CYPRIUM
METALS LIMITED

ASX ANNOUNCEMENT **27 November 2024**

Nifty PFS Confirms $1,129m Pre-Tax NPV and 797kt Ore Reserve

Cyprium Metals Limited (ASX: CYM, OTC: CYPMF) is pleased to present the Prefeasibility Study ("PFS") for the Nifty Copper Complex. The PFS confirms the economic viability of large-scale production of copper in concentrate ("Concentrate Project") through the refurbishment and expansion of Nifty's brownfield concentrator and accompanying new surface mine. The PFS also confirms economics of producing copper cathode by re-treating Nifty's Heap Leach Pads 1-6 ("Initial Cathode Project") which is a subset of oxide opportunities. This PFS supports the first Ore Reserve Estimate ("ORE") to be published on the Concentrate Project and Initial Cathode Project (collectively referred to as the "Projects").

Highlights on a combined basis include:

- **LOM production of 718kt copper including average annual production of 37.3ktpa over the first ten years**
- **Gross revenues of A$9.2 billion, EBITDA of A$4 billion and pre-tax cash flow of $3.1 billion on C1 costs of US$2.39 / lb at a long-term copper price assumption of A$13,253/ tonne**
- **Brownfield redevelopment costs of $458 million represents 2.3x average EBITDA over first 10 years of concentrate production**
  - Concentrate Project includes capital expenditure of $239 million to refurbish and expand concentrator and upgrade site infrastructure and capitalised operating costs of $189 million
  - $30 million capital cost for Cathode Project with total project costs of $46 million
- **$1,129 million pre-tax NPV_8 ($756 million after-tax); pre-tax IRR of 28.9% (23.6% after-tax)**
- **All major permits currently in hand, to be updated using PFS information**
- **Concentrate Project Ore Reserves of 83Mt at 0.90% Cu for 753Kt contained Cu**
- **Initial Cathode Project Ore Reserves of 10.6mt at 0.41% Cu for 44Kt contained Cu**

"The successful completion of this comprehensive PFS marks a pivotal milestone for Cyprium. This is important, foundational work that we will build on" said Executive Chair Matt Fifield.

"The PFS highlights the long duration and immense profitability of Nifty's Concentrate Project. With 797,000 tonnes of copper in total reserve supporting more than $3 billion dollars of pre-tax cash flow, Nifty is a large and important copper source and economic engine for Australia," said Fifield.

"There are few near-term copper development opportunities that present the scale, longevity and positive economics of Nifty's Concentrate Project, and really none that have the speed and cost advantages of a permitted brownfield site and access to Western Australia's world-class supply chain," added Fifield. "The important information in this PFS serves as a strategic foundation for our forward activities as we move towards project execution."

For a copy of this announcement and a short introductory video please visit Cyprium Metals Investor Hub at https://investorhub.cypriummetals.com/link/drLK0e.

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Key PFS Metrics

A summary of the key metrics from the Nifty PFS are summarised in Table 2.

Table 1 – Key PFS Metrics

		Combined	Concentrate Project	Cathode Project
Ore (including inferred)	*Mt*	100.4	87.7	12.7
Grade (including inferred)	*% Cu*	0.83%	0.89%	0.43%
LOM Production	***kt Cu***	**718**	**694**	**24**
Average production, yrs 1-10	***ktpa Cu***	**37.3**	**38.7**	**5.9**
Project Life	***Years***	**20.8**	**19.8**	**4.2**
LOM Average Copper Price[1]	*A$/ t Cu*	*13,253*	*13,252*	*13,271*
Revenue	***A$m***	**9,194**	**8,870**	**324**
Selling Costs	*A$m*	(1,156)	(1,124)	(32)
Site Operating Costs	*A$m*	(4,020)	(3,886)	(134)
EBITDA	***A$m***	**4,018**	**3,860**	**158**
Development Capital	*A$m*	(269)	(239)	(30)
Capitalised Opex in Development	*A$m*	(189)	(173)	(16)
Sustaining Capital (inc. rehabilitation)	*A$m*	(450)	(450)	-
Undiscounted Pre-tax Project Level CF	***A$m***	**3,110**	**2,997**	**113**
Max Project Drawdown	*A$m*	(431)	(435)	(46)
C1 Cost	***A$/ t Pay. Cu***	**7,461**	**7,485**	**6,800**
	US$/lb	2.39	2.40	2.18
AISC	***A$/ t Pay. Cu***	**8,110**	**8,158**	**6,800**
	US$/lb	2.60	2.62	2.18
Pre-tax NPV (8%)	***A$m***	**1,129**	**1,042**	**86**
Pre-tax IRR	***%***	**28.9%**	**26.3%**	**110.1%**
Pre-tax Payback (from first concentrate production) [2]	*Years*	4.75		
After-tax NPV (8%)	*A$m*	756		
After-tax IRR	*%*	23.6%		
Capital Intensity (Dev Capex / Ann Prod)[3]	*A$/t*	12,295	10,660	7,748
Dev Capex / Avg EBITDA[4]	*X*	2.3x		
Max Drawdown / Avg EBITDA [4]	*X*	2.2x		

Notes:

1. The PFS valuation has been performed assuming a base case copper price of US$9,370/ t and a long-term foreign exchange rate of AUD: USD 0.71. The valuation is most sensitive to movements in copper price and FX, both of which have been tested and presented in the sensitivity analysis section of this report.

2. The payback for the Nifty PFS has been determined with reference to the start of production from the Concentrate Project

3. Capital intensity calculated based on average annual production for years 1-10.

4. Average EBITDA of A$200m per annum is calculated for the Period FY28 – FY37, being the first 10 years of steady state operations.

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Table 2 – Ore Reserve Classification for Nifty Projects

	Concentrate			Cathode			Total		
Reserve Classification	Ore (Mt)	Cu (%)	Cu (kt)	Ore (Mt)	Cu (%)	Cu (kt)	Ore (Mt)	Cu (%)	Cu (kt)
Proved	22.7	1.06%	239	-	-	-	22.7	1.06%	239
Probable	60.6	0.85%	514	10.6	0.41%	44	71.2	0.78%	557
Total	83.3	0.90%	753	10.6	0.41%	44	93.9	0.85%	797

Ore Reserve Estimate Notes:

Supporting information as prescribed in by the JORC Code is included in Table 1, Section 4 of MEC's report attached to this ASX announcement, including all material assumptions and modifying factors. The Ore Reserve is based on the current Mineral Resource Estimate (MRE) for the Concentrate Project as announced on 14 March 2024, and the Cathode Project as announced on 19 August 2024. The estimated Ore Reserves have been prepared by a competent person in accordance with JORC Code as detailed in the Competent Persons sign off below. Any conversion of Mineral Resource to Ore Reserve is based on economic recovery of that material as determined by the mining and processing schedules, capital and operating cost projections, macroeconomic assumptions, allowances for ore loss and dilution, and any other modifying factors contained in the attached report entitled "Nifty Copper Complex – Prefeasibility Study" prepared by MEC and disclosed on the date of this release. Please refer to this report for additional information.

Subsequent Event:

The Final Engineering Date of the PFS was 21 November 2024. On this date, at the Company's instruction, the basis of design for the PFS was finalised and further modifications to project engineering and design were stopped. Following the Final Engineering Date, the Company announced that it had entered into a transaction to sell power generation units as disclosed in the ASX announcement dated 22 November 2024. This transaction has not been finalised as of the publication date of the PFS.

The Company and MEC Mining note that completion of the sale of the TM-2500 power generation units as contemplated in the 22 November announcement would change the basis of design for power generation for the Concentrate Project. This may have potential and/or likely impacts to the PFS that include but are not limited to changes to operating costs, capital costs, and project timing. The impact of any new power generation design would necessarily depend on whether a new selected basis of design would be and the commercial environment at the time of the selection of the new design.

Neither MEC Mining nor the Competent Person make no representation as to what the impacts of a prospective change in design basis would have on the financial, operating and temporal results of the PFS based on information as of the Final Engineering Date. The PFS results should be considered with this context in mind.

Following completion of the transaction discussed here, the Company may choose to update this PFS around a new basis of design for power supply for the Concentrate Project. The Company does not anticipate material risk from a change in power supply design, noting the robust Western Australian supply chain of service providers who provide traditional and renewable power generation equipment, and also supply power supply as a service.

Funding Assumptions:

The Company has formed the view that there is a reasonable basis to believe that requisite future funding for the development of the Nifty Copper Complex will be available when required.

The grounds on which this reasonable basis is established include (a) positive economic outcomes of the PFS including positive NPV, IRR above typical funding rates, low Capex / stabilized EBITDA and long project life; (b) lower project implementation risks relative to greenfield projects from significant existing infrastructure, prior history of copper production and advanced permitting, (c) interactions with financing sources and finance advisors prior to the release of the PFS, (d) the significant track record of senior management and the Board of Directors in raising capital and recent experience in raising capital for the Company and (e) the potential for the startup of the Initial Cathode Project on a standalone basis.

With regards to funding sources, the Company has conducted extensive non-confidential and confidential market soundings with multiple financing sources ranging from public equity investors, strategic partners, concentrated equity investors to royalty financiers, debt financiers, debt advisors, and government-linked funding sources. While there can be no guarantee that these funding sources will be available at when required, the Company believes that depth of expressed interest from these funding sources form a reasonable basis to believe that the Company will be successful raising capital for the development of the Nifty Copper Complex.

The Company notes the senior secured loan facility entered in September 2024 with Glencore reflects both management's ability to attract capital and the significant funding appetite that exists for the development of the Nifty Copper Complex. from strategic investors

The specific recent history of capital raising by Cyprium Metals demonstrates management capability and interest in the Nifty Copper Complex. The following ASX announcements relate to recent capital raisings:

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22/11/2024 – Sale of Surplus Generators
30/09/2024 - Glencore Loan Facility Closed and Offtakes Executed
30/08/2024 - $40M Secured Loan Facility with Glencore
18/09/2023 - $31.6 Equity Raising completed

Board and management have significant experience raising capital for and investing in development stage mining companies, as can be seen in their biographies on the Company website.

The Nifty Copper Complex as described herein demonstrates that Nifty's two brownfield processing plants can be developed and operated at the same time.

PFS Plan: The Company notes that the base planning for the PFS contemplates the coordinated startup of the Concentrate Project and the Cathode Project. As disclosed below, this results in combined capital expenditures relating to plant, equipment and infrastructure of $269 million, and further funding of capitalized operating costs which are principally capitalized pre-stripping of $189 million. The maximum project drawdown is expected to be $431 million. Based on pre-PFS market soundings, the Company believes that 40% to 60% of the total drawdown can be funded using traditional and government-linked debt financing. The balance of any project funding requirements would be met through a combination of equity, equity-linked, royalty, project equity, pre-payment and/or mezzanine loan facilities. Based on the attractive project metrics, low capital intensity, strong prospective credit metrics emerging from this PFS study as detailed herein and previous market soundings, the Company believes that there is a reasonable prospect of raising capital for the PFS Plan.

Cathode Project Only: The Company notes that the startup of the Initial Cathode Project is not dependent on the startup of the Concentrate Project as discussed below. The Company may choose to execute the Initial Cathode Project on a standalone basis, which would require funding of development capital of $30 million and capitalized operating expenses of $16 million as disclosed herein. The likely funding sources for the Cathode Project on a standalone basis are equity, equity-linked facilities, royalty financing, pre-payment and/or loan facilities. The Company believes there is a reasonable prospect of raising sufficient capital to execute the Cathode Project on a standalone basis given the low total capital requirements, low project complexity and high potential returns of the Initial Cathode Project.

Cautionary Statement: Despite the Company's belief in the reasonable prospect of capital availability, it is also possible that funding may not be available when required. If project funding is not available, then the projects contemplated in this PFS would not proceed.

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Concentrate and Initial Cathode Project Design Scope

The Nifty copper complex hosts two standalone brownfield processing plants and has two distinct sources of ore that can be processed to produce copper products. The PFS has confirmed the viability of concurrently operating the Concentrator Project with the Initial Cathode Project from a physical space planning and site interaction standpoint.

A brief description of each project follows.

Concentrate Project Scope

The Concentrate Project design that supports the declaration of economic reserves is focused on recovering the copper resources as described in the Nifty New Surface Mine Mineral Resource Estimate released in March 2024. Economics for this project have been developed as follows:

- Ore suitable for processing through the concentrator is recovered from a new surface mine via truck-shovel method.
- Recovered sulphide and transitional ore is processed through the concentrator, as refurbished and expanded to suit new ore feed volumes of 4.5mtpa. Recovered oxide ore is stockpiled on Pad 7 (see below) but not processed.
- Concentrate is produced from the concentrator and shipped to market in containers, departing site via road transportation to Port Hedland.
- Waste material remains on site and is deposited in the existing tailings facility as expanded, and later in integrated waste landforms.
- Site infrastructure is upgraded to handle the expanded workforce and long life of project.

Figure 1 – Resource wireframe with shell

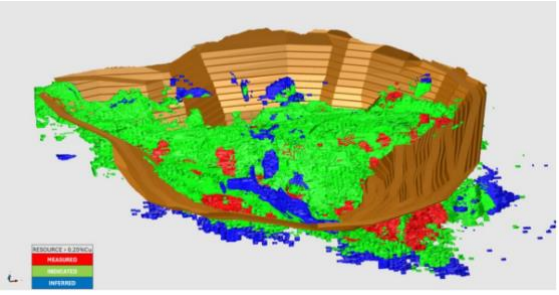

Figure 2 – Existing Concentrator

Initial Cathode Project Scope

The Initial Cathode Project design that supports the declaration of economic reserves is focused on recovering the copper resources as described in the Nifty Heap Leach Mineral Resource Estimate released in August 2024. Economics for this project have been developed as follows:

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- Existing material stockpiled on Pads 5 & 6 are turned over to create new surface area. These materials are retreated in place with fresh leaching solution. Solution pregnant with copper from the retreatment reports through to existing ILS/PLS collection points.
- Pregnant solution is pumped to the SX-EW plant as refurbished, where copper in solution is recovered into marketable cathode product up to rate of ~6ktpa
- Cathode copper products are shipped by road to Port Hedland for export to market.
- Now-depleted ore is removed from Pads 5 & 6 and disposed of, uncovering additional material below, where the process is repeated.
- Existing Pads 1-4 are moved to a new pad, Pad 7, to accommodate the footprint of the new surface mine (see Impact of Timing Assumptions on Project Scopes) and retreated using the same methodology as Pads 5 and 6.
- All mineralised waste material as described in the August 2024 Nifty Heap Leach MRE (e.g. material that is thought to contain recoverable copper but for which the Company does not sufficient information to estimate resource to a JORC standard) is treated as waste, incurring cost to handle and move when applicable.

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Figure 3 – Copper Solution Flowing out of Existing Heap Leach Pads

Figure 4 – Solvent Extraction Plant

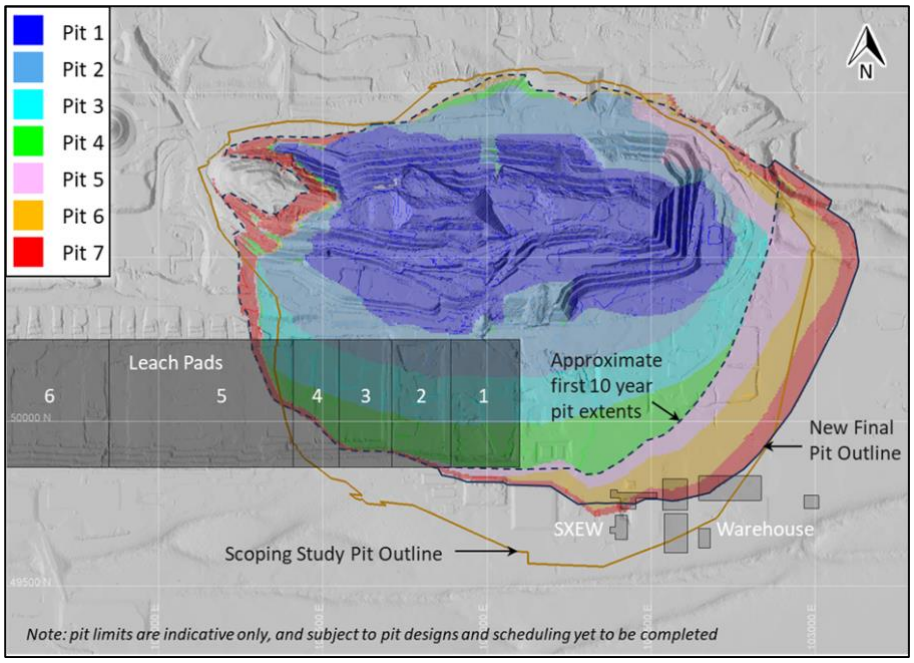
Figure 5 – Electrowinning Circuit

Impact of Timing Assumptions on Project Scopes

The two projects of the Nifty Copper Complex are both capable of execution on a standalone basis, however due to physical space constraints the projects interact with each other if they are both in operation at the same time.

Figure 6 shows the physical site layout, the expected pit limits of the new surface mine supporting the Concentrate Project, the existing stockpiled material that supports the Initial Cathode Project, and the location of important infrastructure for the Initial Cathode Project, namely the SX-EW processing plant.

Figure 6 – Project Interactions



In this Prefeasibility Study, the Initial Cathode Project has been scoped to accommodate the simultaneous operation of the Concentrate Project as described below.

- **Movement of Pads 1-4:** Commencement of surface mining leads to near-term interactions between the new surface mine and Pads 1-4. The Concentrate Project is assumed to relocate 3.4 million tonnes of material on Pads 1-4 to new Pad 7 where it is re-treated.
- **Oxide ore from the new surface mine:** Oxide ore from the pit is also moved to new Pad 7 for permanent disposal, incurring costs but no revenue.
- **Removal of SX-EW Plant:** Figure 7 indicates that the continued advancement of the surface mine will eventually require the removal and/or relocation of the SX-EW processing plant. This interaction is not expected to occur until the eighth year of surface mining operations, allowing for full economic recovery of the ore reserve declared in the Initial Cathode Project. A change in mining plan assumptions may change the year of interaction and therefore the likelihood of economic recovery.

With regard to oxide ore from the new surface mine which is stockpiled on Pad 7, the Company does not have sufficient information to evaluate the economics of further treatment of this material at a PFS level of certainty and has therefore excluded any operations to recovery copper from the overall Initial Cathode Project design.

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Concentrate Project Summary

The Concentrate Project is, as previously described, a large truck-shovel operation that targets the approximately 1 million tonnes of copper metal in transitional and sulphide resources as feed for a concentrator. For additional information on the resource base, please refer to the March 2024 Nifty New Surface Mine MRE.

Resource Conversion

The Production Target for the Concentrate Project are primarily Measured and Indicated resources of 83.3Mt @ 0.90% (97% of total copper processed). Inferred material of 4Mt @ 0.56% Cu that falls within the Ore Reserve Pit is assumed in the Concentrate Project. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources (or Ore Reserves) in relation to that mineralisation.

Table 3 summarises the total Production Target for the Concentrate Project by JORC resource classification, and the percentage of the total Nifty new surface mine mineral resource that has been converted into the PFS mine plan.

Table 3 - Production Target Resource Basis, Concentrate Project

Resource Area	Resource Classification	Million Tonnes	%Cu	Cont. Cu (kt)	% in PFS Economics	% of Total MRE
Surface Mine	Measured	22.7	1.06%	239	31%	64%
Surface Mine	Indicated	60.6	0.85%	514	66%	81%
Surface Mine	Inferred	4.4	0.56%	25	3%	88%
Surface Mine	**Total**	**87.7**	**0.89%**	**778**	**100%**	**75%**

Note: Please see modifying factors in the attached modifying factors in attached PFS Report prepared by MEC Mining.

Ore Reserve – Concentrate Project

The Ore Reserve for the Concentrate Project *(refer Table 4)* were declared based on a PFS-level mine plan and economics. The plans that support the determination of economic recovery are summarised in the ensuing sections and the accompany technical report prepared by MEC.

Table 4 – Ore Reserve Classification for Concentrate Project

	Concentrate Project		
Reserve Classification	Ore (Mt)	Cu (%)	Cu (kt)
Proved	22.7	1.06%	239
Probable	60.6	0.85%	514
Total	**83.3**	**0.90%**	**753**

Note: Supporting information as prescribed in by the JORC Code is included in Table 1, Section 4 of MEC's report attached to this ASX announcement, including all material assumptions and modifying factors. The Ore Reserve is based on the current Mineral Resource Estimate (MRE) for the Concentrate Project as announced on 14 March 2024. The estimated Ore Reserves have been prepared by a competent person in accordance with JORC Code as detailed in the Competent Persons sign off below. Any conversion of Mineral Resource to Ore Reserve is based on economic recovery of that material as determined by the mining and processing schedules, capital and operating cost projections, macroeconomic assumptions, allowances for ore loss and dilution, and any other modifying factors contained in the attached report prepared by MEC and disclosed on the date of this release. Please refer to this report for additional information.

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Concentrate Production Profile

Figure 7 below shows the anticipated production profile from the Concentrate Project. The Concentrate Project shows a 20-year life, with life of mine production of 694,000 tonnes and an average production of 38,700 tonnes of copper across the first ten years of project life. Table 5 below summarises life of mine physicals for the Concentrate Project.

Figure 7 – Copper in Concentrate Production

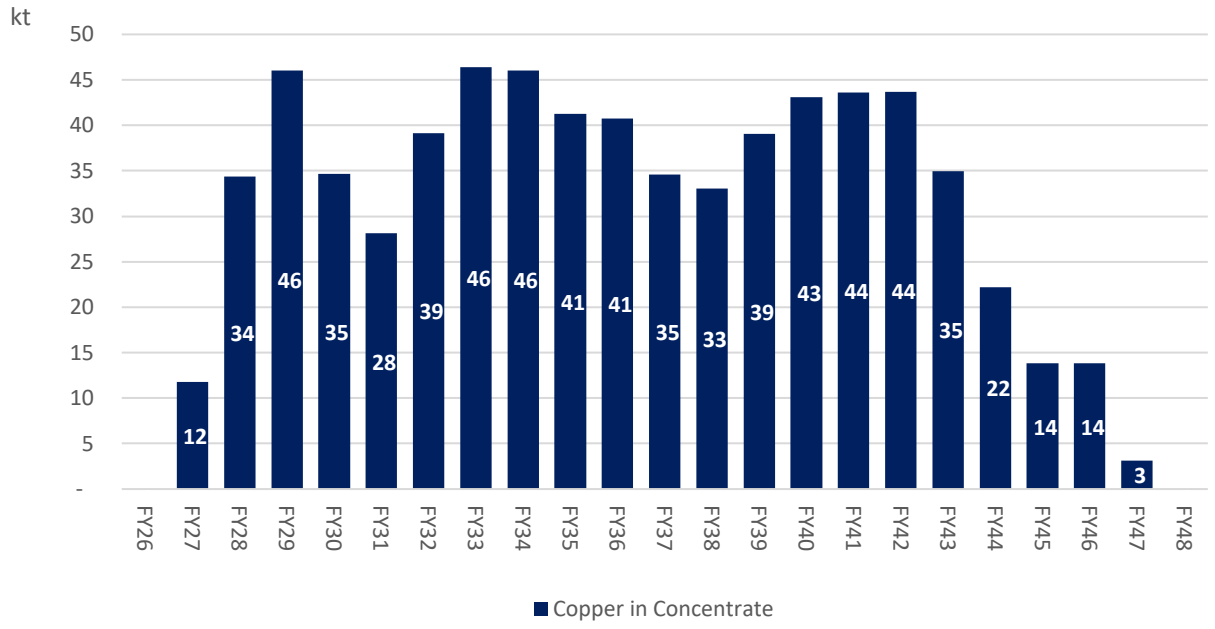

Table 5 – Concentrate Project, Physicals Summary

Waste Mined	Mt	614.9
Ore Mined	Mt	87.7
Strip Ratio	W:O	7.0
Design Plant Throughput	Mtpa	4.5
Average Plant Throughput	Mtpa	4.4
Total Concentrator Feed	Mt	87.7
Average Copper Grade	% Cu	0.89%
Metallurgical Recovery	%	89%
LOM Production	t Cu	694,000
	mm lbs Cu	1,529
Avg. Annual Production, Years 1-10	tpa Cu	38,700
	lbs Cu	85 million
Avg. Annual Production, LOM	tpa Cu	35,100
	lbs Cu	77 million

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Surface Mine Operating Plan

The Concentrate Project establishes a new surface mine to access the sulphide and transitional ore within the pit shell.

- **Speed to Ore:** Per the Company's current engineering knowledge base suitable to support a PFS, the constraint on achieving regular concentrate production is availability of the concentrator (currently estimated at 17 months) rather than the mine availability. The PFS mining rates were designed to match pre-stripping activity with concentrator availability.
- **Operating Philosophy:** The Concentrate Project assumes contract operations throughout. The economic model includes contractor margin of ~15% on top of all operating costs, and a capital recharge component on all equipment.
- **Mining Fleet:** Primary waste stripping is achieved through use of 600-tonne excavators, and ore mining is executed with 200-tonne excavators. Both waste and ore haulage is designed with 220-tonne trucks, which is incorporated in all ramp and road design widths.
- **Zone of Influence:** There is a "zone of influence" where surface mining activities will directly or indirectly overmine previous underground workings and/or the ground being mined is within a geotechnical domain that is influenced by previous underground workings. Substantial mapping and reconciliation of mine records was completed as a part of the March MRE, Geotechnical drilling, mapping and engineering design specific to these areas was completed as a part of this PFS. The overall mine plan was developed with consideration for the zone of influence. Each phase specifically seeks to balance ore and waste movements from areas within the zone of influence with areas that can be considered undisturbed. Unit operating rates and certain operating costs were also adjusted to account for changed operating protocols within the zone of influence, and these rates and costs were discussed with a contract operator with significant and relevant experience.
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Pit Design and Material Movements

Figure 8 shows the PFS material movement is front-loaded as the existing shallow pit that previously supported oxide operations is cut back significantly to access the sulphide ores. Figure 11 below shows the planned pit progression, and Figure 12 a typical cross-sectional view of the targeted resources within the pitshell.

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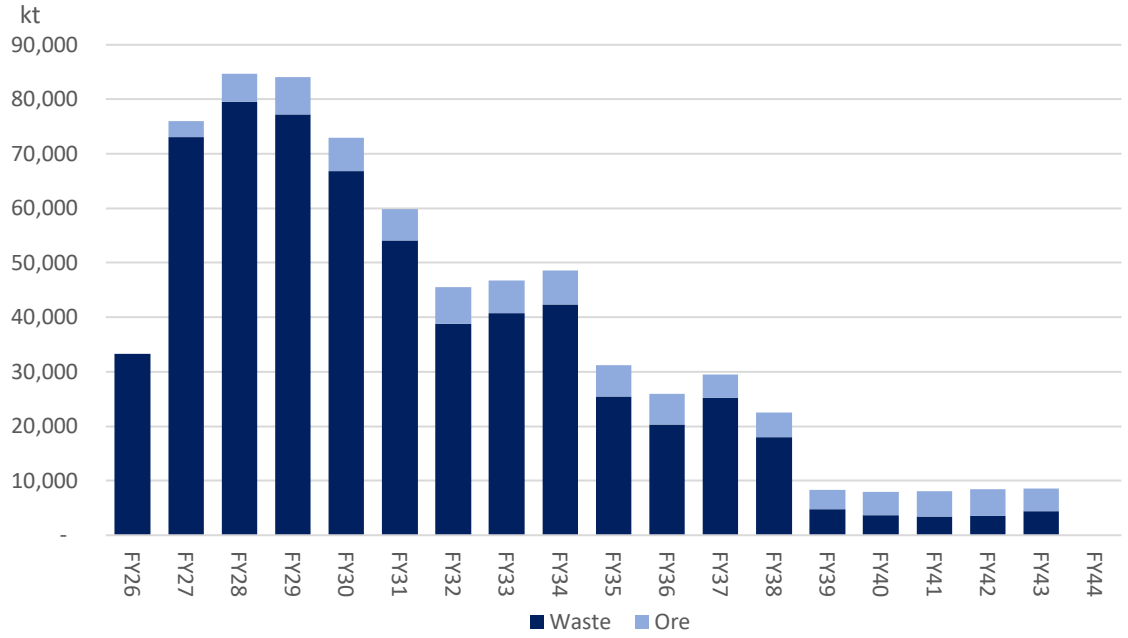
Figure 8 – Mine: Total Material Moved



Ore Movements

Figures 9 and 10 below show the PFS mine plan is designed to deliver 3-6 million tonnes of ore, and higher-grade ore is processed in the period while lower grade ores are stockpiled and blended into ore feed over time. The balance of the low-grade stockpile is processed in the final years of the PFS plan. Table 6 below shows overall plant performance underlying the PFS, with 89% projected recovery.

Figure 9 – Mine: Ore Mining Schedule

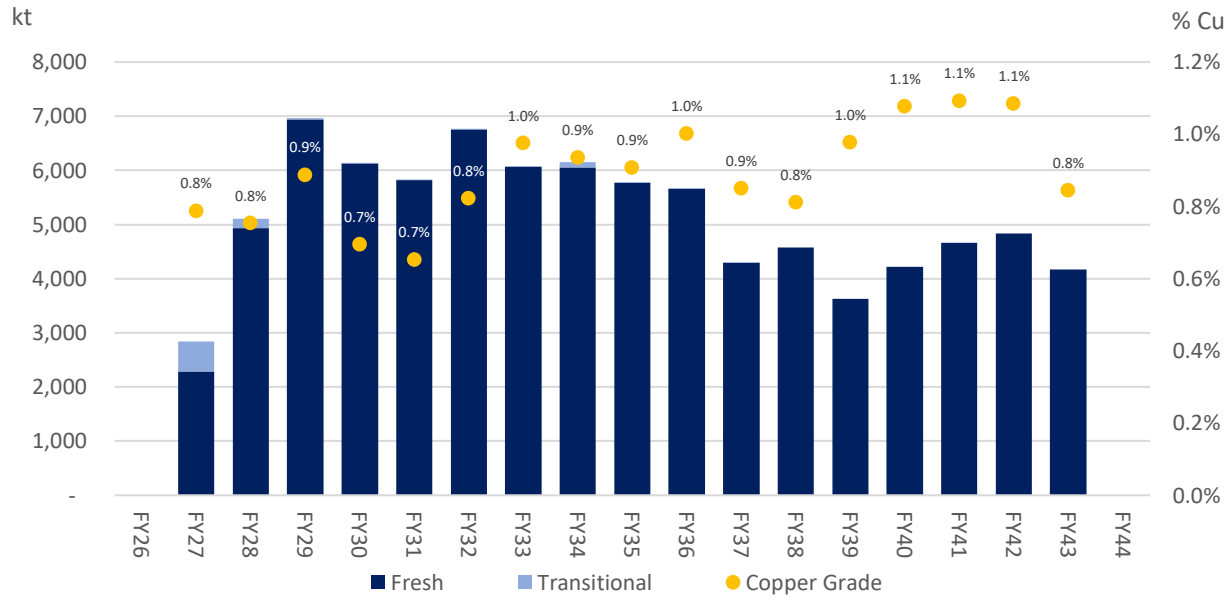


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Figure 10 – Plant: Ore Feed

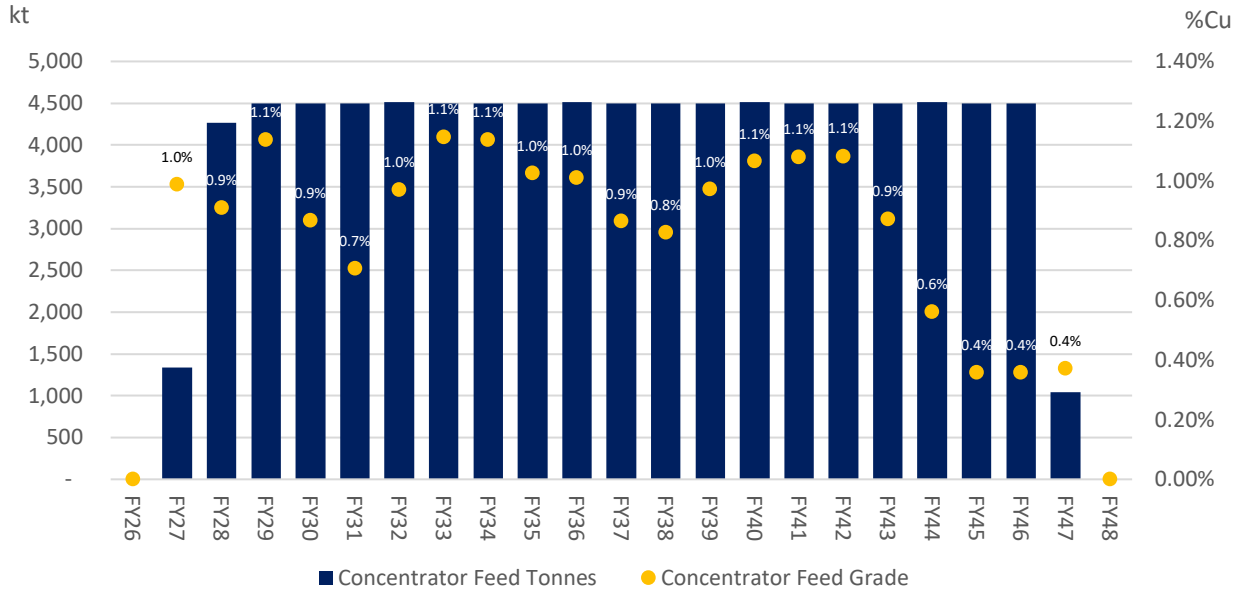

Table 6 – Metallurgical Recoveries, Concentrate

Material Type	Feed (kt)	Feed (kt Cu)	Grade (%Cu)	Recovery (%)	Produced (kt Cu)
Transitional	894	6	0.64%	76%	4
Fresh	86,800	772	0.89%	89%	689
Total	**87,694**	**778**	**0.89%**	**89%**	**694**

Waste Haulage and Location

Waste material will be initially used to build up the existing tailings dam to accommodate additional tailings disposal, later to form up integrated waste landforms, and finally building a waste rock storage facility on the south side of the open pit, as the sequence in Figure 13 shows.

Figure 14 displays areas currently permitted for clearing of native vegetation. These permitted areas are in addition to mine areas that are already cleared. The permitted areas are suitable to accommodate ~93% of all waste material produced in the PFS mine plan.

Permitting

The major permits required to commence the Concentrate Project are largely complete. Table 7 shows the status of these. With the Concentrate Project now supported by a PFS, the Company will work to complete all renewals and update existing approvals with current information.

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Figure 11 – PFS Pit Design and Sequencing

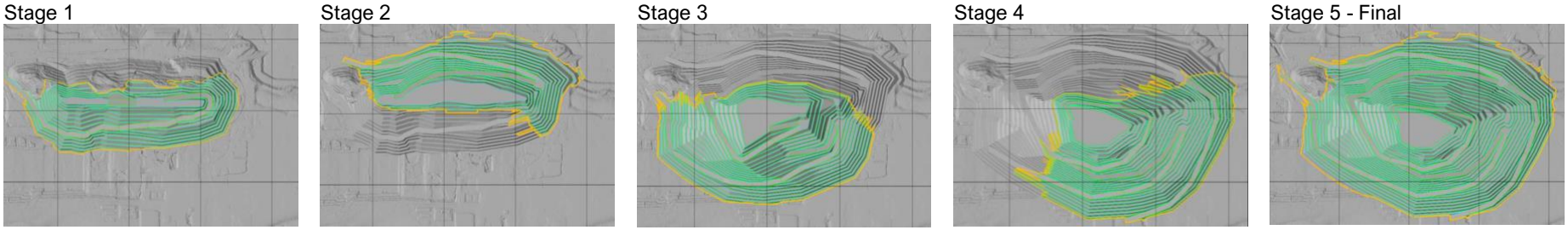

Figure 12 – Cross sectional view

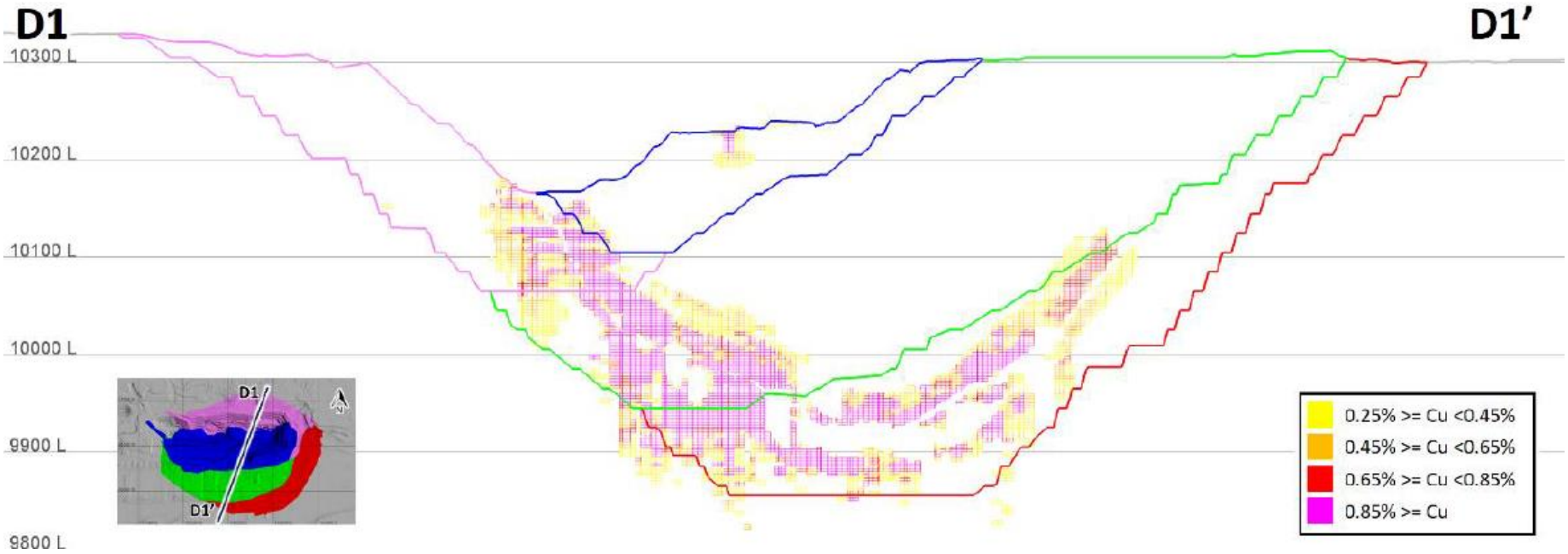

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Figure 13 – PFS Integrated Waste Landform Design and Sequencing

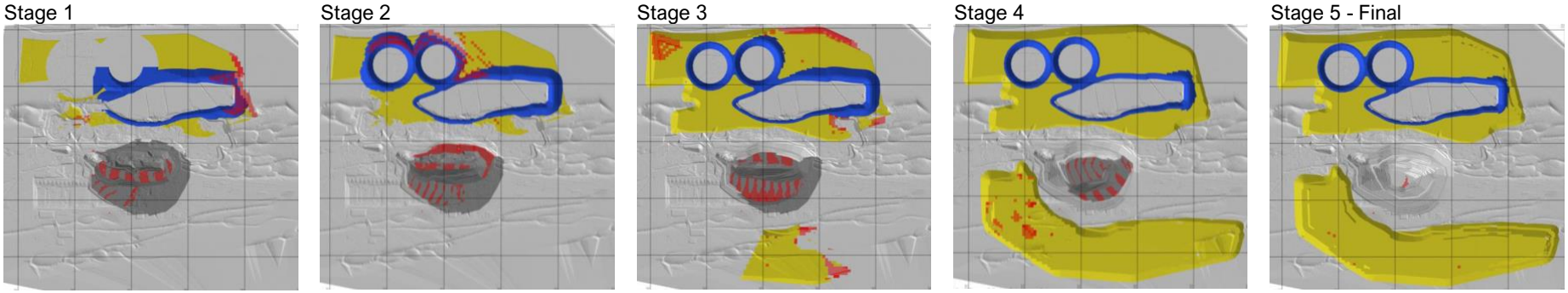

Figure 14 – Native Vegetation Clearing Permit

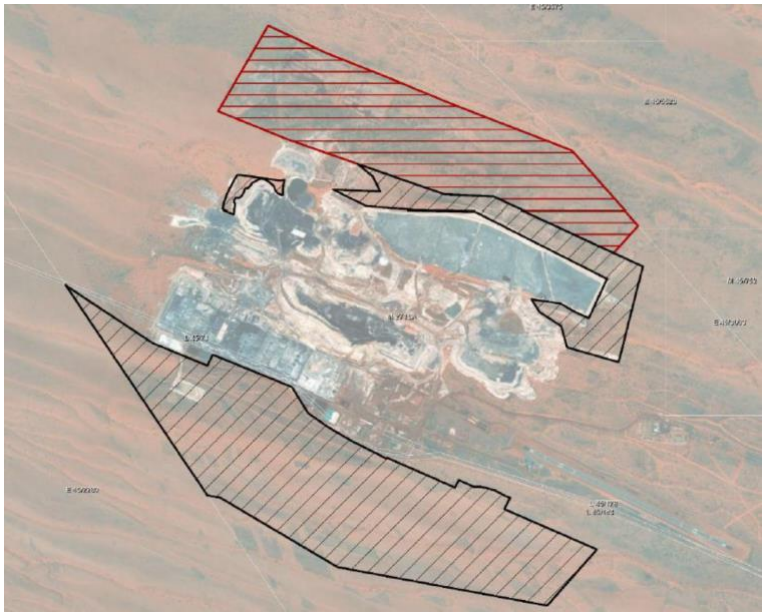

Table 7 – Permits Status Required for Operation

Permit	Regulator	Current Status	Renewal / Requirements
Works Approval	DWER	Approved	Aug-25
Native Veg. Clearing (3)	DEMIRS	Approved	Various
Mining Proposal	DEMIRS	Approved	MOP Update
Mine Closure Plan	DEMIRS	Approved	Apr-25
Water License	DWER	Approved	Apr-26

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All-in-Sustaining Costs (AISC)

The operating cost structure of the Concentrate Project is summarized below in Table 8. These operating costs were built from first principles at a PFS level of confidence and assume a contractor mining model. Additional information on these costs can be found in the accompanying technical report. A breakdown of all-in-sustaining costs (AISC) for the Concentrate Project is summarised in Table 8.

Table 8 – AISC Summary, Concentrate Project

	A$/ t Pay. Cu	A$/ t ore processed	US$ /lb. Pay. Cu
Copper Price	13,252	101.1	4.25
Mining Cost	2,561	19.5	0.82
Processing Cost	3,063	23.4	0.98
Site G&A	181	1.4	0.06
Selling Cost	1,679	12.8	0.54
Cash Cost	7,485	57.1	2.40
Sustaining Capital (including Rehab)	672	5.1	0.22
All-in-Sustaining Cost	8,158	62.3	2.62

Note: Selling costs include road transport, ocean freight, insurance, port charges, TCRCs, marketing fees and state government royalites.

Sustaining capital allowances have been provided to allow for the ongoing costs of repairing existing process plant, including structural concrete, electrical and platework repairs. Sustaining capital has also been forecast for progressive tailings storage lifts and rehabilitation costs have been included at the end of the life of the Concentrate Project.

Additionally, A$230m of in production waste stripping cost have been capitalised and classified as sustaining capital, as it is probable that future benefits will be realised with the associated stripping activities. The waste stripping is incurred over a 52-month period from the commencement of first copper in concentrate production.

Sustaining capital for the Concentrate Project is summarised in Table 9.

Table 9 – Sustaining Capital, Concentrate Project

	A$m
Mining – Waste Stripping	230
General Sustaining Capital	119
Tailings Storage Lifts	51
Rehabilitation	50
Sustaining Capital	**450**

Development Capital

Capital requirements for the Concentrate Project were built up from first principles using a Class 5 estimate, sufficient for a PFS-level of confidence. Capital expenditure for the refurbishment and expansion to a 4.5Mtpa concentrator commences in the first month of the economic evaluation. The overall development period for the new surface mine is 18 months, with first copper in concentrate production achieved in month 19.

Operating costs prior to first copper in concentrate production (primarily mining pre-strip) have been capitalised and classified as development capital.

A breakdown of development capital for Concentrate Project is provided in Table 10.

Table 10 – Development Capital, Concentrate Project

	A$m	
Refurbishment	34.6	
Upgrades:		
Crushing	46.3	
Grinding & Flotation	13.6	
Plant, Equipment & Construction Overheads		9.7
Piping	4.5	
Other Upgrade Costs	15.2	
EPCM & Commissioning	12.6	
Subtotal Refurb & Upgrades	**136.5**	
First Fills	9.1	
Operational Readiness	13.5	
Non-Process Infrastructure	47.2	
New Leach Material Storage Pad	33.0	
Total Upfront Infrastructure Capital	**239.3**	
Capitalised Operating Costs	173.7	
Total Concentrate Project Development Capital	**413.1**	

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Initial Cathode Project

The Initial Cathode Project includes the in-situ leaching of material stacked on existing heap leach pads 5 and 6 as previously described. Heap leach pads 1-4 are transferred to a new leach pad storage location, where they are also leached in-situ.

Resource Conversion

The Production Target for the Initial Cathode Project included in this announcement are primarily Indicated resources (81% of total copper processed). Inferred material of 2.0Mt @ 0.51% Cu that is stacked on heap leach pads 1-6 have been included in the processing schedules. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources (or Ore Reserves) in relation to that mineralisation.

Figure 15 – Initial Cathode Project Pad 5 & 6 Location

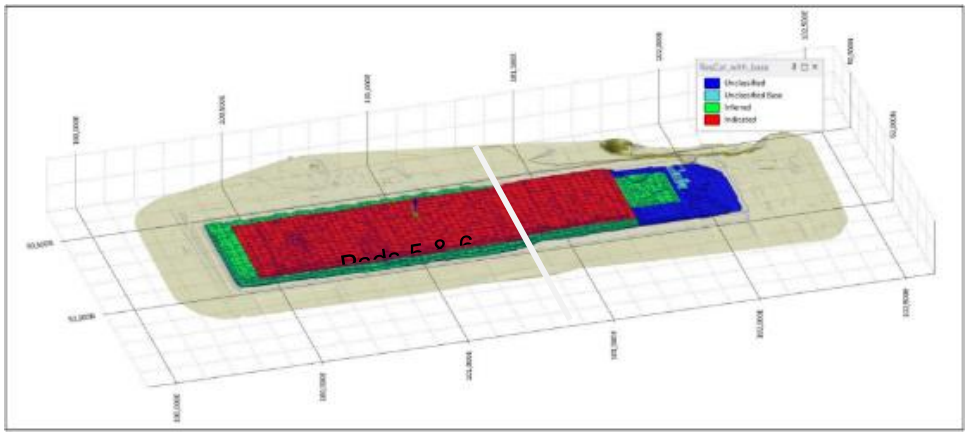

Table 11 summarises the total Production Target for the Initial Cathode Project by resource classification, and the percentage of potential oxide material that has been converted into the PFS mine plan. The PFS specifically excludes mineralised waste material from Pads 1-6, and approximately 4mt of oxide resource that mined as part of the Concentrate Project.

Table 11 - Production Target Resource Basis, Initial Cathode Project

Resource Area	Resource Classification	Million Tonnes	%Cu	Contained Cu (kt)	% in PFS Economics	% of Total Material
Heap Leach	Pad 5 & 6 Indicated	7.8	0.39%	30.2	56%	100%
Heap Leach	Pad 5 & 6 Inferred	1.4	0.53%	7.5	14%	100%
Heap Leach	All Pad 1-4 Indicated	2.8	0.47%	13.4	25%	100%
Heap Leach	All Pad 1-4 Inferred	0.6	0.48%	3.0	6%	100%
Heap Leach	All Mineralised Waste	Excluded				
Surface Mine	Measured & Indicated	Excluded				
All	**Total**	**12.7**	**0.43%**	**54.0**	**100%**	**44%**

Note: Please see Project Description above and modifying factors in the attached PFS Report prepared by MEC Mining.

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Ore Reserve – Initial Cathode Project

The Ore Reserves for the Initial Cathode Project were declared on the basis of economic recovery as supported by a detailed project scope built and costed from first principles.

Table 12 – Ore Reserve Classification for Initial Cathode Project

	Initial Cathode Project		
Reserve Classification	Ore (Mt)	Cu (%)	Cu (kt)
Proved	-	-	-
Probable	10.6	0.41%	44
Total	**10.6**	**0.41%**	**44**

Note: Supporting information as prescribed in by the JORC Code is included in Table 1, Section 4 of MEC's report attached to this ASX announcement, including all material assumptions and modifying factors. The Ore Reserve is based on the current Mineral Resource Estimate (MRE) for the Initial Cathode Project as announced on 19 August 2024. The estimated Ore Reserves have been prepared by a competent person in accordance with JORC Code as detailed in the Competent Persons sign off below. Any conversion of Mineral Resource to Ore Reserve is based on economic recovery of that material as determined by the mining and processing schedules, capital and operating cost projections, macroeconomic assumptions, allowances for ore loss and dilution, and any other modifying factors contained in the attached report prepared by MEC and disclosed on the date of this release. Please refer to this report for additional information.

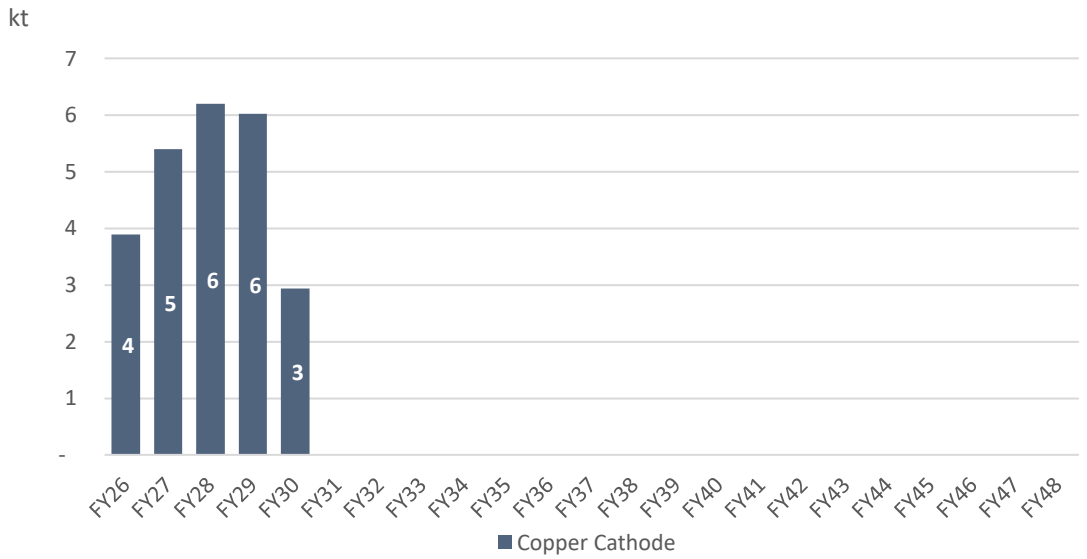
Project Timing

The Initial Cathode Operations can start without regard to the Concentrate Project. For the PFS, the Company has assumed that the cathode plant refurbishment commences at the start of the economic evaluation period. First cathode is modelled to be produced in the seventh month of the economic evaluation.

Initial Cathode Project Production Profile

Figure 16 below shows the anticipated production profile from the Initial Cathode Project. The project shows a 5-year life.

Figure 16 – Copper Cathode Production



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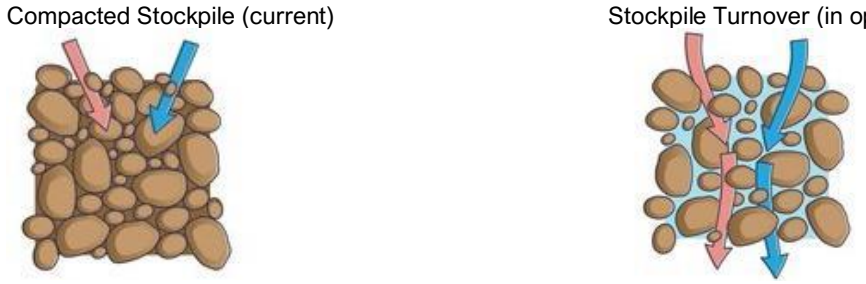
Heap Leach Mining / Irrigation

Material currently located on existing heap leach pads 1-6 will be reprocessed in-situ utilising excavators to turn over existing material, and distributing barren solution across the surface using a drip system.

Copper heap leach systems compact over time, decreasing natural percolation, causing the solution to channel through paths of least resistance. Once these channels are created, the surrounding ore not in direct contact with the channels get minimal to nil exposure to the leach solution, resulting in poor wetting uniformity of the heap with subsequent lower metal recovery. Removing and restacking or turning over the ore via excavator breaks up these channels allowing 'fresh' ore to the contact the leach solution (*refer Figure 17*).

Figure 17 – Break up solution channels to increase porosity and contact area



Solution containing sulphuric acid percolates through the ore to dissolve copper into solution over a leach cycle of approximately 6 months. Detailed quotes for logistics and supply of sulphuric acid have been obtained in support of the PFS.

Metallurgical Recovery

A number of factors have guided Cyprium's heap leach recovery estimate of ~45%, including pilot test performed by RMD Stem on behalf of Aditya Birla in 2009, test work performed by Metals X in 2020 and testing done by Cyprium in 2024.

Figure 18 shows a distribution curve for heap leach recovery based on the 152 samples selected for analysis by Metals X Limited. These results are further supported by Cyprium's 2024 Sequential Leach Analysis (*refer Figure 18*).

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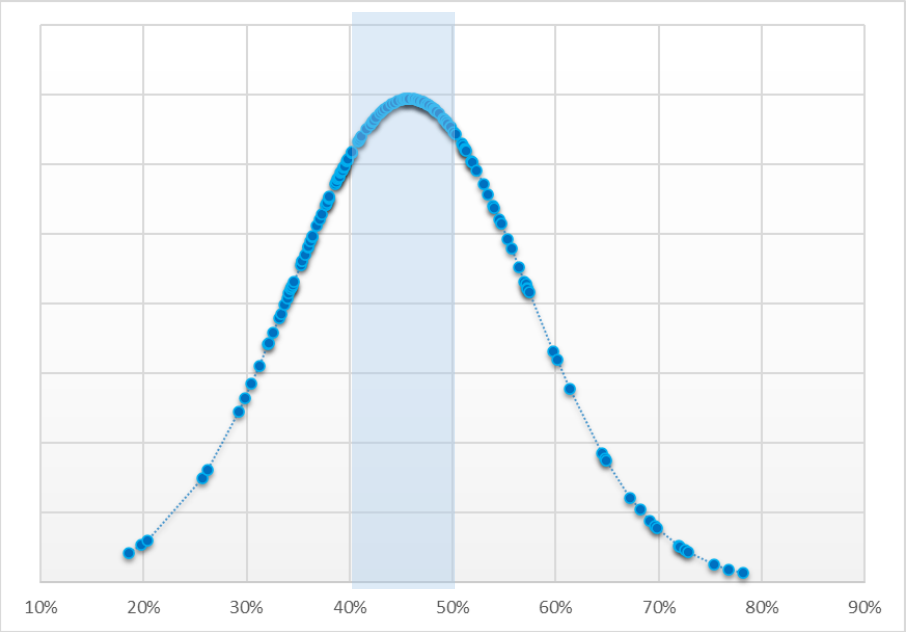
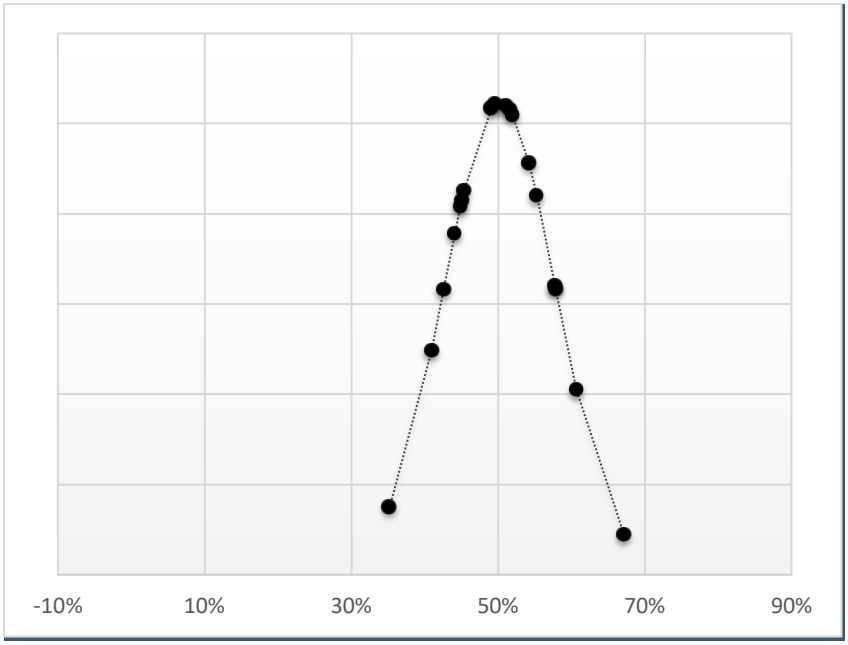
Figure 18 – Metals X Sequential Leach Analysis, Heap Leach Recovery Distribution Curve



Note: Refer to accompanying technical report as well as Cyprium's ASX announcement on 19 August 2024 for further details.

Figure 19 – CYM Sequential Leach Analysis, Heap Leach Recovery Distribution Curve



Note: Refer to accompanying technical report as well as Cyprium's ASX announcement on 19 August 2024 for further details.

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AISC – Initial Cathode Project

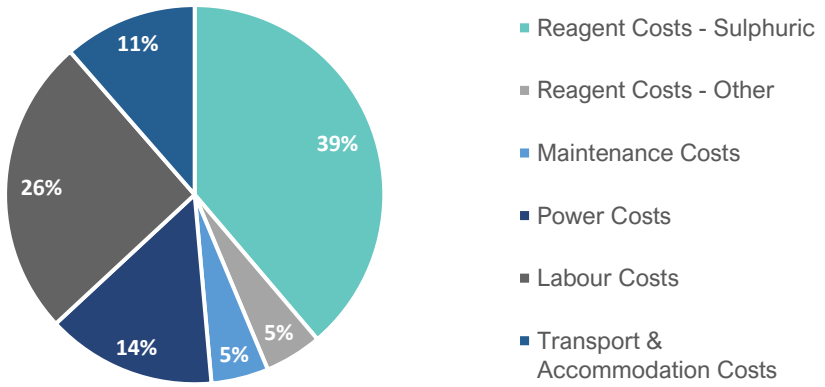
A breakdown of All-in-sustaining costs for the Initial Cathode Project is summarised in Table 13. Selling costs include road transport, ocean freight, insurance, port charges, TCRCs, marketing fees and state government royalites.

Table 13 – AISC Summary, Initial Cathode Project

	A$/ t Pay. Cu	A$/ t ore	US$ /lb. Pay. Cu
Copper Price	13,271	25.6	4.25
Mining Cost	677	1.3	0.22
Processing Cost	4,814	9.3	1.54
Selling Costs	1,309	2.5	0.42
Cash Cost	**6,800**	**13.1**	**2.18**
Sustaining Capital	-	-	-
All-in-Sustaining Cost	**6,800**	**13.1**	**2.18**

Sulphuric acid and labour costs represent the highest proportion of processing costs for the Initial Cathode Project. General site overhead costs have been assumed to be absorbed by the Concentrator Project. Processing costs have been split by activity in the pie chart presented in Figure 20.

Figure 20 – LOM Proportional Breakdown of Processing Costs, Initial Cathode Project



Development Capital, Initial Cathode Project

Cyprium has estimated the total capital required for the refurbishment of the Heap Leach and SX-EW to be A$30m. The basis of the Initial Cathode Project capital cost estimate is at PFS level or higher and is designed for a nameplate production rate of ~6kpta. Table 14 shows a breakdown of development capital for the Initial Cathode Project.

Operating costs incurred before first copper cathode plating (before month 7) are capitalised and classified as development capital. A summary of development capital for the Initial Cathode Project is provided in Table 14.

Table 14 – Development Capital, Initial Cathode Project

	A$m
Heap Leach	0.3
Construction Plant, Equipment & Overheads	1.5
Concrete & Structural	2.8
Mechanical	6.8
Piping	3.4
Electrical	6.5
Site Roads	1.0
First Fills	1.3
EPCM & Commissioning	2.5
Miscellaneous	0.4
Contingency	3.4
Total Upfront Infrastructure Capital	**29.9**
Capitalised Operating Costs	15.5
Total Initial Cathode Project Development Capital	**45.4**

Refurbishment costs for the Initial Cathode Project relate primarily to the replacement and upgrade of existing plant infrastructure, including pumps, motors and electrical controls. There is no immediate need or requirement to relocate any significant infrastructure to restart the historic heap leach pads via an SX-EW operation.

Excluded Material

The PFS necessarily excludes material that does not have the requisite engineering support or level of geologic confidence to declare economic reserves. Cyprium is continuing to gather necessary engineering and geologic data to address these deficiencies. A summary of oxide material excluded from the PFS, and material that will be studied further is provided in Table 15 and Figure 21.

Table 15 – Excluded Materials

Excluded Materials		PFS Deficiency	Assumed Economic Impact
Pads 1-4 Mineralised Waste	4.5Mt @ 0.84% Cu	Insufficient physical observation points to support declaration of JORC-compliant resource	Treated as mining cost for Concentrate Project in relocation to new Pad 7
Pad 5 & 6 Mineralised Waste		Insufficient physical observation points to support declaration of JORC-compliant resource	No current economic impact as material is disposed of in place.
Open-pit Oxide Resource	4mt @ 0,71% Cu Measured & Indicated Resource	Insufficient recovery data to support economic recovery	Treated as mining cost for Concentrate Project in relocation to new Pad 7

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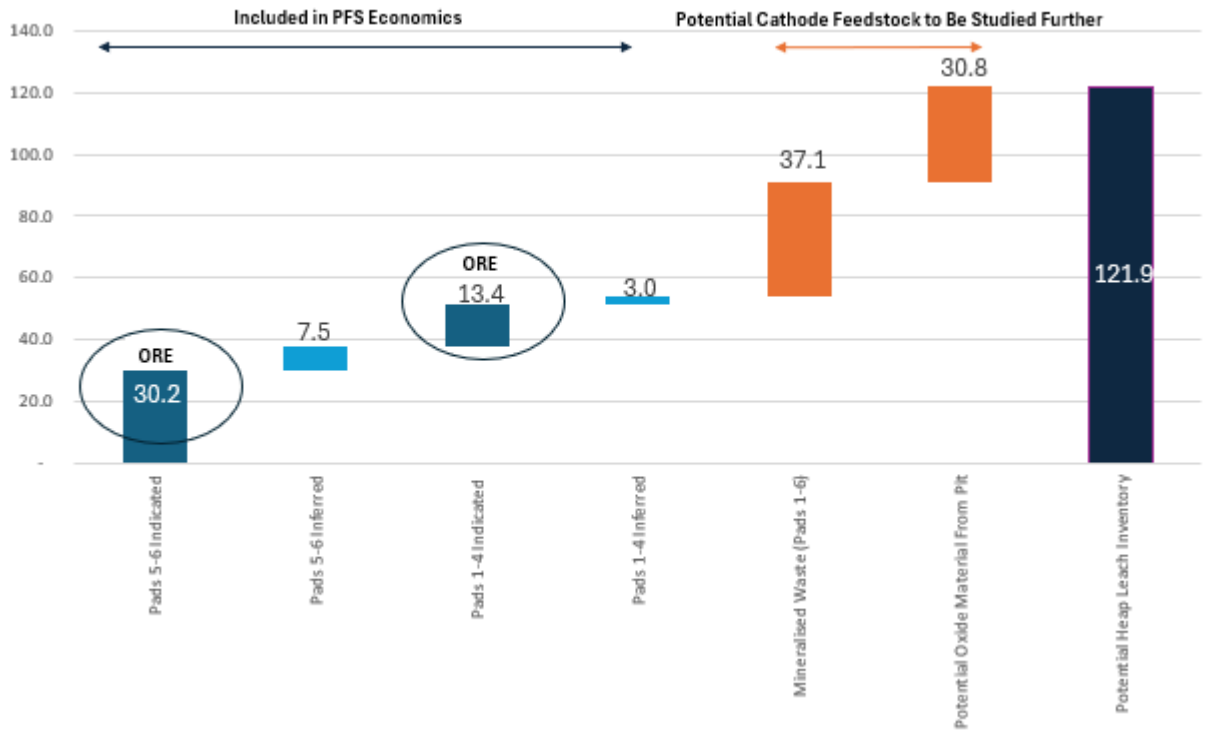
Figure 21 – Material Excluded from PFS (Contained Cu)



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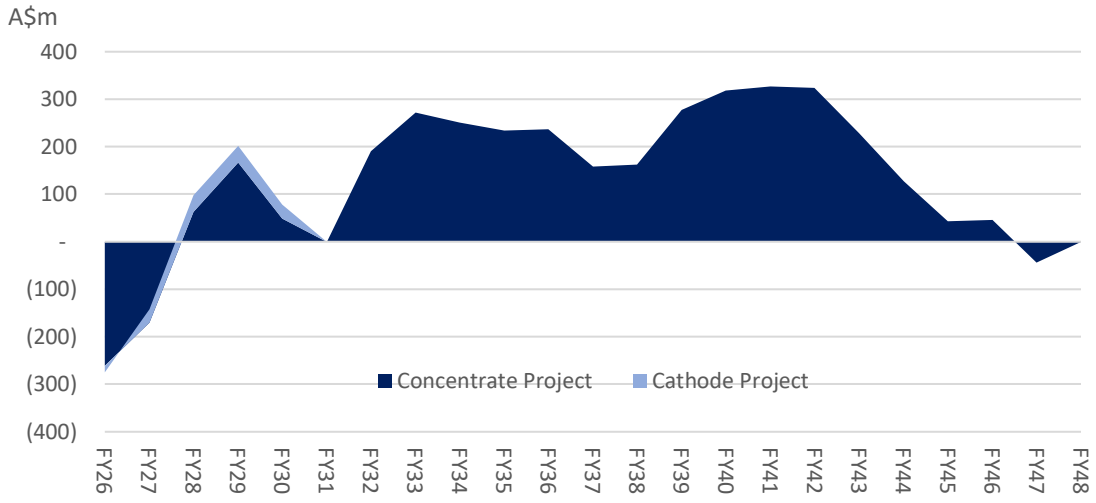
Combined Project Cash Flows

The PFS valuation has been performed assuming a base case copper price of US$9,370/ t and a long-term foreign exchange rate of AUD: USD 0.71. A high proportion of the overall value of the Nifty Complex is attributable to the Concentrate Project, which is a significant long-life asset of meaningful scale. The Initial Cathode Project at Nifty represents a near-term revenue opportunity, and on an PFS basis has a relatively short life though positive economic contribution.

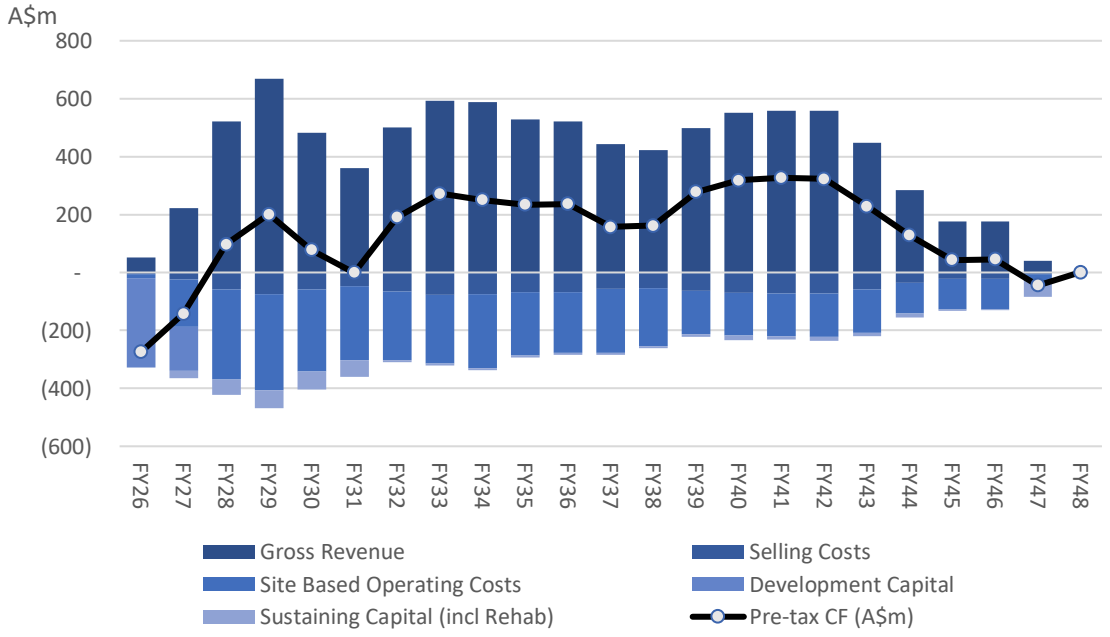
Figure 22 illustrates the respective annual contributions of the Concentrate and Initial Cathode Projects respectively on a pre-tax cash flow basis.

Figure 22 – Pre-tax Project Level Cash Flow, Combined



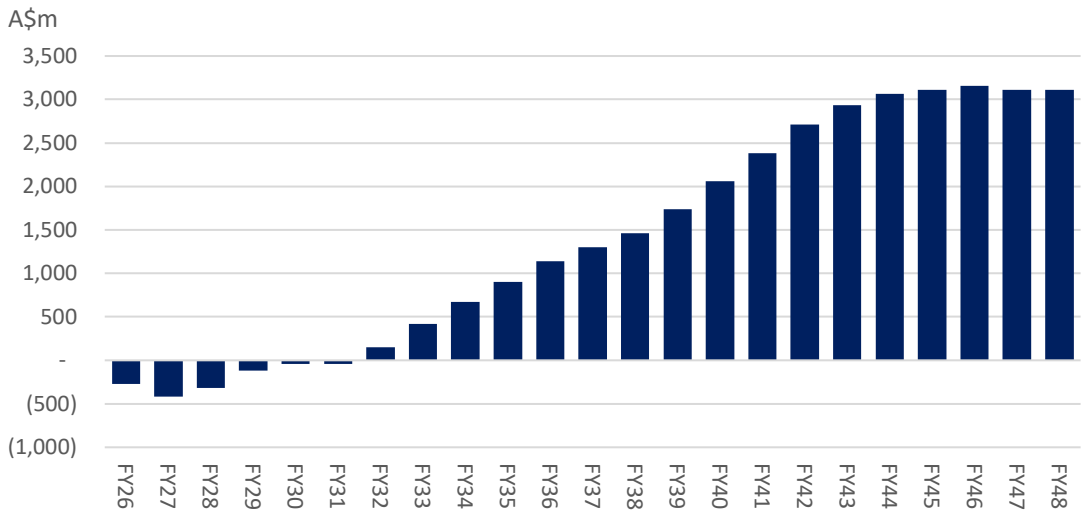
The annual composition of pre-tax project level cash flows for the combined projects is summarised in Figure 23.

Figure 23 – Pre-tax Project Level Cash Flow Composition



Cumulative pre-tax cash flows for the Nifty Projects combined are presented in Figure 24. The maximum drawdown for the combined Projects is A$431m. Early scheduled waste movement at the Concentrate Project is the largest contributor to costs impacting in-period cash flow and therefore cumulative cash flow.

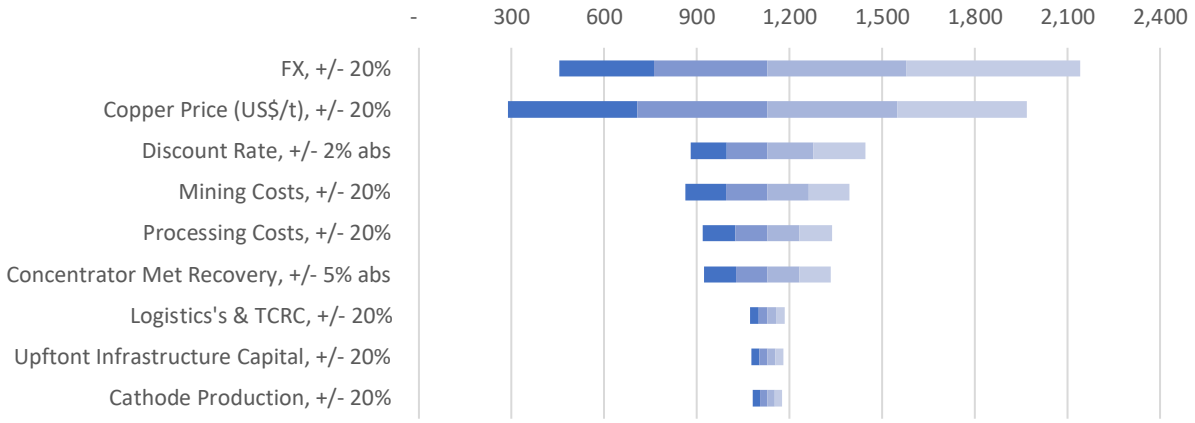
Figure 24 – Cumulative Pre-tax Cash Flows



Sensitivity Analysis

Cyprium has performed a sensitivity analysis on key value drivers for the Nifty Copper Complex. The valuation outcomes (pre-tax NPV) for each sensitivity input presented in Figure 25 is assessed assuming all other parameters remain unchanged. More details on the parameters tested are included in the accompanying technical report.

Figure 25 – Sensitivity Analysis, Pre-tax NPV (A$m)



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Fifield concluded "the tremendous body of work underpinning the PFS and Ore Reserve helps quantify the many positive attributes of the Nifty Copper Complex: large copper reserve base, long project life, compelling economics, brownfield cost advantage, and speed to market through advanced permitting. The time is right for our redevelopment of Nifty. It's a compelling economic case that presents significant exposure to a rising copper price environment. With a clear pathway to production and a strong management team in place, we are confident that Nifty will re-emerge as a key producer in Western Australia's Paterson region and generate long-term value for shareholders."

This announcement has been approved by the Cyprium Board.

For further information:

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Executive Chair
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E communications@cypriummetals.com

About Cyprium Metals Limited

Cyprium Metals Limited (ASX: CYM, OTCQB: CYPMF) 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.

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Competent Person Statement

The information in this report that relates to estimation and reporting of Mineral Resource Estimates is an accurate representation of the available data and is based on information compiled by external consultants and Mr. Peter van Luyt who is a member of the Australian Institute of Geoscientists (2582). Mr. van Luyt is the General Manager – Geology and Exploration for Cyprium Metals Limited, in which he is also a shareholder. Mr. van Luyt has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person (CP). Mr. van Luyt consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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

The information in this report that relates to the estimation and reporting of the Nifty Copper Complex Ore Reserve is an accurate representation of the recent work completed by MEC Advisory Pty ltd. Mr Christofer Catania has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Christofer Catania consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Cyprium confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, which all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially changed from the original market announcement.

Cautionary Statements

The following notices and disclaimers apply to this announcement and you are therefore advised to read this carefully. The information in this announcement is in summary form and does not purport to be complete nor does it contain all the information in relation to the Company. It should be read in conjunction with the Company's other periodic and continuous disclosure announcements lodged with the ASX at www.asx.com.au. While the information contained herein has been prepared in good faith, neither the Company nor any of its shareholders, directors, officers, agents, employees, consultants or advisers give, have given or have authority to give, any representations or warranties (express or implied) as to, or in relation to, the accuracy, reliability, completeness or suitability of the information in this announcement, or any revision thereof, or of any other written or oral information made or to be made available to any interested party or its advisers (all such information being referred to as "Information") and liability therefore is expressly disclaimed.

Accordingly, to the maximum extent permitted by law, neither the Company nor any of its shareholders, directors, officers, agents, employees, consultants or advisers, take any responsibility for, or will accept any liability whether direct or indirect, express or implied, contractual, tortious, statutory or otherwise, in respect of the accuracy or completeness of the Information or for any of the opinions contained herein or for any errors, omissions or misstatements or for any loss, howsoever arising or out of or in connection with the use of this announcement. Each party to whom this announcement is made available must make its own independent assessment of the Company and the announcement after making such investigations and taking such advice as may be deemed necessary. Any reliance placed on the announcement is strictly at the risk of such person relying on such announcement.

This announcement may contain forward-looking statements regarding the Company and its subsidiaries (including its projects). Forward-looking statements may in some cases be identified by terminology such as "may", "will", "could", "should", "expect", "plan", "intend", "anticipate", "believe", "estimate", "predict", "potential" or "continue", the negative of such terms or other comparable terminology. These forward-looking statements are only predictions. Actual events or results may differ materially, and a number of factors may cause our actual results to differ materially from any such statement. Such factors include among others general market conditions, demand for our products, development in reserves and resources, unpredictable changes in regulations affecting our markets, market acceptance of products and such other factors that may be relevant from time to time.

Forward-looking statements include, but are not limited to, statements concerning the Company's planned exploration and development program(s), financial forecast information in this announcement, other results and assumptions in this announcement, the Production Targets, Mineral Resources and Ore Reserve estimates in this announcement and other statements that are not historical facts. These statements are based on various assumptions made by the Company. Such assumptions are subject to factors which are beyond our control and which involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially from any future results, performances or achievements expressed or implied by the forward-looking statements. Refer also to the body of this announcement for details of the material assumptions underpinning, and the key risks relating to, the Production Targets and financial forecasts included in this announcement in relation to the Nifty Copper Complex. There are risks that those assumptions may be incorrect, which would also cause the Production Targets and/or financial forecasts to consequently be inaccurate. While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the Mineral Resource and Ore Reserve estimates are accurate or that the Production Targets or financial forecasts (or other forward-looking statements) as indicated in this announcement will be achieved.

Some of the assumed factors to which those Production Targets and financial forecasts are particularly sensitive include (without limitation) the future copper price and prices of other commodities, whether the Company will be able to raise the required funds needed in order to pay the costs of developing, constructing, commissioning and operating the Project, copper grades metallurgical recoveries, operating costs, economic factors, discount rates, and other key factors such as disclosed throughout this announcement. The Company has formed the view that there is a reasonable basis to believe that requisite future funding for the development of the Nifty Copper Complex will be available when required. The grounds on which this reasonable basis is established include the outcomes of the PFS, significant existing infrastructure and history of copper production, the extended mine life, as well as the track record of senior management and the Board of Directors in raising capital. The Company notes the binding senior secured loan facility entered in September 2024 with Glencore Australia as a reflection of significant funding appetite that exists for the Nifty Copper Complex. Cyprium has also signed offtake agreements with Glencore Australia for copper products, and notes that that the Company maintains ability to joint venture with additional strategic parties at Nifty for up to 30% ownership and offtake. The Company is confident that several sources of capital will be available to continue to progress development of the Projects, noting that the Nifty Copper Complex is of strategic significance to the Australian mining industry and therefore has potential to attract a mix of government linked and private funding.

The Production Targets at the Nifty Copper Complex included in this announcement are predominantly underpinned by the Proved & Probable category Ore Reserves estimated at the Nifty Copper Complex pursuant to the JORC Code. The estimated Ore Reserves underpinning the Production Targets have been prepared by a competent person in accordance with the JORC Code. Inferred category Mineral Resources at the Nifty Copper Complex have not been included in the Ore Reserves or Production Targets and have not been included when determining the forecast financial information detailed in this announcement. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources (or Ore Reserves) in relation to that mineralisation.

Although we believe that the expectations and assumptions reflected in the statements in this announcement are reasonable, any person relying on such Information and this announcement are cautioned that we cannot guarantee future results, levels of activity, performance or achievement. In preparing this announcement and except as required by law, we do not undertake or agree to any obligation or responsibility to provide the recipient with access to any additional information or to update this announcement or Information or to correct any inaccuracies in, or omission from this announcement or to update publicly any forward-looking statements for any reason after the date of this announcement to conform these statements to actual results or to changes in our expectations.

This announcement does not constitute an offer or invitation to sell, or any solicitation of any offer to subscribe for or purchase any securities of the Company and its subsidiaries and nothing contained herein shall form the basis of any contract or commitment whatsoever. The distribution of this announcement in or to persons subject to certain jurisdictions may be restricted by law and persons into whose possession this announcement comes should inform themselves about, and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the laws of the relevant jurisdiction.

The past performance and position of the Company included in this announcement is given for illustrative purposes only and should not be relied upon as (and is not) an indication of the Company's views on its future performance or condition. Past performance of the Company cannot be relied upon as an indicator of (and provides no guidance as to) the future performance of the Company, including future share price performance. Nothing contained in this announcement nor any information made available to you is, or shall be relied upon as, a promise, representation, warranty or guarantee, whether as to the past, present or future. All financial information in this presentation is in United States dollars unless otherwise stated.

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Non-IFRS and Other Financial Measures

This announcement contains certain financial measures and ratios relating to the ORE outcomes (such as All-In Sustaining Costs (AISC), NPV, IRR and other measures) that are not recognised under International Financial Reporting Standards ("IFRS"). Although the Company believes these measures provide useful information about the financial forecasts derived from the ORE, they should not be considered in isolation or as a substitute for measures of performance or cash flow prepared in accordance with IFRS. As these measures are not based on IFRS, they do not have standardised definitions and the way the Company calculates these measures may not be comparable to similarly titled measures used by other companies. You should therefore not place undue reliance on these measures. Furthermore, these measures should not be compared with similarly titled measures provided or used by other issuers. The non-IFRS financial measures and non-IFRS financial ratios used in this document are relatively common to the mining industry.

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Cyprium Metals Ltd

Nifty Copper Complex – Pre-feasibility Study

November 2024

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EXECUTIVE SUMMARY

Study Objectives

Cyprium Metals Limited (Cyprium) engaged MEC to deliver of a Pre-Feasibility Study (PFS) for the Nifty Copper Complex (NCC or Nifty). The study assessed a range of options for their technical and economic viability. As part of, and in conjunction with the assessments conducted, modifying factors were assessed with the objective of reporting Ore Reserves for Nifty mine in accordance with the JORC code.

The study as presented encompasses two components:

1. A Pre-Feasibility Study; and
2. An Ore Reserve Estimate in accordance with the JORC code.

The primary purpose of work completed and documented in this study is to produce a principal source of information for investors, potential investors and their advisors. In line with Cyprium's focus on low-risk, Australian, brownfield, copper assets, Cyprium intend to recommence both mining and processing operations at Nifty, and to operate the site as a competitive Australian copper operation.

Nifty Copper Complex

The Nifty Copper Complex is located in the northeastern Pilbara region of Western Australia. Nifty was wholly acquired by Cyprium in March 2021 and is the flagship property of Cyprium. Nifty operated as an open pit copper oxide mine from 1993 through to 2006, with heap leach and SX/EW processes to produce copper cathodes. From 2006, Nifty transitioned to an underground copper sulphide mine, with processing via standard flotation to produce copper concentrate, prior to being placed onto care and maintenance in November 2019.

Ore Reserve Estimate

The total Reserve Estimate for Nifty is 93.91Mt at 0.85% Cu. The Reserve Estimate was prepared in accordance with the JORC 2012 standard. The total Reserve reported by Proved and Probable classifications is shown in Table 1. The Reserve is made up of a portion of the Resource stated in the March 2024 MRE and the Resource stated in the July 2024 Heap Leach MRE and includes Reserve for planned mining and Reserve contained on existing heap leach pads 1-6.

Table 1. NOVEMBER 2024 ORE RESERVES ESTIMATE

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Total	-	-	22.69	1.06%	**22.69**	**1.06%**
Reserve	Probable	Total	10.64	0.41%	60.59	0.85%	**71.22**	**0.78%**
Reserve	**Total**	**Total**	**10.64**	**0.41%**	**83.27**	**0.90%**	**93.91**	**0.85%**

Numbers are rounded to reflect a suitable level of precision and may not sum

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Study Work Completed

Geology

Prior to this study, MEC built a geological model for Nifty. This model formed the basis of the Mineral Resource Estimate completed by MEC and publicly released by Cyprium in March 2024. Following the March 2024 MRE, in August 2024 Cyprium released an MRE for the existing above-surface material stacked on the heap leach pads at Nifty. Downstream work in this study references both the March 2024 MRE and the August 2024 Heap Leach MRE.

Geotechnical

MEC completed a geotechnical assessment utilising all historical drilling data and test data and included six new holes drilled in 2023 and 2024. The analysis generated overall slope, bench face angle and inter-ramp angle recommendation for pit optimisation and design. The resulting parameters improved the batter slope profile for the operation, enabling greater option in allowing the SXEW facilities to extend their life and allow for longer potential oxide extractive works.

Hydrology/hydrogeology

A hydrology and hydrogeology assessment was conducted for Nifty. This work covered assessments of the water table, available water supply, climate and the wide water balance. Assessments were completed based on data from 27 existing boreholes and available data from the existing underground workings. The water balance demonstrates adequate potential from the planned wells, with confirmatory and alternative well drilling proposed in the future works plan.

Metallurgy

The NCC Concentrator and SXEW have a long history of operation, delivering over 494kt and 219kt of Copper respectively. The metallurgical recoveries have been modelled on the historical performance for each material type, with a consideration for the operating adjustments from the test work for the basis of this study.

As outlined in Figure 45, these equations were limited to a maximum recovery of:

- 95.7% for fresh feed and;
  - Fresh Recovery % = $0.0677Cu^3 - 0.3404Cu^2 + 0.5946Cu + 0.5827$
- 86.3% for transitional feed.
  - Transitional Recovery % = $1.0653Cu^{0.038}$

Cu is copper grade percentage expressed as a decimal

The Oxide processing for the historical leach pads has been modelled based on the confirmatory test works in the leaching process, and SXEW performance. The project assumes as 45.4% copper recovery for the residual ore, set as discount to the life of project recovery of 70%.

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Pit optimisation

Utilising the geological model used in the March 2024 MRE and the geotechnical recommendations generated from the geotechnical study work, MEC completed a pit optimisation assessing the viability of the ultimate pit selected on the Reserve potential ores feeding the concentrator stream only, with inferred and oxides treated as incidental for consideration outside the primary pit optimisation.

