment, the classification was rationalised to ensure a consistent classification.

A further tidy up of blocks was conducted in order to meet the RPEEE condition (**Figure 4-13** to **Figure 4-16**). Blocks were assigned a restriction code (field 'restriction' = restriction) to report only blocks that were deemed by the CP to be potentially economically extractible. Future Pit Optimisation studies will confirm the designation of the blocks for the RPEEE condition.

Inferred MRE are described in the JORC code as -

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.

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.

Indicated MRE are described in the JORC code as -

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.

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.

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.

Measured MRE are described in the JORC code as -

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from 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 confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.

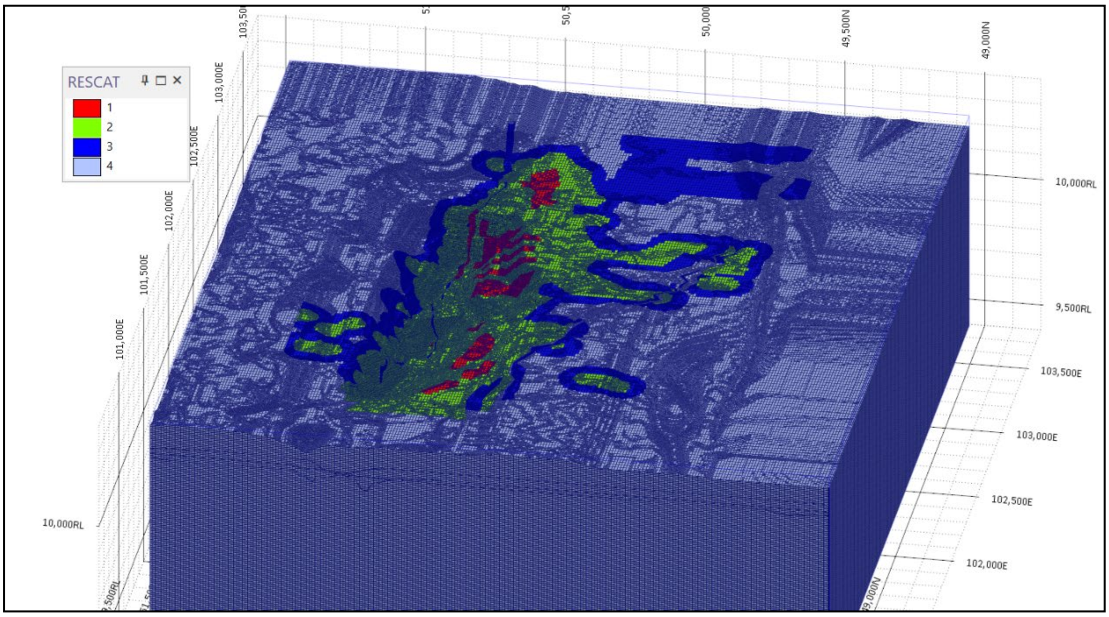


Figure 4-13: OBM colour coded for Resource category, 3D View

Rationalisation of classification is shown in **Figure 4-14** and **Figure 4-15** for the MCU unit. The MRE classification is shown for all units in **Figure 4-17**.

A cross section of the MEC 2024 MRE OBM for rationalised Resource Classification is shown in **Figure 4-16**.

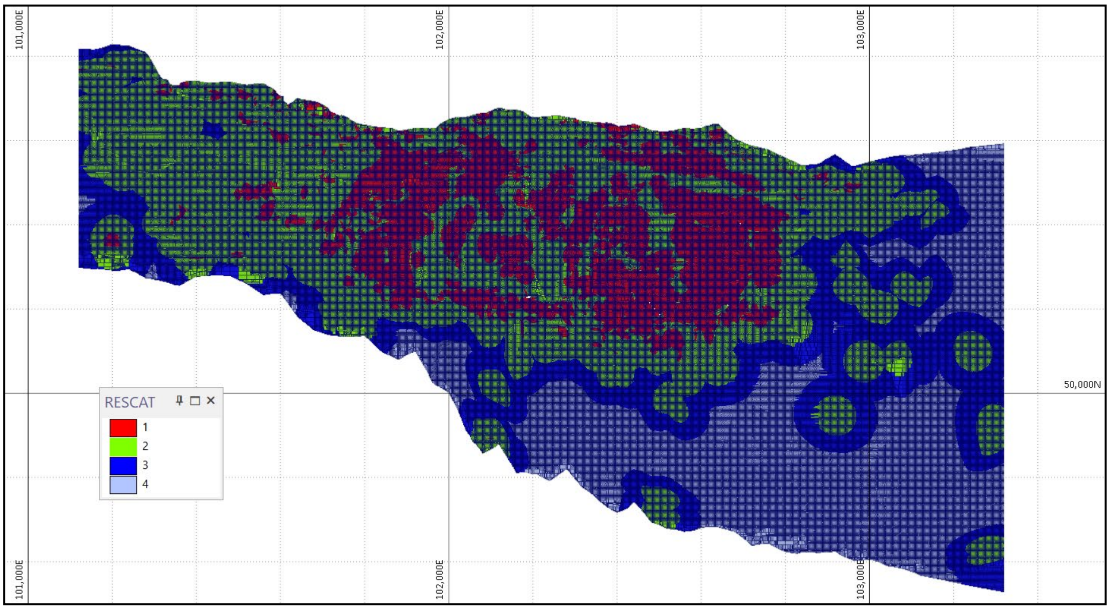


Figure 4-14: MCU unit OBM colour coded for Resource category, plan view (not rationalised)

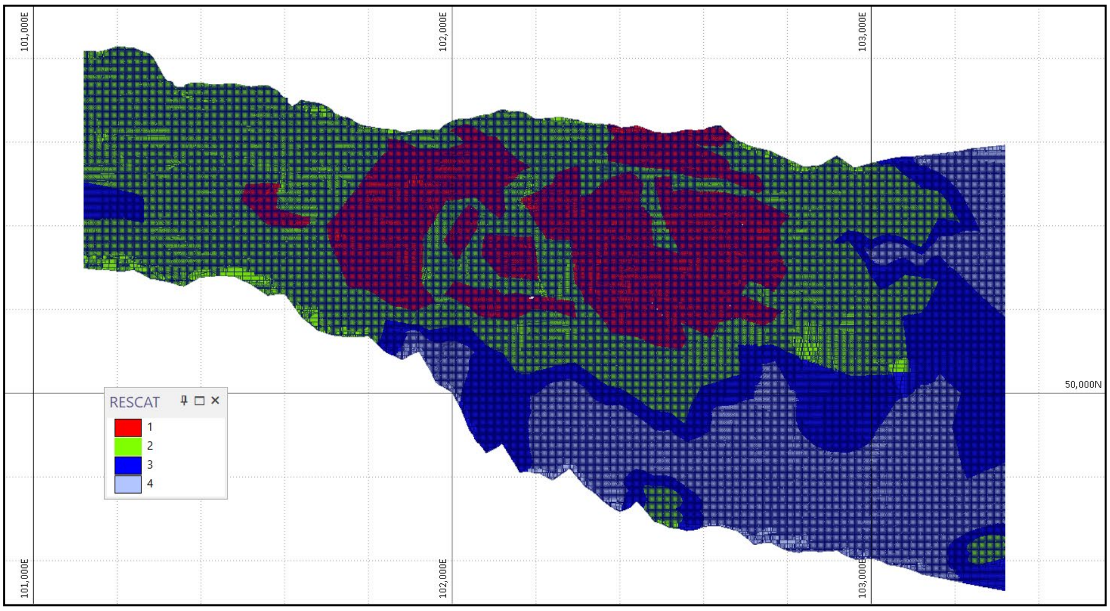


Figure 4-15: MCU unit OBM colour coded for Resource category, plan view (rationalised on category)

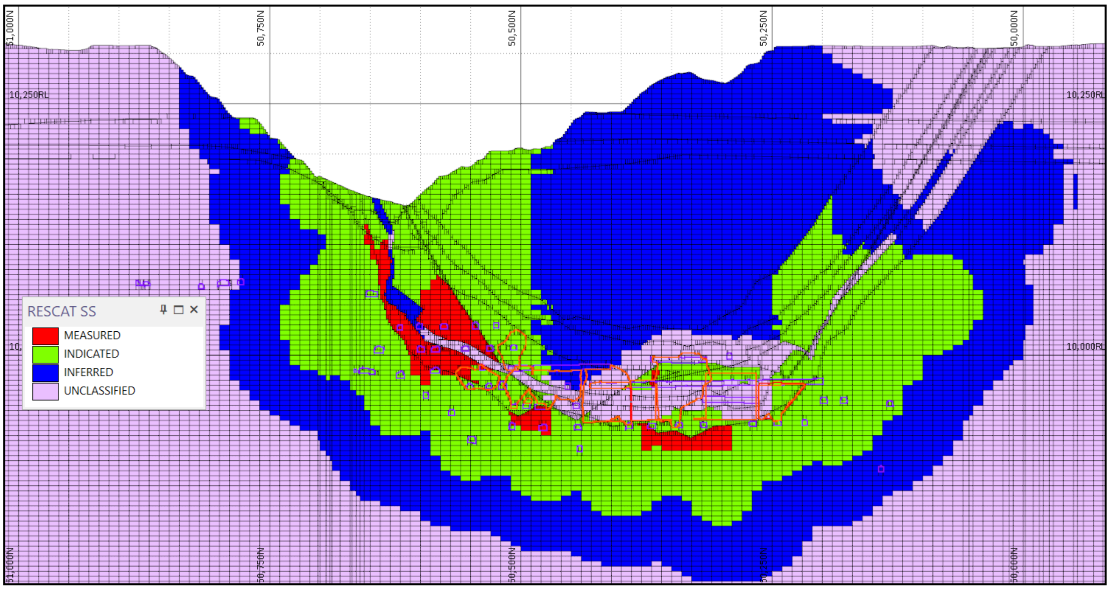


Figure 4-16: Cross section 102200E looking east, OBM colour coded for Resource category

MRE classification adjustment was applied to blocks within the subsidence disturbance zone. Three sinkholes were identified where surface slumping has occurred, likely as a result of the failure of material into underground workings (**Figure 4-18**). These three sinkhole zones were wireframed and assigned to the OBM, with the base 30m designated as unclassified material, and the remaining blocks assigned as Inferred MRE. The three sinkholes are surrounded by a subsidence zone cone area.

For the subsidence zone outside of the sinkhole wireframes, all measured blocks were downgraded to indicated category (**Figure 4-19**).

Further MRE classification adjustment was applied to blocks within the pillars and crown/sill pillars, as these remnants from underground mining are highly unlikely to be economically extractable (**Figure 4-20** and **Figure 4-21**).

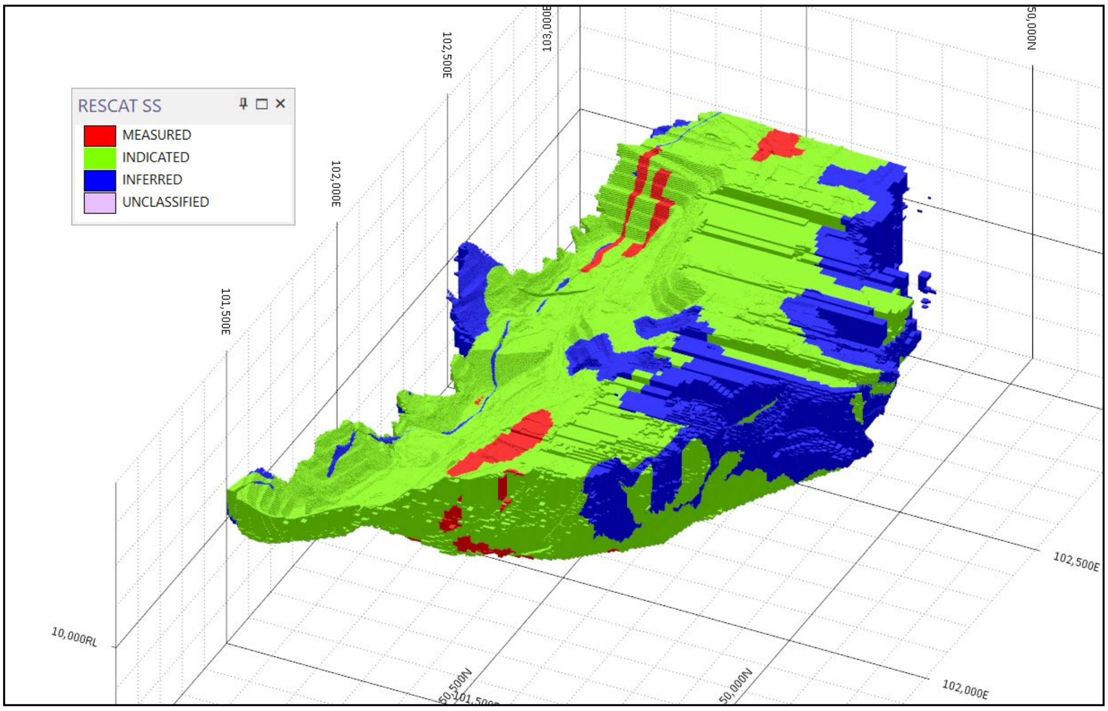


Figure 4-17: 3D View of MRE classification

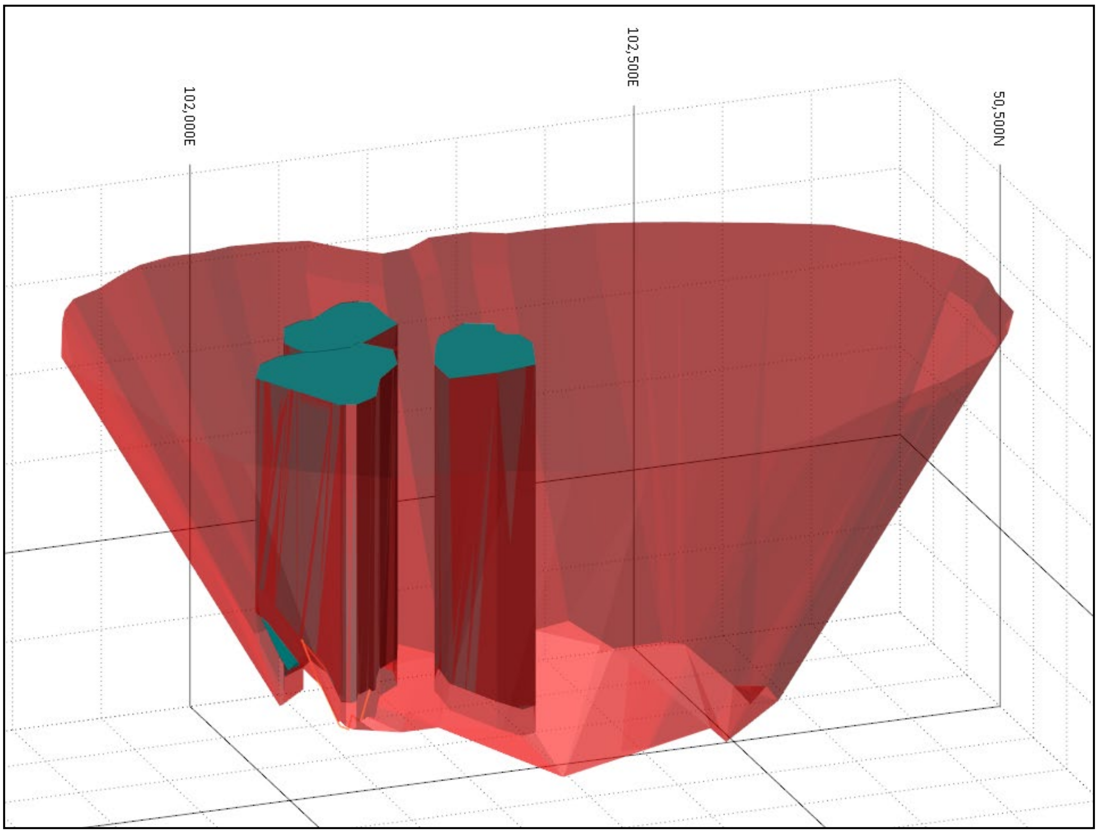


Figure 4-18: 3D view of the three sinkhole wireframes and the subsidence zone cone

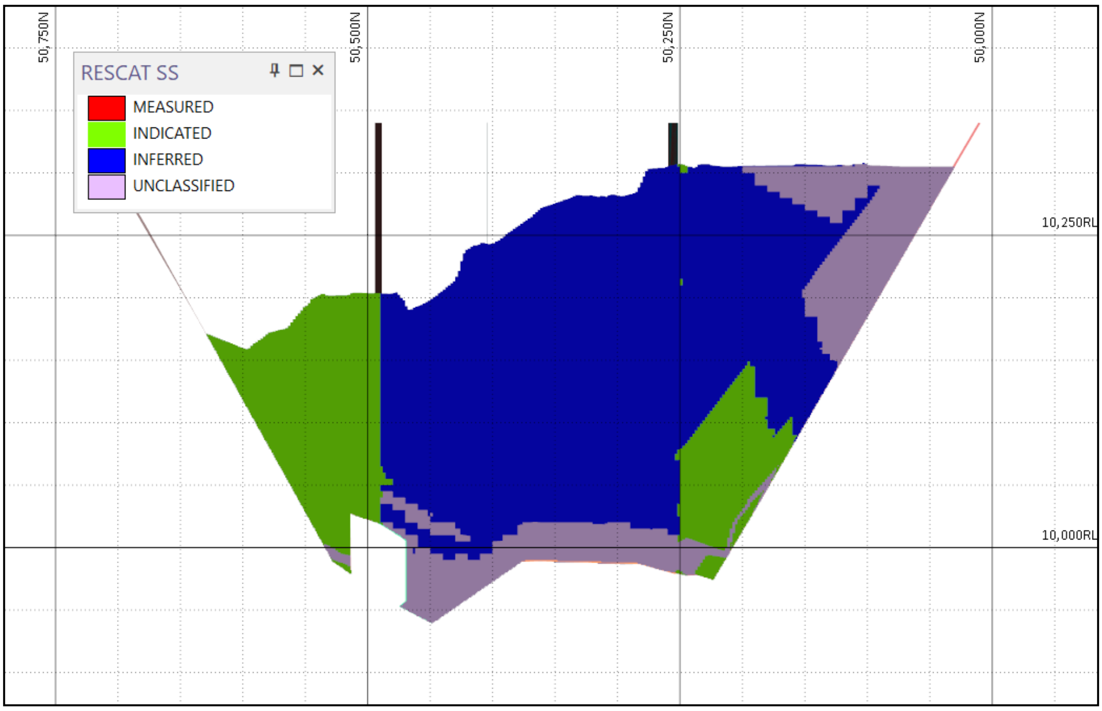


Figure 4-19: 3D view Cross section 102,000E, Subsidence disturbance area MRE classification, looking east

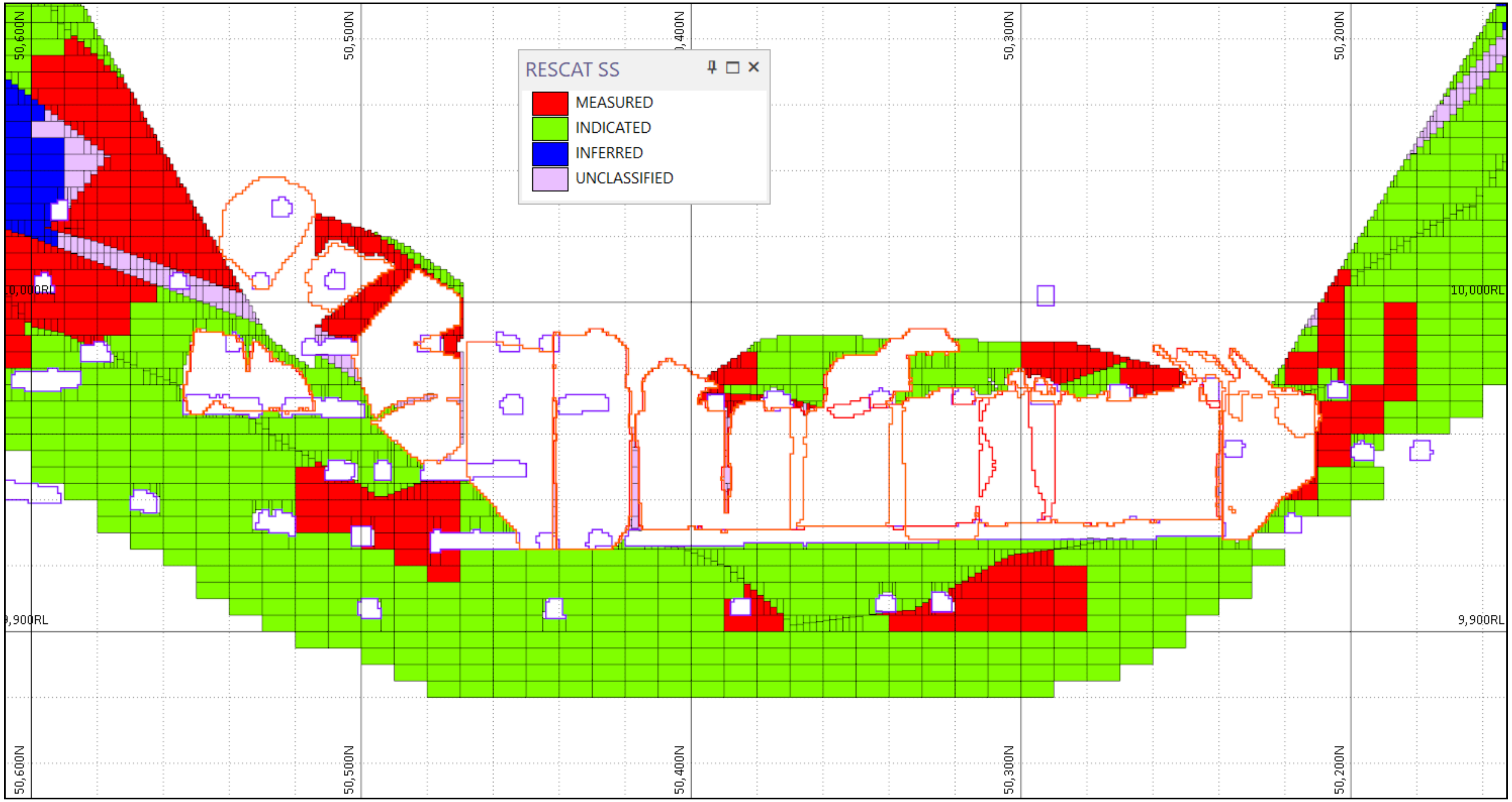


Figure 4-20: Cross 102,000E, looking east, pillars and sill pillars downgraded to unclassified material

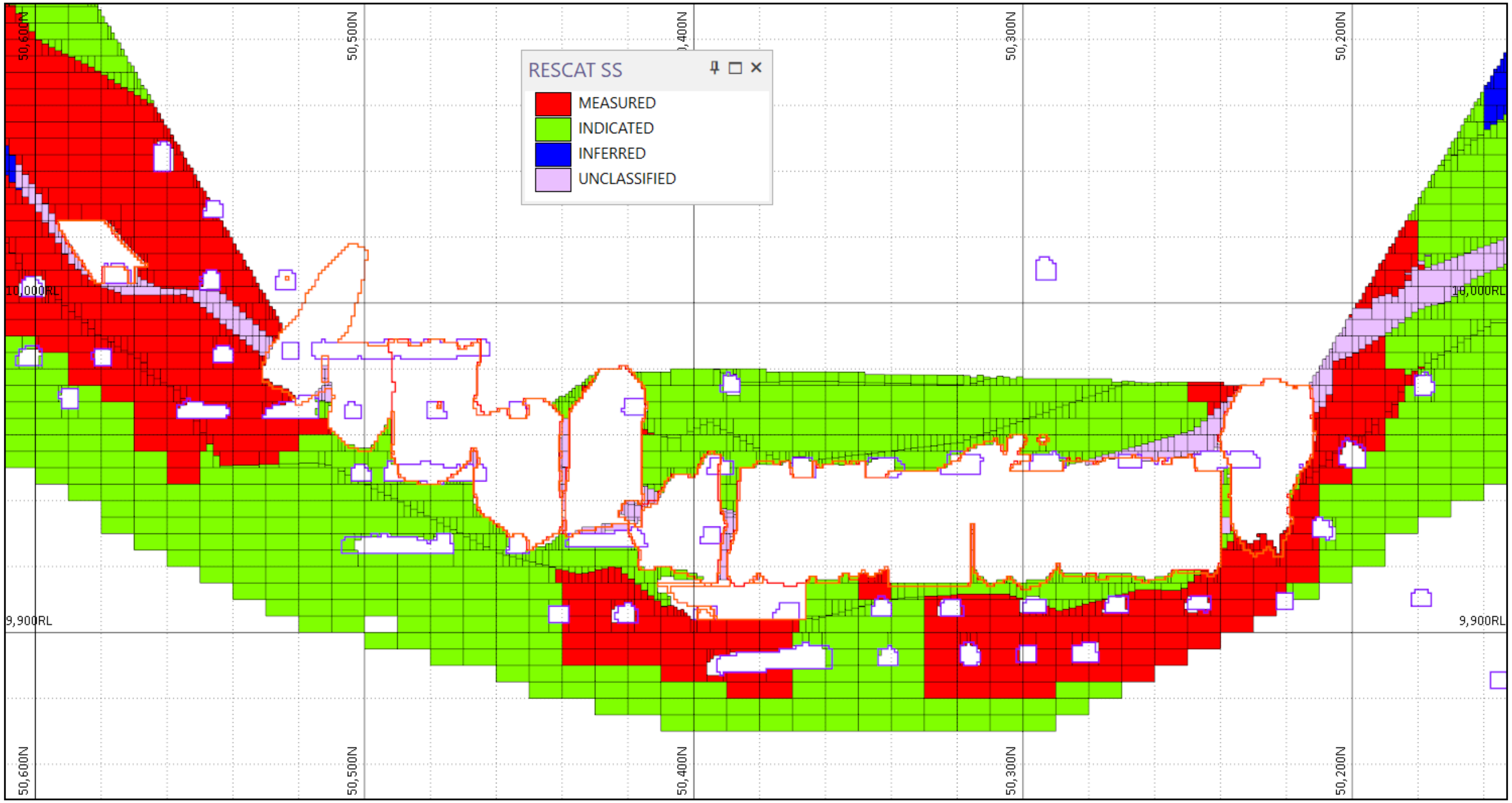


Figure 4-21: Cross 102,060E, looking east, pillars and sill pillars downgraded to unclassified material

4.5 Depletion

The old workings (**Figure 4-22**) were assigned to the MEC OBM and were depleted from the model and subcelled on a 2m east, 1m north, and to 1m in elevation. This included the developments, voids, stopes, and subsidence zone. The backfill was also subcelled to the same specifications. A barren dyke was assigned to the model with a blank grade.

There were numerous validation issues with the supplied wireframes of old workings. These issues were remedied by MEC prior to assignment of the wireframes to deplete the block model.

The old workings were assigned to the MEC model and waste blocks were written to the model.

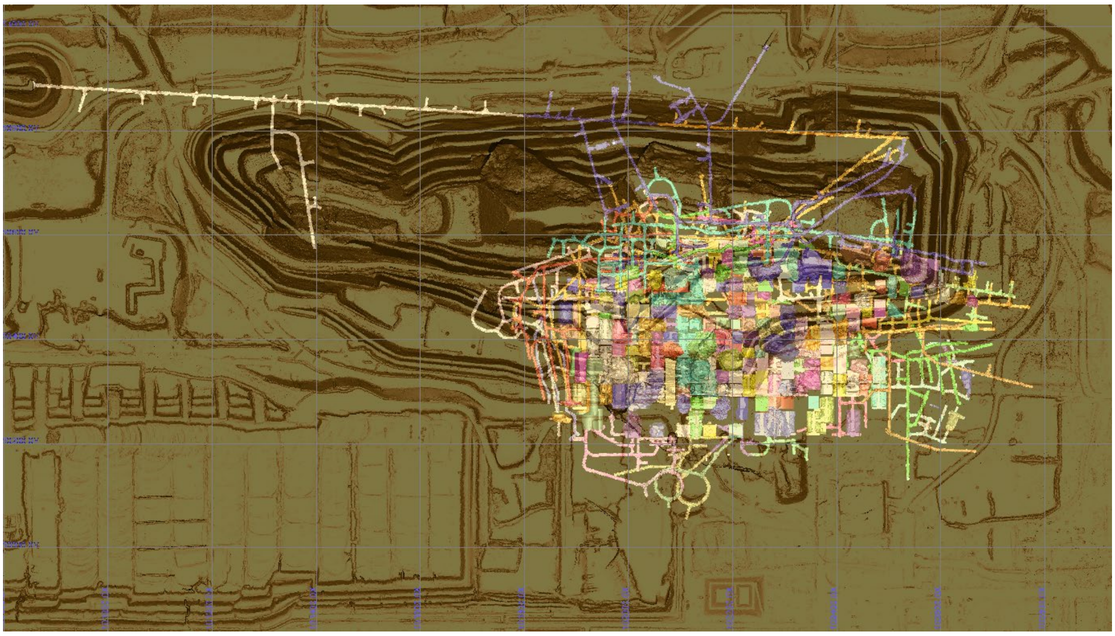


Figure 4-22: Plan of undergound voids used to estimate depletion ***(after CSA Global Nifty 2021 MRE update)***

4.6 Validation

The OBM estimate was validated at key stages during the construction and estimation processes.

On completion of the OBM, block validation was completed, and no overlapping or missing blocks were identified in the MRE OBM.

The OBM grade estimate was then validated, however this was complicated by the spatial distribution of the available drilling (**Figure 4-23**). The available drilling data focussed primarily on the northern limb and hinge region, as well as being spatially clustered.

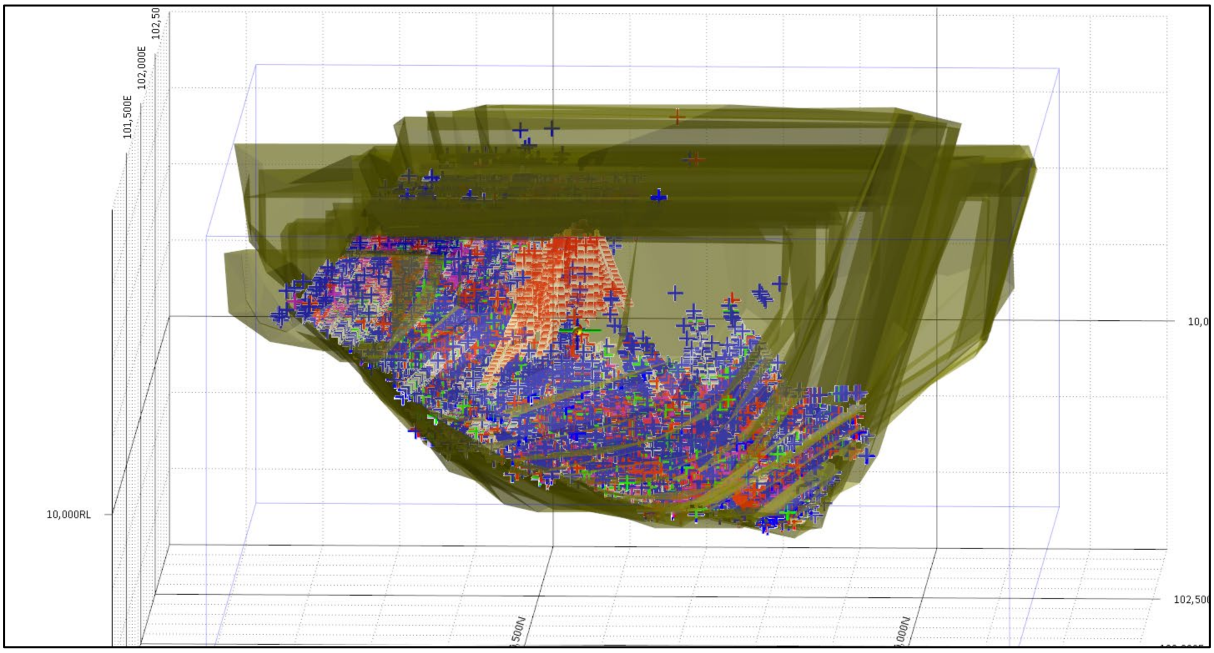


Figure 4-23: Clustered grades within the RPEEE envelope

To validate the estimated block grades, a multi-step approach was taken:

1. Initially, the composite and estimated grades were compared spatially to identify if there were any discrepancies with the estimate, with none being found.
2. The whole of domain estimate was then compared against the composite naïve and declustered composite grades.
3. Finally, swath plots were created to test that composite grade trends had been preserved in the estimate.

Example sections are presented in **APPENDIX 2: VALIDATION SECTIONS**.

The whole of domain comparison for the global estimate is shown in **Table 4-5**. The HWS, FWS and BAC have poor representation, as a function of the less than representative sampling, as highlighted by the difference between the naïve and declustered composite grades.

Table 4-5: Whole of domain validation by lithostratigraphic unit and chalcocite

Global (estimated blocks only)							
Unit	Sample			Model		% Diff	
	Nos Samples	Naïve	Declust.	Volume x10^6	Mean	Naïve	Declst.
HWS	59,403	0.18	0.06	339	0.02	-89%	-69%
ISHU	14,830	0.25	0.25	45	0.07	-73%	-73%
ISHL	28,778	0.70	0.47	58	0.20	-71%	-57%
MCU	41,409	1.26	0.77	51	0.52	-59%	-33%
BAC	1,473	0.06	0.05	5	0.18	207%	266%
LCU	12,492	0.48	0.38	44	0.29	-40%	-24%
FWS	54,358	0.64	0.20	938	0.05	-92%	-73%
Chalcocite	8,446	0.74	0.60	11	0.56	-24%	-7%

To mitigate the impact of extrapolation, the whole of domain comparisons was prepared presenting the composite grade against the estimated grade in run 1 only (**Table 4-6**). The major mineralised units (MCU, LCU and ISHL) all exhibit significant improvement in the validation performance and there is reasonable correlation between the composite and estimate mean grades. The poor comparison for the BAC unit is a function of the very limited number of informing samples, and typical estimation precision issues associated with very low grade domains.

Table 4-6: Whole of Domain validation by lithostratigraphic unit and chalcocite

RUN 1 only (estimated blocks only)							
Unit	Sample			Model		% Diff	
	Nos Samples	Naïve	Declust.	Volume x10^6	Mean	Naïve	Declst.
HWS	59,403	0.18	0.06	120	0.03	-81%	-46%
ISHU	14,830	0.25	0.25	19	0.13	-49%	-49%
ISHL	28,778	0.70	0.47	23	0.41	-41%	-12%
MCU	41,409	1.26	0.77	23	0.95	-25%	23%
BAC	1,473	0.06	0.05	0.6	0.73	1,169%	1,413%
LCU	12,492	0.48	0.38	22	0.49	2%	29%
FWS	54,358	0.64	0.20	82	0.21	-67%	6%
Chalcocite	8,446	0.74	0.60	8.4	0.61	-17%	2%

Swath plots were then prepared and as with the whole of domain validation, there is evidence of considerable extrapolation beyond available sampling, significantly influencing the global validation performance. Swath plots were then prepared for blocks located within the RESCAT_MEC fields = 1 or 2 (**Figure 4-24** to **Figure 4-29**), which confirmed that the grade estimate had preserved the composite grade trends.

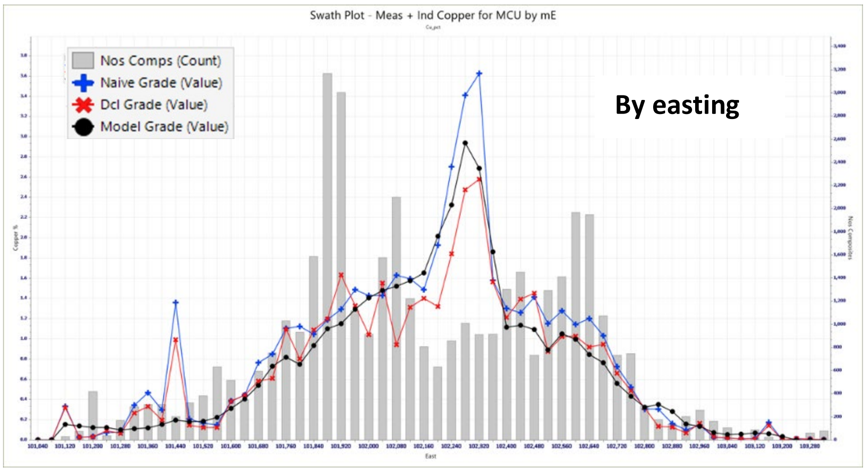


Figure 4-24: Swath plot 'MCU' RESCAT = 1 and 2 by easting (upper)

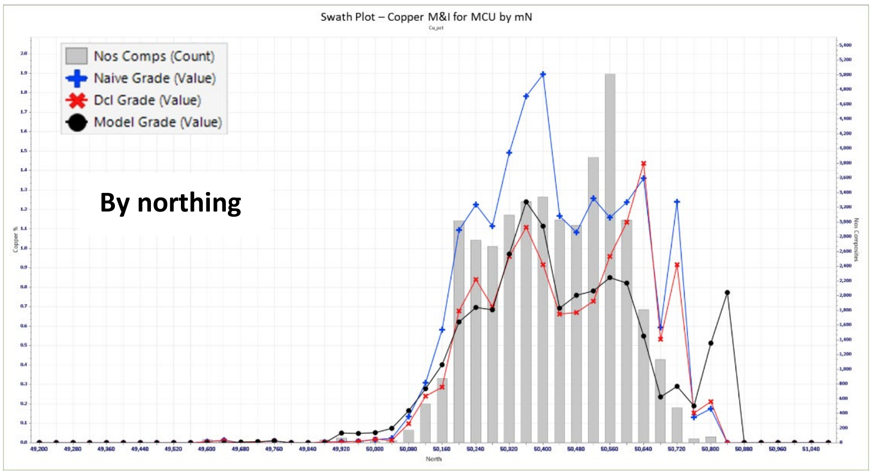


Figure 4-25: Swath plot 'MCU' RESCAT = 1 and 2 by northing (middle)

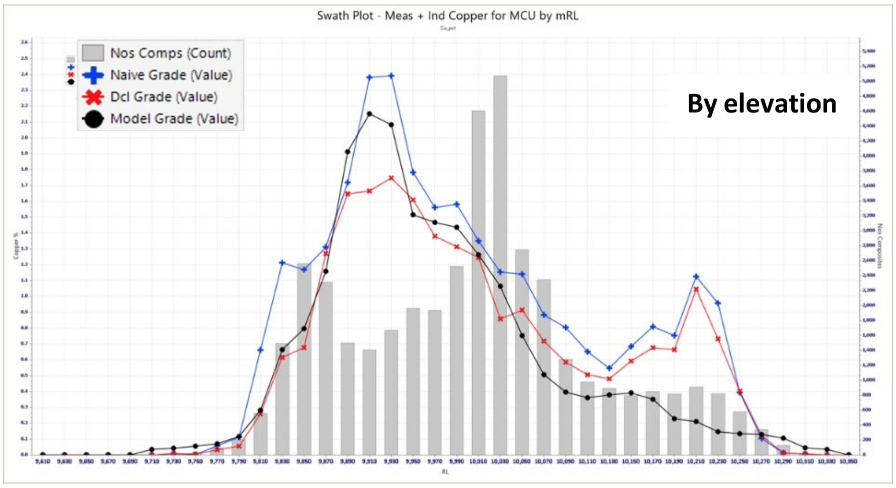


Figure 4-26: Swath plot 'MCU' RESCAT = 1 and 2 by elevation (lower)