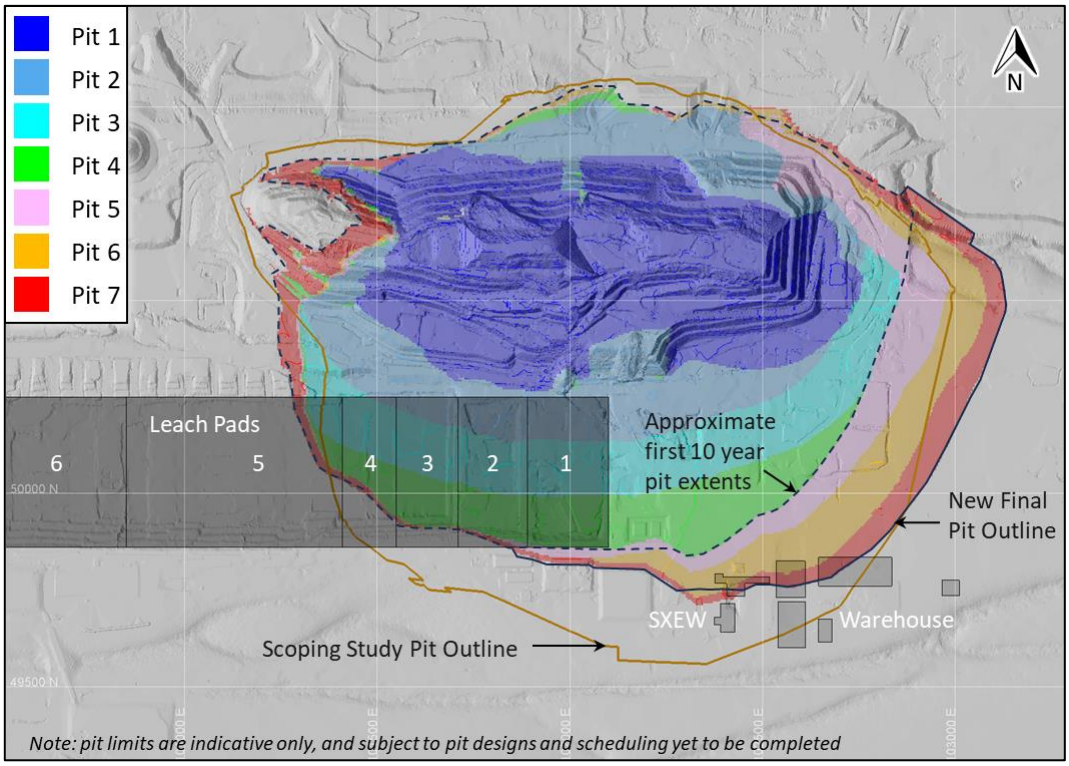

Figure 1 OPTIMISATION PIT PHASES VERSUS SCOPING PIT WITH SXEW INFRASTRUCTURE

Mine design

MEC completed the ultimate pit design based on the pit optimisation outputs and assessment. Bench and batter configuration produced form the geotechnical assessment was applied to the identified geotechnical zones within the mine area, with a 35m ramp width utilised in the design. The design targeted capturing the economic mineralised material that was captured in the pit optimisation while minimising the total quantity of waste. Three stage designs inside the ultimate pit shell were completed, guided by the pit progression identified by the pit optimisation to facilitate maximising the project's NPV.

On completion of the pit design, a material balance was completed for material types contained within the pit and within existing surface dumps and stockpiles. This balance, in conjunction with surface and other constraints informed the waste dump and integrated waste landform designs.

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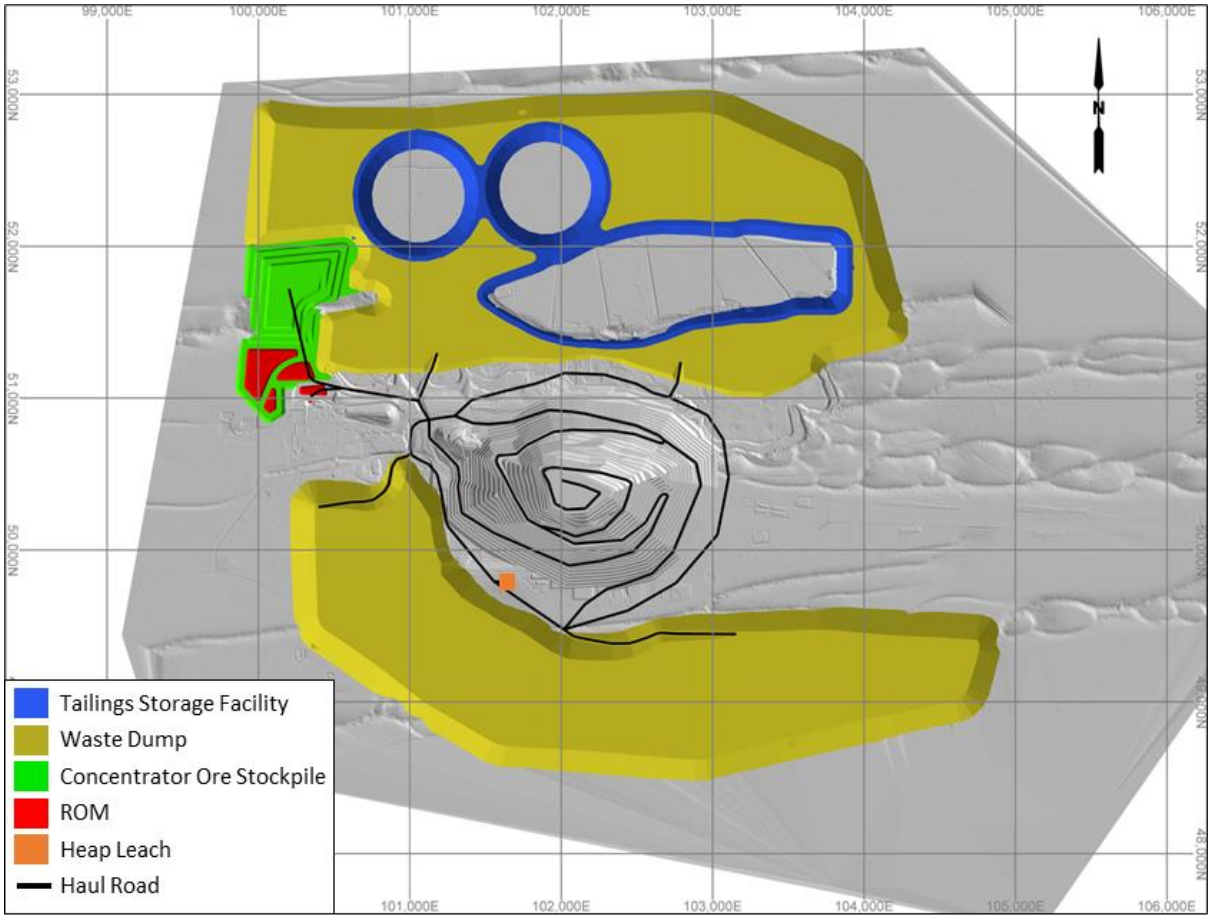

Figure 2 INDICATIVE IWL, ROM AND STOCKPILE LAYOUT

Mine Schedule

Mine designs were broken down into scheduling blocks and were attributed with qualities and quantities from the geological model. Modifying factors for loss and dilution were applied and cut-off grades were applied by material type. Using these attributed scheduling blocks, a mining schedule was created in Deswik scheduler to determine a practically achievable sequence and realistic quantities of waste and ore to be mined. The schedule was completed as an excavator and truck operation, with material movement quantities constrained and targeted on a monthly granularity to ensure consistent delivery of ore to the processing facilities. Excavation of waste was scheduled with 600t class excavators, with ore movement scheduled for 200t class excavators.

Upon completion of the production schedule, haulage scheduling was completed using the Deswik LHS (Landform and Haulage Simulation) software. The haulage model was driven by the mine schedule and designed haul road network and modelled material placement over the scheduled mine life. Placement by material type was a key consideration, with multiple material types considered and treated appropriately in their placement. Haulage was modelled with 230t class trucks.

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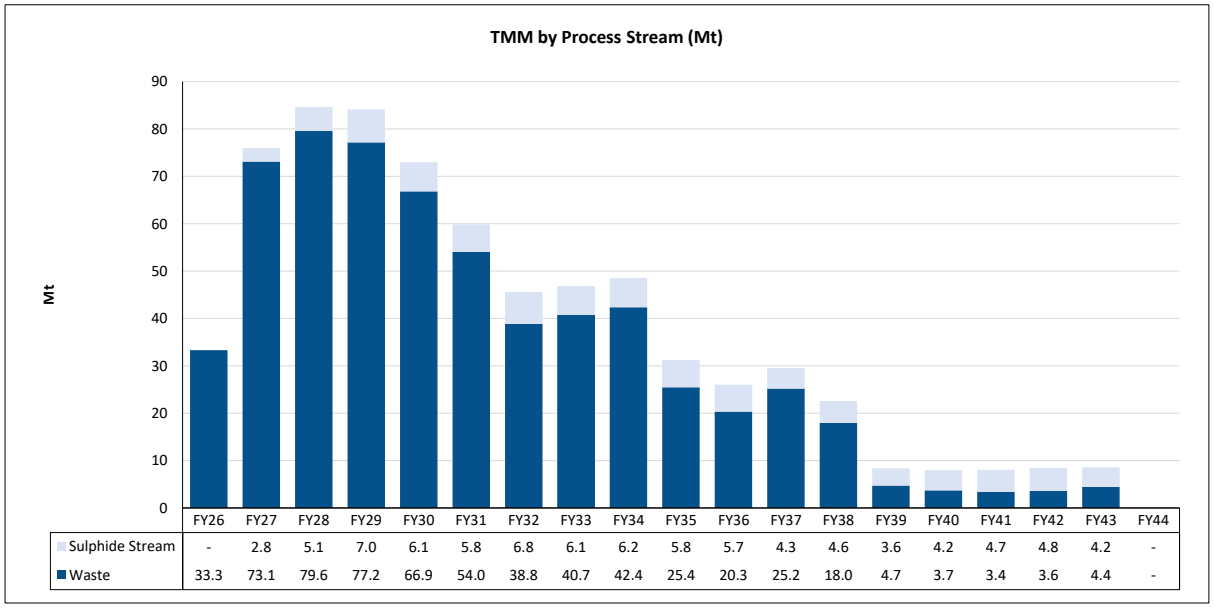

	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
Sulphide Stream	-	2.8	5.1	7.0	6.1	5.8	6.8	6.1	6.2	5.8	5.7	4.3	4.6	3.6	4.2	4.7	4.8	4.2	-
Waste	33.3	73.1	79.6	77.2	66.9	54.0	38.8	40.7	42.4	25.4	20.3	25.2	18.0	4.7	3.7	3.4	3.6	4.4	-

Figure 3 TMM BREAK DOWN

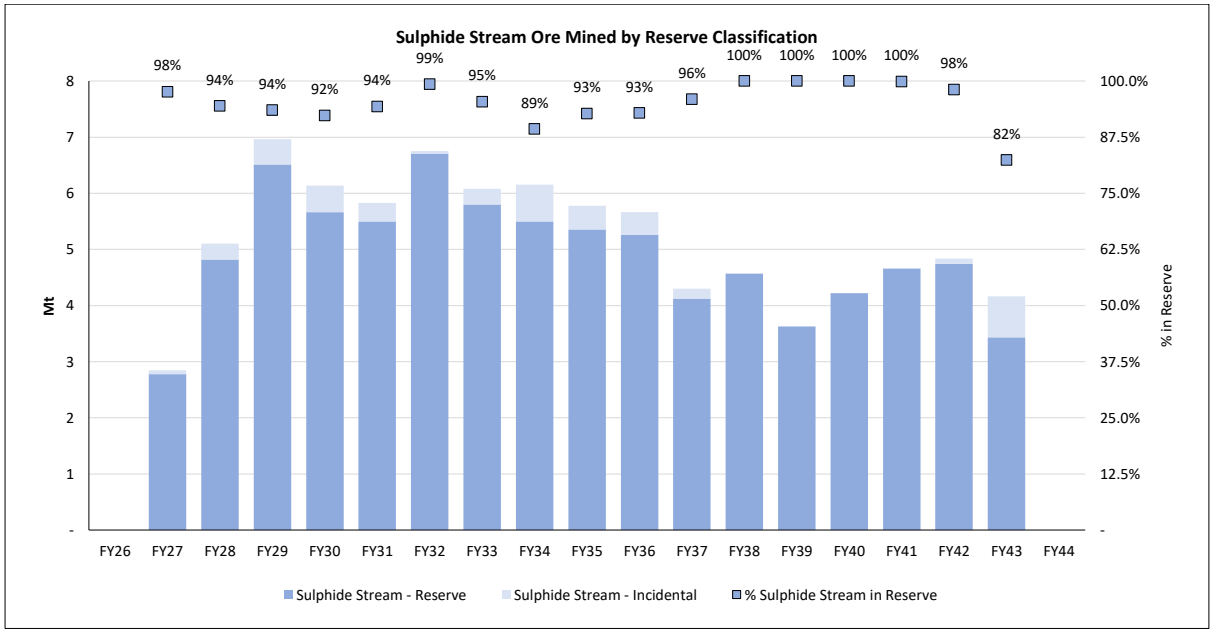

Figure 4 SULPHIDE STREAM ORE MINING SCHEDULE BY RESERVE CLASSIFICATION

Processing

The concentrator restart and expansion to 4.5Mpta is planned for commissioning in January 2027. This ramp to full production is planned over 12 months following the McNulty curves for similar projects. Once in operations the feed of the concentrator will be fed as direct feed and stockpile, using a low-grade stockpiling strategy, explained in the full report. The copper production driven by grade with a full fed plant is shown in Figure 5.

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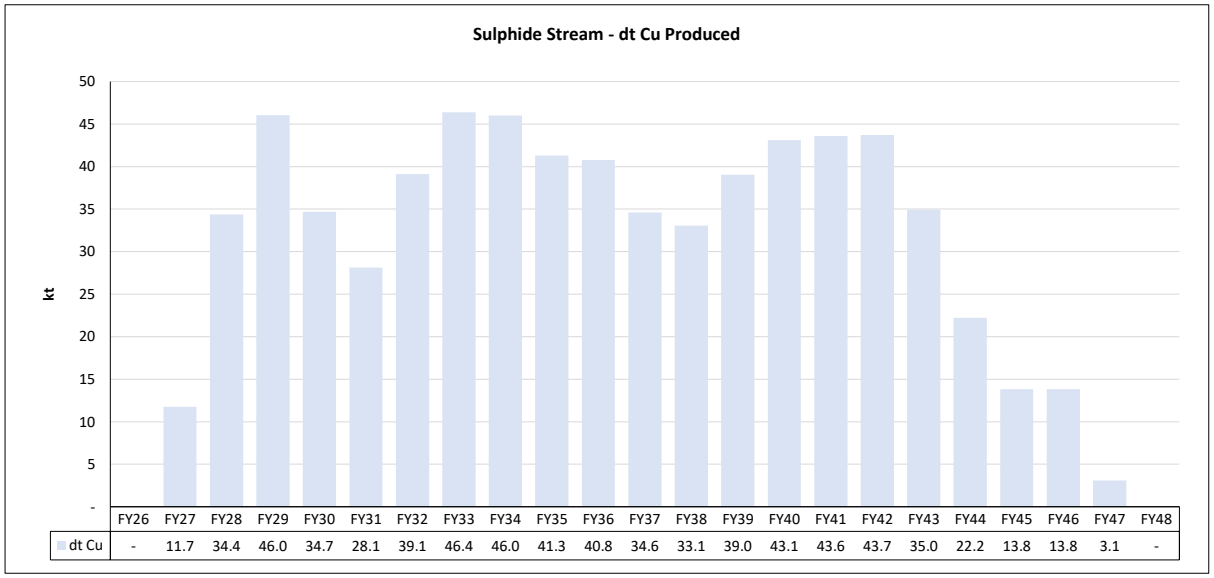

Figure 5 RESERVE AND INCIDENTAL - SULPHIDE STREAM COPPER PRODUCTION

The Oxide ores are to be leached on the new leach pad location within the southern dump, and limited to a 6000tpa cathode plating rate, using the refurbished SXEW.

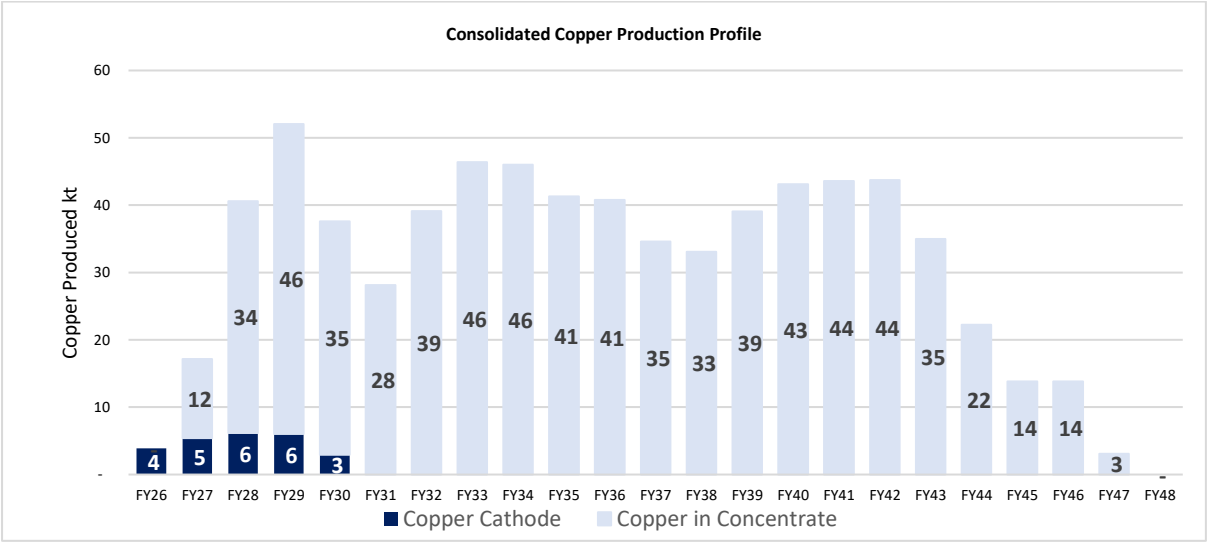

Figure 6. CONSOLIDATED COPPER PRODUCTION

Costs

The site costing were build from detailed estimated from first principals and engineering basis, with groupings to the two mining and processing activities. The details costs breakdown were modelled at heavy vehicle levels, supported by detailed labour and operational costings. The mining was modelled as a contractor site, employing

a 15% margin. The cost builds are extensive and available in the main report. The summary units costs are show in the following tables with splits to the product streams.

Table 2. CONCENTRATE PROJECT AISC

Item	A$/ t Pay. Cu	A$/ t ore processed	US$ /lb. Pay. Cu
Copper Price	**13,252**	**101.1**	**4.25**
Mining Cost	2,561	19.5	0.82
Processing Cost	3,063	23.4	0.98
Site G&A	181	1.4	0.06
Selling Cost	1,679	12.8	0.54
Cash Cost	**7,485**	**57.1**	**2.40**
Sustaining Capital (including Rehab)	672	5.1	0.22
All-in-Sustaining Cost	**8,158**	**62.3**	**2.62**

Table 3. CATHODE PROJECT AISC

Item	A$/ t Pay. Cu	A$/ t ore	US$ /lb. Pay. Cu
Copper Price	**13,271**	**25.6**	**4.25**
Mining Cost	677	1.3	0.22
Processing Cost	4,814	9.3	1.54
Selling Costs	1,309	2.5	0.42
Cash Cost	**6,800**	**13.1**	**2.18**
Sustaining Capital	-	-	-
All-in-Sustaining Cost	**6,800**	**13.1**	**2.18**

Summary outcomes

The Nifty copper complex delivers a strong economic potential at current market conditions. The project has been modelled with a comprehensive mining and processing knowledge basis to underpin the prefeasibility study result. The life of mine pre-tax NPV delivered from the combined project is A$1,129M at a discount rate of 8%. A summary of the key metrics from the Nifty Reserve are summarised in Table 4. The PFS valuation has been performed assuming a base case copper price of US$9,370/ t and a long-term foreign exchange rate of AUD: USD 0.71. The valuation is most sensitivity to movements in copper price and FX. These sensitivities were modelled on a full life basis and as a full sensitivity analysis in the full study report, Figure 7 demonstrate the sensitivity and payback of the project to these key metrics. Figure 7

The payback for the Nifty PFS has been determined with reference to the start of production from the Concentrate Project, as that remains the primary focus of Cyprium.

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Table 4. COMBINED SITE FIANCIAL EVALUATION METRICS

Item	Units	Combined	Concentrate Project	Cathode Project
Ore (including inferred)	*Mt*	100.4	87.7	12.7
Grade (including inferred)	*% Cu*	0.83%	0.89%	0.43%
LOM Production	***kt Cu***	**718**	**694**	**24**
Average production, yrs 1-10	***ktpa Cu***	**37.3**	**38.7**	**5.9**
Project Life	***Years***	**20.8**	**19.8**	**4.2**
LOM Average Copper Price[1]	*A$/ t Cu*	*13,253*	*13,252*	*13,271*
Revenue	***A$m***	**9,194**	**8,870**	**324**
Selling Costs	*A$m*	(1,156)	(1,124)	(32)
Site Operating Costs	*A$m*	(4,020)	(3,886)	(134)
EBITDA	***A$m***	**4,018**	**3,860**	**158**
Development Capital	*A$m*	(458)	(239)	(30)
Capitalised Opex in Development	*A$m*		(173)	(16)
Sustaining Capital (inc. rehabilitation)	*A$m*	(450)	(450)	-
Undiscounted Pre-tax Project Level CF	***A$m***	**3,110**	**2,997**	**113**
Max Project Drawdown	*A$m*	(431)	(435)	(46)
C1 Cost	***A$/ t Pay. Cu***	**7,461**	**7,485**	**6,800**
	US$/lb	2.39	2.40	2.18
AISC	***A$/ t Pay. Cu***	**8,110**	**8,158**	**6,800**
	US$/lb	2.60	2.62	2.18
Pre-tax NPV (8%)	***A$m***	**1,129**	**1,042**	**86**
Pre-tax IRR	***%***	**28.9%**	**26.3%**	**110.1%**
Pre- Tax Payback (from first concentrate production) [2]	*Years*	4.75		
After-tax NPV (8%)	*A$m*	756		
After-tax IRR	*%*	23.6%		
Capital Intensity (Dev Capex / Ann Prod)[3]	*A$/t*	12,295	10,660	7,748
Dev Capex / Avg EBITDA	*X*	2.4x	2.1x	1.2x
Max Drawdown / Avg EBITDA	*X*	2.2x	2.2x	1.2x

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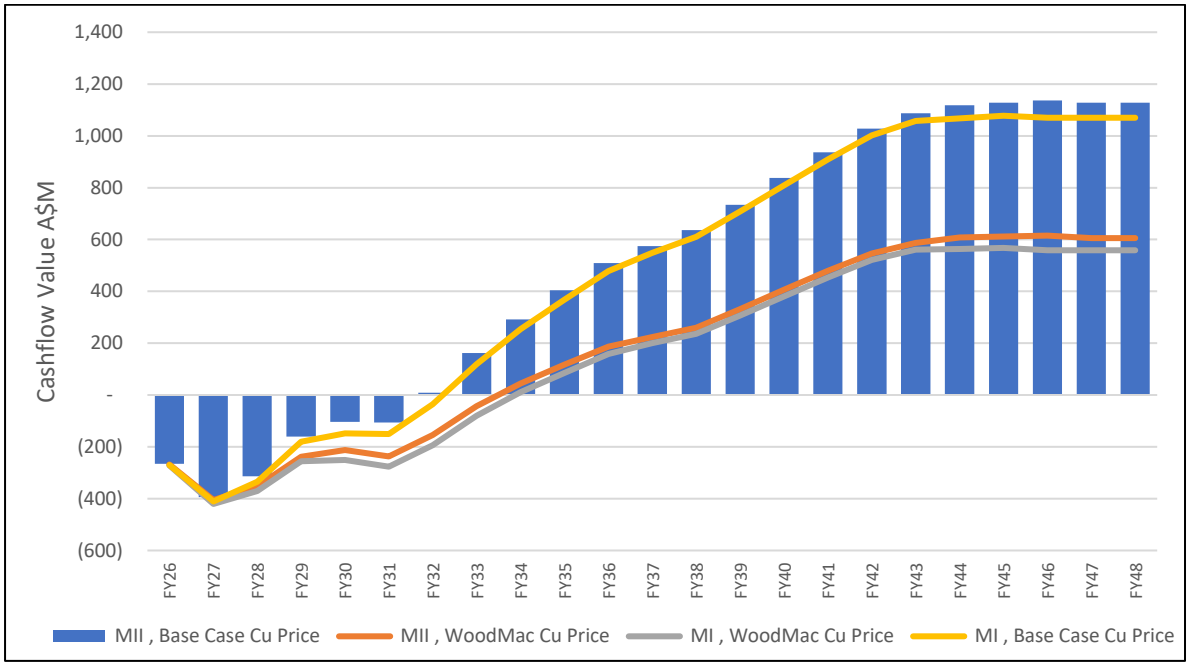

Figure 7. CUMMULATIVE DISCOUNTED CASHFLOW PRE-TAX

Risks and future works

The NCC PFS demonstrated viable brownfields restart with positive economics. The project is reduced in risk with historical ore processing performances well understood, and usable as a basis. The operating risks are well understood from prior works with exception to the underground interface that will be mined through as the pit advances. The ground control management plan will address this in detail however the PFS took significant schedule time and costs consideration to ensure the project is executable under the model presented.

To deliver the project key risks to delivery should be addressed via a future works program including but not limited to:

- Hydrogeological confirmatory works to secure the planned water bore supply
- Additional geotechnical drilling for the feasibility study for future walls outside high density drilling areas
- Further leach testing to enhance the oxide potential form the pit
- Feasibility study works around the restart of both processing facilities to the require accuracies
- Environmental and social support studies for the approvals update and community engagement needs to deliver the project.

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1 STATEMENT OF JORC COMPLIANCE

The information in this report that relates to Pre-feasibility study and Ore Reserves is based on information compiled by Christofer Catania, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Christofer Catania is employed by MEC Mining Group Pty Ltd as a consultant for Cyprium Metals Ltd.

Christofer Catania has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Christofer Catania consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Signed

_____ 21 November 2024

Christofer Catania BEng (Mining) MBA FAusIMM 228366 GAICD

Chief Executive Officer MEC Mining

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2 SCOPE AND INTRODUCTION

MEC were engaged by Cyprium Minerals Limited (ASX: CYM) (Cyprium) to complete a Prefeasibility study and associated Ore Reserves Estimate as part of the ongoing study works on the Nifty Copper Complex. The scoped study was to assess the open pit potential of the Nifty complex, as a continuation from the options defined in the prior scoping study phase

This studies focus was the examination and estimation to a pre-feasibility study level targeting a large scale open pit sulphide mine, using the existing infrastructure for a staged restart and expansion. The operating rationale was to consider an owner/contractor model for the examination. The potential oxide stream was to be assessed to treat the historical leach pad stockpiled Oxide ores, and make consideration for the oxide mineralised material in the pit footprint, however treating this as a side stream to the primary sulphide/concentrate plan.

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3 PROJECT OVERVIEW

3.1 Location

Cyprium's Nifty Copper Complex (Nifty / NCC) is located on the western edge of the Great Sandy Desert in the northeastern Pilbara region of Western Australia, approximately 350 km southeast of Port Hedland as outlined in Figure 8 and Figure 9.

Figure 8 NIFTY LOCATION

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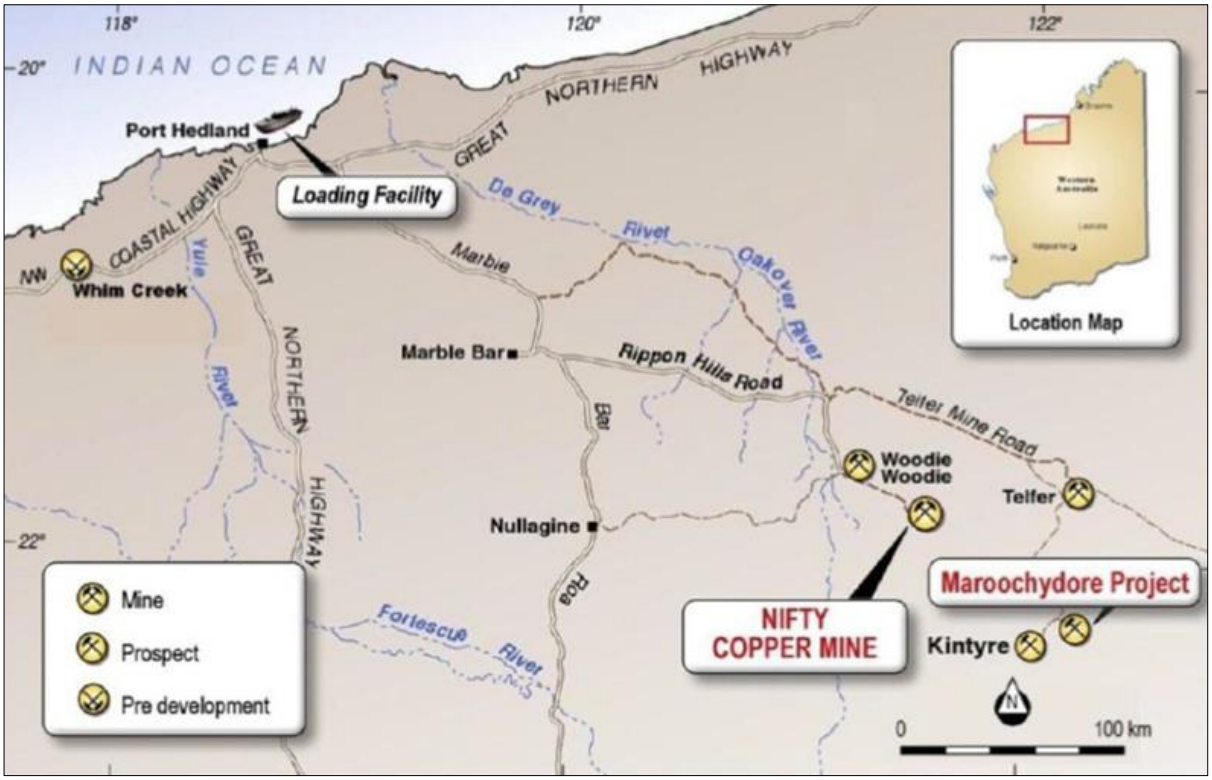

Figure 9 LOCATION OF NIFTY COPPER COMPLEX

3.2 History

Nifty has been mining and processing copper ores since 1993. 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. Open-pit mining operations ceased in June 2006 following the establishment of the underground mine. Up until this time the copper cathode operations produced approximately 220,000 tonnes of cathode throughout its operational history. Heap-leaching operations ceased in January 2009, and the surface facilities for recovering copper oxides remain, but they are not operational. Cyprium Metals has permitted the recovery of remaining copper oxides through refurbishing the SX-EW plant.

The underground sulphide mine commenced in 2004 and consisted of an underground decline to access a high-grade area of the sulphide resources and an accompanying sulphide concentrator. The first copper concentrate from this underground mine was produced in March 2006. Metals X acquired Nifty in late 2016 after an off-market takeover of then-owner Aditya Birla Minerals Limited. In November 2019, underground mining and

processing operations were suspended. Cyprium acquired the project in March 2021. The underground mine was abandoned in Q1 2021. Historic production is shown in Table 5.

Table 5 HISTORICAL PRODUCTION FROM NIFTY COPPER COMPLEX

Year	Heap Leach		Concentrator	
	Ore Stacked (mt)	Cu Metal (kt)	Ore Feed (mt)	Cu Metal (kt)
1993	0.3	1.1		
1994	0.4	7.6		
1995	0.5	9.5		
1996	0.6	10.0		
1997	0.9	13.2		
1998	0.7	16.4		
1999	0.9	15.0		
2000	1.1	17.3		
2001	1.9	22.1		
2002	1.9	21.6		
2003	2.5	24.8		
2004	2.3	16.9		
2005	1.9	16.9		
2006	1.5	16.9	0.7	13.4
2007	0.2	6.9	1.5	47.0
2008	0.7	3.2	1.8	50.1
2009		0.2	2.0	52.4
2010			2.3	61.1
2011			2.1	47.6
2012			2.3	49.7
2013			2.3	47.4
2014			1.1	17.2
2015			1.5	27.5
2016			1.7	31.1
2017			1.4	18.7
2018			1.5	18.5
2019			1.0	12.7
Total	**18.0**	**219.5**	**23.1**	**494.3**

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

3.3 Infrastructure

The previous mining activities on-site give Cyprium access to significant existing infrastructure (Process and Non-Process Infrastructure).

The majority of the infrastructure remains on site in conditions ranging from historic idle or decommissioned, to active care and maintenance and ready for immediate restart. A general layout of the site infrastructure is outlined in Figure 10.

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Figure 10 NIFTY GENERAL LAYOUT

3.3.1 Process Infrastructure

3.3.1.1 Sulphide - Concentration

The current sulphide processing infrastructure includes:

- ROM pads with >100,000 tonne capacity
- Primary surface jaw crusher
- Conventional flotation concentrator including SAG mill, ball mill, flotation cells, filter plant, concentrator thicker, and tails thickener

3.3.1.2 Oxide - Heap Leach and SXEW

The current oxide processing infrastructure includes:

- Heap leach pads
- Leach ponds
- Pipework
- Solvent Extraction Plant
- Electrowinning plant:

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3.3.2 Non-Process Infrastructure

3.3.2.1 Roads

The Nifty site has a series of access and operations roads already in place that service a project restart.

3.3.2.1.1 Port Hedland to Nifty

The road from the Port of Port Hedland to Nifty is via sealed/ unsealed and gazetted / un gazetted road and is ~410Km from the Port Hedland Airport turning to Nifty. The road status is broken down as outlined below:

- Port Hedland Airport Turning to Woodie Woodie
  - 377km
  - Sealed and gazetted
  - Ultra Class (160t net payload quad road trains) in operation (Woodie Woodie)
  - Various river and creek crossings via flood way and bridge – Liable to closure in wet season
- Woodie Woodie to Nifty
  - 33km
  - Unsealed and ungazetted
  - Previously handled 100-120 tonne triple road trains
  - Various river and creek crossings via flood way – Liable to closure in wet season

3.3.2.1.2 Nifty

An extensive network of unsealed roads exists around the mine site

An extensive road network exists including unsealed road to Woodie Woodie (Approx 30km), with sealed road from Nifty to Port Hedland.

3.3.2.2 Accommodation

A camp with all required facilities exists and will require refurbishment and upgrade to support operation, current capacity is

3.3.2.3 Water Supply

Water for the process will be sourced from the existing underground mine via boreholes and pumps. A 26D is in place and approved. Further application amendment is expected to be required to deal with the change in extraction method and changing water requirements over the mine life. The balance of the remaining water is expected to come from increased bores in the approved and existing East Nifty bore fields, the field work to support the increased supply is yet to be completed..

Raw water supply to the Reverse Osmosis (RO) plant for general use and consumption in the offices and camp will come from the existing 10K bore fields. The RO plant is an older installation and will be refurbished prior to the restart of production. RO reject water is suitable for use on the site road network as dust suppression.

3.3.2.4 Power Supply

The supply of power will come from the existing 21MW capacity gas power generation currently supplied by the existing gas pipeline. The current power configuration for the restarted project is expected to be under 15MW, with variable needs during the SXEW operation phase.

The existing system is deemed adequate in supply levels for the expected power draw at peak levels, though the age of the generation system warrants investigation into replacement options.

There is some refurbishment work planned for parts of the power generation system prior to commercial production through processing facilities.

3.3.2.5 Port Facilities

Although concentrate storage exists in Port Hedland CYM no longer has access to these facilities (Lease lapsed in December 2021). The revised strategy as outline in this study no longer requires storage of this kind.

3.3.2.6 Airport and Associated Facilities

There are several “grandfathered” conditions contained within the current approvals (due to the age of the airstrip) which will remain unchanged for the usable life of the current installation.

3.3.2.7 Communications

The site has an operating Telstra 4G tower with site wide LAN connection and associated Wi-Fi hot spots.

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4 GEOLOGY

4.1 Tenements

The Nifty project is 100% owned by Cyprium Metals Limited and is located on M 271SA (Figure 11). MEC has not assessed the tenure status in detail but notes that the tenure is currently live and is due to expire in 2034.

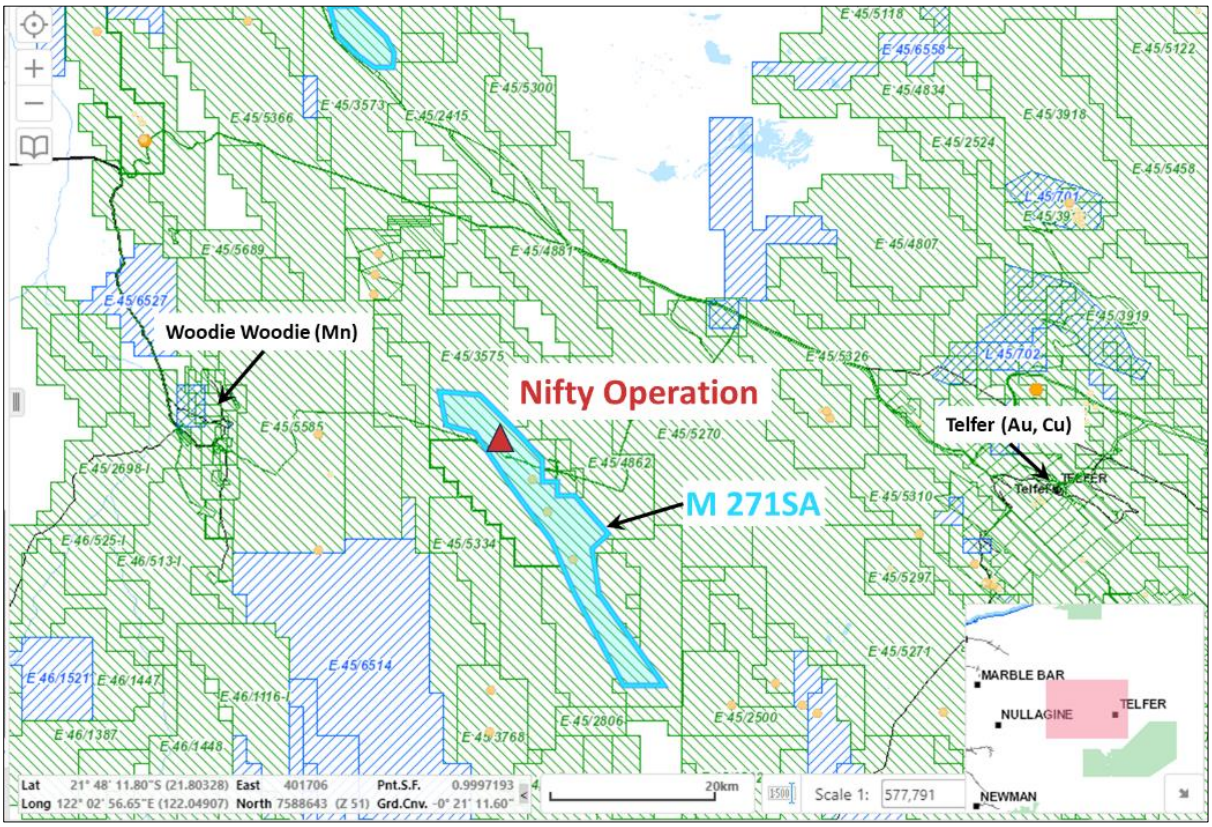

Figure 11 NIFTY TENEMENTS

4.2 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 12).

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 unconformably overlies ~9 to 13 km thick (~824 to 850 years old) of the Yeneena Supergroup (>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.

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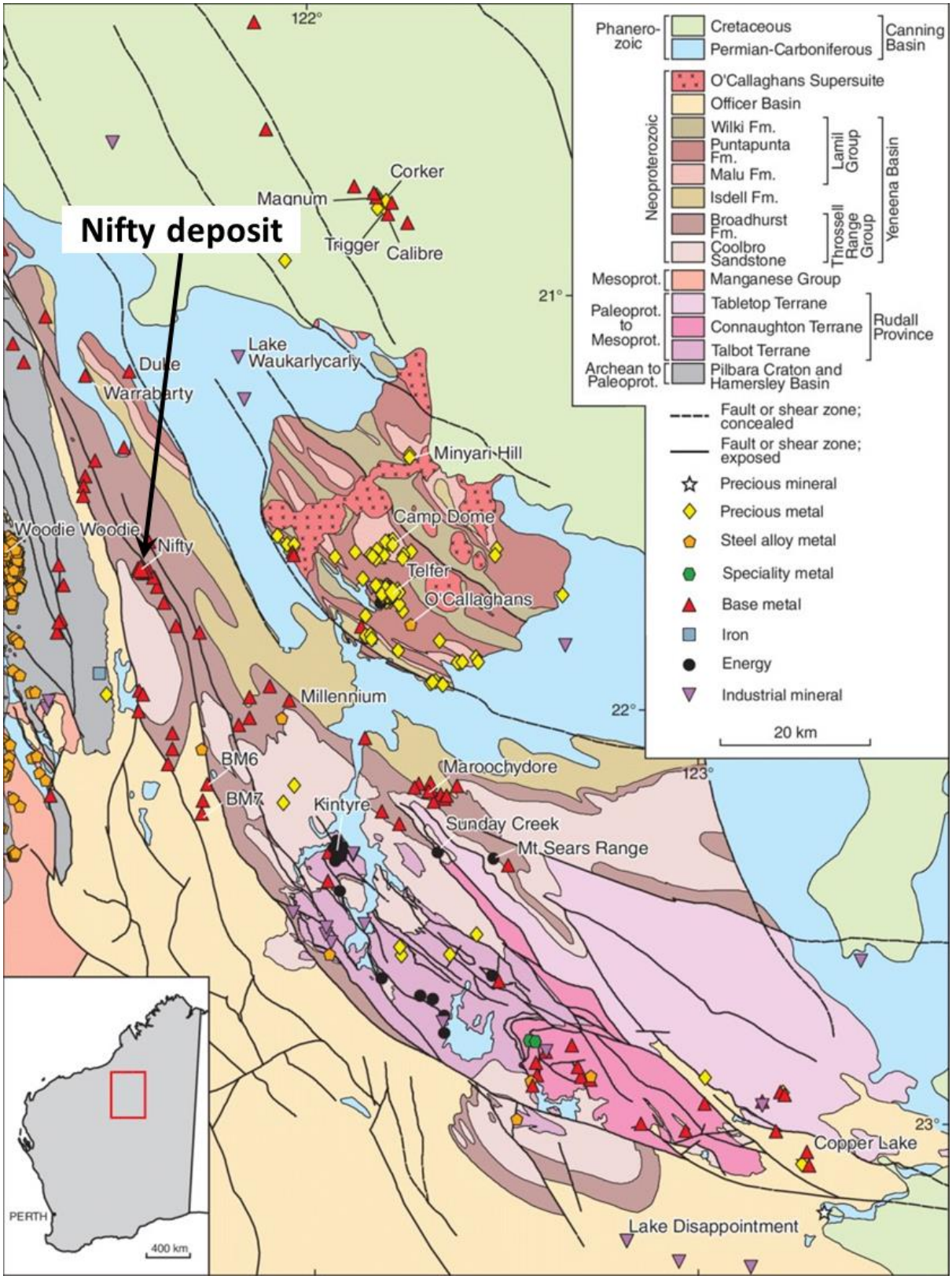

Figure 12 SOLID GEOLOGY OF THE PATERSON OROGEN (AFTER MAIDMMENT ET AL., 2017)

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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 that 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 the 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.

4.3 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 13).

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.

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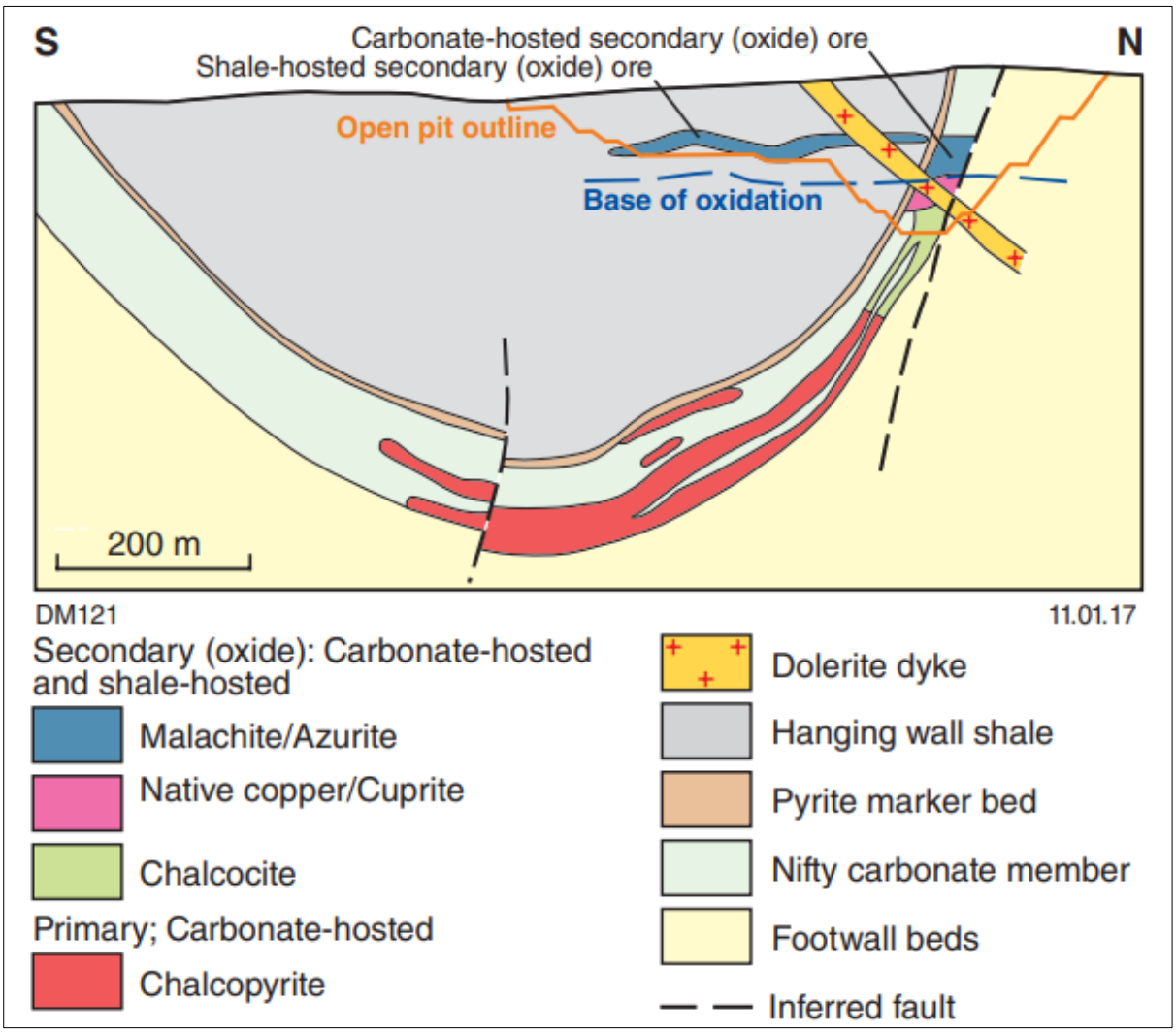

Figure 13 NIFTY GENERALISED GEOLOGICAL CROSS-SECTION (AFTER FERGUSON, BAGAS AND RUDDOCK, 2005)

From youngest to oldest, the stratigraphic units and their relative state of mineralisation are as follows:

- 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

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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 in 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 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.

The primary chalcopyrite copper mineralisation has been modified by weathering and oxidation down to a depth of 200m:

- The oxide copper mineral species are dominantly malachite and azurite, with some cuprite and native copper, which can extend down to 100m below the surface.
- The Lower Saprolite zone potentially contains oxide mineralisation.
- The supergene or chalcocite zone generally extends from 100m to 200m below the 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 are also present. Pyrite is a common gangue mineral but only occurs with chalcopyrite on the margins of the deposit.

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4.4 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. They may have played a role as mineralising fluid conduits (Figure 14).

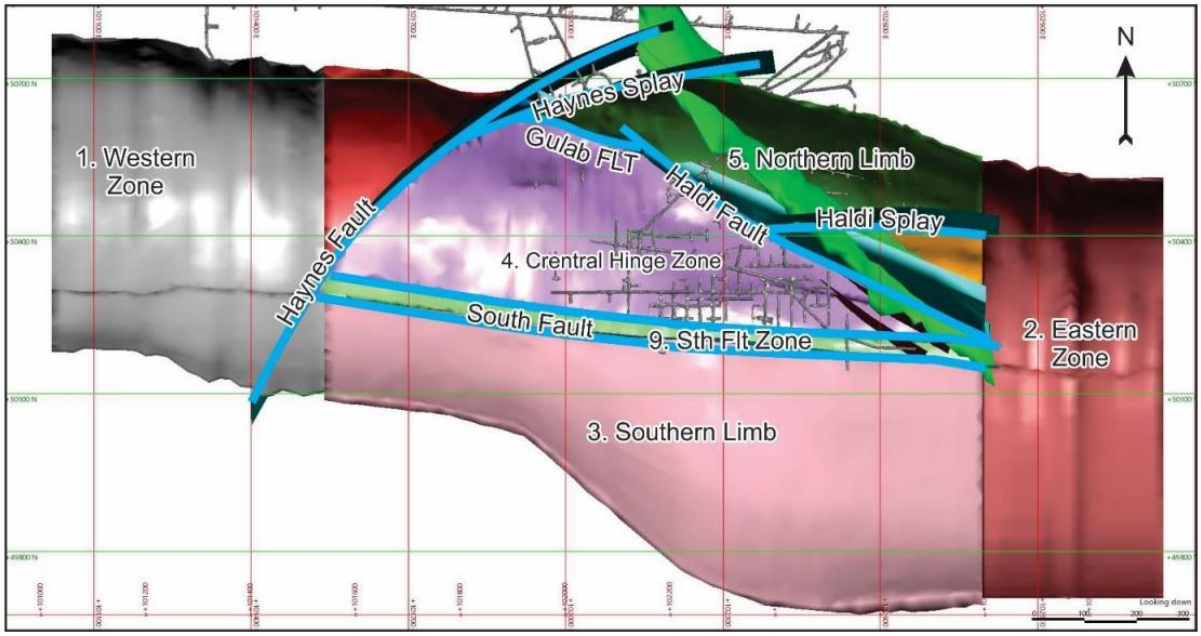

Figure 14 PLAN VIEW NIFTY STRUCTURAL FRAMEWORK (AFTER DAVIS, 2019)

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:

- Open pit mining was focused 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 focused 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.

4.5 Drill Hole 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 drill holes are concentrated on the northern limb and

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around the fold hinge, with significantly fewer drill holes located on the southern limb. Additionally, there are fewer drill holes at the western and eastern extents of the mineralisation (Figure 15).

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

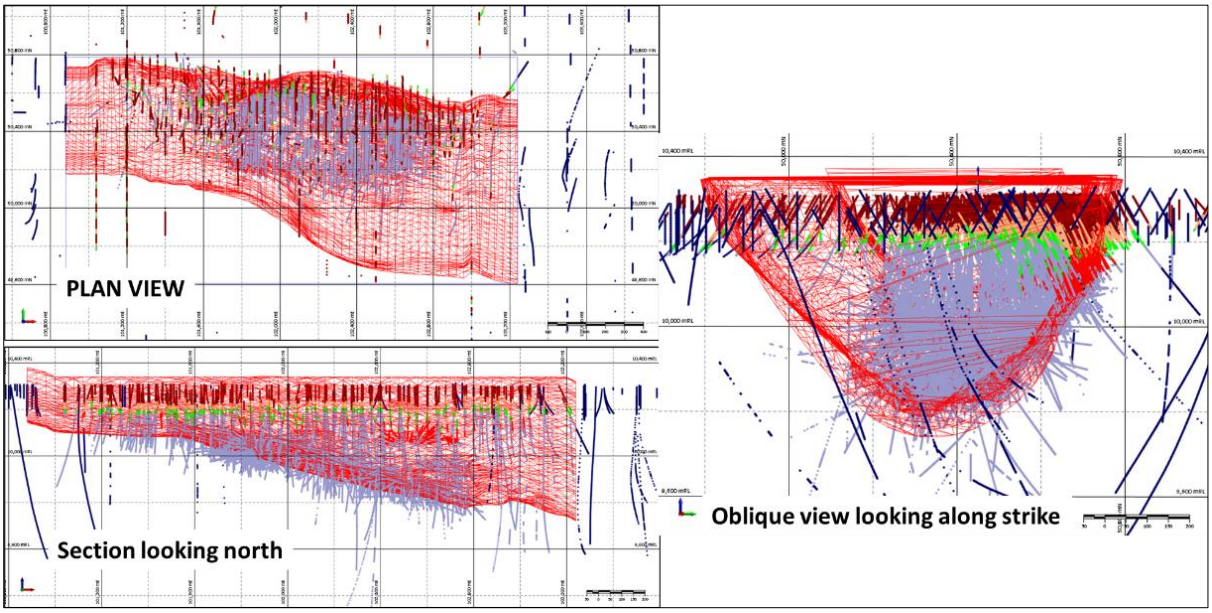

Figure 15 PLAN, LONG-SECTION LOOKING NORTH AND CROSS SECTION LOOKING WEST SHOWING THE MCU WIREFRAME AND AVAILABLE DRILLING

4.6 Database

The number of drill holes and samples used for the MRE are shown in Table 6. For the RC sampling, there are 1,122 samples greater than 2m in length.

Table 6 NIFTY 2023 MRE AVAILABLE DRILL HOLE AND SAMPLE LENGTHS

Use	Hole Type	Nos Holes	Metres Drilled	Nos Samples	Sample Length (m)			
					Total	Average	Minimum	Maximum
2023 MRE	MRD	6	5,095	2,433	2,880	1.2	0.40	4
	RC	866	109,015	68,192	86,796	1.3	1.00	5
	RCD	46	14,017	924	2,541	2.8	1.00	4
	DD	1,422	242,019	134,717	132,037	1.0	0.02	74
	Total	**2,340**	**370,146**	**206,266**	**224,254**	**1.1**	**0.02**	**74**

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

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

4.8 Density determinations

There are a total of 21,357 density determinations in the drill hole database, Table 7. The Competent Person considers the frequency of density measurements to be appropriate.

Table 7 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	2,001.60	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	11,779.00	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**

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5 MINERAL RESOURCE ESTIMATE

MEC completed a Mineral Resource Estimate (MRE) for the Nifty deposit in March 2024, MEC March 2024 MRE. This estimate included remodelling of the deposit, drill hole database clean up, re-wireframing, geostatistical modelling, historical mining zone consideration and depletions.

This MRE is publicly released through the ASX, as a result is summarised here for key modifiers.

5.1 MRE Classification

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

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

Following the 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 16 to Figure 19). Blocks were assigned a restriction code (field 'restriction' = restriction) to report only blocks that the Competent Person deemed to be potentially economically extractible. Future Pit Optimisation studies will confirm the designation of the blocks for the RPEEE condition.

JORC Code classification definitions for the resource categories were applied and adhered to.

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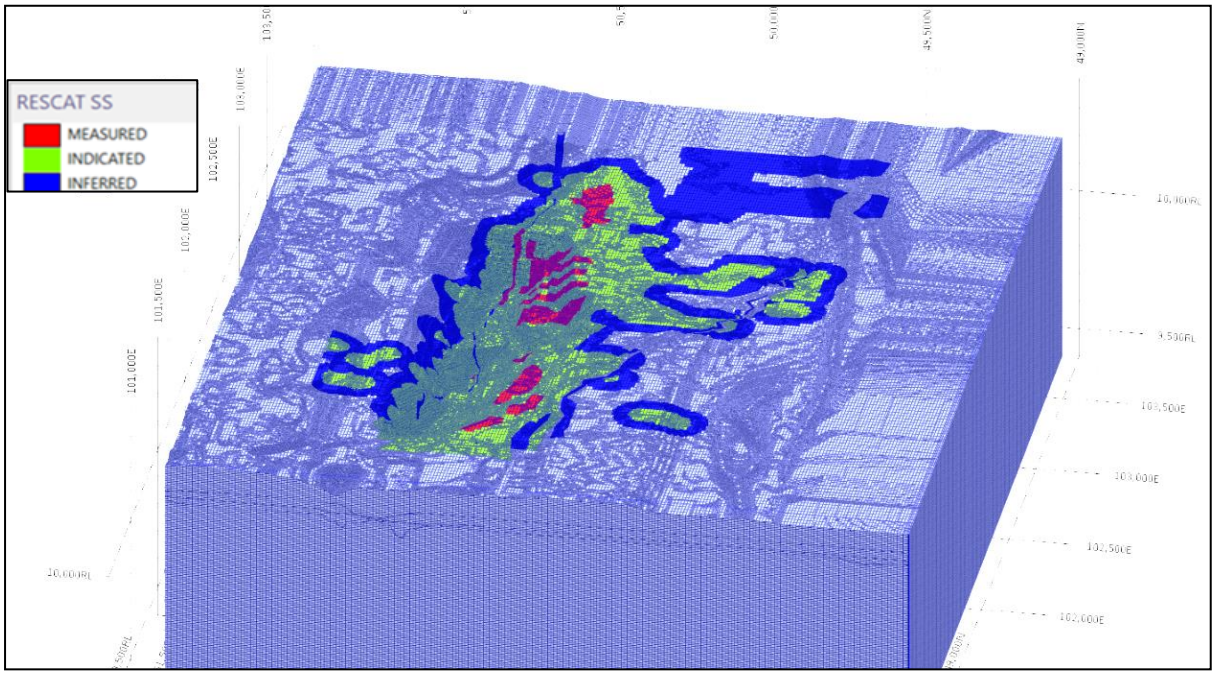

Figure 16 OBM COLOUR CODED FOR RESOURCE CATEGORY, 3D VIEW

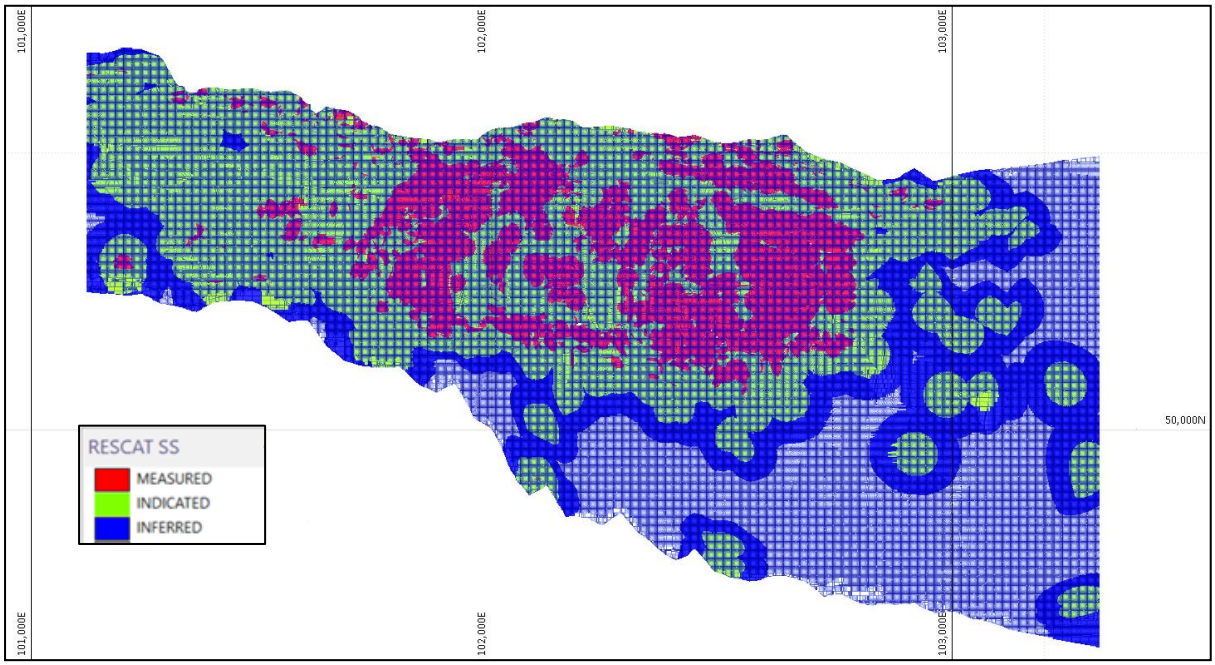

Figure 17 MCU UNIT OBM COLOUR CODED FOR RESOURCE CATEGORY, PLAN VIEW (NOT RATIONALISED)

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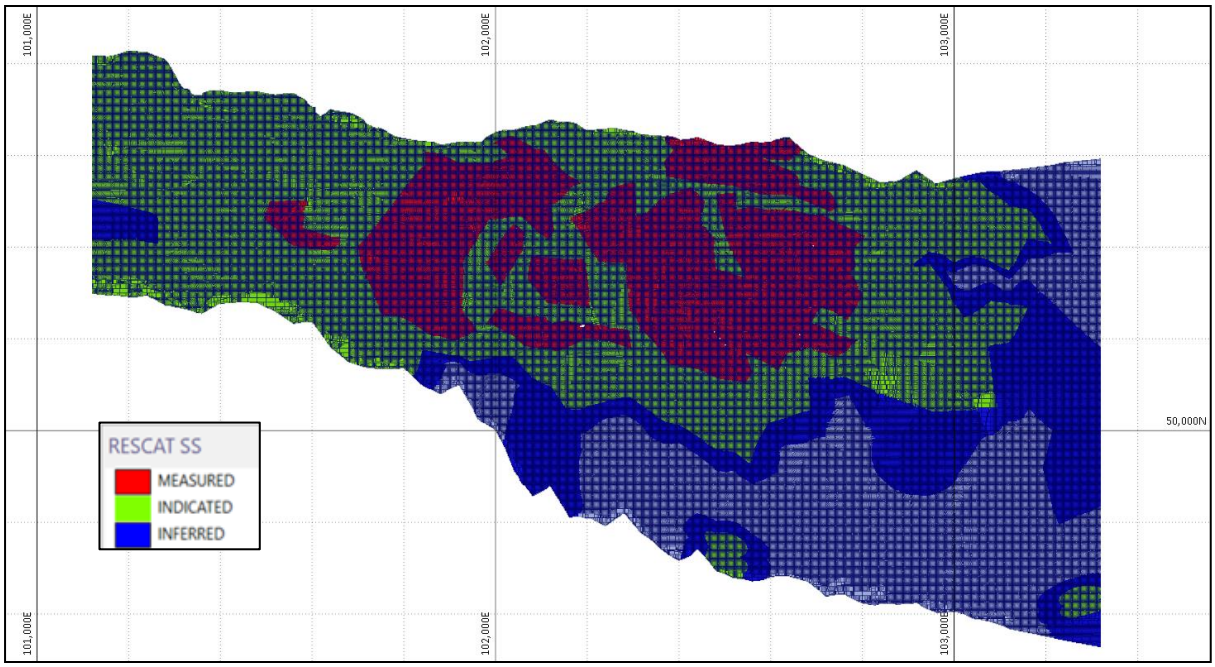

Figure 18 MCU UNIT OBM COLOUR CODED FOR RESOURCE CATEGORY, PLAN VIEW (RATIONALISED ON CATEGORY)

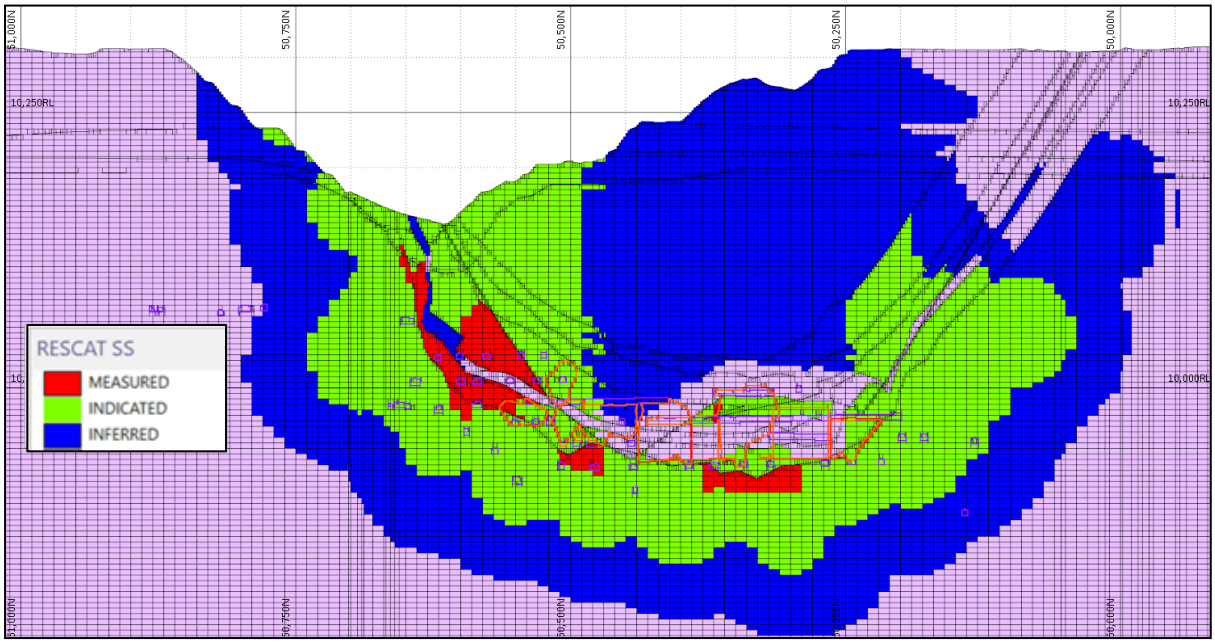

Figure 19 CROSS SECTION 102200E LOOKING EAST, OBM COLOUR CODED FOR RESOURCE CATEGORY

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 21). 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. A subsidence zone cone area surrounds the three sinkholes. For the subsidence zone outside of the sinkhole wireframes, all measured blocks were downgraded to the indicated category (Figure 22).

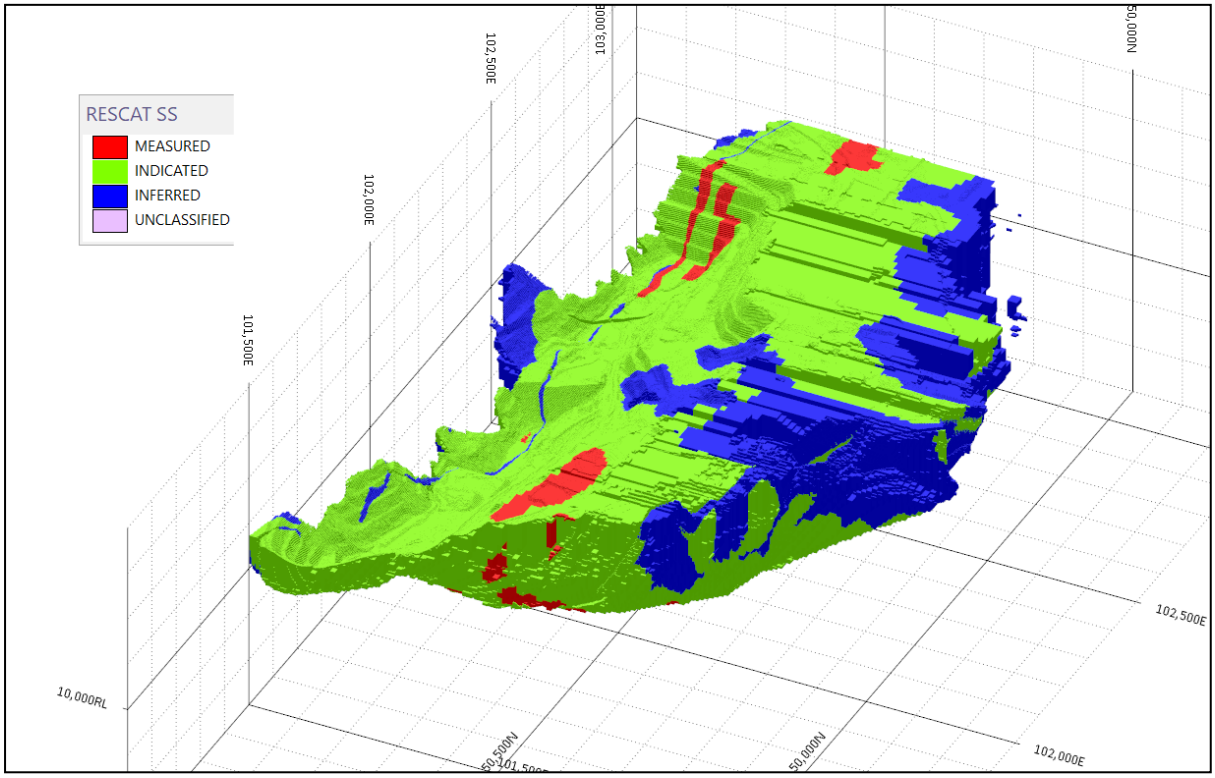

Figure 20 3D VIEW OF MRE CLASSIFICATION

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 23 and Figure 24).

The rationalisation of classification is shown in Figure 17 and Figure 18 for the MCU unit. The MRE classification is shown for all units in Figure 20.

A cross-section of the MEC 2023 MRE OBM for rationalised Resource Classification is shown in Figure 19

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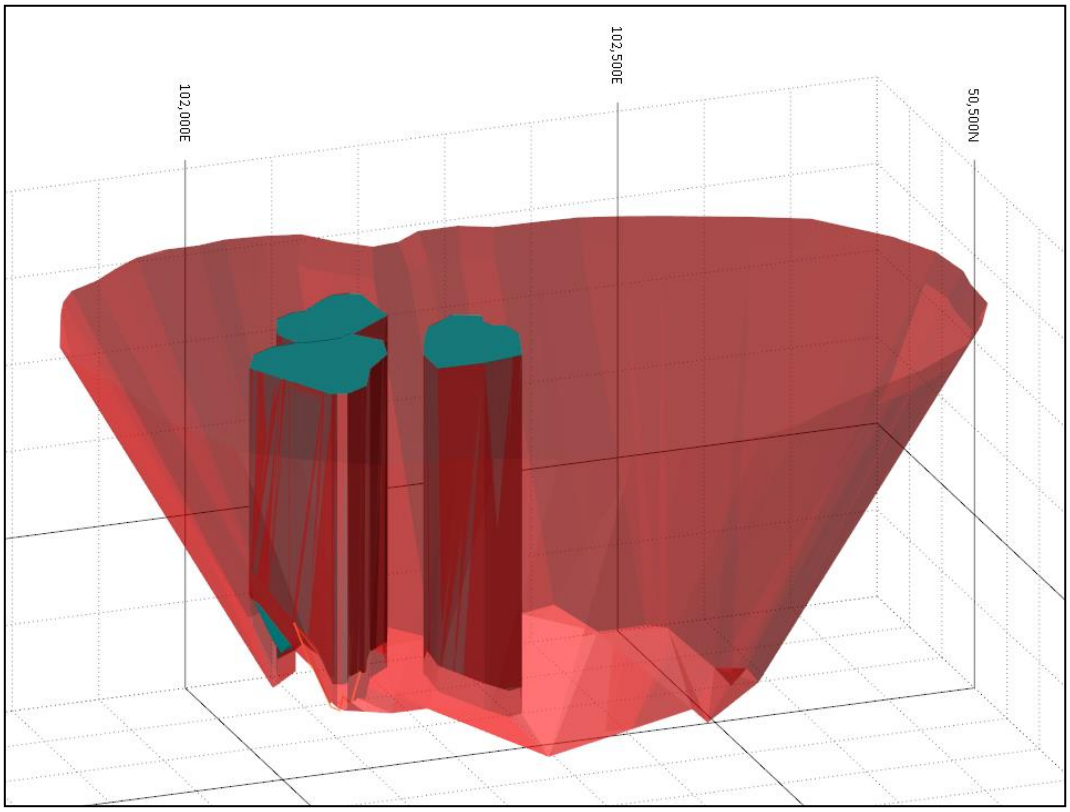

Figure 21 3D VIEW OF THE THREE SINKHOLE WIREFRAMES AND THE SUBSIDENCE ZONE CONE

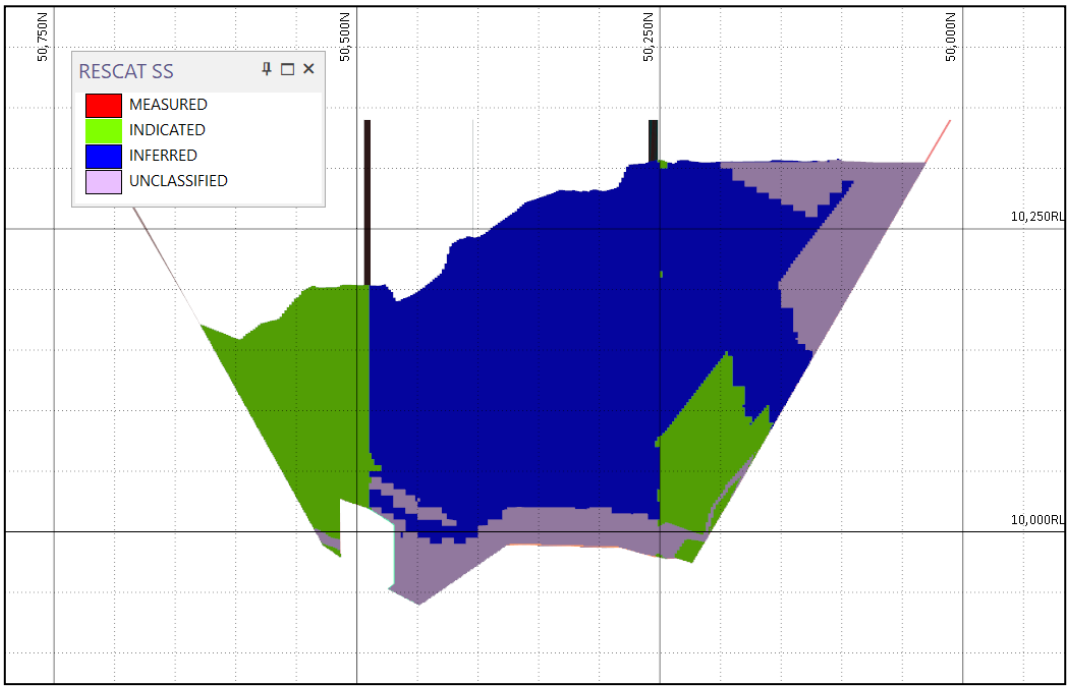

Figure 22 3D VIEW CROSS SECTION 102,000E, SUBSIDENCE DISTURBANCE AREA MRE CLASSIFICATION, LOOKING EAST

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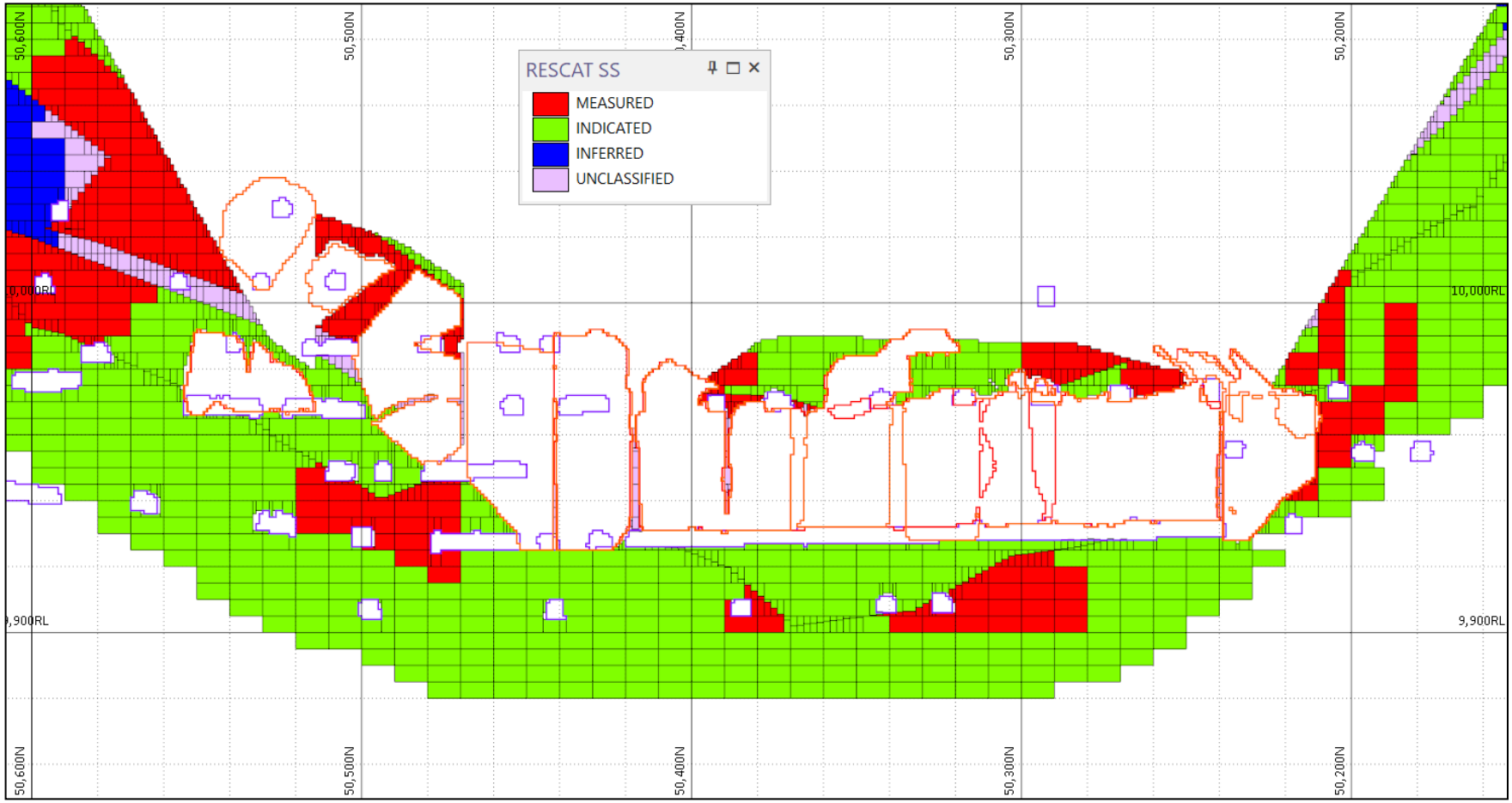

Figure 23 CROSS 102,000E, LOOKING EAST, PILLARS AND SILL PILLARS DOWNGRADED TO UNCLASSIFIED MATERIAL

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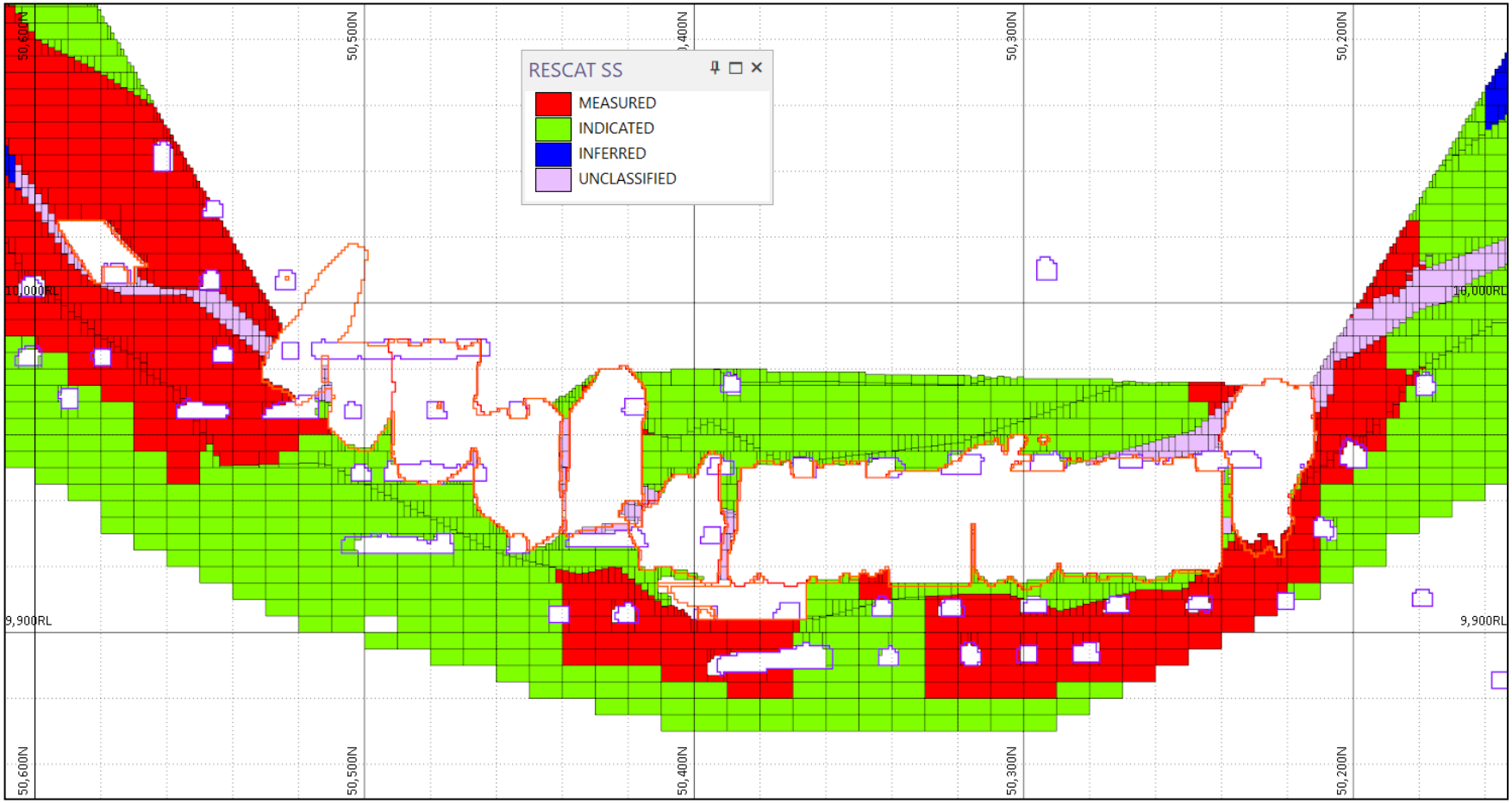

Figure 24 CROSS 102,060E, LOOKING EAST, PILLARS AND SILL PILLARS DOWNGRADED TO UNCLASSIFIED MATERIAL

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5.2 Depletion

The old workings were assigned to the MEC OBM and were depleted from the model and sub celled on a 2m east, 1m north, and 1m in elevation. This included the developments, voids, stopes, and subsidence zone. The backfill was also sub celled to the same specifications. A barren dyke was removed from the model, and a blank grade was assigned.

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

5.3 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 25). The available drilling data focussed primarily on the northern limb and hinge region, as well as being spatially clustered.

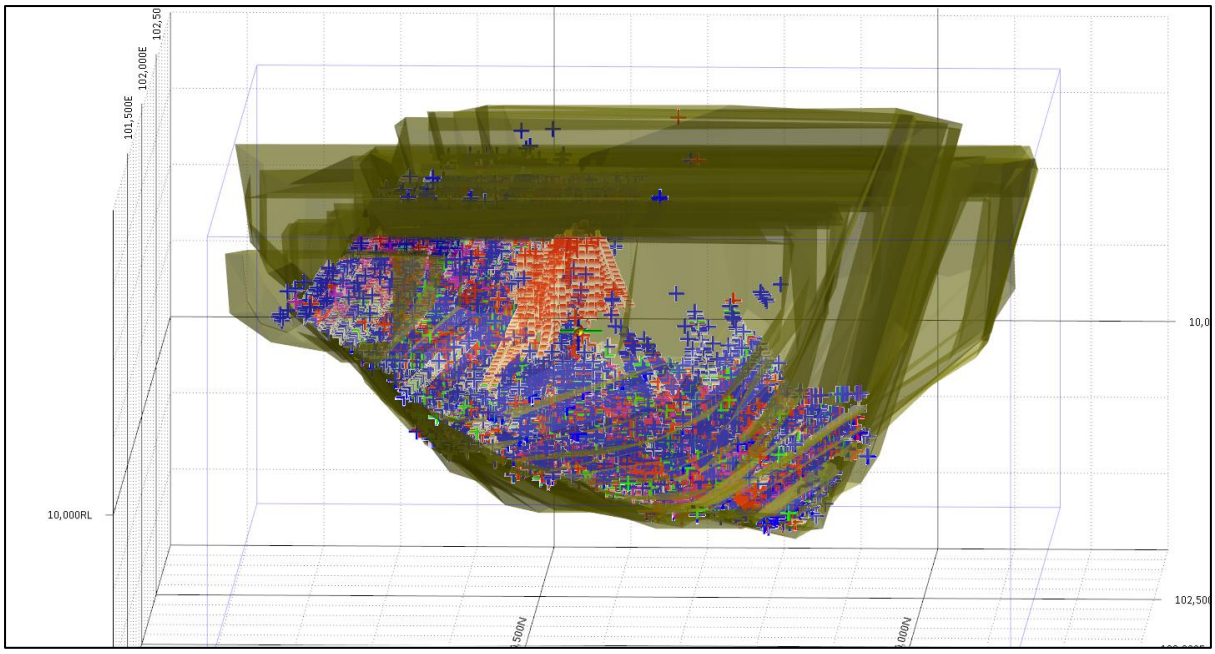

Figure 25 CLUSTERED GRADES WITHIN THE RPEEE ENVELOPE

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

Initially, the composite and estimated grades were compared spatially to identify if there were any discrepancies with the estimate, with none being found.

The whole domain estimate was then compared against the composite naïve and declustered composite grades.

Finally, swath plots were created to test that composite grade trends had been preserved in the estimate.

The whole of domain comparison for the global estimate is presented in Table 8. 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 8 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	0.7	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 9). The major mineralised units (MCU, LCU and ISHL) all exhibit significant improvement in the validation performance, and there is a reasonable correlation between the composite and estimated 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 9 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	0.7	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	1169%	1413%
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%

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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, which confirmed that the grade estimate had preserved the composite grade trends.

5.4 MEC March 2024 MRE Statement

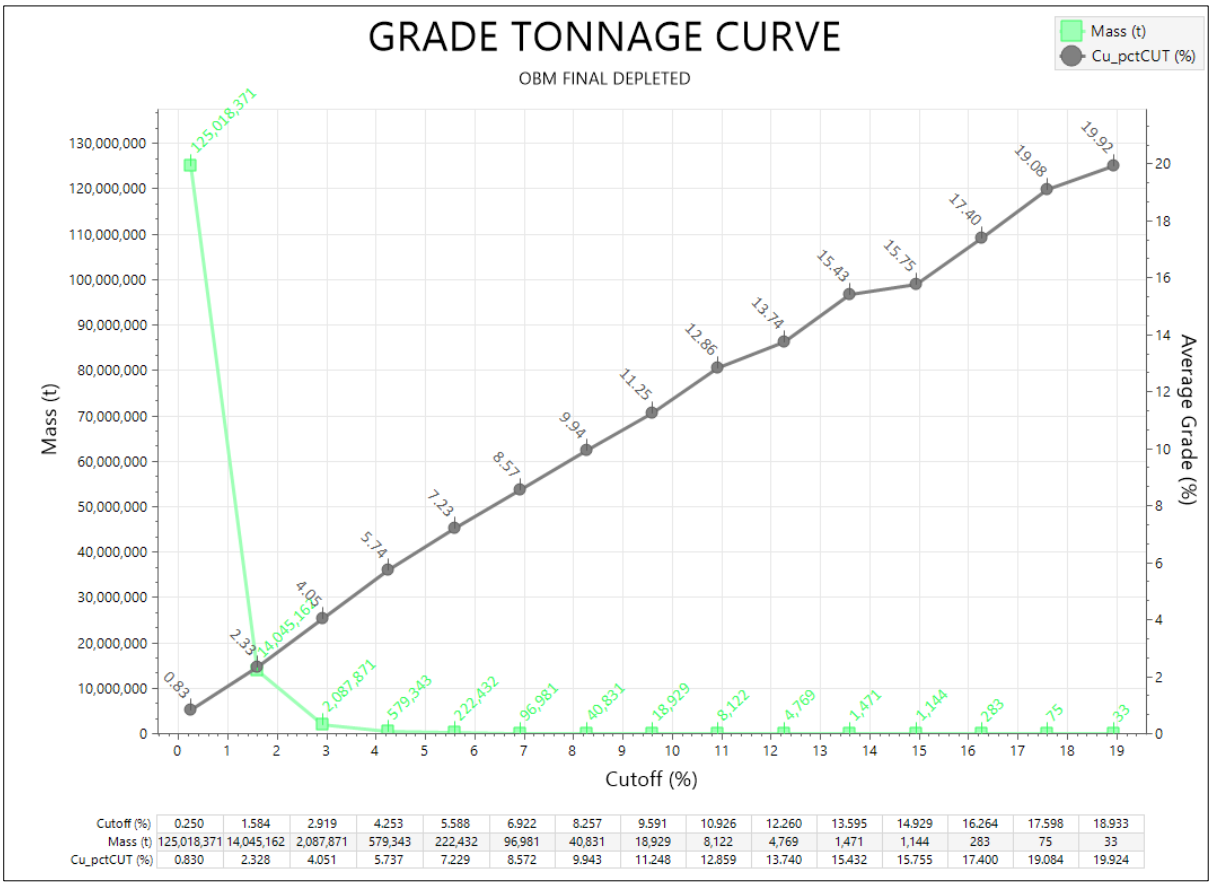
The MEC 2023 MRE is reported above a 0.25 Cu% cutoff and depleted for historical mining, applying topcut Cu% grades as per Figure 26. The grade tonnage curve for the MRE is shown in Figure 27.