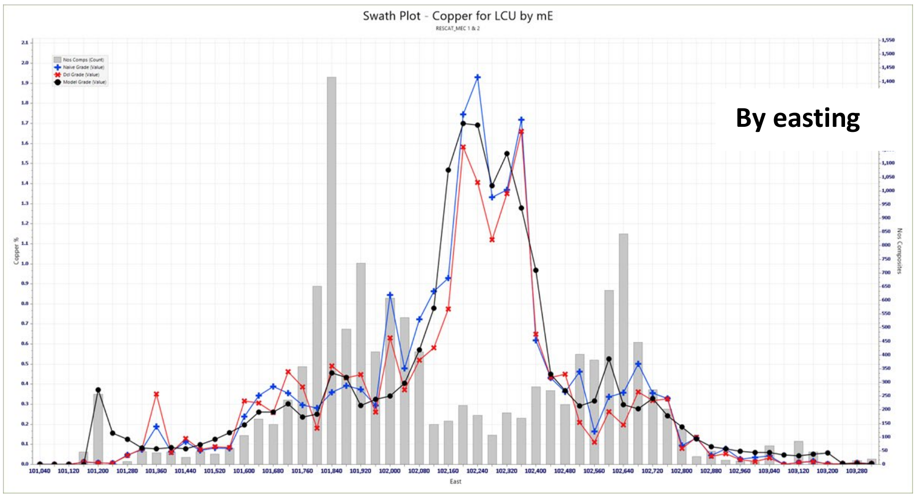


Figure 4-27: Swath plot ‘LCU’ RESCAT = 1 and 2 by easting (upper)

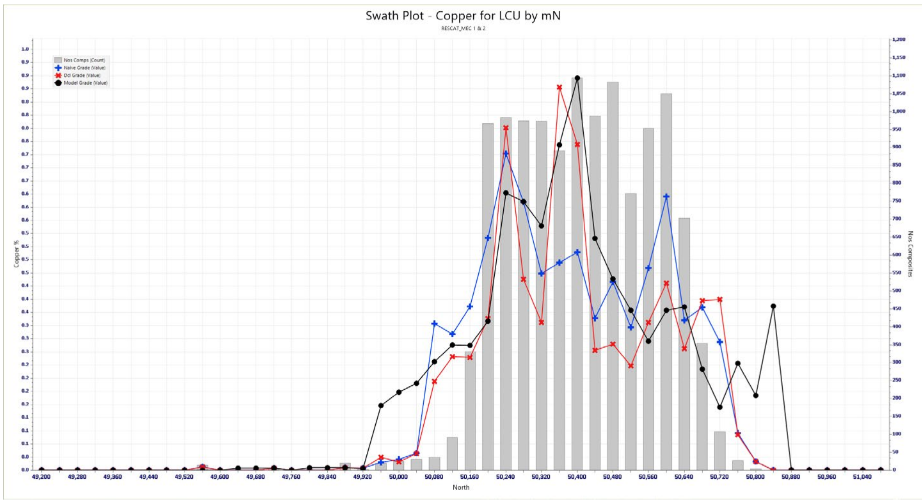


Figure 4-28: Swath plot ‘LCU’ RESCAT = 1 and 2 by northing (middle)

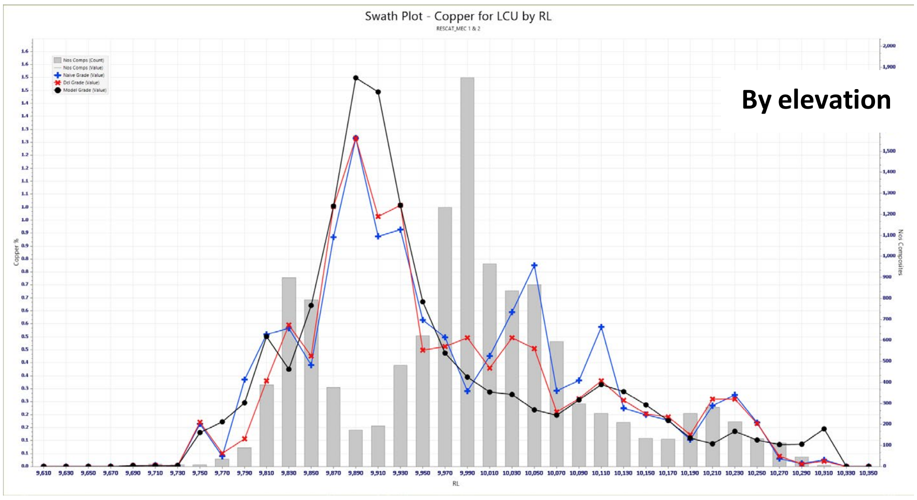


Figure 4-29: Swath plot ‘LCU’ RESCAT = 1 and 2 by elevation (lower)

4.7 MEC 2024 MRE statement

The MEC 2024 MRE is reported above a 0.25 Cu% cutoff, applying topcut Cu% grades, and depleted for historic mining (**Table 4-7**). The grade tonnage curve for the MRE is shown in **Figure 4-30**.

Table 4-7: Nifty MEC March 2024 Mineral Resource Estimate by Resource category

OXIDATION TYPE	MEASURED			INDICATED			INFERRED			TOTAL		
	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu	Mt	CuCUT%	t Cu
OXIDE, SAP, TRANS	2,603,000	1.02	26,471	17,519,000	0.74	130,081	849,000	0.70	5,902	20,971,000	0.78	162,000
SULPHIDE	35,452,000	0.98	347,610	63,395,000	0.80	505,685	5,199,000	0.43	22,479	104,047,000	0.84	876,000
TOTAL	38,055,000	0.98	374,080	80,915,000	0.79	635,765	6,048,000	0.47	28,381	125,018,000	0.83	1,038,000

Numbers are rounded to reflect a suitable level of precision.
Numbers may not sum due to rounding.

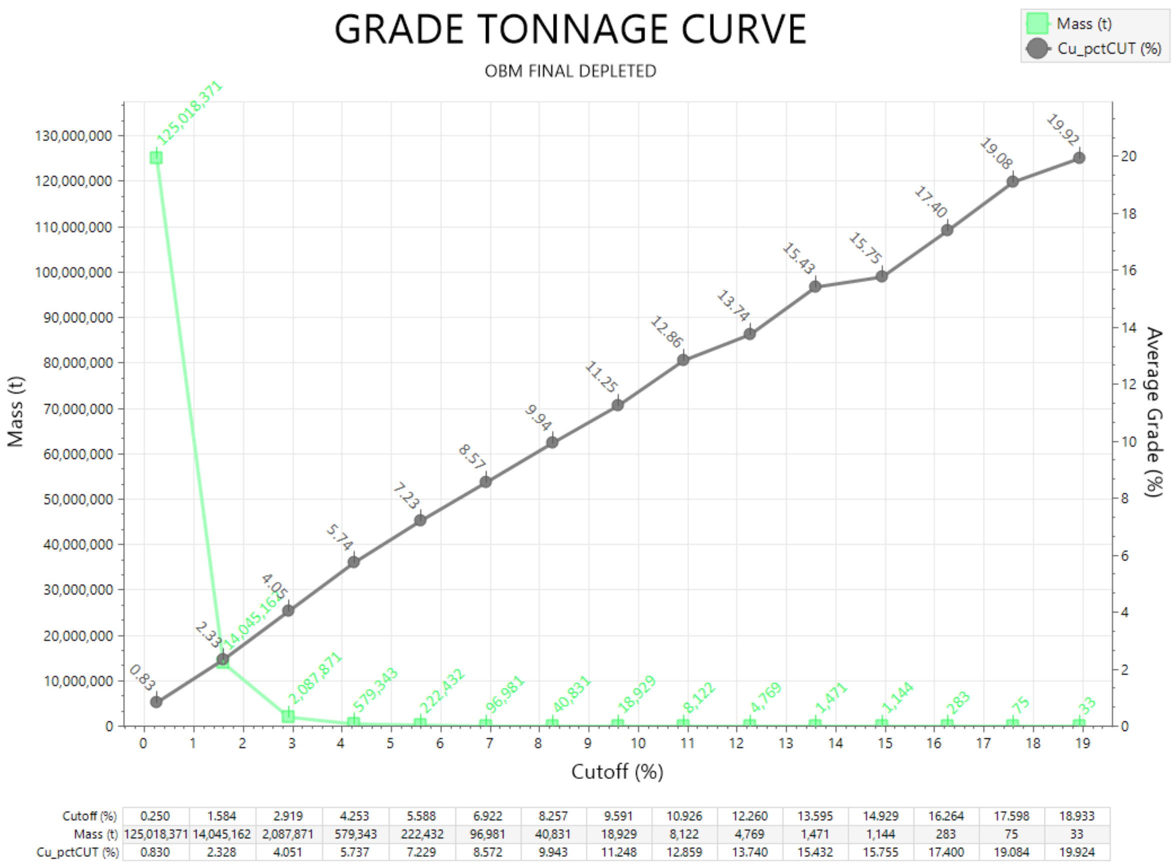


Figure 4-30: Grade tonnage curve, MEC 2024 MRE

Table 4-8: Nifty MEC March 2024 Mineral Resource Estimate, cutoff grades

Cutoff %	0.15	0.20	0.25	0.30	0.35	0.40
Tonnage t	159,557,000	141,045,000	125,018,000	111,379,000	99,425,000	89,823,000
CuCut %	0.693	0.762	0.830	0.899	0.968	1.031

The MEC 2024 Mineral Resource estimate for the entire MRE is stated at different Cu% cutoff grades in **Table 4-8**.

4.8 Comparison with Previous MRE

The updated MEC March 2024 MRE is reported in **Table 4-7**. The previous CSA May 2022 MRE is shown in **Table 4-9**.

Table 4-9: Nifty CSA May 2022 Mineral Resource Estimate

Oxide Type	Cut off grade	Measured			Indicated			Inferred			Total		
		Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	% Cu	Mt	% Cu	t Cu	Mt	% Cu	t Cu	Mt	% Cu	t Cu	Mt	% Cu	t Cu
Oxide incl. Trans.	0.25	8.83	0.92	81,545	4.7	0.86	40,483	2.58	0.86	22,290	16.1	0.90	144,318
Sulphide	0.25	39.9	1.11	443,193	22.86	0.98	222,891	16.2	0.8	129,825	79.0	1.01	795,909
Combined	**0.25**	**48.73**	1.08	**524,738**	**27.56**	0.96	**263,374**	**18.78**	0.81	**152,115**	**95.07**	0.99	**940,227**

The MEC March 2024 MRE has more tonnage at a lower grade than the CSA 2022 MRE. The MEC 2024 MRE reports 125M t @ 0.83 Cu%.

The CSA 2022 reported tables states 95M t @ 0.99%, using a 0.25 Cu% cutoff. This tonnage and grade is equivalent to the MEC 2024 OBM when reporting at a 0.35 Cu% cutoff grade, see **Table 4-8**. The 2022 CSA OBM regularised ore block model file reports 133M t @ 0 .9 Cu%. The blocks within the old workings are 4M t @ 2.19%. With removal of the old workings blocks from the CSA OBM, reports 129M t @ 0.86 Cu% versus the MEC OBM report of 125M t @ 0.83%.

A discrepancy was observed between the MEC OBM and the CSA 2022 OBM that relates to the depletion zones. The MEC 2024 model honours the boundaries of the developments, voids, and stopes; whilst the CSA 2022 model has numerous blocks occurring within the old workings. It should be investigated to determine if this is an error or if there are additional conditions that need to be applied to the CSA model for reporting and visualisation. The provided old workings wireframes have numerous inherent errors, which if not remedied would result in incorrect assignment to an

OBM. These included invalid connections, open sections, and intersections with these wireframes. These validation issues are shown in **Figure 4-31** and **Figure 4-32**.

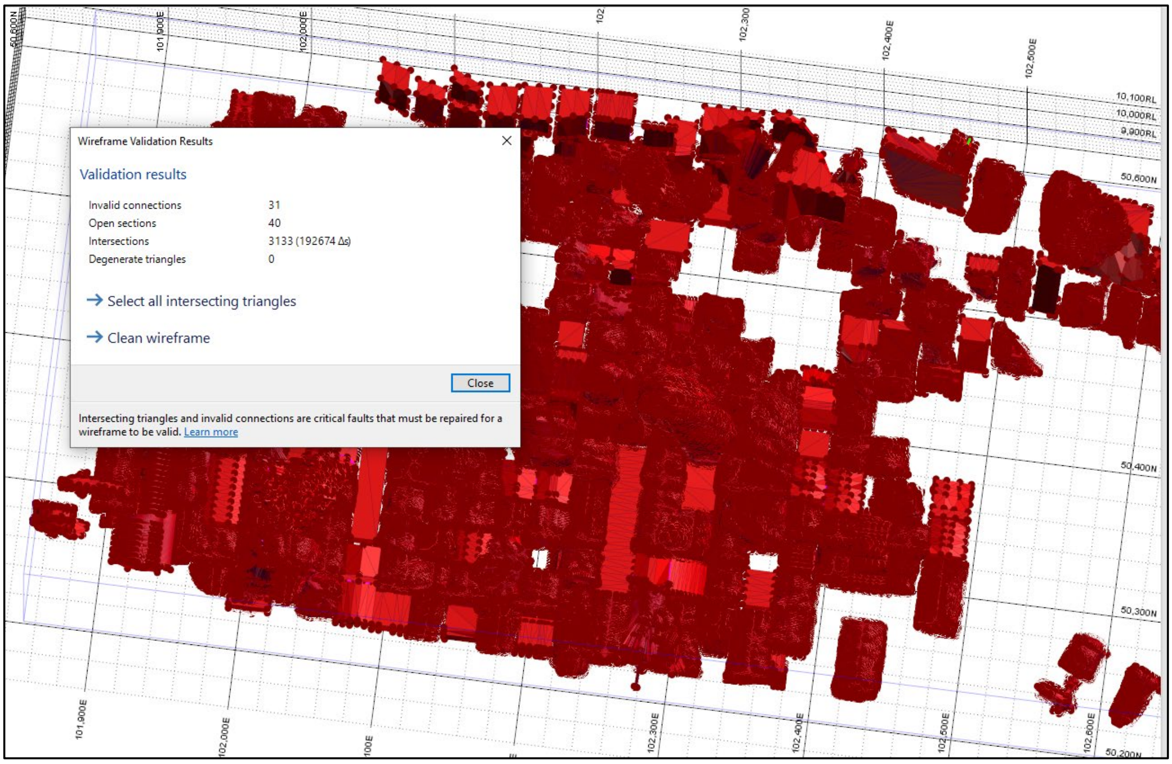


Figure 4-31: Old working wireframes validation results

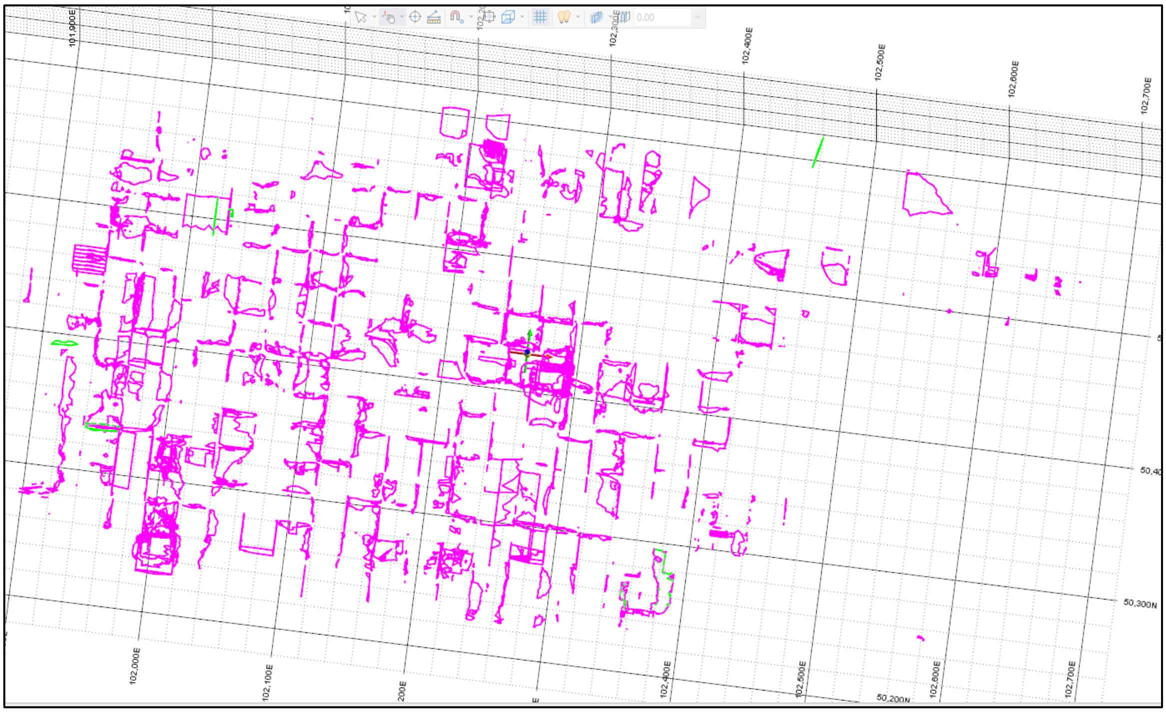


Figure 4-32: Old working wireframes validation error locations

A comparison on easting 102,000E of the MEC assigned old working within the MRE OBM and the CSA MRE OBM is shown in Figure 4-33 and **Figure 4-34,** with the overlap blocks shown in **Figure 4-35** .

A further comparison on easting 102,200E of the MEC assigned old working within the MRE OBM and the CSA MRE OBM is shown in Figure 4-36 and **Figure 4-37,** with the overlap blocks shown in **Figure 4-38**.

The MEC model closely aligns with the boundaries of the old workings.