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.

Figure 26 MRE EXTRACT FROM CYM MARCH 2024 MRE



Cutoff (%)	0.250	1.584	2.919	4.253	5.588	6.922	8.257	9.591	10.926	12.260	13.595	14.929	16.264	17.598	18.933
Mass (t)	125,018,371	14,045,162	2,087,871	579,343	222,432	96,981	40,831	18,929	8,122	4,769	1,471	1,144	283	75	33
Cu_pctCUT (%)	0.830	2.328	4.051	5.737	7.229	8.572	9.943	11.248	12.859	13.740	15.432	15.755	17.400	19.084	19.924

Figure 27 GRADE TONNAGE CURVE, MEC 2023 MRE

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Table 10 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	0.83	0.899	0.968	1.031

The MEC 2023 Mineral Resource estimate for the entire MRE is stated at different Cu% cutoff grades in Table 10

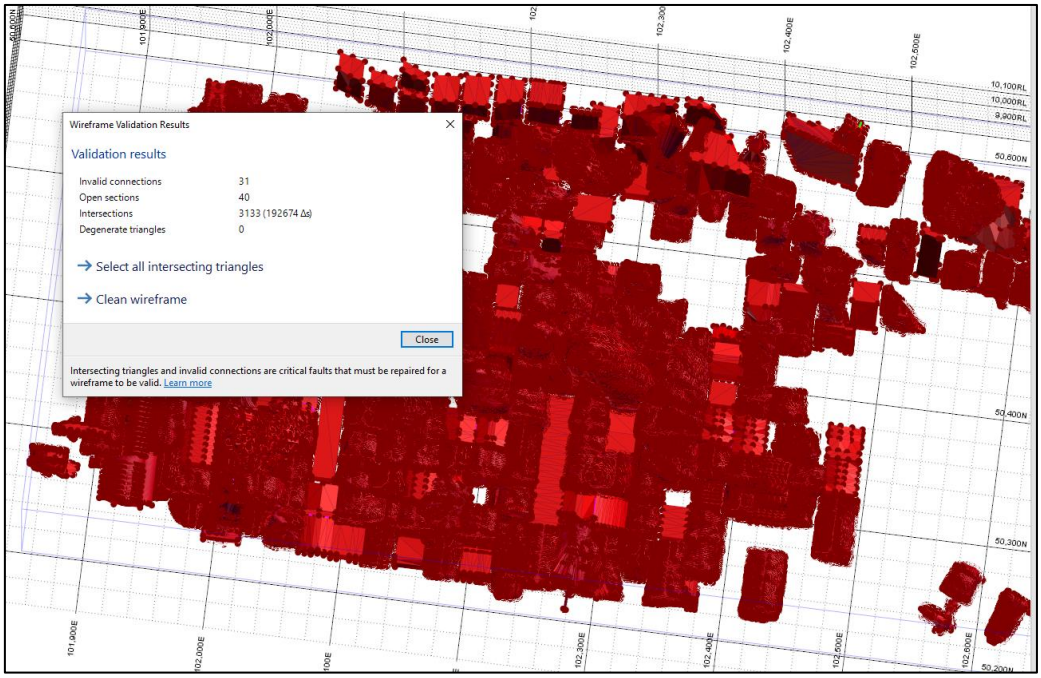

Figure 28 OLD WORKING WIREFRAMES VALIDATION RESULTS

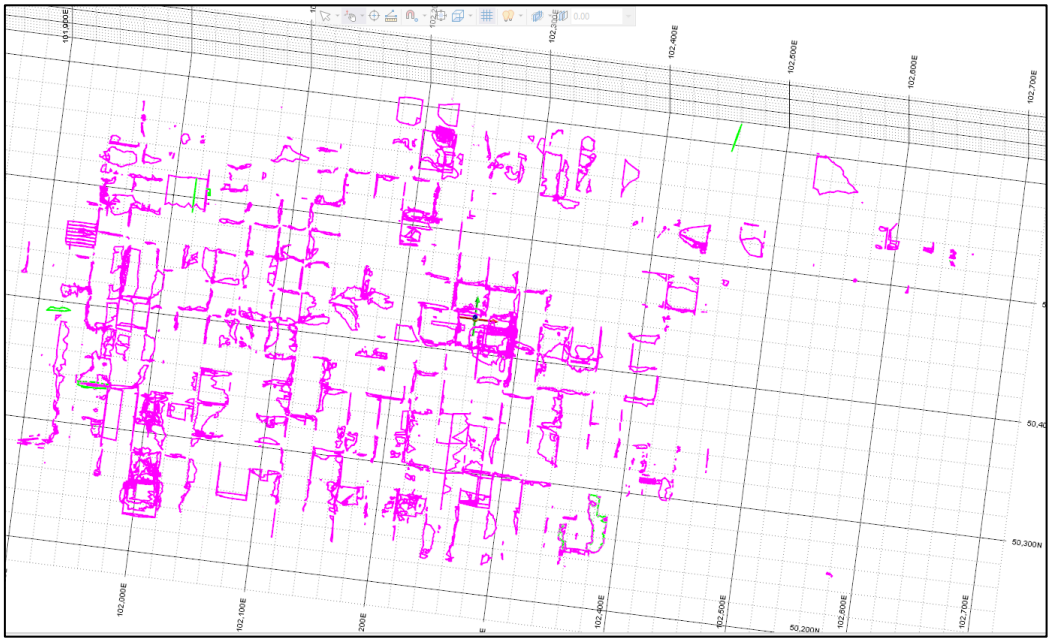

Figure 29 OLD WORKING WIREFRAMES VALIDATION ERROR LOCATIONS

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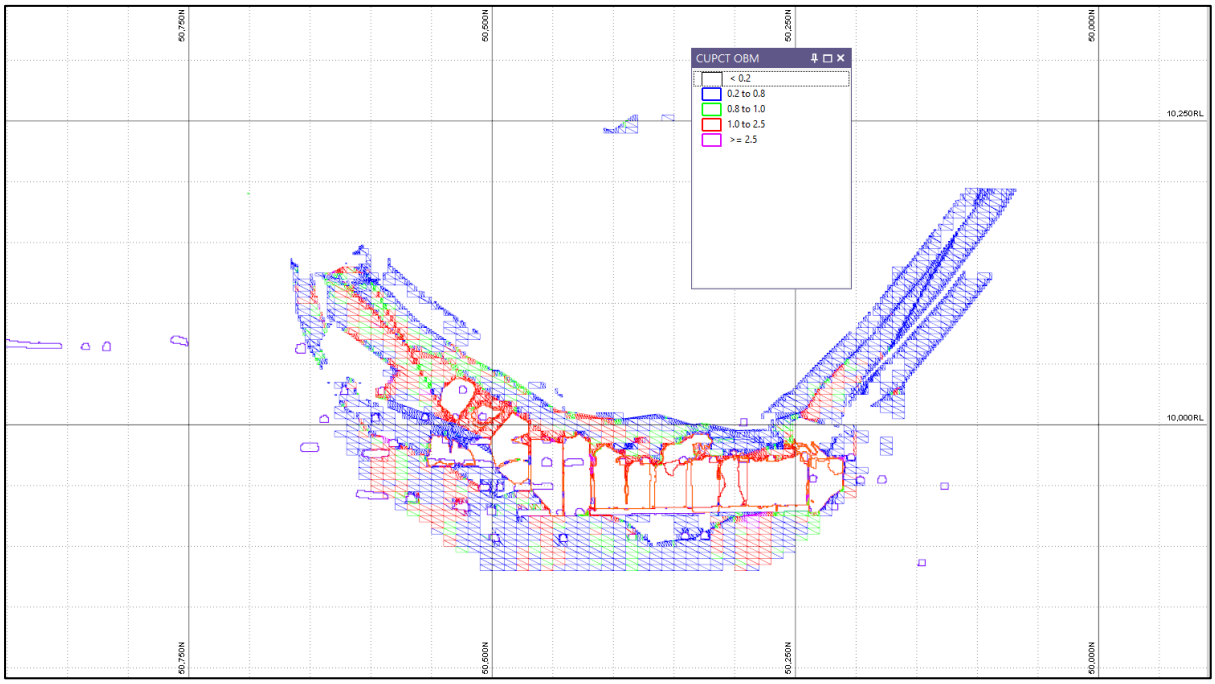

Figure 30 MEC 2023 OBM, DEPLETED, 102000E, LOOKING EAST

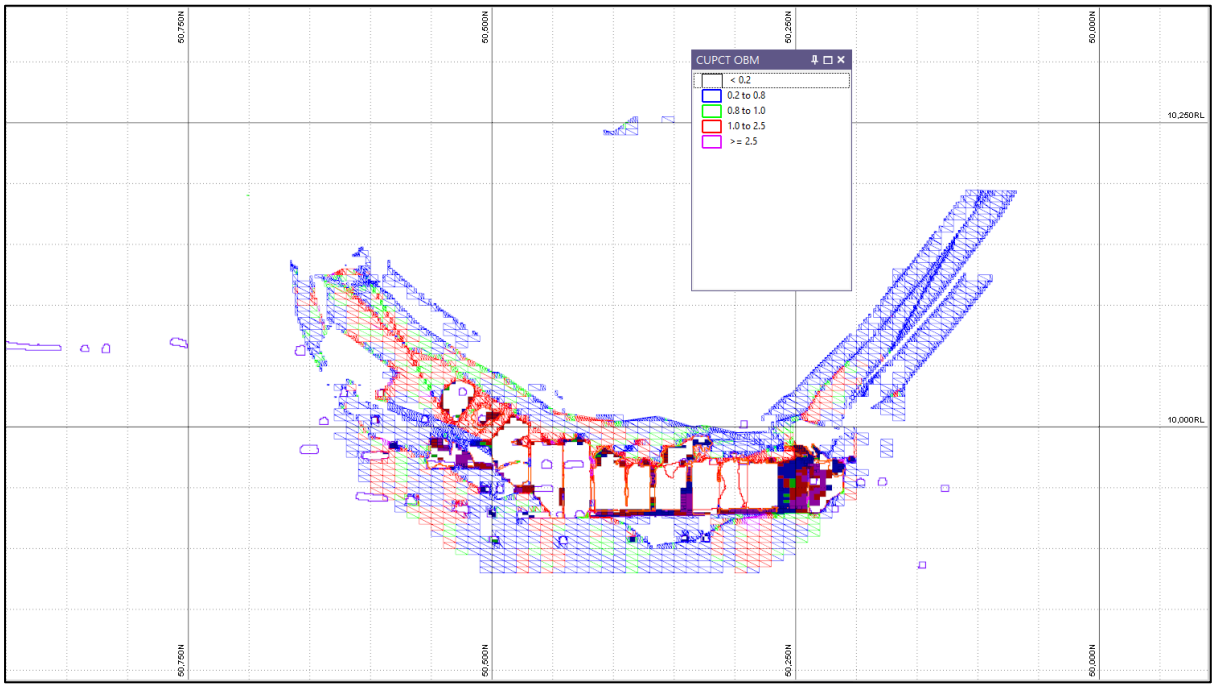

Figure 31 CSA 2022 OBM, DEPLETED, 102000E, LOOKING EAST

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6 MINERAL RESOURCE ESTIMATE - EXISTING HEAP LEACH PADS

6.1 Material Information Summary

Cyprium released a Mineral Resource Estimate (2024 Heap Leach MRE) for the existing heap leach pads at the Nifty Copper Complex.

The 2024 Heap Leach MRE defines an indicated and inferred copper Mineral Resource containing approx. 54,000 tonnes of copper that is supported to JORC reporting standards through drilling information, see Table 11. A review of historic production data indicates that there is substantial potential resource upside from unsampled stockpiled material. This unsampled material is not able to be supported through drilling information as all drill holes were halted short of the pads to maintain the integrity of the pad and liner.

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

Table 11 MEC AUGUST 2024 NIFTY HEAP LEACH MINERAL RESOURCES ESTIMATE, BY MINERAL RESOURCE CATEGORY

Resource Category	Source	Volume m3	Density t/m3	Tonnes t	Cu ppm	Cu Tonnes t	Metal %
Indicated	Stockpile From Drilling	6,253,350	1.70	10,636,950	4,100	43,580	81%
Inferred	Stockpile From Drilling	1,198,330	1.70	2,038,350	5,140	10,470	19%
Total		**7,451,680**	**1.70**	**12,675,300**	**4,260**	**54,050**	**100%**

**Zero Cu ppm cutoff grade, no top cut applied, numbers have been rounded to reflect a suitable level of precision and may not sum*

The 2024 Heap Leach MRE is the first update of an MRE since 2015. The Mineral Resource in Table 11 represents the portion of the stockpile that was estimated from drill data in accordance with the JORC (2012) reporting code.

An MRE was declared in 2015 after a series of internal studies during 2014 and 2015 were accompanied by drilling and sampling campaigns. A comparison of the 2015 and 2024 drilled Mineral Resource estimates is shown in Table 12**.**

Table 12 NIFTY HEAP LEACH 2024 MRE VERSUS 2015 MRE

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

**Numbers have been rounded to reflect a suitable level of precision and may not sum*

In 2021, Cyprium conducted a 24-hole sonic drilling program. The 2024 MRE incorporates this data. Figure 32 shows the location of the drill collars from 2007 to 2021.

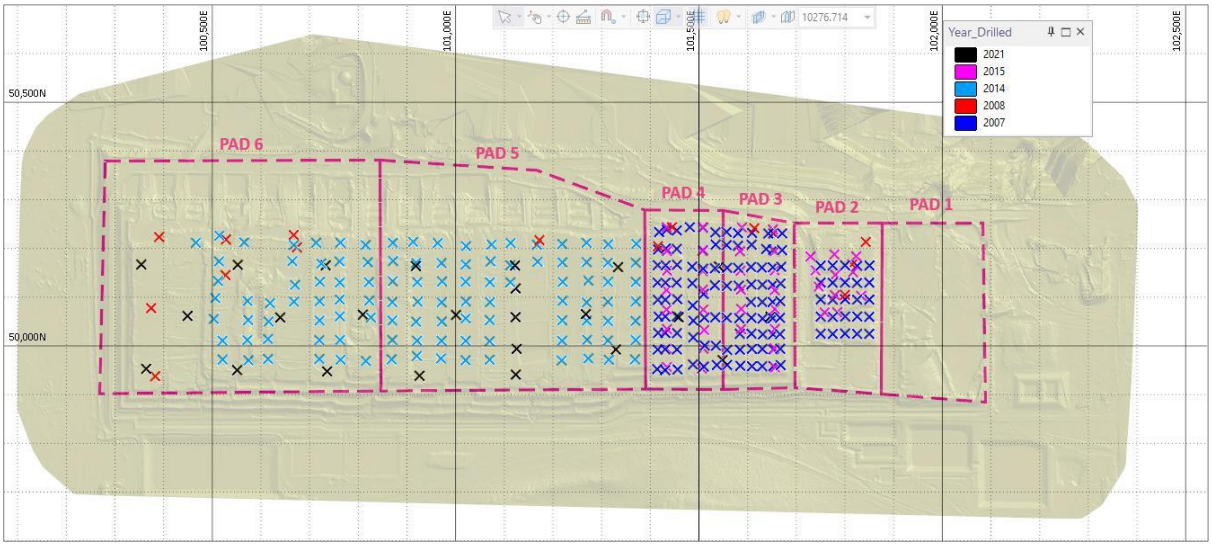

Figure 32 NIFTY HEAP LEACH DRILL HOLE LOCATION

6.2 Drilled Resource Excludes Stockpile Base

The 2024 estimation of the JORC Mineral Resource, using drilled intercepts only, is likely to significantly understate the amount of metal contained in the material on the heap leach pads as the drill holes stopped an estimated depth of between 3 and 4 meters above the heap leach pad lining to protect the integrity of the heap leach pad and liner. Therefore, a reasonable volume of material has been excluded from the Mineral Resource estimation, which was reliant on drill data.

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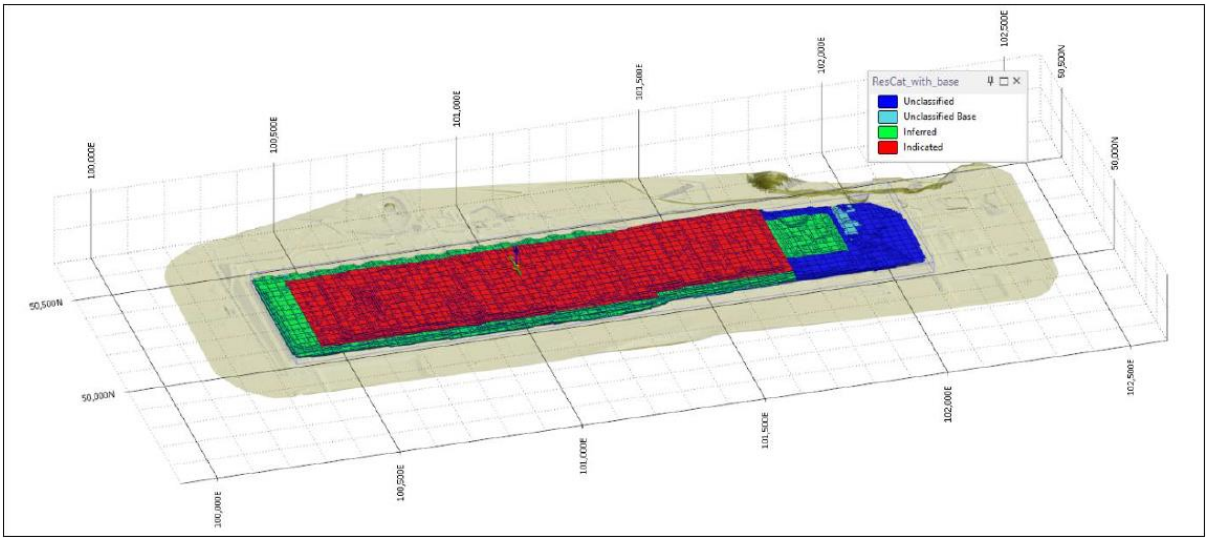

Figure 33 NIFTY HEAP LEACH 2024 MRE CLASSIFICATIONS (OBLIQUE VIEW)

Figure 33 and Figure 34 show the 2024 MRE block model in cross section and oblique view. Red and green areas correspond to drilled Indicated and Inferred Mineral Resources. Blue areas correspond to unsampled material.

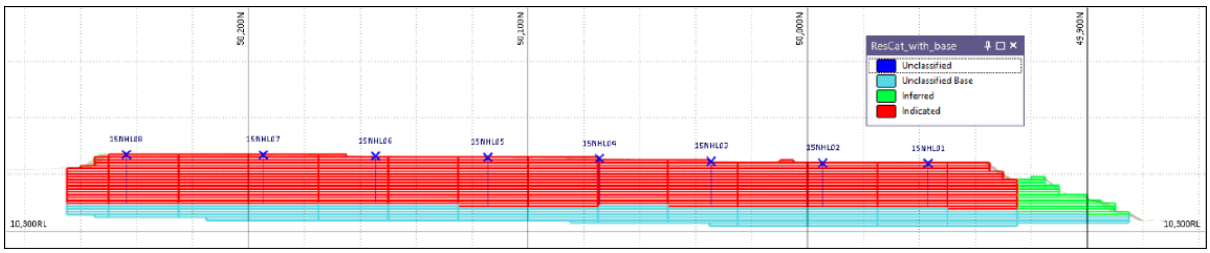

Figure 34 NIFTY HEAP LEACH 2024 MRE CLASSIFICATIONS (SECTION VIEW)

6.3 Heap Leach Stockpile - Reconciliation to Production Records

An estimate of copper contained in the entire heap leach stockpile (e.g. inclusive of unsampled material) is obtained through reconciling metallurgical accounting records from prior operations.

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

MEC Mining examined previous methods and information for adequacy under the current JORC code and recommended a number of changes to classification and drill hole inclusion.

Additional information relevant to the MEC August 2024 Heap Leach MRE is as follows -

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6.4 Geology and Geological Interpretation

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

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

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

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

6.5 Sampling And Subsampling Techniques

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

Sample collection for the 2014 and 2015 RC drilling programs was via a rig mounted cone splitter attached to the cyclone. Two samples were collected for every 1m interval and labelled A, and B. Sample A was sent to the laboratory and sample B was retained. For the 2021 sonic drilling program, single samples were collected.

6.6 Sample Preparation

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

For the 2014 and 2015 RC programs, 1.5-3kg of material was collected in a calico bag over a 1m interval from the cyclone using a cone splitter. The samples were sent to ALS laboratory for preparation (drying, crushing, splitting and pulverising) with a 50gm sample analysed using a 4-Acid ICPOES method (ME-ICP62).

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

6.7 Drilling Techniques

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

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- In 2021 a sonic drilling program was completed by Cyprium.
- 2007: The 2007 campaign targeted Pads 2, 3, and 4, with 124 RC drillholes, and reported a single composite total copper assay per drillhole.
- 2014: The 2014 campaign targeted Pads 5 and 6 with 109 RC drillholes with 1m sampling, assayed for total Cu only. During a site visit on 12 March 2020 the sample coarse rejects for these drillholes were discovered in reasonable condition in a shipping container.
- 2015: The 2015 campaign targeted Pads 2, 3, and 4, with 41 RC drillholes. Samples were at 1m intervals and were tested for total Cu only.
- 2021: A sonic drilling program was conducted in 2021 by Cyprium, targeting pads 3, 4, 5, and 6. This consisted of 24 drillholes sampled at 1m intervals and tested for Ca, Co, Cu, Fe, Mg, Mn, S, and Si.

6.8 Sample Analysis Method

The 2007 RC drilling samples were analysed by Inter Mountain Laboratories, Wyoming, USA. The samples were split into three size fractions, and analysed for Cu. The total Cu value for the whole sample was calculated as a weighted average of the results from the three size fractions. Three analytical methods were used, 4-Acid AAS for primary sulphide, copper in oxide by AAS after H2SO4 leach, and cyanide soluble copper.

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

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

6.9 Estimation Methodology

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

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

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6.10 Classification Criteria

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

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

Pad 1 and the periphery of pad 2 is mineralised waste, due to the lack of drilling data.

Where the drillholes do not extend to depth (due to the risk of penetrating the leach pad liners) then the blocks are also considered mineralised waste. All mineralised waste is unclassified material.

6.11 Cutoff Grades

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

6.12 Mining And Metallurgical Factors

The Heap Leach ore was mined and stacked previously. There are three main bodies of metallurgical test work that support Reasonable Prospects for Eventual Economic Extraction as per Table 13

Table 13 RECOVERY FROM METALLURGICAL TEST WORK PROGRAMS

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

6.12.1 Metals X Limited 2020 sequential leach testing:

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

The resultant data set provided calculated recoveries with a mean of 45.2% and standard deviation of 11.5% as outlined in Figure 35. Data shown is recovery with the y field the portion of total samples to demonstrate the distribution.

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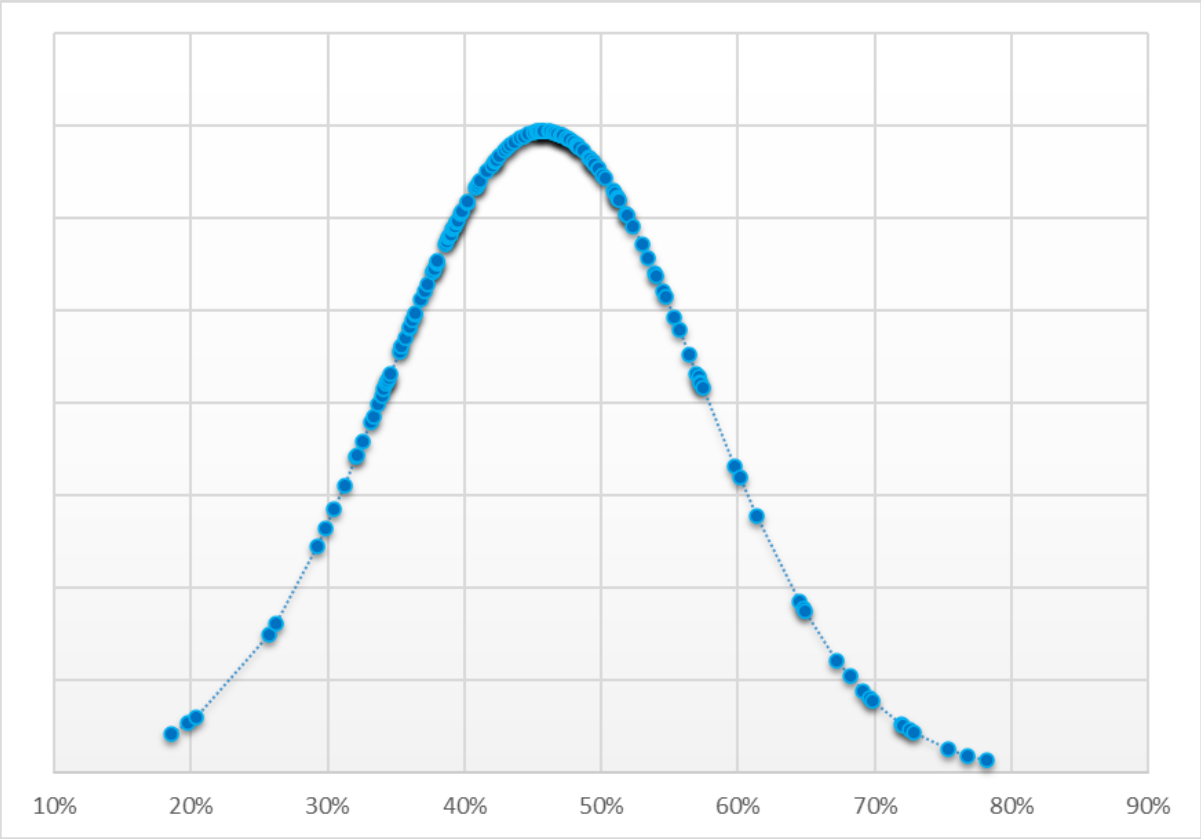

Figure 35 HEAP LEACH RECOVERY DISTRIBUTION CURVE (METALS X LIMITED DATA)

6.12.2 2024 Cyprium sequential leach testing

Further drilling was conducted by Cyprium via 24 sonic drill holes across pads 3 to 6. Pulps from 18 of these holes were composited and submitted for sequential leach in 2024. The resultant data set provided calculated recoveries that supported the Metals X data set, with a mean of 50.3% and a standard deviation of 7.6 as outlined in Figure 36. Data shown is recovery with the y field the portion of total samples to demonstrate the distribution.

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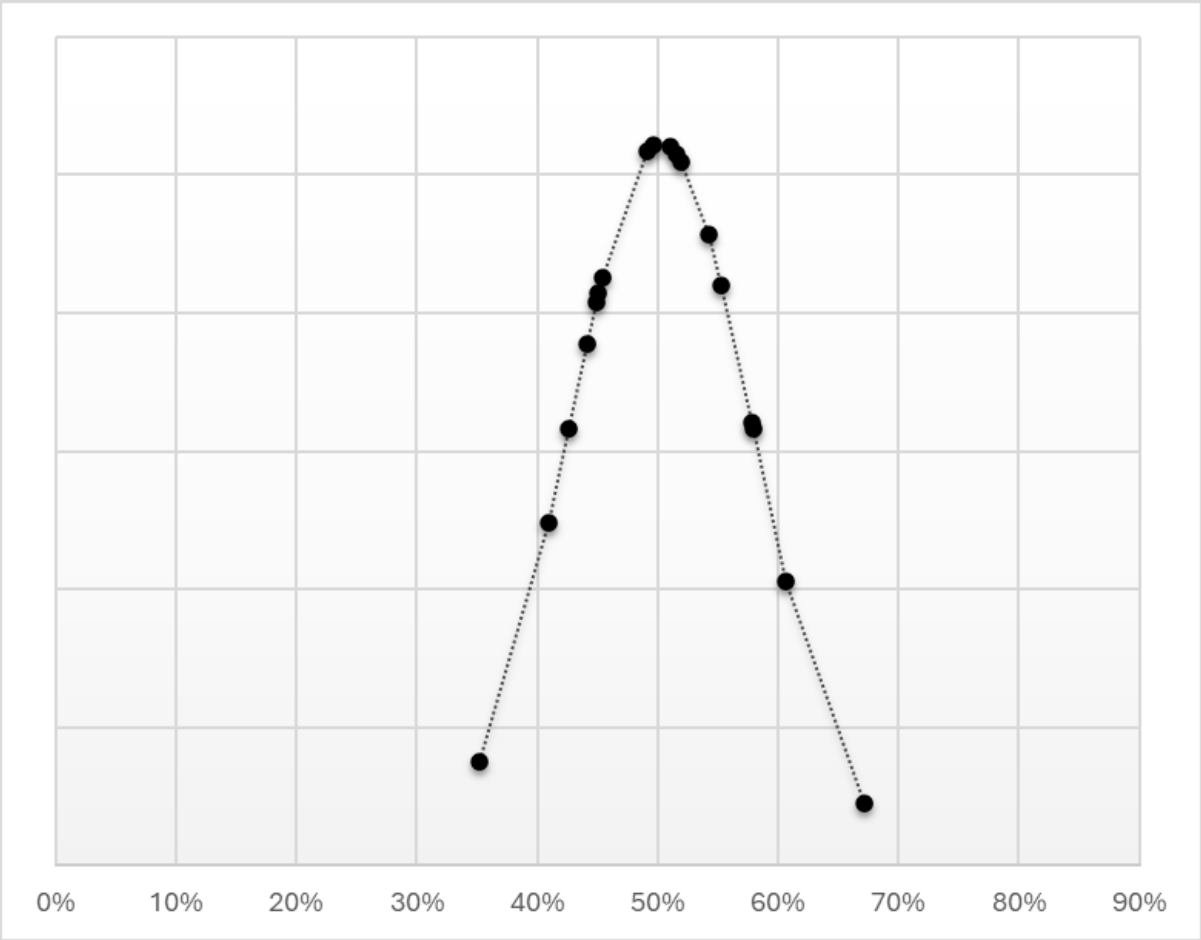

Figure 36 HEAP LEACH RECOVERY DISTRIBUTION CURVE (CYPRIUM DATA)

6.13 Modifying Factors

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

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

This basis of MRE modifying factors is considered in the associated Reserves estimated contained in this report.

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7 GEOTECHNICAL

7.1 Geotechnical Assessment

MEC completed a Geotechnical Study to a pre-feasibility level (MEC, 2024 GT PFS) as a recommendation from the scoping study works (CYM Scoping 2024).

This analysis reassessed all historical geotechnical drilling as outlined in Figure 37 and testing data, along with inclusion of 6 new holes drilled in 2023/2024 as outlined in Figure 38. The geotechnical database was regenerated incorporating all the available geotechnical data.

The study examined the overall rock mass analysis, bench scale rock mass stability and bench face angle stability, inclusive of major structures. The resulting analysis generated overall slope, bench face angle and inter-ramp angle recommendation for pit optimisation and design. These output parameters delivered a simplified geotechnical zone plan, with improved overall slope angles in the majority of the modelled zones. Pit design analysis of the Scoping study designs was also completed to test the failure modes and a confirmatory step, and to inform the design process in the future study phases.

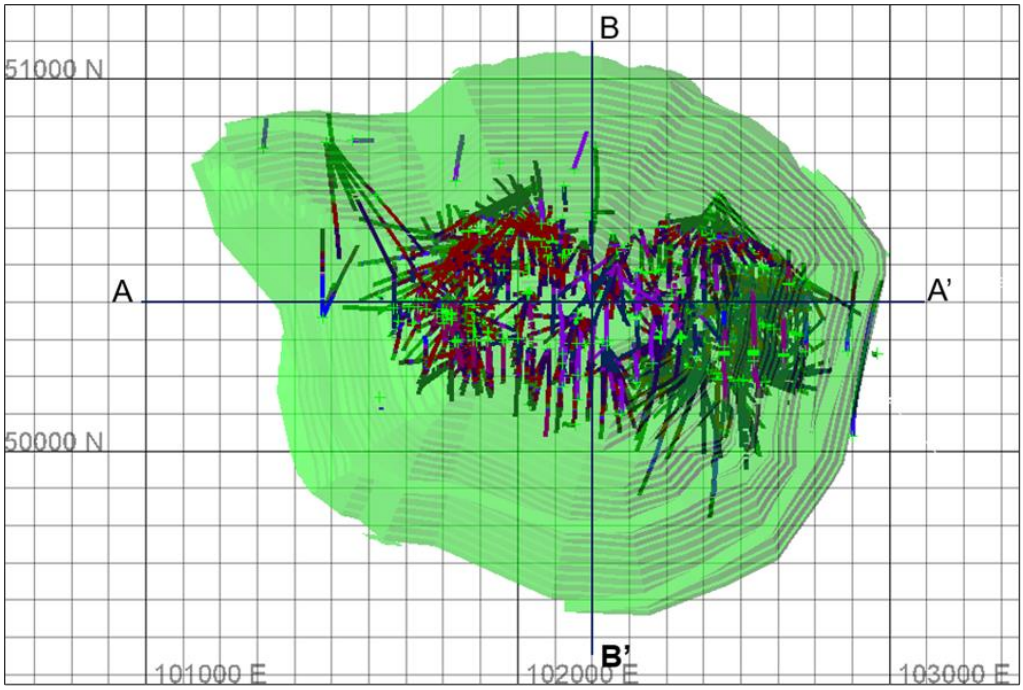

Figure 37 HISTORICAL GEOTECHNICAL DATA (MEC 271100 CYM GEOTECHNICAL PFS – FINAL V1.0)

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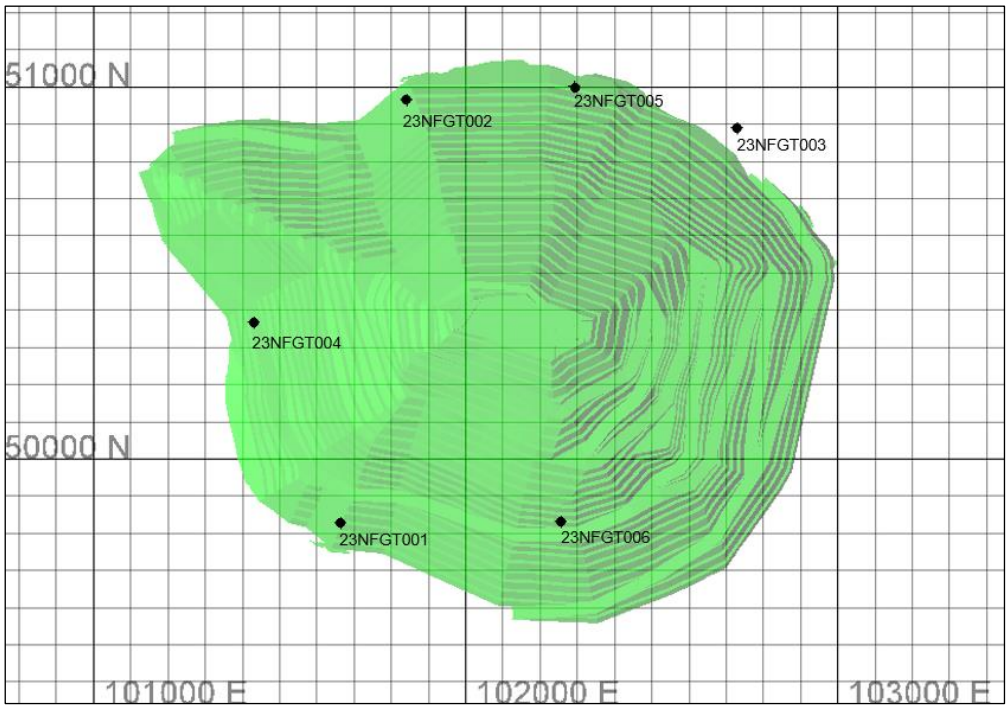

Figure 38 GEOTECHNICAL DRILL HOLE LOCATIONS (2023 DRILLING) (MEC 271100 CYM GEOTECHNICAL PFS – FINAL V1.0

7.2 Geotechnical Design Criteria

Upon completion of the recommended drill programme and associated analysis, the broader area identified for open pit operations was broken down into design criteria relating to:

- Maximum batter, berm and bench configuration to generate a Bench Face Angle (BFA);
- Maximum Overall Slope Angle (OSA) and;
- Maximum Inter Ramp (IRA) Angles

This is outlined in Figure 39.

The design criteria were applied across a total of 28 Primary domains and 6 “Special Domains”:

- Primary Domains:
  - 9 Vertical domains subdivided by oxidation state and RL
- Special Domains based on “as built” structures and occurrences:
  - Sink holes - The crest of the 3 sinkholes that “chimneyed” to the surface and expanded by 50m[1] assumes near vertical failure of the stopes and filling of void via collapsed material[2]
  - Sink hole zone of influence - Remainder of the influence area previously used by MLX

[1] Allows for a 10m catch berm and a 37-degree wall angle for vertical progression though the area
[2] Aligns with the March/April Nifty Geotechnical Review

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- Underground zone of influence - a projection around all underground workings 30m vertically at an angle of 37 Degrees[3-4]
- Waste Dumps
- Heap Leach
- InPit back fill

A summary of the design criteria and domaining applied is outlined in as outlined in Figure 40, the slope design configurations are shown in APPENDIX C GEOTECHNICAL DOMAINS.

7.3 Geotechnical Design Criteria Application

Upon release of the geotechnical assessment and in conjunction with the MRE, a view was formed on the likely placement of ramps that would:

- Maintain primary and secondary ore body and pit access,
- Allow waste haulage optimisation,
- Delay interaction with the existing SXEW infrastructure for as long as possible and;
- Accommodate dual lane haulage for 230t class dump trucks for the majority of the haul cycle

Based on this view, additional berm width was added to the IRA's dependent based on the primary geotechnical domain and the horizon to generate a revised IRA. Upon completion of this the minimum of the OSA and Revised IRA was taken forward as the angle to be used for optimisation purposes. These angles are outlined in Figure 40.

Upon completion of the optimisation, design work was completed in line with the expected ramp layout and the minimisation of ramps within the underground zone of influence.

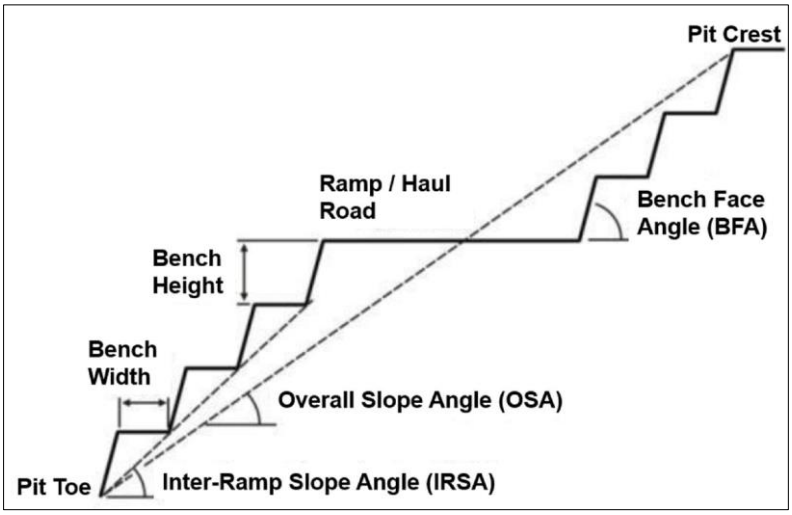

Figure 39 NOMINAL BATTER BERM CONFIGURATON

[3] 3 x 10 m blast benches at the natural rill angle.
[4] Most stopes are filled but Cyprium reported low confidence in this data and as such all workings should be treated as empty/ voids until proven otherwise

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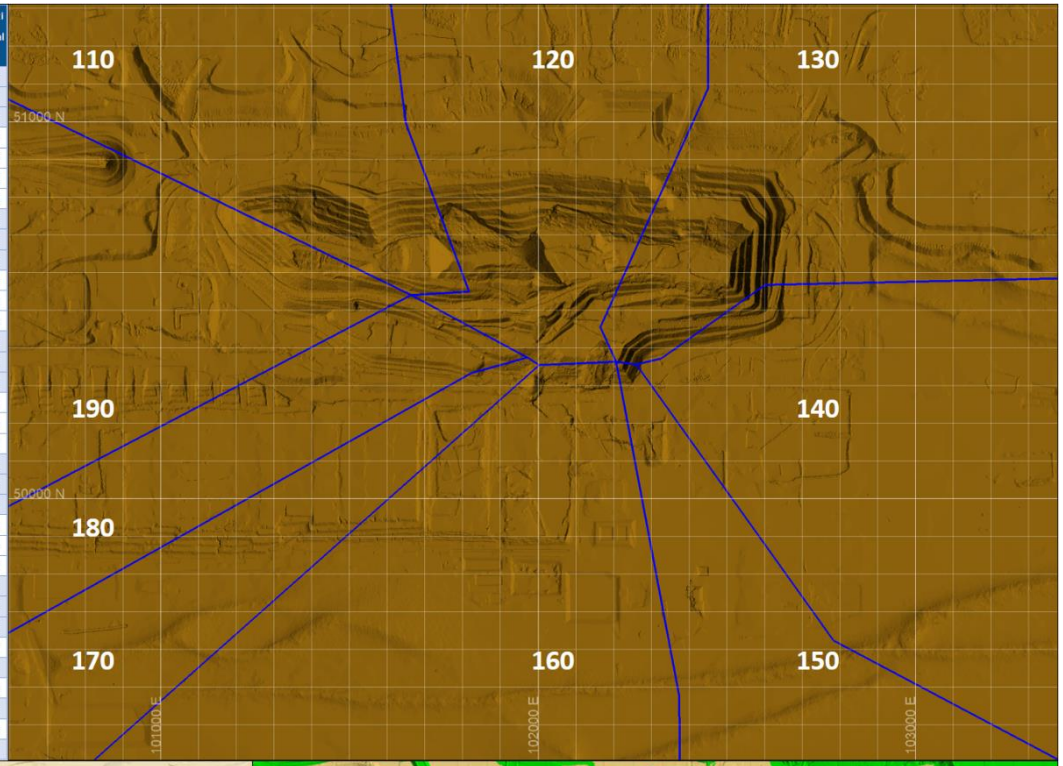
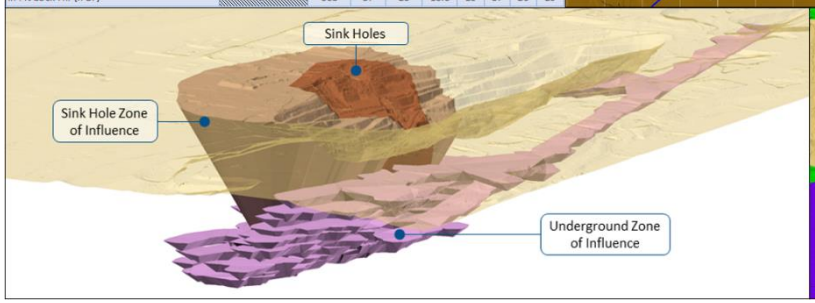
Description	Domain Base #	Domain Weather #	Domain Final #	Batter Angle °	Bench Height m	Berm Width m	IRA °	OSA °	Opti Base °	Opti Final °
Topography to the Base of Oxidation	110	1	111	65	20	12.9	42	62	42	33
Base of Oxidation to the Base of Transitional	110	2	112	75	20	8.5	55	62	55	55
Fresh	110	3	113	75	20	8.5	55	62	55	55
Topography to the Base of Oxidation	120	1	121	65	20	12.9	42	50	42	42
Base of Oxidation to the Base of Transitional	120	2	122	75	20	10.3	52	50	50	34
Fresh>10,500 RL	120	3	123	75	20	10.3	52	50	50	50
Fresh<10500 RL	120	4	124	70	20	8.5	52	50	50	50
Topography to the Base of Oxidation	130	1	131	65	20	12.9	42	43	42	42
Base of Oxidation to the Base of Transitional	130	2	132	75	20	14.0	46	43	43	43
Fresh	130	3	133	62	20	9.4	45	43	43	42
Topography to the Base of Oxidation	140	1	141	65	20	12.9	42	40	40	30
Base of Oxidation to the Base of Transitional	140	2	142	75	20	18.5	40	40	40	31
Fresh	140	3	143	75	20	19.3	39	40	39	33
Topography to the Base of Oxidation	150	1	151	65	20	12.9	42	40	40	31
Base of Oxidation to the Base of Transitional	150	2	152	75	20	14.0	46	40	40	40
Fresh	150	3	153	75	20	12.6	48	40	40	40
Topography to the Base of Oxidation	160	1	161	65	20	12.9	42	54	42	42
Base of Oxidation to the Base of Transitional	160	2	162	75	20	11.4	50	54	50	50
Fresh	160	3	163	75	20	9.2	54	54	54	47
Topography to the Base of Oxidation	170	1	171	65	20	12.9	42	54	42	42
Base of Oxidation to the Base of Transitional	170	2	172	75	20	11.4	50	54	50	29
Fresh	170	3	173	56	20	8.5	42	54	42	40
Topography to the Base of Oxidation	180	1	181	65	20	12.9	42	37	37	35
Base of Oxidation to the Base of Transitional	180	2	182	42	20	8.5	33	37	33	33
Fresh	180	3	183	42	20	8.5	33	37	33	33
Topography to the Base of Oxidation	190	1	191	65	20	12.9	42	65	42	32
Base of Oxidation to the Base of Transitional	190	2	192	65	20	8.5	48	65	48	48
Fresh	190	3	193	65	20	8.5	48	65	48	48
Sink Holes - Crest expanded by 50m			301	42	20	6.7	35	42	35	35
Sink hole Zone of Influence			302	42	20	6.7	35	42	35	35
Under ground workings Zone of Influence			401	42	20	6.7	35	42	35	35
Historic Heap Leap Pads			501	37	20	10.0	29	37	29	29
Waste Dump above original topography			502	37	20	20.0	23	37	23	23
In Pit back Fill (IPBF)			503	37	20	10.0	29	37	29	29





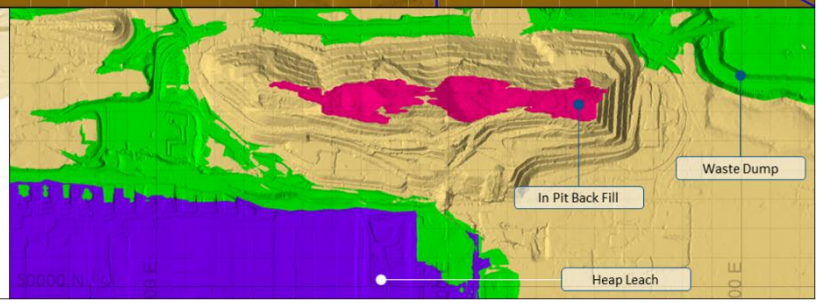


Figure 40 GEOTECHNICAL DOMAINS, ZONES AND ANGLES

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7.4 Management of Existing Underground Voids

A detailed void management plan will be developed and utilised to manage interactions between the open pit mining and the existing underground stopes. Probe drilling will be completed from above the stopes at a distance where the pillar between the pit floor and the workings are at a ratio not less than 2:1. Probe drilling will then allow stopes to be outlined and delineated based on their backfill status prior to mining into the area. Stopes that are found to be open can be backfilled or collapsed through blasting as required.

8 HYDROLOGY AND HYDROGEOLOGY

8.1 Water Table

The groundwater level (GWL) is measured from 27 monitoring boreholes around NCO as illustrated in Figure 41. In September 2023, the GWL was recorded approximately 120 m below the surface in the northern part of NCO and approximately 75 m below the surface in the southern part of NCM (Cyprium, 2023).

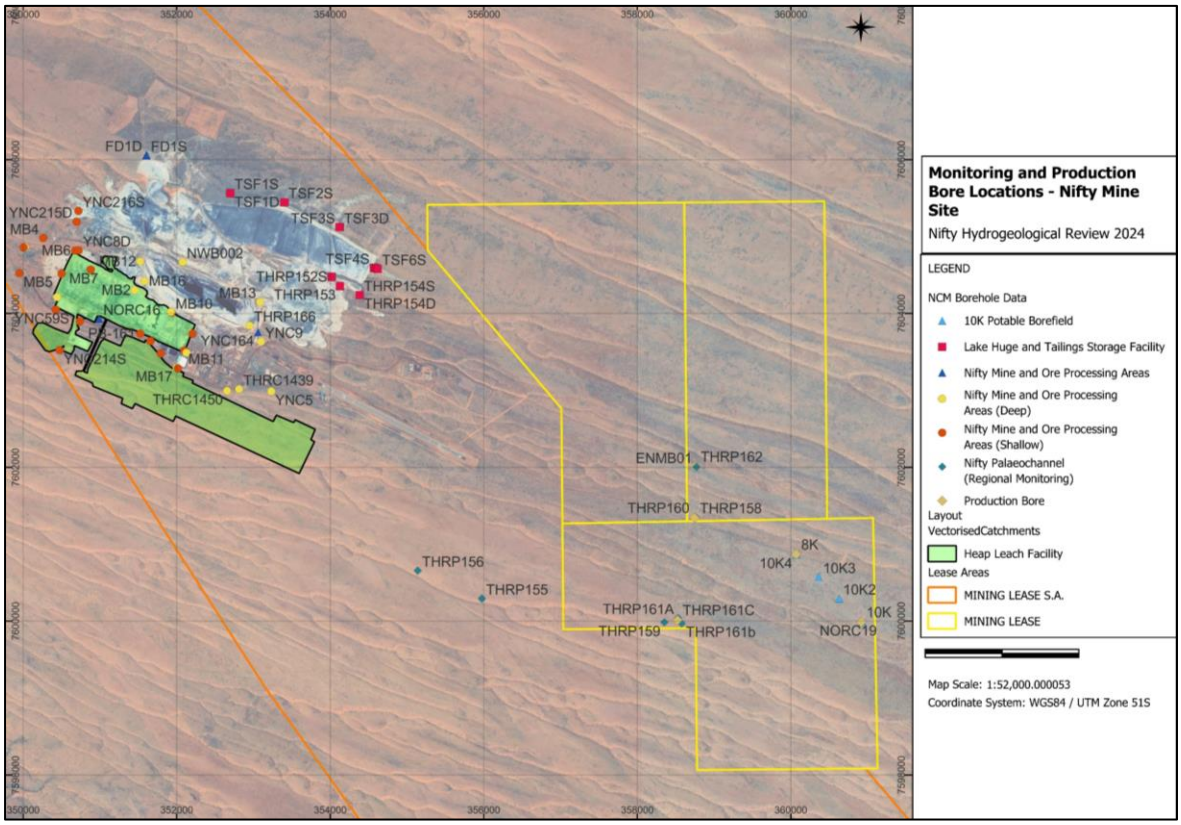

Figure 41 WATER BORE LOCATION

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8.2 Water Supply

Water supply will be primarily provided by dewatering from the historical underground workings augmented by abstraction from the East Nifty borefield. Since the existing pit has been partially flooded, the mine pit will need to be emptied in advance of the mining front. Cyprium is proposing to use the pit lake water to both irrigate any restart of the heap leaching facilities (estimated at second half 2026) and supplement process water supply for concentrator operations (estimated at first half 2027).

It is anticipated that water demand increases significantly as water will be required for both heap leach irrigation and concentrate operations. Most of the water used in concentrate operations is lost from the system as historical records indicate that tailings return tend to be very small due to the significant water deficit conditions that occur at the site.

The higher water demand from the concentrator will require an expansion of the existing East Nifty borefield.

The current approved water licences are as follows:

Licence Number	Description	Annual entitlement
GWL66212	Potable water "10K borefield"	75,0000kL
GWL102247	Production bores - East Nifty borefield	1,500,000kL
GWL210987	U/G dewatering	2,300,000kL
CAW210084	Licence to Construct or Alter Well	

Tailings decant design system is to be studied and planned in the upgrade works to maximise water retention. Options for a future return water and water storage dam are to be explored in future study works, to address water needs later in the mine life. The integrated waste storage design in the north dump has surplus tailings dam capacity that could be employed for water storage should this be required until later in the mine life where the tailings capacity is required. This capacity is deemed sufficient for the level of this study.

8.3 Climate

The region experiences an arid to semi-arid climate, characterised by high summer temperatures and milder winter conditions. The region encounters low rainfall, with an average of 353 mm per year, and considerably higher evaporation rates, resulting in a notable moisture deficit. Summer tropical cyclones and tropical lows originating from the northwest can lead to intense rain during the summer, causing localised short-term flooding. The highest rainfall at the project occurs during the summer months of January to March.

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8.4 Water Balance

8.4.1 Model Development

The site wide water balance was completed by Groundwater Resource Management (GRM) as outlined in (GRM, 2024) and accommodates mining, heap leach and concentrator operations. The report was using a production profile that has been superseded since publication however the results remain relevant and highlight the water supply requirements

The proposed operating strategy comprises a Central Transfer Pond which receives water supply from the various sources. The water pond is then used to supply the make-up water requirements for the heap leach operations, the concentrator and general dust suppression. The pond will receive various water sources including Reverse Osmosis (RO) reject, stormwater from the open pit and dewatering from the underground operations, with East Nifty borefield to be used as last priority to "top-up" the Central Water Pond.

8.4.2 Results

A comprehensive site-wide water balance model was developed for the proposed Nifty operations. The site wide water balance model comprised a detailed simulation of the water processes related to all processes at the site.

The model results indicate that the highest water demands from the East Nifty Borefield is required between 2028 and 2031 when water is required for both heap leach irrigation and concentrator make-up water. Water demands will drop with the cessation of heap leach activities. Estimated requirements for concentrator and site dust suppression activities. During the Peak operating period requirements are predicted to be 490 kL/h, with the mine needs prior and post the leaching activities estimated at 330 kL/h. which is 92 L/s. As the current combined yield of the East Nifty Borefield is about 30 L/s, the expanded borefield plan is expected to be able to deliver an additional 81 L/s. Additional water supply is expected to be sourced as part of the underground mine dewatering as the mine progresses but also with access bores available until approximately 2033 (GRM, 2024).

It is recommended that the East Nifty Borefield should be expanded to include an additional 81 L/s and this borefield will need to be in place by 2028, the specific timeline will be assessed further in the future study works, with dam storage options to also be considered for later in the mine life. MEC also recommend further borefield options be tested in the North west of the lease and south eastern extents, both closer to surface water features and likely to reduce the supply risk that may present with a singular field, these works have been underpinned by prior ground water studies and MECs hydrogeological consultants (EGI, 2024).

The completed analysis and supply model appears sufficient for the basis of estimation. The hydrological and hydrogeology model will be updated further as geology parameters and well performance details are further tested. These works should occur as pre-production activities.

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9 METALLURGY

The Nifty project presents two processing facilities (Streams) from which test work and historical performance data is available to inform the metallurgical and processing assumptions.

These streams and their historic performance are outlined below:

- Sulphide Stream:
  - Sulphide and transitional ores
  - Process of crush, grind, float and concentrate (Concentrator)
  - Operated between 2006 and 2019 with:
    - ~24.9 million Wet Tonnes fed and;
    - ~495kt copper in concentrate produced
- Oxide Stream:
  - Oxide ores[5]
  - Process of crush, stack, agglomerate, leach, solvent exchange (SX) and electro winning (EW) (Heap Leach)
  - Operated between 1993 and 2009 with;
    - ~18 million tonnes stacked and;
    - ~220 kt of copper cathode produced

9.1 Sulphide Stream

9.1.1 Existing Process Plant

Prior to the transfer to care and maintenance in 2019, the Sulphide stream was via a crush, grind, float, thicken, concentrate, process through a 3.0mtpa plant. The actual flow sheet for the plant is outlined in Figure 42 The current processing plant comprises:

- ROM pads with >100,000 tonne capacity
- Primary surface jaw crusher
- Conventional flotation concentrator including SAG mill, ball mill, flotation cells, filter plant, concentrator thicker, and tails thickener.

[5] Some transitional and fresh ores were stacked during the transition from heap leach to concentrate processing

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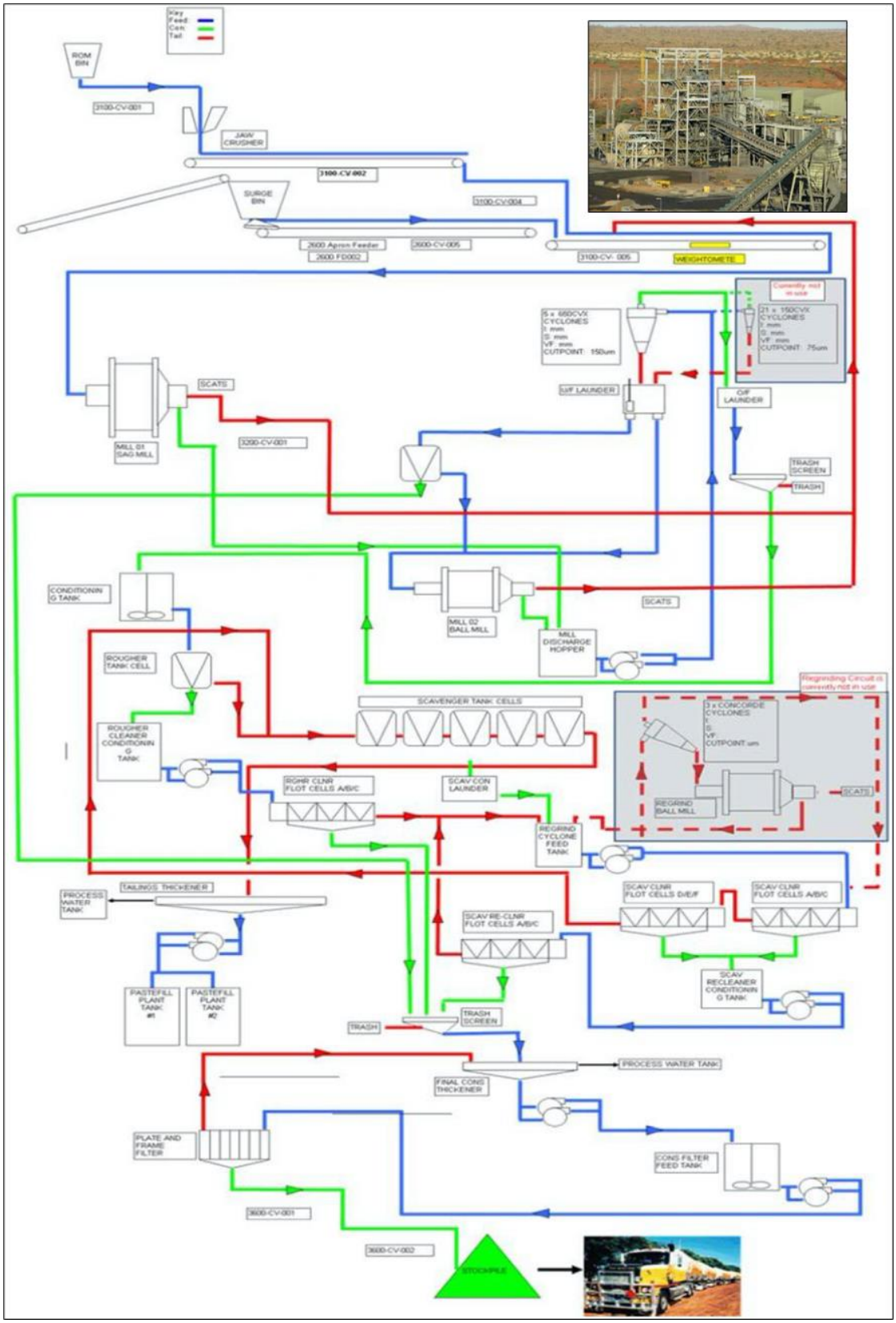

Figure 42 2019 CONCENTRATE FLOW SHEET

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9.1.2 Chalcopyrite Ore

Of the three ore types, the oxide, the chalcocite and the chalcopyrite, the chalcopyrite has the most significant body of test work, coupled with over 2000 data points of daily operational data. The optimised pit shells demonstrated the ore available for feed to the concentrator existed in the following ratio:

- Oxides – 6%
- Chalcocite – 14%
- Primary Chalcopyrite – 80%

This de-risks the Cyprium project significantly, as the majority of the concentrator feed, the chalcopyrite, is well understood, well tested and optimised after many years of concentrator operation.

9.1.3 Test Programs

Two major test programs have been undertaken on the primary chalcopyrite's, the initial 2003 Ammtec testing for the Birla feasibility study and a 2019 optimisation program by BV for MLX (Metals X, 2020). The Ammtec testing is the most comprehensive, as expected as part of the initial feasibility testing, and was conducted on a master composite followed by variability testing and then separately chalcocite testing.

- The main composite was produced by combining ore from 10 different drill holes.
- The variability testing was conducted on ore selected from 9 different drill holes, and the chalcocite testing was conducted on ore from a further 3 different drill holes.
- In all, the spread of drill data not only covers the subsequent underground operations, but also the newly planned concentrator feed.
- The 2019 MLX testing was conducted at the eastern and western ore zones and was conducted on ore from 17 different drill holes, independent from the previous Birla drilling.
- A further 6 additional diamond holes were drilled in 2021, and form part of the 2023/24 Met testing program. This ore will provide the met testing source for oxide and chalcopyrite ore.

Hole locations and existing pit / underground workings for all three drill programs are provided in the appendices.

A summary of the parameters optimised during the two major testing programs are shown in Table 14.

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Table 14 MAJOR TEST PARAMETER COMPARISON (Metals X, 2020)

Parameter	2003 Ammtec	2019 BV
Grind size optimised	Yes	Yes
% Solids optimised		Yes
Rougher pH optimised	Yes	Yes
Collector dose rate optimised	Yes	Yes
Cleaner pH optimised	Yes	Yes
Regrind size optimised	Yes	Yes
Carbon depressant optimised		Yes
Frother optimised	Yes	Yes
Flash Flot testing	Yes	
2 Stage cleaner testing	Yes	
Locked cycle testing	Yes	

Optimised Result	2003 Ammtec	2019 BV
Cu Head Grade	2.86% Cu	2.14% Cu
Cu Recovery	97.54%	96.00%
Cu con grade	19.68% Cu	17.2% Cu

When compensating for the different head grades, the results were very similar, giving further confidence to the repeatability of the chalcopyrite flotation performance over time.

9.1.4 Historical Operating Data

As described in the memo Grade Recovery Curve Derivation (Metals X, 2020), data from daily summary flotation performance spanning from December 2011 through to May 2019 was analysed. This appears a suitable period for performance assessment as this is after the majority of major plant recovery improvement projects had been completed, as follows:

- Mipac control automation of the mill – Jan 2009.
- 125mm ball trial began – Oct 2009.
- Trial of 500 mm cyclones began – Dec 2009.
- SAG Lifter angle changed to 15 deg – Jun 2010.
- Lime slaker commissioned – Dec 2010.

When the daily data is assessed as a mass pull vs upgrade ratio correlation, the resulting dataset comprising nearly 2000 data points exhibits a surprisingly tight curve with a correlation coefficient of 0.99, indicative of a fast-floating ore with robust recovery characteristics as outlined in Figure 43.

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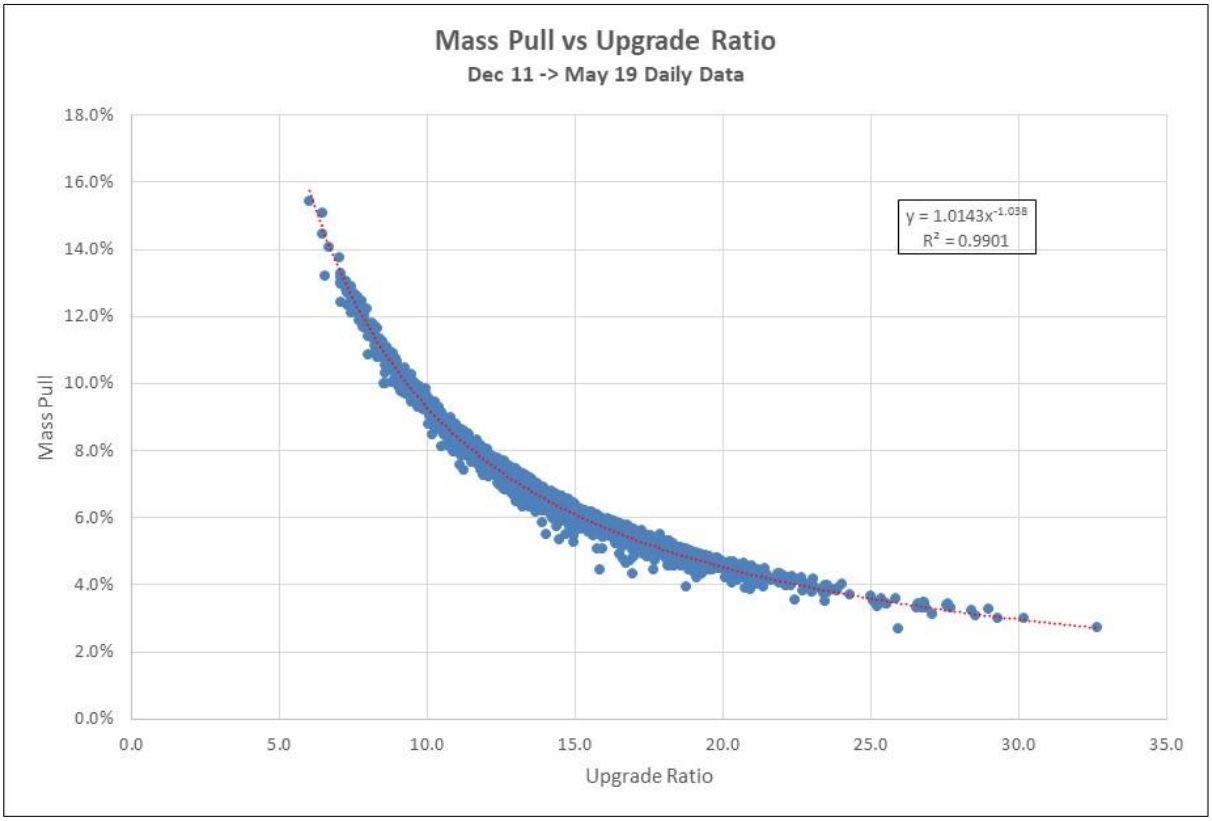

Figure 43 DAILY PLANT DATA - MASS PULL VS UPGRADE RATIO

When using the modelled upgrade ratio to mass pull correlation, the recovery for each of the two optimum test data points previously mentioned can be calculated, i.e. for a given head grade and concentrate grade the recovery for each can be calculated, providing the comparison as outlined in Table 15

Table 15 RECOVERY PERFORMANCE DATA

Parameter	Ammtec Optimised	Modelled Actual Data - Ammtec	BV Optimised	Modelled Actual Data - BV
Cu Head Grade	2.86% Cu	2.86% Cu	2.14% Cu	2.14% Cu
Cu Recovery	97.54%	94.30%	96.00%	93.70%
Cu con grade	19.68% Cu	19.68% Cu	17.2% Cu	17.2% Cu
Recovery Delta		3.20%		2.30%

In each case the actual operating data provides lower than the testing optimised recoveries, indicating that it is not possible to operate at peak optimum every day for a period of 8 years.

No detailed daily analysis has been conducted to assess the difference, but the operating data is likely lower due to operational upsets that occurred during the 8-year period for which operational data is available. Additionally, the operating data is a combination of chalcopyrite and chalcocite production rather than pure chalcopyrite treatment.

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The use of the actual data derived operating grade recovery curve provides a realistic rather than test work optimised optimistic recovery estimations for pit optimisations and future concentrator performance predictions.

9.1.5 Chalcocite Ore

No specific operating information exists for Chalcocite material, as Chalcocite appears to have been blended through the concentrator with the chalcopyrite during previous operations.

Two laboratory test reports exist on chalcocite flotation:

- A 2003 Ammtec report (10) as part of the SNCL feasibility study that tested a composite chalcocite sample and a chalcocite sample blended with chalcopyrite, and
- A 2019 presentation of a BV test set when assessing the poor performing 'level 14.
- A third report from SNF exists on 'Reagent Screening of Shale Wall Material', but the report failed to identify whether this test sample contained chalcocite or not. Further, while acknowledging that the testing was done to overcome the effects of graphitic carbon adsorption of reagents – specifically glycol frother – the report failed to mention the levels of graphitic carbon present in the ore, or even the Cu head grade of the sample – making it difficult to assess for which ore types this reagent screening would be most relevant. The report does provide relevance in that it does confirm reagent adsorption by organic carbon leading to increased xanthates and required levels for frother of up to 700g/t if a high glycol rather than lower glycol frothers are used.

Assessment of the relevant two flotation reports appear to show that the chalcocite floated reasonably well producing good grade concentrate with recoveries around low to mid 80%.

- The chalcocite flotation in isolation in the 2003 Ammtec feasibility testing initially reported very poor flotation results (~25%) in the initial batch test, put down to insufficient reagent use, however once reagents were optimised the results improved, and they further improved with locked cycle testing, which resulted in a recovery of 85% with a 45.4% Cu concentrate grade, for a feed grade of 1.68% Cu. It should be noted the locked cycle testing produced better results than the batch testing, but is more likely to be representative of process plant performance.
- Conversely, when a blend was made of 12% chalcocite and 88% Main composite (Chalcopyrite), the combined 2.71% Cu sample on a batch basis floated better, providing 93.2% recovery for a 24.3% Cu concentrate.
- Finally, the 2019 BV testing showed that a sample of 50% Chalcopyrite and 40.5% secondary sulphides like Chalcocite with a head grade of 1.54% Cu floated well to produce either a 10% Cu con grade at 93.8% recovery, or a con of 20% Cu for 82% recovery as outlined in Figure 44.

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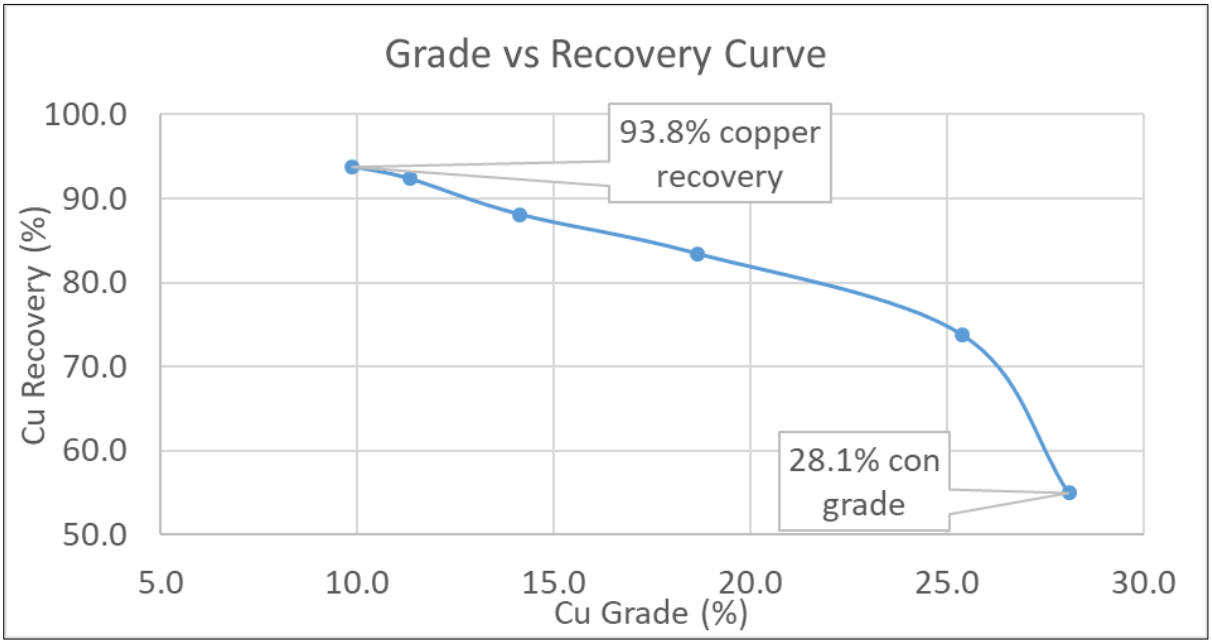

Figure 44 SIGHTER 'CHALCOCITE' GRADE VS RECOVERY CURVE - BV 2019 TESTING

The key takeaways from the chalcocite testing appears that it is softer than the chalcopyrite, so potentially more susceptible to overgrinding if treated combined with the chalcopyrite, and that the chalcocite appears to be associated with carbonaceous shales, which if insufficient reagents have been used will result in poor flotation results.

The Ammtec chalcocite sample was listed as having 10-20% carbon, which was characterised as largely liberated carbon, while the BV sample was listed as having 0.88% organic carbon. This difference in carbon levels potentially addresses Ammtec reporting benefits in utilising a carbon suppressant, whereas the BV report found no benefits with a carbon suppressant.

There appears no significant constraint in treating the chalcocite separately to the chalcopyrite, conditional to the following points:

- There is a historical precedence in treating the chalcocite combined with the chalcopyrite and as such there appears to be no operating data available for the chalcocite independently. If the operating data provides the underlying support for the feasibility study, then further variability test work may be required on pure chalcocite treatment.
- The combined chalcocite / chalcopyrite flotation at 93% Cu appeared to give better overall recovery than the mathematical combination of the chalcocite at low 80s and the chalcopyrite at mid 90s. This needs to be considered with the fact that in the Ammtec report in which the three recoveries are shown, the chalcocite had a lower head grade (1.68% Cu) than the main chalcopyrite composite (2.86% Cu) and so would be expected to have a lower recovery to achieve the same final concentrate grade. A

derived kinetic float model is required to evaluate the impact of head grade on recovery, which requires further chalcocite test work to produce.

While the BV report appears to have been conducted on a sample of troublesome plant feed, listed as "level 14', the Ammtec testing was conducted on a composite generated from six different drill holes.

It is suggested the Ammtec testing is likely more representative of the orebody than subsequent tests, and that these tests should be provided more weight, however the similarity in test results between the 2003 Ammtec testing and the 2019 BV testing support the fact that Chalcocite can be treated in isolation with good results.

Nevertheless, additional confirmatory testing on isolated chalcocite is recommended.

9.1.6 Concentrator Recoveries

The recovery for the transitional material was as per the previous Metals X (MLX) scoping study (SS) completed in June 2020 (Metals X, 2020). CYM further assessed the recovery of fresh material and provided a revised equation. The primary driver in the degradation of the fresh curve to the transitional is the percentage of chalcocite inclusion in the transitional ore data set.

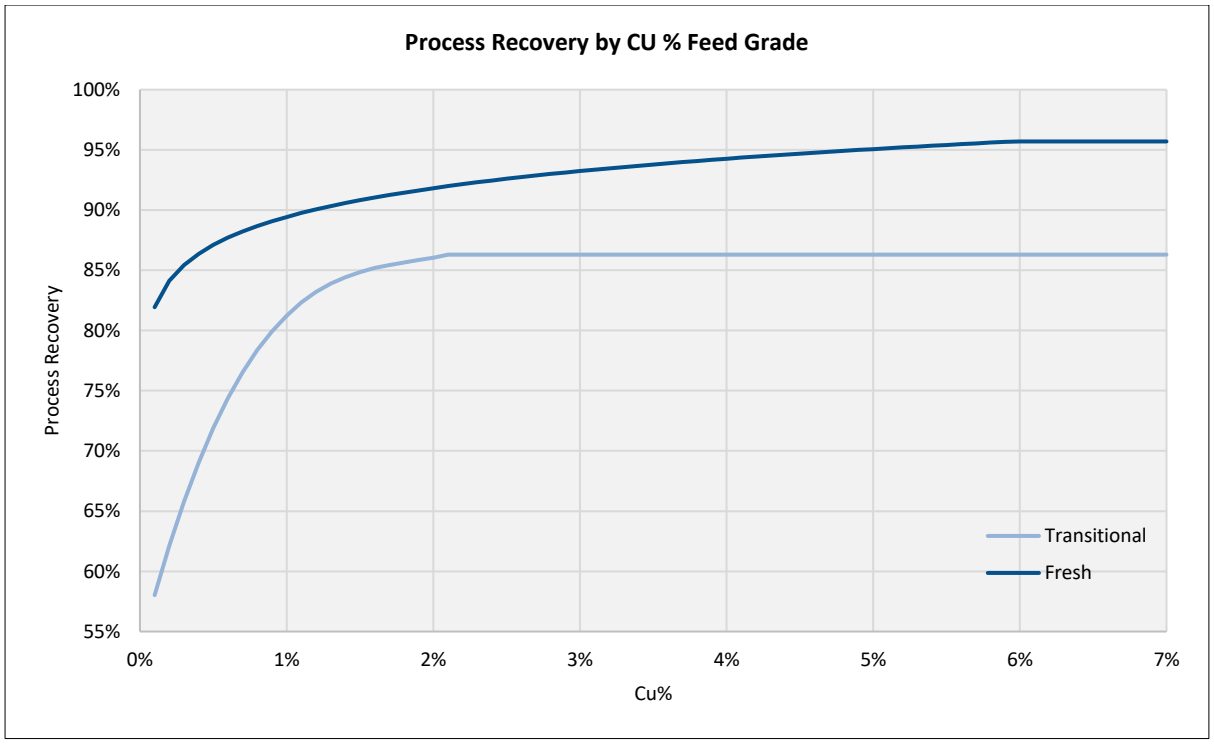

Figure 45 SULPHIDE PROCESS RECOVERY

As outlined in Figure 45, these equations were limited to a maximum recovery of:

- 95.7% for fresh feed and;
- 86.3% for transitional feed.

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Otherwise, they were set to:

- Fresh Recovery %= $0.0677Cu^3 - 0.3404Cu^2 + 0.5946Cu + 0.5827$
- Transitional Recovery % = $1.0653Cu^{0.038}$

  Cu is copper grade percentage expressed as a decimal

9.1.7 Throughput and Expansion Requirement

A concentrate plant through put of 4.5Mtpa has been planned:

- 3mtpa – Current requiring refurbishment
- 1.5mtpa – Upgrade

MACA Interquip were commissioned to provide a class 5 report (Interquip, 2024) on the requirements of the proposed upgrade. The requirements of this upgrade are outlined as follows:

- Replacement of the existing crushing circuit with a three-stage crushing plant sized for 4.5MtPa
- Inclusion of an in-line crushed ore stockpile;
- Conversion of the SAG mill to primary ball mill;
- Inclusion of a second secondary ball mill;
- New cyclone underflow box;
- New trash screens;
- Two new rougher flotation cells with associated hoppers and pumps;
- New scavenger recleaner feed pumps;
- New concentrate thickener feed pumps;
- Replacement concentrate pressure filter;
- New tailings hopper and tailings discharge pumps;
- New decant return pump;
- Piping to match new pumps, including tailings and decant lines.

A high level of the proposed refurbishment and upgrade is outlined in Figure 46.

MEC have utilised the MIM report, estimate and flow sheet as presented by MIM for the basis of this estimate, reliant on the MIM requirement to meet the metallurgical performance as outline in this section under their design and costing works. Ongoing works to improve the design and estimate to a class 4 estimate are commenced. As part of this study consideration to the initial time to production was examined, demonstrating the potential to improve start up time from 22 months to 18 months, by concurrent works and targeted sourcing of long lead items. This development time line has been adopted in this PFS.

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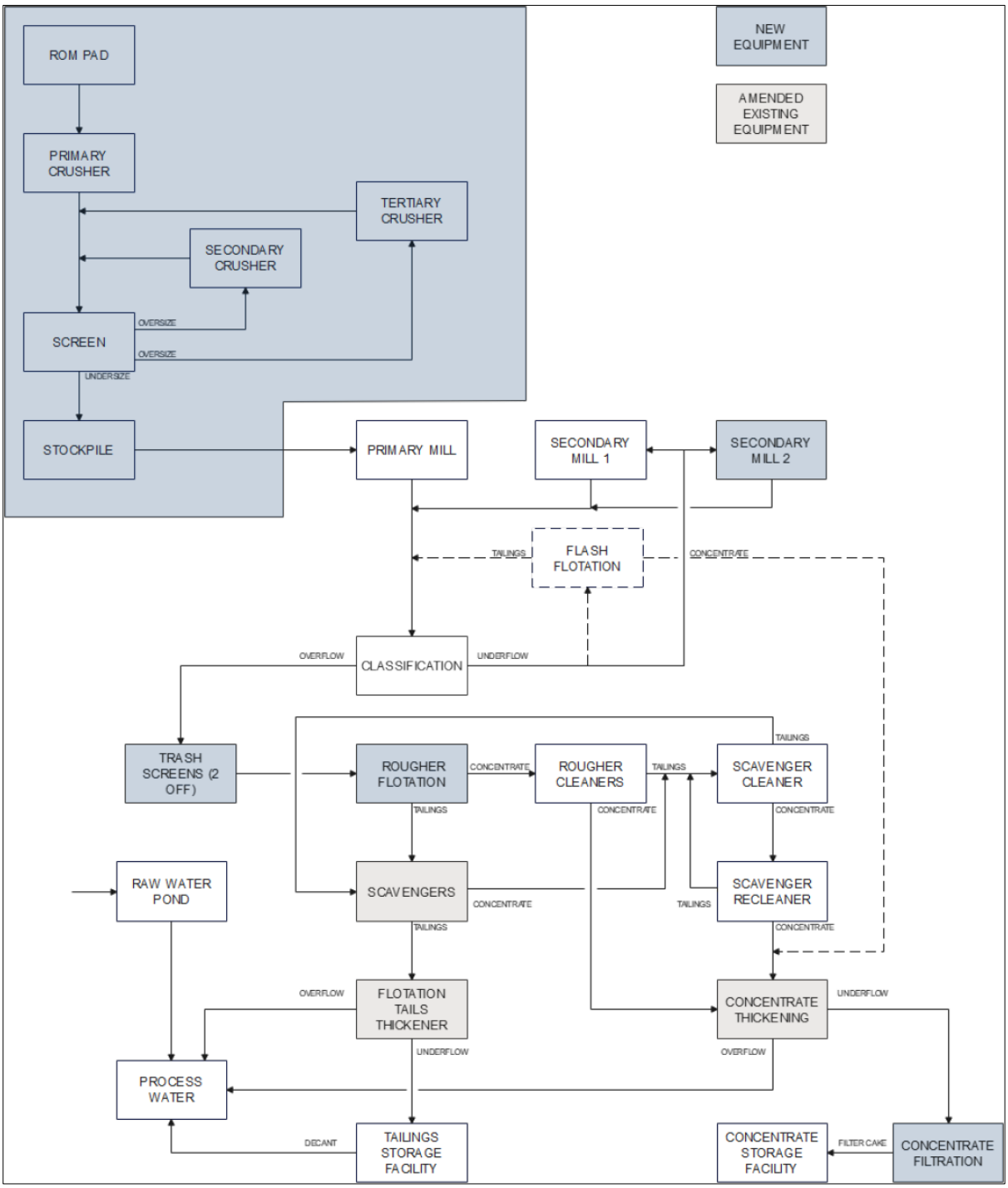

Figure 46 AMENDED NIFTY COPPER CONCENTRATOR PLANT BLOCK FLOW DIAGRAM

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9.2 Oxide Stream

9.2.1 Existing Heap Leach Facilities

The majority of the equipment used to support past operations remains on site in conditions ranging from historic idle or decommissioned, to active care and maintenance and ready for immediate restart. This equipment includes:

- Leach ponds
- Pipework
- Solvent Extraction Plant
- Electrowinning plant

9.2.2 Process Flow

Pregnant (copper loaded) solution runs off the underside of the stacked ore through drainage channels and is either recirculated through the heap as intermediate leach solution (ILS) or collected in the pregnant leach solution (PLS) pond (approximately 25% of circulating solution). This solution proceeds into a solvent extraction (SX) circuit where an organic extractant is combined with the PLS solution to transfer copper ions into the organic phase. The copper depleted barren solution is recycled to the leach pad area.

Copper in the loaded organic solution is stripped in mixer-settlers utilising the barren electrolyte from the EW circuit. Barren electrolyte is strongly acidic allowing for transfer of the copper from the organic phase back into solution. Stripped organic is recirculated back to the SX circuit to collect more copper and the enriched electrolyte solution is routed to the EW circuit.

Electrolyte is filtered and heated before being pumped through electrowinning cells (refer Figure 14). A rectifier producing direct electrical current is passed through the cells. Current flows from the rectifiers through the electrolyte solution in each cell causing the copper from the electrolyte to plate onto the stainless-steel cathode blank producing LME grade copper cathodes.

Copper is plated on the cathode blanks over a cycle of approximately one week. When the cathodes are ready for harvest, they are removed from the EW circuit, copper sheets are removed from the cathode blanks. Cathode blanks are then returned to the EW circuit for reuse. Copper sheets are weighed, sampled, bundled and then trucked to Port Headland.

The process and key infrastructure are outlined in Figure 47.