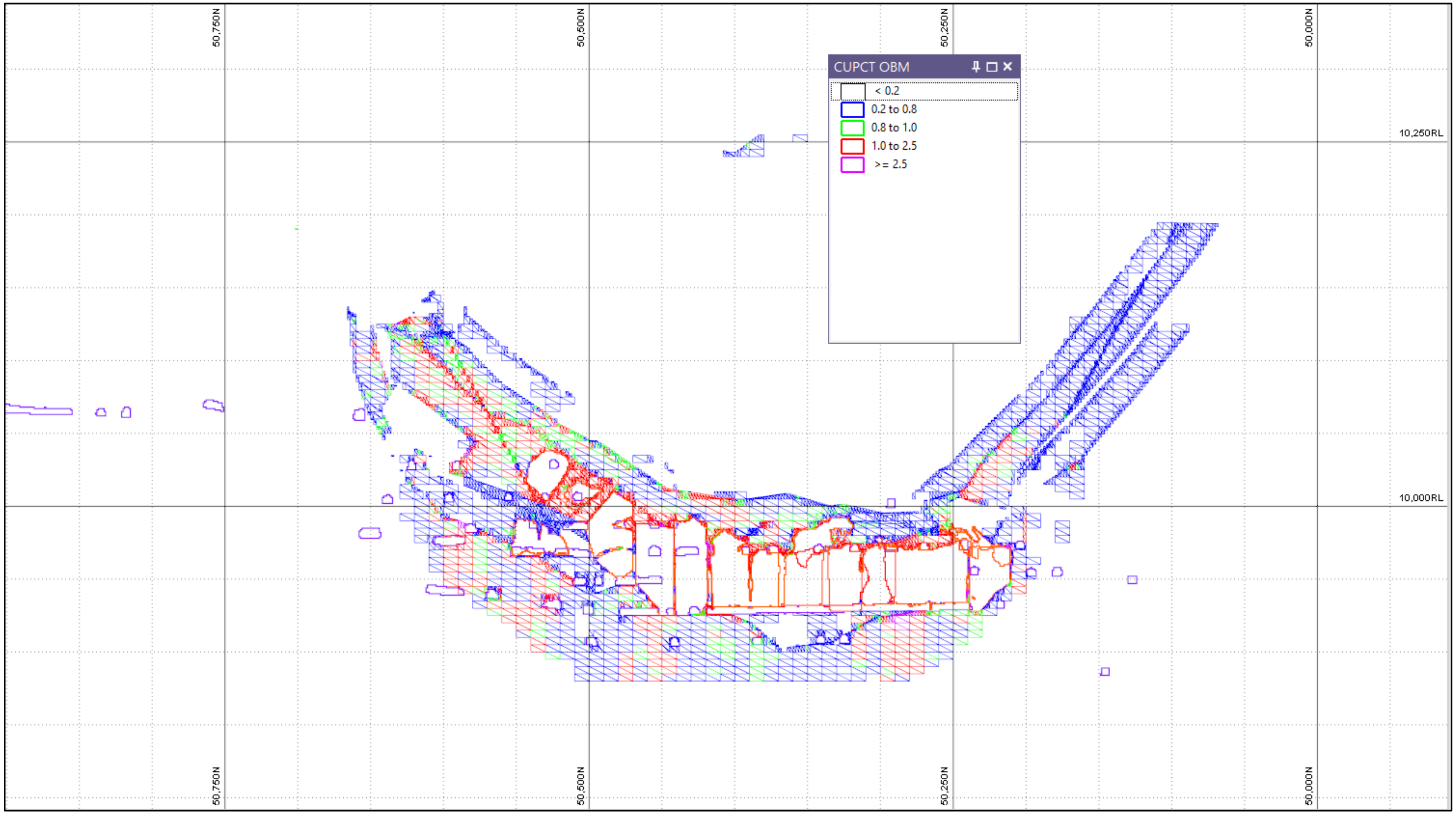


Figure 4-33: MEC 2024 OBM, depleted, 102000E, looking east

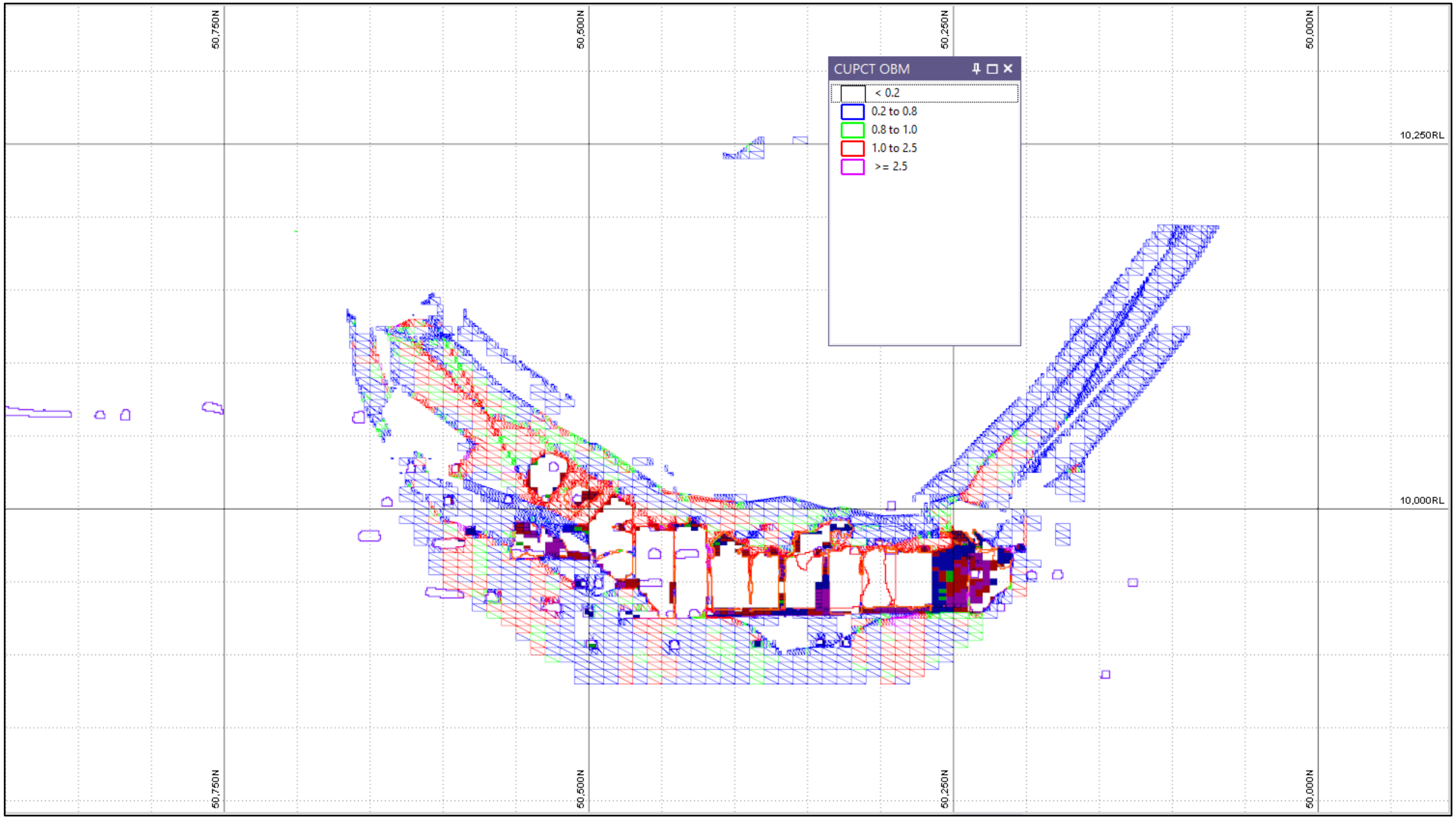


Figure 4-34: CSA 2022 OBM, depleted, 102000E, looking east

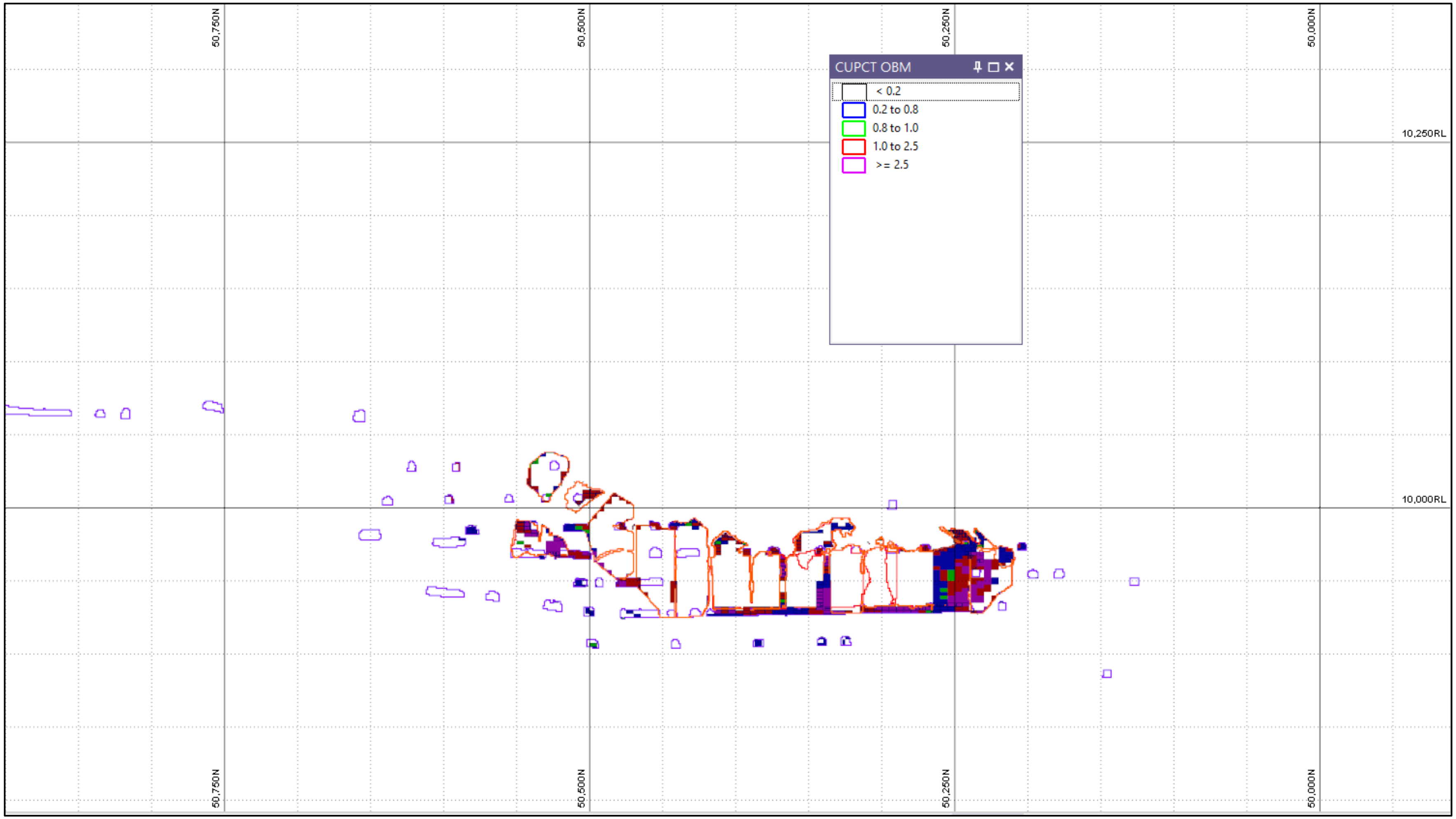


Figure 4-35: CSA 2022 OBM, depleted zone with blocks, 102000E, looking east

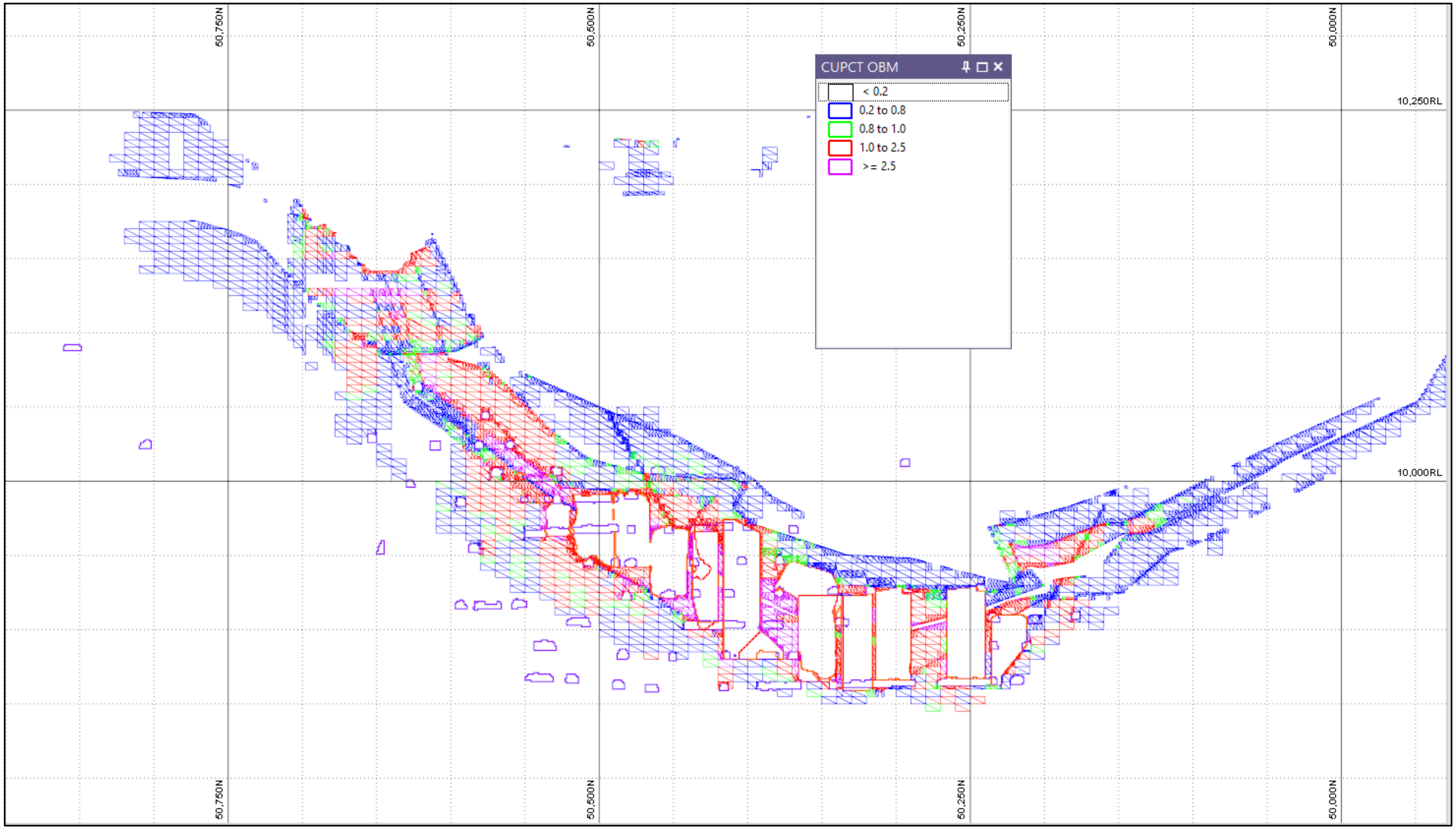


Figure 4-36: MEC 2024 OBM, depleted, 102200E, looking east

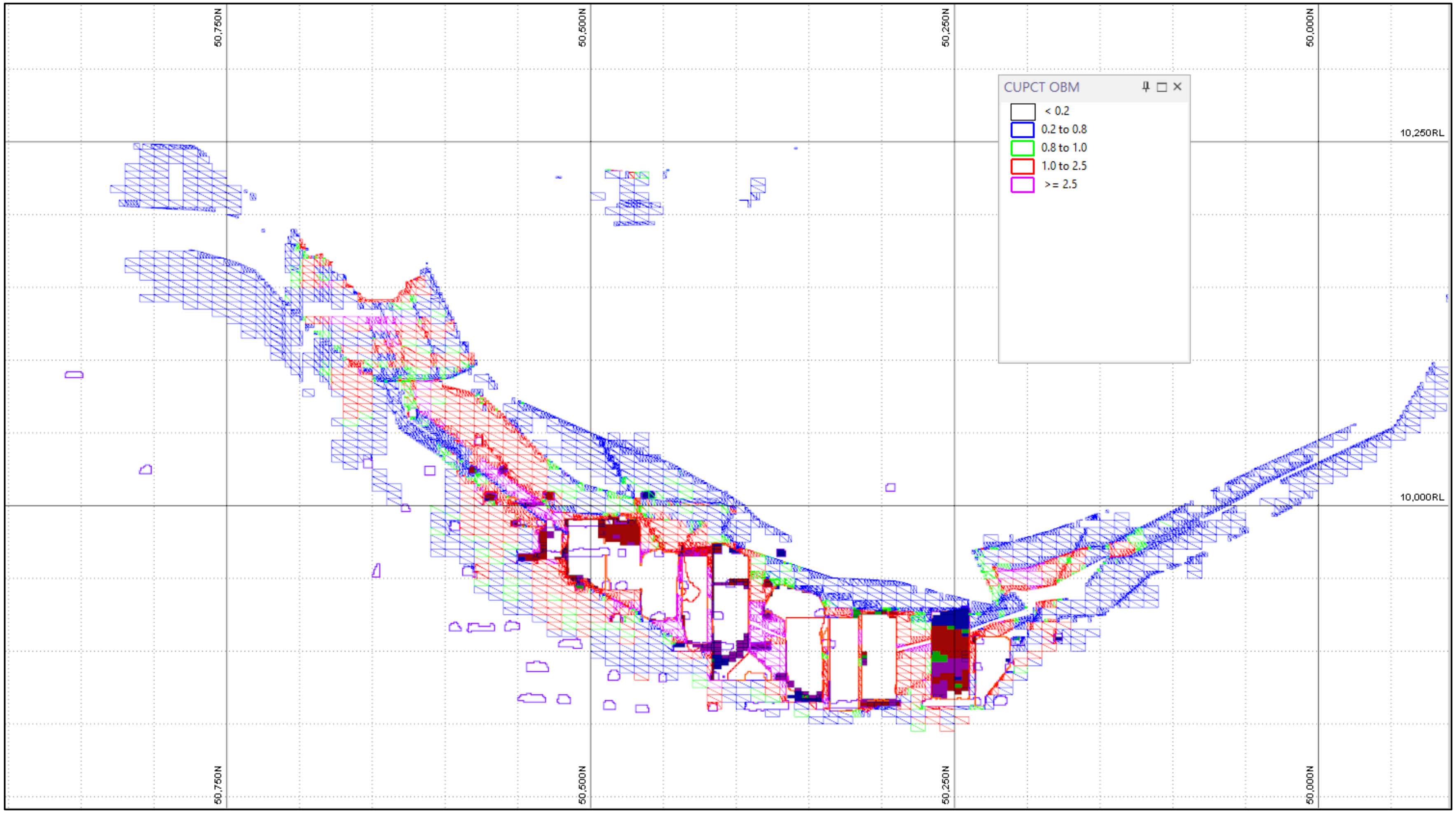


Figure 4-37: CSA 2022 OBM, depleted, 102200E, looking east

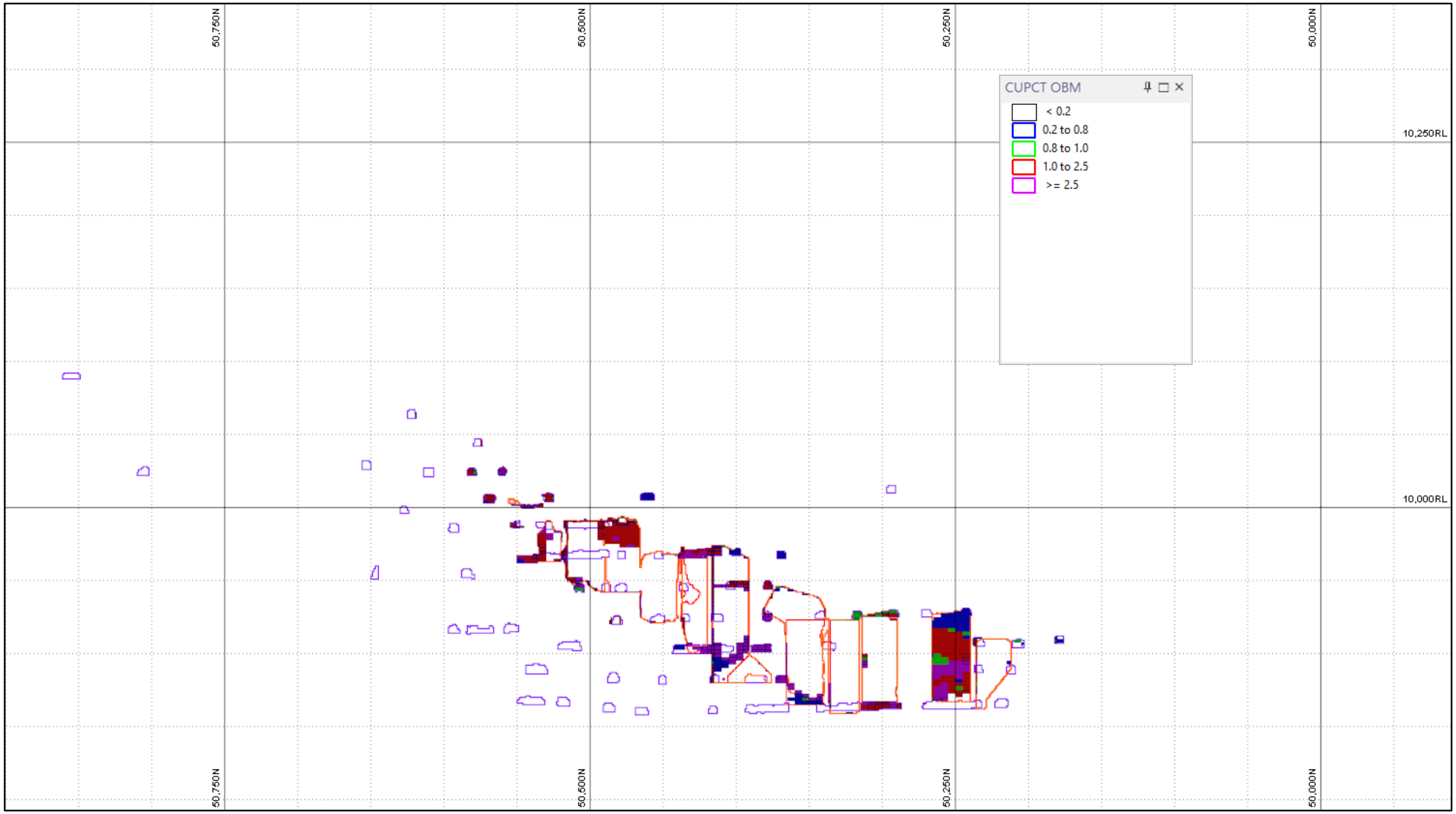


Figure 4-38: CSA 2022 OBM, depleted zone with blocks, 102200E, looking east

5 RPEEE

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. MEC Mining deems that there are reasonable prospects for eventual economic extraction utilising open pit mining followed by underground mining, on the following basis:

- The Nifty project has been mined in phases for decades.
- A processing plant and all associated infrastructure is in place on site.
- The heap leach and SXEW infrastructure provides a rapid pathway to production and cash flow generation.
- The current copper price means the project has robust fundamentals.
- The presence of the subsidence zone may slow opencut mining in some areas, but there are many examples of projects that have transitioned from underground to opencut mines, working around old working via probe drilling and other techniques that result in successful commercial mining.

6 CONCLUSIONS

The MEC March 2024 MRE was created using implicit modelling to honour the geology. An explicit model was then created based on the geology model and was used to create a block model. The model and data were unfolded in order to ensure all samples were found by the search ellipse.

The estimated blocks were then further assigned the topography, barren dyke, developments, voids, and stopes. The subsidence zone was adjusted for MRE classification due to issues relating to the RPEEE condition. MRE classification of other blocks was based upon distance, being the sample spacing.

The MEC March 2024 MRE reported higher tonnage and lower grade that the 2022 MRE, likely due to honouring the old workings boundaries with higher precision than the 2022 MRE OBM.

7 RECOMMENDATIONS

MEC recommends -

- A rerun of the MRE with inclusion of additional drill data that may have a material impact on the MRE.
- The use of a second and then third search during estimation to improve the local map of grade distribution.
- The use of fewer subcells on the stratigraphic unit boundaries to reduce software precision errors.
- The inclusion of a pit drone survey georeferenced photo coverage, to drape and compare against the modelled contacts and potentially to adjust. Particularly whilst the pit walls are clear of dust and all structures are visible.
- The use of production data to reconcile against the OBM.
- Increasing umpire sample submissions.
- Careful monitoring of CRM results to enforce batch reanalysis if unacceptable.
- Increase sample recovery measurements.
- Further analysis of density regressions to better estimate tonnage.

8 APPENDIX 1: JORC CODE TABLE 1 SECTION 1: SAMPLING TECHNIQUES AND DATA

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.	• The Nifty deposit (the Deposit) has been drilled and sampled from surface and underground, along and across strike, using various drilling techniques. The drilling programs have been ongoing since initial discovery to both expand the mineralisation and provide control for mining. • Most drilling has been designed to intersect the folded mineralisation as close as perpendicular as possible. A total of 2,340 RC, diamond, and pre-collared holes with diamond tails have been drilled at Nifty, for a total of 370,146 m of drilled metres within the immediate vicinity of the deposit. • The hole collars were surveyed by company employees or contractors with the orientation recorded. Down hole surveys were recorded using appropriate equipment. The diamond core was logged for lithology and other geological features including regolith and weathering. RC drilling was logged for lithology, regolith and weathering. • The diamond core diameter varied from NQ to HQ in diameter. Mineralised intervals were sampled by cutting the core. For the sampled core, 75% has been sampled as half core: (71% of surface and 76% of underground core). The remainder was sampled as either quarter or whole core. The submitted sample weight ranged from 2 to 3 kg. • The RC drillhole diameters have not been recorded. The submitted RC samples were collected from the cyclone on the rig and spilt at the rig to approximate 2 to 3 kg weight. The splitter was cleaned with compressed air after each sample. • No geophysical tools were employed in assessing the sample grades.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• The drilling rate was monitored and adjusted to maximise sample recovery. • Laboratories used were/are ISO/IEC 17025 accredited.
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard'	• Copper mineralisation is readily identified by the presence of copper oxide minerals (dominantly azurite, malachite and chalcocite) and/or copper sulphide (dominantly chalcopyrite and bornite) mineral species.

	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	• RC drilling was sampled at 1.0 m intervals using a cyclone and sub-sampled using a riffle or cone splitter to create a 2-3 kg sample in a calico bag, which was submitted for assaying. • Diamond drilling was sampled to lithological contacts, limited to nominal 1.0 m in length and predominantly sampled as sawn half core. • The sampling protocols are considered appropriate for the nature and style of the Nifty 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.).	• Drilling from surface was either reverse circulation (RC) drilling or diamond drilling. Drilling from underground was diamond drilling. • Diamond drilling was conducted using HQ to NQ diameter drilling.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	• Core recovery was recorded in the database and assessed by measuring core length against total recovered core. The total core recovery averaged 94% by total number of measurements and 92% using length weighting. • RC sample weights were not recorded.
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	• The ground conditions in the mineralised zone are competent. In areas of less competent material core return was maximised by controlling drill rate. • In the case of RC samples, intervals of less competent material were identified in the log.
	• 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.	• Whilst no formal assessment has been reported, the nature and style of the copper mineralisation, and overall observed competency of the material sampled to date, would preclude potential sampling bias.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	• The routine logging of core and chips informed the general geologic features including stratigraphy, lithology, mineralisation, and alteration, which was sufficient and appropriate to apply mineralisation constraints. • Some core drilling was orientated and structural measurements of bedding, joints, veins etc captured.

		• The level of detail is considered suitable to support all Mineral Resource classifications and future mining and metallurgical studies.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	• Geological logging is qualitative; core recovery and structural orientation was captured as quantitative data.
	• The total length and percentage of the relevant intersections logged.	• The entire length of all holes, apart from surface casing, was logged geologically.
Subsampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Approximately 74% of all core was sampled as half core, 13% as whole core and less than 1% as quarter core. All cut core was sawn. It is not known if the core was consistently taken from the same side of the core. • Field sub-sampling of RC chip samples and the use of core cutting equipment for the submitted core are considered appropriate sub-sampling methods.
	• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	• RC chip samples were collected via a cyclone prior to being sub-sampled by splitter. • The splitter riffles were cleaned with compressed air between each sample. • Geological logging describes the RC samples as being predominantly dry.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• All assaying for both core and RC samples was performed by contract laboratories. The majority of the assay digest used a four acid digest method. Alternatively, sample preparation was by fusion prior to XRF analysis at contract laboratories. • All sample preparation techniques are considered appropriate for the style and nature of the Nifty copper mineralisation.
	• Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	• No precision concerns were raised by the close spaced open cut and grade control data and mining.

	• 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.	• During drilling the splitter riffles were cleaned between sampling using compressed air. • The drill speed was monitored during drilling to optimise sample recovery. • The core was cleaned prior to logging and sampling. • All laboratories adopted appropriate industry best practices for splitting and comminution to the required particle size.
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample sizes are considered appropriate for the style of mineralisation, mineralogy and grain size being sampled.
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.	• Prior to Cyprium's acquisition of the project, analytical techniques varied over time and included AAS (for grades > 1% Cu), ICP-AES, ICP-MS and XRF. All are considered appropriate analytical techniques and suitable for the Nifty style copper mineralisation. • The majority of this assaying used a four acid digest which is considered a total digestion method for copper analysis. A proportion of the samples were prepared using fusion prior to XRF analysis which is also considered a total analytical technique. • Since acquiring the project, Cyprium sample data was assayed at Bureau Veritas in Canning Vale, Western Australia. Samples were crushed and pulverised using a four acid digest, prior to ICP-AES analysis.
	• 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 to ascertain grade.
	• 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.	• Standard and blanks were included with all samples sent for analysis at an overall rate of 1 in 10 and 1 in 31 respectively. Available QAQC for all holes used in the estimate provide support for the quality of the copper assays. • Field duplicate information is also available for the majority of the project, with field duplicates submitted at an overall rate of 1 in 270 (due to some historic drill programs not analysing field duplicates). The most recent drilling (since August 2021) has a rate of 1:21. • Statistical analysis was conducted to assess precision and bias, and there are no material concerns with respect to the MRE.

		• An umpire laboratory was used to re-analyse 182 samples. There were no concerns with respect to bias.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• The extensive data set has been reviewed by previous operators of the project and the intersections within the mineralisation have been confirmed.
	• The use of twinned holes.	• 11 sets of twinned holes were identified for analysis, 9 pairs were RC/diamond twins and 2 pairs were RC/RC twins from different phases of drilling. Overall, the comparison between the twin holes is acceptable at ≤2% Cu. Above this grade there is some strong bias, generally towards the diamond holes showing higher grade than the RC holes. One hole (NPC0073) was also identified as likely being in the incorrect location however does not have a material impact on the MRE as it is above the level of depletion so has been removed from the model. • In addition to the twinned holes, there is a significant amount of supportive close spaced drilling of various orientations.
	• • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• The extensive historical data set has been reviewed many times over nearly 30 years by several data management consultants. Intersections within the mineralisation have previously been confirmed. • Cyprium has adopted established data entry, verification, storage and documentation protocols commensurate with past production.
	• Discuss any adjustment to assay data.	• Other than re-setting below detection limit grades to 'blanks', there have been no adjustments to the assay data.

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.	• Collar positions have been surveyed on a known local grid with good, demonstrated survey control and supported both open pit and underground mining. • Drillhole collar locations are set out and surveyed using the local Nifty Mine grid. • The drillhole azimuth and dip was recorded at 30m intervals.
	• Specification of the grid system used.	• The regional grid is GDA94 Zone 50. All site survey work is completed using the local Nifty mine grid.
	• Quality and adequacy of topographic control.	• Topographic control is adequate and is derived from post-mining surface surveys.
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• Surface and underground drillholes were drilled on a nominal 40m x 20m grid, designed to specifically target the lithological and mineralisation sequence.
	• 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.	• Data spacing and distribution is sufficient to establish the degree of geological and grade continuity. The applied Mineral Resource classification is commensurate with the geological and grade continuity demonstrated.

	• Whether sample compositing has been applied.	• Samples were composite to 1 m prior to commencing the estimate.
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.	• Drillholes were designed to reflect the orientation of the stratigraphy, mineralisation, and deposit type. • Neither the drillhole design nor the sampling are believed to have introduced a sample bias.
	• 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.	• No sampling bias is considered to have been introduced by either RC or diamond drilling.
Sample security	• The measures taken to ensure sample security.	• RC samples and diamond drillhole core trays once collected from the rig, were stored at the Nifty mine site, which allowed only authorised access.
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 deposit is situated on mining lease M271/SA. • Cyprium Metals Ltd has 100% ownership of the Paterson Copper Pty Ltd entity, the owner and operator of the Nifty Copper mine.
	• 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.	• Currently there are no known impediments to Cyprium obtaining a licence to operate. The current tenure expires in September 2034.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The Summary Nifty project history is: • WMC Resources Ltd discovered Nifty in 1980 by using regional ironstone sampling and reconnaissance geology. Malachite staining of an outcrop and copper-anomalous ironstones from dune swale reconnaissance sampling were the initial indicators. This was followed up by lag sampling on a 500 x 50m grid that detected a 2.5 x 1.5km Cu-Pb anomaly. Secondary copper mineralisation was intersected in percussion drilling in mid-1981, with high grade fresh ore (20.8m at 3.8% Cu) discovered in 1983. WMC commenced open pit mining of the secondary oxide ore in 1992 and continued mining until September 1998 when Nifty was sold to Straits Resources Ltd. • Straights Resources Ltd sold the project to Aditya Birla Minerals Ltd, in 2003. • Open pit mining ceased in June 2006. • Underground mining of the fresh (chalcopyrite) mineralisation started in 2006. • The project was acquired by Metals X from Aditya Birla in 2016 in an on-market takeover of the ASX listed company. • Copper extraction using heap leaching ceased in January 2009. sulphide copper was processed using conventional floatation, producing a copper concentrate.

		• Underground mining and concentrate production ceased in November 2019 and the Nifty Copper mine was placed in care and maintenance. • The project was acquired by Cyprium Metals Ltd in February 2021.
Geology	• Deposit type, geological setting and style of mineralisation	• The Nifty mineralisation 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. • The Nifty mineralisation is hosted within the folded late-Proterozoic Broadhurst Formation, part of the Yeneena Group. The Broadhurst Formation is between 1,000 m to 2,000 m thick and consists of a stacked series of carbonaceous shales, turbiditic sandstones, dolomite, and limestone. • The dominant structural feature is the Nifty Syncline which strikes approximately southeast-northwest and plunges approximately 6°-12° to the southeast. The bulk of the mined sulphide mineralisation is largely hosted within the keel and northern limb of the Syncline. • Weathering and oxidation extend down to a maximum depth of 200 m vertically. • Oxide copper mineralisation is identified by the presence of azurite and malachite, as well as minor cuprite and native copper. • A lower saprolite zone is a sub-domain of the oxide zone, where the rock mass has more than 20% altered minerals but with identifiable remnant rock textures, which may contain oxide copper mineralisation. • There is development of a sub-horizontal chalcocite blanket within the transitional zone. • The transitional zone marks the gradual transition from chalcocite to fresh chalcopyrite mineralisation. • 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:	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

	• easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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.	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

	• 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').	
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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.	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding sections 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 has undergone rigorous checks by accredited database specialists through almost 30 years of operation.
	• Data validation procedures used.	• Drillhole collar, downhole survey, assays, geology, core recovery data was imported initially into Leapfrog and then into Micromine software. • The imported data was then compared to the database values with no discrepancies identified. • The data was desurveyed in both software packages and reviewed spatially with no discrepancies identified.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Dean O'Keefe, the Competent Person for this Mineral Resource estimate visited the Nifty site on February 8, 2024.
	• If no site visits have been undertaken indicate why this is the case.	• A site visit has been conducted.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	• Confidence in the interpretation of the weathering and oxide zones is considered good – being well tested by surface drilling, clearly identifiable mineralogy, and rock fabric. • The confidence in the lithostratigraphic interpretation comes from thirty years' history of open pit and underground mining, and the closely spaced drilling, pit and underground mapping and other geological and sample information. • All available historical data was provided by Cyprium. • The lithostratigraphic sequence is subject to vertical and horizontal dimension changes along and across strike and in thickness. Fresh mineralisation occurs as either disseminated or massive chalcopyrite within the sequence. • The interpretations have been refined in conjunction with previous open pit and underground mining.

	• Nature of the data used and of any assumptions made.	• Surface RC as well as surface and underground diamond drilling have been used to inform the Mineral Resource estimate.
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• Due to both the coverage of available data and the +30 years of exploration and mining experience at Nifty, there is limited scope for alternate interpretations in areas that have been suitably drill tested, with only minor/local scale refinements expected. • Areas with wider spaced drilling have an increased potential for alternate interpretations but are still expected to correlate well with the geological model and be commensurate with the amount of informing data.
	• The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	• The lithostratigraphic weathering/oxidation units were used as hard boundaries for estimation. • The composite and block model were unfolded prior to estimation, using the individual lithostratigraphic units to control the unfolding process. • Estimation of the weathered and chalcocite zones was completed in real space to reflect the known genetic model for these domains.
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 Nifty copper deposit occurs over a 1,200m down plunge distance; units vary individually between from 0 m to 30 m in true thickness. The limbs of the sequence are variously mineralised and up to 400 m in vertical extent.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	• The final interpretational wireframes and estimation work was completed using Micromine v2023.5. • The available samples were coded by lithostratigraphic and oxide/weathering unit (estimation domain), and 1.0 m composites were created honouring these boundaries. • Copper geo-statistical assessment of the controlling variograms was undertaken in unfolded space, for each estimation domain, with the exception of the chalcocite domain which was estimated in true space because of its linear geometry. • The grade was estimated using ordinary block kriging of the 1.0m composite grades.

		• Topcuts were applied to the composite samples on individual estimation domains, to restrict the impact of a limited number of extreme (high) values. • For estimation purposes all boundaries were treated as hard boundaries. • For the transitional and fresh sulphide lithostratigraphic domains, the search orientation was derived from the continuity model in unfolded space. • The primary search was 200 m in the direction of maximum continuity, 100 m along the intermediate direction of continuity and 40 m in the minor direction of continuity. Up to 4 samples per octant sector (maximum number of informing samples was 32 samples) was used. • The secondary search was 500 m in the direction of maximum continuity, 250 m along the intermediate direction of continuity and 100 m in the minor direction of continuity, with a maximum of 32 informing samples (no octant search applied). • Estimation of the chalcocite domain was undertaken in real space, with the search ellipse orientated along the strike of the mineralisation parallel to the overall chalcocite geometry. The primary estimation pass used search distances of 200 m along strike, 100 m across strike and 40 m vertically, with up to 4 samples per octant sector (32 maximum number of informing samples). The second estimation pass expanded the search distances to 500 m along strike, 250 across strike m and 100 m vertically, with a maximum of 32 informing samples (no octant search applied). • Any blocks not estimated after two estimation runs were not estimated. • The maximum distance for extrapolation was 500 m.
	• 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 2024 MEC MRE was compared to the previous 2022 estimate. When the two estimates are suitably regularised and depleted for previously mining, the 2024 estimate has 3% more tonnes and 4% higher grade.

	• 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).	• There are no deleterious elements estimated.
	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• As a function of the folded geometry, the drill spacing for the fresh mineralisation is highly variable, with a nominal drillhole spacing of 40 m east by 20 m north across strike. The block size used for estimation 20 m east x 10 m north and 5 mRL.
	• Any assumptions behind modelling of selective mining units.	• No selective mining unit assumptions were used for the Mineral Resource Estimate.
	• Any assumptions about correlation between variables.	• No assumptions have been made regarding correlated variables.
	• Description of how the geological interpretation was used to control the resource estimates.	• The estimate used the lithostratigraphic and weathering/oxidation contacts to define the estimation domains. The oxide and chalcocite estimation domains had the continuity modelling and estimate completed in true (unfolded) space to reflect the linear geometry of the mineralisation. The transitional and fresh sulphide domain continuity modelling and estimate was completed in folded space, derived by the individual lithostratigraphic folded geometry. • Density was assigned based on a combination of oxidation state and lithostratigraphy.
	• Discussion of basis for using or not using grade cutting or capping.	• To prevent extreme composite grade values exerting undue influence on the estimate, estimation domains with extreme values were topcut. The topcuts ranged from 5% to 30% copper grade, with a total of 47 composite samples being topcut, with between 2 and 9 composite samples per estimation domain being topcut.
	• 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 configuration was initially validated and no gaps or overlapping blocks existed in the ore block model. The composite and estimated block grades were then validated in a series of steps which included visual comparison on section, hole of domain validation and swath plots.