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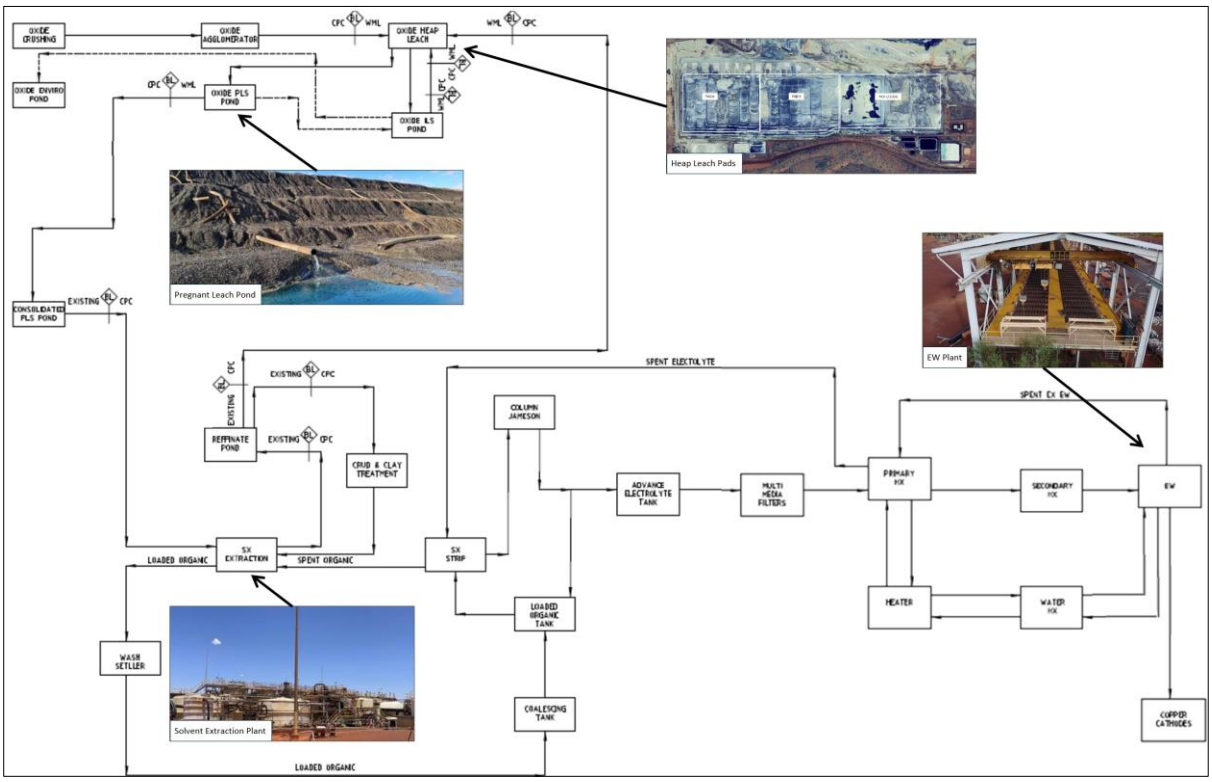

Figure 47 HEAP LEACH PROCESS AND EQUIPMENT

9.2.3 Historic Performance

Prior to the transfer to care and maintenance in 2009 the Heap Leach & SX-EW facility produced approximately ~220kt of copper cathode between 1993 and 2009, as outlined in Figure 48.

Review of historic production reports suggest approximately 74% recovery was achieved on fully leached material. With the existing piles only partially leached to differing extents, as supported by the drilling residual grades and metal balance works.

Towards the end of the operation in 2007 and 2008 little new ore was being stacked and therefore copper production was depleting rapidly as outlined in Figure 48**.**

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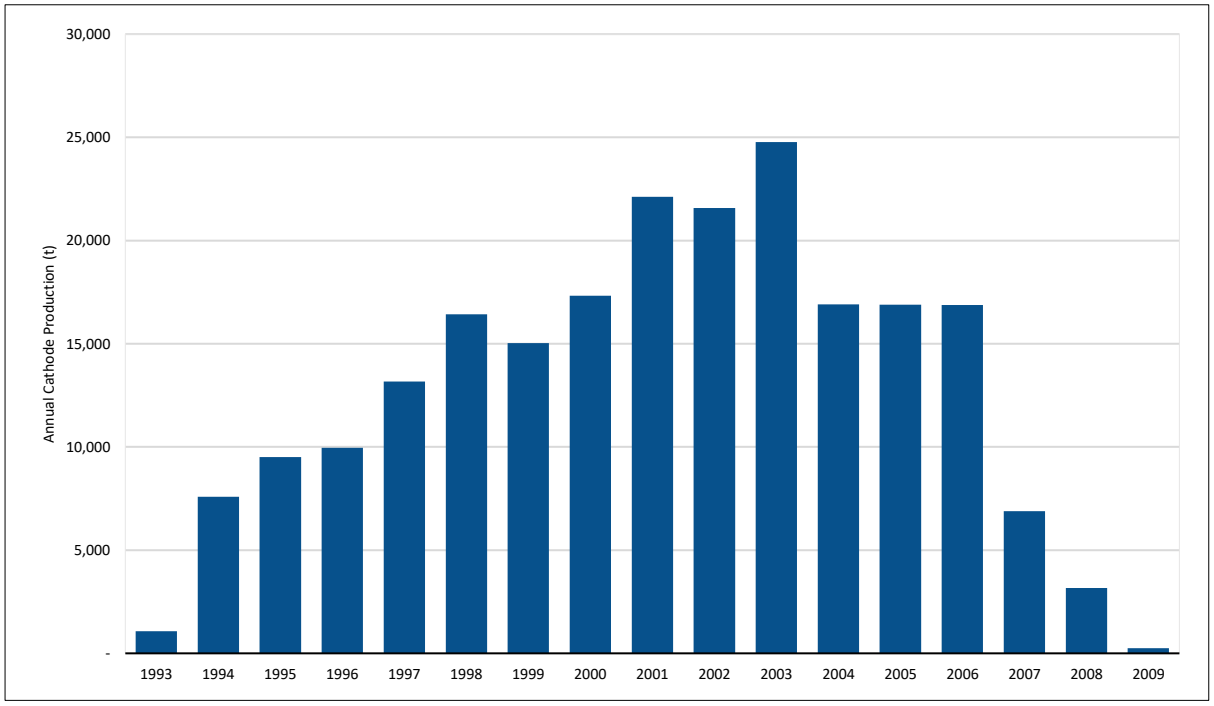

Figure 48 HISTORICAL COPPER CATHODE PRODUCTION

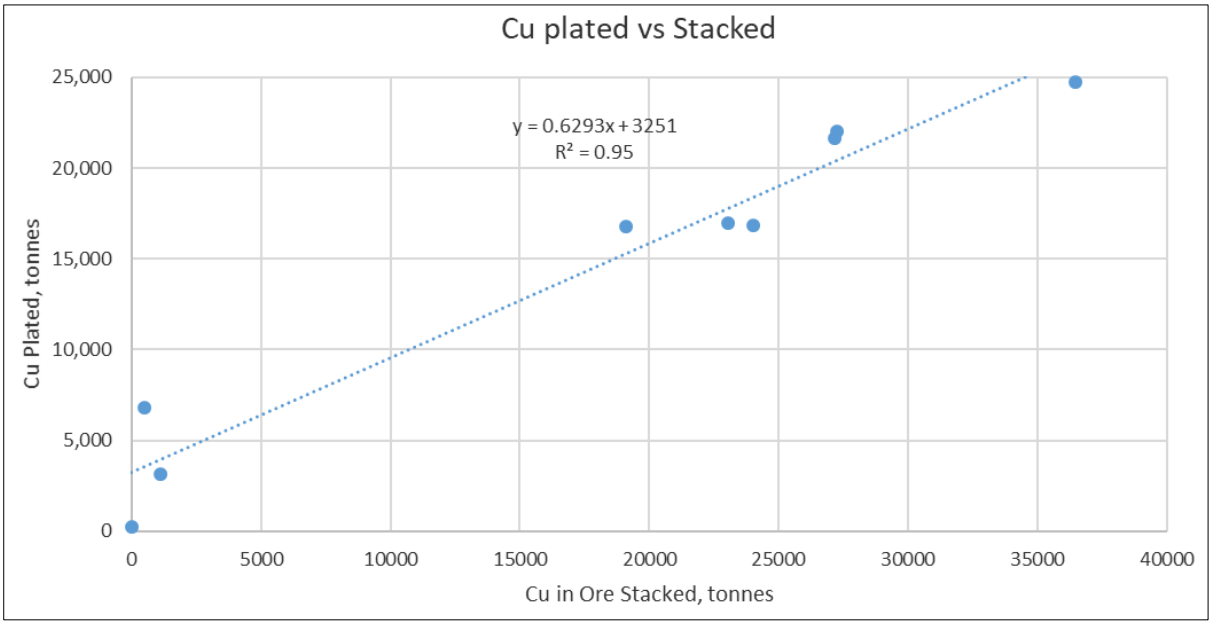

Figure 49 NIFTY CU PLATED VS COPPER CONTAINED IN ORE STACKED (2001 TO 2009)

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9.2.4 SX-EW

As part of the SXEW restart the efficiency and of the existing plant and hence operating performance is expected to be restored in the refurbishment works. Works will target an excess of 12ktpa cathode production capacity to meet the leach pad capacity.

9.2.5 Recovery

9.2.5.1 Existing Heap Leach Pads

An estimated recovery for the existing heap leach pads is estimated at 45% based on:

- Aditya Birla 2009:
  - Pilot test performed by RMD Stem
- Metals X 2020:
  - Sequential Leach Analysis refer metals x curve as outlined in Figure 50
- Cyprium 2024:
  - Sequential Leach Analysis as outlined in Figure 51
  - Bottle roll recovery 1m from surface of piles refer Figure 52

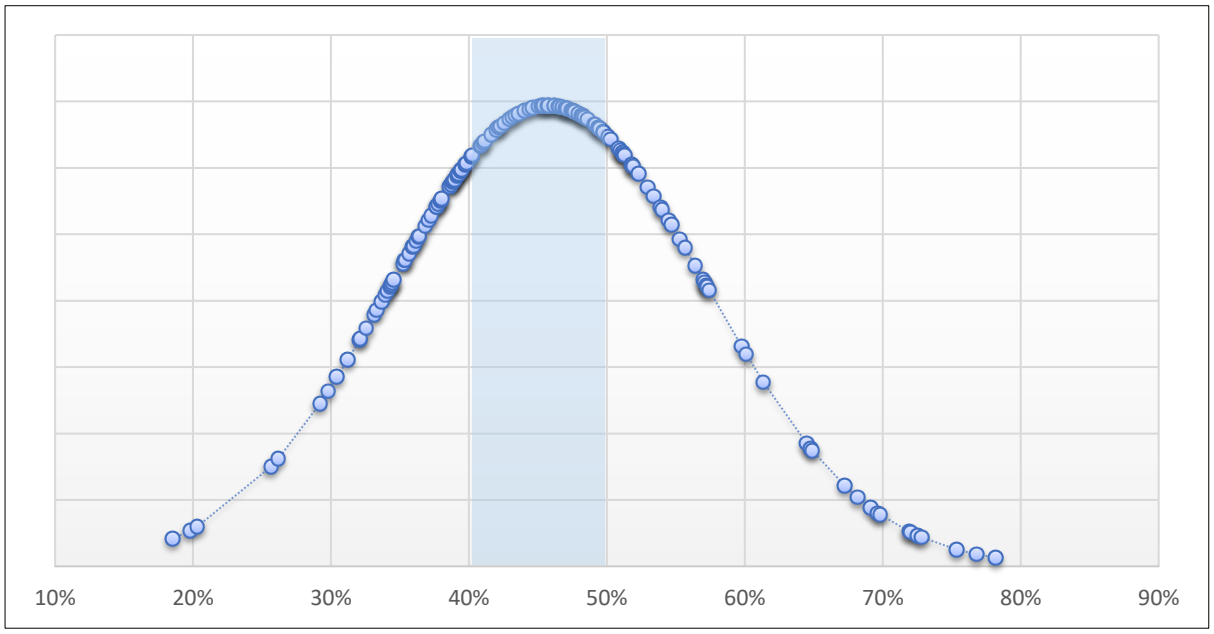

Figure 50 METALS X SEQUENTIAL LEACH ANALYSIS, HEAP LEACH RECOVERY DISTRIBUTION CURVE SAMPLE NUMBER WEIGHTED

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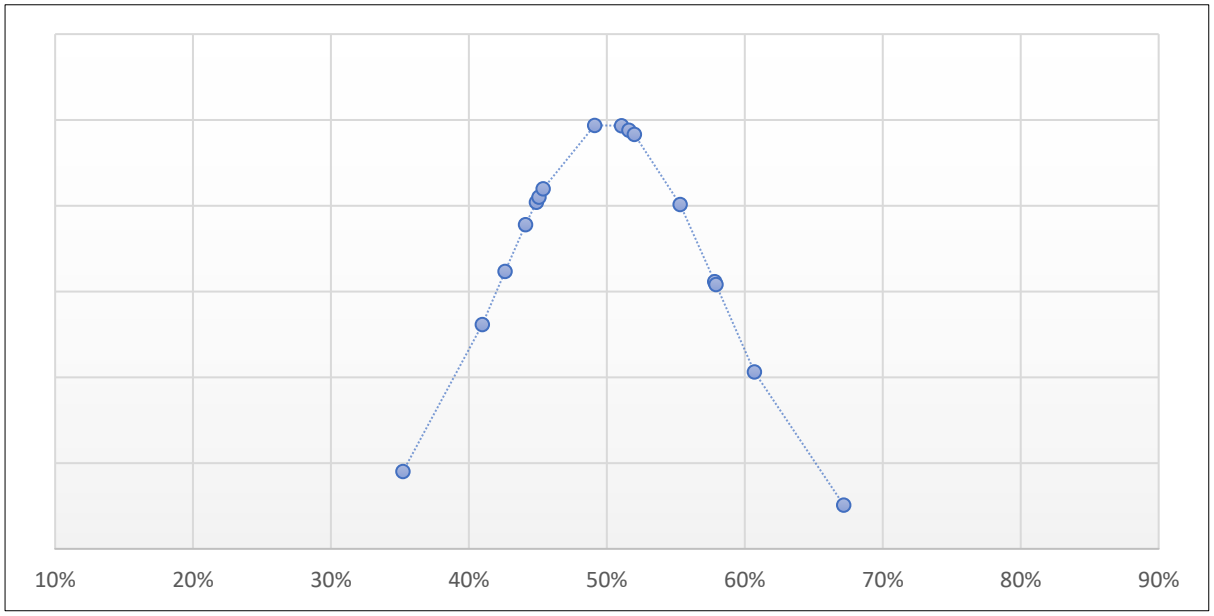

Figure 51 CYM SEQUENTIAL LEACH ANALYSIS, HEAP LEACH RECOVERY DISTRIBUTION CURVE SAMPLE NUMBER WEIGHTED

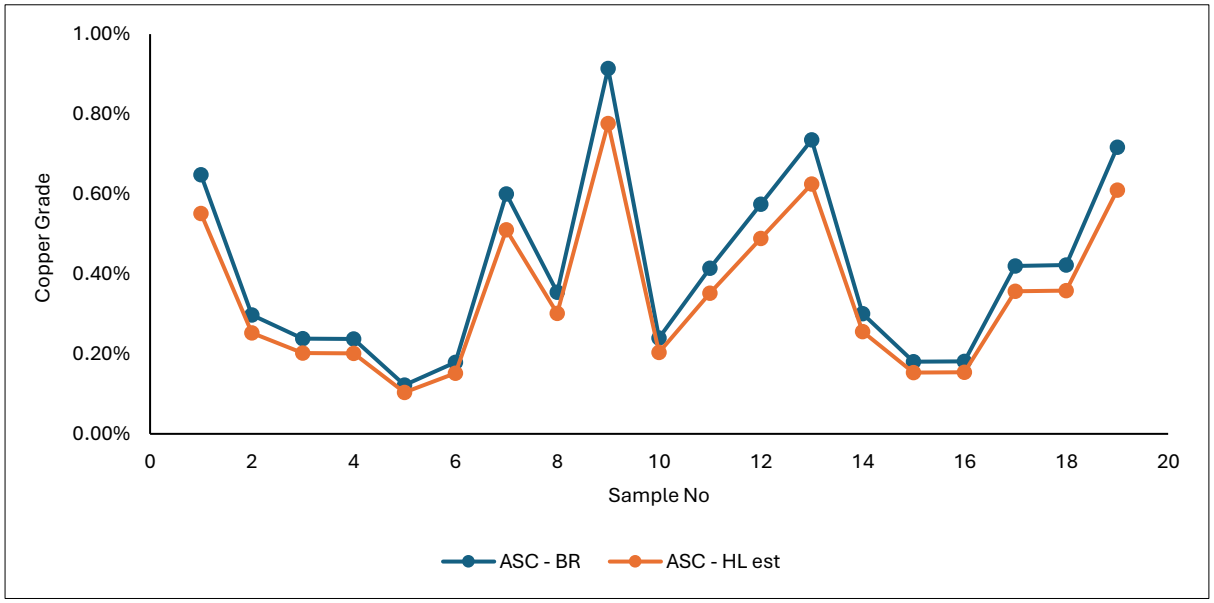

Figure 52 LEACHABLE COPPER GRADE UP TO 1M FROM SURFACE

9.2.5.2 New Pit Ore

Historical recovery performance across the orebody as stated in the prior section was 74%, with an average leach cycle of 12 months. Later years performance data assessed in 2008 demonstrated approximately 70% recovery on operational reports from that period. The historical performance was supported by test works from Western mining. While the leach cycle curves demonstrate potential for a significant portion of the recovery to be achieved in a 6 month leach cycle the basis of this report is aligned to the historical performance, with ongoing

test works to assess the viability of both more direct stacking options and shorter leach cycles. As per (WMC, 1997) and (CYM, 2014) as well as the results summarised in Figure 53 and Figure 54.

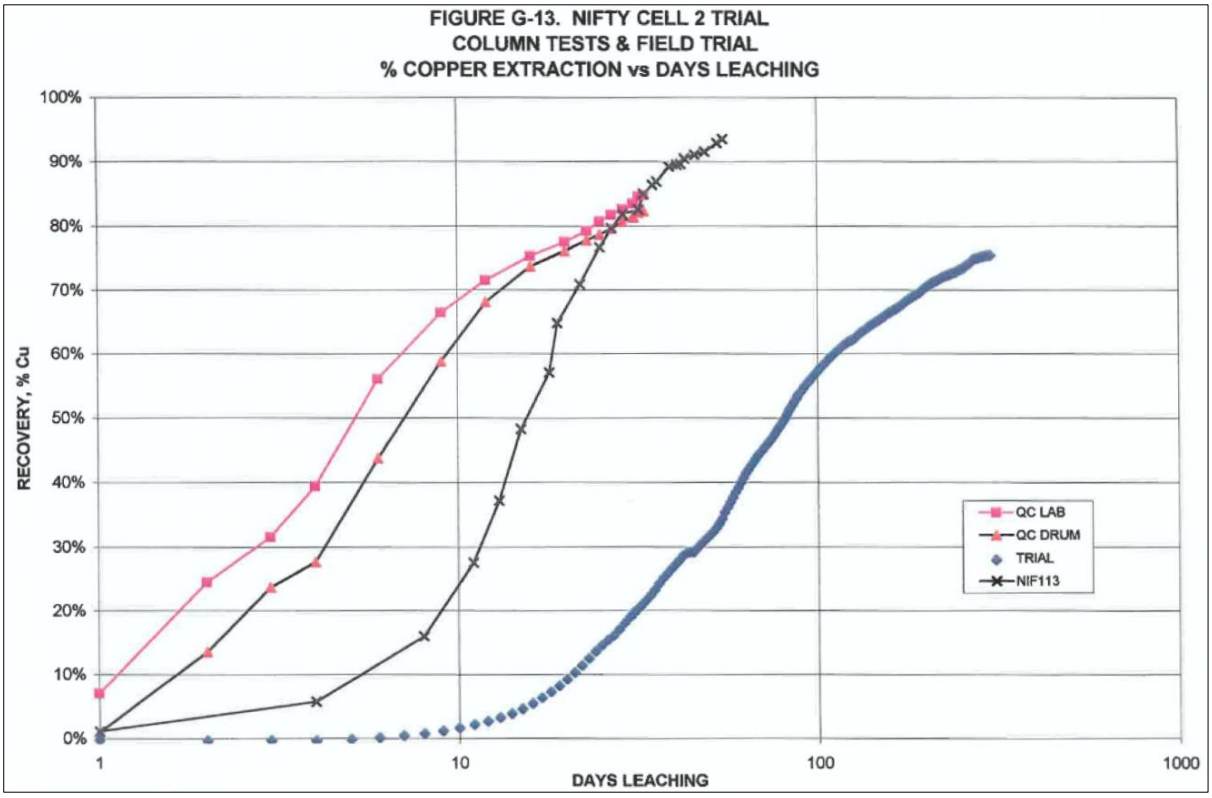

Figure 53 WMC TRIAL RECOVERY AND LEACH PERFORMANCE 1997

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Crushed/Stacked (Tonnes)	
Mine	
Ore	18,060
Contained Metal	260
Recoverable Metal	208
Pad One	
Ore	-
Contained Metal	-
Recoverable Metal	-
Waste Dump Stock	
Ore	36,121
Contained Metal	-
Recoverable Metal	-
Total Stacked	
Ore	54,181
Contained Metal	260
Recoverable Metal	208
Life To Date Cumulative Stacked (tonnes)	
Ore	17,157,633
Contained Metal	311,169
Recoverable Metal	261,447
Cathode	
Opening Cathode	9
Plated	271
Stripped	270
Sold	279
Closing Cathode	-
Life To Date	
Stripped	217,124
% Recovery of Stacked Metal	69.78%

Figure 54 EXTRACT FROM APRIL 2008 SITE MONTHLY REPORT

9.2.6 Operating Strategy

9.2.6.1.1 Reserve considerations

All potentially treatable insitu material that is within the pit boundary is treated as waste for the purpose of reserve reporting. The oxide mineralised material has been costed for storage in a celled portion of the southern dump to preserve future optionality for extraction.

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9.2.6.2 Existing Heap Leach Pads – Pads 1-6

The material currently located on existing heap leach 1 to 6 pads will be reprocessed in a new leach pad location within the southern dump, for re-leaching activities. Once placed it will be irrigated by distributing barren solution across the surface using a drip system. Solution containing sulphuric acid percolates through the ore to dissolve copper into solution over a leach cycle of approximately 6 months.

Copper heap leach systems compact over time, decreasing natural percolation, causing the solution to channel through paths of least resistance. Once these channels are created, the surrounding ore not in direct contact with the channels get minimal to nil exposure to the leach solution, resulting in poor wetting uniformity of the heap with subsequent lower metal recovery. Removing and restacking or turning over the ore via excavator breaks up these channels allowing 'fresh' ore to the contact the leach solution. As the ore needs to be handled and most must be moved for the sulphide mining activities this study contemplates that all potential reserve material will be relocated and leached in the new pad location, in the stack heights applicable for the modelled performance.

The plan is to 'mine' and restack to a depth of ~3m, then irrigate for a period then remove solids sequentially for each area. Once the leach cycle is complete another layer will be staked above to utilise the footprint to the maximum height available and workable in the pad footprint.

The residual material that is unclassified on the pads will be stored in existing pads 5&6 foot print where withing the final dump limits, enabling potential leaching but ensuring a safe final storage cell regardless.

The new pad footprint will allow for active leaching of up to ~2.25 Mt at any one time, nominally leaching will have 1.5-1.7Mt under irrigation at any point in time. Some relocation costs are captured in the base mining schedule with the pit stripping fleet employed for the bulk removal of material above the pit stages. All other material outside the pit footprint will be progressively relocated based on pad leaching capacity over the life of the stream. Operating costs are generally low as equipment travel is limited, and will enable a fixed rate contractor arrangement, opportunity exists to campaign with mining fleet to further reduce the unit costs for relocation works.

Optimally the mining/relocation, irrigation and flushing steps will have consistent duration for leaching and physical works across all the placed material and therefore will be continuous, moving from one heap leach area to the next. Irrigation time however might differ depending on time required for sufficient leaching to occur. The leaching being completed on the new pad allows for leaching to tail off longer where possible, however leach recoveries have not considered this in the estimates provided.

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9.2.6.2.1 Reserve considerations

Based on pit development it is expected that all leaching will have occurred prior to the advancement of the pit schedule stopping the SXEW. For this reason, the classified resource tonnes have been modelled on the basis they will be relocated and leached for the indicated and inferred resource as they exist in stacks together.

It is recognised that this process for leaching is assumes sub optimal recoveries. Further work to improve leaching performance is recommended while considering the potential new pit material integration into this strategy.

9.2.6.3 New Pit Ore

No new pit ore will be processed, rather stockpiled at an appropriate location for potential future processing. It is intended to review in detail the potential benefit of leaching this material at the next stage of study. All potentially treatable material is counted as waste for the purpose of reserve reporting

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10 OPTIMISATION

MEC completed a series of pit optimisations targeted at the Sulphide Stream (Transitional and Fresh) extraction, while sensitivity assessments were completed for the oxide material the pit oxides were treated as waste for the basis of the optimisation presented for this estimate.

10.1 Sulphide Stream

The geological model utilised in this optimisation is the Mineral Resource block model that was used for the NCC Scoping study also. This model was developed as part of the Mineral Resource Estimate March 2024, completed by MEC Mining and released on the 14th of March 2024 (Cyprium - MRE, 2024-c). The MRE is summarised in Figure 55.

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.

Figure 55 MRE EXTRACT FROM CYM MARCH 2024 MRE

The optimisations were completed in 1 stage:

- Primary – Sulphide feed only using only measured and indicated resources

This approach was to ensure that the operation could support a standalone concentrator process without support from the inferred material.

The optimisation was completed using assumptions derived and refined from the initial Scoping Study build up as well as those where subsequent studies had advanced to a suitable level, with the geotechnical design parameters as outlined in section 7.

10.2 Inputs

The key inputs for the optimisation are outlined below and summarised in Table 15.

- Geotechnical primary domains and “Special Zones” with associated overall slope angles
- Rock types – inclusive of “Special Zones”
- Mining cost inclusive of positional cost adjustment factors
    - Subsequent to the Scoping study (CYM Scoping 2024) MEC completed a:
        - Full Staged Design,
        - Scheduling using Deswik Scheduler with productivity adjustments applied to:

- Sink Holes
- Sink Hole Zone of Influence and;
- Underground Zone of Influence)

- Haulage modelling using Deswik
- Life of mine Mining cost model built from first principles and using MEC database

As the scheduling included productivity adjustments for the Sink Holes, Sink Hole Zone of Influence and Underground Zone of Influence no MCAF were applied to these areas.

As no productivity adjustment were applied to previously mined material (Dumps, heap leach and In Pit Back Fill) Mine Cost Adjustment Factor (MCAF's) were applied to these areas

- Metallurgical recovery by rock type
- Revenue
- Processing costs by rock type and process
  - Heap leach costs were extracted from the previous restart study (Cyprium - Restart, 2022) and adjusted using the Australian Bureau of Statistics Indices - Table 14, Index 21 Primary Metal and Metal Product Manufacturing Indices from 31st March 2022 to 30th June 2024 (11.6%)
- Selling Costs
  - A third-party threshold royalty of 1.5% is due to be reached 80,000 dt Cu is produced. For the purposes of the optimisation this was excluded from the sales cost and should be addressed as part of financial modelling
- Mining Loss and Dilution
- Maximum process plant throughput
- Production assumptions

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Table 16 OPTIMISATION INPUTS

Optimisation	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Primary - Sulphide	Ore & Waste	Y/N	N	Y	Y	MEC
Resource Model	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Model	Ore & Waste	Text	Nifty March 2024 MRE			MEC
Model Type	Ore & Waste	Type	Regularised			MEC
Block Size - X	Ore & Waste	m	5.0			MEC
Block Size - Y	Ore & Waste	m	5.0			MEC
Block Size - Z	Ore & Waste	m	2.5			MEC
Loss and Dilution	Ore & Waste	m	Not Applied to Block Model			MEC
Resource Assessment	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Measured	Ore	Y/N	N	Y	Y	MEC
Indicated	Ore	Y/N	N	Y	Y	MEC
Inferred	Ore	Y/N	N	N	N	MEC
Geotech	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Geotech	Ore and Waste	Degrees	As per geotech domains			MEC
Mining	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Grade Control	Ore	A$/Tonne Mined	-	0.035	0.050	MEC
Drill and Blast	Ore	A$/Tonne Mined	-	0.534	0.622	MEC
Drill and Blast	Waste	A$/Tonne Mined	0.540	0.524	0.609	MEC
Load and Haul - Loading	Ore	A$/Tonne Mined	-	0.614	0.614	MEC
Load and Haul - Loading	Waste	A$/Tonne Mined	0.744	0.620	0.620	MEC
Load and Haul - Hauling - Fixed	Ore	A$/Tonne Mined	-	0.432	0.432	MEC
Load and Haul - Hauling - Fixed	Waste	A$/Tonne Mined	0.634	0.634	0.634	MEC
Load and Haul - Hauling - Variable	Ore	A$/Tonne Mined	-	0.003	0.003	MEC
Load and Haul - Hauling - Variable	Waste	A$/Tonne Mined	0.003	0.003	0.003	MEC
G&A - Client	Ore & Waste	A$/Tonne Mined	0.203	0.203	0.203	MEC
G&A - Contractor	Ore & Waste	A$/Tonne Mined	0.195	0.195	0.195	MEC
MCAF - Normal	Ore & Waste	% of Base	100%	100%	100%	MEC
MCAF - Sink Holes	Ore & Waste	% of Base	100%	100%	100%	MEC
MCAF - Sink Hole Zone of Influence	Ore & Waste	% of Base	100%	100%	100%	MEC
MCAF - Underground Zone of Influence	Ore & Waste	% of Base	100%	100%	100%	MEC
MCAF - Waste Dumps	Ore & Waste	% of Base	90%	90%	90%	MEC
MCAF - Heap Leach	Ore & Waste	% of Base	90%	90%	90%	MEC
MCAF - In Pit Back Fill	Ore & Waste	% of Base	90%	90%	90%	MEC
DCAF - Normal	Ore & Waste	% of Base	50%	100%	100%	MEC
DCAF - Sink Holes	Ore & Waste	% of Base	50%	50%	50%	MEC
DCAF - Sink Hole Zone of Influence	Ore & Waste	% of Base	75%	75%	75%	MEC
DCAF - Underground Zone of Influence	Ore & Waste	% of Base	110%	110%	110%	MEC
DCAF - Waste Dumps	Ore & Waste	% of Base	-	-	-	MEC
DCAF - Heap Leach	Ore & Waste	% of Base	-	-	-	MEC
DCAF - In Pit Back Fill	Ore & Waste	% of Base	-	-	-	MEC
Ore Loss	Ore	% by Mass	-	5%	5%	MEC
Ore Dilution	Ore	% by Mass	-	5%	5%	MEC
Processing	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Processing - Fixed	Ore - Concentrate Feed	A$/Tonne Fed		10.783	10.783	CYM
Processing - Variable	Ore - Concentrate Feed	A$/Tonne Fed		12.732	12.732	CYM
Processing - Cu % Range Input	Ore - Concentrate Feed	#		0-100	0-1	CYM
Processing - Maximum Recovery	Ore - Concentrate Feed	%		86.3%	95.7%	CYM
Processing - Recovery	Ore - Concentrate Feed	Equation		ax^3+bx^2+cx+d	ax^b	CYM
Processing - Recovery Coefficient - Cu%	Ore - Concentrate Feed	x = Cu%		x	x	CYM
Processing - Recovery Coefficient	Ore - Concentrate Feed	a		0.0444	1.0653	CYM
Processing - Recovery Coefficient	Ore - Concentrate Feed	b		-0.2481	0.0380	CYM
Processing - Recovery Coefficient	Ore - Concentrate Feed	c		0.4816		CYM
Processing - Recovery Coefficient	Ore - Concentrate Feed	d		0.5345		CYM
Processing - Feed Rate	Ore - Concentrate Feed	mtpa		4.50	4.50	CYM
Revenue	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Revenue	Product	US$/dt Cu		9,100.00	9,100.00	CYM
Exchange Rate	Product	US$:A$		0.7187	0.7187	CYM
Revenue	Product	A$/dt Cu		12,662.00	12,662.00	CYM
Discount Rate	ALL	%		8%	8%	CYM
Sales Cost - Concentrate	**Applied to**	**UoM**	**Oxide**	**Transitional**	**Fresh**	**Source**
Moisture	Concentrate	% - H_2O		9.5%	9.5%	CYM
Grade	Concentrate	% - Cu		27.5%	27.5%	CYM
Haulage and Ship Loading	Concentrate	A$/wmT		93.34	93.34	CYM
Port Charges	Concentrate	A$/wmT		0.06	0.06	CYM
State Royalty	Product	% of Revenue		5.0%	5.0%	CYM
3rd Party Royalty	Product	% of Revenue		-	-	CYM
LoM Production	Product	dt Cu		-	-	CYM
Third Party Production Hurdle	Product	dt Cu		-	-	CYM
Shipping	Concentrate	US$/wmT		37.5	38	CYM
Shipping Insurance	Product	% of Revenue		0.005%	0.005%	CYM
TCRC Payable Copper - Min Deduction	Concentrate	% of Revenue		96.5%	96.5%	CYM
TCRC Payable Copper - % Point reduction	Concentrate	% Point		1.0%	1.0%	CYM
TCRC - Treatment Cost	Concentrate	US$/dT		80.6	80.61	CYM
TCRC - Refining Charge	Product	US$/lb		0.081	0.08	CYM
Sales Cost - Haulage and Ship Loading	Product	A$/dt Cu		375.29	375.29	CYM
Sales Cost - Royalty State	Product	A$/dt Cu		633.10	633.10	CYM
Sales Cost - Royalty 3rd Party	Product	A$/dt Cu		-	-	CYM
Sales Cost - Shipping	Product	A$/dt Cu		210.29	210.29	CYM
Sales Cost - TCRC	Product	A$/dt Cu		1,083.32	1,083.32	CYM
Total Sales Cost	**Product**	**A$/dt Cu**		**2,302.00**	**2,302.00**	**CYM**

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10.2.1 Method

The pit optimisation was completed using Maptek Vulcan Pit optimiser, employing the Lerchs Grossman algorithm methodology like other optimisation software, e.g., Whittle.

All Vulcan Pit Optimisations were evaluated on a contained copper basis and calculated using block model scripting and interface inputs in accordance with the inputs noted in Table 16.

10.2.2 Optimisation Results

10.2.2.1 Shell Generation

The pit optimisation was completed generating shells for a span of revenue factors from 0.6 to 1.58, the resulting pit shells allow for selection of final pit extents and phase groupings for analysis and then future design. These shells are outlined in Figure 56, Figure 57 and Figure 58.

Pits were then examined to determine the key phase groupings based on pit positions and physicals for practical mining phase shapes, selection pits are shown in Table 17 and Figure 59.

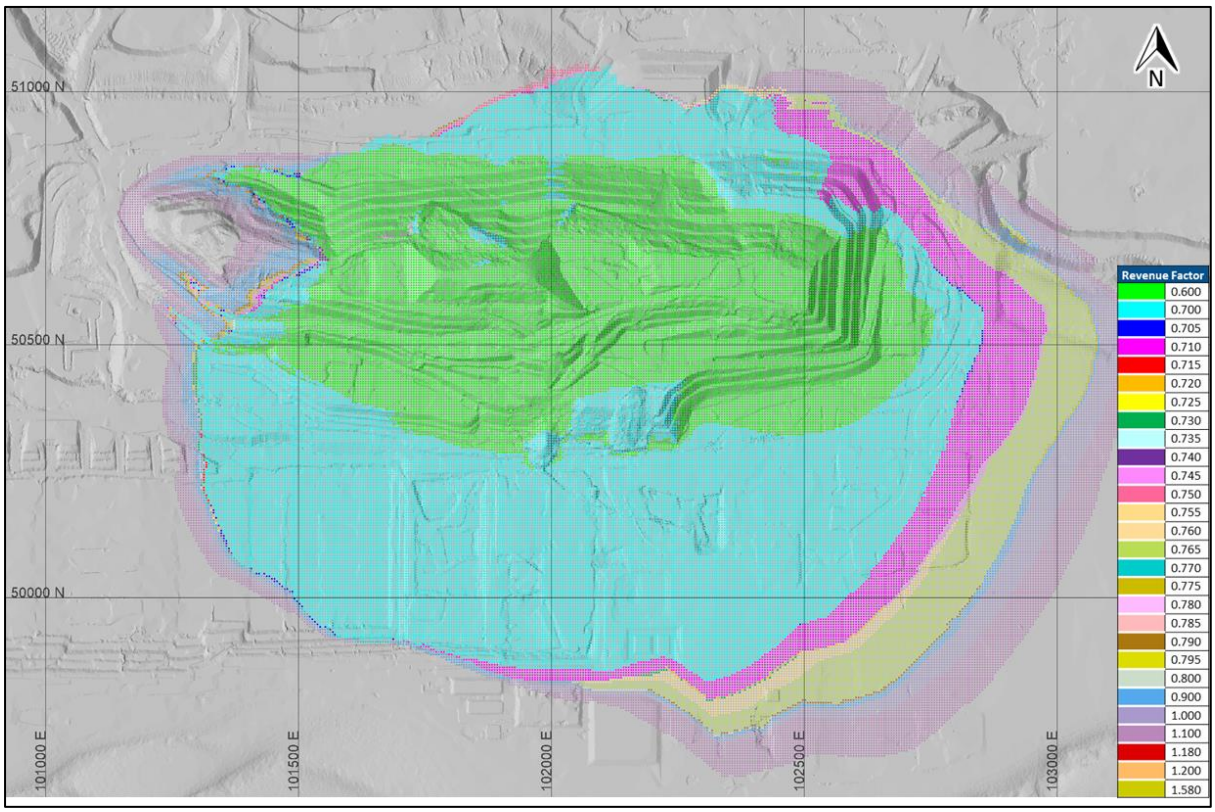

Figure 56 INITIAL OPTIMISATION OVERVIEW

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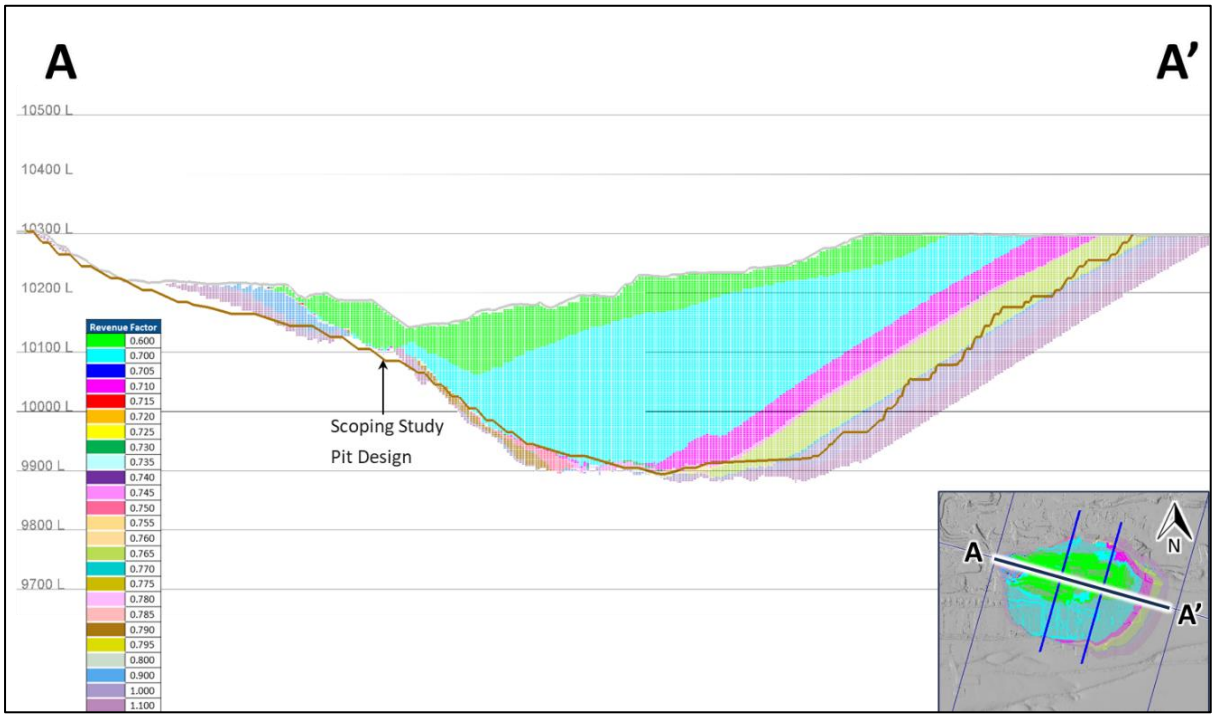

Figure 57 OPTIMISATION SHELLS - LONG SECTION WITH SCOPING STUDY PIT DESIGN

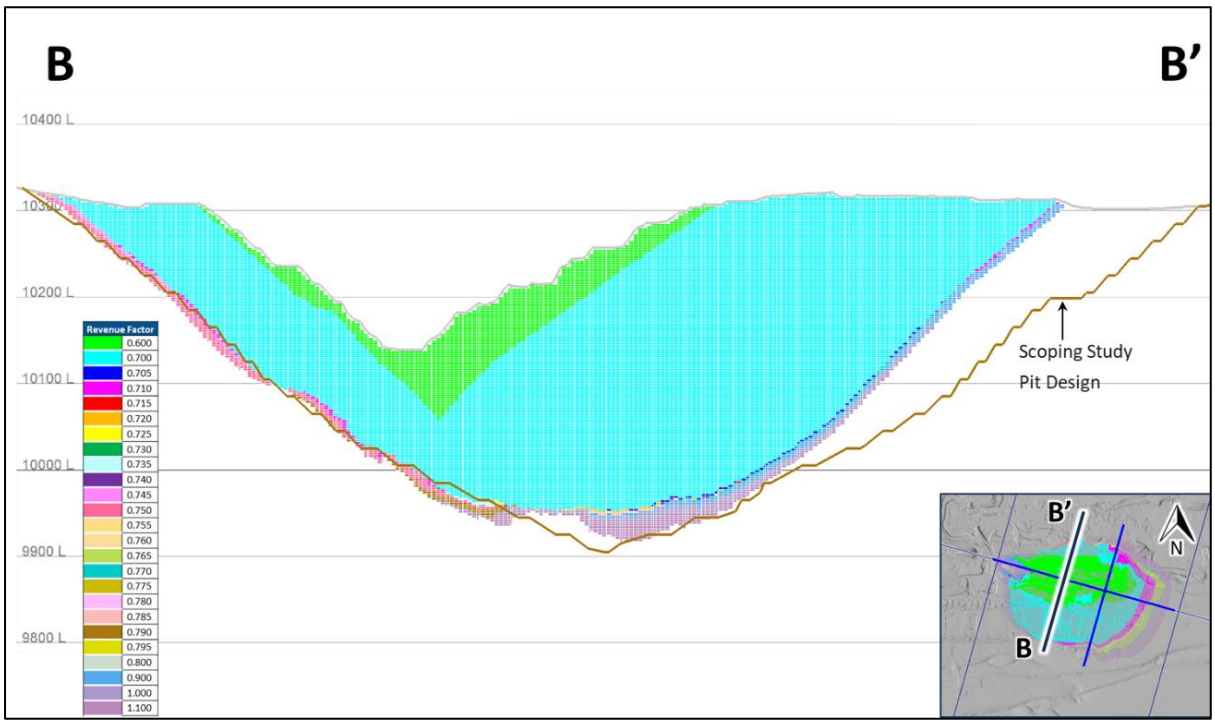

Figure 58 OPTIMISATION SHELLS CROSS-SECTION WITH SCOPING STUDY PIT DESIGN

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Table 17 SULPHIDE OPTIMISATION PHYSICALS

Pit #	RF #	SR - Total W:O	SR - Sulphide W:O	Waste Mt	Potential Ore - Oxide Mt	Potential Ore - Transitional Mt	Potential Ore - Fresh Mt	TMM Mt
1	0.600	2.95	2.95	41.2	-	0.4	7.5	49.1
2	0.700	5.83	5.83	394.4	-	0.7	57.3	452.4
3	0.705	5.81	5.81	395.5	-	0.7	57.6	453.9
4	0.710	5.95	5.95	454.1	-	0.8	64.3	519.2
5	0.715	5.94	5.94	454.3	-	0.8	64.4	519.5
6	0.720	5.94	5.94	455.2	-	0.8	64.5	520.5
7	0.725	5.94	5.94	455.3	-	0.8	64.6	520.6
8	0.730	5.93	5.93	456.6	-	0.8	64.9	522.2
9	0.735	5.93	5.93	456.8	-	0.8	65.0	522.5
10	0.740	5.92	5.92	457.3	-	0.8	65.1	523.2
11	0.745	5.91	5.91	461.0	-	0.8	65.8	527.6
12	0.750	5.90	5.90	463.2	-	0.8	66.3	530.3
13	0.755	5.96	5.96	474.9	-	0.8	67.6	543.3
14	0.760	5.95	5.95	476.5	-	0.8	67.9	545.2
15	0.765	6.28	6.28	540.4	-	0.8	73.3	614.6
16	0.770	6.27	6.27	541.4	-	0.8	73.5	615.8
17	0.775	6.26	6.26	542.3	-	0.9	73.7	616.9
18	0.780	6.26	6.26	542.4	-	0.9	73.7	617.0
19	0.785	6.26	6.26	542.4	-	0.9	73.8	617.1
20	0.790	6.25	6.25	545.3	-	0.9	74.4	620.6
21	0.795	6.24	6.24	545.5	-	0.9	74.5	620.9
22	0.800	6.24	6.24	546.7	-	0.9	74.8	622.4
23	0.900	6.16	6.16	565.3	-	1.0	78.3	644.6
24	1.000	6.32	6.32	614.1	-	1.0	83.4	698.5
25	1.100	6.63	6.63	704.2	-	1.0	91.9	797.1
26	1.180	6.62	6.62	717.9	-	1.0	93.8	812.7
27	1.200	6.85	6.85	763.0	-	1.1	96.7	860.8
28	1.580	7.40	7.40	905.4	-	1.1	107.2	1,013.6

Pit Selected to guide stage design
Pit Selected to guide final pit design

Numbers are rounded to reflect a suitable level of precision and may not sum

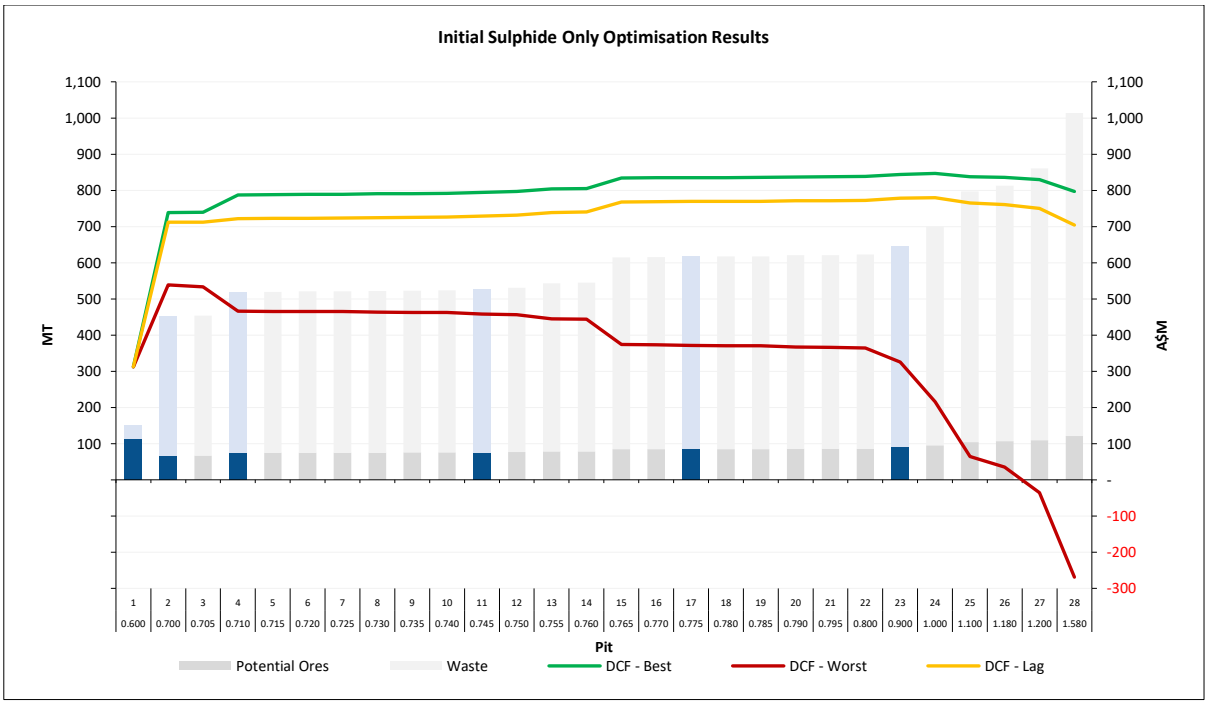

Figure 59 SULPHIDE OPTIMISATION PIT METRICS

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10.2.2.2 Pit Phases

The initial optimisation pits were then grouped into suitable pit phases to enable minable phases to be represented. A total of 7 pit phases were considered for this analysis, these phases are required to be further rationalised and grouped in the future pit design works. A full break down of these phases and physicals is outlined in Figure 60, Figure 61, Figure 62, Figure 63 and Figure 64.

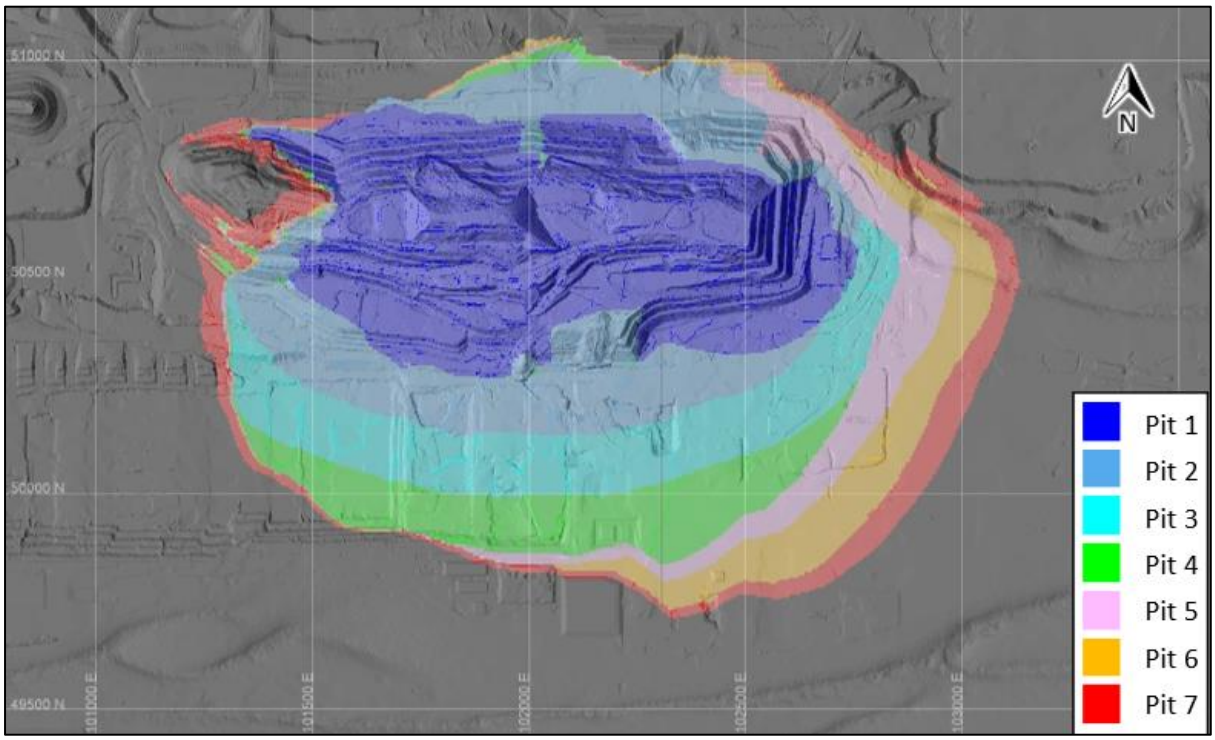

Figure 60 PIT PHASE OVERVIEW

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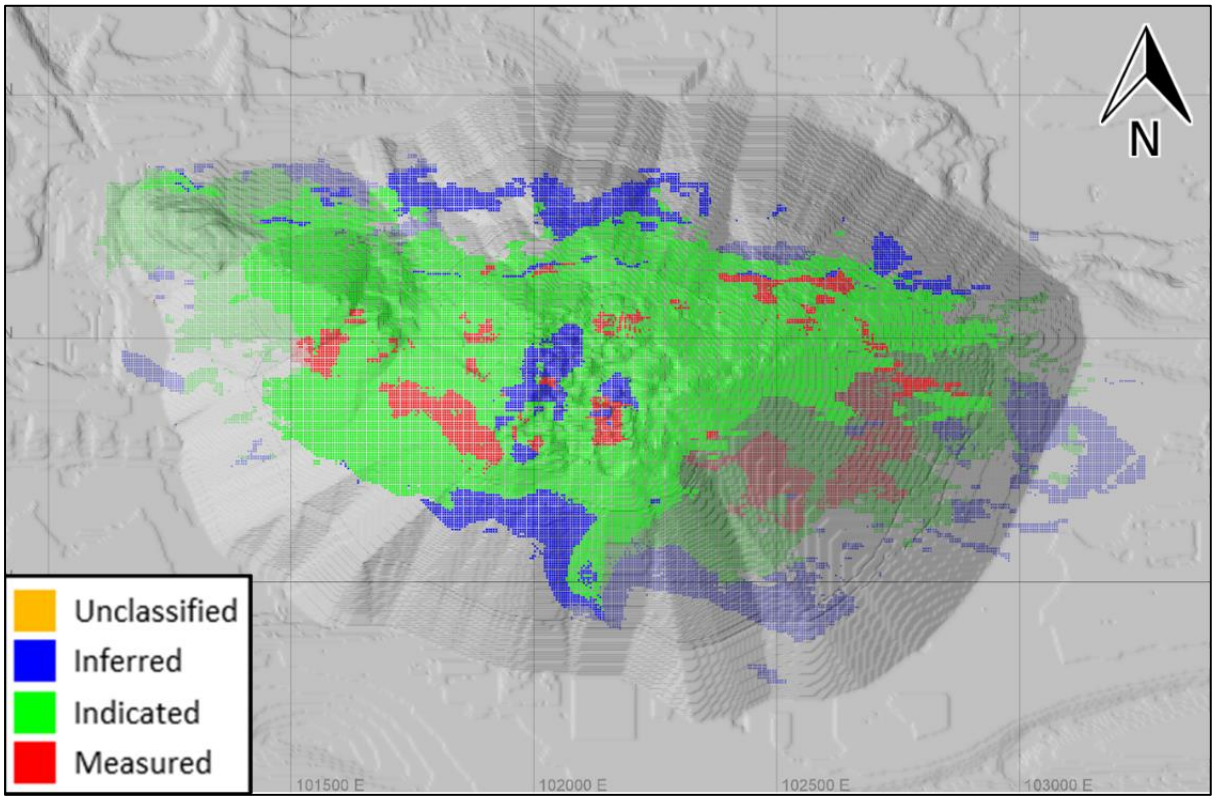

Figure 61 PIT EXTENTS WITH RESOURCE CATEGORY OVERLAY

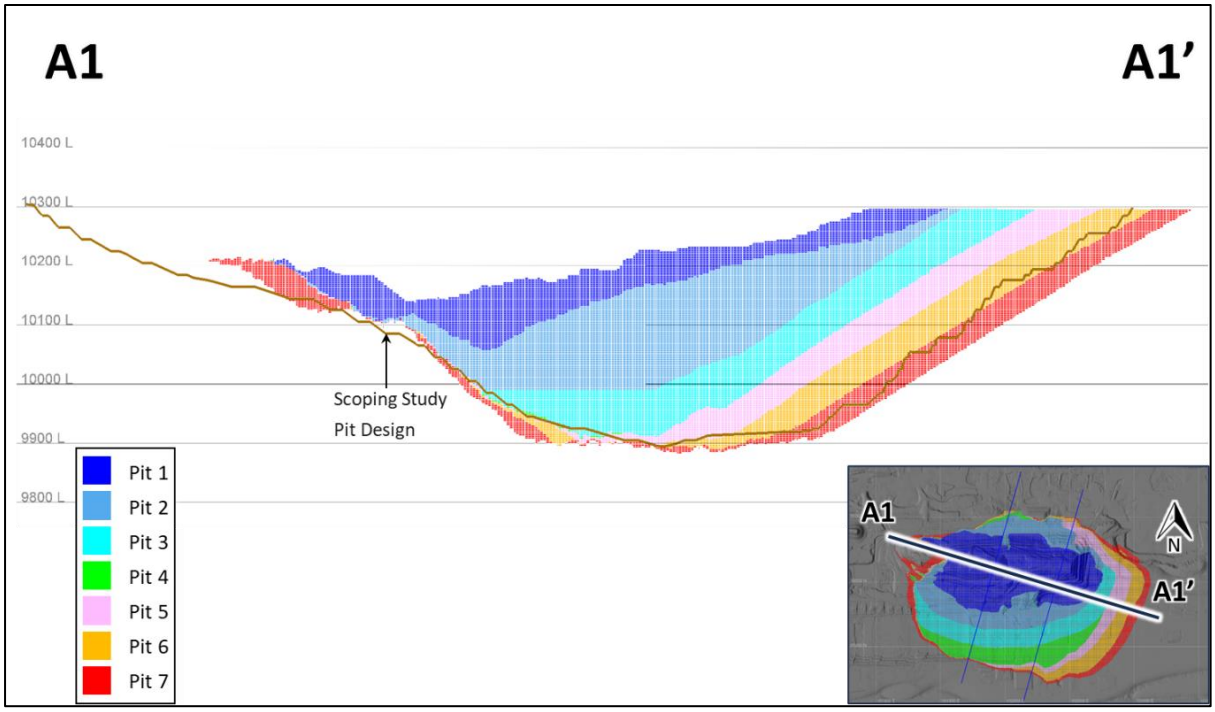

Figure 62 OPTIMISER PIT PHASES LONG-SECTION AND SCOPING PIT DESIGN

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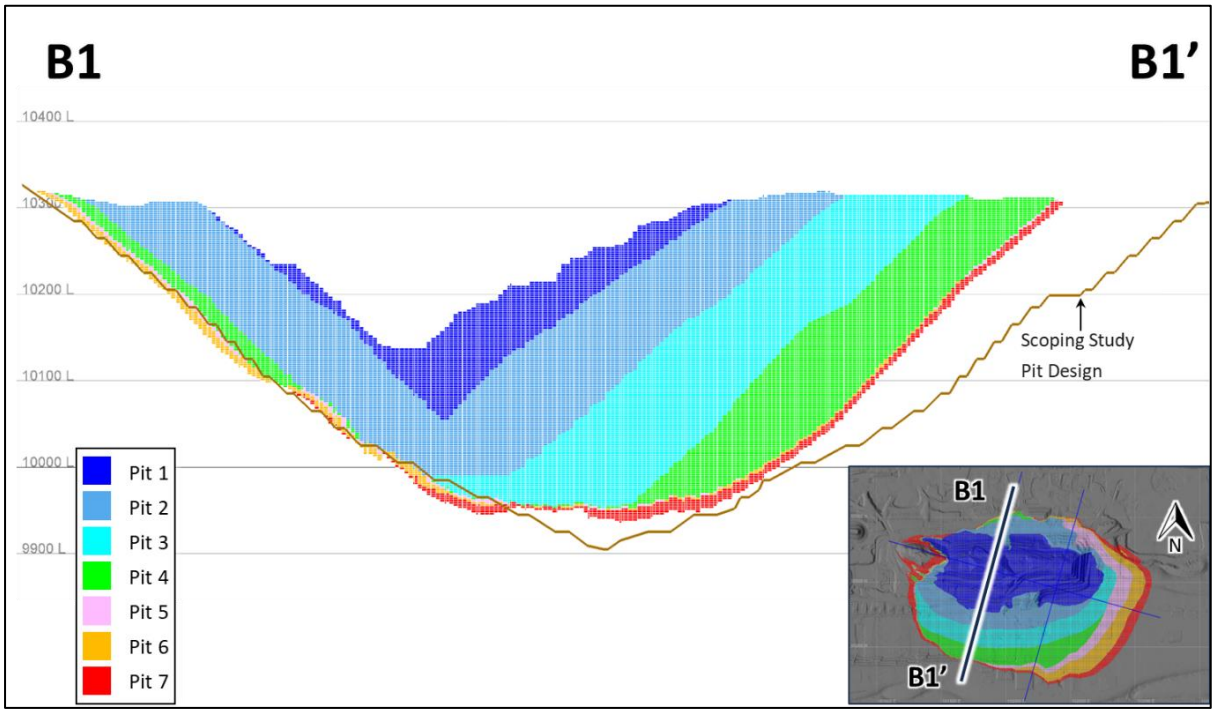

Figure 63 OPTIMISER PIT PHASES CROSS-SECTION AND SCOPING PIT DESIGN

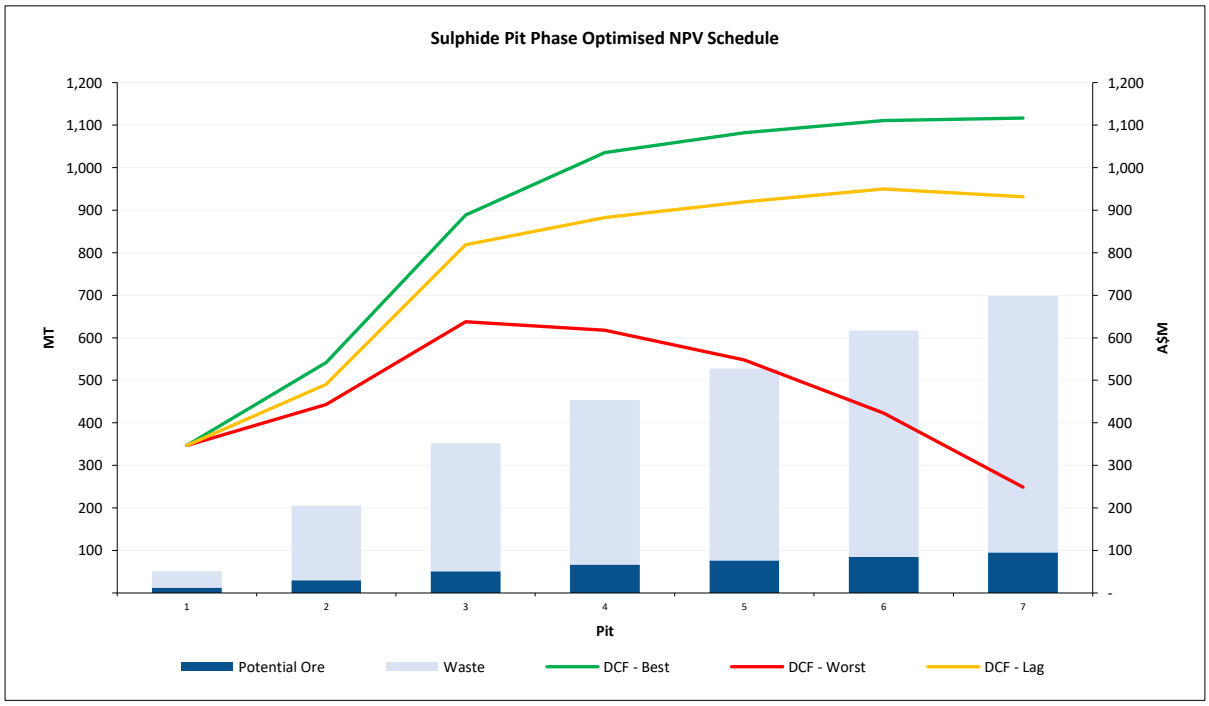

Figure 64 PIT PHASE PHYSICALS

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10.2.2.3 High Level Schedule

Phased pits were analysed at production levels aligned to the scoping study, modelling both the total mining and concentrator feed. This analysis was generated to examine potential timing of surface infrastructure interaction, and to inform potential changes in pit planning in study work. The output is not to be taken as detailed scheduling and should not be utilised for forward looking economic examination. This schedule is outlined in Figure 65.

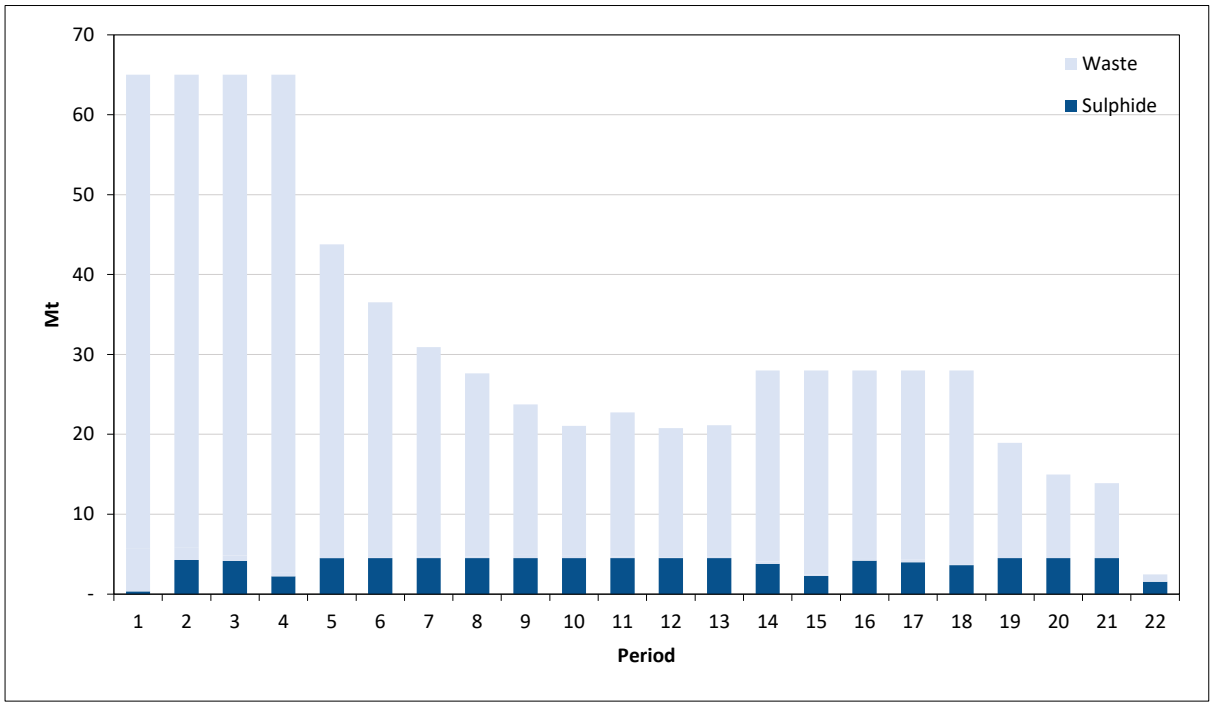

Figure 65 ANNUAL HIGH LEVEL PHYSICALS

10.2.3 Outcomes & Recommendations

The resultant pit extents with the revised geotechnical parameters demonstrate significant reductions in the overall pit size, delivering an improved stripping ratio from the Scoping study at 9.7:1 to approximately 7.3:1 on a comparable basis, see Table 18. This decrease in the pit extents delivers a material difference in the timing that the mining activities will likely impact the existing Solvent Extraction and Electro Winning (SX-EW) facilities, compared the initial Scoping study pits, see Figure 66.

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Table 18 OPTIMISATION PHYSICALS SCHEDULE

Pit #	SR - Total W:O	SR - Sulphide W:O	Waste Mt	Potential Ore - Transitional Mt	Potential Ore - Fresh Mt	TMM Mt
1	5.21	5.21	42.8	0.4	7.8	51.0
2	8.05	8.05	182.4	0.7	22.0	205.0
3	7.28	7.28	309.7	0.7	41.9	352.3
4	6.78	6.78	395.5	0.7	57.6	453.9
5	6.92	6.92	461.0	0.8	65.8	527.6
6	7.27	7.27	542.3	0.9	73.7	616.9
7	7.28	7.28	614.1	1.0	83.4	698.5

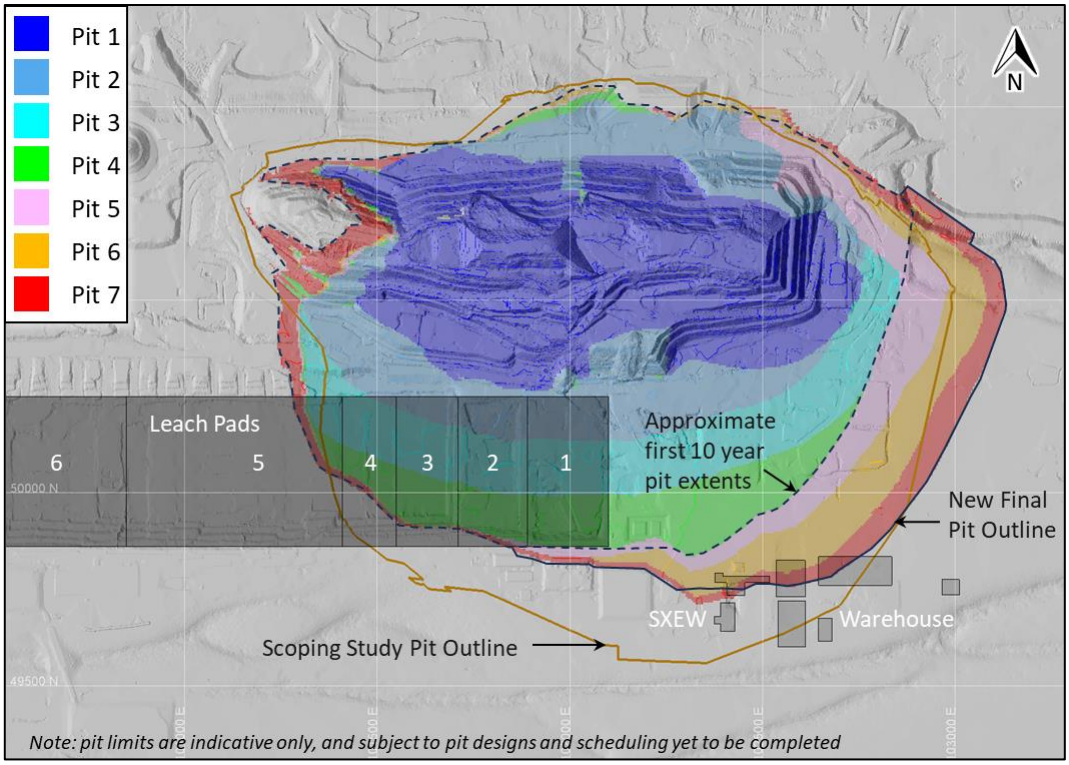

Figure 66 PIT PHASES VERSUS SCOPING PIT WITH SXEW INFRASTRUCTURE

The change in pit phase timing presents potential to maintain the SXEW plant for the first half of the mine life, based on high level sequences, this is a material change from the Scoping study.

Should a potential Oxide material processing stream be considered, MEC modelled the potential Oxide ores that existed in the waste profile for the Sulphide pit to examine the timing of presentation in relation to the disturbance of the SXEW facility. This examination demonstrated that the potential resource classified heap leach processable material would be mined in the first 4 years and as such could potentially be processed using the existing facilities before they are disturbed by the pit progression. Note that no financial assessment of this oxide material has been performed, nor does it add any revenue consideration to the economics modelled.

11 MINE DESIGN

11.1 Fleet Selection

Based on the work completed in the scoping study it was determined that the likely fleet configuration to best meet Nifty's operational demand would be a mixed fleet of 600t (Primarily for waste) and 200t (Primarily for Ore) excavators, a fleet of 230t class rigid dump trucks and supported by various ancillary equipment. This was reevaluated and confirmed from post the pit optimisation and updated outcomes from this Study.

11.2 Pit Design

In addition to the parameters outlined in section 7, the only other constraint to mine design was ramp width.

The ramp width was calculated at 35m as outlined in Figure 67.

2 Way Haulage Ramp Layout - High Wall to Left and Pit to Right

Parameter	Eq	UoM	Value
Fleet		Ex	600.00
Lane		#	Double
Truck Type		OEM	Cat 793F
Truck Capacity		wT	226.8
Tyre Type		#	40.00R57
Tyre Diameter		m	3.58
Truck Operating Width	A	m	8.30
Bund Height - Relative to Tyre Diameter		%	50%
Bund Height	B	m	1.79
Bund Angle		°	37.00
Bund Flat Top		m	1.00
Bund Width		m	5.76
Bund Toe to Crest	c	m	0.30
Total Bund Width	C	m	6.06
Drainage, Services and Contingency	D	m	4.10
Truck Width Multipler for Lane	a	#	3.00
Truck Pavement	E	m	24.89
Total Ramp Width	F	m	35.00

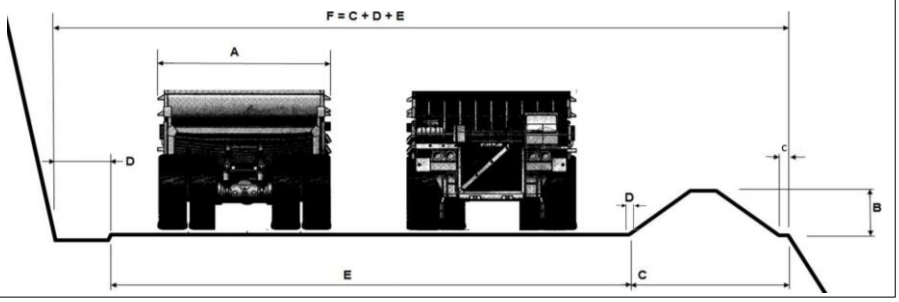

Figure 67 2 WAY RAMP HAULAGE

Following review of the optimisation it was determined that 4 stages as outlined in Figure 68, Figure 69, Figure 70, Figure 71, Figure 72, Figure 73, Figure 74and Figure 75 would be required and detailed scheduling would drive the ultimate face progression.

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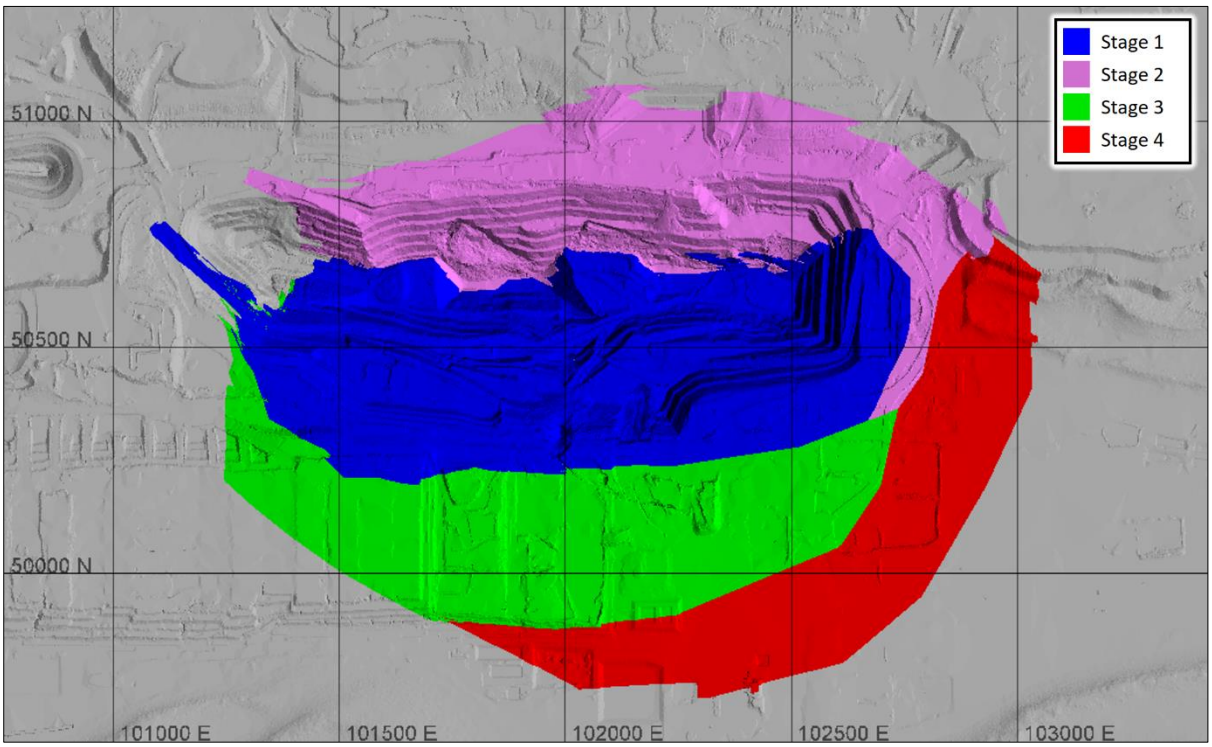

Figure 68 PIT STAGE OUTLINE

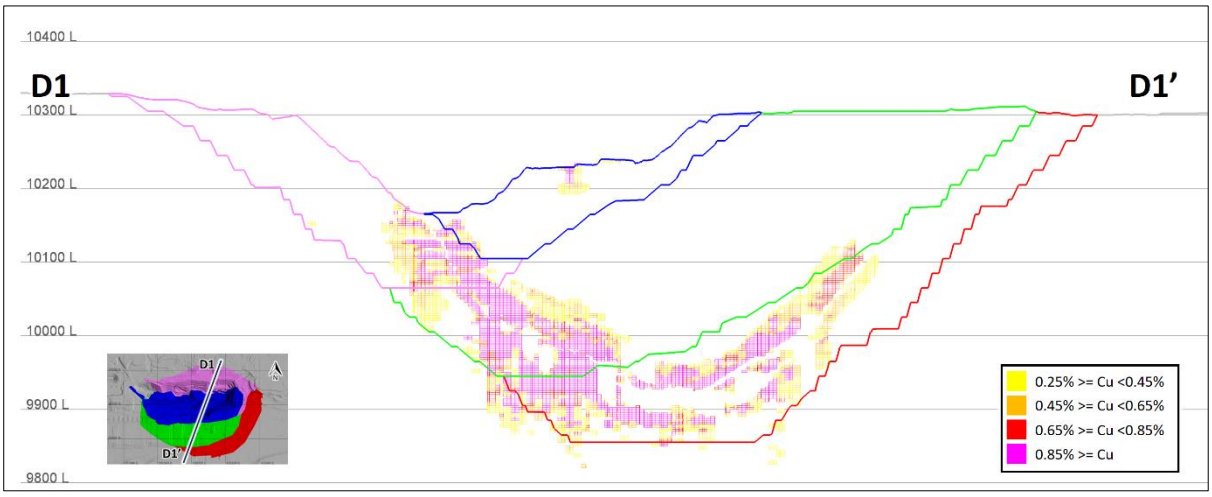

Figure 69 PIT DESIGN CROSS SECTION D

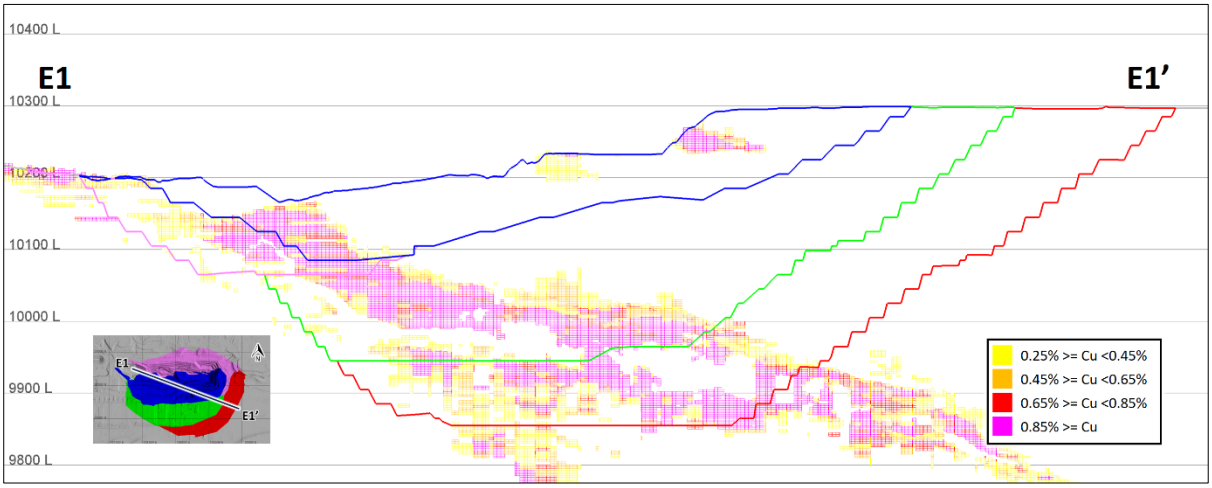

Figure 70 PIT DESIGN LONG SECTION E

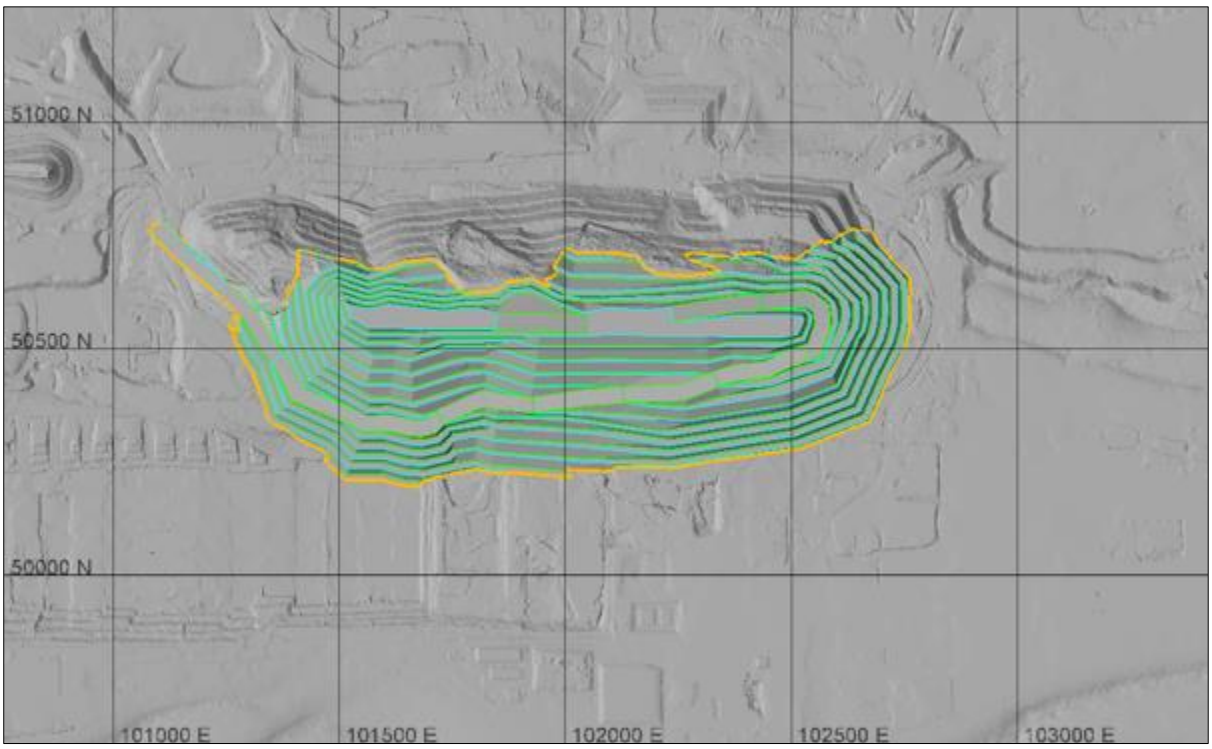

Figure 71 PIT DESIGN STAGE 1

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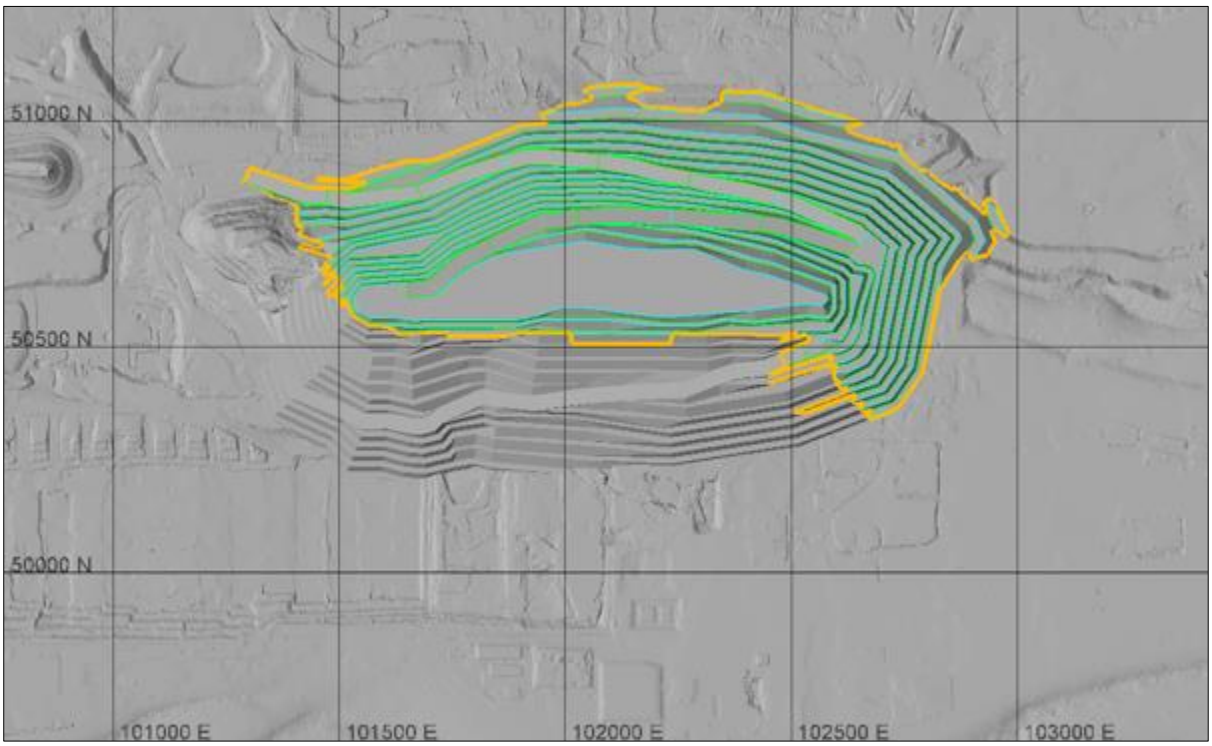

Figure 72 PIT DESIGN STAGE 2

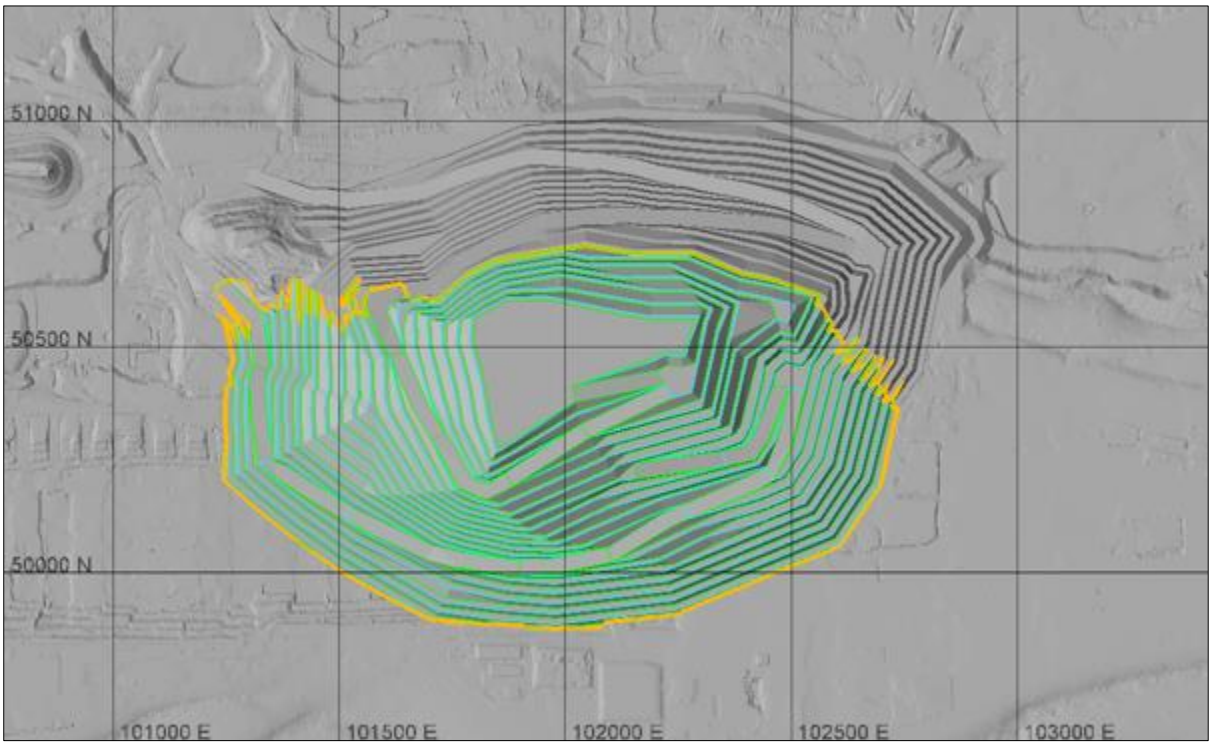

Figure 73 PIT DESIGN STAGE 3

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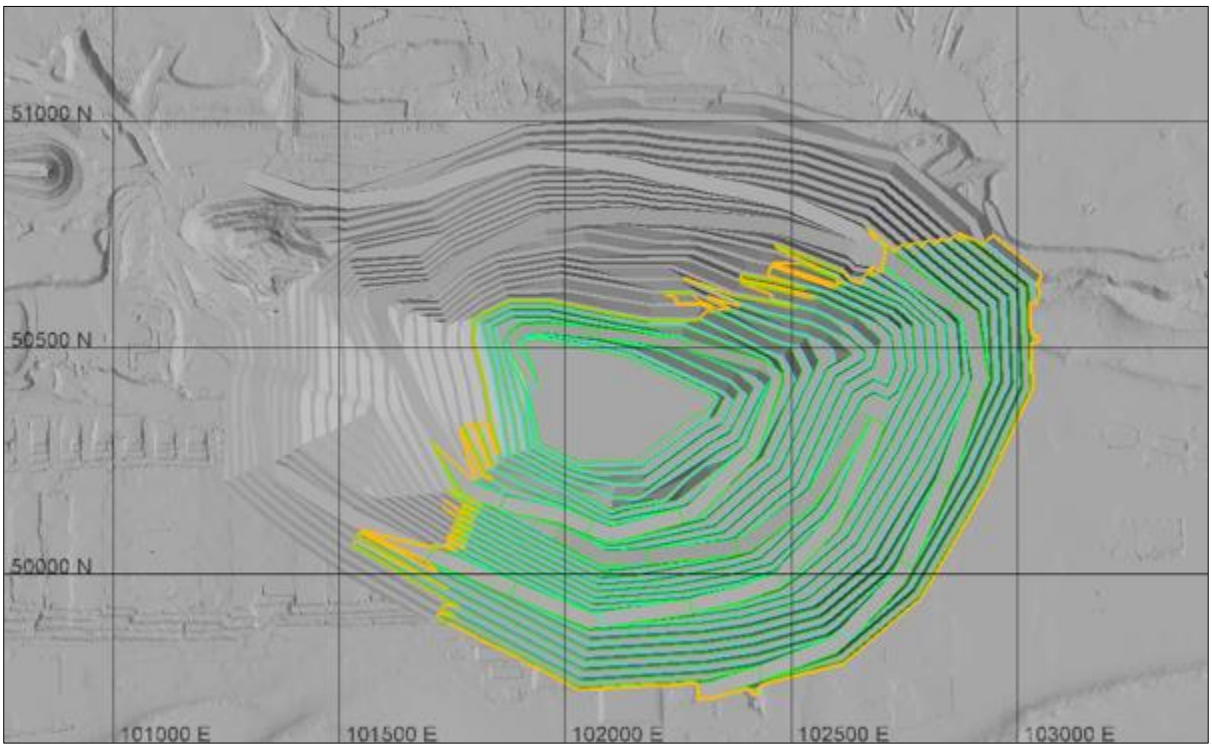

Figure 74 PIT DESIGN STAGE 4

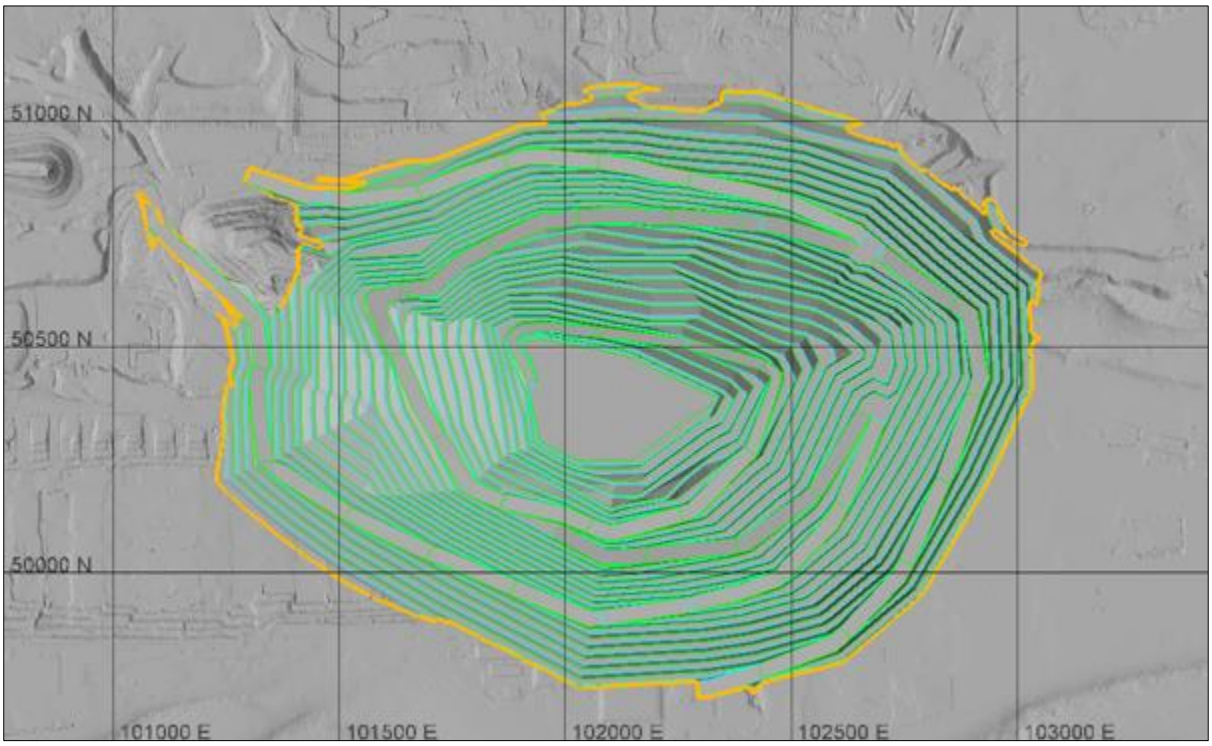

Figure 75 ULTIMATE PIT DESIGN

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Based on a 0.25%Cu Cut off grade the break down of the mined mineral resource is summarised in Table 19.