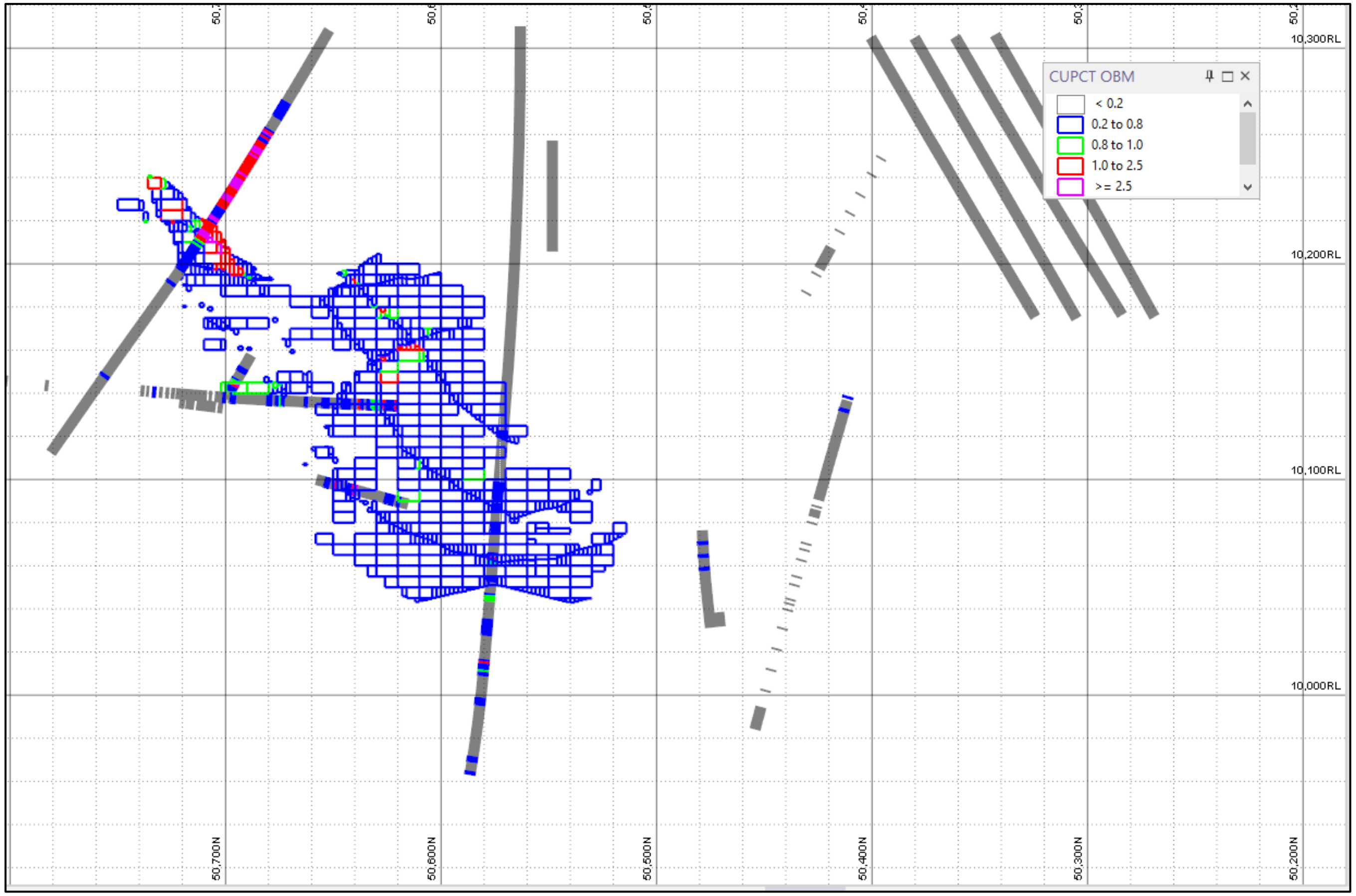
		• Drillhole grades were initially visually compared with cell model grades. Domain drill hole and block model statistics were then compared. Swath plots were also created to compare drillhole grades with block model grades for easting and northing slices throughout the deposit. The block model reflected the tenor of the grades in the drill hole samples both globally and locally. • Currently there is no reconciliation data available.
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 on a dry bulk density basis using density determined by copper content.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied	• The MRE was reported at a 0.25% total copper basis, which is the reporting cut-off used for the previous MRE.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Mining at the operation has previously been undertaken by open cut (mining ceased 2006) and underground (mining ceased in 2009) methods. • Previous underground mining was by open stoping with paste fill. • Mining operation are currently under care and maintenance. • Cyprium Metals is evaluating the opportunity to re-commence mining and processing operations for both oxide and sulphide ores at Nifty.
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	• Mining operation are currently under care and maintenance. • Nifty previously processed the oxide and some transitional ore as a heap leach with SX-EW copper operation from 1993-2006. • The sulphide ore was processed using conventional floatation producing a copper concentrate for sale. • Cyprium plans to re-commission mining and processing at Nifty with a similar approach:

	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.	• Initial mining of oxide material and treatment using heap leaching and SX-EW to produce Cu cathode. • On-going development over several years leading to mining transitional and fresh sulphides for treatment using conventional floatation to produce a copper concentrate.
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.
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.	• Density was determined from whole core prior to the core being cut and is assumed to be on a dry basis. • There were 12,475 valid density determinations from surface drilling testing oxide, transitional and fresh copper sulphides. There were 8,881 determinations from underground drilling, testing the fresh chalcopyrite mineralisation.
	• 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,	• Prior to density determination, the core was sealed using plastic wrap to mitigate the presence of vugs and/or voids.

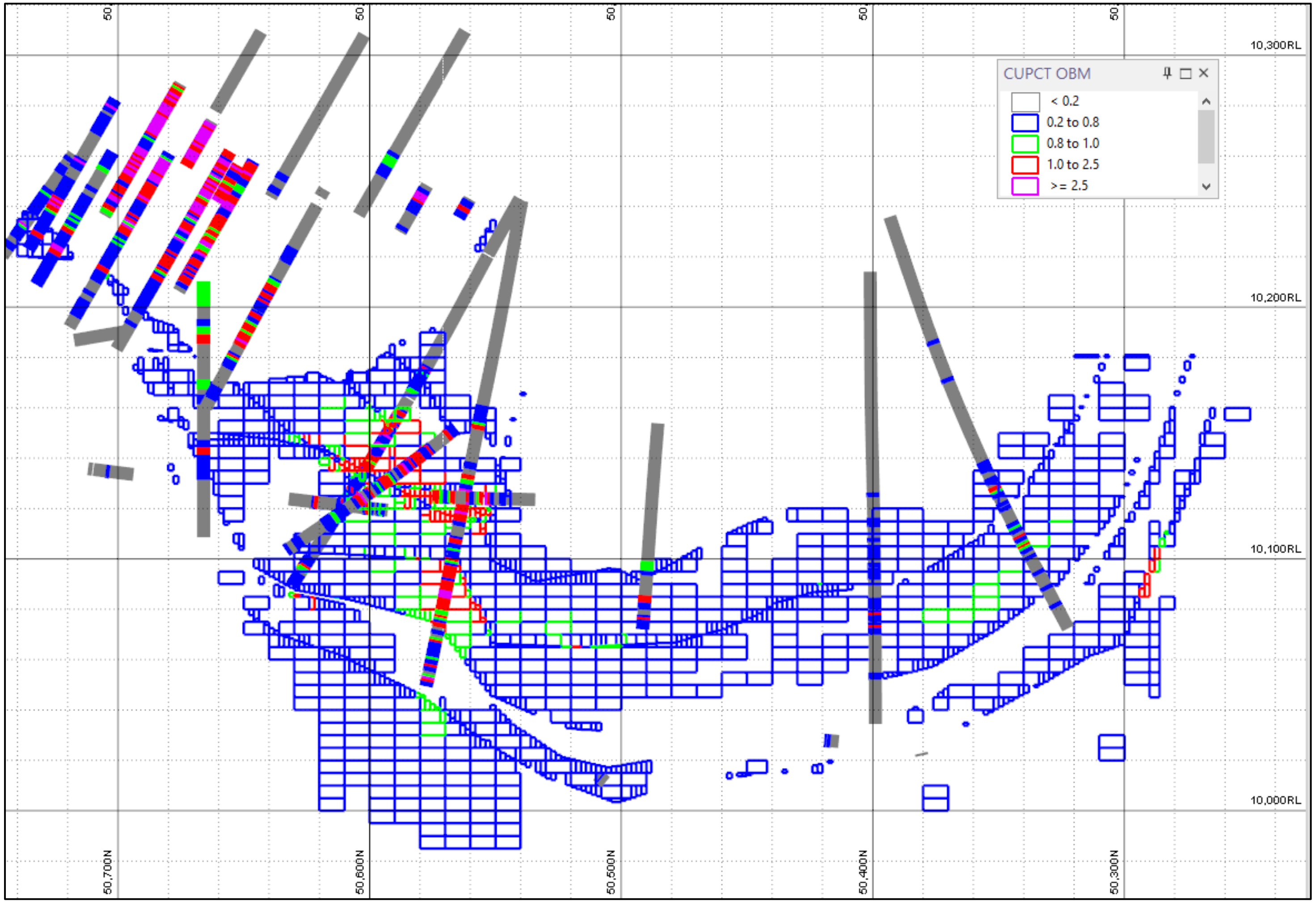
	• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Historically, density was applied based on stratigraphy, oxidation state and copper grade basis, and this is the same approach for was used for the 2024 resource update: The density applied to the estimate was derived by: • Lithostratigraphic domain • Oxidation/weathering domain; and • Copper grade.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories	• The criteria used to categorise the Mineral Resources included the robustness of the input data, the confidence in the geological interpretation including the predictability of both structures and grades within the mineralised zones and the distance from the data informing the estimates within the respective domains.
	• 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 performance of the historical mining and well-documented understanding of the deposit geology and mineralisation controls provide significant confidence in the estimate.
	• 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 deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Craig Gwatkin of Palaris Australia has completed an external high level review of the MEC March 2024 MRE and no fatal flaws were identified. • The 2024 MRE has followed the same workflow and methodology as was used for the 2019 Mineral Resource estimate, which had been audited by external independent consultants who found no fatal flaws with this approach. The same approach has been used for the previous 2021 and 2022 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	• The March 2024 MRE accuracy and confidence is commensurate with the applied Mineral Resource classification.

	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	• Factors that could affect the relative accuracy and confidence in the estimate are the estimation domain being considered and the proximity to informing samples. • No quantitative test of the relative accuracy has been done.
	• 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 March 2024 Mineral Resource update is considered a global estimate. Grade control scale sampling will be required to provide sufficient local confidence prior to mining.
	• The statements of relative accuracy ad confidence of the estimate should be compared with production data, where available.	• Comparison with production data is currently not available.

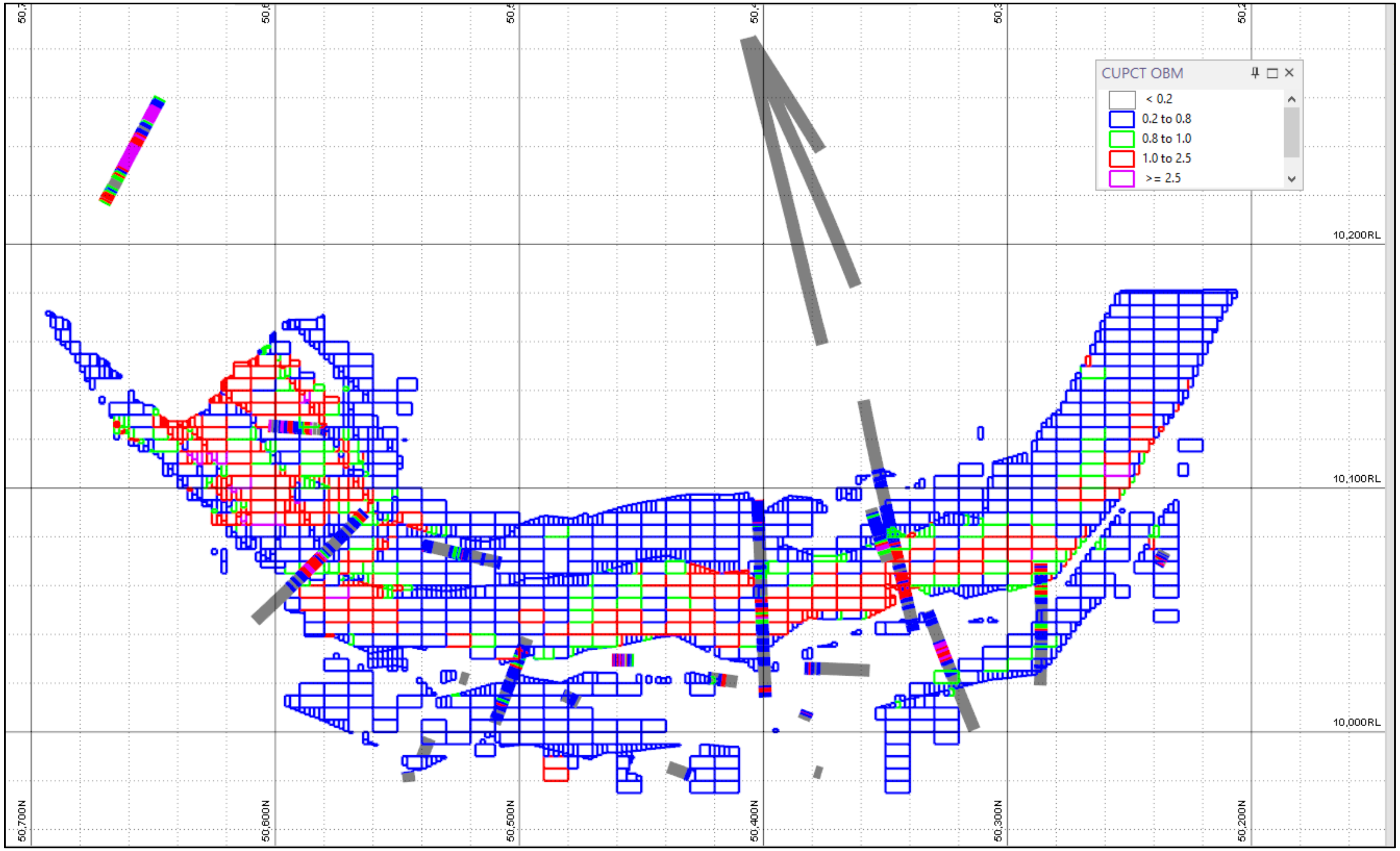
9 APPENDIX 2: VALIDATION SECTIONS



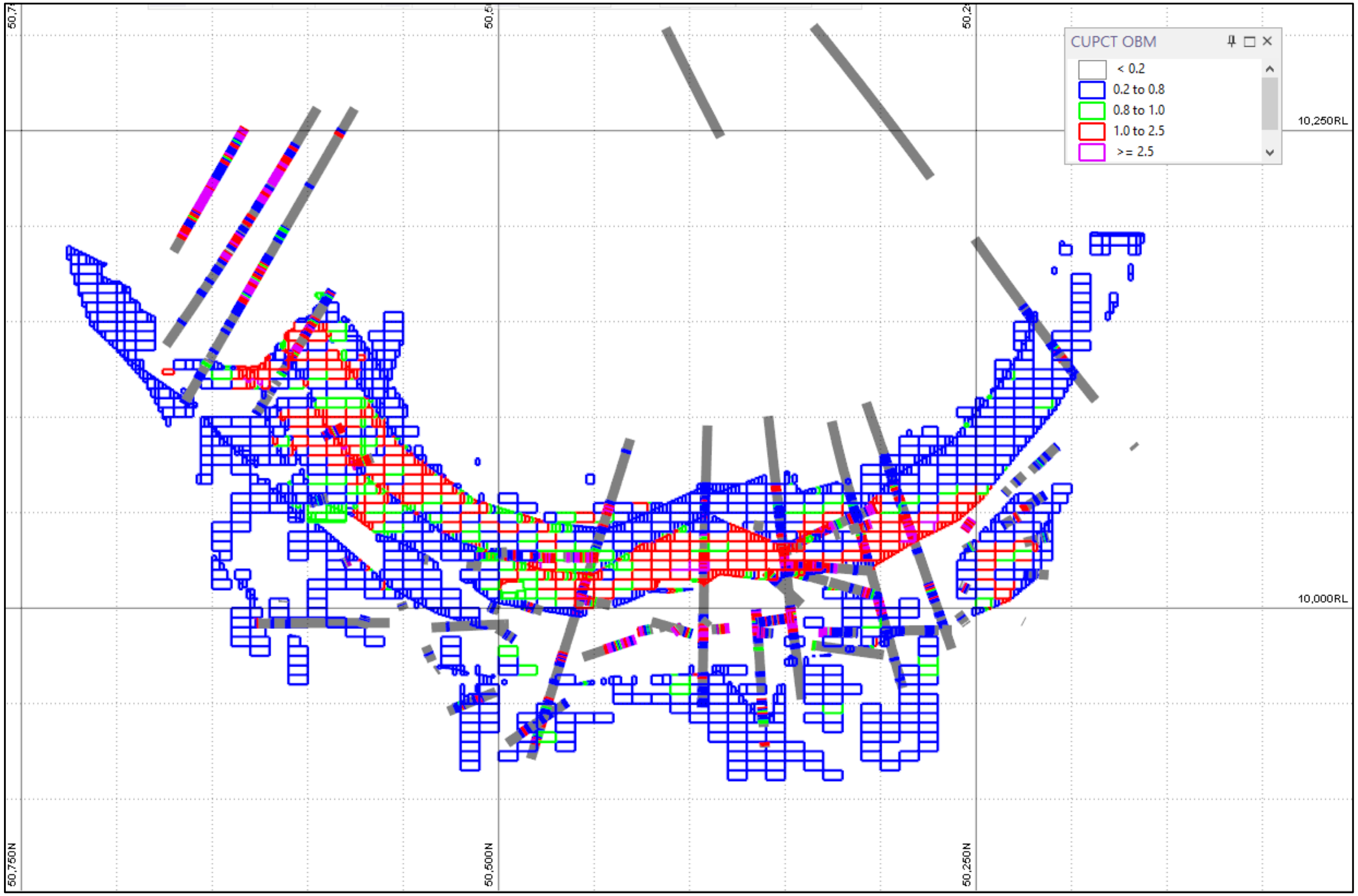
Cross section 101500E, looking east



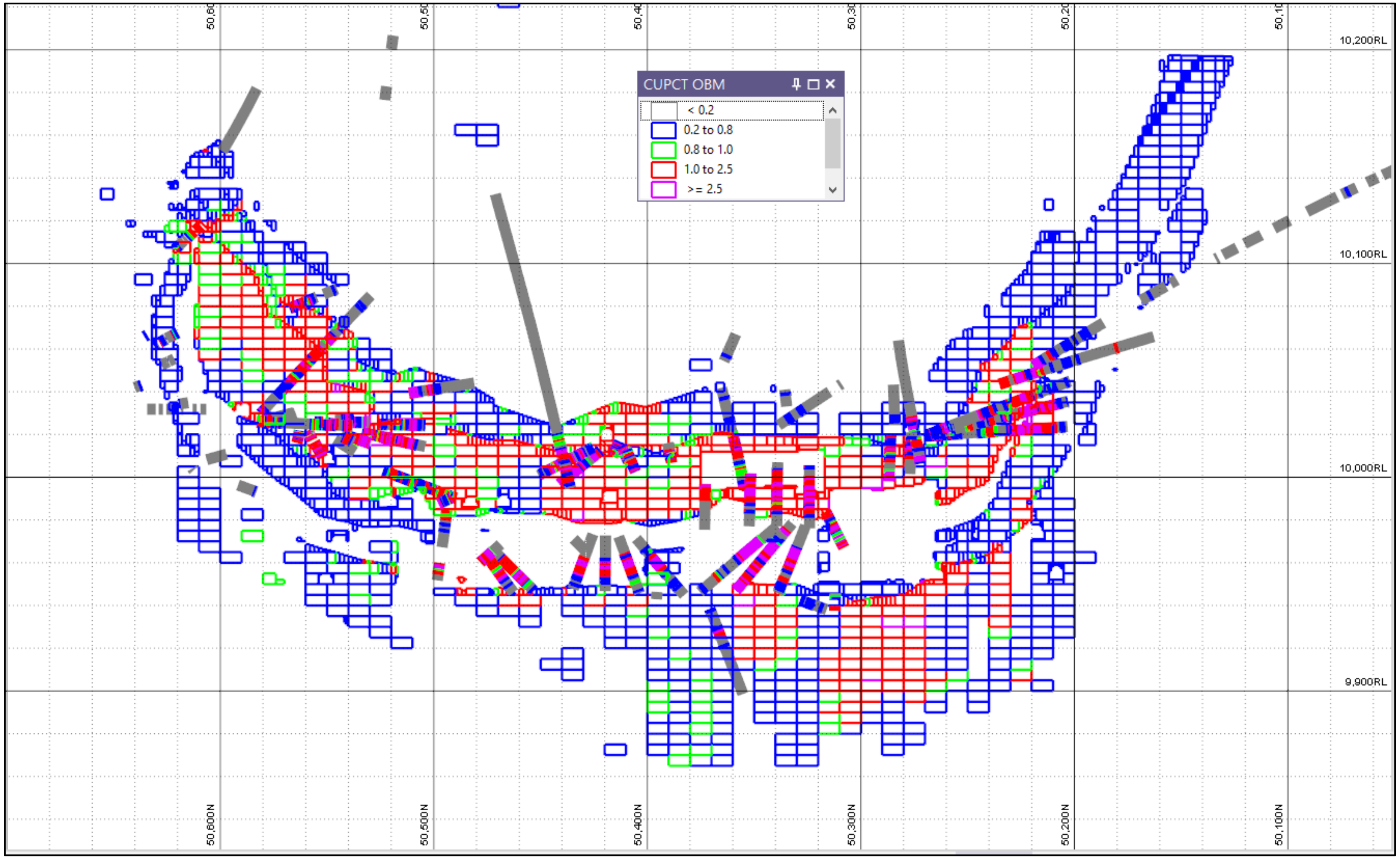
Cross section 101600E, looking east



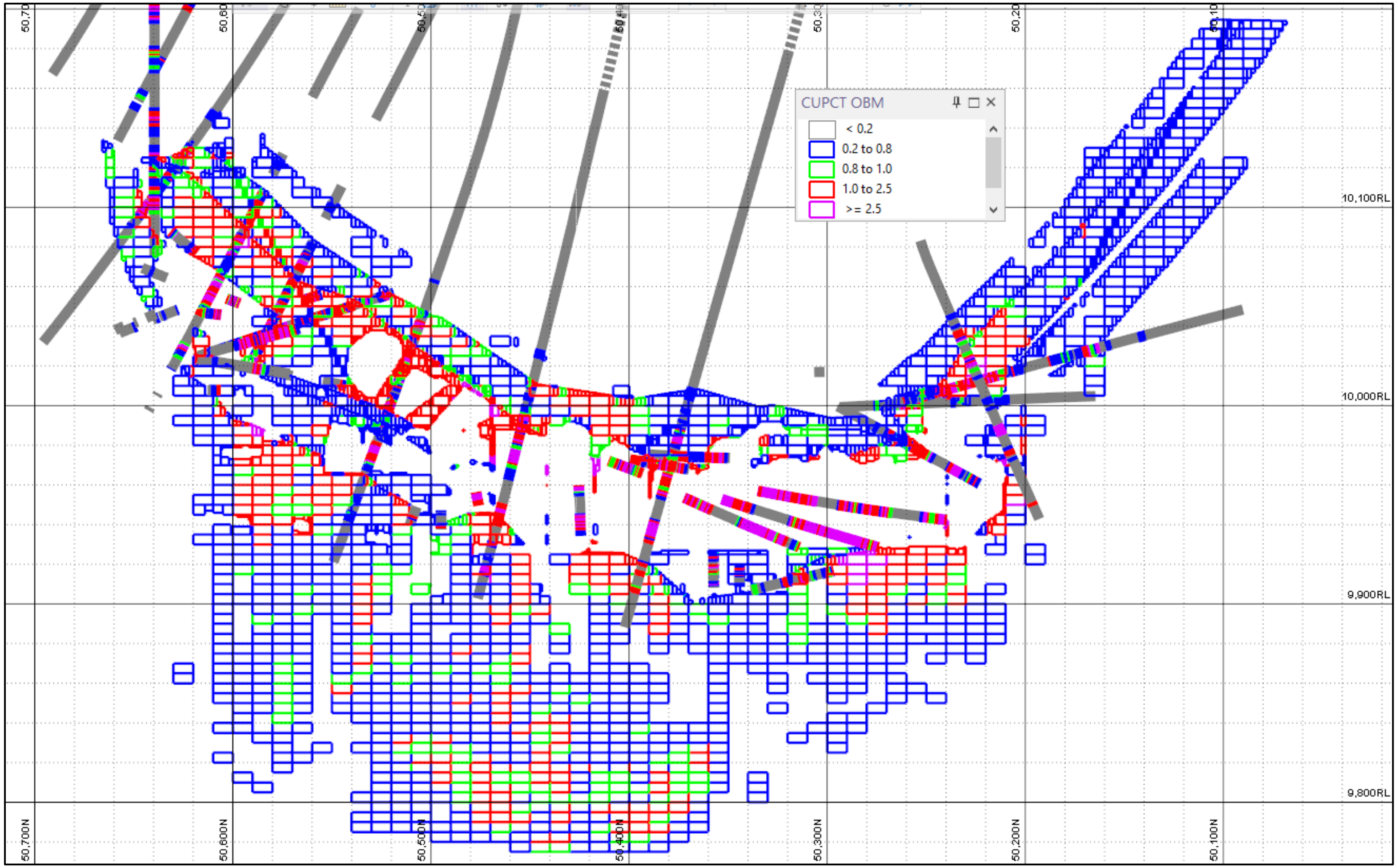
Cross section 101700E, looking east



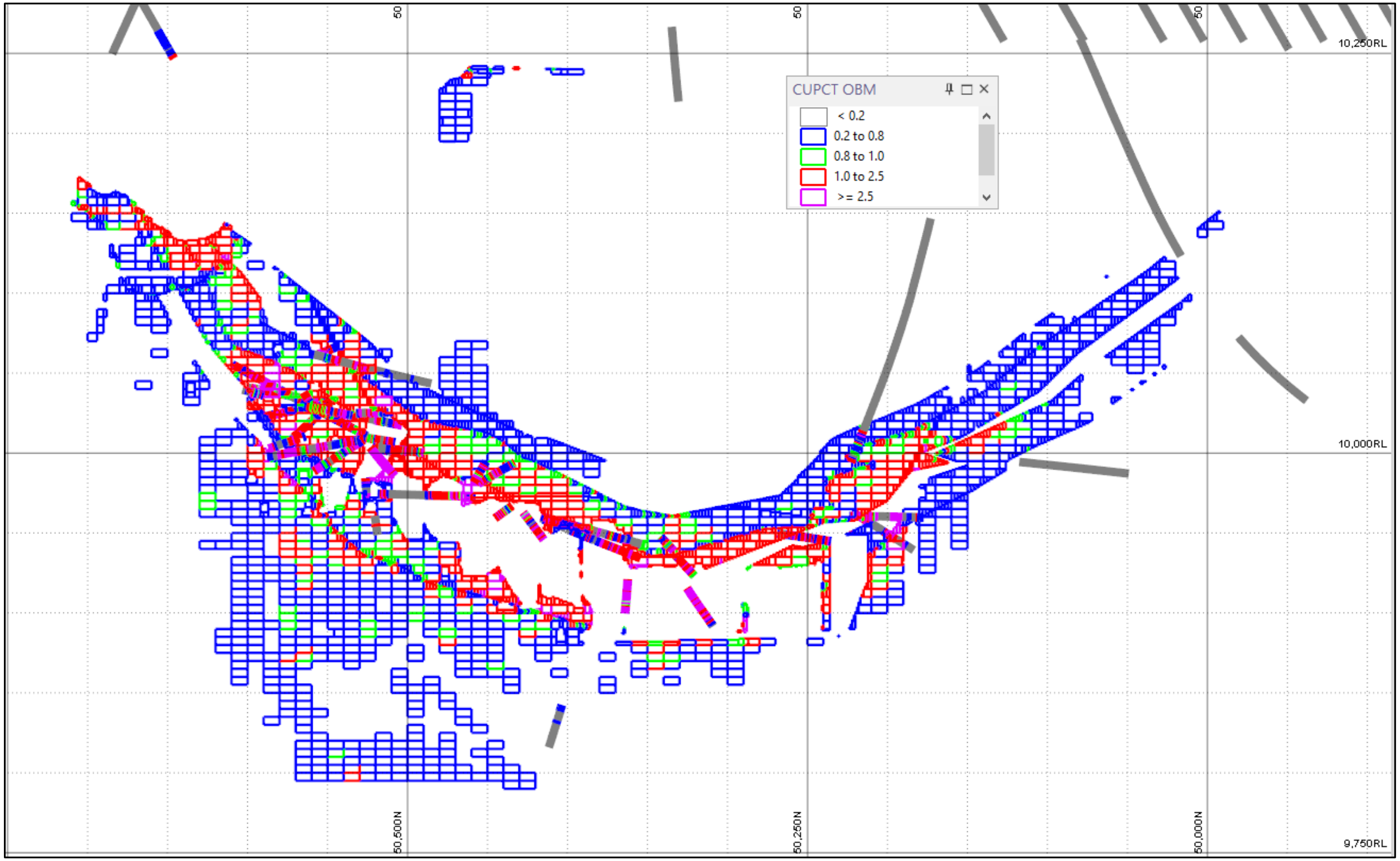
Cross section 101800E, looking east



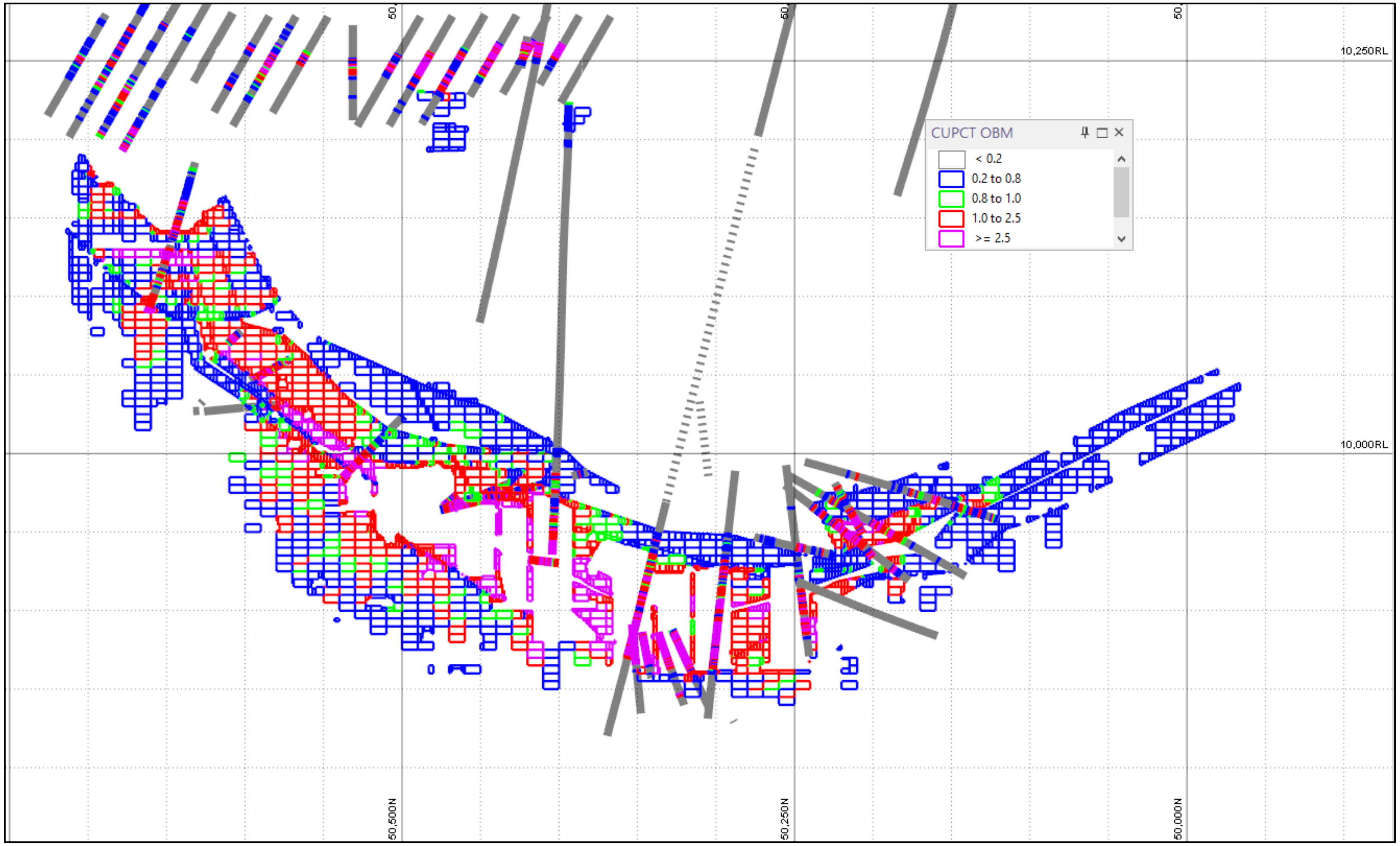
Cross section 101900E, looking east



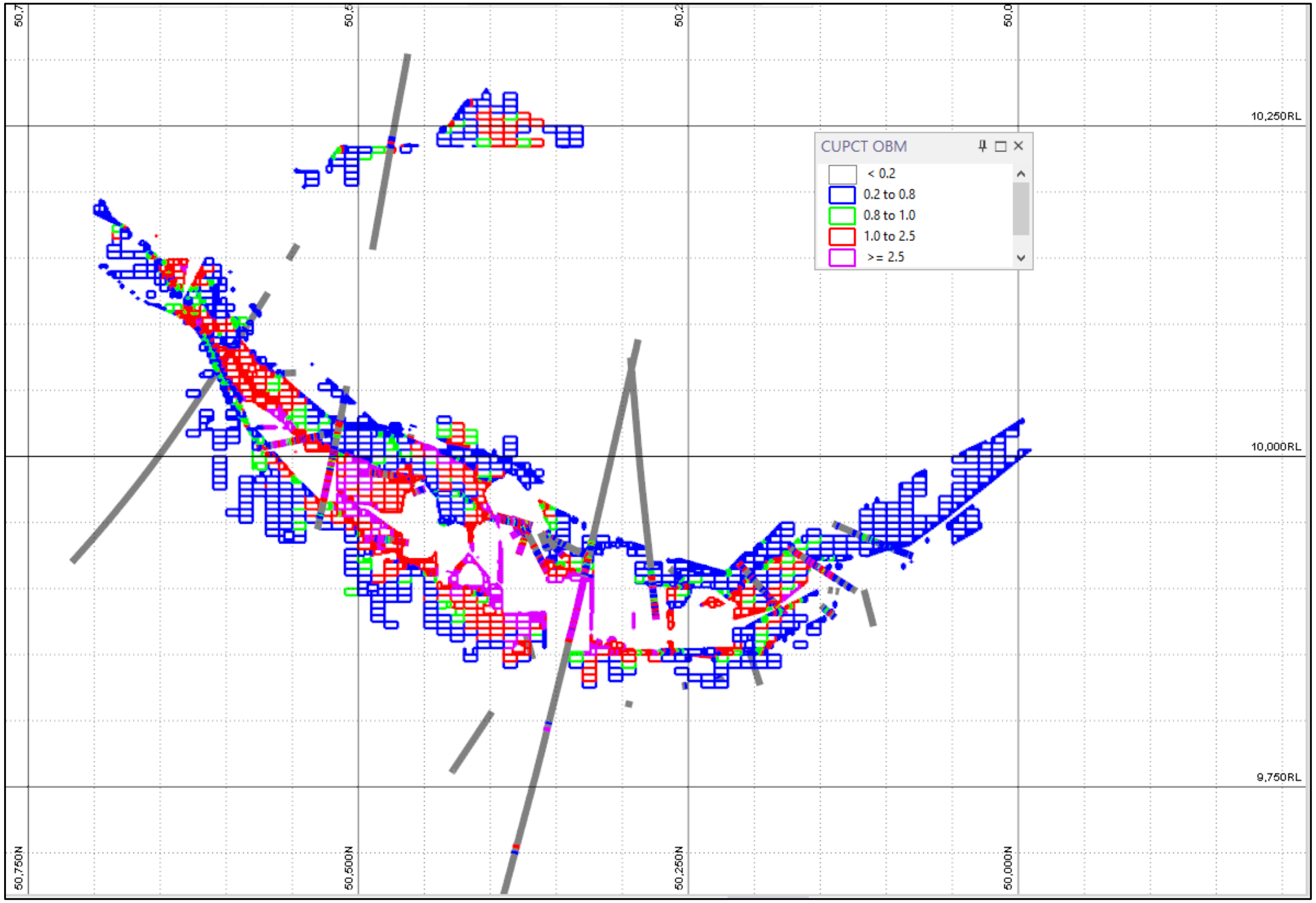
Cross section 102000E, looking east



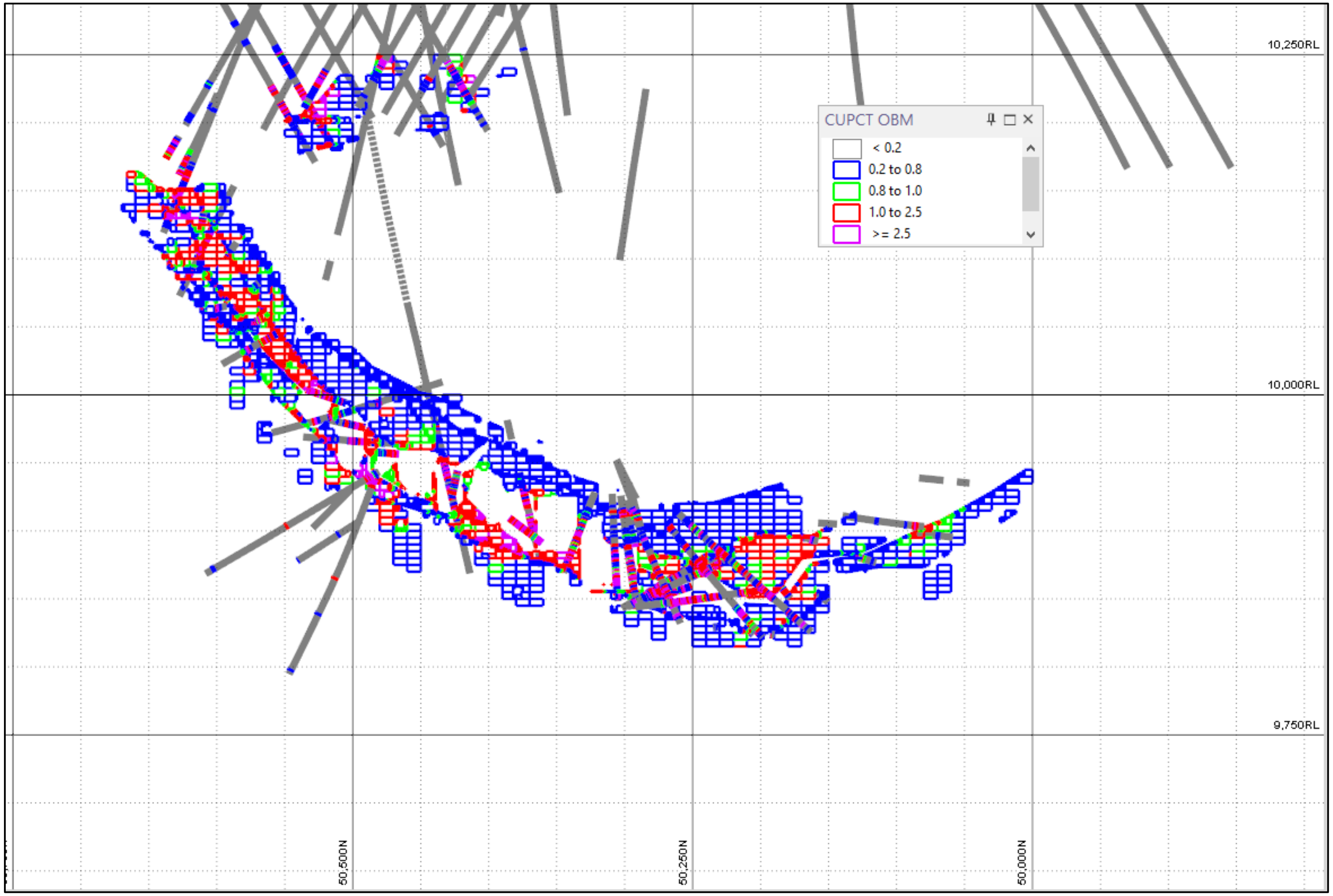
Cross section 102100E, looking east



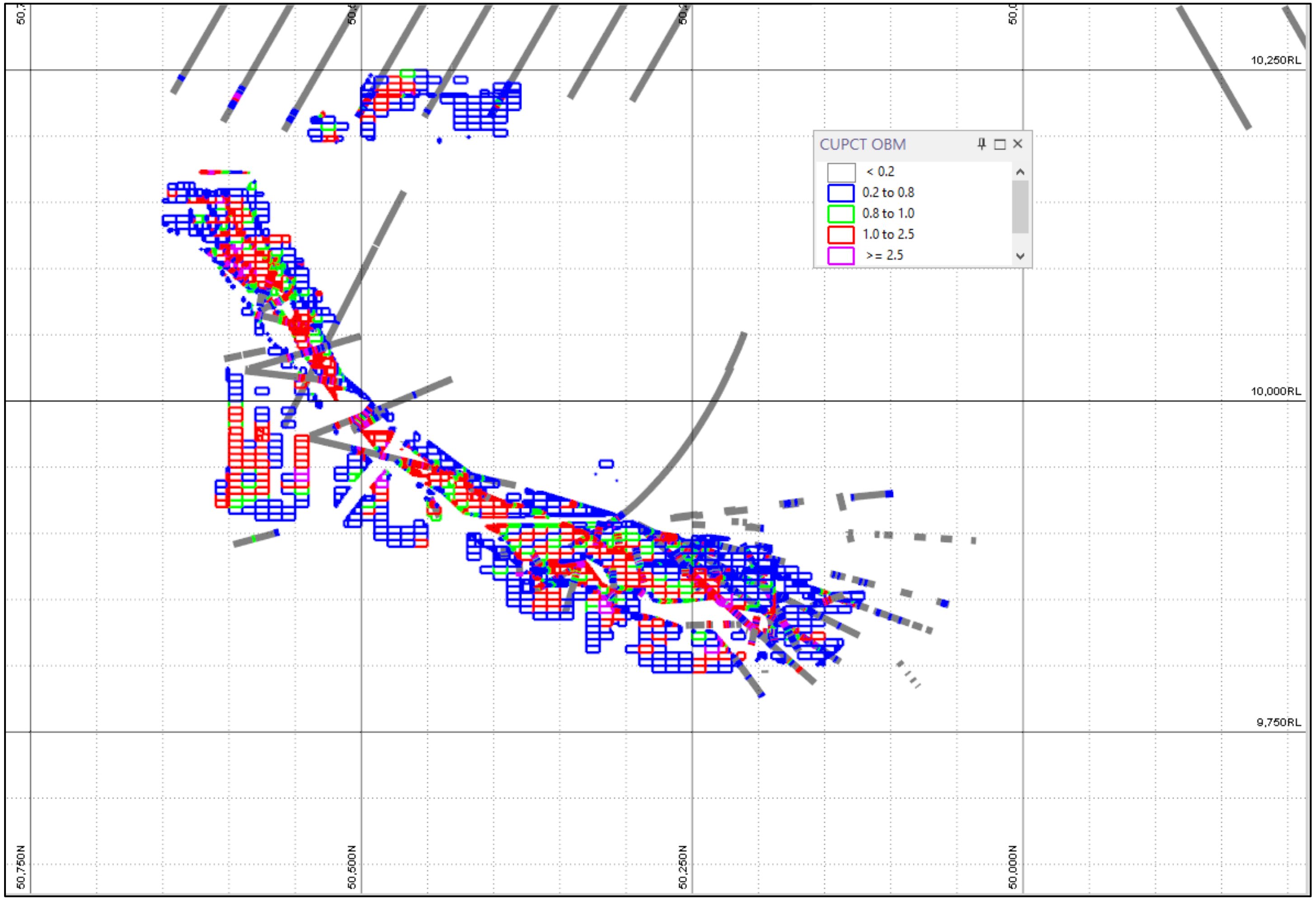
Cross section 102200E, looking east



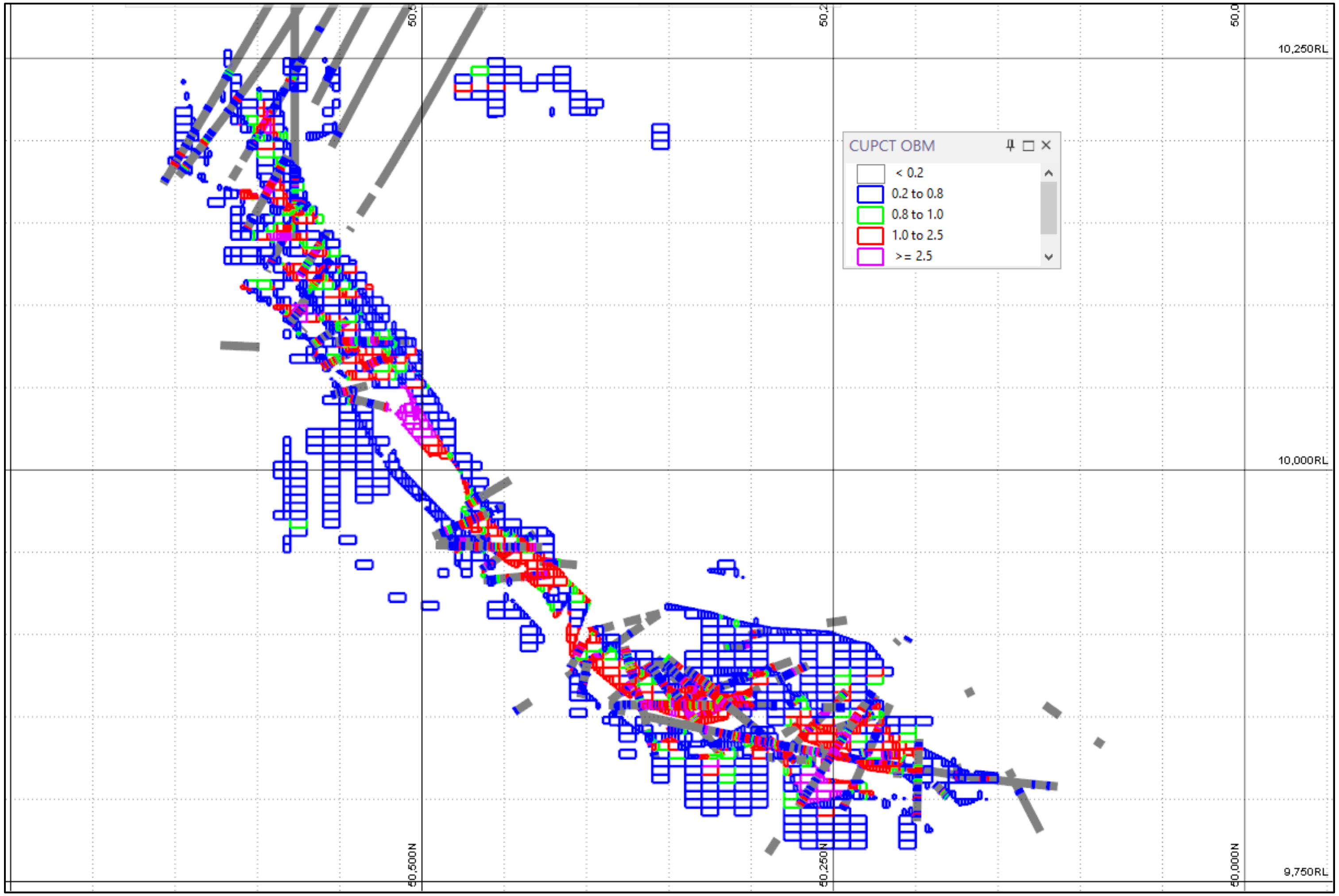
Cross section 102300E, looking east



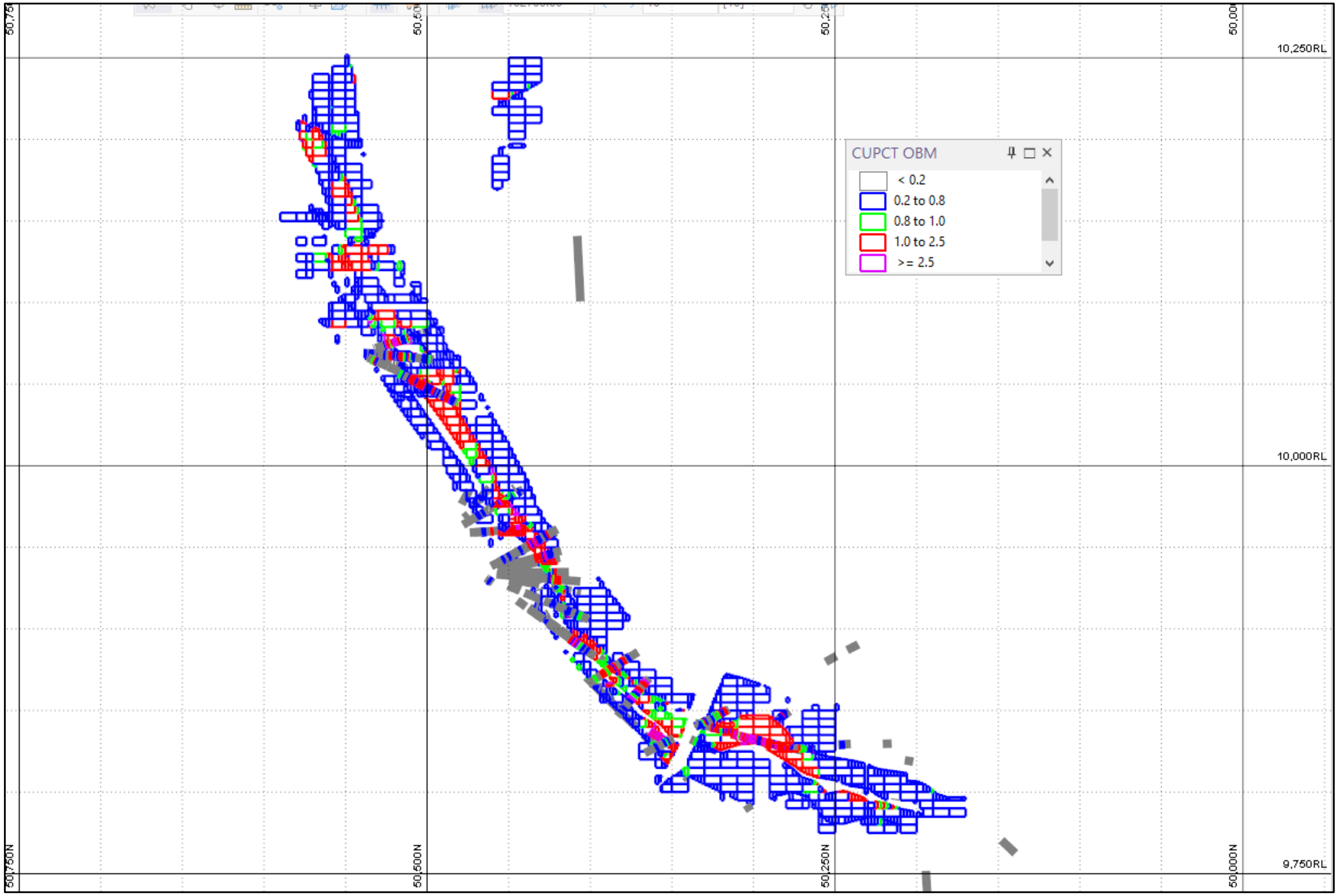
Cross section 102400E, looking east



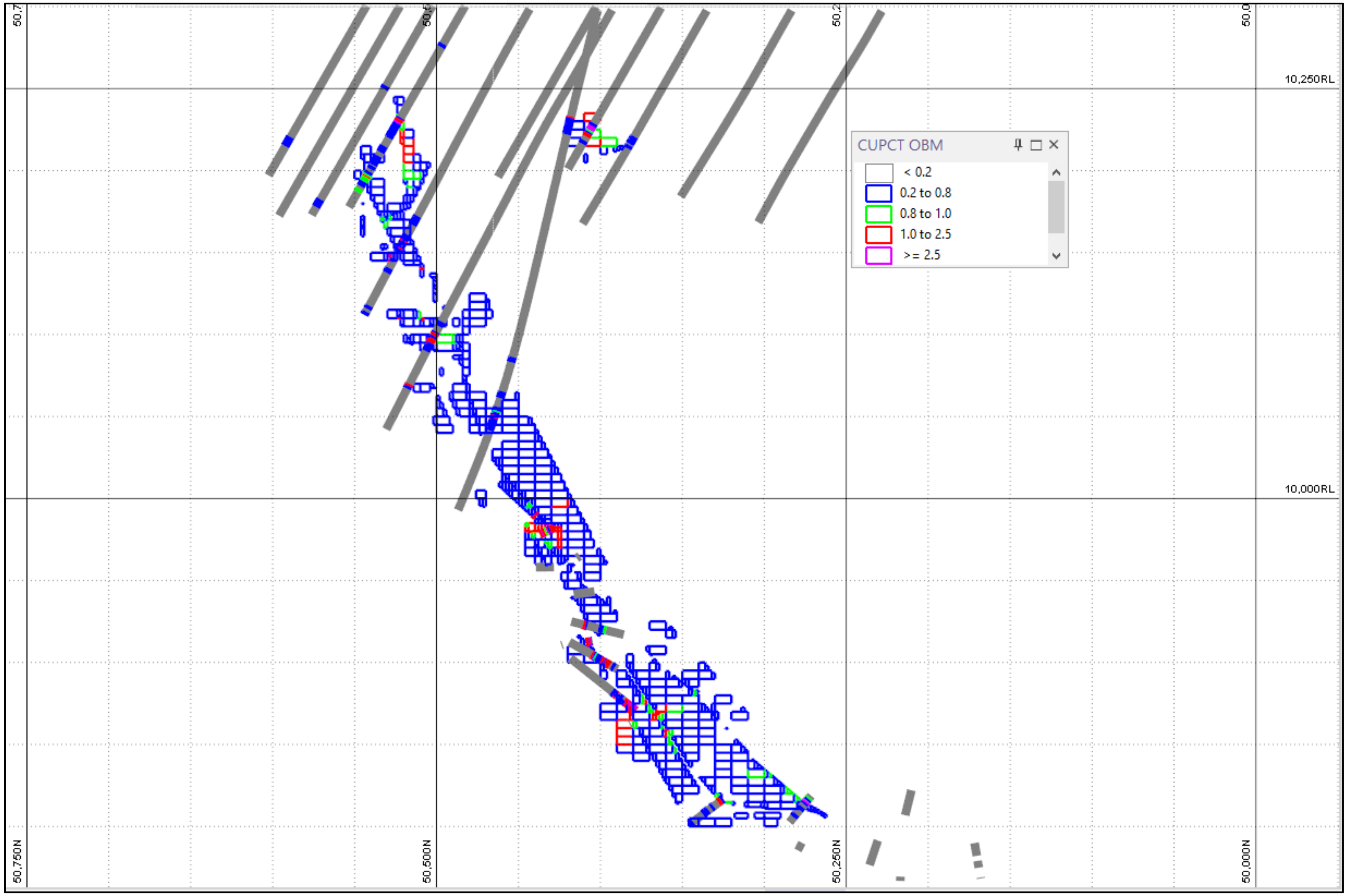
Cross section 102500E, looking east