Table 19 MINERAL RESOURCE BY PIT STAGE ABOVE A 0.25 CU% CUTT OFF

Stage 1	TMM	Waste	Total Meas, Ind & Inf			Strip	Measured			Indicated			Inferred		
	Mt	Mt	Mt	Cu%	Cu kt	Ratio	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt
Oxide	40.9	40.9	-	-	-		-	-	-	-	-	-	-	-	-
Transitional	18.1	16.7	1.3	0.42%	5.7		0.0	0.48%	0.2	1.3	0.42%	5.5	0.0	0.26%	0.0
Fresh	24.5	18.4	6.1	0.80%	48.3		1.1	0.88%	10.0	4.8	0.77%	37.4	0.1	1.04%	0.9
Total	**83.4**	**76.0**	**7.4**	**0.73%**	**54.0**	**10.27**	**1.2**	**0.86%**	**10.2**	**6.1**	**0.70%**	**42.9**	**0.1**	**1.01%**	**0.9**

Stage 2	TMM	Waste	Total Meas, Ind & Inf			Strip	Measured			Indicated			Inferred		
	Mt	Mt	Mt	Cu%	Cu kt	Ratio	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt
Oxide	38.1	38.1	-	-	-		-	-	-	-	-	-	-	-	-
Transitional	11.7	11.5	0.2	0.35%	0.8		0.0	0.60%	0.1	0.2	0.34%	0.8	0.0	0.33%	0.0
Fresh	43.2	31.0	12.2	0.86%	104.8		2.2	1.03%	22.9	9.3	0.84%	77.8	0.7	0.61%	4.1
Total	**93.0**	**80.5**	**12.4**	**0.85%**	**105.6**	**6.47**	**2.2**	**1.03%**	**22.9**	**9.5**	**0.82%**	**78.6**	**0.7**	**0.61%**	**4.1**

Stage 3	TMM	Waste	Total Meas, Ind & Inf			Strip	Measured			Indicated			Inferred		
	Mt	Mt	Mt	Cu%	Cu kt	Ratio	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt
Oxide	82.6	82.6	-	-	-		-	-	-	-	-	-	-	-	-
Transitional	16.2	16.0	0.1	0.32%	0.5		0.0	0.72%	0.0	0.1	0.31%	0.4	-	-	-
Fresh	198.8	156.1	42.7	0.84%	357.2		14.7	1.01%	148.8	25.9	0.76%	197.5	2.1	0.52%	11.0
Total	**297.6**	**254.8**	**42.9**	**0.83%**	**357.7**	**5.94**	**14.7**	**1.01%**	**148.8**	**26.1**	**0.76%**	**197.9**	**2.1**	**0.52%**	**11.0**

Stage 4	TMM	Waste	Total Meas, Ind & Inf			Strip	Measured			Indicated			Inferred		
	Mt	Mt	Mt	Cu%	Cu kt	Ratio	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt
Oxide	54.6	54.6	-	-	-		-	-	-	-	-	-	-	-	-
Transitional	12.9	12.7	0.2	1.08%	1.8		0.0	-	-	0.2	1.13%	1.8	0.0	0.33%	0.0
Fresh	161.1	126.5	34.6	0.88%	305.0		6.2	1.10%	68.2	25.8	0.87%	224.6	2.6	0.47%	12.2
Total	**228.5**	**193.8**	**34.8**	**0.88%**	**306.8**	**5.57**	**6.2**	**1.10%**	**68.2**	**26.0**	**0.87%**	**226.4**	**2.6**	**0.47%**	**12.2**

Total Pit	TMM	Waste	Total Meas, Ind & Inf			Strip	Measured			Indicated			Inferred		
	Mt	Mt	Mt	Cu%	Cu kt	Ratio	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt	Mt	Cu%	Cu kt
Oxide	216.1	216.1	-	-	-		-	-	-	-	-	-	-	-	-
Transitional	58.8	56.9	1.9	0.46%	8.8		0.1	0.45%	0.3	1.8	0.46%	8.5	0.0	0.28%	0.0
Fresh	427.6	332.0	95.6	0.85%	815.4		24.2	1.03%	249.8	65.9	0.82%	537.3	5.5	0.52%	28.2
Total	**702.6**	**605.1**	**97.5**	**0.85%**	**824.1**	**6.21**	**24.3**	**1.03%**	**250.1**	**67.7**	**0.81%**	**545.8**	**5.5**	**0.51%**	**28.2**

**Numbers are rounded to reflect a suitable level of precision and may not sum*

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11.3 Integrated Waste Landform and ROM Design

Following completion of the pit designs, it was determined that the volume required for the Integrated Waste Landform (IWL) was approximately:

- Waste 260.97 MBCM

A 20% swell (Post Settlement) was used to indicate a total volumetric requirement of ~313 MLCM

An overview of the proposed IWL, ROM and Ore stockpiles is shown in Figure 76.

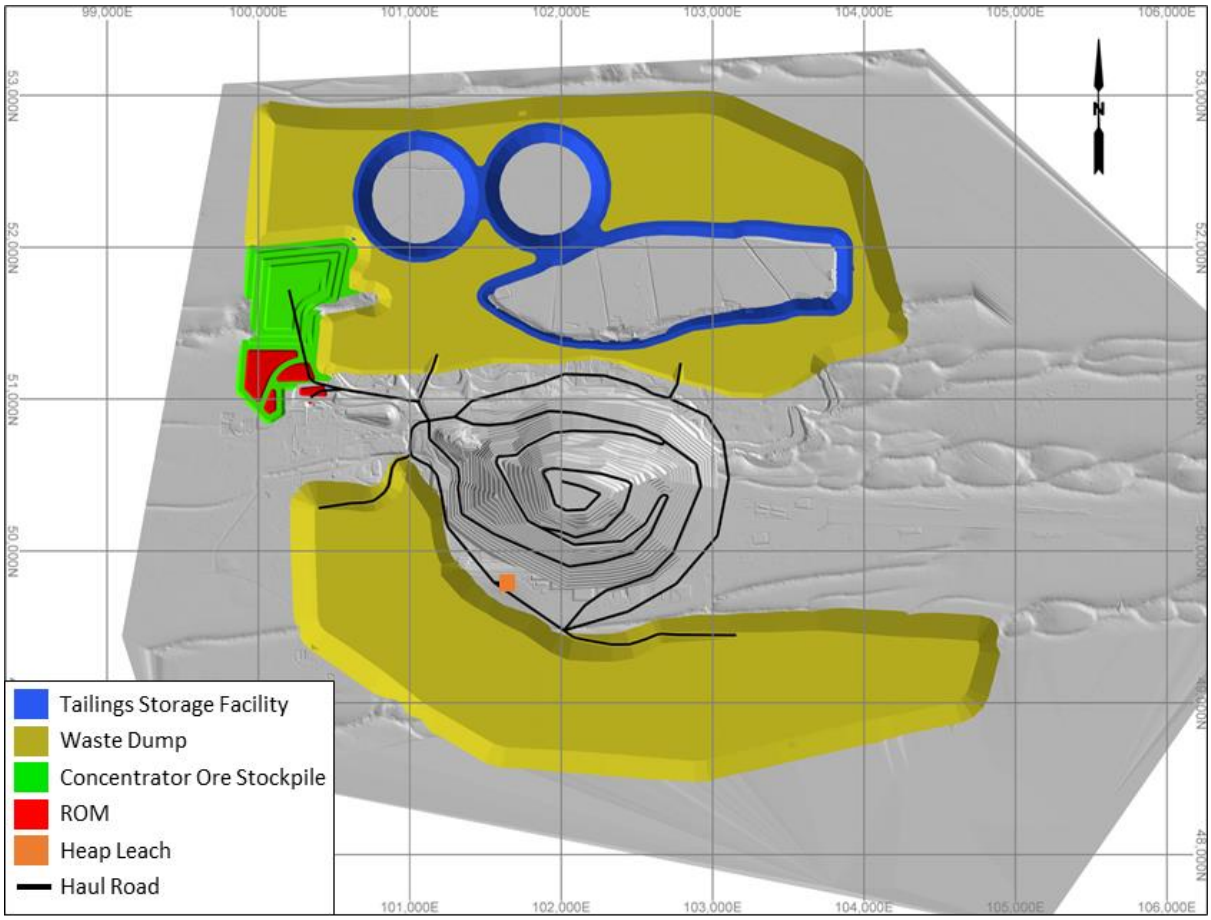

Figure 76 INDICATIVE IWL, ROM AND STOCKPILE LAYOUT

The ROM and IWL were designed with the following considerations:

- IWL rehabilitated batter angle 18° with no berm – future work may consider concave slopes.
- Tailings Storage Facility internal batter angles of 27° (1:1.96)
- Adherence to the WA guidelines for placement of abandonment bunds
- Maximum elevation 10,350mRL. Current dump height approvals are in place for 10,340mRL, however initial consultation indicated no fixed limit to prevent further approvals for the 10,350mRL to be employed if dump space is required later in the mine life.

- Adherence to aerodrome approach and take off paths
- To stay within the lease boundary (offset at least 50 metres to allow for access roads, drains, etc.)
- Endeavour to stay within approved cleared areas
- Cover existing heap leach pads
- 2 new tailings storage facilities to allow offset construction and tailings time – this approach should be reviewed in future studies
- No consideration was made to material characterisation, particularly potentially acid-forming (PAF) materials. However, these should be considered as part of future studies

Upon completion of design the estimated capacities of the IWL and ROM Facilities are

- IWL to the 10,340mRL 317 MLCM
- Concentrator Ore Stockpile 12.5 MLCM
- Concentrator ROM 0.92 MLCM

This design (when including the Concentrator ore stockpile) has sufficient volume and includes a 5% contingency

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12 MINE SCHEDULE

12.1 Loading Schedule

A mining schedule was created in Deswik scheduler to determine realistic monthly quantities of waste and ore to be mined.

12.1.1 Loading Scheduling Solids

The pit designs were split into 20m by 20m by 10m scheduling blocks to ensure sufficient schedule definition

A Deswik interrogation process was run to assign a grade, density, weathering, feed type, resource classification, and special geotechnical zone.

An adjacent block dilution process was implemented as outlined in prior sections with an additional 3% mining loss applied.

The outcome of this loss and dilution is summarised in Table 20.

Table 20 LOSS AND DILUTION SUMMARY

Total	Oxide Ore			Sulphide Ore			Sulphide Mineralised Waste	Waste	Strip Ratio
	Mt	Cu%	Cu Kt	Mt	Cu%	Cu Kt	Mt	Mt	
Undiluted Model	-	-	-	90.6	0.89	806	40.5	571.5	6.8
Adjacent Block Diluted Model	**-**	**-**	**-**	**90.4**	**0.89**	**802**	**32.0**	**569.7**	**6.7**
Impact of Adjacent Block Dilution	-	-	-	-0.22%	-0.21%	-0.43%	-21.00%	-0.30%	-1.46%
Final Model (3.0% Loss Applied)	**-**	**-**	**-**	**87.7**	**0.89**	**778**	**31.0**	**573.7**	**6.9**
Impact of Mining Losses	-	-	-	-3.00%	-0.00%	-3.00%	-3.00%	0.70%	3.61%
Total Estimated Loss & Dilution	**-**	**-**	**-**	**-3.21%**	**-0.21%**	**-3.42%**	**-23.37%**	**0.40%**	**2.10%**

**Numbers are rounded to reflect a suitable level of precision and may not sum*

12.1.2 Loading Scheduling Inputs

The mining schedule was created in Deswik Scheduler using the following constraints and inputs:

- The pit is planned to be mined in 4 stages
- Vertical and face advance angle dependencies were applied to the scheduling blocks
- Production rates were supplied by a third-party contractor based on their experience in other operations with similar levels of complexity, these were aligned to the MEC performance data for the region
- The excavators were set to run on a 24/7/365 schedule, with an effective utilisation applied, delivering an annualised capacity of 5700hrs – Asset requirements were modelled post scheduling. The modelling works applied a detailed time usage model, and fleet rationalisation to ensure full units in the estimates.

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- Quantity constraints were applied to different pit stages to balance the mining progression

12.1.3 Cut-off grade and Grade Bins

The cut-off grades were based on the inputs for processing, sales, royalty, logistics and revenue as outlined in Section 10. Material below the cut-off grade but above the processable limit of 0.15% was treated as mineralised waste that would be dump location tracked for future potential. Grade bins above the cut-off grade were developed to give manageable grade groups for processing analysis and stockpile management.

Allocation of grade bins by grade as outlined in Table 21.

Table 21 SCHEDULING GRADE BINS

Material	Destination	Oxide	Transitional	Fresh
Waste	Waste Dump	Cu < 0.15%	Cu < 0.15%	Cu < 0.15%
Mineralised Waste	Waste Dump	0.15% <= Cu < 0.30%	0.15% <= Cu < 0.36%	0.15% <= Cu < 0.28%
Low Grade Ore	Heap Leach Stockpile/LG Stockpile/ROM	0.30% <= Cu < 0.45%	0.36% <= Cu < 0.45%	0.28% <= Cu < 0.45%
Ore	Heap Leach Stockpile/ROM	0.45% <= Cu	0.45% < =Cu	0.45% <= Cu

12.1.4 Equipment Inputs

A third-party contractor provided inputs and constraints based on their experience in other copper operations with a similar level of complexity. These inputs were benchmarked by MEC and deemed reasonable; they are outlined in Table 22. With the anticipated operating philosophy of the 200t excavator in ore and the 600t excavator in waste and ore, no ore/waste productivity adjustments were applied.

Table 22 EXCAVATOR PRODUCTIVITY TABLE

Ex Class	Metric	UoM	Oxide	Transitional	Fresh
600	Base Productivity	tph	3,106	3,725	3,725
600	Productivity Adjustment - Sink Holes	% of Base Prod	72%	75%	75%
600	Productivity Adjustment - Sink Holes Zone of Influence	% of Base Prod	100%	100%	100%
600	Productivity Adjustment - Underground Zone of Influence	% of Base Prod	72%	75%	75%
600	Productivity Adjustment - Waste Dump	% of Base Prod	100%	100%	100%
600	Productivity Adjustment - Heap Leach	% of Base Prod	100%	100%	100%
600	Productivity Adjustment - In Pit Back Fill	% of Base Prod	100%	100%	100%
200	Base Productivity	tph	1,599	1,731	1,731
200	Productivity Adjustment - Sink Holes	% of Base Prod	72%	75%	75%
200	Productivity Adjustment - Sink Holes Zone of Influence	% of Base Prod	100%	100%	100%
200	Productivity Adjustment - Underground Zone of Influence	% of Base Prod	72%	75%	75%
200	Productivity Adjustment - Waste Dump	% of Base Prod	100%	100%	100%
200	Productivity Adjustment - Heap Leach	% of Base Prod	100%	100%	100%
200	Productivity Adjustment - In Pit Back Fill	% of Base Prod	100%	100%	100%

In the scheduling, all blocks deemed to be inside the Underground Zone of Influence were mined with the 200t excavator. This limits the mining advance rates through the workings as only one excavator is available to mine

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in these areas. The productivity applied was reduced to allow for additional activities to mine selectively and manage the impacts of prior rock support and other materials that may be encountered.

12.2 Loading Schedule Results

The schedule was run in Deswik Scheduler using the outlined inputs. The schedule was started on a mining commencing on 1st September 2025 to complete the required stripping to align with the sulphide concentrator refurbishment and construction works timing.

Various schedule iterations were run to optimise, reflect and achieve:

- Likely operational ramp up
- Maximum sulphide stream grade in the early years of operation
- Maintenance of a 4.5mtpa sulphide stream feed rate at the target grade levels, stockpiling and reclaiming lower grade ores where required
- Ensure maximum utilisation of excavators where possible

In total the schedule mines:

- 702.6 Mt at a;
- Strip ratio of 7.01:1 to produce;
- 92.05Mt of sulphide ore (Measured, indicated and inferred), at a grade of;
- 0.89% Cu, over a period of;
- 17.8 years, with;
- ~95.0% of ore mined in the reserve category and;
- ~96.8% of the copper mined in the reserve category

The total excavator hours reflect the mining schedule with a total of ~313kH used during the life of mine reaching a peak of ~33.6 kHrs per year at a life of mine average of 17.4 kHrs per year. It should be noted that these hours include the non-productive hours as outlined in the time usage model see Table 32.

A full total and annualised summary of the mining schedule is out lined section 12.2

Figure 77, Figure 78, Figure 79, Figure 80, Figure 81 and Figure 82 show selected face position relating to pit and dump progression.

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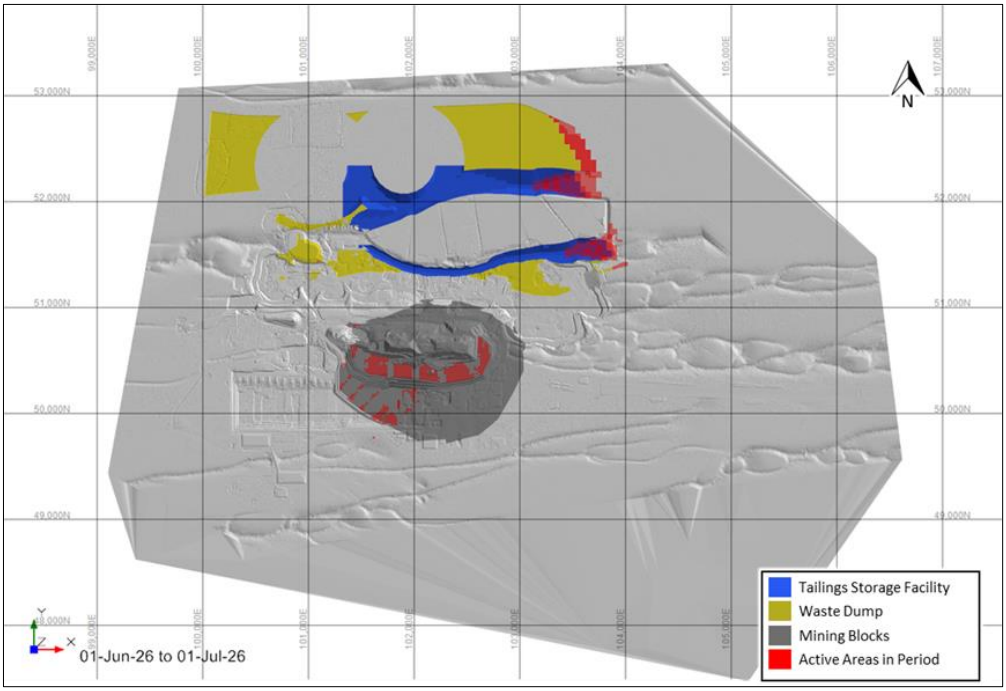

Figure 77 FACE POSITION END OF FY26

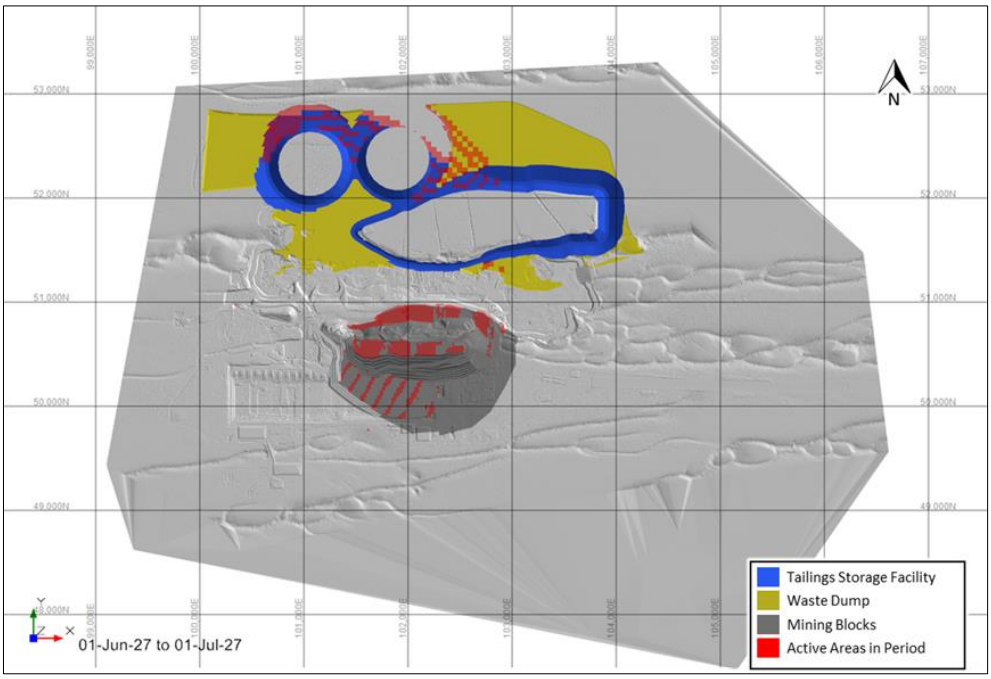

Figure 78 FACE POSITION END OF FY27

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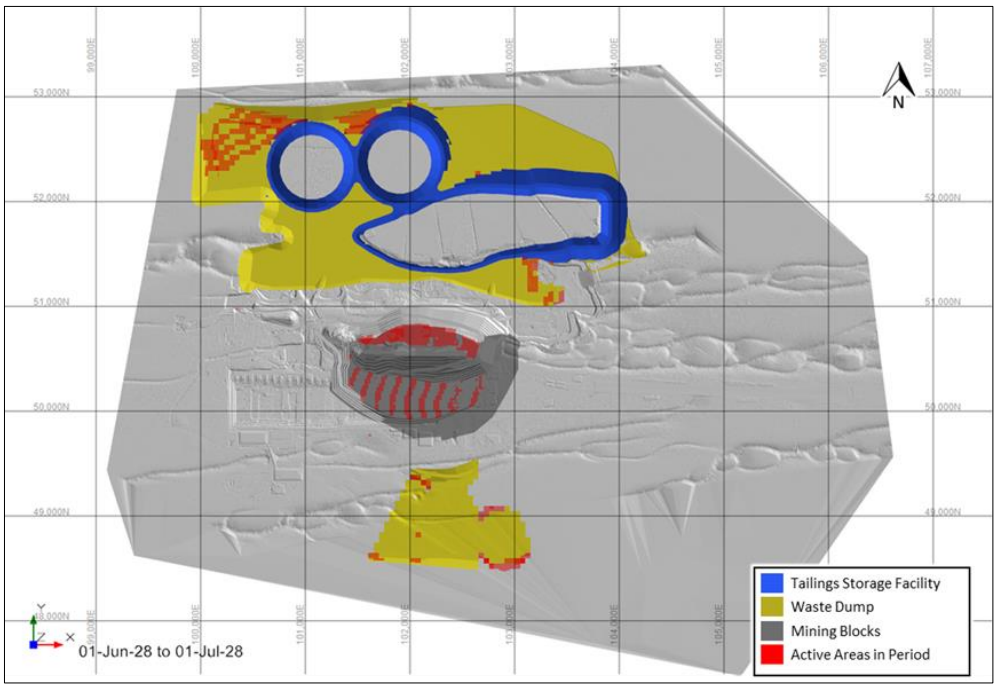

Figure 79 FACE POSITION END OF FY28

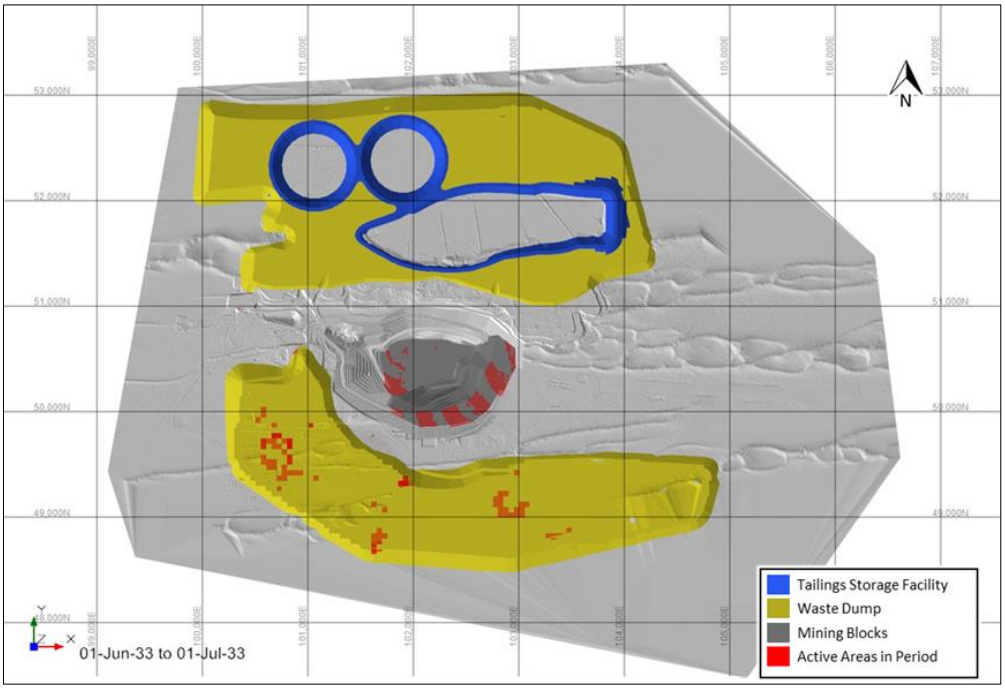

Figure 80 FACE POSITION END OF FY33

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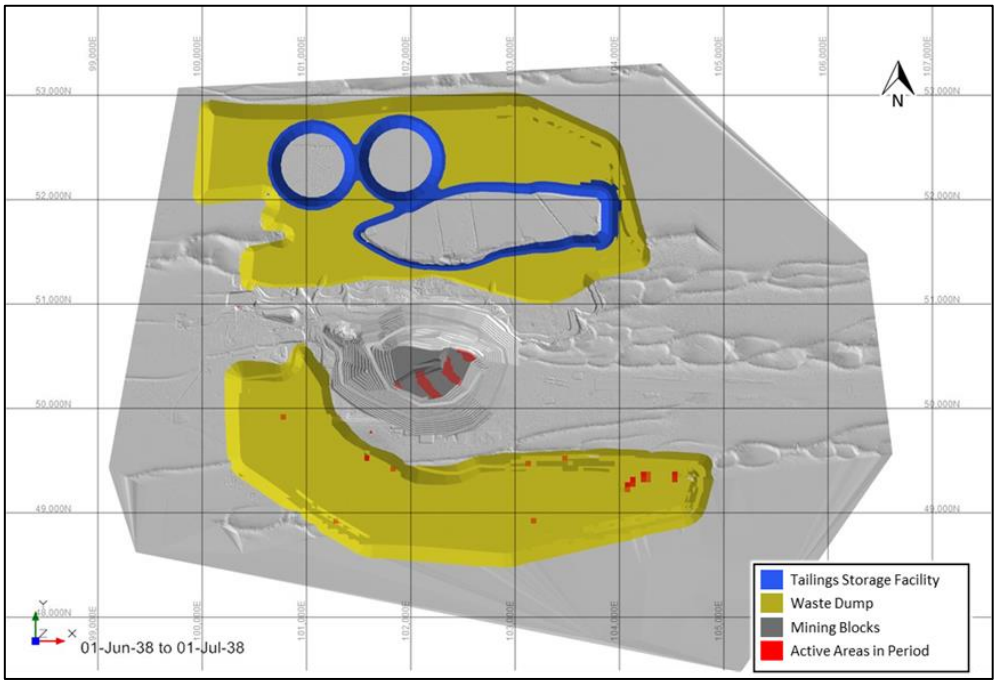

Figure 81 FACE POSITION END OF FY38

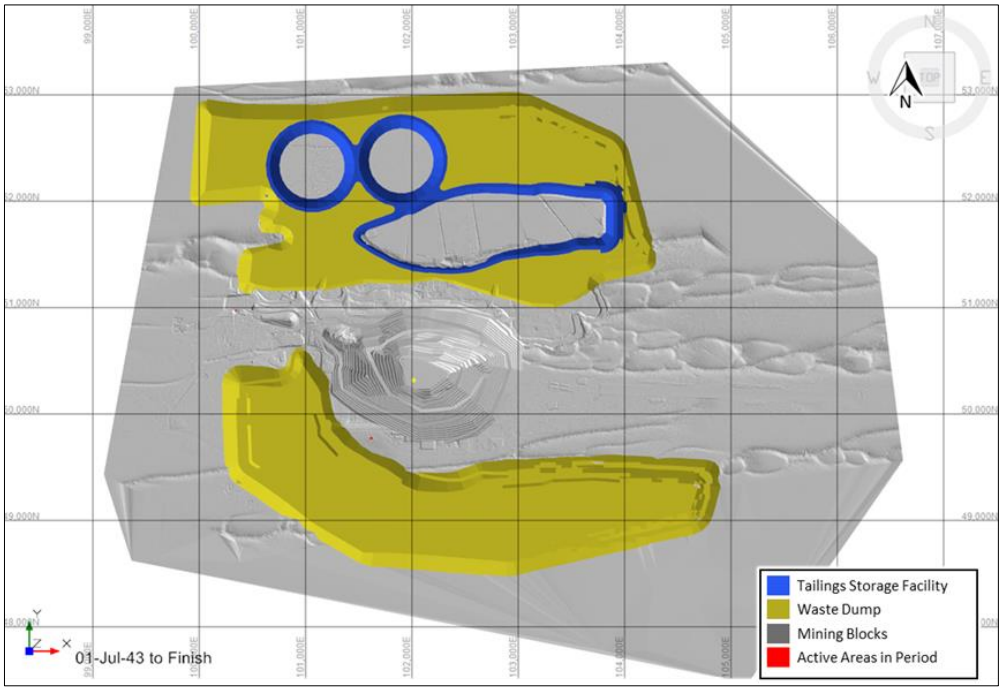

Figure 82 FACE POSITION END OF FY43 - END OF LIFE

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12.2.1 Loading Schedule Summary

The results of the loading schedule are shown in Table 23, Figure 83, Figure 84, Figure 85, Figure 86, and Figure 87. The waste material in this section includes a portion of the historic leach pad material. A portion of these materials will be leached and are included as ore in the Oxide Stream.

Table 23 MINING SCHEDULE SUMMARY

Mining Schedule Summary		UoM	Reserve & Incidental	Reserve	Incidental
Total	Material Movement	Mt	702.56	702.56	
Total	Waste	Mt	614.86	619.28	
Total	Ore	Mt	87.69	83.27	4.42
Total	Strip Ratio	WT:OT	7.01	7.44	
Total	Contained Copper	kdt Cu	778.12	753.21	24.91
Total	% Ore in Reserve	%	95.0%		
Total	% Copper in Reserve	%	96.8%		
Total	Mining Time	Years	17.93		
Peak	Mining Rate	MtPa	84.69		
Average	Mining Rate	MtPa	39.19		
Total	Excavator	kH	312.54		
Peak	Excavator	kHPa	33.57		
Average	Excavator	kHPa	17.44		
Total	Truck	kH	1,674.57		
Peak	Truck	kHPa	186.72		
Average	Truck	kHPa	93.42		
Mined Ore Feed by Stream Break Down					
Total	Ore	Mt	87.69	83.27	4.42
Total	Ore	Cu%	0.89%	0.90%	0.56%
Total	Contained Copper	kdt Cu	778.12	753.21	24.91

Numbers are rounded to reflect a suitable level of precision and may not sum

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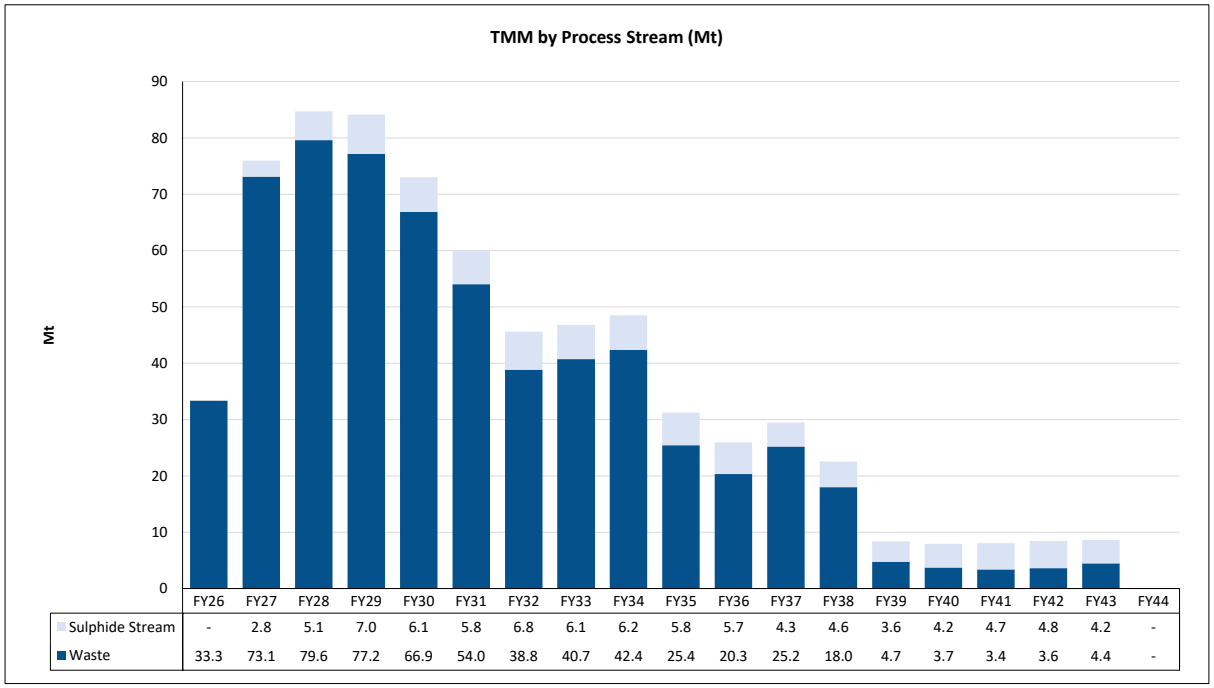
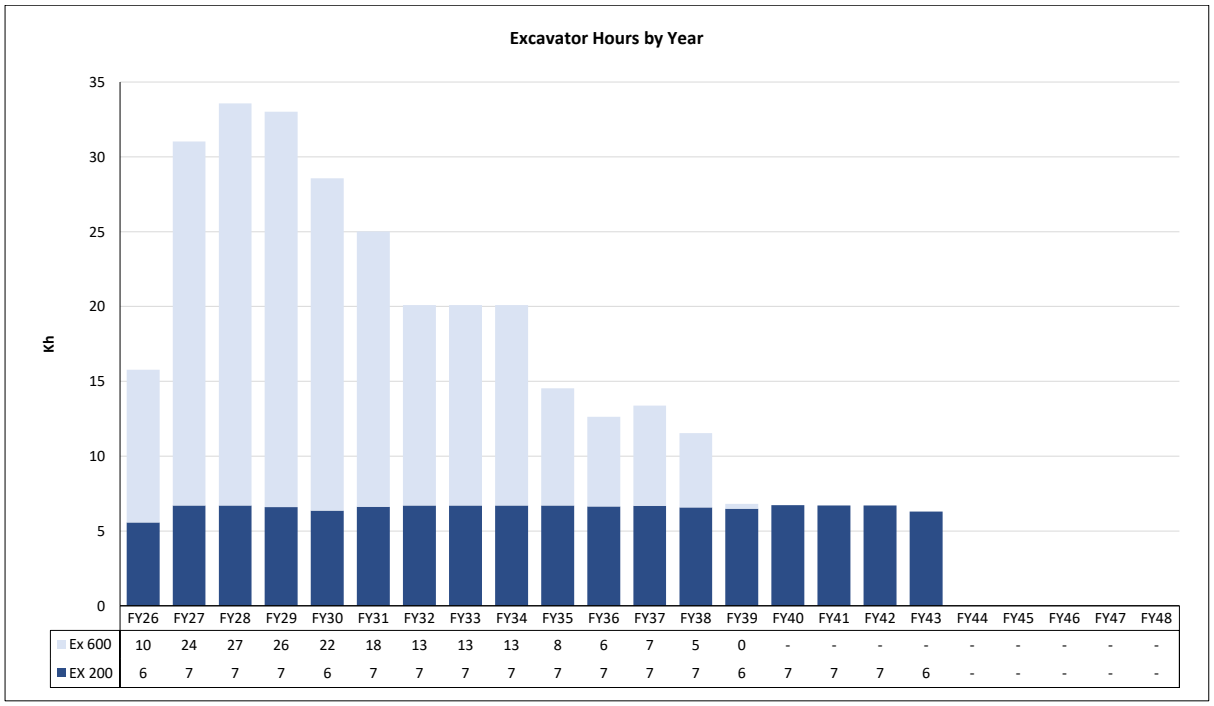


	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
Sulphide Stream	-	2.8	5.1	7.0	6.1	5.8	6.8	6.1	6.2	5.8	5.7	4.3	4.6	3.6	4.2	4.7	4.8	4.2	-
Waste	33.3	73.1	79.6	77.2	66.9	54.0	38.8	40.7	42.4	25.4	20.3	25.2	18.0	4.7	3.7	3.4	3.6	4.4	-

Figure 83 TMM BREAK DOWN



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Ex 600	10	24	27	26	22	18	13	13	13	8	6	7	5	0	-	-	-	-	-	-	-	-	-
EX 200	6	7	7	7	6	7	7	7	7	7	7	7	7	6	7	7	7	6	-	-	-	-	-

Figure 84 EXCAVATOR HOURS BY YEAR

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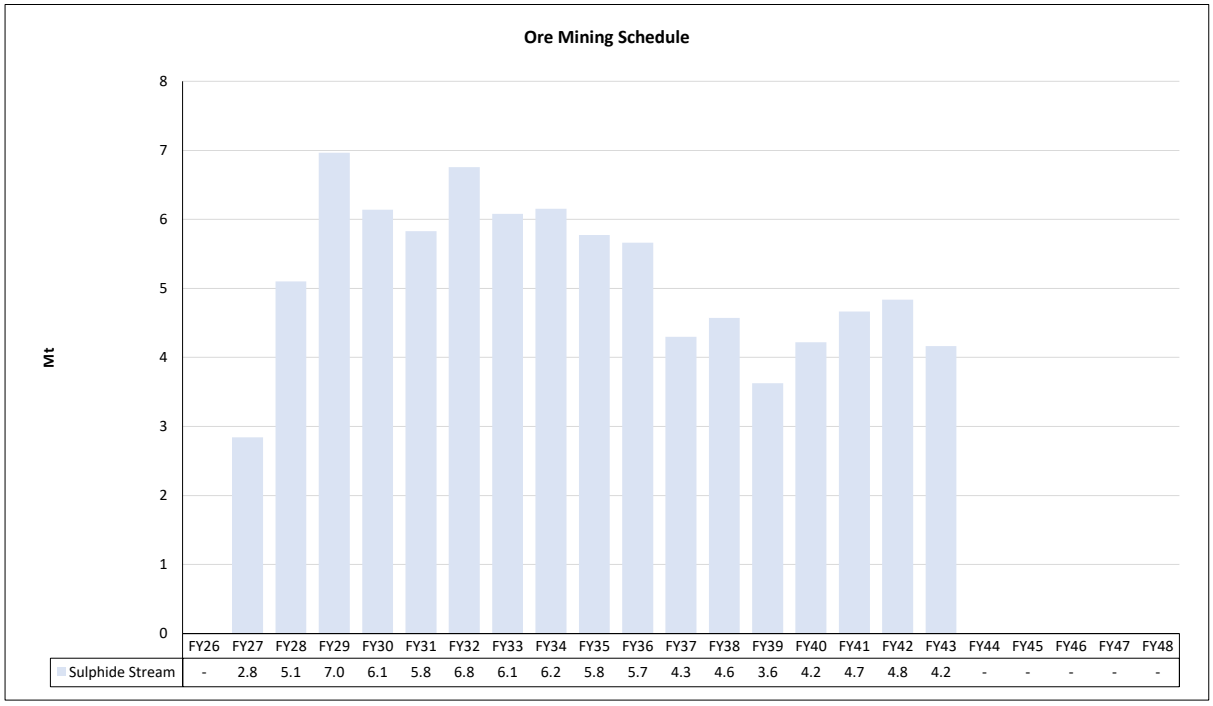
12.2.2 Ore Mining Schedule - Total



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Sulphide Stream	-	2.8	5.1	7.0	6.1	5.8	6.8	6.1	6.2	5.8	5.7	4.3	4.6	3.6	4.2	4.7	4.8	4.2	-	-	-	-	-

Figure 85 ORE MINING SCHEDULE

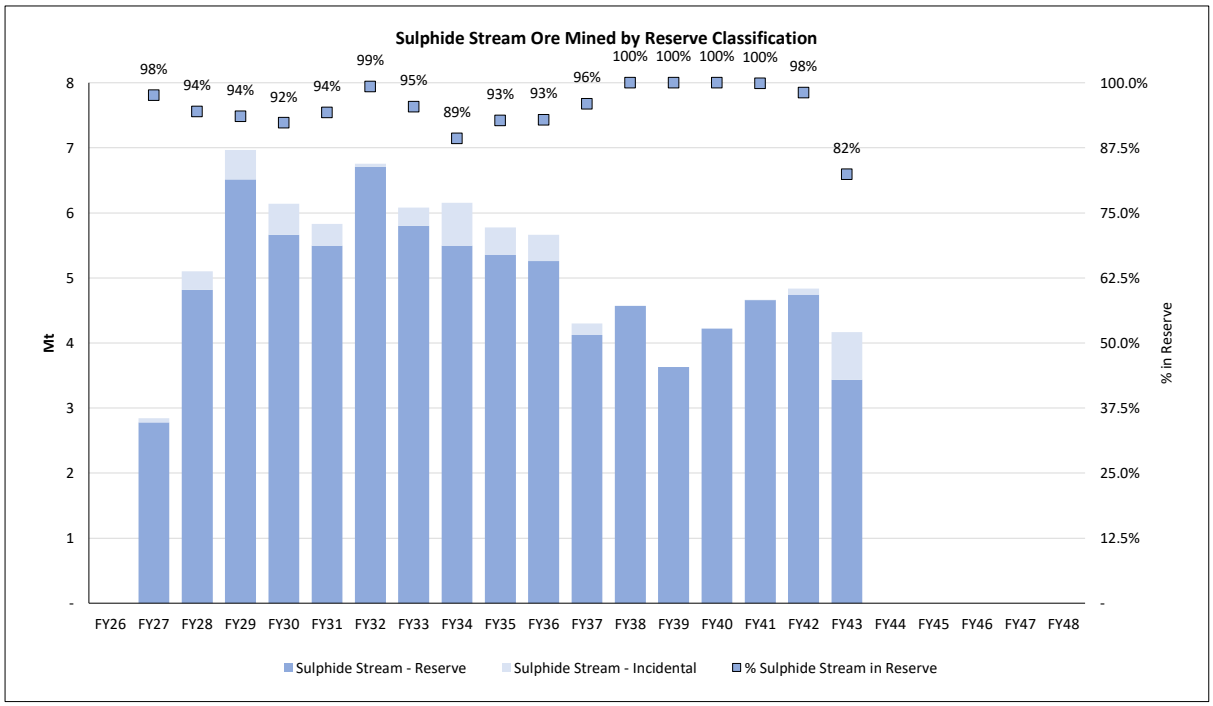


Figure 86 SULPHIDE STREAM ORE MINING SCHEDULE BY RESERVE CLASSIFICATION

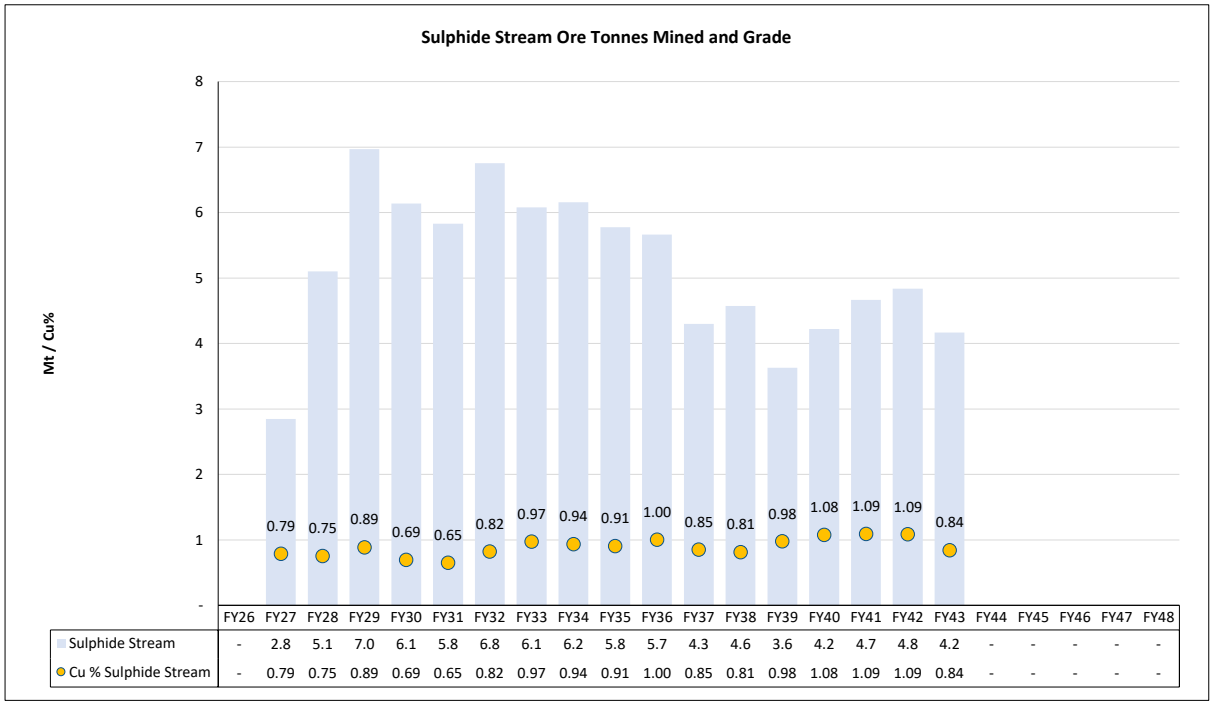


Figure 87 SULPHIDE STREAM ORE MINING SCHEDULE

12.3 Haulage Schedule

Upon completion of the production schedule, haulage scheduling was completed using the Deswik LHS (Landform and Haulage Schedule) software based on a 230 tonne class rigid dump truck (Cat793G)

A haulage network was created as outlined in Figure 76 and the haulage schedule run.

12.3.1 Haulage Schedule Inputs

A breakdown of the inputs and their source used in the haulage schedule is outlined in Table 24.

Table 24 HAULAGE SCHEDULE INPUTS

Data	Format	Source	Comments
Mining Schedule	Schedule file	MEC	MEC created the LOM schedule as the driving schedule for the LHS
Topography Surface	x,y,z data	CYM	hl_topo_simp_v3
Dump Designs	.dxf	CYM	North Waste Dump (nth_iwl_des07_cut) South Waste Dump (sth_iwl_des07_cut)
Dump Solids	Triangulation	MEC	Cut into 50m X 50m X 10m blocks
Stockpile	Triangulation	MEC	Haulage estimated to centre of stockpile
Dump Solid Attributes	Data stored on solids	MEC	Generated using MEC created formula sets.
Dump Sequence Driver	Software input	MEC	A minimum distance prioritises dump solids.
Dump Dependencies	Dump dependencies	MEC	Maximum 25-degree overall face angle
Haul Roads	CAD data	MEC	Aligned to pit stage designs and dump designs. Interim ramps and roads were created to be in line with client data.
Truck Model Used	CAT793G rear dump truck Deswik .trux file	Deswik	Payload 229t
Material Swell Factor	Values	CYM	1.2 for ore and waste
Truck Spot & Load Time	Values	MEC	3 min
Truck Spot & Dump Time	Values	MEC	2 min
Rolling Resistance	Values	MEC	3%

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12.3.1.1 Road Design

Road centres were digitised on the supplied surface using a 10% gradient for ramps. All haul roads have been assumed as two-way access, base of pit will operate with a portion of single lane access with clear passing bays and spotting locations. Due to the low fleet requirements at this final stage the dual direction haulage assumption is not considered material in the haulage estimation.

12.3.1.2 Truck Operating Parameters

For the haulage modelling in Deswik, defaults are used for all truck parameters; this includes:

- Rim-pull curves
- Rolling resistance
- Payloads

12.3.2 LHS Set Up

The LHS setup was based on four key components:

Source (mining) solids

- The pit scheduling solids

Destination solids

- Destinations for material to be hauled to
- Dump solids for waste – volume limited to volumes of design solids
- Stockpile solids for ore – unlimited volume to simulate dump and reclaim of the stockpile

Haul roads as out lined in Figure 76

- Road network for material to travel from source to destination.
- A specific road network is set up for each pit stage to align with ramp locations.

Block connectors

- Connections from mining solids to haul roads.
- Connections from haul roads to destination solids

Waste rock dumps are strategically located to the north and south of the Cyprium Nifty pit. The current waste dump plan allows for scheduled building of the TSF/IWL.

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12.3.2.1 Potential Acid Forming Material Encapsulation

It is understood that acid mine drainage could potentially occur at Nifty and as such logic must be applied to ensure encapsulation of Potentially Acid Forming (PAF) materials, with Non-Acid Forming Materials (NAF) and this should be accounted for in the dump sequencing.

At time of writing minimal data was available on geochemical analysis for waste rock characterisation and as such the following assumptions were made until the data is available:

- Oxide – NAF
- Transitional – NAF and PAF
- Fresh – PAF

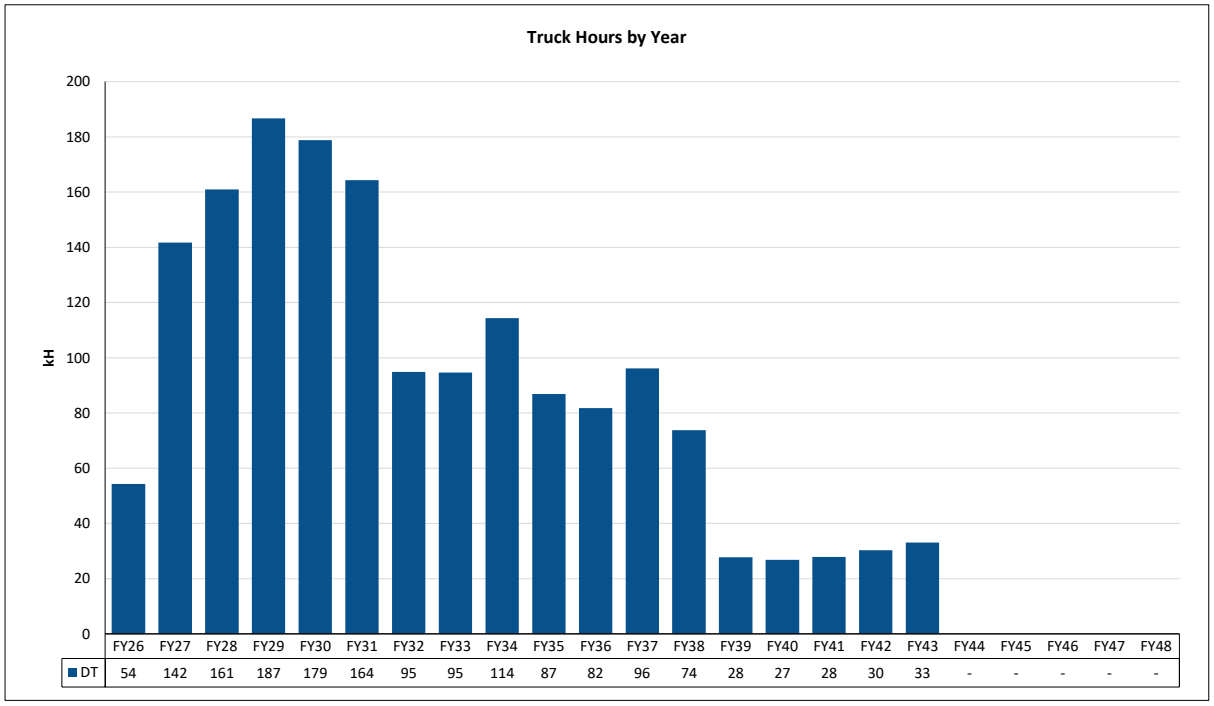
Using these inputs the dump scheduling was completed to create encapsulation of the PAF material as follows:

- 2m thick base of NAF
- Up to a 100m wall of NAF (based on the wall thicknesses of the TSF's

The NAF/ PAF geochemical assessment is underway and will be included as a refinement within the feasibility study. The information available is deemed sufficient for a PFS.

12.3.3 LHS Results

In total ~1,675k truck hours are required (inclusive of non-productive time as outlined in the TUM inputs in Table 32, the truck hours peak at ~190kHPa and average ~94kHPa over the life of the mine. The schedule of truck hours is outlined in Figure 88.



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
DT	54	142	161	187	179	164	95	95	114	87	82	96	74	28	27	28	30	33	-	-	-	-	-

Figure 88 TRUCK HOURS BY YEAR

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13 PROCESSING

13.1 Sulphide Stream

13.1.1 Sulphide Stream Processing Schedule

After completing the load and haul scheduling, the processing schedule was created based on the following inputs:

- 23 months of plant refurbishment and upgrade, this estimate includes procurement timeline as estimated by Macca Interquip (Interquip, 2024) allowing feed to start on a sustainable basis in May 2027
- As outlined by Macca Interquip (Interquip, 2024) the McNulty Series 1[6] ramp up curve was adopted for the ramp up of processing:

  "The curve reflects the percentage of the expected nameplate capacity (tonnes milled) of the on-specification concentrate production over the first 12 months of operations. Actual ramp up will be dependent on the mining ramp-up schedule. Nifty is expected to match or exceed McNulty Series 1 due to the maturity of the plant and process."

- The curve was extrapolated from the report and applied as outlined in Figure 89 and sees a ramp up from ~1.8 mtpa to 4.5 mtpa on a monthly equivalent over the first 12 months of operation
- Based on the estimated break even cost of processing and consideration of the grade bins as outlined in Table 21:
  - The scheduled grade bins aligned to the cut off grades estimated in the mine design and reserves section. Only material above the cut off grade was considered for processing with all other material considered waste.
  - The lower grade bin above COG, was stockpiled to give a higher feed grade during periods where lower grade was observed to be bottlenecking the concentrator. This stockpile was then reclaimed throughout the mine life when feed tonnes from the mine could not meet the concentrator feed rate. Most reclaim was then at the end of the mine life, where the cost base is reduced and hence enabling improved overall project economics.

In total 87.7mt is fed over a 21 Year period at a grade of ~ 0.89% Cu. Approximately 95% of the feed ore and ~97% of the feed copper is in reserve as outlined in Table 25, Figure 90, Figure 91, Figure 92 and Figure 93.

[6] The 4 McNulty Series Curves can be summarised as follows:
- Series 1 – Mature technology, prior licenses, equipment similar to other operations, through piloting completed, process engineering and development is complete
- Series 2 – New technology, prototype equipment, sever process conditions
- Series 3 – Series 2 + Steps missed in testing, serious design flaws, poor quality, feed / mineralogy mis understood, engineering and construction fast tracked
- Series 4 – Series 2 + 3 + Complex flowsheets, equipment downsized to save cost and process chemistry miss understood

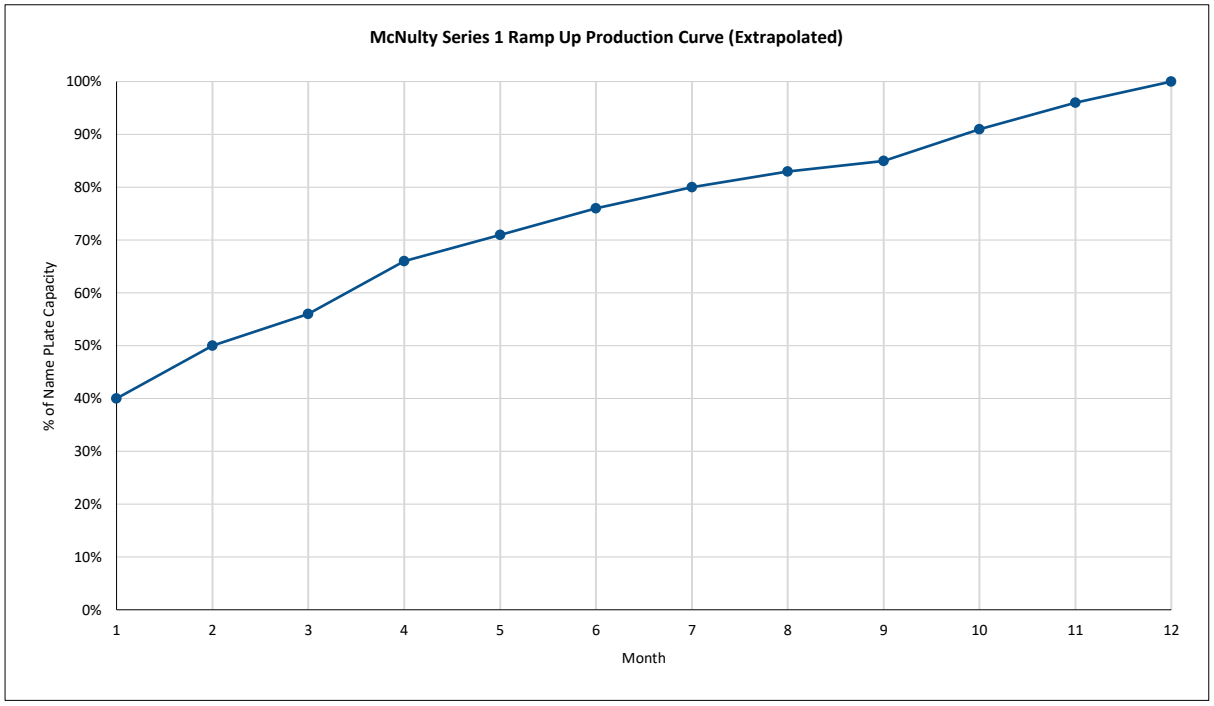

Figure 89 EXTRAPOLATED MCNULTY SERIES 1 RAMP UP CURVE

Table 25 BREAK DOWN OF SULPHIDE STREAM FEED BY RESERVE CLASSIFICATION

		Fed Mt	Fed Cu kt	Grade Cu%	Tonnes % of Feed	Copper Tonnes % of Feed
Sulphide Stream	Reserve	83.3	753.2	0.90%	95%	97%
Sulphide Stream	Incidental	4.4	24.9	0.56%	5%	3%
Sulphide Stream	**Total**	**87.7**	**778.1**	**0.89%**	**100%**	**100%**

**Numbers are rounded to reflect a suitable level of precision and may not sum*

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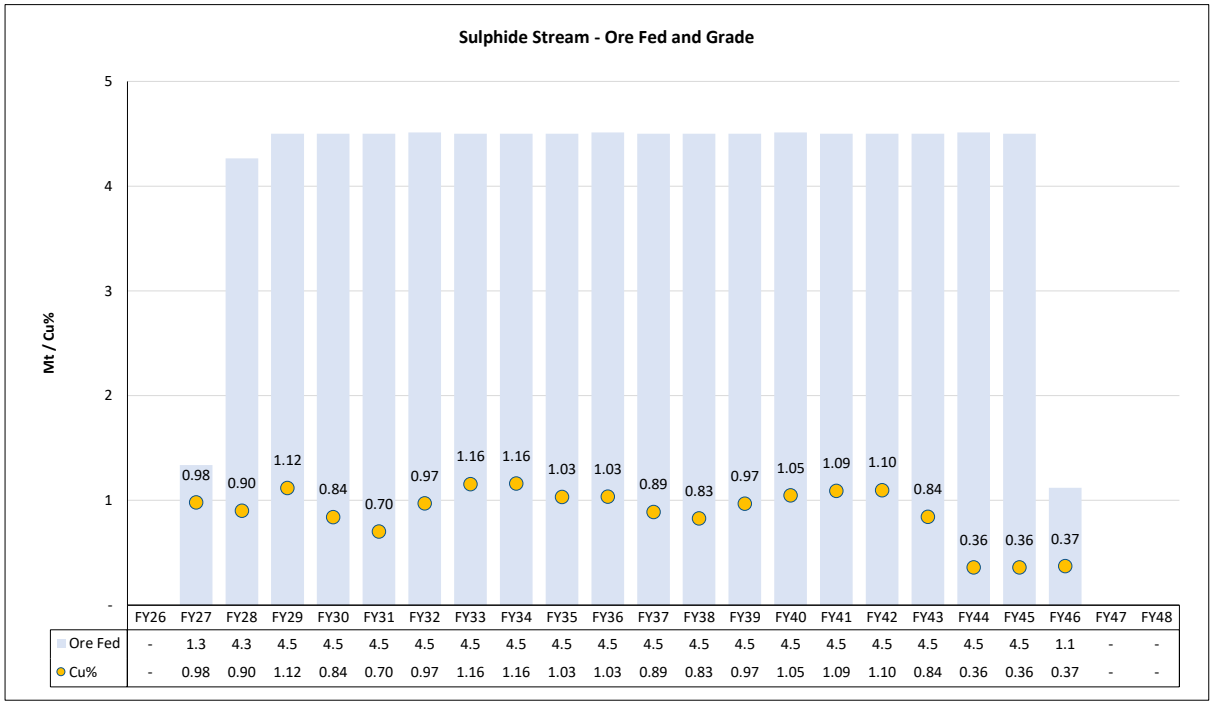
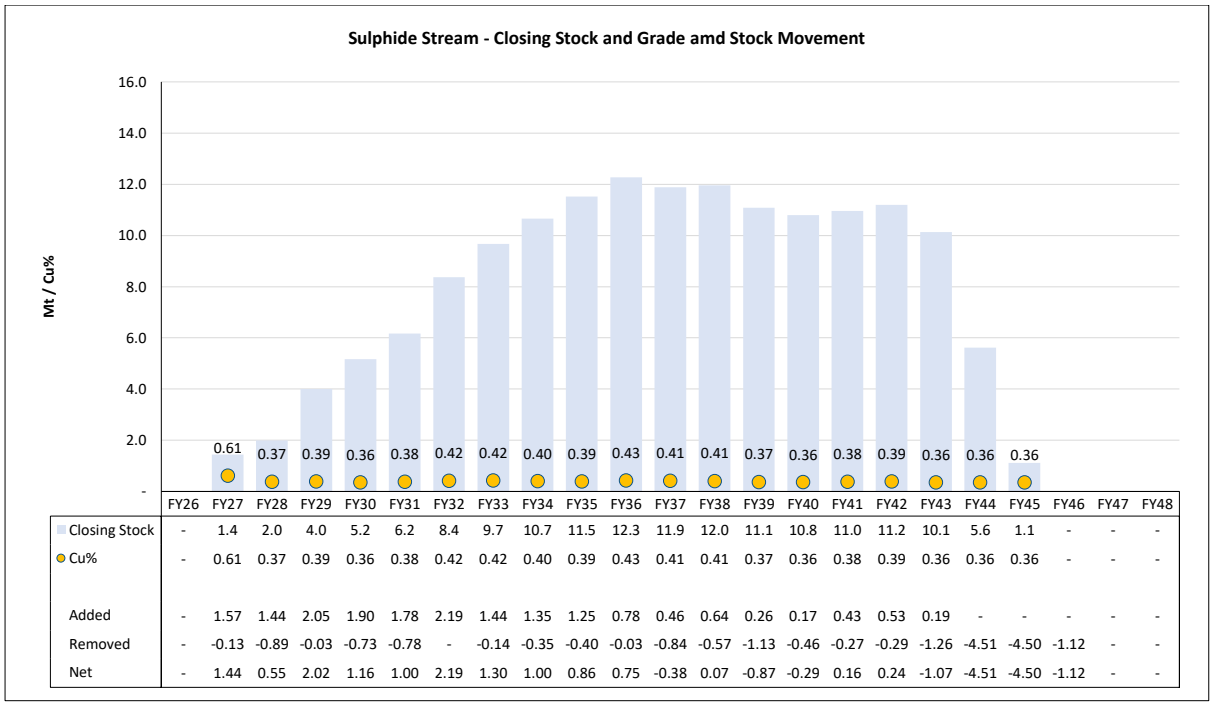
13.1.1.1 Sulphide Stream Feed (Reserve Only)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Ore Fed	-	1.3	4.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	1.1	-	-
Cu%	-	0.98	0.90	1.12	0.84	0.70	0.97	1.16	1.16	1.03	1.03	0.89	0.83	0.97	1.05	1.09	1.10	0.84	0.36	0.36	0.37	-	-

Figure 90 RESERVE ONLY - TOTAL SULPHIDE STREAM FED MATERIAL AND GRADE



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Closing Stock	-	1.4	2.0	4.0	5.2	6.2	8.4	9.7	10.7	11.5	12.3	11.9	12.0	11.1	10.8	11.0	11.2	10.1	5.6	1.1	-	-	-
Cu%	-	0.61	0.37	0.39	0.36	0.38	0.42	0.42	0.40	0.39	0.43	0.41	0.41	0.37	0.36	0.38	0.39	0.36	0.36	0.36	-	-	-
Added	-	1.57	1.44	2.05	1.90	1.78	2.19	1.44	1.35	1.25	0.78	0.46	0.64	0.26	0.17	0.43	0.53	0.19	-	-	-	-	-
Removed	-	-0.13	-0.89	-0.03	-0.73	-0.78	-	-0.14	-0.35	-0.40	-0.03	-0.84	-0.57	-1.13	-0.46	-0.27	-0.29	-1.26	-4.51	-4.50	-1.12	-	-
Net	-	1.44	0.55	2.02	1.16	1.00	2.19	1.30	1.00	0.86	0.75	-0.38	0.07	-0.87	-0.29	0.16	0.24	-1.07	-4.51	-4.50	-1.12	-	-

Figure 91 RESERVE ONLY – SULPHIDE STREAM STOCKPILE MOVEMENT AND BALANCE

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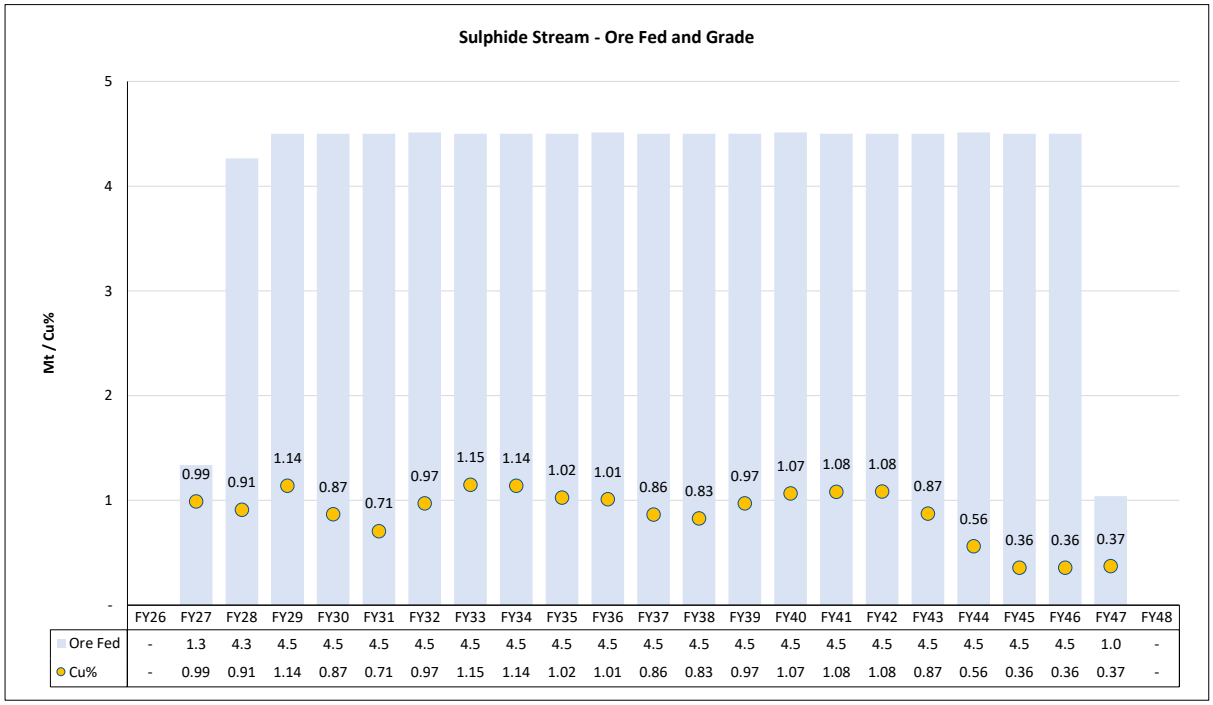
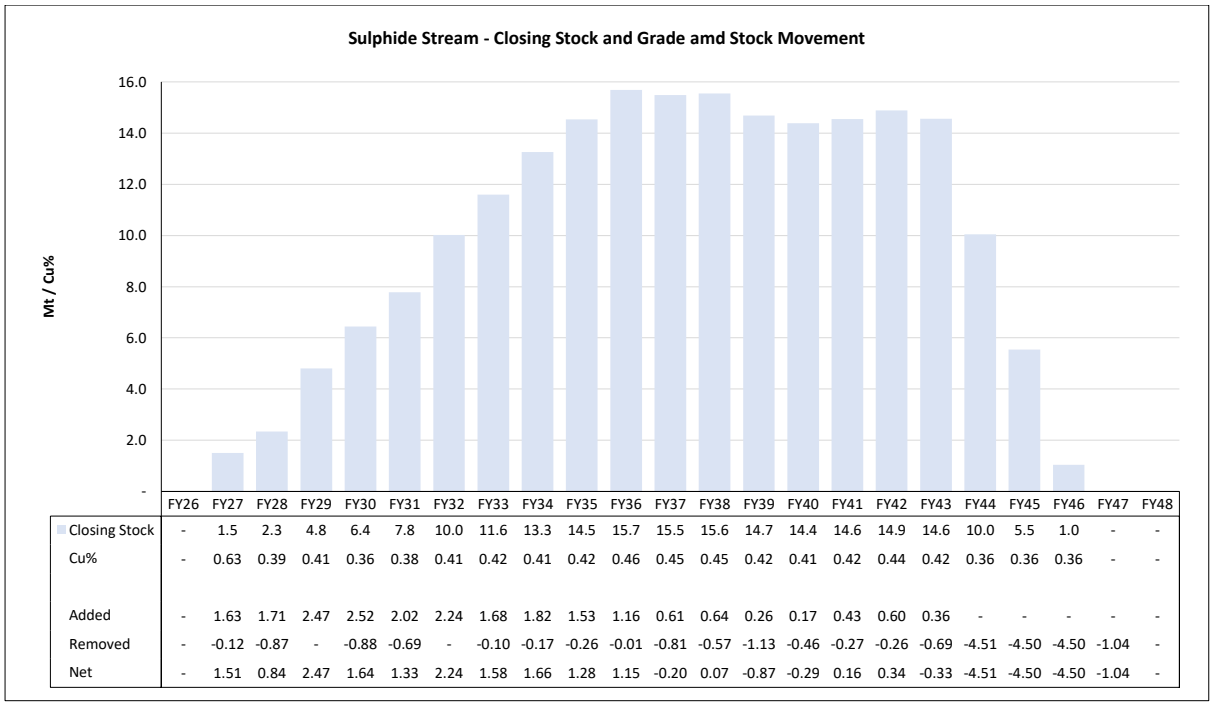
13.1.1.2 Sulphide Stream Feed (Reserve and Incidental)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Ore Fed	-	1.3	4.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	1.0	-
Cu%	-	0.99	0.91	1.14	0.87	0.71	0.97	1.15	1.14	1.02	1.01	0.86	0.83	0.97	1.07	1.08	1.08	0.87	0.56	0.36	0.36	0.37	-

Figure 92 RESERVE AND INCIDENTAL - TOTAL SULPHIDE STREAM FED MATERIAL AND GRADE



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Closing Stock	-	1.5	2.3	4.8	6.4	7.8	10.0	11.6	13.3	14.5	15.7	15.5	15.6	14.7	14.4	14.6	14.9	14.6	10.0	5.5	1.0	-	-
Cu%	-	0.63	0.39	0.41	0.36	0.38	0.41	0.42	0.41	0.42	0.46	0.45	0.45	0.42	0.41	0.42	0.44	0.42	0.36	0.36	0.36	-	-
Added	-	1.63	1.71	2.47	2.52	2.02	2.24	1.68	1.82	1.53	1.16	0.61	0.64	0.26	0.17	0.43	0.60	0.36	-	-	-	-	-
Removed	-	-0.12	-0.87	-	-0.88	-0.69	-	-0.10	-0.17	-0.26	-0.01	-0.81	-0.57	-1.13	-0.46	-0.27	-0.26	-0.69	-4.51	-4.50	-4.50	-1.04	-
Net	-	1.51	0.84	2.47	1.64	1.33	2.24	1.58	1.66	1.28	1.15	-0.20	0.07	-0.87	-0.29	0.16	0.34	-0.33	-4.51	-4.50	-4.50	-1.04	-

Figure 93 RESERVE AND INCIDENTAL – SULPHIDE STREAM STOCKPILE MOVEMENT AND BALANCE

13.1.1 Copper Production

In Total ~694 k dt Cu is produced with ~97% of production in the reserve category as outlined in Table 26, Figure 94 and Figure 95.

Table 26 SULPHIDE STREAM COPPER PRODUCTION

		Fed Mt	Fed kt Cu	Grade Cu%	Recovery Recovery	Produced kdt Cu	Produced %
Sulphide Stream	Reserve	83.3	753.2	0.90%	89.2%	671.8	97%
Sulphide Stream	Incidental	4.4	24.9	0.56%	87.6%	21.8	3%
Sulphide Stream	**Total**	87.7	778.1	0.89%	89.1%	693.6	100%

**Numbers are rounded to reflect a suitable level of precision and may not sum*

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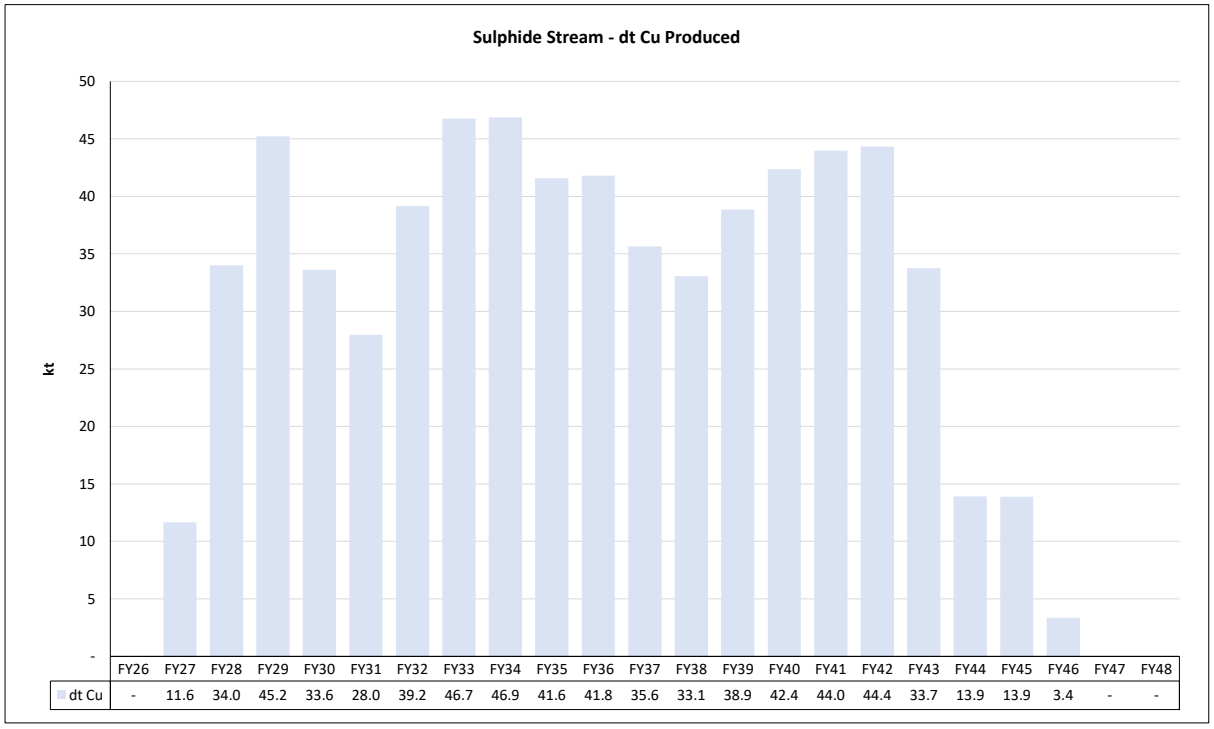
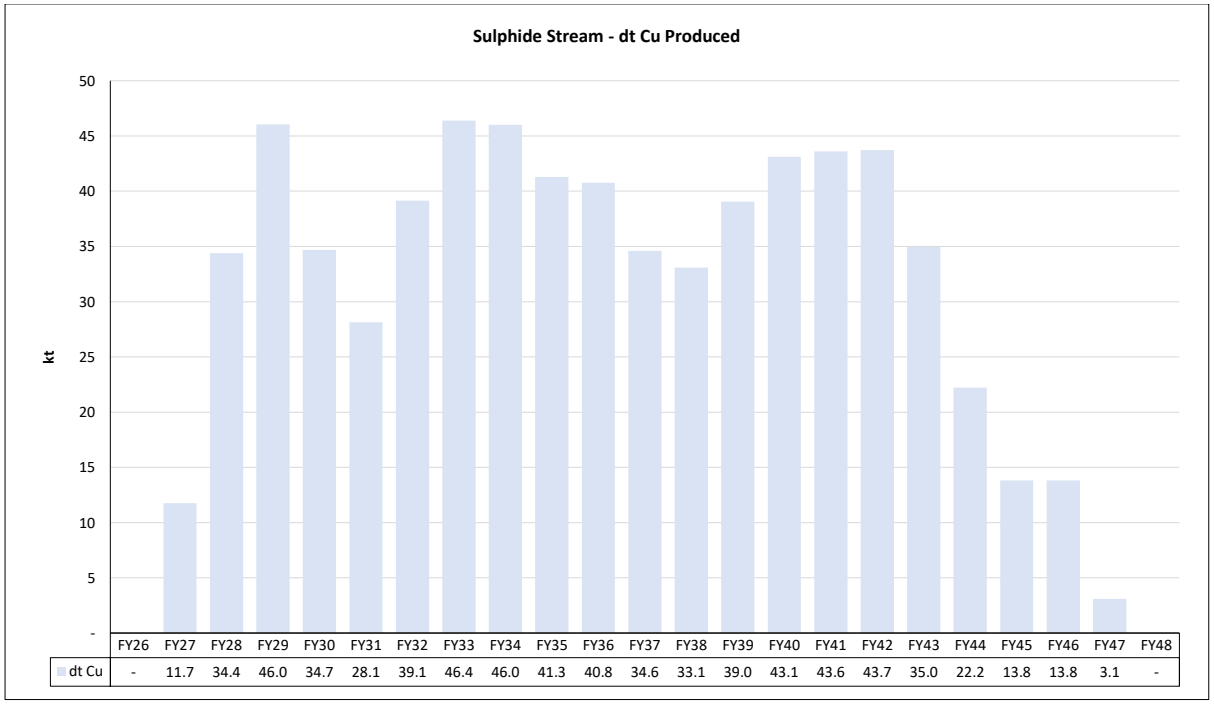
13.1.1.1 Sulphide Stream – (Reserve Only)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
dt Cu	-	11.6	34.0	45.2	33.6	28.0	39.2	46.7	46.9	41.6	41.8	35.6	33.1	38.9	42.4	44.0	44.4	33.7	13.9	13.9	3.4	-	-

Figure 94 RESERVE ONLY - SULPHIDE STREAM COPPER PRODUCTION

13.1.1.2 Sulphide Stream – (Reserve and Incidental)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
dt Cu	-	11.7	34.4	46.0	34.7	28.1	39.1	46.4	46.0	41.3	40.8	34.6	33.1	39.0	43.1	43.6	43.7	35.0	22.2	13.8	13.8	3.1	-

Figure 95 RESERVE AND INCIDENTAL - SULPHIDE STREAM COPPER PRODUCTION

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13.2 Oxide Stream

13.2.1 Heap Leach & SX-EW Processing Schedule

The Oxide Stream processing sees the turnover of the existing leach pads 5 and 6 and re leaching before treatment via the SX-EW circuit. Existing heap leach pads 1-4 will be relocated from within the pit limits to a new leach pad located inside the southern waste dump footprint to be leached. The entire circuit is limited by total annual copper cathode production of 6ktpa.

All newly mined oxide material that couple potentially be treated in the future will be stockpiled in an appropriate location near to the existing heap leach and SX-EW infrastructure.

Of the assessable pads, a total ~12.7Mt of ore is treated in this estimate with ~81% of feed in reserves as shown in Table 27, Figure 96 and Figure 97.

Table 27 BREAK DOWN OF OXIDE STREAM FEED BY RESERVE CLASSIFICATION

		Fed Mt	Fed Cu kt	Grade Cu%	Tonnes % of Feed	Copper Tonnes % of Feed
Oxide Stream	Reserve	10.6	43.6	0.41%	84%	81%
Oxide Stream	Incidental	2.0	10.5	0.51%	16%	19%
Oxide Stream	**Total**	**12.7**	**54.0**	**0.43%**	**100%**	**100%**

**Numbers are rounded to reflect a suitable level of precision and may not sum*

13.2.1.1 Oxide Stream Ore Feed (Reserve Only)

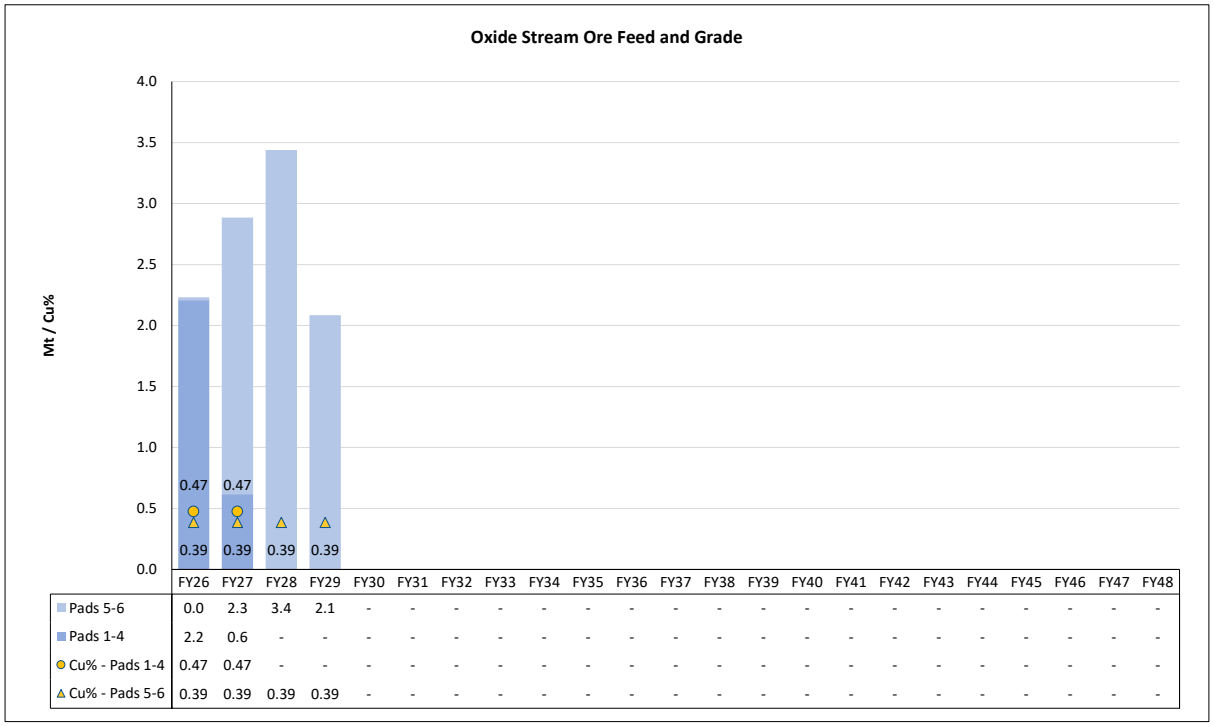

Figure 96 RESERVE ONLY - OXIDE STREAM FEED TONNES AND GRADE

13.2.2 Oxide Stream Ore Feed (Reserve and Incidental)

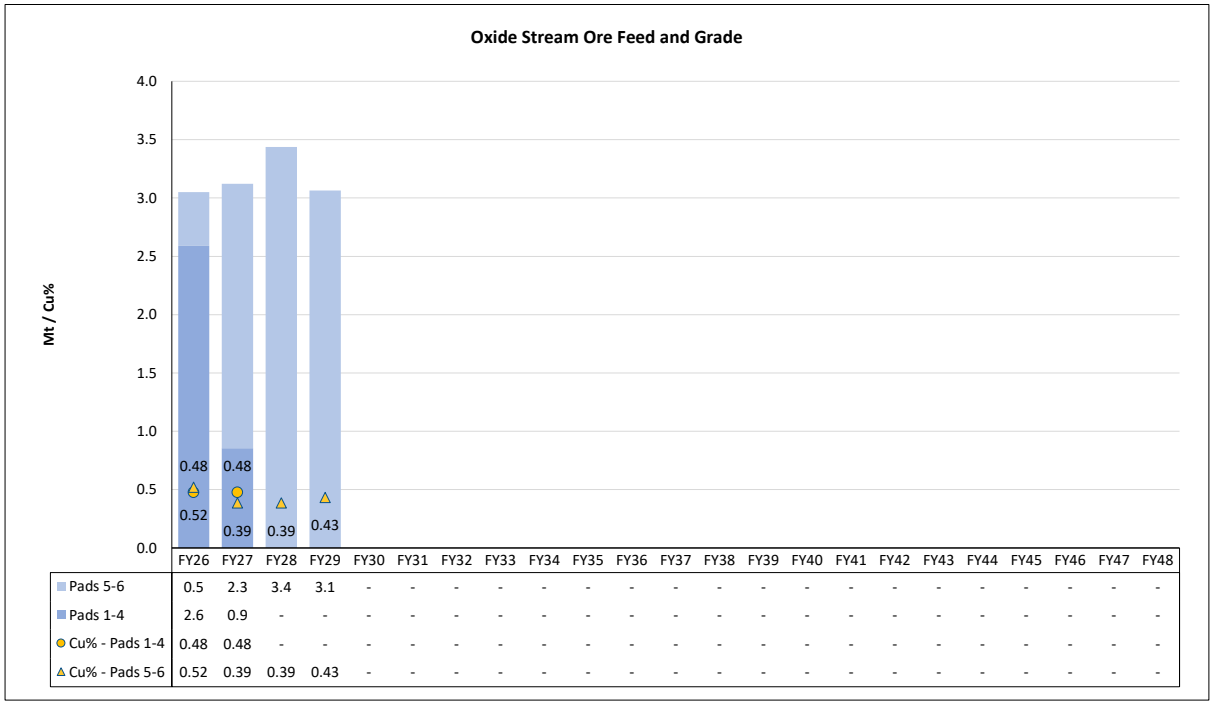

Figure 97 RESERVE AND INCIDENTAL - OXIDE STREAM FEED TONNES AND GRADE

13.2.1 Copper Production

In Total ~24k dt Cu is produced with ~81% of production in the reserve category as outlined in Table 28, Figure 98 and Figure 99.

Table 28 OXIDE STREAM COPPER PRODUCTION

		Fed Mt	Fed kt Cu	Grade Cu%	Recovery Recovery	Produced kdt Cu	Produced %
Oxide Stream	Reserve	10.6	43.6	0.41%	45.2%	19.7	81%
Oxide Stream	Incidental	2.0	10.5	0.51%	45.2%	4.7	19%
Oxide Stream	**Total**	12.7	54.0	0.43%	45.2%	24.4	100%

**Numbers are rounded to reflect a suitable level of precision and may not sum*

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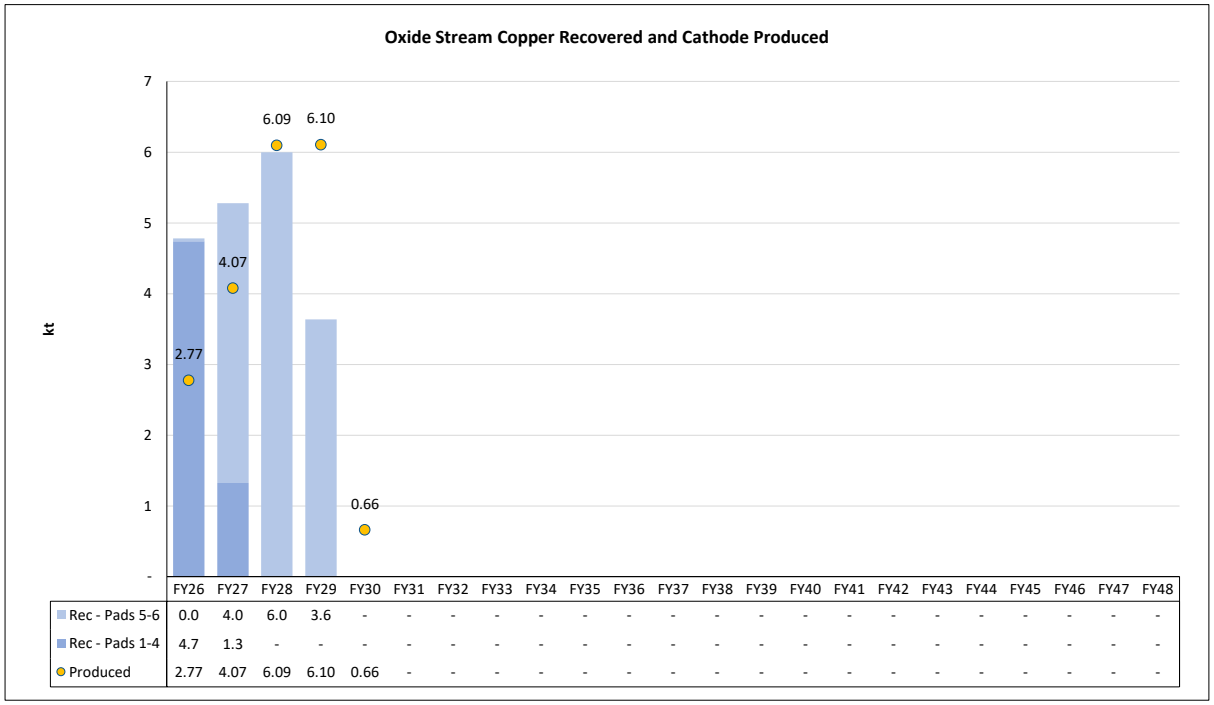
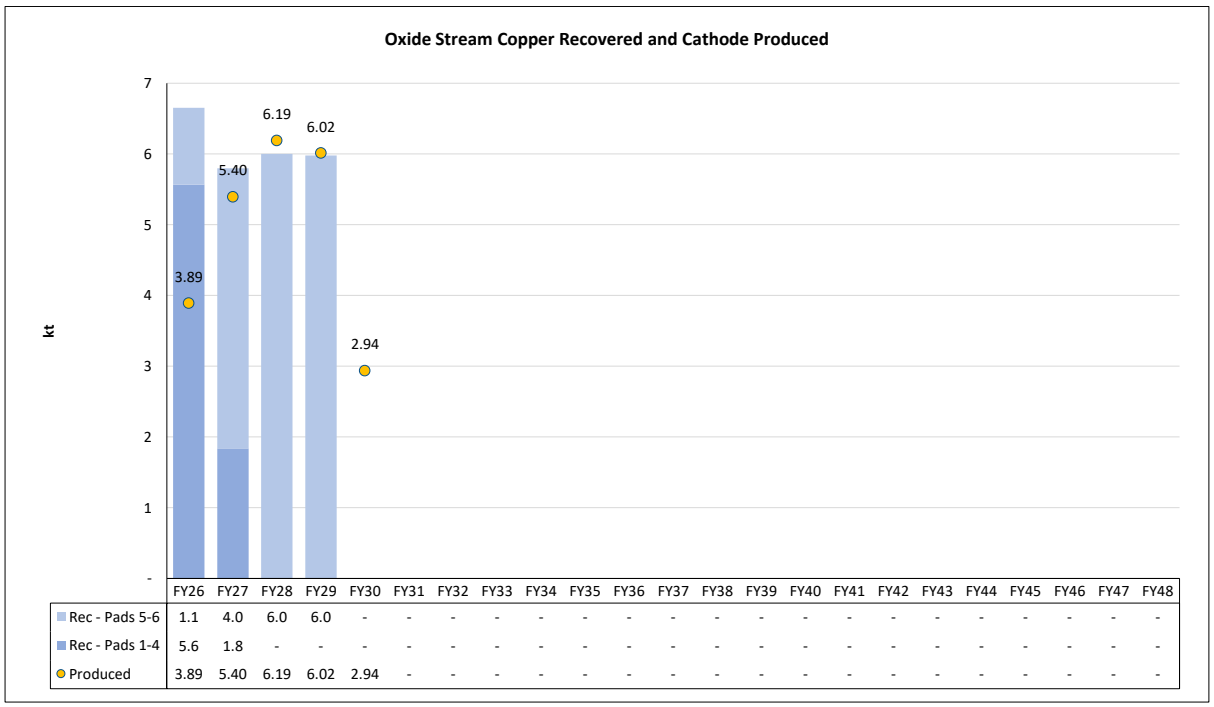
13.2.1.1 Oxide Stream - (Reserve Only)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Rec - Pads 5-6	0.0	4.0	6.0	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rec - Pads 1-4	4.7	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Produced	2.77	4.07	6.09	6.10	0.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Figure 98 RESERVE ONLY - OXIDE STREAM COPPER RECOVERED AND CATHODE PRODUCED

13.2.1.2 Oxide Stream - (Reserve and Incidental)



	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48
Rec - Pads 5-6	1.1	4.0	6.0	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rec - Pads 1-4	5.6	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Produced	3.89	5.40	6.19	6.02	2.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Figure 99 RESERVE AND INCIDENTAL - OXIDE STREAM COPPER RECOVERED AND CATHODE PRODUCED

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14 TAILINGS

Cyprium commissioned a 3rd party consultant to provide preliminary designs (CMW - IWL DESIGN, 2023) and costs (CMW - TSF, 2023) for tailings storage as outlined in section 11.3. The principle of the IWL is that mining will place the bulk of the material to build the wall, with the final compaction and lining completed by a specialist contractor.

No Level of accuracy of these numbers was provided; after review, it is reasonable to suggest that they are at a ±30% level.

The build of the TSF was then scheduled based on the estimated tailings production of the plant and scheduled to achieve the required freeboard 12 months in advance of the requirement.

Based on the tailing's capacity required, it is estimated that ~A$52 million will be required over the life of the mine for tailings storage.

The basis of the tailings designs in the IWL are sufficient for the purpose of reserves. In the PFS works a revised design and staged costing should be sought for the full life of mine TSF to support approval amendments and rehabilitation estimates.

15 NON-PROCESS INFRASTRCUTURE

As outlined in Section 3.3 the majority of infrastructure that supported operations at nifty remains on site in conditions ranging from historic idle or decommissioned, to active care and maintenance and ready for immediate restart.

15.1 Facilities Plan

As part of the PFS works the non-process infrastructure was assessed for refurbishment, replacement or upgrade needs to service the larger scale operation and the existing conditions of the facilities. An order of magnitude estimate was provided for the and action recommendation for each facility was produced by a third party consultant, and rationalised for adoption by MEC and Cyprium. This study was compiled through site inspection of all facilities, rationalised works options and costings through build up or comparable estimated from recent works.

The key actions for each non-process /power facilities are summarised in the following table.

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Table 29. NON-PROCESS INFRASTRUCTURE FACILITIES ACTION PLAN

Area	Element	Plan	Function
Airstrip	Air side	Retain and Refurbish	No Function Change
Airstrip	Ground Side	Retain and Refurbish	No Function Change
Camp	Camp	Retain and Refurbish	Increase from ~80 to ~400 rooms
Borefield and Ponds	Borefield	Retain and Refurbish	No Function Change
Sewerage Plant	Ponds and Irrigation	Retain and Refurbish	No Function Change
Exploration Facilities	Demolish old Exploration Area	Demolish	New Location
Exploration Facilities	2 New Core Sheds	New	New Location
Fixed Plant Maintenance Facilities	Maintenance Workshop	Retain and Refurbish	No Function Change
Fixed Plant Maintenance Facilities	Electrical Workshop	Retain and Refurbish	No Function Change
Fixed Plant Maintenance Facilities	Stores	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	MV Equipment Workshop Inc Stores and Sideshops	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	LV Tyre Bay	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	LV Workshop	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	Additional Workspace	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	Crane Shed	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	LV Washbay and Apron	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	LV Maint Area Infrastructure	Retain and Refurbish	No Function Change
Mobile Plant Maintenance Facilities	Old Shotcrete Facility	Retain and Refurbish	No Function Change
Concrete Batch Plant	Batch Plant	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Admin Building	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Bathhouse	Retain and Refurbish	Convert to Office Space
Main Area Administration Buildings	Crib Area	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Enviro Administration	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Enviro Storage	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Exploration Office	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Medical Centre	Retain and Refurbish	No Function Change
Main Area Administration Buildings	Mining Laboratory	New	New
ERC Facilities	ERC Training Offices	Retain and Refurbish	No Function Change
ERC Facilities	ERC Offices/Stores	Retain and Refurbish	No Function Change
ERC Facilities	ERC Supplies and Training Area (Igloo and Containers)	Retain and Refurbish	No Function Change
Administration Buildings (RO Plant)	Old Laboratory	Demolish	Demolish
Administration Buildings (RO Plant)	Old Tech Services	Demolish	Demolish
Administration Buildings (RO Plant)	Administration Building	Retain and Refurbish	No Function Change
Mining Fleet Maintenance Facility	New hardstand and manouvering areas	New	New
Mining Fleet Maintenance Facility	New Workshop (2 Bay to Start, Room for up to 4 Bays)	New	New
Mining Fleet Maintenance Facility	New Washbay	New	New
Mining Fleet Maintenance Facility	New Wheel Change Facility	New	New
Mining Fleet Maintenance Facility	New Refuel Facility	New	New
Mining Fleet Maintenance Facility	New Boiler Making Bay	New	New
Civil	Transition Earth Works Pad between, New HV Maintenance Area, New Refuelling Area, Heap Leach Ramp	Civil Works	New
RO Plant	RO Plant	Retain and Refurbish	Recondition
Warehouse	Warehouse	Retain and Refurbish	No Function Change

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15.2 Power Supply

For the basis of this study the supply of power is currently planned to come from the existing 21MW capacity gas power generation currently supplied by the existing gas pipeline. The current power configuration for the restarted project is expected to be under 15MW, with increased variable needs during the SXEW operation phase.

While the existing system is deemed adequate in supply levels for the expected power draw at peak levels, though the age of the generation system warrants investigation into replacement options. Opportunities exist to replace the power supply over time with a hybrid renewable energy model, to complement the secure gas supply. Investigation into the power supply options is underway by Cyprium but are not considered mature for inclusion within this study. Operating costs assume supply charges and minimum use charges for the project, as a result these are considered robust. On this basis no capital allocation for alternative power supply has been included in this study, as alternative options would likely be through supply agreements and not capital investments.

16 LOGISTICS

16.1 Sulphide Stream

Prior to 2022 Cyprium had access to a bulk concentrate storage shed and ship loaded in Port Hedland. In 2022 the lease for the shed and access to the ship loader lapsed and as such is no longer available.

The proposed export of concentrate is via a containerised system such as the QUBE RotaBox.

The RotaBox system is a fully enclosed half height 20-foot containers that would normally be:

- Loaded on site (Normally by front end loader on weighbridge to maximise payload)
- Transfer to Port Hedland via Tripple or Quad Road Train
- Stacked (Stockpiled) adjacent to the berth
- Transferred to wharf for shipment
- Emptied into the ships hold via crane and rotainer system
- Shipped to destination by bulk cargo carrier

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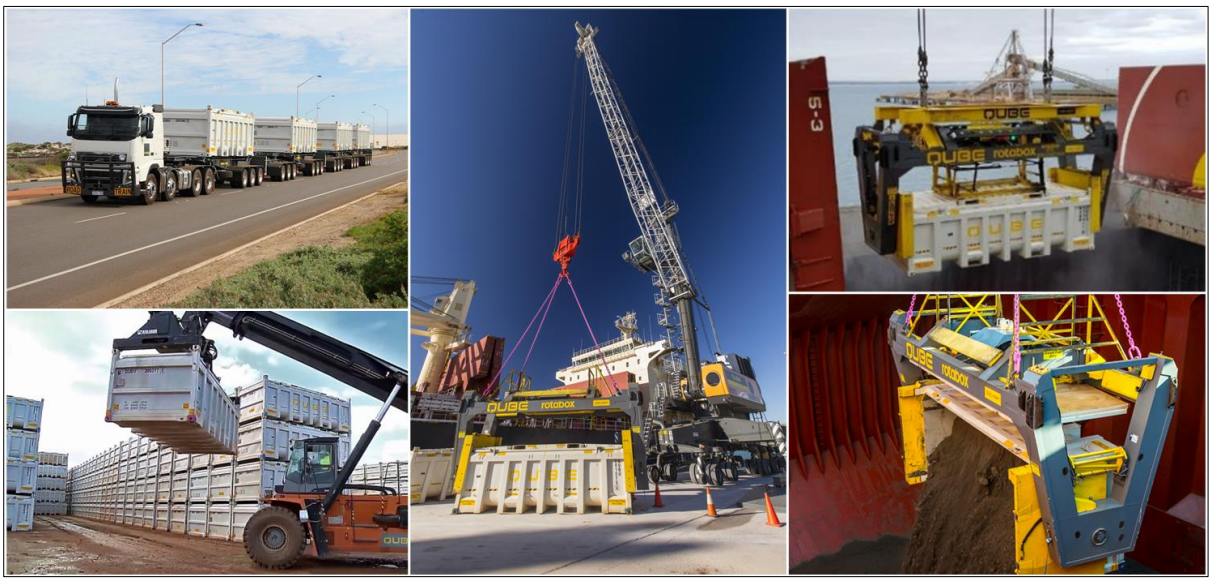

Figure 100 ROTABOX SYSTEM

The RotaBox system ensures a strong chain of custody of the cargo from loading on site to discharge into the vessel. The concentrate is also always enclosed and it not exposed to the environment until moments before discharge into the vessel. This process is outlined in Figure 100.

16.2 Oxide Stream

The copper cathode produced will be bundled and either transported by

- Containerised on site
  - Loaded into 20-foot containers
  - Transferred to Port Hedland in triple or quad road trains
  - Stored in Port Hedland
  - Loaded on to a container ship for export in Port Hedland
- Transfer to Port Hedland and containerised
  - Loaded on to flatbed triple or quad road trains
  - Transferred to 220-foot containers in Port Hedland and stored
  - Loaded on to a container ship for export in Port Hedland

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17 LEGISLATIVE, ENVIRONMENTAL, SOCIAL AND COMMUNITY

17.1 History

Approval documents for the commencement of operations at the Nifty Copper Project were first submitted by Western Mining Corporation (WMC) to the Western Australian Department of State Development in 1992. Surveys were undertaken to assess the flora and fauna on the site and survey findings and recommendations were incorporated into plans for construction and operations.

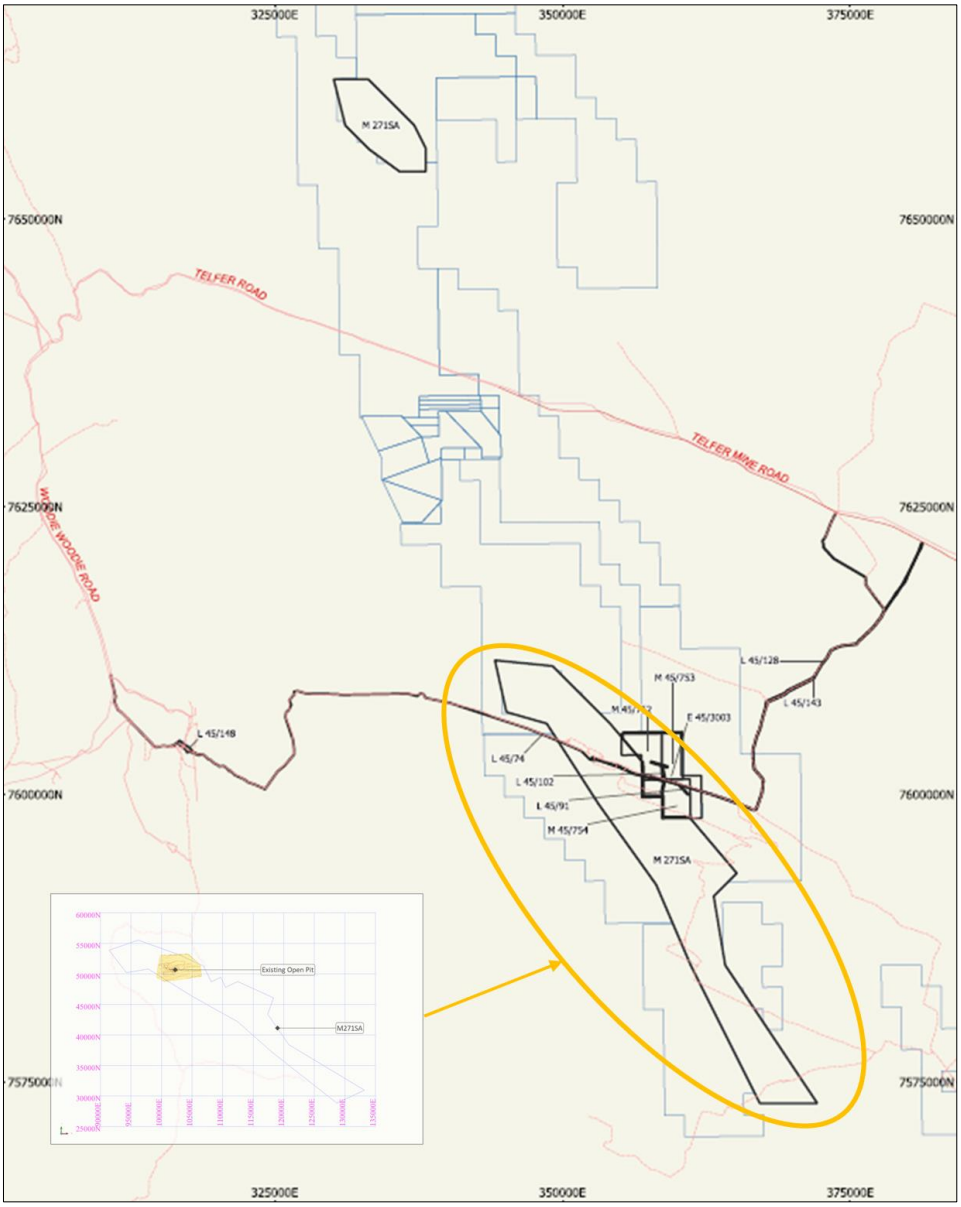

Figure 101 MINING LEASE M271SA

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Aboriginal heritage surveys conducted at that time identified no culturally significant locations within the footprint of the operations, with the nearest site identified +15 km away.

In 2003 the approval for development of an underground mine and concentrator was obtained by Aditya Birla Minerals Limited following its purchase of the project in 2003. The project operated under this operating scenario from January 2004 until the operation was placed into care and maintenance in November 2019.

The current Nifty operations lie within the Southern portion of mining lease M271SA as outlined in Figure 101.

17.2 Existing Land Use

The Project is situated to the east of the pastoral grazing region on Unallocated Crown Land (UCL). The major land use in the area is mining and mineral exploration, with nearby mines at Telfer and Woodie Woodie and development projects at Haverion and Winu.

The land surrounding M271SA is subject to Native Title rights and the general area may be used from time to time by Traditional Owners conducting cultural activities.

17.3 Heritage and Native Title

17.3.1 Heritage

Early heritage surveys and visits completed for WMC in the early 1980s appear to be the first heritage work completed in the Nifty region of the Great Sandy Desert. As far back as 1976 (before the opening of the Telfer gold mine), coordinated visits or introductory field surveys, comprising archaeologists and Aboriginal people, were undertaken to understand the Aboriginal heritage of the Throssell Range area which was a pre-cursor exploration tenement that ultimately encompassed the Nifty deposit.

The Aboriginal people involved in the survey work and who had first-hand knowledge of the region outlined that Nifty was located within the traditional lands of the Waukarlykarly Group and that the primary language spoken was Nyangumarta.

They indicated that the Traditional Owners of the Nifty area considered it to be poorly watered land which was occupied on an occasional basis for undertaking activities only when rainfall temporarily filled the ephemeral water supplies.

They were satisfied that no sites of significance would be impacted by a Nifty project development and therefore should not be deemed as an impediment to the granting of appropriate statutory approvals.

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The nearest Aboriginal communities of Parnngur and Punmu are approximately 160km south-east and north-east respectively.

17.3.2 Native Title

The Commonwealth Native Title Act 1993 (NTA) was passed with the intent of recognising the rights and interests of Aboriginal and Torres Strait Islanders people in lands and waters. The Act provides for the holders or registered claimants of Native Title to negotiate on the terms and conditions of developments such as mining, insofar as it affects their Native Title rights and interests.

In September 2002, the Federal Court of Australia made a determination that the Martu people hold Native Title rights and interests in respect of the region surrounding Nifty. In 2002, the Federal Court did not make a determination in respect of native title over those areas covered by the mining leases granted before 1994 (including M271SA). A second determination was made by the Federal Court in 2013 in relation to the areas which were not determined in 2002, the effect of which was that native title was found to exist over the whole of the determination area but that the rights conferred on the mining tenement holders were exclusive rights to conduct mining operations which would prevail over native title rights and interests to the extent that their exercise is wholly inconsistent with the continued exercise by the Traditional Owners of their native title rights and interests.

Cyprium has in place an executed Indigenous Land Use Agreement (ILUA) with the Jamukurnu-Yapalikurnu Aboriginal Corporation (JYAC) who hold the Native Title Rights on trust for the Martu People. This ILUA is registered under the NTA. The terms of the ILUA that are binding on Cyprium and JYAC, cover the access, exploration, development and production on Cyprium's Project Tenure. The tenure granted prior to 1994 is excluded from the ILUA.

Cyprium recognises the Martu as the traditional owners, users, and managers of the land in the Nifty region, and the eventual return of the land to the Martu People at final relinquishment. Cyprium is engaging the Martu as a key stakeholder in the closure of Nifty.

17.4 Soils and Landforms

The project is situated within the Little Sandy Land System and is characterised by sandplains with linear and reticulate dunes supporting shrubby hard and soft spinifex grasslands.

There is 85,725 hectares (ha) of this land system within the 40km study area considered in 2021 by the company's consultants, Biota Environmental Services (Biota). The area surveyed was noted to be all Little Sandy Land System and represented only 0.67% of the total 85,725 ha ascribed to the land system as outlined in Figure 102.

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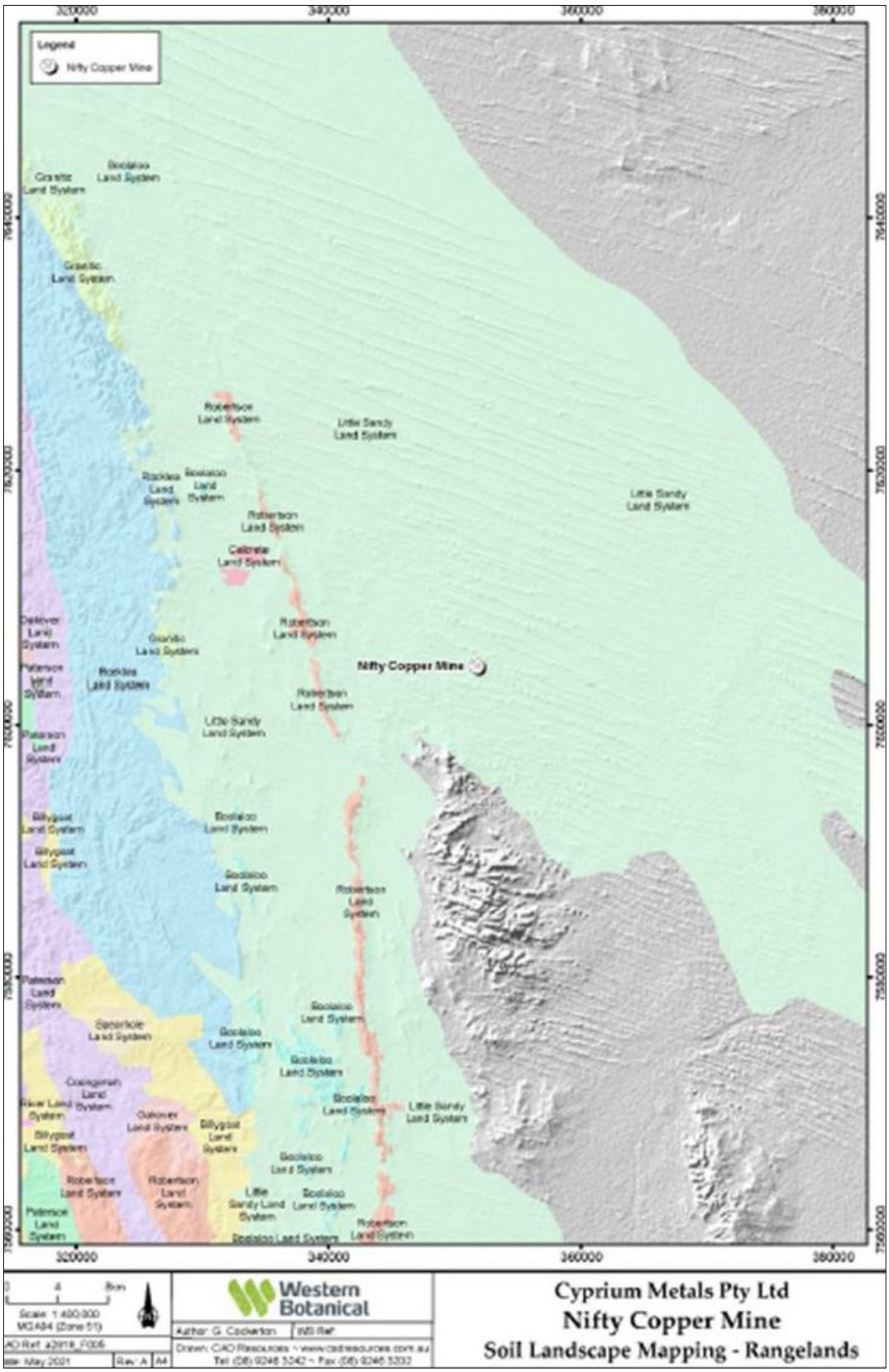

Figure 102. NIFTY LOCATION AND SOIL LANDSCAPE MAPPING

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17.5 Vegetation and Flora

17.5.1 Recent Surveys

Western Botanical undertook a detailed flora and vegetation assessment of the survey area in 2021 as support for the application of clearing permits for the restart project. This study included a comprehensive desktop assessment followed by field surveys and targeted searches for conservation significant flora. The final report included field mapping and descriptions of vegetation types and the condition of the flora within the study area.

The survey area comprised three survey polygons, each roughly one kilometre wide and 3.5km long, positioned to the north-east, south-western, and south-eastern edges of the existing project all within mining tenement M271SA.

The survey polygons encompass 94.6ha, 256ha and 214ha, respectively. The south-eastern polygon was added to the proposal at a later stage to provide flexibility for the planning and final positioning of potential infrastructure that may be required in the future time. The field surveys, conducted in May and July 2021, identified 174 flora species from 94 genera and 41 families within the study area.

17.5.2 Conservation Significant Flora

Western Botanical identified 26 conservation significant flora species occurring within 110km of the study area in desktop studies. These were comprised of one Threatened Flora, ten Priority 1, three Priority 2, eleven Priority 3 and one Priority 4 species.

A further assessment of the likelihood of each of these 26 species occurring in the survey area was also undertaken and two species were considered as ‘probably occurring’ within the survey area while an additional nine were considered as ‘possibly occurring’.

The eleven species identified as ‘probable’ or ‘possible’ with their conservation status are -

- Seringia exastia (T).
- Goodenia hartiana (P2).
- Lepidium amelum (P1).
- Eremophila sp. Rudall River (P2).
- Thysanotus sp. Desert East of Newman (P2).
- Comesperma sabulosum (P3).
- Dampiera atriplicina (P3).
- Eragrostis lanicaulis (P3).
- Indigofera ammobia (P3).
- Pterocaulon xenicum (P3); and
- Sauropus arenosus (P3).

Flora studies identified six Priority Flora in the survey and a review of these species was also undertaken to provide local context of their extent outside the field survey area and within a 5,000 ha buffer area from the Nifty Project.

Considering the uniformity of the landforms present within the study area (i.e., repetitious linear sand dunes and sandplain swales), and across the Great Sandy Desert bioregion, these taxa are expected to occur in significant numbers outside of the survey area and should not be just restricted to the areas surrounding the Nifty project.

An overview of the priority flora distribution is outlined in Figure 103.

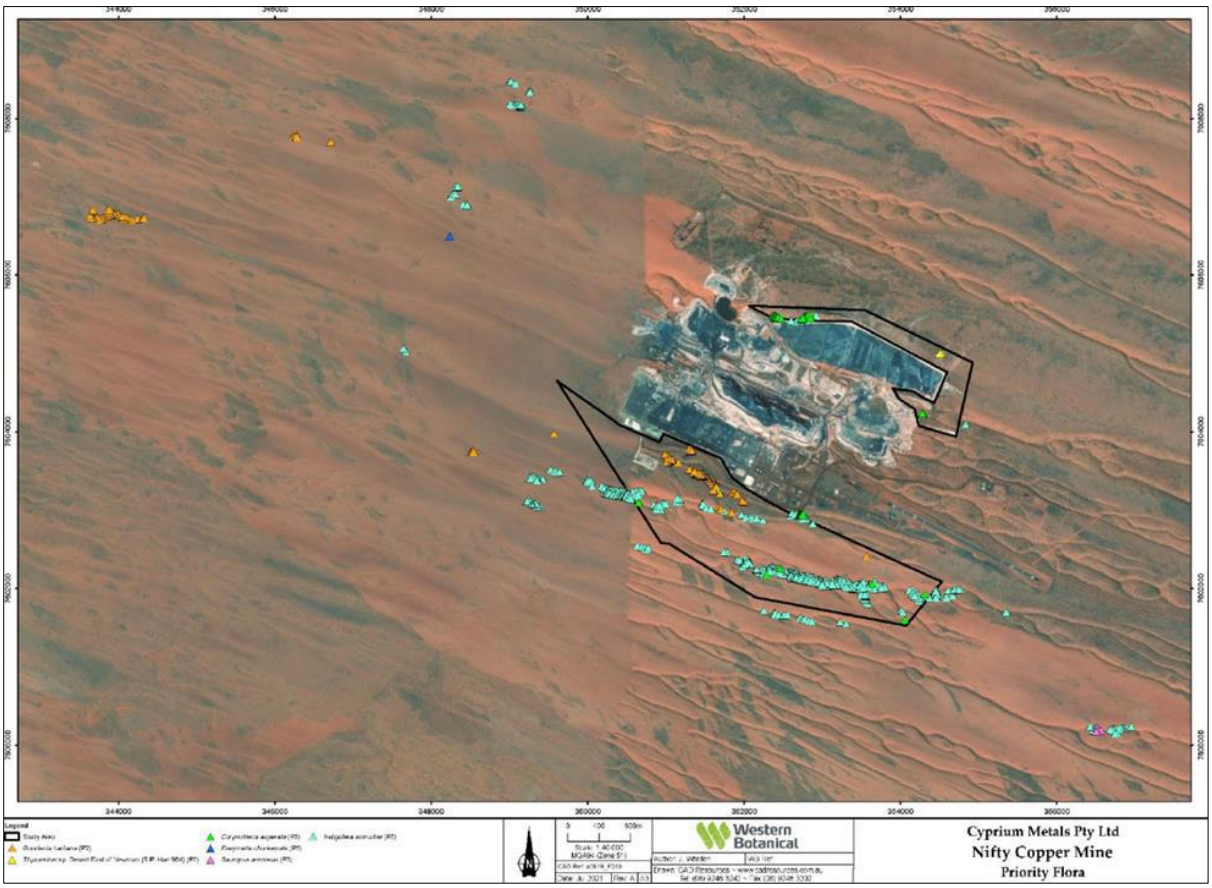

Figure 103 PRIORITY FLORA

17.6 Fauna

17.6.1 Fauna Habitat

Biota Environmental Sciences (Biota) completed field surveys and desktop studies for fauna in 2021. The studies found that the fauna habitats defined for the survey area aligned broadly with the landforms present, with further delineation of some isolated habitats that may support distinct fauna assemblages. Five main habitat types were identified (including cleared areas) with sandplains and sand dunes dominating the survey area.

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Identified habitats in the Nifty area include:

- Sand dune - Open Eucalyptus/Corymbia sp. occurs across the tall longitudinal sand dunes with scattered Acacia spp., Eremophila sp. Shrubs and Triodia sp. open hummock grassland and very open tussock grassland characterising the understorey. Sand Dune comprises 66.7ha of the survey area.
- Sandplain - Open sandplains of scattered Acacia sp. occurs on sandy flat soils. The understorey includes Eremophila sp. shrubs over Triodia sp. open hummock grasslands. Sandplain comprises 448.2ha of the survey area.
- Low rocky rises - Dispersed Acacia sp. occur over low rocky rises of exposed shale. The understorey is comprised of open shrubland over Triodia sp. Open hummock grassland and Ptilotus sp. Scattered low shrubs. Low rocky rises comprise of 7.9ha of the survey area.
- Cleared/disturbed areas - Patches of cleared/degraded areas resulting from historical land clearing are characterised by sparse low-lying vegetation with few species utilising these habitats. Borrow pits may be occasionally inundated by rains and water pooling during winter may be visited by many nomadic and migratory birds. Cleared/degraded areas comprises 28.9ha of the survey area.
- Revegetation - Revegetated land occurs on sandplain habitat consisting of compact soils subject to historical clearing and revegetation. The heavily compacted soils feature minimum ground cover with predominantly Acacia sp. characterising the tall open shrubland. Revegetated land comprises 7.1ha of the survey area

17.6.2 Potential Conservation Significant Fauna

The desktop study (Biota, 2021) identified that two reptiles, seven mammals and twenty-two birds of conservation significance have the potential to occur within the survey area.

Fauna habitats identified during the survey were found to be common and widespread, with none of the fauna habitats being confined to just the survey area (Biota Environmental Sciences, November 2021).

17.6.3 Recorded Conservation Significant Fauna

The work conducted in 2021 shows evidence of two fauna species of significance in the survey area, with Bilby tracks being identified and two diggings/burrowings of Northern Marsupial Mole being observed.

- **Macrotis lagotis (Bilby)**

The Bilby is listed as Vulnerable under both the Environmental Protection and Biodiversity Conservation (EPBC) Act and the Biodiversity Conservation (BC) Act. The species has declined to now occupy less than 20% of its former range and extant populations occur in a variety of habitats, usually on landforms of low topographic relief and light to medium soils.

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It prefers areas suitable for burrowing where the substrate comprises sand, sandy clay or sandy gravel, though they are also known from atypical stony gravelly areas. The Bilby also demonstrates a strong association with species of Acacia that host root-dwelling larvae, which form a major food resource for the species.

The sand dune and sandplain habitats present with the survey area represented suitable Bilby habitat and the species has previously been recorded at Nifty. Despite thorough searches, no burrows were located during this study. The presence of suitable habitat, historical records and Bilby tracks all indicate that Bilbies will utilise the area at least for occasional foraging. However, as the proposed disturbance area represents less than 1% of the Great Sandy Desert, any impact on potential Bilby habitat is not thought to be significant.

- **Notoryctes caurinus (Northern Marsupial Mole)**

The Northern Marsupial Mole was delisted under the EPBC Act in 2015 as it was no longer considered Threatened. This species is listed on the Department of Biodiversity, Conservation and Attraction's (DBCA) priority list as a Priority 4 (Threatened Species).

Evidence of Northern Marsupial Mole was recorded from two trenches dug on sand dunes within the surveyed area. Trenching effort in the July survey did not reveal any evidence of marsupial mole burrows.

17.7 Rehabilitation Provision

The Nifty Copper Project is located within State Agreement Mining Lease M271SA and the rehabilitation of the operation remains covered by a AUD 6 million unconditional performance bond (UPB) administered under the Mining Act 1978 (WA) and held against the tenement.

The Mining Rehabilitation Fund Act 2012 (WA) applies to all other Cyprium tenements.

17.8 Environmental Management System

Cyprium has developed an Environment Management System (EMS) to effectively manage the Environmental aspects of the activities associated with all component operations. The EMS aligns with the International Standards Organisations (ISO) ISO14001:2015 environmental management systems guidelines and requirements.

17.9 Approvals and Permitting

17.9.1 Legislative Framework

17.9.1.1 General

The main Acts (with their supporting Regulations) governing environmental activities at Nifty are -

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- Western Mining Corporation Limited (Throssell Range) Agreement Act 1985 - [01-c0-06]
- Mining Act 1978
- Environmental Protection Act 1986
- Mining Rehabilitation Fund Act 2012
- Environment Protection and Biodiversity Conservation Act 1999

Cyprium is also required to comply with the conditions currently existing on various existing licences and permits.

17.9.1.2 Western Mining Corporation (Throssell Range) Agreement Act 1985

The Nifty Copper Project is governed under a Western Australian State Agreement titled the Western Mining Corporation (Throssell Range) Agreement Act 1985 and the proponent for this State Agreement is Nifty Copper Pty Ltd.

Proponents commit to these significant projects based on an agreement specifying terms and conditions with the Western Australian (WA) Government for the development of the mineral resource. These terms and conditions are contained within what is known as State Agreements, which are ratified by individual Acts of Parliament.

Effectively, the agreement works within the normal permitting regimes as primary and secondary proposals whereas a primary proposal is submitted for approval prior to or concurrent with Ministerial approval under a State Development proposal (such as an EPA Part IV requirement of a Part V Works Approval) while a secondary approval is required prior to commencement but can be obtained without accompanying State Development approval (such as a Native Vegetation Clearing Permit). The process is established around Clause 37 Environmental Protection -

Nothing in this Agreement can be construed to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of incidental to its activities hereunder that may be by made the State or by any State agency or instrumentality or any local or other authority or statutory body of the State pursuant to any Act from time to time in force.

17.9.2 State Agreement Proposals

The State Agreement requires the submission of proposals and amendments to proposals under Clause 6 to keep the Minister informed on the progress of engineering, environmental, market and finance studies and the progress and results of studies, investigations, and other works. Clause 7 details the requirements to submit a proposal for approval to the Minister for any operations initially on the Special Exploration Licence which then converts to a Special Mining Licence as it exists today.

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The original proposal was the 1992 Nifty Development Proposal and Supplement which outlined the development of the open pit heap leach and SX-EW operation based around the oxide component of the Nifty orebody.

The subsequent extensions and addendums are submitted under Clause 9 Additional Proposals

This restart of the Nifty Copper Project is being proposed under Clause 9. The proposal submitted must comply with the requirements of the Agreement and in particular Clauses 7 and 8. The following sections summarise the requirements of the Agreement under those clauses.

17.9.3 Establishment of Mining and Treatment Options

Operations are already established as an open pit, heap leach, 25,000 tpa SX-EW, and sulphide concentrator plant and the restart proposal will increase overtime, current approvals are believed to be sufficient and production is not likely to be exceeding that profile. An increased area of disturbance is allowed for integrated waste landforms and heap leach pads.

The changes to most of the facilities are to bring the facilities up to current standards and to allow for the extension of the life of mine of the project. The existing open cut pit will be expanded, and the existing waste rock landform and tailings storage facility will be expanded into an integrated waste landform.

17.9.4 Airport and Associated Facilities

There are several “grandfathered” conditions contained within the current approvals (due to the age of the airstrip) which will remain unchanged for the usable life of the current installation.

17.9.5 Water Supply

As described in section 7.4, water for the process will be sourced from the existing underground mine via boreholes and pumps. The balance of the remaining water supply will come from the existing East Nifty bore fields. Licences are in place for the water abstraction and for the construction of the new bores.

17.9.6 Mining Proposals

The project, although covered under a State Agreement proposal, is still required to lodge and gain approval for mining activities under the Mining Act 1978 (WA).

The Mining Proposal (MP) may be referred to the Environmental Protection Authority (EPA) if it is considered to have a significant impact on the environment. The Department of Energy Mines, Industry Regulation and Safety (DEMIRS) will consider the proposal concurrently with whatever process is deemed to be required by the EPA.

Historically, Nifty mining proposals have been submitted for each advancement of the project from the initial State Development proposal (Notice of Intent under DEMIRS) to the subsequent proposals for heap leach pad

extensions, SX-EW expansions, sulphide underground and concentrator development and construction, storing underground waste in the base of the open pit, as well as the TSF construction and subsequent wall lifts. These approvals and the terms and conditions by which they operate are still in place.

The new MP (subject of the study) is being prepared in accordance with the DEMIRS Statutory Guidelines for Mining Proposals and the associated Guidelines (2020 Guidelines).

The purpose of the new proposal is to detail the Nifty Restart component of the Nifty Copper Project and the proposal covers all of the existing approved Mining Proposals (as they have been implemented to date) into a single approval document and utilises the risk management framework and compliance basis required by the revised 2020 Guidelines.

17.9.7 Native Vegetation Clearing Permits (NVCP)

The native vegetation clearing provisions of the EP Act and Regulations commenced on 8 July 2004 and replaced the repealed Notification of Intent to Clear under the Soil and Land Conservation Regulations 1992. Under the EP Act it is an offence to clear native vegetation unless the clearing is done in accordance with a clearing permit, or an exemption applies. Under this legislation, clearing is not generally permitted where the biodiversity values, land conservation and water protection roles of native vegetation would be significantly adversely impacted.

Two NVCP applications have been approved as outlined in Figure 104, authorising clearing of up to an additional 300 ha of land (CP9493/1) and amending the purpose and boundary of an existing NVCP (being CPS6225/4) to enable Cyprium to expand operations at the Project. All clearing will be undertaken within Mining Lease M271SA.

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Figure 104 NVCP APPLICATIONS (RED=AMENDED PERMIT BLACK=NEW PERMIT AREA)

17.9.8 Groundwater Licences

Groundwater extraction for the Nifty Project is permitted under Groundwater Licences GWL66212, GWL102247 and GWL201987 and is located in the Canning-Kimberley Groundwater Area proclaimed under the Rights in Water and Irrigation Act 1914 (RIWI Act).

Historically, dewatering of both the original open pit and the recently closed underground mine provided process water to the initial heap leach SX-EW operation and more recently, a flotation concentrator. Any water shortfall from dewatering was made up via abstraction from the nearby permitted East Nifty Aquifer.

The aquifer characteristics of the immediate Nifty mine environs are such that the stratigraphy hosting the copper mineralisation is the main water producing set of associated aquifers necessary for ongoing project operation. The 2021 closure of the underground mine has therefore allowed the groundwater water to accumulate in the voids created by mining. Therefore, an underground storage “reservoir” has been recently created to preserve water for future production activities. Dewatering will be required ahead of production however the underground extends deeper than the pit and hence will still present some storage capacity.

Water for the process will be sourced from the existing underground mine via large diameter boreholes and submersible pumps. The proposed abstraction methodology is outlined in section 7.4.

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17.9.8.1 Existing Water Users

The sandy soils of the region, paired with the lack of larger vegetation, allows surface water in the area to infiltrate, or drain by sheet flow over the swale areas between parallel dunes during extreme rainfall events.

No watercourses or wetlands are present within M271SA.

No surface expressions of groundwater occur within the Nifty area, with pre-mine groundwater generally about 25-50m below surface.

17.9.8.2 Subterranean Fauna

Prior to the development of an underground mine, it was thought that the carbonate and dolomite rocks which host the Nifty copper orebody may have had the potential to provide an underground habitat for stygofauna.

In response, a subterranean fauna survey of the Nifty project area was conducted in October 2003 to investigate whether the lowering of the water table as a result of dewatering the proposed underground mine may have unintended impacts on subterranean fauna.

The survey selected six bores based on target geology and hydrogeology representative of the aquifers within the underground sulphide resource and the surrounding rockmass that would be dewatered and subterranean fauna monitoring comprising traps, bailings and sieving, was undertaken within the groundwater in the open pit sumps and bores.

No stygofauna were found during this work and the absence of significant or continuous voided/vuggy features associated with the orebody and host rock formations is indicative of a poor habitat for stygofauna and troglofauna and corroborates the findings of the subterranean fauna survey. The proposed future dewatering of the Nifty underground was found to have no impact on stygofauna and by extension, the geological rockmass conditions precluded the development of suitable habitats for troglofauna to exist at Nifty above or below the water table.

17.9.9 Works Approvals

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the Public Sector Management Act 1994 and designated as responsible for the administration of Part V, Division 3 of the Environmental Protection Act 1986 (WA) (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action, and develops and implements licensing and industry regulation policy.

In 2022 Cyprium was granted a Works Approval for the restart of the Heap Leaches and SX-EW plant. A further Works Approval will be applied for the restart of the Sulphide Concentrator Plant.

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17.9.9.1 Prescribed Premises

The restart proposal will use existing infrastructure as most have been maintained in a ready-to-start condition and activity has been approved by the Department of Water and Environmental Regulation (DWER) under Operating Licence number L6617/1992/15 issued on 26th March 2015 and valid until 8th April 2025.

Categories of Prescribed Premises (PP) are defined in Schedule 1 of the Environment Protection Regulations 1987 (WA) (EP Regulations) and the current licence outlines a number of prescribed premises and the descriptions of each Table 30.

Table 30 CURRENT PRESCRIBED PREMISES AND DESCRIPTIONS

Category Number	Category Description	Category Production or Design Capacity
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes or more per year
6	Mine Dewatering	50,000 tonnes or more per year
52	Electric Power Generation	20 megawatts or more in aggregate (using natural gas)
54	Sewage Facility	100 cubic metres or more per day
64	Class II putrescible landfill site	20 Tonnes or more per year
73	Bulk storage of chemicals, etc	1,000 cubic metres in aggregate

The Prescribed Premises License is issued under Part V of the Environmental Protection Act and the conditions contained within the license relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them. Figure 105 shows the Prescribed Premise boundary as approved in the Works Approval submission.

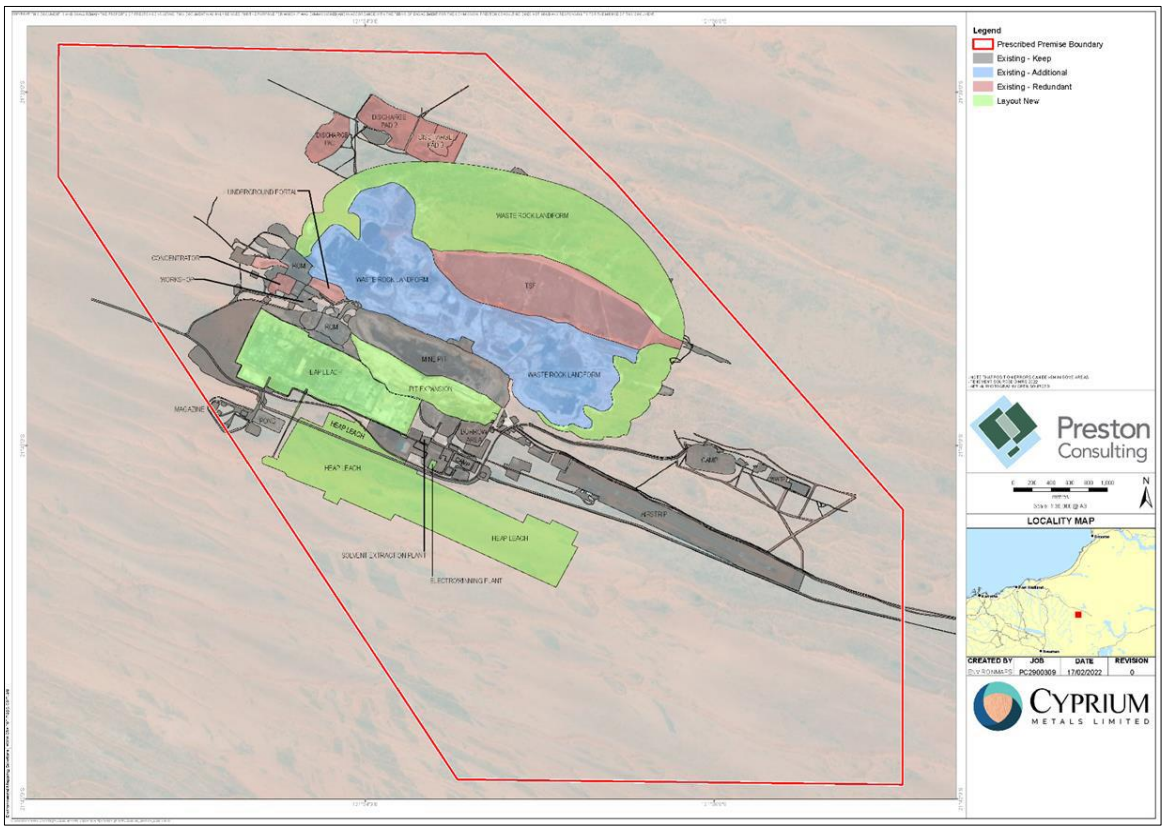

Figure 105 PRESCRIBED PREMISES BOUNDARIES

17.9.9.2 Mine Closure Plans

A Mine Closure Plan (MCP) which accompanied the Nifty Restart Mining Proposal, was approved. The MCP covered an operation where the underground mine had been abandoned and no sulphide mining operations were planned. A new MCP will be required and developed for the for any restart of the operations.

The MCP applies to those components of Nifty that are located within M271 SA and associated Mining Act 1978 (WA) tenure for the project restart. The MCP includes historic Nifty disturbance as well as the Nifty Restart proposed disturbance as outlined in Figure 105.

The MCPs are prepared in accordance with the DEMIRS guidelines and have been established to ensure that Nifty will meet the principal closure objectives:

All disturbed areas should be rehabilitated such that they are

- rendered safe to humans and animals, i.e.:
    - geotechnically stable,
    - geo-chemically non-polluting
- capable of sustaining an agreed post-mining land use, and
- premises are decommissioned and rehabilitated in an ecologically sustainable manner.

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17.9.10 Approvals Roadmap and Status

The Works Approval amendment will state that Cyprium will use existing facilities (concentrator, workshops, etc.). This infrastructure has been previously approved by the Department of Water and Environmental Regulation under Operating Licence L6617/1992. The current approval status required for the proposed operations is outlined in Table 31.

Table 31 APPROVALS REQUIREMENT AND STATUS

Permit/Item	Legislation	Department	Description	2022 Status	2024 Status
Works Approval and Licence	Environmental Protection Act (1986)	Department of Water & Environmental Regulation (DWER)	Amended Prescribed Activities Licence to enable processing	Approved	Expires 4th August 2025 Amendment required when final operating plan confirmed
Native Vegetation Clearing Permit	Environmental Protection Act (1986)	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	Authorises clearing of native vegetation for project development	Approved	Approval Extended NVCP 4102 Expires 31/03/2026 NVCP 6225 Expires 31/10/2032 NVCP 9493 Expires 16/09/2033
Mining Proposal	Mining Act (1978)	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	Approval for mining activities and construction of mine infrastructure	Approved	New Submission required when final operating plan confirmed
Mine Closure Plan	Mining Act (1978)	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	Defines rehabilitation and closure accompanying the Mining Proposal	Approved	Update[7] required 1st April 2025
26D Licence to Alter Water Abstraction Methods of an Existing Licence	Rights in Water and Irrigation Act (1914)	Department of Water & Environmental Regulation (DWER)	Change in abstraction mechanism under the existing water licence	Approved	Approves Expires29/04/2026

17.10 Community Engagement

17.10.1 Engagement and Training of Employees

The restart operation utilises technology and methods for which labour skills are not readily available. Therefore, Nifty Copper will embark on a recruitment and training programme for suitable employees to obtain these skills. Where possible, this programme will include employees sourced from the Traditional Owner groups from within the greater Pilbara region.

[7] Prior to 1st April 2025, new regulations may supersede the current mine closure plan framework, and a Mine Development and Closure Proposal (MDCP) may be required instead

17.10.1 Use of Labour, Professional Services, Manufacturers, Suppliers, Contractors and Materials

The majority of labour, contractors and professional services are sourced from within Western Australia. Transport to site is currently from Perth only, with the monitoring of potential transport out of the greater Pilbara area once local employee numbers have reached a suitable level. Equipment, supplies, and materials are where possible located out of Western Australia and are otherwise sourced from within Australia or elsewhere on a skill needs basis.

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18 FLEET

The mining fleet was modelled on the basis of the physicals schedules produced for the major excavating and haulage fleets. Dig, dump, stockpile movement and all major mine site activities.

18.1 Time Usage Model

The calculation of the fleet requirement to meet the mining schedule is based on a Time Usage Model (TUM) as outlined in Table 32 and the ancillary factors as outlined in Table 33. The TUM and the ancillary factors were provided by a third-party contractor based on their experience of operation in copper to a similar level of complexity as Nifty.

Table 32 TIME USAGE MODEL

Metric	UoM	Value	Comments
Calendar Time	**Hours**	**8,760**	**Available calendar time**
Scheduled Time	Hours	8,760	Available work time Based on 3 panels 14/7, 2 x 12hr shifts, 365days a year.
Maintenance Delays	Hours	1,008	Planned and Unplanned Maintenance
Mechanically Available Hours	**Hours**	**7,752**	**Machine available hours**
External Operational Delays	Hours	195	Inclement Weather conditions (based on Telfer BOM weather station)
On Shift Delays (Operational Delays)	Hours	1,357	Includes: - Crib Times - Travel Times - Shift Change - Toolboxes - Blast Delays - Cleanup Delays - Geotechnical Delays - Void related Delays
Available Hours - Total	**Hours**	**6,200**	**Annual machine work hours for schedule**
Non Productive	Hours	468	
Productively Available Hours Total	**Hours**	**5,732**	
Availability	Hours	88%	Hours machine is available to do work
Utilisation of Availability	Hours	80%	% of available time that machine is utilised

Table 33 ANCILLARY FACTORS

Asset	Uom	Typical Hard Rock Factor	Nifty Factor	Comment
Water Cart Hours	% of Truck Hours	12%	12%	
Water Cart Hours	% of Excavator Hours	5%	5%	
Grader Hours	% of Truck Hours	10%	12%	The grader and dozer will work together to cover the site and move between pits, roads and dumps.
Grader Hours	% of Excavator Hours	5%	8%	The Grader and Dozer will work together to cover the site and move from pits, roads and dumps.
Dozer Hours	% of Excavator Hours	100%	120% - 140%	The dozer will be with the loading unit and likely require additional time due to geotechnical safety guidelines (around voids and subsidence zones) to loads tipped short and dozer pushed out, therefore increasing time. The sinkhole and underground working areas may present sub-optimal blasting, increasing blocky/oversized material at the dig face.

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18.2 Asset Requirement

Application of these tables was applied to the Excavator and Dump truck hours as outlined in section 12.

An initial estimate of "Decimal" assets was made. Further review was then conducted to manually smooth the asset requirement to better reflect the likely operational deployment of assets. This smoothing considered:

- Opportunity to reduce the EX600 requirement when sufficient capacity remained for the EX200
- Smoothing to minimise spasmodic mobilisation and demobilisation of assets
- Removal of low utilisation assets, i.e. decimal calculated the need for 0.1 of an asset
- No account was made for life cycle replacement based on a contractor model with OEM Financing

Based on these considerations the life of mine asset profile was estimated as outlined in **Figure 106**.

The schedule will commence with 3 excavators for the first 12 months before ramping up to 5 for 4.5 years in line with peak in 2027, this number will steadily decline over the life of the mine.

The dump trucks will steadily increase to a peak of 30 from 2029-2032, they will then decline in line with production.

The Ancillary equipment matching follows the requirement of the excavators and dump trucks with a maximum of:

- 8 Dozers
- 4 Graders and
- 4 Water trucks required

The peak assets on site is 51 between 2028 and 2029

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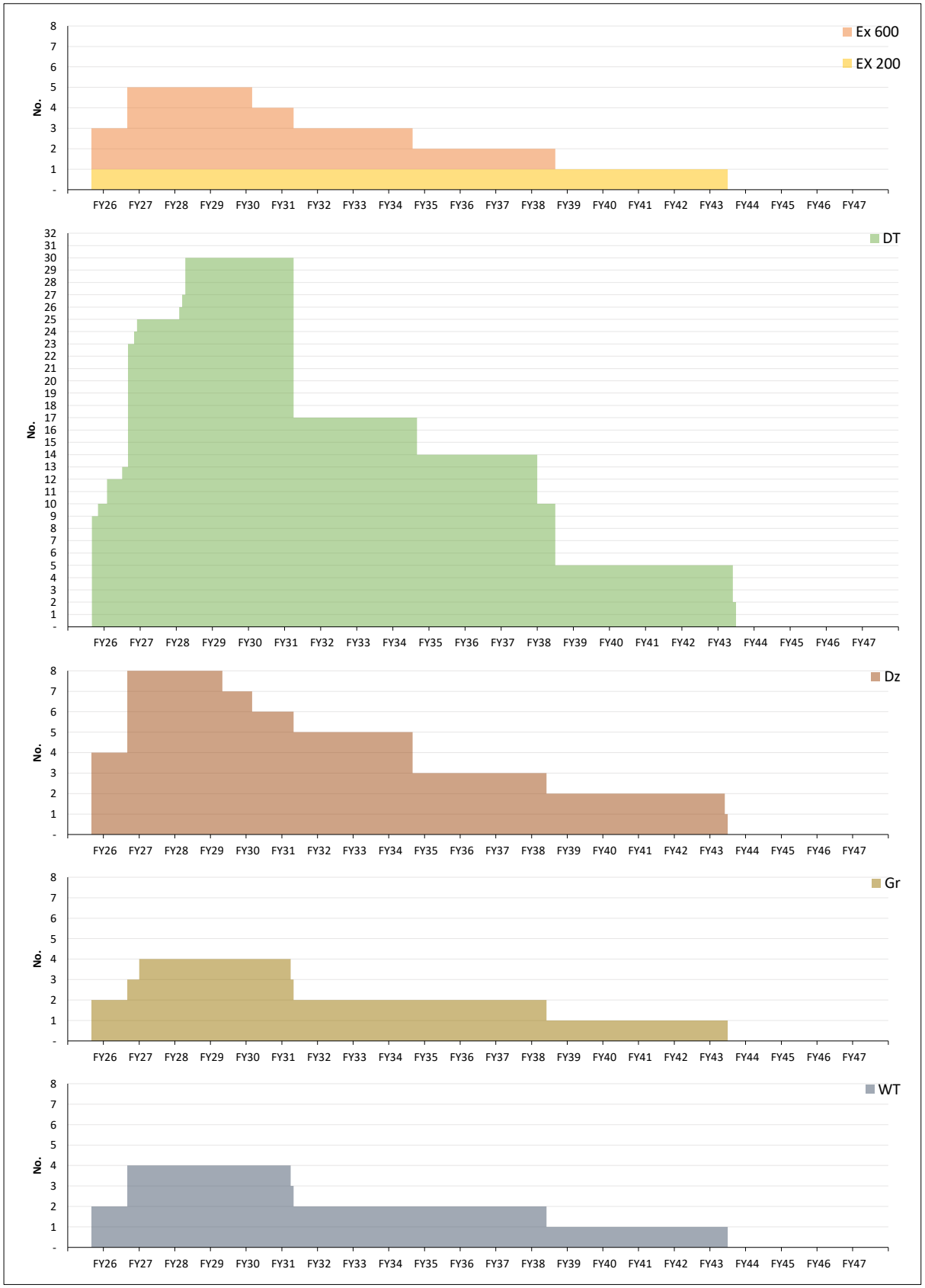

Figure 106 LIFE OF MINE ASSET REQUIREMENT

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18.3 Personnel Requirement

The personnel build was modelled based on a combination of TMM and ore mined.

The rosters chosen were lifestyle rosters to attract and retain divorce personnel and all based on a variation of 8:6 Day Shift Only or 7:7 Day Shift Night Shift as outlined in Table 34.

Table 34 MINING PERSONNEL ROSTERS AND SALARY

Position	Base Salary	Roster	Annual Leave	Personal Leave	Oncost
Manager Mining	284,032	Office D - 8:6, 4:3	24	10	25%
Tech Services Manager	238,384	Office D - 8:6, 4:3	24	10	25%
Senior Mining Engineer	190,200	Office D - 8:6	24	10	25%
Mining Engineer	169,912	Office D - 8:6	24	10	25%
Senior Surveyor	192,736	Office D - 8:6, 4:3	24	10	25%
Mine Surveyor	157,232	Office D - 8:6	24	10	25%
Survey Assistant	101,440	Office D - 8:6	24	10	25%
Admin Assistant	80,000	Office D - 8:6	24	10	25%
Geology Manager	238,384	Office D - 8:6, 4:3	24	10	25%
Senior Mine Geologist	182,592	Office D - 8:6	24	10	25%
Mine Geologist	142,016	Office D - 8:6	24	10	25%
Pit/Geological Technician	101,440	Operator DN - 8:6, 6:8	24	10	25%
Geo Tech Manager	238,384	Office D - 8:6, 4:3	24	10	25%
Senior Geotech Engineer	190,200	Office D - 8:6	24	10	25%
Project Manager	284,032	Office D - 8:6, 4:3	24	10	25%
Project Manager - Alt	284,032	Office D - 8:6, 4:3	24	10	25%
Project Admin - Inc Maint	80,000	Office D - 8:6	24	10	25%
Training Officer	101,440	Office D - 8:6	24	10	25%
Safety Officer	101,440	Office D - 8:6	24	10	25%
MP Maintenance Manager	-	Office D - 8:6, 4:3	24	10	25%
MP Maintenance Manager - Alt	-	Office D - 8:6, 4:3	24	10	25%
MP Supervisor	-	Operator DN - 8:6, 6:8	24	10	25%
MP Fitter	-	Operator DN - 8:6, 6:8	24	10	25%
MP Service / TA / Boiler, Auto Sparky / Tyres	-	Operator DN - 8:6, 6:8	24	10	25%
MP Planner	-	Operator DN - 8:6, 6:8	24	10	25%
D&B Superintendent	-	Office D - 8:6, 4:3	24	10	25%
Drill Supervisor	-	Office D - 8:6	24	10	25%
Driller	-	Operator DN - 8:6, 6:8	24	10	25%
Blast Supervisor	-	Office D - 8:6	24	10	25%
Shot Firer	-	Office D - 8:6	24	10	25%
Blast Crew	-	Office D - 8:6	24	10	25%
MPU Operator	-	Office D - 8:6	24	10	25%
Drill Fitter	-	Operator DN - 8:6, 6:8	24	10	25%
Supervisor	166,121	Operator DN - 8:6, 6:8	24	10	25%
Loader	147,663	Operator DN - 8:6, 6:8	24	10	25%
Excavator	156,892	Operator DN - 8:6, 6:8	24	10	25%
Dump Truck	133,820	Operator DN - 8:6, 6:8	24	10	25%
All Rounder	147,663	Operator DN - 8:6, 6:8	24	10	25%

Supervision was assumed to be a maximum of 16 personnel.

All calculations include 100% Leave Coverage (Annual Leave and Personal Leave), no account was made for long service leave.

No smoothing of operations personnel has been performed as this is derived from the calculated asset hours.

Based on these inputs the total staffing for the site is summarised in Figure 107. The total personnel required reaches a peak of ~370 between 2029 and 2030 before declining in line with total movement.

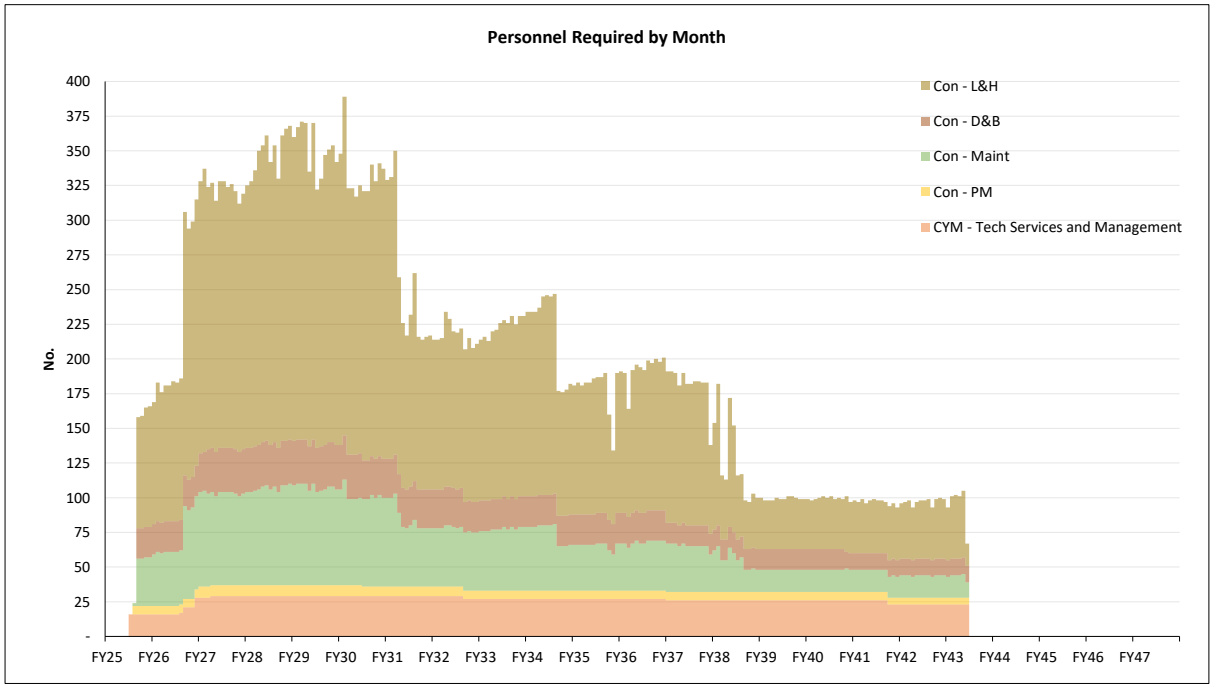

Figure 107 MINING DEPARTMENT HEAD COUNT

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19 OPERATING COSTS

19.1 Mining

19.1.1 Mining

The operating model proposed for mining is a contractor model with technical services provided by the client. Mining costs were developed using first principal build ups and contract rates were quoted. Contractor margins and finance costs were also considered in line with the operating model.

19.1.2 Drill and Blast

Drill and blast costs are calculated from based on derivation and adjustment from a provided 3rd party Drill and blast estimate for Nifty based on 10m bench and applied as follows:

- Oxide Ore $0.55/tonne
- Transitional Ore $0.53/tonne
- Fresh Ore $0.62/tonne
- Oxide Waste $0.54/tonne
- Transitional Waste $0.52/tonne
- Fresh Waste $0.61/tonne

These costs include additional allowances for probe drilling and forcing caving around the underground workings.

19.1.3 Grade Control

The grade control costs were based on blast hole sampling at a 5 m interval and assay completed by the on site lab at a cost of $20 per sample. A further 20% contingency was applied to generate a grade control cost per ore tonne of:

- Oxide Ore $0.04/tonne
- Transitional Ore $0.04/tonne
- Fresh Ore $0.05/tonne

19.1.4 Mobile Equipment

A full first principal life cycle cost (LCC) build was completed for the proposed equipment from MEC's equipment database inclusive of labour, maintenance spares, equipment and workshop facilities. The LCC cost was then combined with an ownership cost based on OEM financing of equipment to provide a fixed and variable cost of equipment as outlined in Table 35.

Additional build up was performed for the cost of a ROM loader and a Dump Truck for Crusher feed as necessary from stockpiles. These costs are included in processing and not in in the mining cost centre

Table 35 KEY ASSET INPUTS

	UoM	Excavator	Excavator	Dump Truck	Dozer	Grader	Water Truck	Loader	Dump Truck
Asset	Class	600	200	230	D10	18	130	WA1200	230ROM
Capital	A$M	13.02	3.99	5.44	2.77	1.59	3.49	4.62	5.44
Mobilisation	A$k	30	30	30	30	30	30	30	30
Demobilisation	A$K	30	30	30	30	30	30	30	30
Finance Rate	%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%
Finance Term	Years	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Asset Life	Years	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Fixed Cost	A$M/Year	1.16	0.35	0.48	0.25	0.14	0.31	0.41	0.48
LCC	$/h	343.91	113.49	67.16	117.76	63.30	47.49	-	67.16
Comment	Text	-	-	-	-	-	-	ROM use	ROM use

19.1.5 Personnel

The provision of personnel was assumed to be broken down as follows for salary, flight and accommodation costs:

- Client:
  - Mine Management and statutory responsibility
  - Technical and Planning:
    - Mining Engineering
    - Geology
    - Geo Tech
    - Survey
    - Administration

- Contractor:
  - Project Management
  - Maintenance (Costed in LCC)
  - Drill and blast (Costed in Drill and blast cost)
  - Load and haul operations and supervision

A full Break down of all renumerations and rosters used is outlined **Error! Reference source not found.**.

19.1.6 Flights

Cyprium provided a quoted charter flight return cost of $841 per passenger. . This is not included in the Site General and Administration cost as mining occurs before processing commences and to eliminate the risk of double up in cost.

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19.1.7 Camp and Accommodation

Cyprium provided a quoted messing rate of $63.44 per night per person This is not included in the Site General and Administration cost as mining occurs before processing commences and to eliminate the risk of double up in cost.

19.1.8 Light Vehicles

A Light Vehicle (LV) ratio of 4 people per LV per shift was used to calculate the number of LVs required, and an annualised cost of $50,000 per LV was used.

19.1.9 Unbudgeted

An allocation of $950k per year was made to cover unbudgeted costs, including but not limited to computer hard and software, consultants and testing, miscellaneous travel, communications, PPE, General mining, survey and geology consumables, and general miscellaneous expenses

19.1.10 Contractor Margin

Based on the MEC Equipment Database, a 15% contractor margin was applied to the following inputs:

- Mobilisation and Demobilisation
- OEM Finance Interest
- Maintenance
- Project Management and Supervision
- Load and Haul Operators and Supervision
- Drill and Blast
- Grade Control

19.1.11 Rehabilitation and Closure

3rd party consultants completed rehabilitation and closures and abandonment studies in Q1 2020 (CMA - Closure, 2020) and (AMC - Closure, 2020) detailing all the costs associated with rehabilitation and closure and the expected operating principles. These costs include but are not limited to:

- Ripping contouring and profiling all disturbed areas (Heap leach, tails, waste rock dumps, roads, etc.)
- Relocating topsoil
- Removal of contaminated material
- Encapsulating the TSF
- Prevention of acid mine drainage
- Dismantlement of all infrastructure and removal from the site

As of 31st December 2023, Cyprium had an accrued cost of these activities of A$36.5 million for rehab and closure based on Nifty as it is at the minute, it is estimated that a further A$14m will be required to cover the expands operations of the site, meaning approximately ~A$51 million will be required.

Based on the currentness and detail of the estimation completed, this estimate is deemed reasonable.

19.1.12 Total Mining

The total mining cost over the life of the project is estimated at ~A$2,158 million which equate to $3.07/tonne Mined, with the 5 key costs being Fuel, Drill and Blast, labour, equipment and contractor margin as outlined in Figure 108 and Figure 109

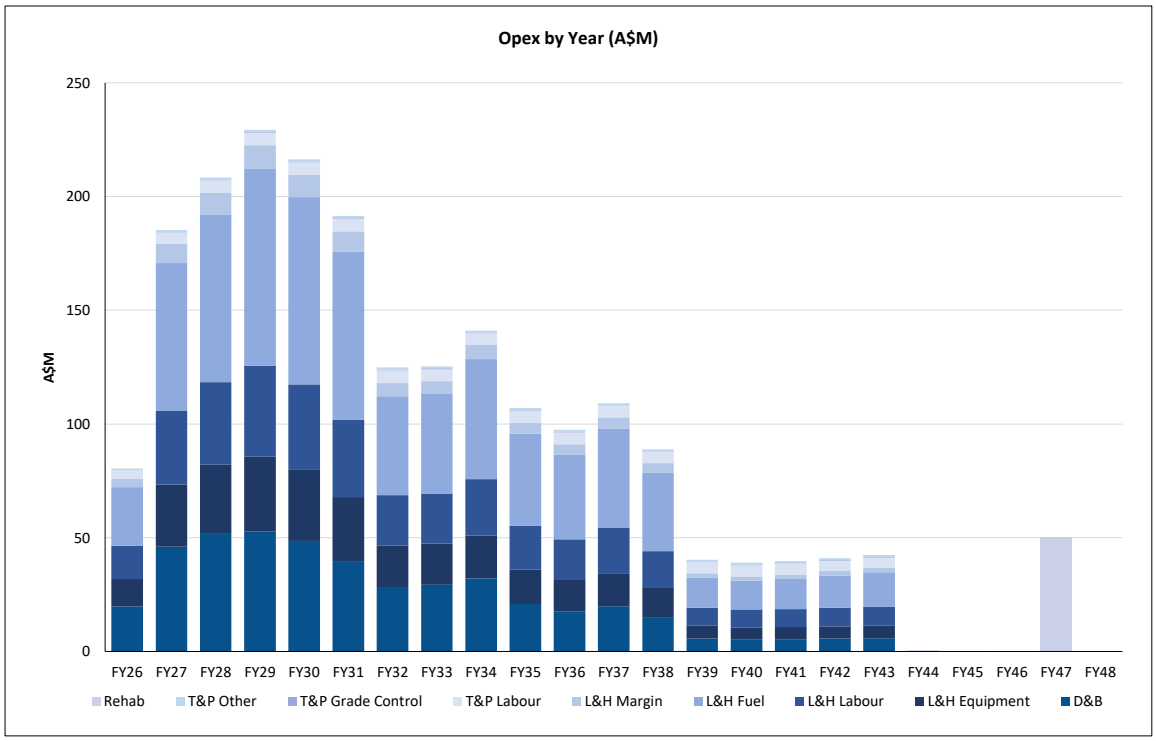

Figure 108 MINING OPEX BY YEAR

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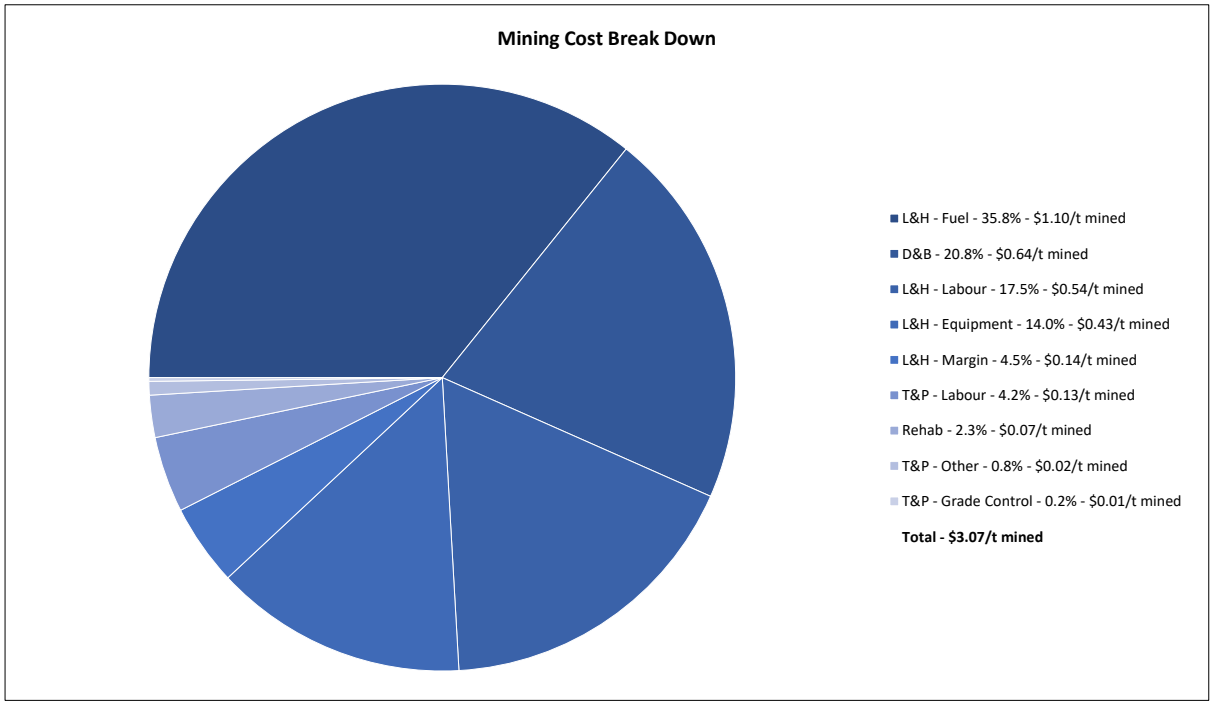

Figure 109 MINING OPEX COST BREAK DOWN

19.2 Sulphide Stream - Concentrate

Cyprium engaged a 3rd party contractor to deliver a Class 5 Study report (± 30%) (Interquip, 2024) on the expected operating cost of the process plant inclusive of:

- General and Administration including, inclusive of but not limited to, personnel (8:6 or 14:14 Roster), consumables, mobile plant, fuel flights, accommodation, messing and administration. This is inclusive of client support functions, i.e. HSE, medical, General management admin, training recruitment, etc.
- Process plant operations, inclusive of but not limited to personnel (8:6 or 14:14 Roster), consumables, mobile plant, fuel flights, accommodation, messing and administration
- Fixed plant maintenance, inclusive of but not limited to personnel (8:6 or 14:14 Roster), consumables, mobile plant, fuel, flights, accommodation, messing and administration
- Costs did not include and additional crusher feed by loader or stockpile rehandling. These costs were built up based on the amount of material that could be direct tipped and the amount that would have to be rehandled by loader and or dump truck. This same fleet were then estimated for the larger stockpile reclaim activities also.

The total concentrate processing cost over the life of the project is estimated at ~A$2,051 million which equates to $23.39 / tonne fed, with the 5 key costs being Fixed, Consumables, Power, Maintenance and Stockpile handling as outlined in Figure 110 and Figure 111.