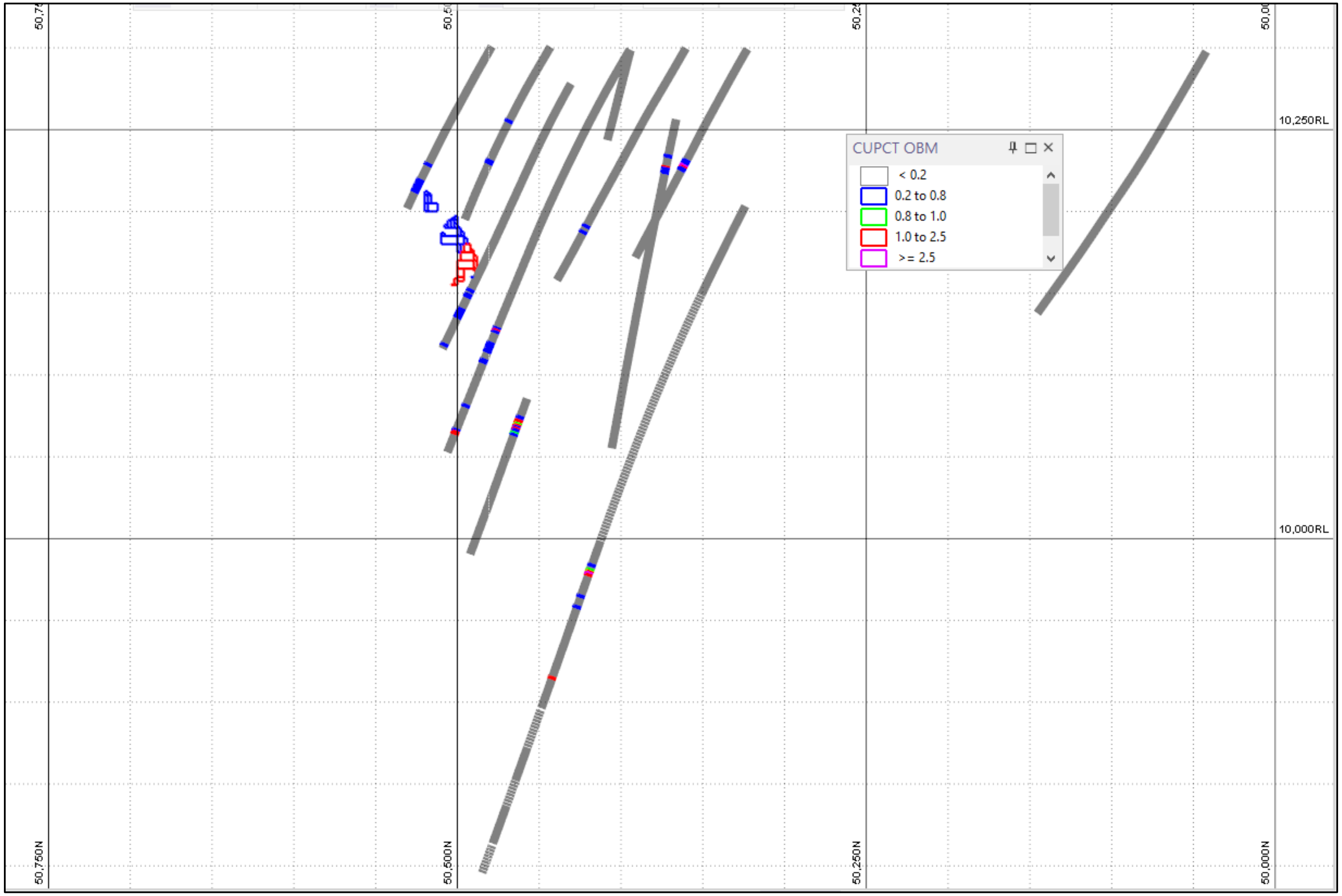
Cross section 102600E, looking east



Cross section 102700E, looking east



Cross section 102800E, looking east



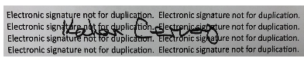
Cross section 102900E, looking east

DOCUMENT CHANGE CONTROL

Version	Description of Changes/amendments	Author (s)	Date
1.	Written	Dean O'Keefe Issam Digais	19/2/2024
2.	Peer reviewed	Kahan Cervoj	19/2/2024

Status	**Final**
Version	Final
Print Date	7/3/2024
Author(s)	Dean O'Keefe, Issam Digais
Reviewed By	Kahan Cervoj
File Name	MEC Nifty MRE March 2024 Memorandum Release CYM reviewed.docx
Job No	271007
Distribution	Cyprium Metals Ltd

DOCUMENT REVIEW AND SIGN OFF

Version	Reviewer	Position	Signature	Date
1.	Kahan Cervoj	Principal Resource Geologist		19/2/2024
2.	Peter van Luyt	Cyprium GM Geology and Exploration		1/3/2024
3.	Craig Gwatkin	Principal Geologist Palaris Australia	Refer to Palaris Fatal Flaw Review CML7016-01	8/3/2024