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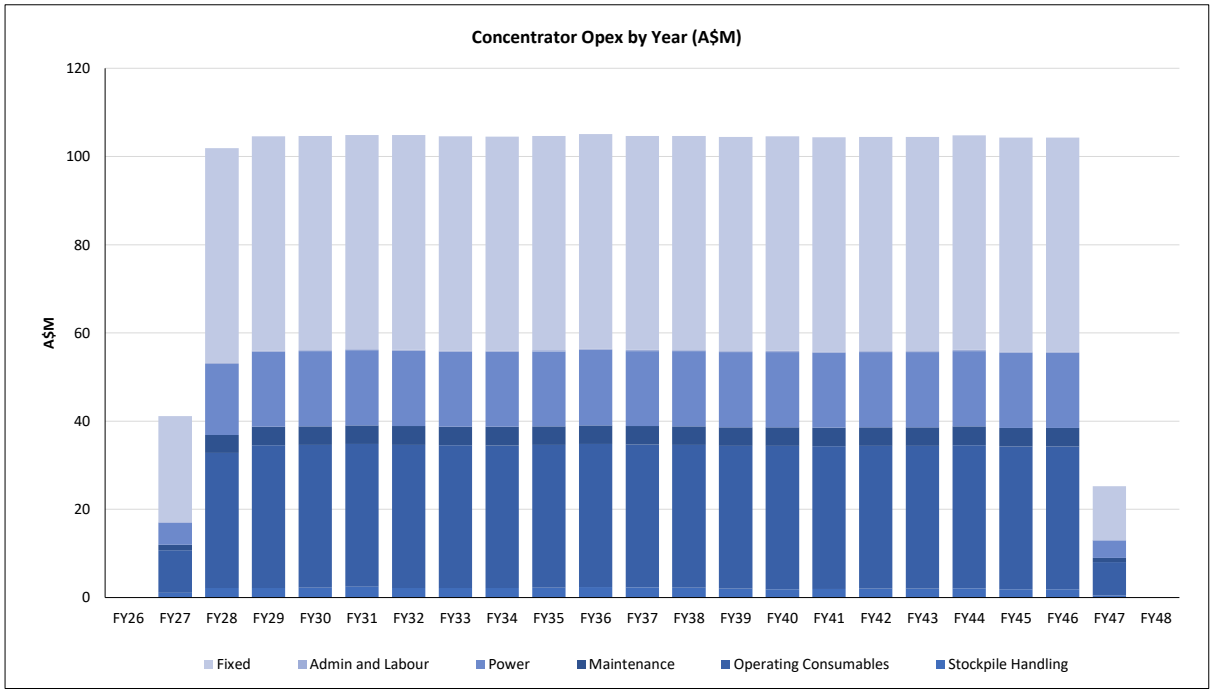

Figure 110 SULPHIDE STREAM - CONCENTRATOR OPEX BY YEAR

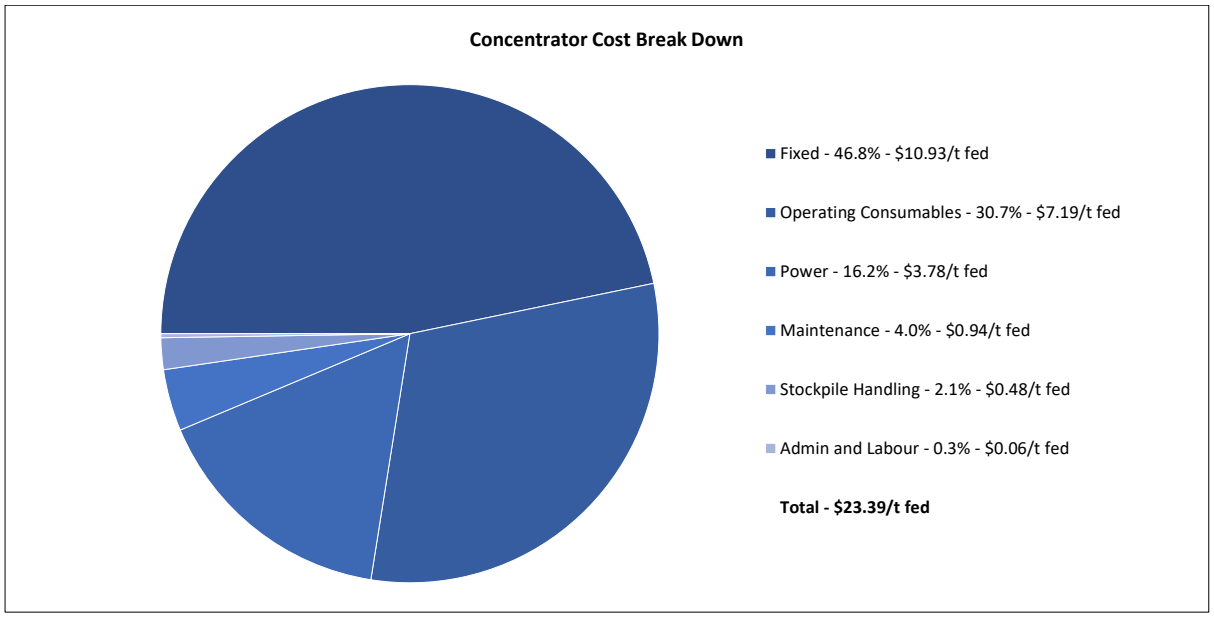

Figure 111 SULPHIDE STREAM CONCENTRATOR COST BREAK DOWN

The detailed basis of estimation for the non-MEC work is outlined in APPENDIX F CONCENTRATE PROCESSING OPERATING COST ESTIMATION. Based on the independence, currentness and detail of the report, the accuracy of ±30% is deemed reasonable.

19.3 Oxide Stream - Heap Leach & SXEW

Heap leach costs were extracted from the previous restart study (Cyprium - Restart, 2022) and adjusted using the Australian Bureau of Statistics Indices - Table 14, Index 21 Primary Metal and Metal Product Manufacturing Indices from 31st March 2022 to 30th June 2024 (11.6%)

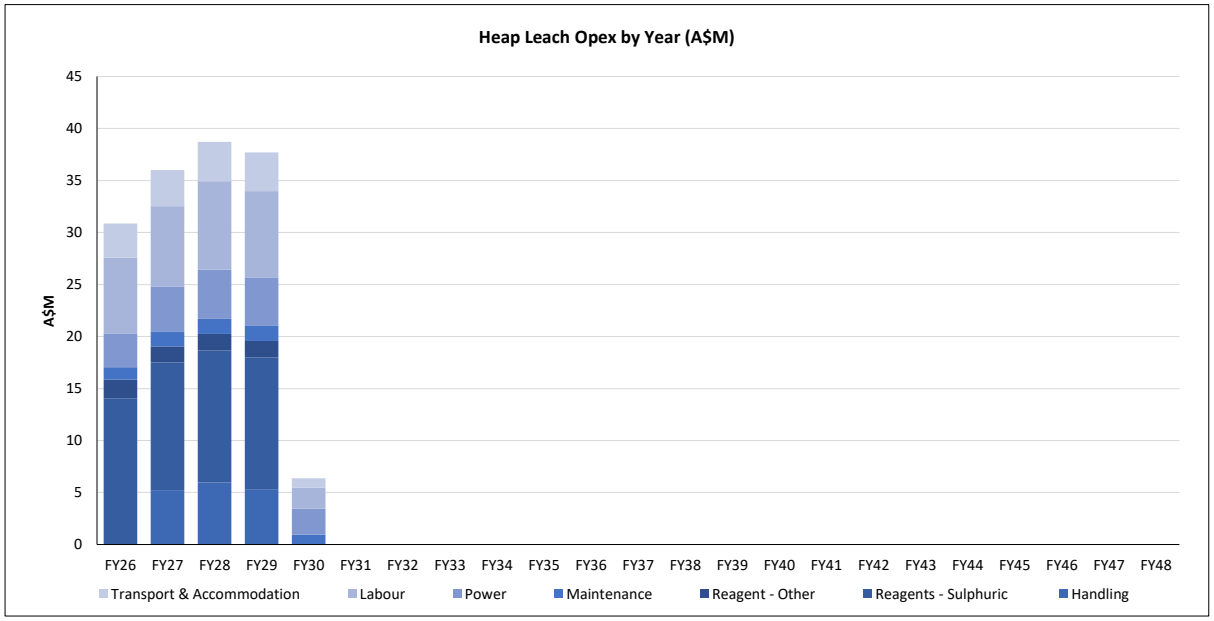

Figure 112 OXIDE STREAM HEAP LEACH AND SXEW OPEX BY YEAR

The total heap leach processing cost over the life of the project is estimated at ~A$150 million which equates to $11.81 / tonne fed, with the 5 key costs being transport and accommodation, labour, power, maintenance and reagent (Non-acid) s as outlined in Figure 112 and Figure 113

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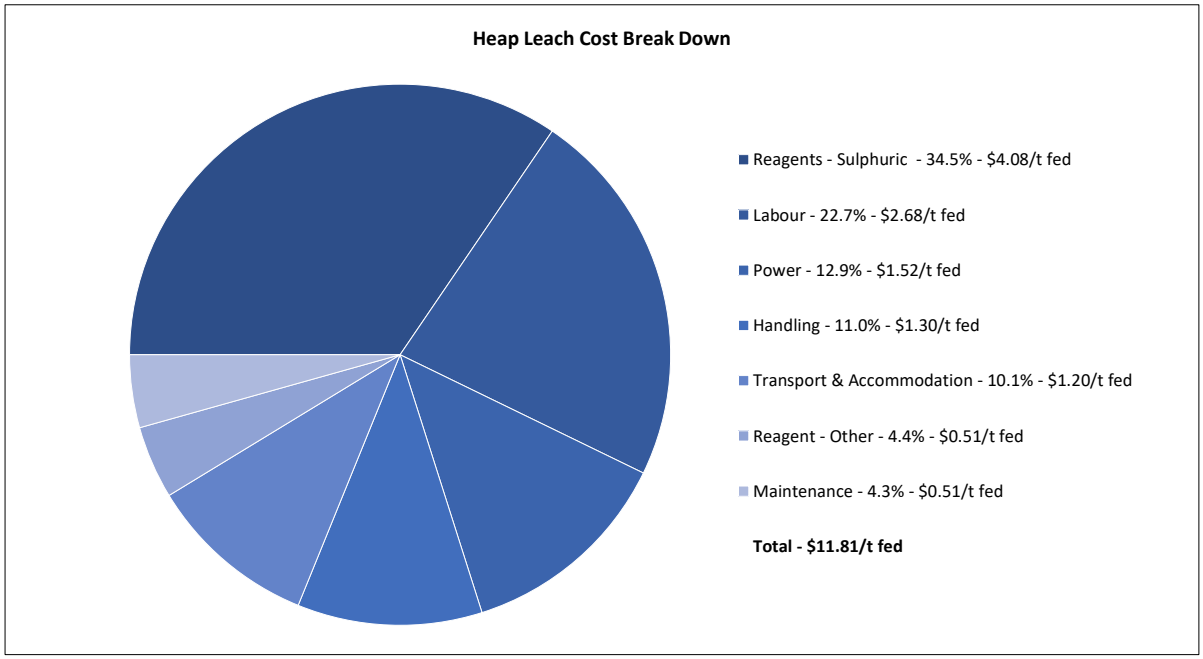

Figure 113 OXIDE STREAM HEAP LEACH AND SXEW COST BREAK DOWN

19.4 General and Administration

The G&A cost over the life of the project is estimated at ~A$131 million which equates to $0.19 / tonne mined as outlined in Figure 115.

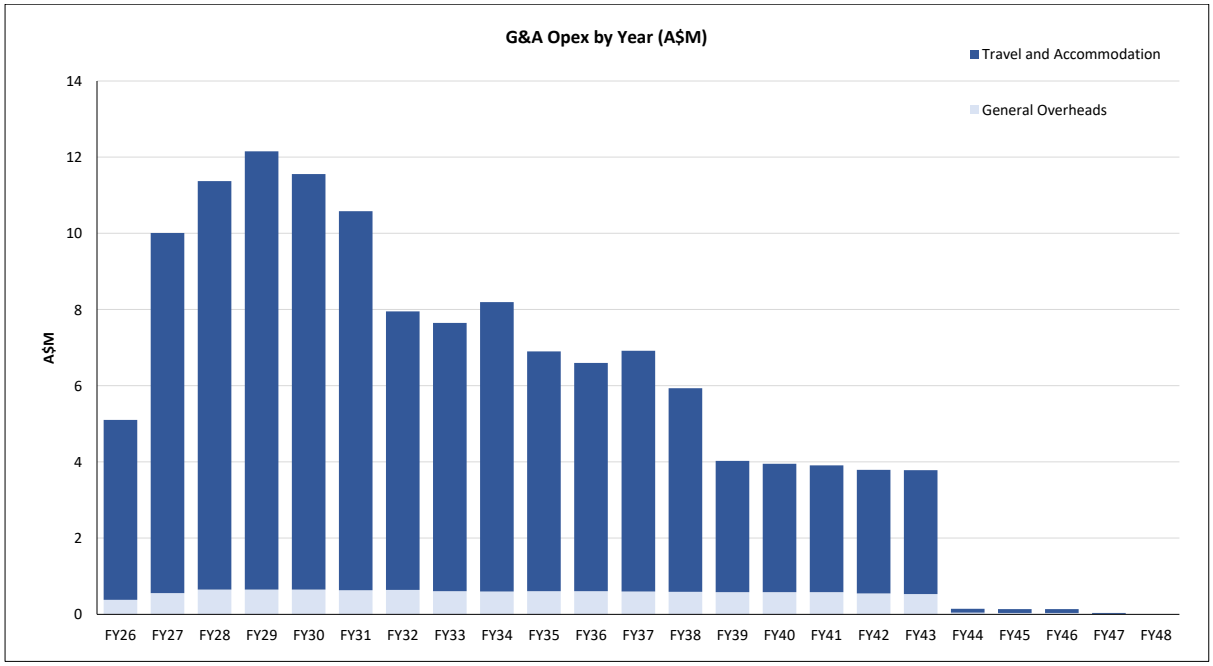

Figure 114 G&A COST BREAK DOWN BY YEAR

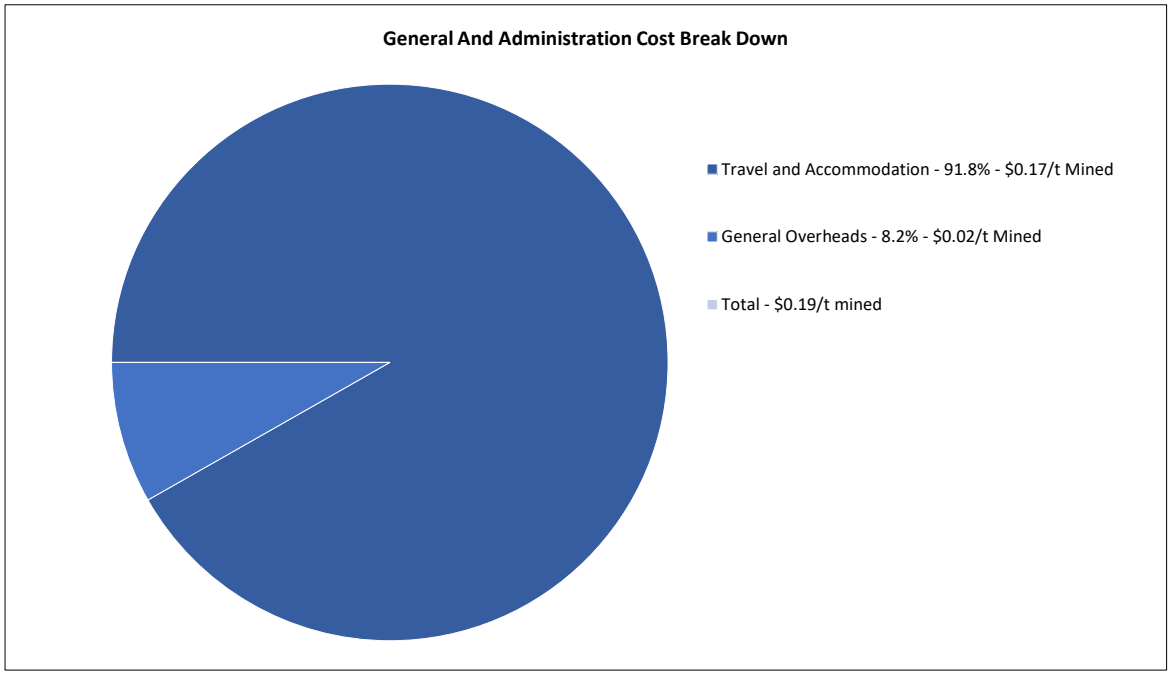

Figure 115 G&A COST BREAK DOWN

19.5 Total Site Cost

The operating cost over the life of the project is estimated at ~A$4,489 million which equates to:

- $6.39 / tonne mined
- $51.19 / ore tonne mined
- $6,252/ dt Cu produced

These costs are summarised in Figure 116, Figure 117, Figure 118 and Figure 119.

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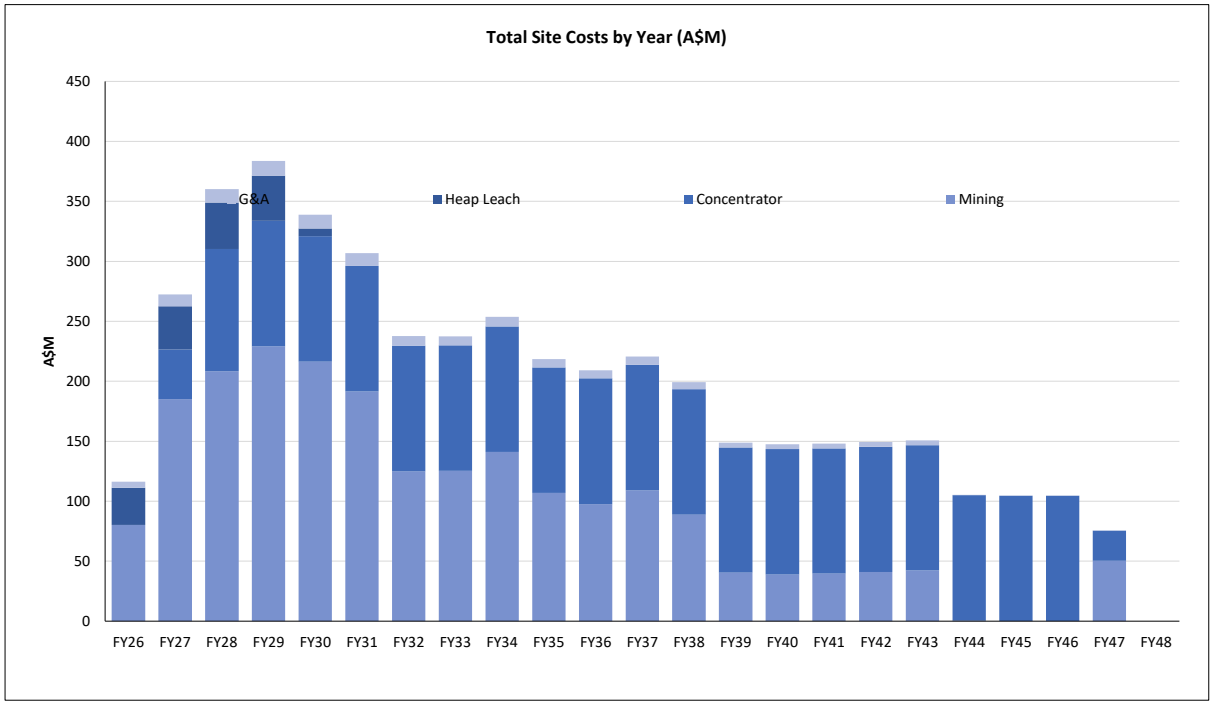

Figure 116 TOTAL SITE OPEX COST BY YEAR

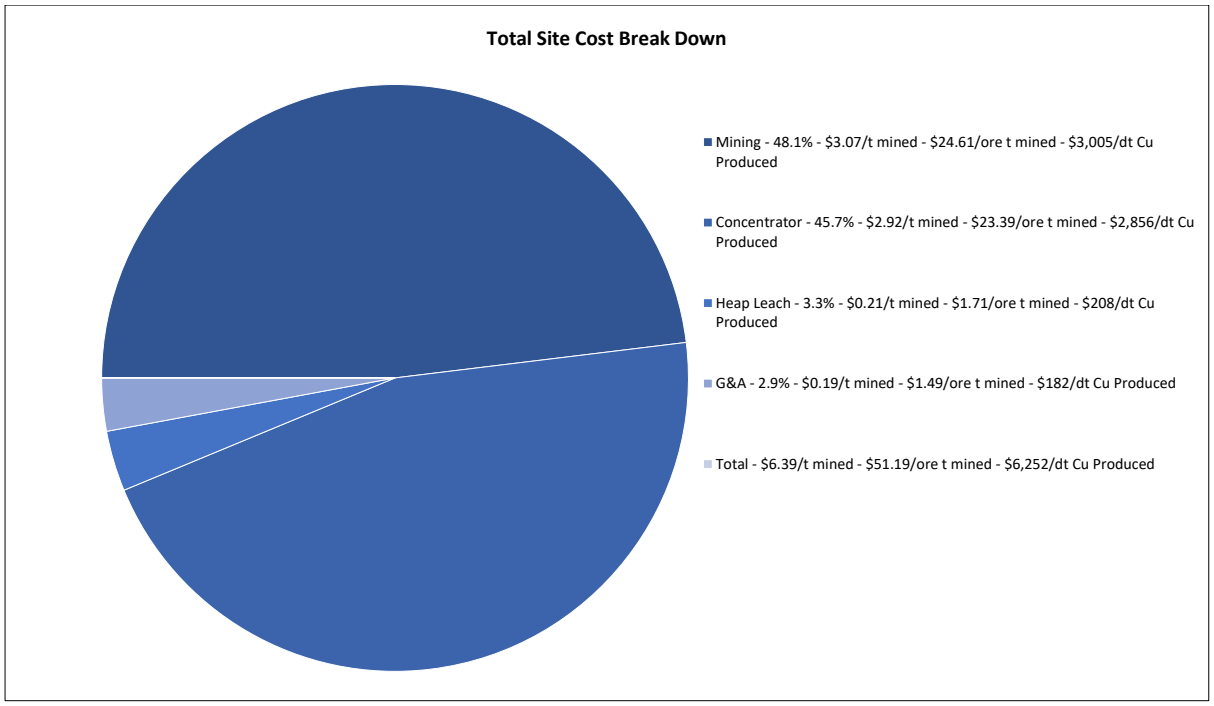

Figure 117 TOTAL SITE OPEX COST BREAK DOWN

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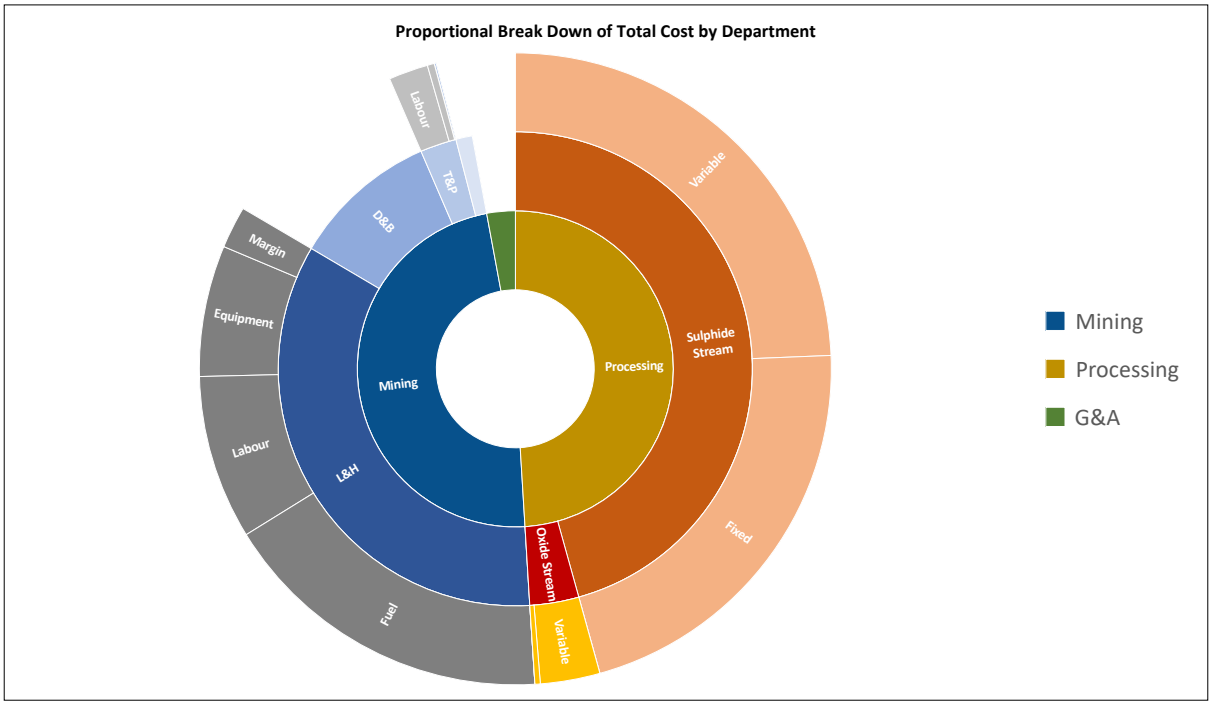

Figure 118 PROPORTIONAL BREAK DOWN OF TOTAL SITE OPEX COST

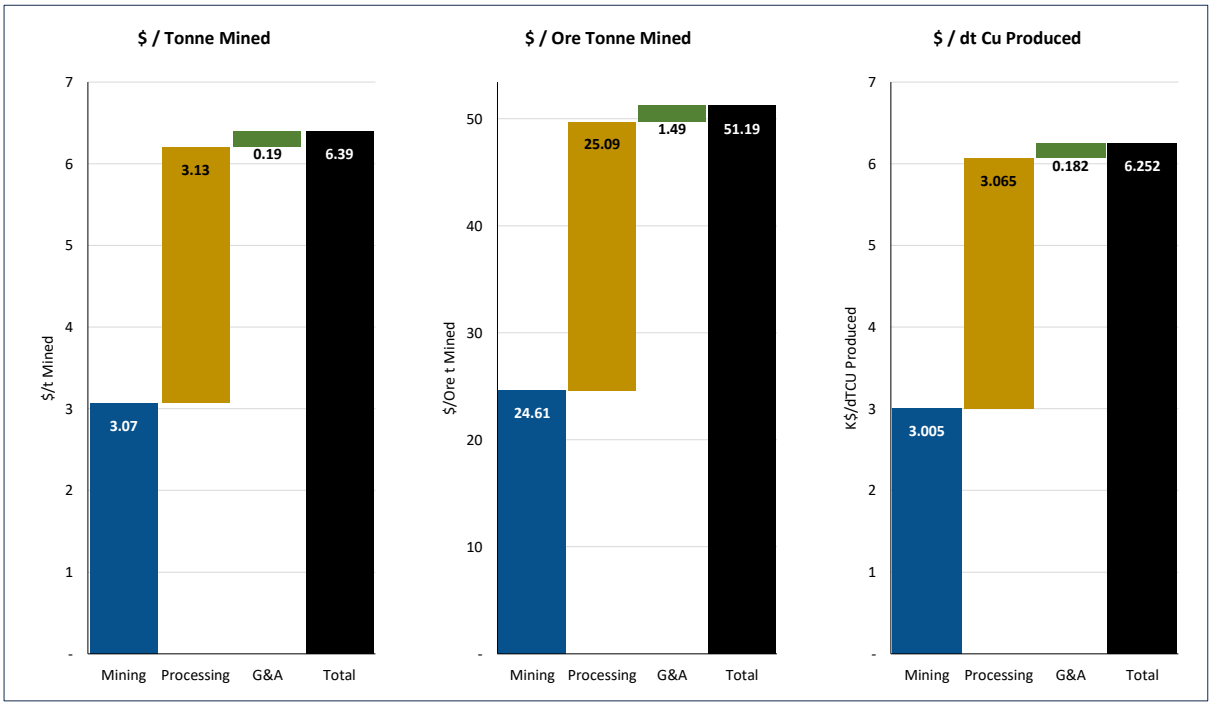

Figure 119 UNIT COST BREAK DOWN

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19.6 Sale costs

19.6.1 Sulphide Stream

19.6.1.1 Mine To Ship Logistics

A third-party contractor provided a mine-to-port logistics cost for containerised haulage and ship-loading of $A90.95/wet tonne of concentrate, hauled to an accuracy of ±10%.

This rate is inclusive of:

- Loading at Site
- Haulage to Port Hedland Port
- Provision of 400 containers
- Fuel
- Receival and stockpile management of containers
- Rotabox system and Mobile harbour crane
- Stevedoring Labour
- Receival and management of containers
- Ship loading

Based on other operations of similar size in the Pilbara, this is deemed a reasonable estimate.

Further to this, the Pilbara Port Authority (PPA) charge $2.45/tonne of containerised bulk export for the FY 24/25 (PPA, 2024).

Total mine-to-ship logistics equate to $93.40/wet tonne of concentrate. MEC completed prior market cost sourcing for the NCC transport, aligning within the noted estimate accuracy, as a result this estimate is deemed a suitable basis for this estimate. Cyprium have progressed towards a commercial arrangement providing confidence in the ongoing validity of transport costing assumption.

19.6.1.2 Shipping

Cyprium have a market shipping agreement as part of their sales agreement with Glencore. The parameters of this agreement are commercial in confidence. MEC have review the full agreement and structure that provides shipping from Port Hedland to destination smelting locations in Asia. This agreement provide security to transport under market rates. For this purpose, in this estimate MEC has employed comparable market shipping rates from Port Hedland to China, a shipping rate of US$54/tonne has been assumed, these rates to be reasonable and within a ±15% level of accuracy.

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19.6.1.3 Marketing

As outlined in section 21 Cyprium signed an off-take agreement with Glencore. The parameters of this agreement are commercial in confidence. MEC have review the full agreement and structure that provides a sales marketing for a percentage fee, taking 100% of the product produced from each product stream. This rate is aligned to similar agreements in MECs experience and deem this to be a suitable basis for this estimate.

19.6.1.4 Treatment and Refining Costs

As outlined in section 21 Cyprium signed an off-take agreement with Glencore. The parameters of this agreement are commercial in confidence. MEC have review the full agreement and structure that provides long term secured treatment and refining cost rates, secured for the sale agreement duration, covering the first 10 years of the project. The supplied rates are in MECs opinion competitively positioned and form a suitable basis for this estimate. This agreement simplifies the basis of TCRC cost estimation and market driven exposure.

19.6.1.5 Royalties

19.6.1.5.1 State

Under the state agreement, Cyprium is required to pay a Royalty based on 5% of total copper revenue.

19.6.1.5.2 3rd Party

Under previous sale agreements, Cyprium is required to pay a 1.5% royalty based on total copper revenue upon reaching a threshold. Cyprium state that there are 135,000 dt Cu to be produced to reach and activate this threshold.

19.6.2 Oxide Stream

19.6.2.1 Mine to Ship Logistics

A third-party contractor provided a mine-to-port logistics cost for road haulage, warehouse packing of containers with copper cathode and delivering fully loaded containers to quay side for Ship -loading at a rate of $271/t tonne of copper cathode including 10% contingency on costs.

The operational process will be executed by flat deck road train trucks loading copper cathode bundles for haulage to Port Hedland warehouse. Cargo will be weighed and packed in shipping line containers and delivered to the port stacks in Port Hedland, where the containers will be loaded on vessel as per customers' requirements by the port of Port Hedland.

The road between Nifty mine and Port Hedland is in fair condition for road train movements but can be limited in periods of the year due to weather conditions. Warehouse in port Hedland is fully secure with security and

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enclosed for safety of copper cathode. Empty containers will be collected from Port Hedland stacks, delivered to Warehouse for packing and re delivered to port stacks once packed with copper cathode.

This rate is inclusive of :

- Triple road train delivery to port warehouse
- Warehouse inbound handling
- Storage 14 days free
- Container transport empty and full to and from warehouse
- Container packing with copper cathode metal
- VGM- weigh bridge Verification
- Port charges plus 10% service charge
- Documentation
- Certificate of Origin

MEC has independently confirmed the transport costing basis and has deemed the estimate and cost basis suitable for the purpose of this estimate.

19.6.2.2 Shipping

Cyprium have a market shipping agreement as part of their sales agreement with Glencore. The parameters of this agreement are commercial in confidence. MEC have review the full agreement and structure that provides shipping from Port Hedland to destination smelting locations in Asia. This agreement provide security to transport under market rates. For this purpose, in this estimate MEC has employed the Cyprium provided shipping rate of US$182.5/tonne, assumed from Port Hedland to China. MEC believe these rates to be reasonable and within a ±15% level of accuracy

19.6.2.3 Marketing

As outlined in section 21 Cyprium signed an off-take agreement with Glencore. The parameters of this agreement are commercial in confidence. MEC have review the full agreement and structure that provides a sales marketing for a percentage fee, taking 100% of the product produced from each product stream. This rate is aligned to similar agreements in MECs experience and deem this to be a suitable basis for this estimate.

19.6.2.4 Royalties

19.6.2.4.1 State

Under the state agreement, Cyprium is required to pay a Royalty based on 2.5% of total copper revenue.

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19.6.2.4.2 3rd Party

Under previous sale agreements, Cyprium is required to pay a 1.5% royalty based on total copper revenue upon reaching a threshold. Cyprium state that there are 135,000 dt Cu to be produced to reach and activate this threshold.. This is the same as outlined in section 19.6.1.5.2

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20 CAPITAL COSTS

20.1 Sulphide Stream

20.1.1 Process Plant

The Nifty Copper Complex already has significant infrastructure and facilities, requiring only upgrade or refurbishment to enable mining and processing restart.

Cyprium engaged a 3rd party contractor to deliver a Class 5 (Interquip, 2024) Study report (± 15%)[8] based on the proposed refurbishment and upgrade of the plant to 4.5 Mtpa (Dated June 2024).

The battery limits of the estimate were for the plant and infrastructure between the primary crusher hopper and the concentrate shed only, with key exclusions outlined below:

- Sunk costs, including pre-feasibility and feasibility costs
- Australian GST.
- Project insurances.
- Licence fees.
- Exchange rate variations.
- Land acquisition costs and fees.
- Cost of handling and disposal of any contaminated product.
- Costs associated with activities by Cyprium Operations.
- Operation and maintenance of the permanent rooms in the village once occupied by construction operations staff.
- Site security.
- Owner's costs
- Working capital
- Costs associated with mining and the tailings dam
- Telephone and plant LAN network systems
- CCTV and Security Systems
- No allowance for inclement weather delays
- Vehicles[9]

[8] Where contingency was not provided MEC applied a 5% contingency
[9] MEC Costed the Asset list provided based on new near new pricing, inclusive of transport, minesite fit out and contingency

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The capital is estimated as a total of A$159.2M initially, with a further A$7.1M in annual sustaining capital. These amounts are summarised in Table 36 and the detailed basis for estimating outlined in APPENDIX E CONCENTRATE PROCESSING CAPITAL ESTIMATION.

Based on the independence, currentness and detail of the report, the accuracy ±15% of the estimate is deemed reasonable. The exchange rate level should be considered as a risk as an AUD: USD of 0.64 was used.

Table 36 SULPHIDE STREAM CAPITAL SUMMARY

Area	Material Cost A$M	Install Cost A$M	Freight A$M	Contingency A$M	Total A$M
Refurbishment	15.2	15.5	1.2	2.6	**34.6**
Upgrade - Includes Dump Hopper Expansion	69.8	23.5	2.9	5.7	**102.0**
Vehicles	5.0	-	0.1	0.3	**5.4**
Pre Production	7.7	-	-	0.4	**8.1**
First Fills	8.7	-	-	0.4	**9.1**
Total	**106.5**	**39.1**	**4.3**	**9.4**	**159.2**

Sustaining Capital - 5% annual of Base (Refurbishment, Upgrade and Vehicles)	**7.1**

Numbers are rounded to reflect a suitable level of precision and may not sum

20.1.2 Camp

A 3rd party provided a quote (ADD - Camp, 2021) for the upgrade and refurbishment of the camp in mid-2021 to upgrade the camp to accommodate 399 personnel. This upgrade is deemed sufficient to accommodate the anticipated requirement of the project. It should be able to operate without the hoteling of rooms, which is a significant point in the attraction and retention of personnel. The civils review in 2024 gave a reduced estimate with a reduction in the rooms required to 350, resulting in capital of A$16.59 million as outlined in Table 37.

Table 37 CAMP UPGRADE AND REFURBISHMENT COSTS

Area	A$M
Preliminaries, Permits, Engineering, Overhead, Management	1.15
Mobilisation to site	0.15
Earthworks to new build area and old service removal	0.52
New Buildings as per attached	6.37
Install Including Inground services to whole camp and Tie downs where required	3.90
Refurbishment as per dilapidation report	2.31
Concrete Pathways and gazebo all new build area A to G Blocks and New Dry Mess	0.81
Transport of New Buildings to site	1.10
Demolition and Remove from site within 2 km inclusive of salvage	0.26
Total	**16.59**

Numbers are rounded to reflect a suitable level of precision and may not sum

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20.1.3 Tailings Storage Facilities Capital Costs

Cyprium commissioned a 3rd party consultant to provide preliminary designs (CMW - IWL DESIGN, 2023) and costs (CMW - TSF, 2023) for tailings storage as outlined in 11.3 and 14.

The report was reviewed and then modelled by Cyprium (Cyprium - TSF, 2024-a) to provide estimates to complete the required compaction and lining of the total facility as outlined below:

- Main (Existing TSF) A$11.5 Million
- West TSF A$36.5 Million
- East TSF A$31.5 Million

No Level of accuracy of these numbers was provided; after review, it is reasonable to suggest that they are at a ±30% level.

The build of the TSF was then scheduled based on the estimated tailings production of the plant and scheduled to achieve the required freeboard 12 months in advance of the requirement.

Based on the tailings capacity required, it is estimated that ~A$51.23 million will be required over the life of the mine for tailings storage, of the total build cost estimate of A$79.5Milion.

20.2 Oxide Stream

20.2.1 Heap leach

Heap leach capital costs were extracted from the previous restart study (Cyprium - Restart, 2022) and adjusted using the Australian Bureau of Statistics Indices - Table 14, Index 21 Primary Metal and Metal Product Manufacturing Indices from 31st March 2022 to 30th June 2024 (11.6%) in total an estimated A$M 32.9 is required to re-establish the heap leach set up as outlined in Table 38.

Table 38 LEACH MATERIAL STORAGE PAD CAPITAL

Area	A$M
Clearing of vegetation, including removal of trees where indicated and deep ripping to remove tree roots as required.	0.32
Stripping of 200mm of topsoil from the cleared areas as required by the Specification	0.86
Leach Pad foundation compaction	0.66
Place, spread, condition and compact in 200mm layers required by the Specification	22.46
Cut to spoil (bank volume)	2.73
Over excavation of rock or gravel 300mm deep and backfilling with sandy material	0.48
Heap Leach Geosynthetic Clay Liner (GCL	4.69
ILS Pond Liner	0.35
PLS Primary Settlement Pond Liner	0.10
PLS Storage Pond Liner	0.28
Total	**32.94**

Numbers have been rounded to reflect a suitable level of precision and may not sum

20.2.2 SXEW

An estimated capital cost of A$29.9m is required for the refurbishment of the SXEW plant as outlined in Table 39. The estimate was supplied by MIM as an independent estimate and refurbishment plan for the asset, above a PFS level of accuracy.

Table 39 SXEW REFURBISHMENT CAPITAL

Area	A$M
Heap Leach	0.3
Construction	21.4
Indirect	2.5
Miscellaneous	2.4
Contingency	3.4
Total	**29.90**

Numbers have been rounded to reflect a suitable level of precision and may not sum

20.3 Non-process infrastructure

As part of the PFS works the non-process infrastructure was assessed for refurbishment, replacement or upgrade needs to service the larger scale operation and the existing conditions of the facilities. An order of magnitude estimate was provided for the and action recommendation for each facility was produced by a third party consultant. A summary of the capital estimates is shown in the following table. Ongoing works to deliver a class 5 estimate is underway, incorporating further design and rationalisation works that are expected in separate and subsequent studies.

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Table 40. NON-PROCESS INFRASTRUCTURE CAPITAL AND PLANNED ACTIVITIES

Area	Element	Plan	Function	Base	Overheads (8%)	Project management (10%)	Contingency (20%)	Estimate 2024
Airstrip	Air side	Retain and Refurbish	No Function Change	$ 500,000	$ 40,000	$ 50,000	$ 100,000	$ 690,000
Airstrip	Ground Side	Retain and Refurbish	No Function Change	$ 60,000	$ 4,800	$ 6,000	$ 12,000	$ 82,800
Camp	Camp	Retain and Refurbish	Increase from ~80 to ~400	$ 12,020,000	$ 961,600	$ 1,202,000	$ 2,404,000	$ 16,587,600
Borefield and Ponds	Borefield	Retain and Refurbish	No Function Change	$ 130,000	$ 10,400	$ 13,000	$ 26,000	$ 179,400
Sewerage Plant	Ponds and Irrigation	Retain and Refurbish	No Function Change	$ 200,000	$ 16,000	$ 20,000	$ 40,000	$ 276,000
Exploration Facilities	Demolish old Exploration Area	Demolish	New Location	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Exploration Facilities	2 New Core Sheds	New	New Location	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Fixed Plant Maintenance Facilities	Maintenance Workshop	Retain and Refurbish	No Function Change	$ 723,750	$ 57,900	$ 72,375	$ 144,750	$ 998,775
Fixed Plant Maintenance Facilities	Electrical Workshop	Retain and Refurbish	No Function Change	$ 75,000	$ 6,000	$ 7,500	$ 15,000	$ 103,500
Fixed Plant Maintenance Facilities	Stores	Retain and Refurbish	No Function Change	$ 60,000	$ 4,800	$ 6,000	$ 12,000	$ 82,800
Mobile Plant Maintenance Facilities	MV Equipment Workshop Inc Stores and Sideshops	Retain and Refurbish	No Function Change	$ 800,000	$ 64,000	$ 80,000	$ 160,000	$ 1,104,000
Mobile Plant Maintenance Facilities	LV Tyre Bay	Retain and Refurbish	No Function Change	$ 55,000	$ 4,400	$ 5,500	$ 11,000	$ 75,900
Mobile Plant Maintenance Facilities	LV Workshop	Retain and Refurbish	No Function Change	$ 35,000	$ 2,800	$ 3,500	$ 7,000	$ 48,300
Mobile Plant Maintenance Facilities	Additional Workspace	Retain and Refurbish	No Function Change	$ 55,000	$ 4,400	$ 5,500	$ 11,000	$ 75,900
Mobile Plant Maintenance Facilities	Crane Shed	Retain and Refurbish	No Function Change	$ 40,000	$ 3,200	$ 4,000	$ 8,000	$ 55,200
Mobile Plant Maintenance Facilities	LV Washbay and Apron	Retain and Refurbish	No Function Change	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Mobile Plant Maintenance Facilities	LV Maint Area Infrastructure	Retain and Refurbish	No Function Change	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Mobile Plant Maintenance Facilities	Old Shotcrete Facility	Retain and Refurbish	No Function Change	$ 55,000	$ 4,400	$ 5,500	$ 11,000	$ 75,900
Concrete Batch Plant	Batch Plant	Retain and Refurbish	No Function Change	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Main Area Administration Buildings	Admin Building	Retain and Refurbish	No Function Change	$ 90,000	$ 7,200	$ 9,000	$ 18,000	$ 124,200
Main Area Administration Buildings	Bathhouse	Retain and Refurbish	Convert to Office Space	$ 300,000	$ 24,000	$ 30,000	$ 60,000	$ 414,000
Main Area Administration Buildings	Crib Area	Retain and Refurbish	No Function Change	$ 30,000	$ 2,400	$ 3,000	$ 6,000	$ 41,400
Main Area Administration Buildings	Enviro Administration	Retain and Refurbish	No Function Change	$ 60,000	$ 4,800	$ 6,000	$ 12,000	$ 82,800
Main Area Administration Buildings	Enviro Storage	Retain and Refurbish	No Function Change	$ 30,000	$ 2,400	$ 3,000	$ 6,000	$ 41,400
Main Area Administration Buildings	Exploration Office	Retain and Refurbish	No Function Change	$ 24,000	$ 1,920	$ 2,400	$ 4,800	$ 33,120
Main Area Administration Buildings	Medical Centre	Retain and Refurbish	No Function Change	$ 24,000	$ 1,920	$ 2,400	$ 4,800	$ 33,120
Main Area Administration Buildings	Mining Laboratory	New	New	$ -	$ -	$ -	$ -	$ -
ERC Facilities	ERC Training Offices	Retain and Refurbish	No Function Change	$ 45,000	$ 3,600	$ 4,500	$ 9,000	$ 62,100
ERC Facilities	ERC Offices/Stores	Retain and Refurbish	No Function Change	$ 15,000	$ 1,200	$ 1,500	$ 3,000	$ 20,700
ERC Facilities	ERC Supplies and Training Area (Igloo and Containers)	Retain and Refurbish	No Function Change	$ 67,000	$ 5,360	$ 6,700	$ 13,400	$ 92,460
Administration Buildings (RO Plant)	Old Laboratory	Demolish	Demolish	$ 50,000	$ 4,000	$ 5,000	$ 10,000	$ 69,000
Administration Buildings (RO Plant)	Old Tech Services	Demolish	Demolish	$ 50,000	$ 4,000	$ 5,000	$ 10,000	$ 69,000
Administration Buildings (RO Plant)	Administration Building	Retain and Refurbish	No Function Change	$ 100,000	$ 8,000	$ 10,000	$ 20,000	$ 138,000
Mining Fleet Maintenance Facility	New hardstand and manouvering areas	New	New	$ 1,200,000	$ 96,000	$ 120,000	$ 240,000	$ 1,656,000
Mining Fleet Maintenance Facility	New Workshop (2 Bay to Start, Room for up to 4 Bays)	New	New	$ 9,040,000	$ 723,200	$ 904,000	$ 1,808,000	$ 12,475,200
Mining Fleet Maintenance Facility	New Washbay	New	New	$ 2,500,000	$ 200,000	$ 250,000	$ 500,000	$ 3,450,000
Mining Fleet Maintenance Facility	New Wheel Change Facility	New	New	$ 1,500,000	$ 120,000	$ 150,000	$ 300,000	$ 2,070,000
Mining Fleet Maintenance Facility	New Refuel Facility	New	New	$ 400,000	$ 32,000	$ 40,000	$ 80,000	$ 552,000
Mining Fleet Maintenance Facility	New Boiler Making Bay	New	New	$ 500,000	$ 40,000	$ 50,000	$ 100,000	$ 690,000
Civil	Transition Earth Works Pad between, New HV Maintenance	Civil Works	New	$ 1,254,674	$ 100,374	$ 125,467	$ 250,935	$ 1,731,450
RO Plant	RO Plant	Retain and Refurbish	Recondition	$ 480,000	$ 38,400	$ 48,000	$ 96,000	$ 662,400
Warehouse	Warehouse	Retain and Refurbish	No Function Change	$ 1,112,500	$ 89,000	$ 111,250	$ 222,500	$ 1,535,250

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20.4 Total Capital Expenditure

Over the life of the project a total capital expenditure of ~A$431.3.4 Million is expected as outlined in Figure 120 as well as the estimated timing of the expenditure as outlined in Figure 121.

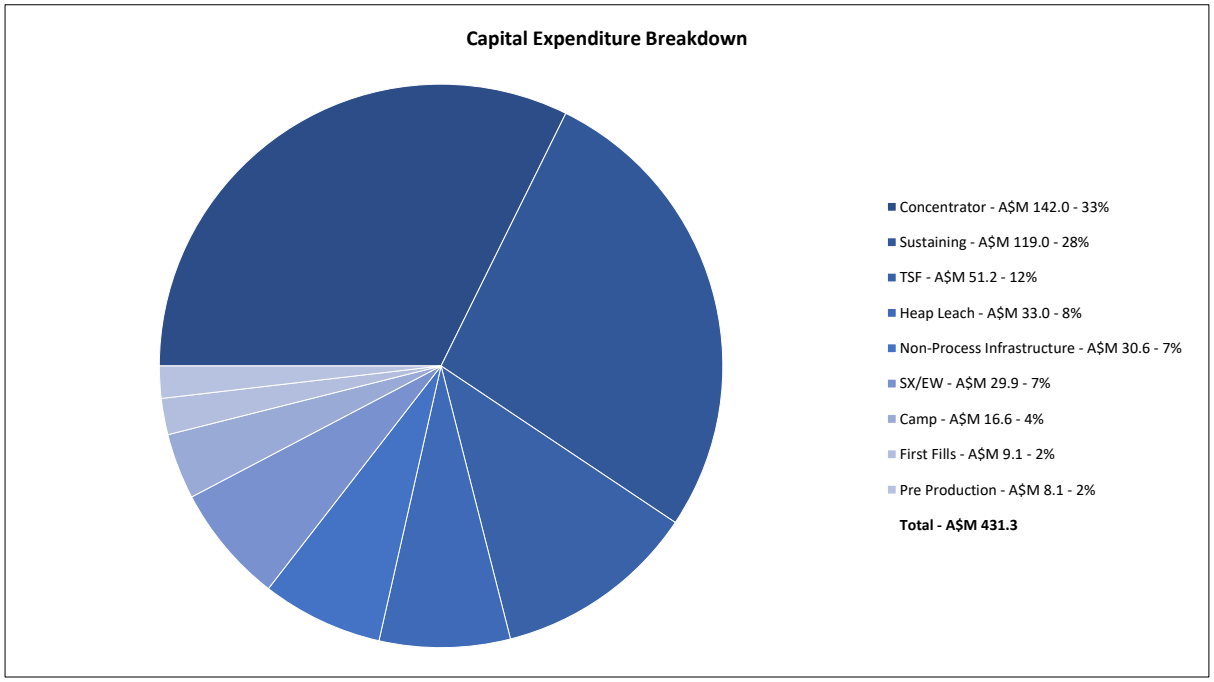

Figure 120 CAPITAL EXPENDITURE BREAKDOWN

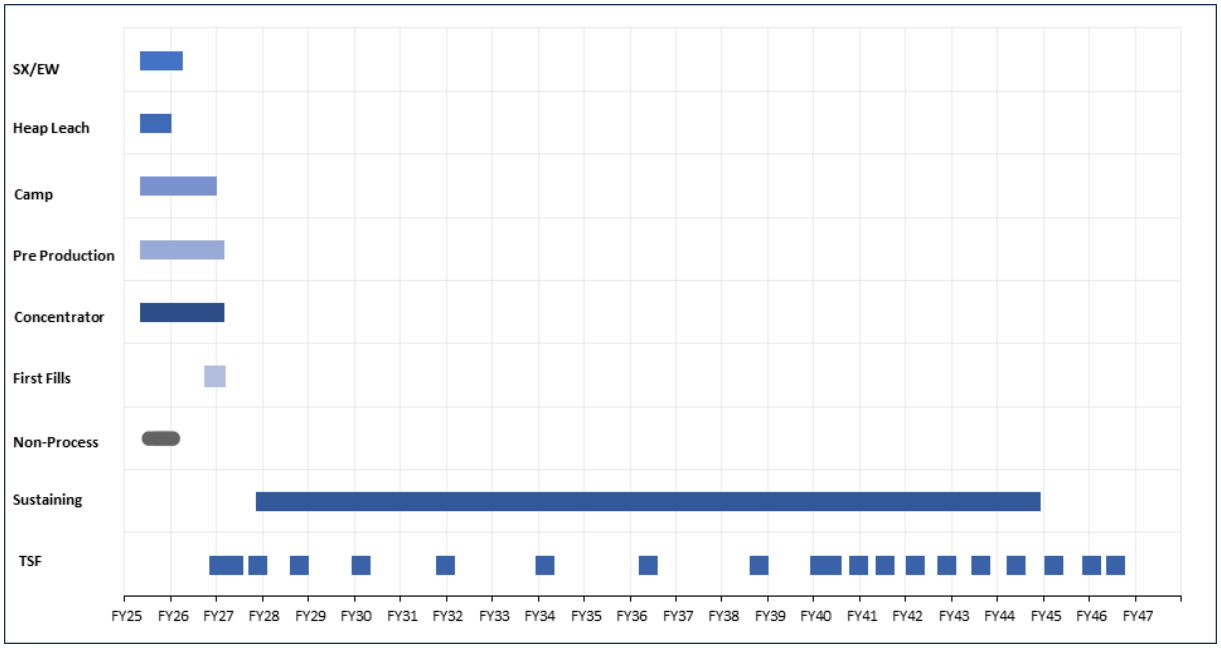

Figure 121 CAPITAL EXPENDITURE TIMING

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21 MARKETING

Cyprium Metals Limited announced to the ASX on the 30th September 2024 the execution of offtake agreements for copper products with Glencore International AG and its affiliates (Glencore).

The execution of the strategic commercial partnership with Glencore, enables Cyprium access to Glencore's downstream processing assets in Mt. Isa and Townsville, Queensland. This upstream-downstream integration allows Cyprium and Glencore to jointly offer copper consumers a copper product produced and refined wholly within Australia – ensuring the best in provenance and security of supply.

As per the ASX announcement the material terms that can be disclosed are outlined in Figure 122 and Figure 123.

CYPRIUM

Annexure B – Material Terms of Copper Cathode Offtake Agreement

The material terms of the Copper Cathode Offtake Agreement are as follows:

Buyer	Glencore International AG
Term	Ten (10) years, extendable by mutual consent
Material	One hundred percent (100%) of available copper cathode produced from Nifty tenements subject to Carve Out
Price, Terms	Market-based terms
Carve Out	Up to thirty percent (30%) of Material may be made available to certain parties with Glencore approval, subject to certain terms and conditions

The Copper Cathode Offtake Agreement contains other terms and conditions that are customary for an agreement of this nature.

Figure 122 MATERIAL TERMS OF COPPER CATHODE AGREEMENT

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Annexure C – Material Terms of Copper Concentrate Offtake Agreement

The material terms of the Copper Concentrate Offtake Agreement are as follows:

Buyer	Glencore International AG
Term	Ten (10) years, extendable by mutual consent
Material	One hundred percent (100%) of available copper concentrate produced from Nifty tenements and/or processed at Nifty subject to Carve Out
Price, Terms	Market-based terms
Carve Out	Up to thirty percent of Material may be made available to certain parties with Glencore approval, subject to certain terms and conditions

The Copper Concentrate Offtake Agreement contains other terms and conditions that are customary for an agreement of this nature.

Figure 123 MATERIAL TERMS OF COPPER CONCENTRATE AGREEMENT

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22 FINANCIAL ANALYSIS

22.1 Revenue & Market Assessment

Market analysis was sourced from a third party analyst company to independently support the forecast market conditions. Cyprium provided Wood Mackenzie Q1 2024 Global copper market analysis report, and this includes copper market demands, current and new supply sources, performance impedance trends, scrap and other contributors to global supply (Wood Mackenzie - Global Copper, 2024-a)

Market assessment of the global copper market is expected to grow with increased demand volumes spurred by the increased electrical infrastructure for renewable energy transitions along with electric vehicle uptake and production. This demand is predicted to see a 3.5% growth in 2025, with ongoing cyclical growth for the duration of the Nifty mine life. Global mine supply increase was only 0.5% in 2024, pushing near term prices higher but reducing over the mine life as new supply hits the market. (Wood Mackenzie - Global Copper, 2024-a).

As outlined in section 21 Glencore have signed an offtake agreement for 100% of the copper produced at Nifty. This reduces the marketing and placement challenges that may be present for typically at this stage of the study development.

The global demand basis supported the market assessment indicate conditions to hold or grow relative to 2024. For this reason a copper price of US$9,370/dt Cu was employed for the long term pricing assessment. This is a 10% discount to the 2024 pricing and deemed a conservative basis. For the purpose of this estimate both the long term pricing forecast from Wood Makenzie and the static long term price were modelled to assess the inclusion of reserve tonnes. The forecast for the copper revenue is seen as reasonable and meets the requirements of a PFS-level study.

22.2 Exchange Rate

The foreign exchange rate of AUD:USD 0.71 was utilised for the base case valuation used in this estimate. Deloitte access economics information available to Cyprium's advisors was supplied to MEC as a basis of this long term outlook. The Wood Mackenzie forecast was also modelled to test the sensitivity of the project to forecast variances, AUD:USD 0.74, from this both cases demonstrated the same reserves inclusions. The forecast for the exchange rate 0.71 and is seen as reasonable and meets the requirements of a PFS-level study.

22.3 Discount Rate

A discount Rate of 8% was used for financial modelling, based on the jurisdiction, orebody knowledge, labour supply and skills availability outlook for copper demand and exchange rate.

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Cyprium considers a real discount rate of 8% to be appropriate to value the Nifty Copper Project to be reasonable. This based on a review of several similar studies published on the ASX. Additionally, Cyprium considers the discount rate appropriate on the basis the Nifty Copper Project is located in a Tier 1 mining jurisdiction and is a brownfields project with significant existing infrastructure. Similar capital profile and risked projects are presented to market at this rate and this is deemed appropriate with the current understanding of the capital makeup of the project.

22.4 Basis of Evaluation

A financial model assessing real post-tax unleveraged cash flows generated by the Nifty Copper Complex (Nifty) has been prepared for evaluation of project economics. A monthly model resolution has been determined appropriate by Cyprium to fully evaluate the timing of upfront capital expenditure, to reflect an appropriate ramp up of mining activity, copper concentrate and copper cathode production.

The financial model assumes a valuation date of 1 July 2025 and does not include pre-commitment costs that will be expended by Cyprium prior to a Final Investment Decision (FID). Corporate costs, for example head office and minimum exploration expenditure have been excluded from the valuation.

The PFS demonstrates the economic potential of Nifty's two standalone processing routes, being the large-scale production of copper in concentrate ("Concentrate Project") through the refurbishment and expansion of Nifty's brownfield concentrator and accompanying new surface mine, and the production of copper cathode from the retreatment of a subset of existing stockpiled material ("Initial Cathode Project", and together with the Concentrate Project, the "Projects").

For the Concentrate project, all site operating costs up until first copper in concentrate production have been capitalised and classified as development capital. Post-production, additional waste stripping has been capitalised and classified as sustaining capital.

For the Initial Cathode Project, any mining and processing operating costs incurred before first cathode plating has been capitalised and classified as development capital.

The post-tax valuation includes the benefit of tax losses available to Cyprium and the depreciation of opening written down values for existing infrastructure. Depreciation has been modelled on a units of production basis.

In addition to state government royalties payable on the sale of copper cathode and copper concentrate, a private royalty payable to a third party (1.5% of realisable value) has been modelled in the cash flows. The private royalty is applicable after ~135kt of copper has been produced.

Cyprium considers a real pre-tax discount rate of 8% to be appropriate to value the Nifty Copper Project to be reasonable. This is based on a review of several similar studies published on the ASX. Additionally, Cyprium

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considers the discount rate appropriate on the basis the Nifty Copper Project is located in a Tier 1 mining jurisdiction and is a brownfields project with significant existing infrastructure.

22.5 New Open Pit Mine -Sulphide Stream

The total mining inventory and copper in concentrate production is summarised in Table 41 and Figure 124 illustrate annual copper in concentrate production forecast in the Ore Reserve valuation.

Table 41. – NIFTY NEW SURFACE MINE PHYSICALS SUMMARY

Nifty New Surface Mine		
Waste Mined	Mt	614.9
Ore Mined	Mt	87.7
Strip Ratio	W:O	7.0
Design Plant Throughput	Mtpa	4.5
Average Plant Throughput	Mtpa	4.4
Total Concentrator Feed	Mt	87.7
Average Copper Grade	% Cu	0.89%
Metallurgical Recovery	%	89%
Total Copper in Concentrate Produced	kt	694
LOM Average Annual Copper in Concentrate Produced	ktpa	35.1

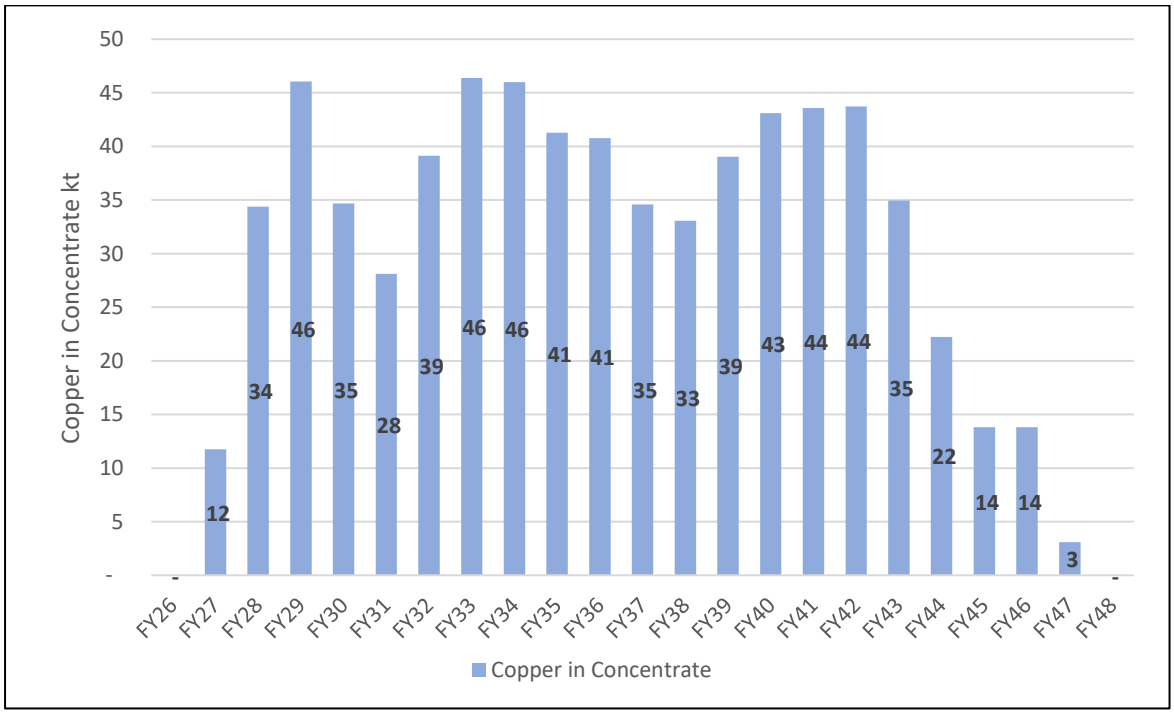

Figure 124. ANNUAL COPPER IN ONCENTRATE PRODUCTION

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22.5.1 Development Capital

Capital expenditure for the refurbishment and expansion to a 4.5Mtpa concentrator commences in the first month of the economic evaluation. The overall development period for the new surface mine is 18 months, with first copper in concentrate production achieved in month 19.

Operating costs prior to first copper in concentrate production (primarily mining pre-strip) have been capitalised and classified as development capital.

A breakdown of development capital for the Concentrate Project has been provided in Table 42.

Table 42. CONCENTRATE STREAM DEVELOPMENT CAPITAL

Item	A$M
Refurbishment	34.6
Upgrades	
Crushing	46.3
Grinding & Flotation	13.6
Plant, Equipment & Construction Overheads	9.7
Piping	4.5
Other Upgrade Costs	15.2
EPCM & Commissioning	12.6
Subtotal Refurbishment and Upgrades	**136.5**
First Fills	9.1
Operational Readiness	13.5
Non-Process Infrastructure	47.2
New Leach Material Storage Pad	33
Total Upfront Infrastructure Capital	**239.3**
Capitalised Operating Costs	173.7
Total Concentrate Project Development Capital	**413.1**

Non process infrastructure capital includes A$16.6m for a refurbished and expanded camp, as well as A$20.9m for a mining fleet maintenance facility (workshop, wash bay etc).

The new surface mine capital expenditure estimate includes ~A$33m for a new leach material pad. This allowance has been provided to suitably relocate heap leach pads 1-4 and oxide material from the New Surface Mine.

In the absence of the new surface mine, pads 1-4 would not be relocated and would be leached in situ in their current location. Therefore, the Concentrate Project is allocated the cost of constructing the new leach material storage pad.

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22.5.2 All-in-sustaining costs

A breakdown of All-in-sustaining costs (AISC) for the Nifty project is summarised in Table 43. Selling costs include road transport, ocean freight, insurance, port charges, TCRCs, marketing fees and state government royalites.

Table 43. CONCENTRATE PROJECT AISC

Item	A$/ t Pay. Cu	A$/ t ore processed	US$ /lb. Pay. Cu
Copper Price	**13,252**	**101.1**	**4.25**
Mining Cost	2,561	19.5	0.82
Processing Cost	3,063	23.4	0.98
Site G&A	181	1.4	0.06
Selling Cost	1,679	12.8	0.54
Cash Cost	**7,485**	**57.1**	**2.40**
Sustaining Capital (including Rehab)	672	5.1	0.22
All-in-Sustaining Cost	**8,158**	**62.3**	**2.62**

Sustaining capital allowances have been provided to allow for the ongoing costs of repairing existing process plant, including structural concrete, electrical and platework repairs. Sustaining capital has also been forecast for progressive tailings storage lifts and rehabilitation costs have been included at the end of the life of the Concentrate Project.

Additionally, A$230m of in production waste stripping cost have been capitalised and classified as sustaining capital, as it is probable that future benefits will be realised with the associated stripping activities. The waste stripping is incurred over a 52-month period from the commencement of first copper in concentrate production. Table 44 summarises sustaining capital forecast over the life of the Concentrator Project.

Table 44. CONCENTRATOR PROJECT SUSTAINING CAPITAL

Item	A$M
Mining- Waste Stripping	230
General Sustaining Capital	119
Tailings Storage Lifts	51
Rehabilitation	50
Sustaining Capital	**450**

22.6 Oxide Stream (Cathode Project)

The Initial Cathode Project includes in-situ leaching of material stacked on existing heap leach pads 5 &6. Pads 1-4 are transferred to a new leach pad storage location, where they are also leached in-situ. In total 12.7 Mt of heap leach ore is retreated with total contained and recovered copper of 54kt and 24.4kt respectively. A summary of copper cathode production is presented in Table 45.

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Table 45. COPPER CATHODE PRODUCTION SUMMARY

Item	Units	Value
Heap Leach Ore, Pads 1-4	kt	3,444
Heap Leach Ore, Pads 5-6	kt	9,231
Total Heap Leach Ore	kt	12,675
Grade, Pads 1-4	% Cu	0.48%
Grade, Pads 5-6	% Cu	0.41%
Total Copper Contained	kt	54.0
Heap Leach Recovery	%	45%
Copper Cathode Plated	**kt**	**24.4**

22.6.1 Development Capital

Cyprium has estimated the total capital required for the refurbishment of the Heap Leach and SX-EW to be A$30m. Refurbishment of the SX-EW infrastructure commences in the first month of the economic model and is incurred over a seven-month period.

Operating costs incurred before first plating (month 7) are capitalised and classified as development capital.

A breakdown of development capital for the Initial Cathode Project has been provided in Table 46.

Table 46. CATHODE PROJECT DEVELOPMENT CAPITAL

Item	A$M
Heap Leach	0.3
Construction Plant, Equipment & Overheads	1.5
Concrete & Structural	2.8
Mechanical	6.8
Piping	3.4
Electrical	6.5
Site Roads	1.0
First Fills	1.3
EPCM & Commissioning	2.5
Miscellaneous	0.4
Contingency	3.4
Total Upfront Infrastructure Capital	**29.9**
Capitalised Operating Costs	15.5
Total Initial Cathode Project Development Capital	**45.4**

22.6.2 All-in-sustaining costs

A breakdown of All-in-sustaining costs (AISC) for the Cathode Project is summarised in Table 47. Selling costs include road transport, ocean freight, insurance, port charges, marketing fees and state government royalites. Site G&A costs are assumed to be absorbed by the Concentrator Project.

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Table 47. CATHODE PROJECT AISC

Item	A$/ t Pay. Cu	A$/ t ore	US$ /lb. Pay. Cu
Copper Price	**13,271**	**25.6**	**4.25**
Mining Cost	677	1.3	0.22
Processing Cost	4,814	9.3	1.54
Selling Costs	1,309	2.5	0.42
Cash Cost	**6,800**	**13.1**	**2.18**
Sustaining Capital	-	-	-
All-in-Sustaining Cost	**6,800**	**13.1**	**2.18**

22.7 NCC Key Project Metrics

A summary of the key metrics from the Nifty Reserve are summarised in Table 48. The PFS valuation has been performed assuming a base case copper price of US$9,370/ t and a long-term foreign exchange rate of AUD: USD 0.71. The valuation is most sensitivity to movements in copper price and FX, both of which have been tested extensively and presented in the sensitivity analysis section.

The payback for the Nifty PFS has been determined with reference to the start of production from the Concentrate Project, as that remains the primary focus of Cyprium.

Table 48. COMBINED SITE FIANCIAL EVALUATION METRICS

Item	Units	Combined	Concentrate Project	Cathode Project
Ore (including inferred)	*Mt*	100.4	87.7	12.7
Grade (including inferred)	*% Cu*	0.83%	0.89%	0.43%
LOM Production	***kt Cu***	**718**	**694**	**24**
Average production, yrs 1-10	***ktpa Cu***	**37.3**	**38.7**	**5.9**
Project Life	***Years***	**20.8**	**19.8**	**4.2**
LOM Average Copper Price[1]	*A$/ t Cu*	*13,253*	*13,252*	*13,271*
Revenue	***A$m***	**9,194**	**8,870**	**324**
Selling Costs	*A$m*	(1,156)	(1,124)	(32)
Site Operating Costs	*A$m*	(4,020)	(3,886)	(134)
EBITDA	***A$m***	**4,018**	**3,860**	**158**
Development Capital	*A$m*	(458)	(239)	(30)
Capitalised Opex in Development	*A$m*		(173)	(16)
Sustaining Capital (inc. rehabilitation)	*A$m*	(450)	(450)	-
Undiscounted Pre-tax Project Level CF	***A$m***	**3,110**	**2,997**	**113**
Max Project Drawdown	*A$m*	(431)	(435)	(46)
C1 Cost	***A$/ t Pay. Cu***	**7,461**	**7,485**	**6,800**
	US$/lb	2.39	2.40	2.18
AISC	***A$/ t Pay. Cu***	**8,110**	**8,158**	**6,800**
	US$/lb	2.60	2.62	2.18
Pre-tax NPV (8%)	***A$m***	**1,129**	**1,042**	**86**
Pre-tax IRR	***%***	**28.9%**	**26.3%**	**110.1%**
Pre-tax Payback (from first concentrate production) [2]	*Years*	4.75		
After-tax NPV (8%)	*A$m*	756		
After-tax IRR	*%*	23.6%		
Capital Intensity (Dev Capex / Ann Prod)[3]	*A$/t*	12,295	10,660	7,748
Dev Capex / Avg EBITDA	*X*	2.4x	2.1x	1.2x
Max Drawdown / Avg EBITDA	*X*	2.2x	2.2x	1.2x

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22.8 Cash Flow Profile

A high proportion of the overall value of the Nifty Complex is attributable to the Concentrate Project, which is a significant long-life asset of meaningful scale. The Initial Cathode Project represents a near term revenue opportunity.

Figure 125 illustrates, on a pre-tax cash flow basis, the respective contributions of the Concentrate Project and Initial Cathode Project.

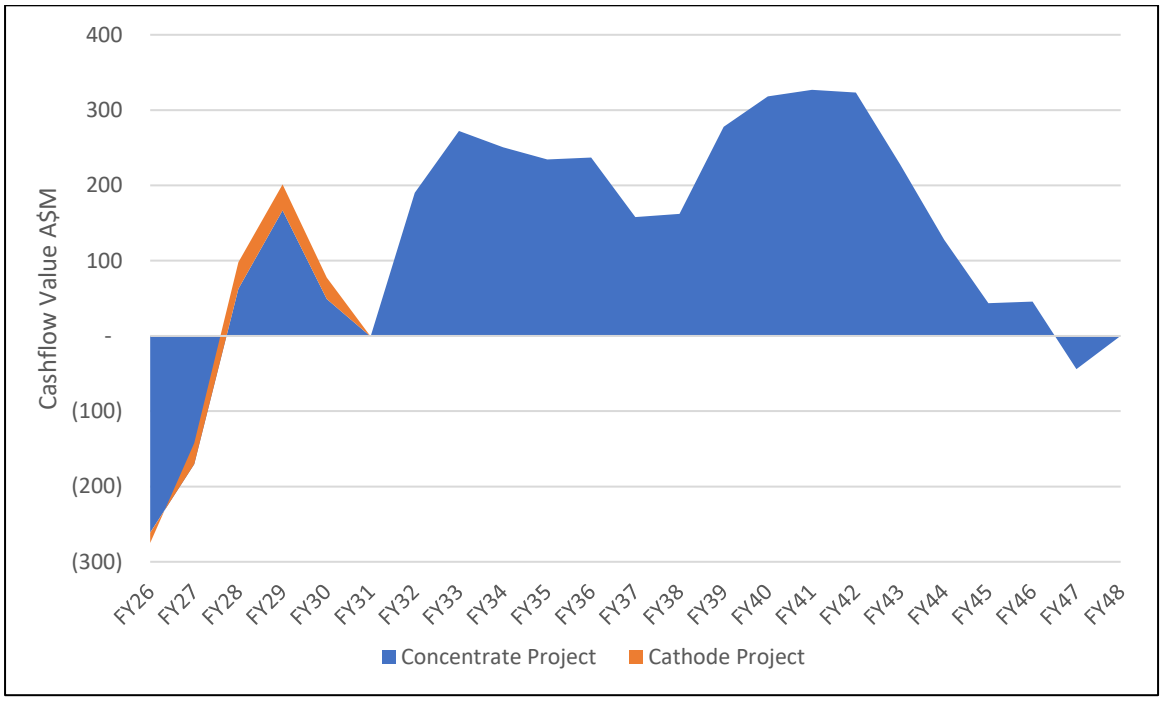

Figure 125. PRE-TAX PROJECT LEVEL CASHFLOW SPLIT

The annual composition of pre-tax project level cash flows for the Nifty Project is summarised in Figure 126.

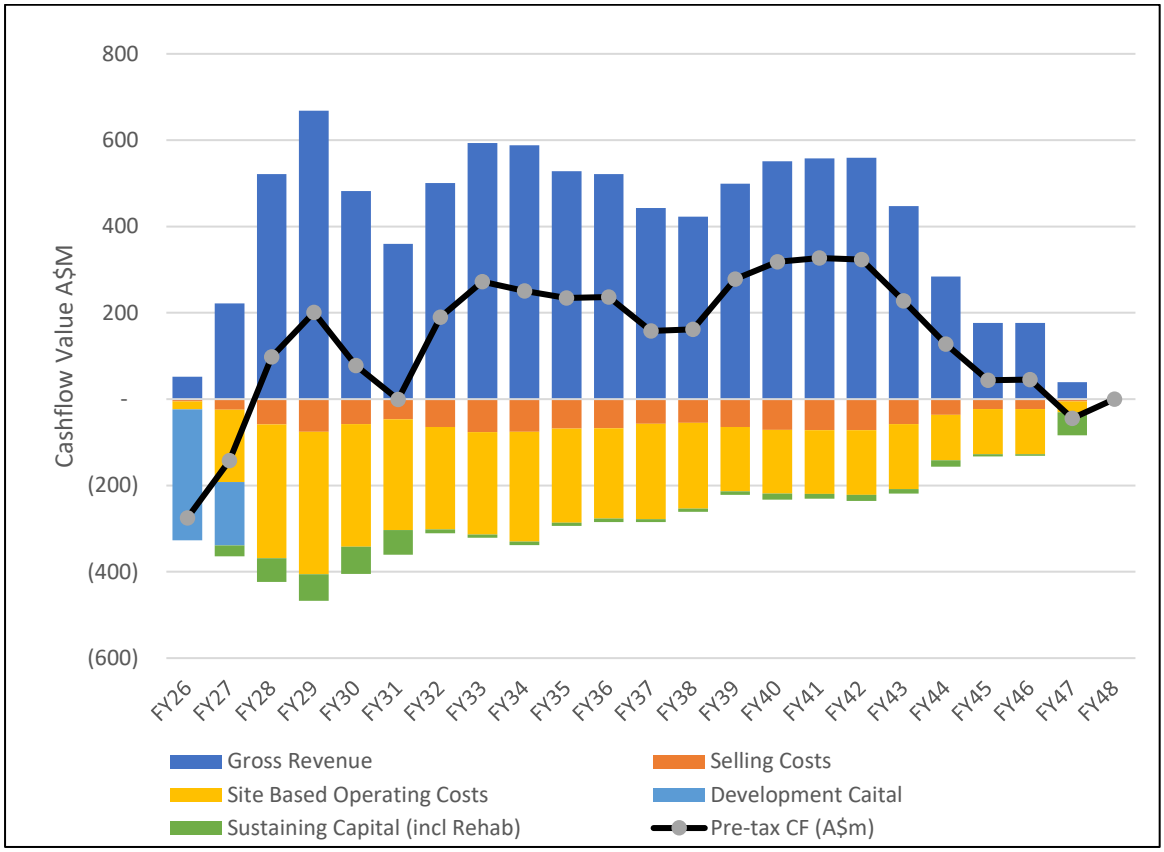

Figure 126. PRE-TAX PROJECT LEVEL CASHFLOW COMPOSITION

Cumulative pre-tax cash flows are presented in Figure 127. The maximum drawdown for the combined Projects is $431m. Cumulative positive pre-tax cash flows are generated approximately 4.75 years from first copper in concentrate production.

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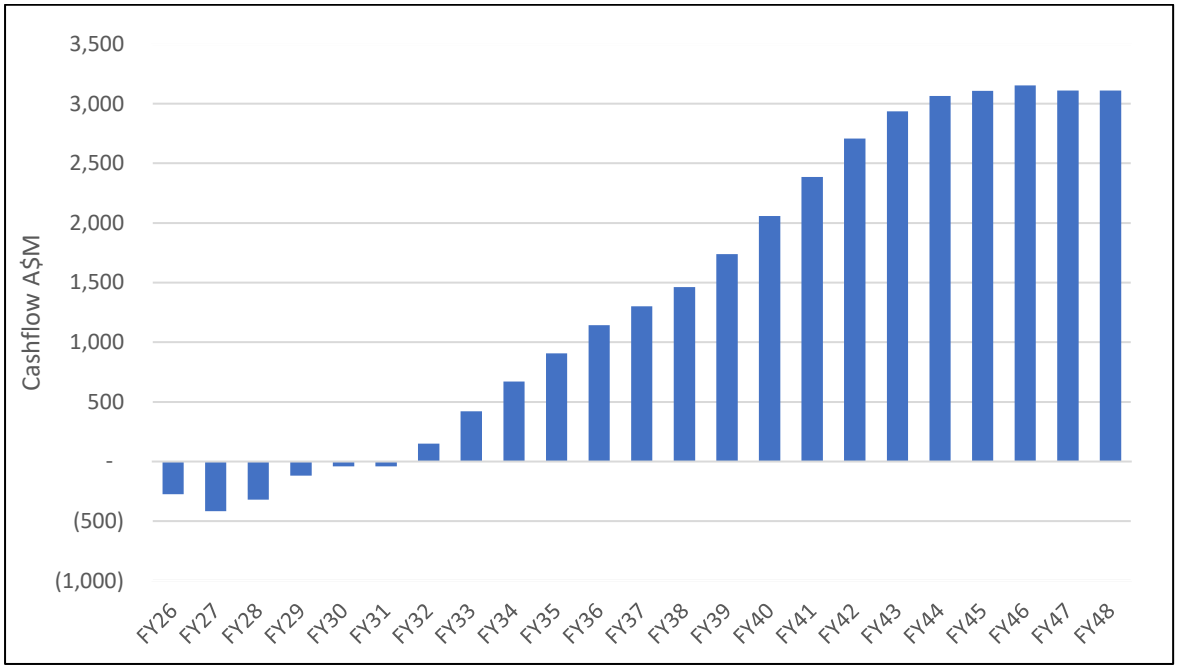

Figure 127. PRE-TAX CUMMULATIVE PROJECT LEVEL CASHFLOW

22.9 Financial Model Sensitivity

Cyprium has performed a sensitivity analysis on key value drivers for the Nifty Copper Project. The valuation outcomes (pre-tax NPV) for each sensitivity input presented in Figure 128 is assessed assuming all other parameters remain unchanged.

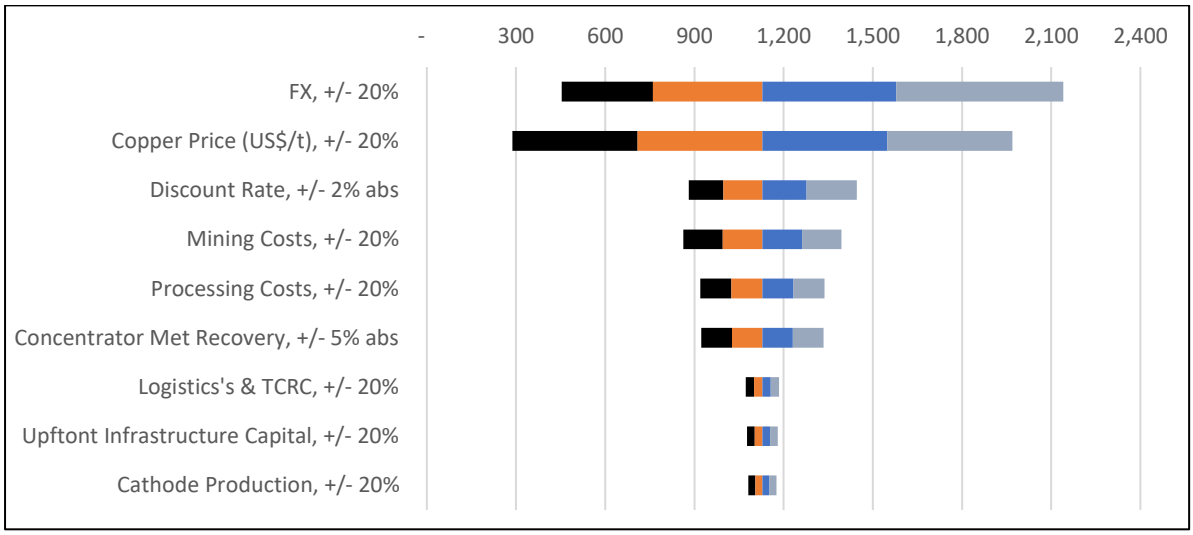

Figure 128. SENSITIVITY ANALYSIS, PRE-TAX NPV A$M

A description of the key value drivers assessed in the sensitivity analysis and the ranges applied are summarised in the ensuing sections.

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22.9.1 Copper Price

The valuation of the Nifty Complex has been tested to understand the sensitivity to movements in copper price within a +/- 20% range. The sensitivity analysis demonstrates that the Nifty Copper Project has significant economic leverage in a rising copper price environment but is also economic in a lower copper price environment

22.9.2 Foreign Exchange Rate (AUD:USD)

The valuation of the Nifty Complex is very sensitive to foreign exchange rates (AUD:USD). Movements in foreign exchange rates have flow through to copper pricing, logistic costs and TCRCs.

22.9.3 Discount Rate

Given the long mine life of the new surface mine, the valuation is particularly sensitive to discount rates. Figure 128 shows the range of valuation when applying a real discount rate of 6-10% pa.

22.9.4 Mining Cost

Mining costs have been developed from first principles and assume a contractor mining scenario. Cyprium have tested the sensitivity of the valuation to changes in mining costs within a range of +/-20%.

22.9.5 Processing Cost

Cyprium has tested the sensitivity of the ORE valuation to changes in processing costs within a range of +/- 20%.

22.9.6 Concentrator Recovery

The metallurgical recoveries included in the economic modelling are substantiated a significant body of historical and ongoing test work. A sensitivity analysis has been performed testing recoveries within a +/- 5% range.

22.9.7 Cathode Production

Cyprium is adopting a low complexity and low recovery operating and development philosophy to the oxide stream (cathode production). The overall sensitivity of the valuation to higher or lower than modelled cathode production is relatively low.

22.9.8 Upfront Infrastructure Capital

The impact of changes to total development capital costs has been tested within a +/- 20% range, noting that contingency of ~20% included in the upfront capital estimates, or otherwise as stated. This sensitivity analysis excludes capitalised operating costs over the preproduction phase of the project.

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22.9.9 Logistics & TCRCs

Offsite costs included in the Nifty Project valuation are underpinned by Cyprium's strategic commercial relationship with Glencore. Costs for the transport of cathode and concentrate from Port Headland have been developed in consultation with Glencore. Treatment and refining charges for the sale of copper in concentrate are as per the binding offtake agreements executed with Glencore and are confidential.

22.9.10 Additional Macroeconomic Sensitivity Analysis

The PFS valuation has been performed assuming a base case copper price of US$9,370/ t and a LT foreign exchange rate of AUD:USD 0.71. Cyprium has also performed an economic valuation utilising independent forecast information provided by commodity specialist Wood Mackenzie.

Figure 129 presents cumulative discounted cash flows for the following scenarios:

- Base Case Price (A$13,253 /t), Measured, Indicated & Inferred Ore
- Base Case Price (A$13,253 /t), Measured & Indicated Ore
- WoodMac Price (~A$11,345 /t), Measured, Indicated & Inferred Ore
- WoodMac Price (~A$11,345 /t), Measured & Indicated Ore

Importantly, the analysis demonstrates that Nifty Copper Project is economic even if inferred material is excluded. Inferred material represents approximately 6% of total tonnes processed over the PFS LOM.

Assessment of the production levels at the conservative long-term forecasts as noted from the Wood Mackenzie supply. The project net present value at the conservative forecast price and exchange rate is A$558M. Figure 130 demonstrate that the project cashflow year on year is positive after initial stripping, even when applying conservative price and exchange assumptions, validating the full inclusion of the Reserves estimated.

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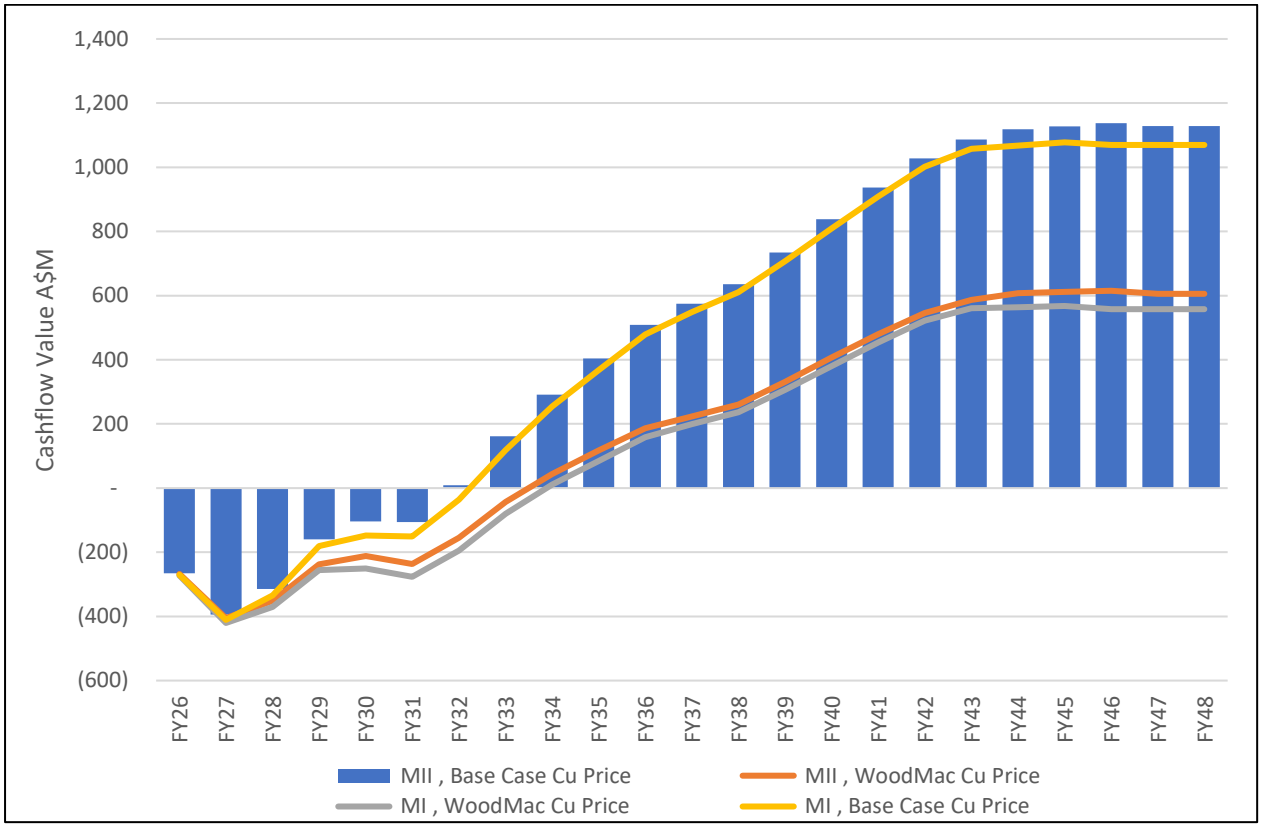

Figure 129. CUMMULATIVE DISCOUNTED CASHFLOW PRE-TAX

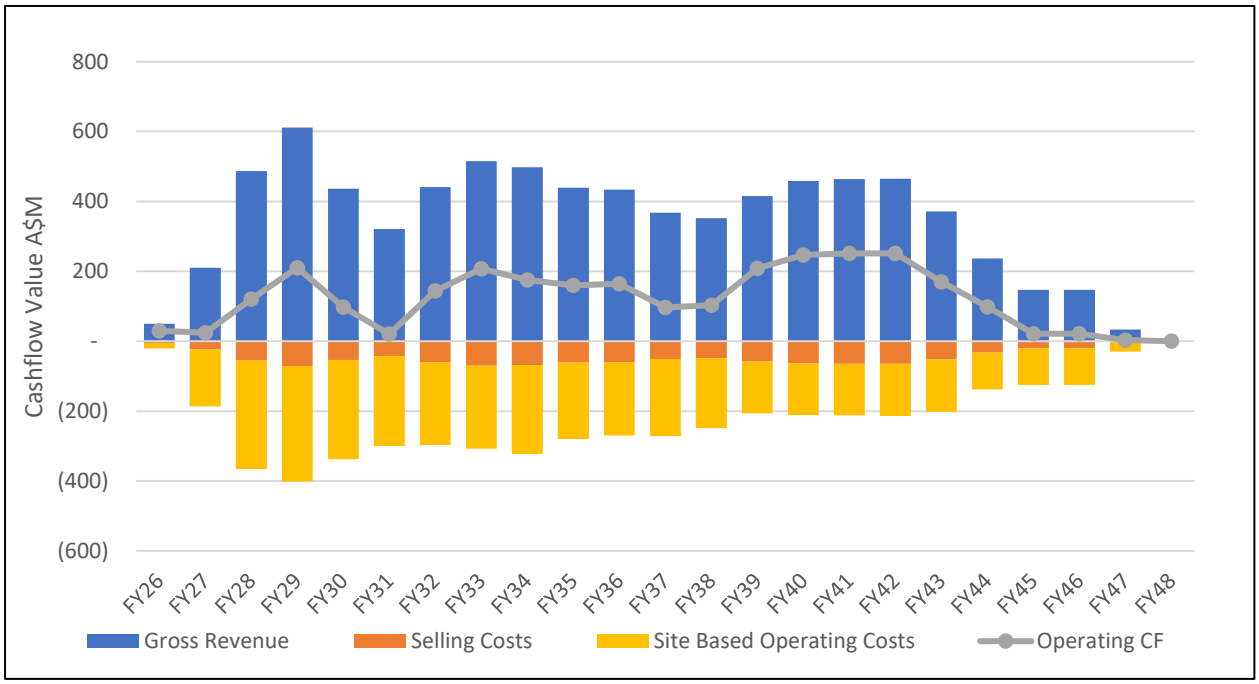

Figure 130. CASHFLOW EXCLUSING CAPEX AT CONSERVATIRVE PRICE AND FX.

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23 RISK

23.1 Operational Risk Assessment

Nifty Mine site team have developed and maintain an existing operational Risk Assessment. This risk assessment identifies the operational risks, controls, residual risks, emerging risks and was last updated in May 2024. The Cyprium site team have a good understanding of the operational risks onsite and implement these controls at Nifty mine site.

23.2 Project Restart Risk Assessment Workshop

On Wednesday 20 November 2024, a project Risk Assessment Workshop was conducted with participants from MEC and Cyprium in attendance who had a diverse background of expertise including mining, processing, geotechnical, operations, environment and project execution. Nifty Mine has a good understanding of its operational risks from prior works except for the underground interface that will be mined through as the pit advances. This workshop was undertaken specifically to identify risks for the restart of Nifty Mine with the aim to identify the priority of studies/ actions required for the future study phases up until mining commencement.

The workshop was conducted as follows:

- Facilitator outlined the proposed design, mine staging, extents of the mine, dump locations, tailings storage facilities, leach pads, bore fields, processing concentrator, SXEW and associated non processing infrastructure.
- A Short 15min brainstorming sessions for each topic with attendees asked to identify key risks via online survey.
- At the end of each session, the risks identified were discussed within the group to clarify any ambiguities.

A summary of the MINING key risks identified:

- Interaction between open pit excavation and existing underground stopes.
- Inability to delineate ore and waste.
- Slope failure of open pit.
- Interface between drone and existing airport.
- Low grade ores do not achieve the extrapolated grade recovery curve.
- Unable to blend ore to achieve minimum grades.
- Geotechnical stability at unknown structures.
- Lack of understanding and characteristics of transitional ore.
- Not achieving the required pit advance to reach high grade ore.

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- Downhill hauling resulting in trucks outside of braking zone

A summary of the PROCESSING key risks identified:

- Delays to concentrator refurbishment works due to not undertaking make-safe works prior to commencement.
- Scope, cost, and schedule blowouts due to an incomplete understanding of the concentrator refurbishment scope.
- Faster-than-planned concentrator refurbishment causing idle time waiting for ore.
- Insufficient capacity of processing infrastructure to meet production and environmental containment requirements.
- Variability in the feed ore grade.
- Delay in reagent supply due to weather conditions.
- Insufficient water supply to run both concentrator and heap leach operations simultaneously.
- Insufficient power supply for processing infrastructure.
- Delays and interface on truck route due to bottlenecks on the transport route to Port Hedland.

A summary of the ENVIRONMENTAL key risks identified were:

- Insufficient identification of NAF/PAF quantities for cover design.
- PAF seepage into the substrate via waste dumps or heap leaching.
- Overflow of heap leach ponds into the environment due to poor design.
- Environmental spill caused by tailings failure/seepage.
- Contamination of underground water supply
- Carbon footprint does not meet expectations of investors/government.
- Inability to meet required standards for emissions reporting and accounting
- Changes in ESG expectations impacting cost and operational assumptions.
- Sediment runoff from waste landforms increasing disturbance footprint.
- Approvals delayed due to legislative changes or new requirements.
- Closure requirements change during the approvals process.
- Insufficient design detail delaying approval schedules.
- Change in indigenous relations laws shifting historical approval limits.

A summary of the FINANCIAL key risks identified were:

- No funding available to undertake the project.

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- Insufficient funding due to study capital estimates being lower than market costs.
- Capital cost overrun reducing cash flow.
- Operational cost higher than estimated reducing cash flow.
- Change in commodity price during the mine's operational life.
- Mining costs and/or productivity below schedule.
- Unfavourable TCRCs are negotiated with Glencore.
- Unable to recruit staff to operate the mine.

A summary of the SOCIAL key risks identified were:

- Lack of effective consultation and collaboration with Traditional Owners may lead to community dissatisfaction, delays, or project opposition.
- Exclusion or perceived exclusion of the Martu people may result in reputational damage and negative public sentiment.
- Failure to provide clear employment or business pathways for Traditional Owners may lead to perceived exclusion and community discontent.
- Changes to Indigenous access arrangements or engagement practices may lead to misunderstandings or conflict.
- Poor living conditions and lack of facilities may deter potential workers.
- Poor site conditions may lead to dissatisfaction among the workforce and lower productivity.
- High competition for local Indigenous talent may lead to workforce shortages.
- Inability to meet local workforce or supplier targets may lead to regulatory or community dissatisfaction.
- Negative public or employee sentiment may deter potential recruits.
- High employee turnover rates may result in operational inefficiencies.
- Lack of amenities may impact worker morale and retention.
- Evolving environmental, social, and governance (ESG) standards may require costly adjustments to operational strategies.
- Trucking operations may create noise, dust, and traffic concerns for communities along the route.

23.3 Project Restart Risk Assessment

To prepare the project risk assessment the following steps need to be undertaken as follows:

- Summarise the project risks and summarise the high priorities;
- Undertake a gap analysis for the project and operational risks;

- Prepare draft Project Risk Assessment which outline controls and residual risks;
- Consult with relative Subject Matter Experts to finalise the Project Risk Assessment.

24 DEVELOPMENT SCHEDULE

MEC in conjunction with the Cyprium team and associated suppliers have developed a project development schedule to support the future works and project delivery schedule. The project delivery schedule master underpins the project timing and cost modelling for the project. Each of the key tasks is supported by a detailed schedule of works and resource planning at or above the required confidence and granularity to enable to project definition for a pre-feasibility study. The development schedule is shown in Figure 131.

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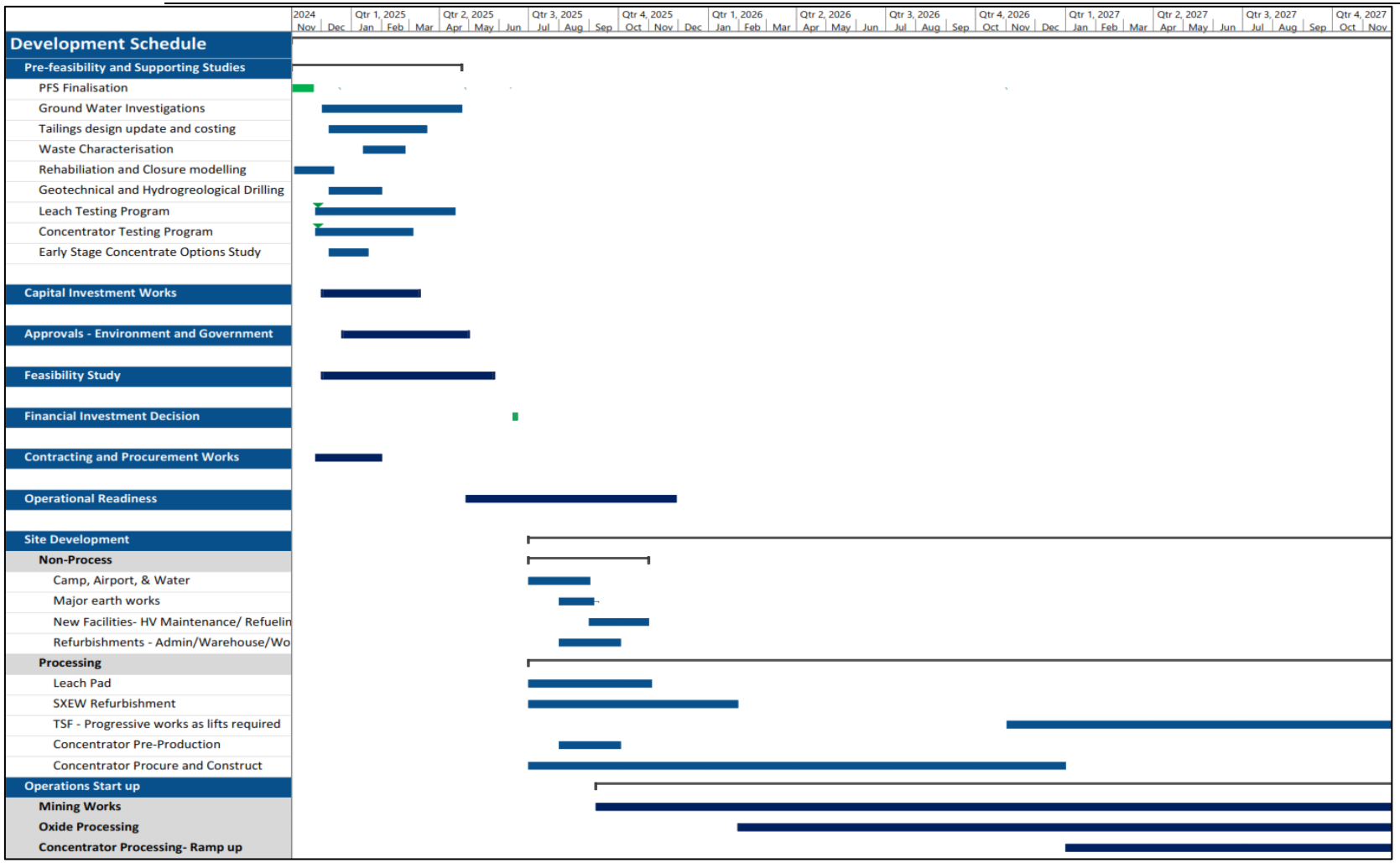

Figure 131. NCC DEVELOPMENT SCHEDULE- HIGH LEVEL

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25 FUTURE WORK PLAN

The following tasks have been identified to address the project risks, list in order of priority and should be considered as part of the forward work plan:

Mining

- Undertake core drilling, associated logging, and testing activities at 11 locations.
- Update the resource model and rock characterisation post drilling.
- Development of plan to attain copper mark accreditation

Processing

- Prepare make safe works scope of work, prepare business case (tender with cost and schedule) and request approval to engage contractor to conduct early works.
- Prepare exhaustive concentrator refurbishment scope of works including onsite inspections of all structures and services to reduce latent conditions.
- Prepare a logistics report outlining transport route review between Nifty and Port Headland.
- Undertake Leach testing program
- Undertake Concentrator program
- Early stage concentrator options study

Tailings Storage Facility

- Inspect, monitor and test to identify and assess potential seepage into groundwater, geotechnical/ structural stability of the wall and containment of the facility.
- Expansion TSF design for approval

Social

- Prepare a Stakeholder Engagement strategy/ plan.
- Prepare a Communication strategy/ plan.
- Prepare Diversity and Inclusion strategy/ plan.
- Prepare Indigenous Engagement and employment plan/ strategy.
- Prepare Human Resources Strategy.

Hydrology

- Regional Groundwater Exploration Program – Drill more borehole locations and confirm more aquifers. Coordinate this with the drilling for the Geotech/Geology.
- Expansion to groundwater production bore network – Design, construct and install additional monitoring bores.

- Install Groundwater monitoring equipment to monitor the dewatering.
- Prepare numerical groundwater model to assess groundwater geochemical trends.
- Install additional monitoring sites further down water table gradient.

Environmental

- Undertake NAF/PAF Testing to confirm including 3rd party testing of existing samples.
- Undertake Tailings Storage Dam Inspections and Monitoring.
- Undertake Tailings Dam design and update.
- Undertake Rehabilitation and Closure Modelling.
- Install Bore Water Inspection Monitoring.
- Consult with DEMIRS to assess clear timeline and requirements for Approvals.
- Consult with Government department for ESG, Emissions, Carbon Footprint, Emissions timeline and requirements.

All risks identified should be addressed but to gain an understanding of the timing requirements and urgency, each risk has been ranked to enable a clear understanding on what studies/ investigations need to be undertaken in relation to the development schedule. Table 49 shows the priority of studies/investigations required in the Forward Work Plan based on ranking of studies, the ranking priority contemplates both the risk level but also the timing of the works as an enabler to deliver the development schedule as presented.

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Table 49 PRIORITISED FORWARD WORK PLAN

Priority	Area	Description	Rank
1	Mining	Undertake core drilling, associated logging, and testing activities at 11 locations.	High
1	Mining	Update the resource model and rock characterisation post drilling.	High
1	Mining	Development of plan to attain copper mark accreditation	High
1	Processing	Prepare make safe works scope of work, prepare business case (tender with cost and schedule) and request approval to engage contractor to conduct early works.	High
1	Processing	Prepare exhaustive concentrator refurbishment scope of works including onsite inspections of all structures and services to reduce latent conditions.	High
1	Processing	Undertake Leach testing program.	High
1	Hydrology	Undertake Regional Groundwater Exploration Program.	High
1	Hydrology	Undertake Expansion to groundwater production bore network.	High
1	Environmental	Undertake NAF/PAF Testing to confirm including 3rd party testing of existing samples.	High
1	Environmental	Consult with DEMIRS to assess clear timeline and requirements for Approvals.	High
2	Processing	Undertake Concentrator program.	Medium
2	Processing	Early stage concentrator options study.	Medium
2	Processing	Inspect, monitor and test to identify and assess potential seepage into groundwater, geotechnical/ structural stability of the wall and containment of the facility.	Medium
2	Processing	Expansion TSF design for approval.	Medium
2	Hydrology	Install Groundwater monitoring equipment to monitor the dewatering.	Medium
2	Hydrology	Prepare numerical groundwater model to assess groundwater geochemical trends	Medium
2	Hydrology	Install additional monitoring sites further down water table gradient	Medium
2	Environmental	Undertake Tailings Storage Dam Inspections and Monitoring.	Medium
2	Environmental	Undertake Tailings Dam design and update.	Medium
2	Environmental	Undertake Rehabilitation and Closure Modelling	Medium
2	Environmental	Install Bore Water Inspection Monitoring	Medium
2	Environmental	Consult with Government department for ESG, Emissions, Carbon Footprint, Emissions timeline and requirements.	Medium
3	Processing	Prepare a logistics report outlining transport route review between Nifty and Port Headland.	Low
3	Social	Prepare a Stakeholder Engagement strategy/ plan.	Low
3	Social	Prepare a communication strategy/ plan.	Low
3	Social	Prepare Diversity and Inclusion strategy/ plan.	Low
3	Social	Prepare Indigenous Engagement and employment plan/ strategy.	Low
3	Social	Prepare Human Resources Strategy.	Low

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26 ORE RESERVE ESTIMATE

26.1 Modifying Factors and Discussion of Reserve Conversion

The Ore Reserves Estimate provided in this report is based upon the March 2024 Mineral Resource Estimate for the Nifty mine by Mr Dean O'Keefe of MEC Mining and the Mineral Resource Estimate (2024 Heap Leach MRE) for the existing heap leach pads at the Nifty Copper Operations.

The Nifty Mine has previously been an operating mine, and this has given the study a good basis of actual data to set up the inputs to the optimisation, schedule and financial models. These have formed the basis of the concentrator recovery. Similarly, the heap leach and SXEW operation has historically operated and strong performance data has been used to support the recovery and performance considerations.

This PFS level study and Reserve estimate were completed on the basis of an open pit operation feeding transition and Sulphide ores to a concentrator, and Oxide ores along with historical stockpiled oxide to flow through the leaching process with SXEW treatment. All other Measured Resources were converted to Proved Reserves, and Indicated Resources were converted to Probable Reserves. There was no reasonable basis for varying confidence of Resource confidence categories in the Ore Reserves conversion.

26.2 Risk and Accuracy

This study has been conducted to the accuracy of a pre-feasibility study (±30%). This applies to the financial and production inputs, schedule, and haulage modelling.

Due to the Nifty previously being an operating mine, the understanding of processing recoveries and behaviours would be more advanced than the other aspects of the study. Despite this previously being an operating mine, minor approval amendments are still to be granted to allow the expanded mining operation planned in the schedule and haulage models.

The data supplied to and generated by MEC Mining are adequate to address the proposed mining and concentrate processing operations.

Technical test works and processing works have been supplied to MEC around the mine production. The inputs utilised in this report align with the evidence provided.

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26.3 JORC Reserves

Nifty Mine Ore Reserve Estimate on 19th November 2024, as outlined in Table 50. Reserves estimated are a portion of the Resources stated in the March 2024 MRE for Nifty, and similarly for the July 2024 Heap Leach MRE. The Reserves Estimate was prepared in accordance with the JORC 2012 standard.

Table 50 NIFTY ORE RESERVES ESTIMATE

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Mined	-	-	22.69	1.06%	**22.69**	**1.06%**
Reserve	Probable	Mined	-	-	60.59	0.85%	**60.59**	**0.85%**
Reserve	**Total**	**Mined**	**-**	**-**	**83.27**	**0.90%**	**83.27**	**0.90%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Leach Pads 1 - 4	-	-	-	-	**-**	**-**
Reserve	Probable	Leach Pads 1 - 4	2.82	0.47%	-	-	**2.82**	**0.47%**
Reserve	**Total**	**Leach Pads 1 - 4**	**2.82**	**0.47%**	**-**	**-**	**2.82**	**0.47%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Leach Pads 5 - 6	-	-	-	-	**-**	**-**
Reserve	Probable	Leach Pads 5 - 6	7.81	0.39%	-	-	**7.81**	**0.39%**
Reserve	**Total**	**Leach Pads 5 - 6**	**7.81**	**0.39%**	**-**	**-**	**7.81**	**0.39%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Total	-	-	22.69	1.06%	**22.69**	**1.06%**
Reserve	Probable	Total	10.64	0.41%	60.59	0.85%	**71.22**	**0.78%**
Reserve	**Total**	**Total**	**10.64**	**0.41%**	**83.27**	**0.90%**	**93.91**	**0.85%**

Numbers are rounded to reflect a suitable level of precision and may not sum

The presented schedules and financials include incidental tonnes that would be mined in the process of extracting the Reserves; these quantities are additional to the Reserves stated above, and they are also a portion of the Resources stated in the March 2024 MRE and July 2024 Heap Leach MRE or Nifty,. These incidental tonnes are outlined Table 51.

Table 51 INCIDENTAL TONNES ADDITIONAL TO THE STATED RESERVE

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Incidental	Inferred	Mined	-	-	4.42	0.56%	**4.42**	**0.56%**
Incidental	Inferred	Leach Pads 1 - 4	0.62	0.48%	-	-	**0.62**	**0.48%**
Incidental	Inferred	Leach Pads 5 - 6	1.42	0.53%	-	-	**1.42**	**0.53%**
Incidental	**Total**	**Total**	**2.04**	**0.51%**	**4.42**	**0.56%**	**6.46**	**0.55%**

Numbers are rounded to reflect a suitable level of precision and may not sum

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APPENDIX A JORC CODE 2012 – TABLE 1 MRE SECTIONS NIFTY INSITU DEPOSIT

JORC CODE 2012 – Table 1 - Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• 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. Downhole 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 drill hole 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. • The drilling rate was monitored and adjusted to maximise sample recovery. • Laboratories used were/are ISO/IEC 17025 accredited. • 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. • 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,*	• Drilling from the 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.

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Criteria	JORC Code explanation	Commentary
	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.).	
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• 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. • 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. • 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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• The routine logging of core and chips 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. • Geological logging is qualitative; core recovery and structural orientation was captured as quantitative data. • The entire length of all holes, apart from surface casing, was logged geologically.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for*	• 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. • 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. • 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. • No precision concerns were raised by the close spaced open cut and grade control data and mining. • During drilling the splitter riffles were cleaned between sampling using compressed air.

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Criteria	JORC Code explanation	Commentary
	instance results for field duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• 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. • 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.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• 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. • No geophysical tools were used to ascertain grade. • 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 use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The extensive data set has been reviewed by previous operators of the project and the intersections within the mineralisation have been confirmed. • 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. • 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. • 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 drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.*	• Collar positions have been surveyed on a known local grid with good, demonstrated survey control and supported both open pit and underground mining. • Drill hole collar locations are set out and surveyed using the local Nifty Mine grid. • The drill hole azimuth and dip was recorded at 30m intervals. • The regional grid is GDA94 Zone 50. All site survey work is completed using the local Nifty mine grid. • Topographic control is adequate and is derived from post-mining surface surveys

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Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Surface and underground drill holes were drilled on a nominal 40m x 20m grid, designed to specifically target the lithological and mineralisation sequence. • 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. • Samples were composited 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.* • *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.*	• Drill holes were designed to reflect the orientation of the stratigraphy, mineralisation, and deposit type. • Neither the drill hole design nor the sampling are believed to have introduced a sample bias. • 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 drill hole 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.

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JORC CODE 2012 – Table 1 - Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Nifty deposit is situated on mining lease M271/SA. • Cyprium Metals Ltd has 100% ownership of the Paterson Copper Pty Ltd entity, the owner and operator of the Nifty Copper mine. • 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.

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Criteria	JORC Code explanation	Commentary
		• 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* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *downhole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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*	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

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Criteria	JORC Code explanation	Commentary
	should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').*	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.
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 (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the*	• No exploration results are reported as part of this release and any results relating to the deposit have been released previously.

Criteria	JORC Code explanation	Commentary
	areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

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JORC CODE 2012 – Table 1 - Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The Nifty databases has undergone rigorous checks by accredited database specialists through almost 30 years of operation. • Drill hole 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 resurveyed 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.* • *If no site visits have been undertaken indicate why this is the case.*	• Dean O'Keefe, the Competent Person for this Mineral Resource estimate visited the Nifty site on February 8, 2024. • A site visit has been conducted.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• 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. • 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. • Surface RC as well as surface and underground diamond drilling have been used to inform the Mineral Resource estimate. • 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 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*	• 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.

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Criteria	JORC Code explanation	Commentary
	Mineral Resource.	
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation*	• 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 February 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. • There are no by-products. • There are no deleterious elements estimated. • As a function of the folded geometry, the drill spacing for the fresh mineralisation is highly variable, with a nominal drill hole 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. • No selective mining unit inputs were used for the Mineral Resource Estimate. • No assumptions have been made regarding correlated variables. • 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. • 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.

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Criteria	JORC Code explanation	Commentary
	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. • Drill hole 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 drill hole 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 when*	• 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.

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Criteria	JORC Code explanation	Commentary
	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.	
Environmen-tal 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.*
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.*
	• *Discuss assumptions for bulk density estimates used in the evaluation*
		• 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.
		• Prior to density determination, the core was sealed using plastic wrap to mitigate the presence of vugs and/or voids.
		• 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.

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Criteria	JORC Code explanation	Commentary
	process of the different materials.	
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The criteria used to categorise the Mineral Resources 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. • The performance of the historical mining and well-documented understanding of the deposit geology and mineralisation controls provide significant confidence in the estimate. • 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.*	• The MEC February 2024 MRE has not been externally audited. 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 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*	• The February 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 February 2024 Mineral Resource update is considered a global estimate. Grade control scale sampling will be required to provide sufficient local confidence prior to mining. • Comparison with production data is currently not available.

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Criteria	JORC Code explanation	Commentary
	procedures used. • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

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APPENDIX B JORC CODE 2012 – TABLE 1 MRE SECTIONS NIFTY HEAP LEACH

JORC CODE 2012 – Table 1 - Section 1: Sampling Techniques and Data

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.
• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</td><td>• Sampling techniques used for the Nifty Heap Leach MRE include both RC chips and sonic drilling samples. The number of drillholes, metres drilled and number of samples are summarised below. NB not all the samples were used to support the MRE.
<table>
<tr><th>Drilling Phase</th><th>Number of drillholes</th><th>Metres drilled</th><th>Number of samples</th></tr>
<tr><td>2007 RC drilling</td><td>124</td><td>1,867.5</td><td>123</td></tr>
<tr><td>2014 RC drilling</td><td>109</td><td>1,466</td><td>1,466</td></tr>
<tr><td>2015 RC drilling</td><td>41</td><td>588</td><td>588</td></tr>
<tr><td>2021 Sonic drilling</td><td>24</td><td>357.7</td><td>495</td></tr>
<tr><td>TOTAL</td><td>298</td><td>4,279.2</td><td>2,672</td></tr>
</table>
• For the 2007 drilling a single sample (of up to 2.4kg) was collected for each hole (method unknown). The sample length therefore varies depending on hole depth but is a mean depth of 15.2m. The samples were split into three size fractions, and each was analysed for Cu only. The total Cu value for the whole sample was calculated as a weighted average of the results from the three size fractions. Three analytical methods are listed but it is not clear which approach was used for which size fraction. The three methods are 4-Acid AAS for primary sulphide, copper in oxide by AAS after H2SO4 leach, and cyanide soluble copper.
• For the 2014 and 2015 RC programs, 1.5-3kg of material was collected in a calico bag over a 1m interval from the cyclone using a cone splitter. The samples were sent to ALS laboratory for preparation (drying, crushing, splitting and pulverising) with a 50gm sample analysed using a 4-Acid ICPOES method (ME-ICP62).
• For the 2021 sonic drilling program, the majority of samples were obtained at 1m intervals. Samples were analysed by ALS in Perth by XRF. No further information is available on sampling technique.
• The sampling approach is considered appropriate for the nature and style of the Nifty Heap Leach copper mineralisation.</td></tr>
<tr><td>Drilling techniques</td><td>• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter,</td><td>• The Nifty Heap Leach stockpiles have been drilled and sampled from surface using both RC and sonic drilling techniques across 4 different drilling programs.
• Three of the drilling programs (in 2007, 2014 and 2015) were RC, and sonic was used in 2021.</td></tr>
</table>

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Criteria	JORC Code explanation	Commentary
	triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• The 2014 and 2015 RC drilling programs used a face sampling bit and a hole diameter of 150mm. There is no information available on the details of the 2007 RC drilling program. • There is no information available on the details of the 2021 sonic drilling program.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• There is no quantitative information available on sample recovery therefore no analysis has been conducted on this, or any relationships between sample recovery and grade. • There is reference to an average sample weight of 1.8kg across the 2014 and 2015 RC drilling samples from a Drilling QC report, but the raw data is no longer available for verification. • There is no information available on measures taken to maximise sample recovery and ensure representivity. • Sonic drilling samples have been used to support the MRE, which is known to be a particularly effective drilling technique in unconsolidated material due to providing continuous, undisturbed and high-recovery samples with minimal contamination. • It is noted that RC drilling can potentially over-represent fines in unconsolidated material such as stockpiles. It has not been possible to verify any bias due to this as there are no sonic and RC sample pairs within an acceptable distance of each other (<5m), or the pairs are with 2007 RC samples where a single sample represents the entire hole.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• The chips were not geologically or geotechnically logged as the material is on a stockpile and therefore no longer in situ. As such there is no geological continuity. • According to the Nifty Copper SX-EW Restart Study Report, from east to west the stockpile material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. Waste material was used as a blend in some of the Heap Leach stockpiles to aid percolation during leaching. This included "low grade silicified carbonate and even barren rock."
Subsampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all subsampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-*	• Samples available were from the 2021 sonic drilling. • For the 2014 and 2015 drilling, sampling of chips was conducted using a cone splitter from material taken from the cyclone on the rig. No information is available on how the sample was split for the 2007 RC drilling. • All material is dry on the Heap Leach stockpiles. • The use of a cone splitter for sample collection during RC drilling is an industry standard approach and considered appropriate in terms of obtaining a representative sample. • For the 2014 and 2015 drilling programs, QC procedures were in place to ensure sample representivity. This included field duplicates as documented in the 2015 MRE report which states that 150 field duplicate samples were collected as part of the 2014 and 2015 RC drilling programs, and that scatter plots showed acceptable precision and the QQ plots showed no obvious bias. A 2014 Aditya Birla report also references the field duplicate data and states that they were collected at a rate of 1:13. The original data is no longer available to verify this. Additional QC procedures included the submission of standards, blanks, laboratory repeats and umpire laboratory analytical results. For the sonic drilling, the QC procedures included the submission of standards and umpire laboratory analytical results. There are no documented QC procedures for the 2007 RC drilling. • Sample sizes are considered appropriate to the grain size of the material being sampled.

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Criteria	JORC Code explanation	Commentary
	situ material collected, including for instance results for field duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Due to multiple phases of drilling and different operators, sample collection, preparation and analytical method is not consistent for all samples contributing to the August 2024 MRE. • The 2007 RC drilling samples were sent to a laboratory identified as 'IML' which, according to a 2014 report from Aditya Birla, was likely Inter Mountain Laboratories, Wyoming, USA. Samples were split into three size fractions, and each analysed for Cu only. Total Cu was calculated as a weighted average of the results from the three size fractions. Three analytical methods are listed but it is not clear which approach was used for which size fraction. The three methods are 4-Acid AAS for primary sulphide (near-total technique), copper in oxide by AAS after H2SO4 leach (partial technique), and cyanide soluble copper (partial technique). Due to lack of information on the 2007 RC drillholes, 114 out of 124 were excluded from the MRE. The 10 included drillholes inform Inferred resources only. • The 2014 and 2015 RC program samples were analysed by ALS laboratories in Perth using a 4-Acid ICPOES method (ME-ICP62, near-total technique) for 16 elements: Ag, As, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, Pb, S, Sb and Zn. Results exceeding the detection limit of the method were re-analysed with an ore-grade method, e.g. Cu-OG62 for copper which is a 4-acid digest, but with a variable finish depending on the element. • For the 2021 sonic program, samples were analysed by ALS in Perth by XRF for Cu, Ca, Co, Fe, Mg, Mn, S and Si. In May 2024, 176 samples across 18 of the 24 sonic drillholes were re-submitted for analysis to Bureau Veritas Laboratories in Perth. These samples were analysed using a 4 acid digest then ICP-OES for Ca, Fe, Mg and S, and ICP-MS for Cu. The samples used to support the August 2024 MRE were the samples analysed by XRF.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• No geophysical tools were used as part of the analysis.
	• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Supporting QAQC data is available for the 2014 RC drilling program in the form of standards, blanks, and laboratory repeats (analytical precision). For the 2021 sonic drilling program, QAQC consists of standards and the re-assay of pulps by an umpire laboratory. The other drilling programs do not have supporting QAQC data. Further QAQC data is mentioned in historical reports, but the data is no longer available to verify the conclusions. This includes reference to field duplicate data for the 2014 and 2015 RC drilling programs, which reportedly showed no obvious bias, and re-assay of pulps by an umpire laboratory for the 2014 RC drilling, which showed all values were within acceptable results. • For the 2014 drilling program, four (3.6%) of the standard samples were outside the acceptable limits of 3 standard deviations from the mean. Two (1.6%) of the blank samples were outside the acceptable limits. For the laboratory repeats (analytical precision), the mean of the original samples was 2,428 ppm Cu and the mean of the repeats was 2,448 ppm Cu. • Only Standard OREAS 131a had a representative population. This had an acceptable pass rate. It should be noted that some failures by other standard results were by small margins and if rounded to two decimal points they would not have failed.

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Criteria	JORC Code explanation	Commentary
		• 174 samples were re-assayed by an umpire laboratory (Bureau Veritas) in 2024. The re-assayed samples had a mean grade of 0.39% Cu and the original samples had a mean grade of 0.42% Cu. The positive bias when comparing the original results to the umpire laboratory results is attributed to the difference in analytical technique: the original samples were assayed by XRF and the re-assayed samples by ICP-MS. There are no concerns surrounding the QAQC data for the 2021 sonic drilling program.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• NA, as all material in the Heap Leach will be leached.
	• *The use of twinned holes.*	• There are no twinned drillholes, no twin analysis was undertaken. • Visual checks of proximal drillholes show that grades are similar.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Primary data for the 2014 and 2015 drilling programs was recorded directly onto electronic spread sheets and validated by the database manager. • There is no information regarding the data collection for the 2007 RC drilling program. • Cyprium has adopted established data entry, verification, storage and documentation protocols which were adopted for the 2021 sonic drilling program. • Drilling data was provided to MEC in the form of a Microsoft Access database for the RC drilling, and Excel files for the sonic drilling.
	• *Discuss any adjustment to assay data.*	• No adjustments have been made to the assay data, except where composited to 1m for estimation. • Cu assay units were converted between ppm and % where required. • NB: the 2007 RC drilling assays are a total copper value determined from the weighted average of the results from three size fractions.
Location of data points	• *Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• A Trimble R8 GPS RTK system was used to survey the collar locations for the 2014 and 2015 drillholes, there is no record of the survey method for the 2007 RC collar locations. The sonic drillhole collar locations were surveyed by DGPS by a Cyprium site surveyor. • Drillhole collar elevations were assigned from the topographic surface wireframe prior to any modelling or estimation. Prior to adjustment the mean difference between the collar RL and topography RL was 0.96m and the maximum was 7.03m • No downhole surveys were conducted on any of the drillholes. Azimuth and inclination were obtained from the planned orientations. Given all the drillholes are vertical and shallow, there is confidence in the drillhole trace locations.
	• *Specification of the grid system used.*	• The regional grid is GDA94 Zone 50. All site survey work, including collar locations use the local Nifty mine grid.
	• *Quality and adequacy of topographic control.*	• The Heap Leach stockpile surface wireframe was generated by a Cyprium site surveyor in May 2022 from a drone survey. • The surface representing the base of the stockpile was constructed from a survey of the toe of the heaps. Some drillholes were deeper than this surface, and the perimeter was too small to intersect the topography wireframe, therefore it was edited as follows prior to use in the MRE: • Where a drillhole intersected the base surface, the surface was projected to 3m below the end of that drillhole. • Where projection was required in closely spaced drillholes, the lowermost point was selected and used. • The perimeter of the base wireframe was expanded such that it would intersect with the surface wireframe and could then be used to create a solid to constrain the block model.
	• *Data spacing for reporting of Exploration Results.*	• The drillhole spacing for the 2007 RC program was ~25mE x 50mN. The 2014 RC program was 50m x 50m, and the 2015 RC program was 100mE x 50mN. The combined RC drilling covers leach pads 2 to 6. • The sonic drilling was drilled at a ~200mE x 200mN spacing across leach pads 3 to 6.

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Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• Given the material type being drilled there is no geological continuity. The drill spacing is considered appropriate for an MRE. • The applied Mineral Resource classification is commensurate with drillhole spacing.
	• *Whether sample compositing has been applied.*	• Samples were composited to 1m based on the dominant original sample length. • Where sample lengths were >1m, they were split into 1m intervals. • Descriptive statistics were calculated for the raw and composite samples, including statistics on composites where the intervals >1m were split and where they were not split, to compare the effect. Splitting did not have a material impact. • The March 2015 MRE report stated that statistical analysis was conducted on 1m versus 2m composites, and the differences were not found to be material.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• The drilling is vertical as required for stockpile drilling. The sampling is thought to be unbiased on the basis that the stockpiles were constructed by vertical lift stacking, with an overall east to west construction.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Previous leaching of the stockpiles means that grade generally increases with depth, therefore the drillholes are perpendicular to the orientation of the mineralisation trend. • No sampling bias is considered to have been introduced.
Sample security	• *The measures taken to ensure sample security.*	• Samples from the 2014, 2015 RC, and 2021 sonic drilling programs were stored at the Nifty minesite.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Over several years, database management companies have audited the drill hole databases and found them to be representative of the information contained.

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JORC CODE 2012 – Table 1 - Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• The Nifty project is 100% owned by Cyprium Metals Limited and is situated within mining lease M271SA.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• MEC has not assessed the tenure status in detail but notes that the tenure is currently live and is due to expire 2 September 2034.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The historic Nifty Heap Leach operations commenced in 1993 when the site was operated by WMC Limited (WMC). Stacking continued until the latter part of 2006, and leaching ceased in 2009 when the project was put on care and maintenance by Aditya Birla Minerals Ltd (Aditya Birla). Cyprium Metals Limited (Cyprium) acquired the Nifty project in 2021. • The 2007, 2014 and 2015 RC drilling programs were conducted by Aditya Birla. There is limited documentation on the 2007 drilling program still available. • The 2021 sonic drilling program was conducted by Cyprium.
Geology	• *Deposit type, geological setting and style of mineralisation*	• There is no geological continuity within the Mineral Resource given it is a heap leach stockpile. • From east to west the copper content decreases and the material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tend to leach better with superior copper recovery. • The Nifty mineralisation from which the stockpiled material has been extracted is a strata-bound copper deposit, is structurally controlled, with fresh mineralisation being chalcopyrite-quartz-dolomite replacement of carbonaceous and dolomitic shales within a folded sequence. It is hosted within the folded late-Proterozoic Broadhurst Formation, part of the Yeneena Group. The bulk of the mined sulphide mineralisation is largely hosted within the keel and northern limb of the Nifty Syncline. Oxide copper mineralisation is identified by the presence of azurite and malachite, as well as minor cuprite and native copper. Fresh mineralisation consists of chalcopyrite, with minor covellite and bornite.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar*	• N/A. Drilling results reported previously.

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	• *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.*	• There has been no truncation or top cutting of grades.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this*	• Drillholes are vertical to test the horizontal Heap Leach dumps.

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	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*	• N/A, the Heap Leach is a stockpile and does not possess any natural grade continuity or grade intersections.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All assay results are relevant to the Heap Leach, as a zero economic cut-off grade has been applied.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances*	• The Heap Leach occurs on the edge an above a subsidence zone. However, the subsidence zone is not considered to have impacted the Heap Leach dumps.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• There is no planned further work on the Heap Leach stockpiles, other than restarting production and recovering the remaining copper.

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JORC CODE 2012 – Table 1 - Section 3: Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• The Nifty databases have undergone checks by accredited database specialists throughout the operation of the site, most recently by MaxGeo at the beginning of 2024. • The most recent database has been compiled by MaxGeo and is suitably protected and version controlled. • The Heap Leach drilling data for the RC drilling programs was provided to MEC in a Microsoft Access database. The data for the sonic drilling programs was supplied in Excel spreadsheets.
	• *Data validation procedures used.*	• The database was validated using tools within Micromine software and no discrepancies were identified. • Validation checks included searching for duplicate hole IDs and co-ordinates, spurious hole locations, checking all drillholes have associated orientation and inclination records, checks for overlapping records or missing data. • One drillhole from the 2007 RC drilling program (07NHL1053) did not have any assay results, this drillhole was not used to support the August 2024 MRE.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• The CP, Dean O'Keefe, visited the site on February 8th, 2024, accompanied by MEC Resource Geologist Issam Digais and the Cyprium General Manager of Geology and Exploration, Peter van Luyt. • The Competent Person observed the Heap Leach stockpiles, the Nifty pit, and SX-EW infrastructure and the pregnant solution ponds.
	• *If no site visits have been undertaken indicate why this is the case.*	• N/A, a site visit was conducted
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• There is no geological interpretation for the Nifty Heap Leach mineral resource as the Mineral Resource comprises stockpiled material. As such, there are no assumptions or any alternative interpretations that would affect the Mineral Resource estimation. • A qualitative assessment of the general geology of the stockpiles is as follows, but the estimate is based on grade only with no geospatial relationships assumed: • From east to west the copper content decreases and the material changes from mainly silicified carbonate and shale blends, through to chalcocite and multiple coarse rock types and shale blends. There is more chalcocite in the western stockpiles which, due to fewer fines, tends to leach better with superior copper recovery. • Factors affecting the continuity of the grade include both the stacking order (stockpiles were constructed by vertical lift stacking, with an overall east to west construction) and the previous leaching which results in higher Cu concentrations at the base of the stockpiles.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface*	• The total footprint of the Heap Leach stockpiles is approximately 1,750m in an east-west direction and 400m in a north-south direction. The height varies from approximately 18m at the western end to approximately 5m at the eastern end.

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	to the upper and lower limits of the Mineral Resource.	
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Estimation were completed using Micromine version 2023.5. • Estimation was supported by both sonic and RC drilling data. A composite length of 1m was selected based on the dominant sample length. • No top cutting of extreme grade values was applied. • No domaining was completed as the stockpiled material is not in situ and has no geological continuity. • The estimation method was Inverse Distance Weighting to a cubed power (IDW3) to apply more weighting to local samples. The block model was populated by estimating into parent cells, using two search passes to populate the blocks. No geospatial analysis such as variography was used to inform the estimate, as the material is not in situ and there is no geological continuity. • The maximum distance of extrapolation from data points was 200m. • A bulk density of 1.701 t/m3 was assigned to every block in the block model, the bulk density was derived from the production records tonnage of 17.158Mt divided by the constraining block model volume of 10,082,450m3. •
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• The March 2015 MRE stated 58,924 tonnes of contained copper, as compared to the 54,050 tonnes of contained copper reported in the 2024 MRE (not including mineralised waste material). The 2015 MRE did not include heap leach pads 1 and 2, and used a lower default density based on cone density testing. • A 2014 mineral inventory derived from metallurgical balance calculations and production records estimated the stacked copper remaining in the heap leach stockpiles was 91,140 tonnes. • The August 2024 MRE is based on a combination of the sonic and RC drilling; however, two additional estimates were completed on the RC drilling alone and the sonic drilling alone as check estimates for comparison. The reported MRE states 4,260 Cu ppm; the MRE based on the RC drillholes alone is 3,840 Cu ppm; and the MRE based on the sonic drillholes alone is 4,380 Cu ppm. Note these figures are for Indicated and Inferred material only and do not include the mineralised waste material.
	• *The assumptions made regarding recovery of by-products.*	• There are no by-products.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*	• Deleterious elements were not estimated.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• A parent block size of 25m east by 25m north by 1m elevation was used, with the blocks orthogonal to the grid. • The block model was constrained by a solid generated from the intersection of the Heap Leach surface and base wireframes. For estimation purposes, at the boundary of this solid, the block model was sub-blocked to 5m east by 5m north, by 1m in elevation. A block discretisation of 5 x 5 x 2 was applied. • Estimation was completed in two runs. All search ellipses were orientated at a 0° azimuth, no plunge and a -90° dip. Search ellipse run1 dimensions are 100m x 100m x 4m, with minimum 3 drillholes and sector quadrants with a minimum of three samples in the search ellipse. Search ellipse run2 dimensions are 200m x 200m x 8m, with minimum 3 drillholes and sector quadrants with a minimum of three samples in the search ellipse. • The empty block model volume and constraining wireframe volume were compared to check the volume resolution. The constraining wireframe volume is 10,072,379m3 and the empty block model volume is 10,082,450m3, a difference of 10,071m3 in the block model (0.1%). • Blocks not estimated after the second search run were assigned the median composite Cu ppm grade. Unestimated blocks comprised 0.01% of the total. They are located at the southeastern periphery of the block model, which is considered to be mineralised waste.
	• *Any assumptions behind modelling of selective mining units.*	• No assumptions were made regarding selective mining units.

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	• *Any assumptions about correlation between variables*	• No assumptions were made about correlations between variables, only Cu was estimated.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• No geological interpretation was used to control the resource estimate as the stockpiled material is no longer in situ.
	• *Discussion of basis for using or not using grade cutting or capping.*	• No extreme values were apparent that could bias the estimation, and as such no grade cutting or capping was applied.
	• *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	• The block model was validated globally and locally at key stages during the construction and estimation processes. • Basic block model checks such as reporting on the minimum and maximum of each attribute were used to ensure all blocks were populated. A check was also performed for overlapping blocks, of which there were none. • Visual validation was completed by comparing the block grade to the drillhole grade. There was close correlation between raw and modelled grades. • Global statistical validation was completed by comparing statistics between the composited, and estimated Cu grades. • Local validation was completed by using trend/swath plots by easting, northing and RL slices. • There were no concerns with the outcomes of the validation checks. • Reconciliation is not possible, however, the metallurgical accounting was compiled from production records and may in future be reconciled when further production from the Heap Leach is conducted.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated as dry as this is stockpiled material. • A nominal dry density value of t/m3 was applied and was back calculated from Heap Leach stockpile volume divided by MI reported production tonnage.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The MRE was reported at 0 ppm Cu cutoff, as all the material on the stockpiles is planned to be processed.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The material has already been mined, crushed and stacked. • The stockpiles will be processed as they were previously, by heap leaching and SX-EW to produce Cu cathode. The infrastructure is already in place.

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Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• 152 samples from 10 drillholes from the 2014 RC drilling of the Heap Leach stockpiles were submitted to ALS Metallurgy in Perth for metallurgical testing in 2020. The samples covered a broad range of Cu grades and depths. • This was followed by composites of 18 sonic holes from the 2021 drilling campaign, which supported the 2020 results. • A 145-day Pilot rial conducted by RMD Stem in 2009 provided supporting recovery data.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Cyprium reports that it operates in accordance with all environmental conditions set down as conditions for grant of the respective mining leases. • The infrastructure and licensing is in place to conduct all aspects of a mining, processing and waste disposal operation.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• A nominal bulk density of 1.701 t/m3 was assigned to all blocks. • Bulk density was derived from the production records tonnage of 17.158Mt divided by the constraining block model volume of 10,082,450m3. It was not deemed appropriate to use the cone density tests for determining density, as used in the historic MRE, as the test locations were sparse considering the area of the stockpile, and they only penetrate to 1m depth. This will not be representative of the density at depth which will be higher due to compaction.
	• *The bulk density for bulk material must have been measured by*	• The material in the pad is relatively uniform in particle size given that it has been crushed and stacked.

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	methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The Heap Leach stockpiles are treated as all the same material given, they are no longer in situ and have been mined, crushed and stacked. • The density profile is expected to increase with depth due to previous leaching operations concentrating the Cu at the base. However, there is no means of testing this as drilling to depth carries a high risk of penetrating the liners at the base of the stockpiles.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	• An Indicated classification has been assigned where the August 2024 MRE is supported by drilling data from the 2014 and 2015 RC drilling, the 2021 sonic drilling, and QAQC data. • An Inferred classification has been assigned to blocks supported by the 2007 drilling (which comprise a single assay for the entire hole) and the periphery of the stockpile where it was not possible to drill due to slope and proximity to the edge. • Pad 1 and the periphery of pad 2 is mineralised waste due to the lack of drilling data. Where the drillholes do not extend to depth (due to the risk of penetrating the leach pad liners) then the blocks are also mineralised waste. This mineralised waste material at the base of the stockpile is believed to have the highest grade based on extrapolation of the grade profile from the drilling samples above, and the concentration of Cu from previous leaching operations. As such, the grade of this material was balanced to the known metal content derived from the metallurgical accounting
	• Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	• The correlation of the drill data to the MI provides reasonable confidence in the August 2024 MRE, which is reflected in the MRE classifications of Indicated and Inferred Mineral Resources , and mineralised waste materials.
	• Whether the result appropriately reflects the Competent Person's view of the deposit.	• The Mineral Resource estimate reflects the Competent Person's view of the Heap Leach stockpiles.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Metals X reviewed the previous 2015 MRE in 2020 and stated the tonnages were likely conservative based on the cone density tests, that grade was likely higher at the base of the stockpiles due to previous leaching and re-precipitation, that the minimum number of samples used in the estimate should be increased and that a new wireframe should be used to more accurately constrain the volume. • No audit has been completed on the current MRE.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed	• The August 2024 MRE accuracy and confidence is commensurate with the applied Mineral Resource classification. • Factors that could affect the relative accuracy and confidence in the estimate are the lack of geospatial continuity due to material no longer being in situ, as well as the true basal surface of the stockpiles being unknown. • No quantitative test of the relative accuracy has been completed. • There were no concerns with the block model validation checks which included global mean comparisons, visual checks of composite versus block grades, and swath plots by easting, northing and RL. • Relative confidence in the underlying data, drillhole spacing, geological continuity and interpretations has been appropriately reflected by the Competent Person in the Resource Classification.

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	appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The August 2024 Mineral Resource estimate is considered a global estimate of the Heap Leach stockpiles.
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The estimate of recoverable Cu within the Heap Leach stockpiles has been determined from the metallurgical accounting balance. • The August 2024 MRE has been estimated, and mineralised waste material grade aligned with the metallurgical accounting.

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APPENDIX C JORC CODE 2012 – TABLE 1 SECTION 4

JORC CODE 2012 – Table 1 - Section 4 Estimation and Reporting of Ore Reserves

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr>
<td>Mineral Resource estimate for conversion to Ore Reserves</td>
<td>

Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.
Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.

</td>
<td>

The Nifty Copper Complex (NCC) Ore Reserve estimate was completed on the:

March 2024 Nifty Mineral Resource Estimate.
August 2024 Heap Leach MRE

The Ore cutoff grade was determined by a financial assessment based on processing cost and the revenue from the recovered products.
The input Mineral Resource categories had applied a cut-off grade off:

0.25% copper for the March 2024 MRE – This is above the tested recovery levels for the ore body. As such, additional cut-off application was not required in the Ore Reserves Estimation process, apart from the optimisation economic limits.
0.00% copper for the August 2024 Heap Leach MRE – This is due to the expected inability to selectively mine the heap leach pads

The Ore Reserves are presented as inclusive within the Mineral Resource Estimate totals contained in the noted Resource statements below

March 2024 Nifty Mineral Resource Estimate.
<table>
<tr><th></th><th colspan="3">Measured</th><th colspan="3">Indicated</th><th colspan="3">Inferred</th><th colspan="3">Total</th></tr>
<tr><th>OXIDISATION TYPE</th><th>Mt</th><th>%</th><th>Cu t</th><th>Mt</th><th>%</th><th>Cu t</th><th>Mt</th><th>%</th><th>Cu t</th><th>Mt</th><th>%</th><th>Cu t</th></tr>
<tr><td>OXIDE, SAP & TRANS</td><td>2.60</td><td>1.02%</td><td>26,471</td><td>17.52</td><td>0.74%</td><td>130,081</td><td>0.85</td><td>0.70%</td><td>5,902</td><td>156,555</td><td>5.89%</td><td>162,454</td></tr>
<tr><td>SULPHIDE</td><td>35.45</td><td>0.98%</td><td>347,610</td><td>63.40</td><td>0.80%</td><td>505,685</td><td>5.20</td><td>0.43%</td><td>22,479</td><td>853,330</td><td>2.41%</td><td>875,774</td></tr>
<tr><td>TOTAL</td><td>38.06</td><td>0.98%</td><td>374,081</td><td>80.91</td><td>0.79%</td><td>635,766</td><td>6.05</td><td>0.47%</td><td>28,381</td><td>1,009,885</td><td>2.66%</td><td>1,038,228</td></tr>
</table>
Numbers are rounded to reflect a suitable level of precision and may not sum
August 2024 Heap Leach MRE
<table>
<tr><th>Resource Category</th><th>Source</th><th>Volume m3</th><th>Density t/m3</th><th>Tonnes t</th><th>Cu ppm</th><th>Cu Tonnes t</th><th>Metal %</th></tr>
<tr><td>Indicated</td><td>Stockpile From Drilling</td><td>6,253,350</td><td>1.70</td><td>10,636,950</td><td>4,100</td><td>43,580</td><td>81%</td></tr>
<tr><td>Inferred</td><td>Stockpile From Drilling</td><td>1,198,330</td><td>1.70</td><td>2,038,350</td><td>5,140</td><td>10,470</td><td>19%</td></tr>
<tr><td colspan="2">Total</td><td>7,451,680</td><td>1.70</td><td>12,675,300</td><td>4,260</td><td>54,050</td><td>100%</td></tr>
</table>
*Zero Cu ppm cutoff grade, no top cut applied, numbers have been rounded to reflect a suitable level of precision and may not sum
. The Ore Reserve estimate is based on the Mineral Resource estimate as of the 21st November 2024
</td>
</tr>
<tr>
<td>Site visits</td>
<td>

Comment on any site visits undertaken by the Competent Person and the outcome of those visits.
If no site visits have been undertaken indicate why this is the case.

</td>
<td>

The Competent Person conducted a site visit on 25th and 26th April 2024. The Mining area was inspected, inclusive of the historical mine operating faces, historic heap leach pads, accesses, dumps and optimisation extents for Reserve extraction. Site inspection included geotechnical wall inspections, drainage and water storage equipment and physical barriers. Full processing, and maintenance equipment sighted and upgrade activities inspected. The equipment registered for the basis of upgrade costs were present in the advised condition. Pits demonstrated alignment with the geotechnical modelling and identified hazards. Ore sampling and core also sighted, aligning with resource Competent Person notes in MRE.

</td>
</tr>
</table>

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Criteria	JORC Code explanation	Commentary
Study Status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• This Ore Reserves Estimate was completed to a pre-feasibility level study level including a full life of mine plan. All aspects of modelling, design, schedules and cost estimates align to the PFS level accuracy or higher, as the project has advanced study levels for certain technical areas. . • A life-of-mine plan was completed (October 2024) by MEC Mining on the basis of the geological models and resource estimates as of March 2024 and August 2024 (Heap Leach). This mine plan included ○ Pit optimisation of the March 2024 MRE, based on a concentrate process only (Transitional and Fresh material) to ensure that project is viable without the inclusion of oxide material that could be fed through the heap leach. Additional optimisations were completed and confirmed that the economic limits of the pit were driven by the sulphide ores, any oxide ore would have minimal impact if included in the assessment. Oxide from the pit has been treated as waste in this estimate and can be assessed in future studies.. ○ Detailed mine production scheduling inclusive of haulage modelling and economic analysis in a detailed financial model. The mine plan demonstrated the economic viability of the stated reserves on an individual block basis and when assessed as an operation. Modifying factors, including economic viability, cutoff grades, and environmental and infrastructure considerations, have been applied. • The Nifty Mine has previously been operated. ○ Mining costs were built up from first principles based on costings in MEC's equipment database with a contractor margin added to contractor-responsible items. ○ Plant capital and operating expenditure rates have been calculated from a first principal basis by a third party consultant engaged by Cyprium. These costs were verified by MEC and there applicable adjusted for inflation using the Australian Bureau of Statistics Table 14, Index 21 Primary Metal and Metal Product Manufacturing, before being used in the financial model. • The completed works have been deemed representative or within the sensitivity of current market cost conditions. Pit optimisations considered mining, processing, and revenue sensitivities to determine economic sensitivities. The works completed demonstrate adequate economic buffer for sensitivities within the noted study level accuracies.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The Ore cutoff grade was determined by a financial assessment based on processing cost and the revenue from the recovered products. The input Mineral Resource categories had applied a cut-off grade of 0.25% copper and . The additional cut-off application was applied based on the scheduled processing cost and revenue assumptions. • Cut off grades for each material from the mine were estimated using the optimisation input costings to determine a breakeven COG. ○ .Fresh ore 0.28% Cu, Transitional ore 0.36% Cu, Oxide 0.3% Cu

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<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Grade streaming was applied to hold low grade until later in the mine life improving the cut over performance based on the annualised operating costs.
<table>
<tr><th>Material</th><th>Destination</th><th>Oxide</th><th>Transitional</th><th>Fresh</th></tr>
<tr><td>Waste</td><td>Waste Dump</td><td>Cu < 0.15%</td><td>Cu < 0.15%</td><td>Cu < 0.15%</td></tr>
<tr><td>Mineralised Waste</td><td>Waste Dump</td><td>0.15% <= Cu < 0.30%</td><td>0.15% <= Cu < 0.36%</td><td>0.15% <= Cu < 0.28%</td></tr>
<tr><td>LG Ore</td><td>Heap Leach Stockpile/LG Stockpile/ROM</td><td>0.30% <= Cu < 0.45%</td><td>0.36% <= Cu < 0.45%</td><td>0.28% <= Cu < 0.45%</td></tr>
<tr><td>Ore</td><td>Heap Leach Stockpile/ROM</td><td>0.45% <= Cu</td><td>0.45% <= Cu</td><td>0.45% <= Cu</td></tr>
</table></td></tr>
<tr><td>Mining factors or assumptions</td><td>• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).
• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.
• The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.
• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).
• The mining dilution factors used.
• The mining recovery factors used.
• Any minimum mining widths used.
• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.
• The infrastructure requirements of the selected mining methods.</td><td>• A pit optimisation was completed to determine the extent of the economically mineable Ore Reserves based on transitional and fresh material only. Each block is evaluated on Cyprium's base sales price for Copper concentrate. The pit optimisation was only conducted using transitional and fresh, measured and indicated resources. A detailed pit design was then completed, which was then scheduled on a monthly level, using resource driven scheduling.
• Mining is proposed to be conducted with hydraulic backhoes (600t and 200t) and rear dump trucks (230t). Waste will be mined and placed in the expit dumps ready for rehabilitation. As mining progresses, grade control drilling and sampling will be conducted to inform a grade control block model. As the ore is exposed, it will be mined by the hydraulic excavator. Dependent on the weathering of the ore the ore will he handled as per below:
  ○ Transitional and Fresh ore will be hauled to a run of mine (ROM) stockpile where it will either be dumped directly into the crusher hopper or stockpiled and rehandled using loaders and trucks into the crusher hopper dumped directly into the crusher hopper to be loaded into the crusher. The current processing plant will require refurbishment and upgrade to meet the proposed throughput and proposed equipment sizing
  ○ The Existing heap leach pads of 1-6 will be relocated and re leached in the new leach pad location, The pregnant solution is then pumped to the SXEW plant for cathode production. The current heap leach pads, infrastructure and SXEW plant will require refurbishment, along with the new leach pad location which are costed in this estimate.
• The pit optimisation considered the transitional and fresh, measured and indicated resources only.
For the mining schedule measured, indicated and inferred (Incidental), transitional and fresh material was considered. The oxide material is processed by heap leach and the transitional and fresh by concentration. The inferred (incidental) material was included as additional material in the reserve estimate accounts for in the reserve estimate and accounts for ~3% of the copper produced from the mine..
An economic assessment and sensitivity was conducted at the schedule level for the scenarios, including and excluding the incidental material, both sets of analysis indicated economic viability. Incidental material is not reported as reserve.
• A geotechnical study was completed to PFS level and included the consolidation and assessment of the existing geotechnical data set that identified the need for additional drilling and analysis. 6 new geotechnical holes were drilled, analysed and incorporated into the data set, which was then reviewed, and recommendations made on overall slope angles, inter ramp angles and batter and berm configurations. In addition, additional recommendations were made for adjustments and reduction in angle (Where applicable) to the special geotechnical zones relating to the sink holes, sink hole zone of influence, underground zone of influence, waste dumps, heap leach pads and in pit back fill.
• No grade control drilling is anticipated during production, due to the structurally controlled nature of the orebody , although blast hole sampling at 5 m intervals in ore zones is planned.
• The Major assumptions for the pit optimisation is as follows:
  ○ MRE Used – Cyprium April 2024 MRE
  ○ Resource classification used in optimisation – Measured and Indicated
  ○ Ore by Oxidation – Transitional and Fresh</td></tr>
</table>

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Criteria	JORC Code explanation	Commentary
		○ Grade Control – 0.044 to 0.050 $/t based on oxidation ○ Drill and Blast – 0.551 to 0.622 $/t based on oxidation and ore / waste classification ○ Loading – 0.622 to 0.744$/tonne based on oxidation and ore / waste classification ○ Hauling Fixed – 0.432 to 0.634 $/t based on ore / waste classification ○ Hauling Variable – 0.003$/t per m of elevation above / below the 10330rl ○ G&A – 0.398 4/t ○ Processing – 23.515$/t ○ Recovery : ▪ Transitional - $0.0444Cu^3 + -0.2481Cu^2 + 0.4816Cu + 0.5345$, to a maximum of 86.3% ▪ Fresh - $1.0653 \times Cu^{0.038}$, to a maximum of 95.7% ○ Revenue – 12,662 A$/dt Cu ○ Sales Cost – 2,302A$/dt Cu – inclusive of all ex-mine gate logistics, TCRC and royalties ○ Discount Rate – 8% • An adjacent block loss and dilution principle was used with the rates of 5% Dilution and 10% loss applied with an additional 3% mining loss applied. This is deemed appropriate for the deposit type and the size of the mining equipment and with consideration of historical performance. • The minimum mining width of 35m was used and no good bye cuts were designed. • The economic limits and pit extents were driven by Measured and Indicated transitional and fresh material only, with financial modelling completed on this material only and demonstrating and standalone economic viability.

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Criteria	JORC Code explanation	Commentary

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Mined	-	-	22.69	1.06%	**22.69**	**1.06%**
Reserve	Probable	Mined	-	-	60.59	0.85%	**60.59**	**0.85%**
Reserve	**Total**	**Mined**	-	-	**83.27**	**0.90%**	**83.27**	**0.90%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Leach Pads 1 - 4	-	-	-	-	-	-
Reserve	Probable	Leach Pads 1 - 4	2.82	0.47%	-	-	**2.82**	**0.47%**
Reserve	**Total**	**Leach Pads 1 - 4**	**2.82**	**0.47%**	-	-	**2.82**	**0.47%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Leach Pads 5 - 6	-	-	-	-	-	-
Reserve	Probable	Leach Pads 5 - 6	7.81	0.39%	-	-	**7.81**	**0.39%**
Reserve	**Total**	**Leach Pads 5 - 6**	**7.81**	**0.39%**	-	-	**7.81**	**0.39%**

Numbers are rounded to reflect a suitable level of precision and may not sum

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Reserve	Proved	Total	-	-	22.69	1.06%	**22.69**	**1.06%**
Reserve	Probable	Total	10.64	0.41%	60.59	0.85%	**71.22**	**0.78%**
Reserve	**Total**	**Total**	**10.64**	**0.41%**	**83.27**	**0.90%**	**93.91**	**0.85%**

Numbers are rounded to reflect a suitable level of precision and may not sum

- Additional material mined within the pit designs that have economic viability to be fed through was assessed and shown to have a positive impact, as outlined below. The economic viability of the pits designed and modelled to not require the included incidental tonnages to deliver a viable result. The included incidental tonnes represent ~5% of the total processed material.

			Oxide Stream		Sulphide Stream		Total	
Category	**Classification**	**Source**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**	**Ore (Mt)**	**Cu%**
Incidental	Inferred	Mined	-	-	4.42	0.56%	**4.42**	**0.56%**
Incidental	Inferred	Leach Pads 1 - 4	0.62	0.48%	-	-	**0.62**	**0.48%**
Incidental	Inferred	Leach Pads 5 - 6	1.42	0.53%	-	-	**1.42**	**0.53%**
Incidental	**Total**	**Total**	**2.04**	**0.51%**	**4.42**	**0.56%**	**6.46**	**0.55%**

Numbers are rounded to reflect a suitable level of precision and may not sum

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Criteria	JORC Code explanation	Commentary
		• The mine is a restart operation with most of the infrastructure in place, however upgrades are planned to the processing circuit and non-process infrastructure to support the proposed mining and processing rates as well as the planned mobile equipment

Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*
	• *Whether the metallurgical process is well-tested technology or novel in nature.*
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*
	• *Any assumptions or allowances made for deleterious elements.*
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*
	• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*
		• Nifty is a formerly operating mine that utilised 2 processes depending on oxidation state:
		  ○ Oxide Ores – were crushed, agglomerated and leach before extraction through an SXEW plant to produce a copper cathode for export
		  ○ Transitional and Fresh ores - were / are to be crushed, ground, floated and thickened to produce a copper concentrate for export from Nifty for offsite refinement.
		  Both processes are deemed mature and appropriate for the nature and style of the ore body mineralisation
		• Both processes utilise only proven and tested technology with now new or novel techniques used.
		• As Nifty was an operating site significant "Actual", metallurgical, recovery and plant performance data exists, that is further enhanced with significant 3rd party test work. From this work Cyprium provided the following recoveries by oxidation process and source locations:
		  • Oxide – Heap Leach – Leaching of existing pads 1-4, recovery = 45.204%
		  • Oxide – Heap Leach – Leaching of existing pads 5-6, recovery = 45.204%
		  • Oxide – Heap Leach – Newly mined ore, recovery = 70% (not applied in this Estimate)
		  • Transitional – Concentration – Newly mined ore, recovery = $0.0444Cu^3 + -0.2481Cu^2 + 0.4816Cu + 0.5345$, to a maximum of 86.3%
		  • Fresh – Concentration – Newly mined ore, recovery = $1.0653 \times Cu^{0.038}$, to a maximum of 95.7%
		  These recoveries have been assessed in line with he upgraded flow sheet (Concentrator) and are deemed appropriate for the proposed upgraded concentrate and refurbished heap leach process plant
		• There are no deleterious elements considered relevant to this Reserve Estimate; with the historical performance, this assumption is deemed to be reasonable based on historic operating performance.
		• As Nifty was an operating site extensive historical metallurgical, recovery and plant performance exists that validate the inputs and assumptions used and are deemed to be appropriate for the ore body as whole and by oxidation state
		• There are no minerals that have been defined by a specification
		• The concentrator ore will be hauled to the ROM to be then loaded into the crusher and into a grind and float process to be turned into a copper concentrate that will be transported in sealed half-height containers to Port Hedland, where it will be loaded direct from these containers into Panamax size ships for transport to China, India and Japan for Smelting.

Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered, and, where applicable,*	• Nifty is a previously operating mine with mature environmental and regulatory approvals and monitoring process in place. All relevant approvals are in place to support initial recommencement of operations but will require amendment to support the full extent of proposed operations as outlined below:
		  • Works Approval and Licence – Approved and In Place - Will require amendment to support proposed operations
		  • Project Management Plan – Approved and In Place - Will require amendment to support proposed operations
		  • Native Vegetation Clearing Permit – Approved and In Place - Will require amendment to support proposed operations
		  • Mining Proposal – Approved and In Place - Will require amendment to support proposed operations
		  • Mine Closure Plan – In place and an update is required in 2025

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Criteria	JORC Code explanation	Commentary
	the status of approvals for process residue storage and waste dumps should be reported.	• 26D Licence to Alter Water Abstraction Methods of an Existing Licence – Approved and In Place - Will require amendment to support proposed operations • Waste rock characterisation is currently underway with no results returned. Scheduling in this study does not account for the placement and encapsulation of Potentially Acid Forming (PAF) material with Non-Acid Forming (NAF). Upon finalisation of the waste rock characterisation dump design and scheduling will be completed to ensure the required encapsulation. • Tailings storage has been designed to take the form of an Integrated Waste Landform (IWL). The build of the facilities has been scheduled and costed 1 year in advance of storage requirement. Tailing studies have been supplied to MEC from Cyprium and were completed by a third-party tailings consulting group, inclusive of costing. The design employed from this study were supplied to MEC for adoption and sequencing in the detailed mine planning works.

Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Nifty is a formerly operating mine site with process and non-process infrastructure in place to support a 2.8mtpa concentrator and underground operation. Capital has been allocated to upgrade process and non-process infrastructure to support a 4.5mtpa concentrator, 12ktpa SXEW plant and a 65Mtpa mining operation. A summary of the key infrastructure is outlined below:
		• A summary of the existing key infrastructure is outlined below
		  • Camp with the plan to upgrade an increase to a 399-person capacity, which is sufficient to support operations. Capital has been allocated for this upgrade. Includes, swimming pool and sports areas
		  • Offices, Workshops, Stores, Core Yard and Workshop facilities spread across site to support, concentrator, SXEW and mining operations
		  • A sealed aerodrome under historic approvals exists and is capable of servicing 104-seater jet aircraft.
		  • A Telstra 4g tower
		  • Existing generators and existing gas pipeline supply power
		  • Sufficient process water is available from the existing East Nifty Borefield and dewatering of the mining area in advance of mining production
		  • Potable water will be produced via existing and upgraded reverse osmosis facilities
		  • Unsealed road to Woodie Woodie (Approx 30km) and sealed road from Woodie Woodie to Port Hedland / Great Northern Highway
		• Non-process infrastructure assessment was completed in the PFS that outlines the refurbishment and replacement schedule that has been considered in the start up and capital costs.

Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*
	• *The methodology used to estimate operating costs.*
	• *Allowances made for the content of deleterious elements.*
	• *The source of exchange rates used in the study.*
	• *Derivation of transportation charges.*
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*
	• *The allowances made for royalties*
		• The consolidated financial model has been built using a bottom up, first principle, fixed and variable approach on a monthly basis:
		• The capital and operating costs for the mining department have come from MEC Mining's database and adjusted where relevant using the Australian Bureau of Statistics Indices - Table 14, Index 21 Primary Metal and Metal Product Manufacturing Indices.
		  • All operating costs have been built using a bottom up, fixed and variable, first principals approach on a monthly basis. The noted database includes full life cycle costings (, sustaining capital, labour costs and factors)
		  • A 15% Contractor margin has been applied to the load and haul and drill and blast operations
		  • The labour costs for the mining labour have been taken from recent industry surveys with a build up of on costs applied. All leave entitlements have been assumed to be taken in full each year
		• The capital and operating costs for process plants have been provided by Cyprium, and are based on bottom up, first principal, fixed and variable approach. The costs have been adjusted where relevant using the Australian Bureau of Statistics Indices - Table 14, Index 21 Primary Metal and Metal Product Manufacturing Indices.
		• There are no deleterious elements considered relevant to this Reserve Estimate; with the historical performance, this assumption is deemed to be reasonable.
		• Cyprium provided the long-term exchange rate forecasts produced by Deloitte at an average exchange rate of A$:US$ 0.71. An additional more conservative forecast from Wood Mackenzie was also employed to test the sensitivities of the project with a weight average exchange rate of A$:US$ 0.749

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Criteria	JORC Code explanation	Commentary

	payable, both Government and private.	• Cyprium hold an offtake agreement for 100% of their concentrate and cathode products. This agreement is confidential, MEC have sighted this agreement and confirmed that the costs, rates and basis are reasonable and market aligned for the 10 year period of the base agreement. The marketing rate, treatment and refining charges are fixed under the agreement. The shipping and price parameters are aligned to market prices.
		• A 3rd Party Haulier provided ca +/-10% cost of transportation to, storage and ship loading + Pilbara Port Authority Fees of A$93.40 / wet tonne of concentrate.
		• A 3rd part shipping broker forecast was used to confirm the expected shipping rates from the Glencore agreement, assuming transport from Port Hedland to China.
		• The royalties applied are as per the state agreement and the threshold royalty agreement with a 3rd Party:
		  • State Agreement 5% of Gross Revenue for Concentrate
		  • State Agreement 2.5% of Gross Revenue for Copper Cathode
		  • A threshold third party royalty of 1.5% of gross revenue is applicable once 800kt of copper produced has been reached. Cyprium has stated there is ~135kt of copper to be produced until this threshold is reached.

Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s) for the principal metals, minerals and co-products.*	• The head grade was calculated based on the scheduling of the designed pits and the application of the economic factors. • Recovery curves were applied to the head grade to achieve the total metal produced. As Nifty was an operating mine, Cyprium were able to provide recovery curves backed up with significant historical data. • Cyprium provided the long-term Copper forecasts produced by Wood Mackenzie, this forecast was applied over the life of the project and generated a weighted average copper price of US$ 8,531/dt Cu. This was used for the lower basis of assessment to ensure forecast sensitivity was adequately completed for Reserves inclusion. A current 2024 price average was discounted by 10% to US$9,370/dt Cu this was applied for the project value financial modelling. Detailed market supply and demand analysis was considered, noting growing market demand demonstrating suitable market requirements for the revenue assumptions. • Cyprium provided the long-term exchange rate forecasts produced by Deloitte at an average exchange rate of A$:US$ 0.71. An additional more conservative forecast from Wood Mackenzie was also employed to test the sensitivities of the project with a weight average exchange rate of A$:US$ 0.749 • Cyprium hold an offtake agreement for 100% of their concentrate and cathode products. This agreement is confidential, MEC have sighted this agreement and confirmed that the costs, rates and basis are reasonable and market aligned for the 10 year period of the base agreement. The marketing rate, treatment and refining charges are fixed under the agreement. The shipping and price parameters are aligned to market prices. • There are no deleterious elements considered relevant to this Reserve Estimate; with the historical performance, this assumption is deemed to be reasonable based on historic operating performance. • A 3rd Party Haulier provided ca +/-10% cost of transportation to, storage and ship loading + Pilbara Port Authority Fees of A$93.40 / wet tonne of concentrate. • A 3rd part shipping broker forecast was used to confirm the expected shipping rates from the Glencore agreement, assuming transport from Port Hedland to China. • A discount Rate of 8% was used, which is seen as reasonable based on jurisdiction, orebody knowledge, labour supply and skill and outlook for copper demand. The WACC for the company/project are not refined as capital sourcing is still underway. • All revenue factors as defined are driven from reputable third party forecasts, market analysis, or quotes, the accuracy of these drivers are considered reasonable for the accuracy of this estimate.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*	• Cyprium supplied their market demand assessments and placement positioning, supported by the Wood Mackenzie Copper Outlook reports • Key market demand surplus is demonstrated at the planned operational commencement dates and continuing through mine life, the analysis considers new project, potential projects, smelter demands, alternative sources of cathode and scrap. Renewable energy mandates are expected to drive market demand for copper for renewable energy systems, increased grid transmission infrastructure and electric vehicles uptake. New mine supply is expected the lag the demand in the near term, balancing with demand by 2034. .

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Criteria	JORC Code explanation	Commentary
	• *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The market assessments demonstrate long term demand. Cyprium hold a 10 year off take agreement with Glencore for all the Concentrate and Cathode produced. This give security of put placement for these tonnes at market pricing.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The NPV of the October 2024 LOM plan was calculated to be sufficiently positive to declare an Ore Reserves Estimate. • At the assumed restart periods and production profiles, the estimated Net Present Value is A$1,129 Million when accounting for the processing of incidental inferred included, IRR 28.9% Pre-tax. • The sensitivity to price and costs was assessed in the October 2024 LOM plan and adequately considered the economic sensitivities to ensure the reported Reserves are sufficiently positive. Using reserve only tonnes at a discounted pricing and exchange rates still deliver a A$558 Million using Reserve only • The discount rate applied was 8%, this was considered relevant within the market application. • The mine production schedule results were Incorporated for revenue/cash flow, and the NPV is calculated based on the capital expenditure and sustaining capital expenditure for each annual period. • Sensitivity was run on a +/-20% basis for key inputs, with Revenue and Exchange rate being the most sensitive.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The leases are not located near any communities and do not present a local visual impact. • The operation utilises technology and methods for which labour skills are readily available. • Cyprium have indicated they will embark on a recruitment and training programme for suitable employees to obtain these skills. This programme may include local employees from the Traditional Owner groups within the greater Pilbara region.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that*	• The mine schedule and financial model were completed on all available Reserves at the time of the study. • All of the Reserve is contained within a mining lease owned by Cyprium. • The updated life of mine plan that is associated with this Reserve Estimate requires minor environmental disturbance alterations, along with ongoing community engagement. These applications and supporting consultations have been demonstrated to be sufficiently progressed. However final lodgement for amendment is still pending based on the finalisation of the LOM plan. There is currently no foreseeable reason why any required approvals or amendments would not be granted would not be approved.

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Criteria	JORC Code explanation	Commentary
	all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Nifty Mine has previously been an operating mine. This has given the study a good basis of actual data to set up the inputs to the optimisation, schedule and financial models. These have formed the basis of the concentrator and heap leach recovery. • This PFS level study and Reserves estimate were completed on the basis of an open pit operation feeding a heap leach and concentrator process, as well as the re leaching of historic leach pads. All Measured Resources were converted to Proved Reserves and Indicated Resources converted to Probable Reserves. There was no reasonable basis for varying confidence of Resource confidence categories in the Ore Reserves conversion. • The economically mineable measured, oxide, transitional and fresh resources were converted to Proved Reserves. The economically mineable Indicated transitional and fresh resources were converted to Probable reserves. • There was found to be no reasonable basis to vary confidence of Resource confidence categories in the Ore Reserves conversion
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• MEC Mining Principal Mining Engineers Rod Bonner, Tyler Hilkewich and Christofer Catania completed the work. • MEC Mining Principal Mining Engineer and CEO Christofer Catania reviewed and approved the work
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be*	• No statistical or geostatistical procedures have been used to estimate the confidence level of the Reserves. Geostatistical modelling was utilised in the Resource modelling and the accuracy and interpretation of this was reviewed and agreed. • The LOM study was conducted to an estimated Pre-Feasibility level of accuracy. • Due to Nifty previously being an operating mine, the understanding of processing recoveries and behaviours would be considered mature. • The operating methods, rates and site arrangements are consistent with conventional open pit metalliferous operations, ensuring the modifying factors are well understood and taken at a conservative basis. • Nifty is a previously operating mine with existing approvals already in place. Prior to commencement, amendment the following will be required: An amendment to the Works Approval License, A new Mining Proposal will need to be submitted, and an update of the Mine Closure plan is required in 2025. MEC See no foreseeable reason why these approvals wouldn't be granted as these are primarily amendment works. There is an order on the concentrator that needs remedy before restart works can occur, presenting a risk in the project timeline if this is delayed. • Due to the duration of mine life and capital required, it is reasonable to assume that a contractor model would be in operation for the first 8-10 years of the operations life. No agreements for this work are currently in place. The project planned start allows reasonable time to finalise these, with sufficient market options and supply. • The company market capitalisation on 30th June 2024 is ~A$68 Million based on a share price of A$0.045 and ~1,525 Million Shares on Issue

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Criteria	JORC Code explanation	Commentary
	relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

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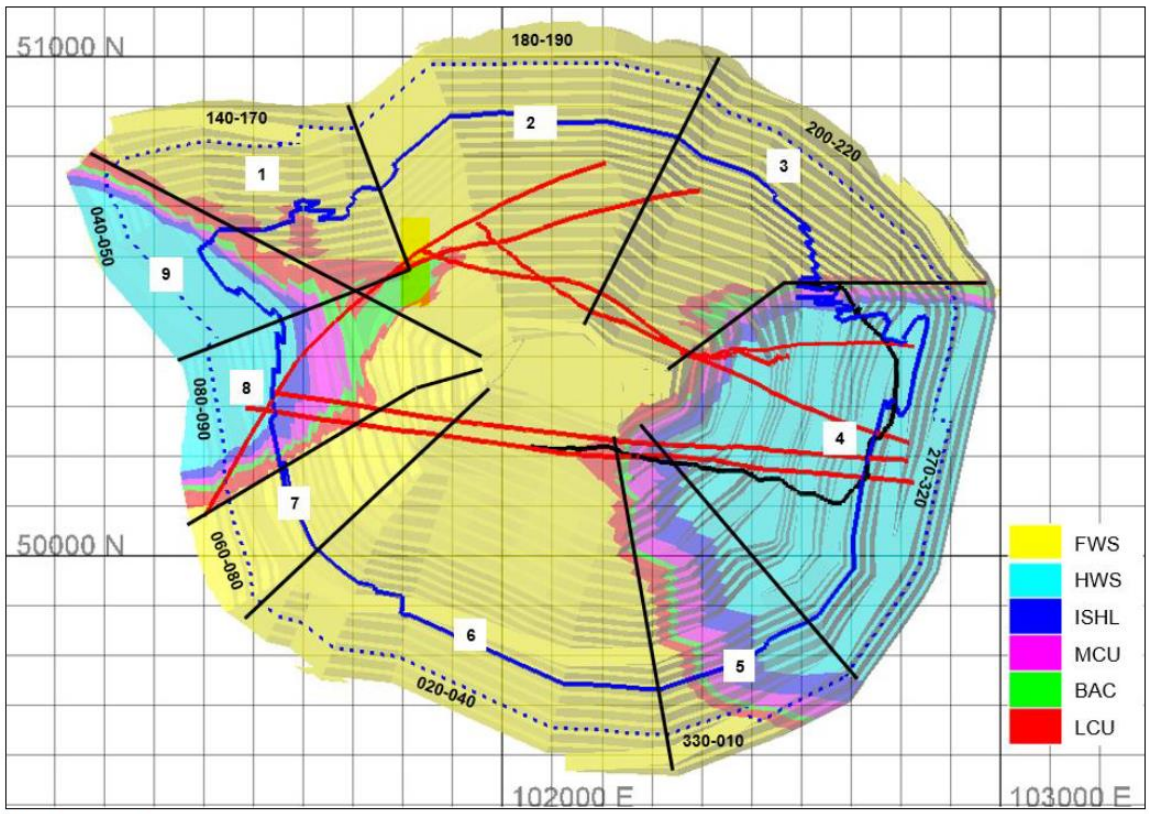
APPENDIX C GEOTECHNICAL DOMAINS

Geotechnical Domains from (MEC, 2024 GT PFS)



Pit design domains

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Slope design configurations for pit domains

Pit Domain	Material Type	Slope Dip Direction (°)	Structural Assessment			Rock Mass Assessment		
			Max. BFA1 (°)	Max. Bench Height (m)	Min. Berm Width (m)	Max. IRSA2 (°)	Slope Height (m)	Max. OSA[3] (°)
1	Weathered	140 – 170	65	20	10.0	42	240	62
	Transitional		75	20	8.5	65		
	Fresh		75	20	8.5	65		
2	Weathered	180 – 190	65	20	10.0	42	470	50
	Transitional		75	20	8.5	52		
	Fresh >10050		75	20	8.5	52		
	Fresh <10050		70	20	8.5	52		
3	Weathered	200 – 220	65	20	10.0	42	450	43
	Transitional		75	20	8.5	46		
	Fresh		62	20	8.5	45		
4	Weathered	270-320	65	20	10.0	42	440	40
	Transitional		75	20	8.5	40		
	Fresh		75	20	8.5	39		
5	Weathered	330-010	65	20	10.0	42	450	40
	Transitional		75	20	8.5	46		
	Fresh		75	20	8.5	48		
6	Weathered	020-040	65	20	8.5	42	450	54
	Transitional		75	20	8.5	50		
	Fresh		75	20	8.5	54		
7	Weathered	060-080	65	20	10.0	42	450	54
	Transitional		75	20	8.5	50		
	Fresh		56	20	8.5	54		
8	Weathered	080-090	65	20	10.0	42	470	37
	Transitional		42	20	8.5	36		
	Fresh		42	20	8.5	37		
9	Weathered	040-050	65	20	10.0	42	180	65
	Transitional		65	20	8.5	64		
	Fresh		65	20	8.5	55		
Waste Dumps[4]			25	10	5	21	20	23
Heap Leach[4]			25	5	5	18	20	19

[1] Maximum Bench Face Angle based on kinematic analyses
[2] Inter-ramp Slope Angle based on rock mass stability
[3] Maximum achievable Overall Slope Angle based on rock mass stability (note that bench configuration may result in flatter OSA than the ones provided in this table but cannot exceed them).
[4] Based on the existing on-site design

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APPENDIX D LOSS AND DILUTION

Dilution from block to block is proportional to the contact surface area between those blocks – the block surface area % (BSA%)

The net effect is that the total tonnes of each block stays the same, but the copper tonnes change.

If the neighbouring block is ore:

- Add [ore dilution factor × BSA%] × copper & waste tonnes from neighbouring block
- Subtract [ore dilution factor × BSA%] × copper & waste tonnes from this block

If the neighbouring block is waste:

- Add [waste dilution factor × BSA%] × total tonnes* from neighbouring block
- Subtract [waste dilution factor × BSA%] × waste & copper tonnes from this block

**in a waste block, copper tonnes are negligible, so the total tonnes were used*

The block model blocks used were:

- X-Axis (East / West) 5.0m
- Y-Axis (North / South) 5.0m
- Z-Axis (Top / Bottom) 2.5m

With dilution from each neighbouring block proportional to that face's surface area as outlined in the table below and pictorially on the next page:

Block Face	Dimension 1	Dimension 2	surface area (m²)	Block surface area %
Top	5.00	5.00	25.00	25.00%
Bottom	5.00	5.00	25.00	25.00%
North	5.00	2.50	12.50	12.50%
South	5.00	2.50	12.50	12.50%
East	5.00	2.50	12.50	12.50%
West	5.00	2.50	12.50	12.50%

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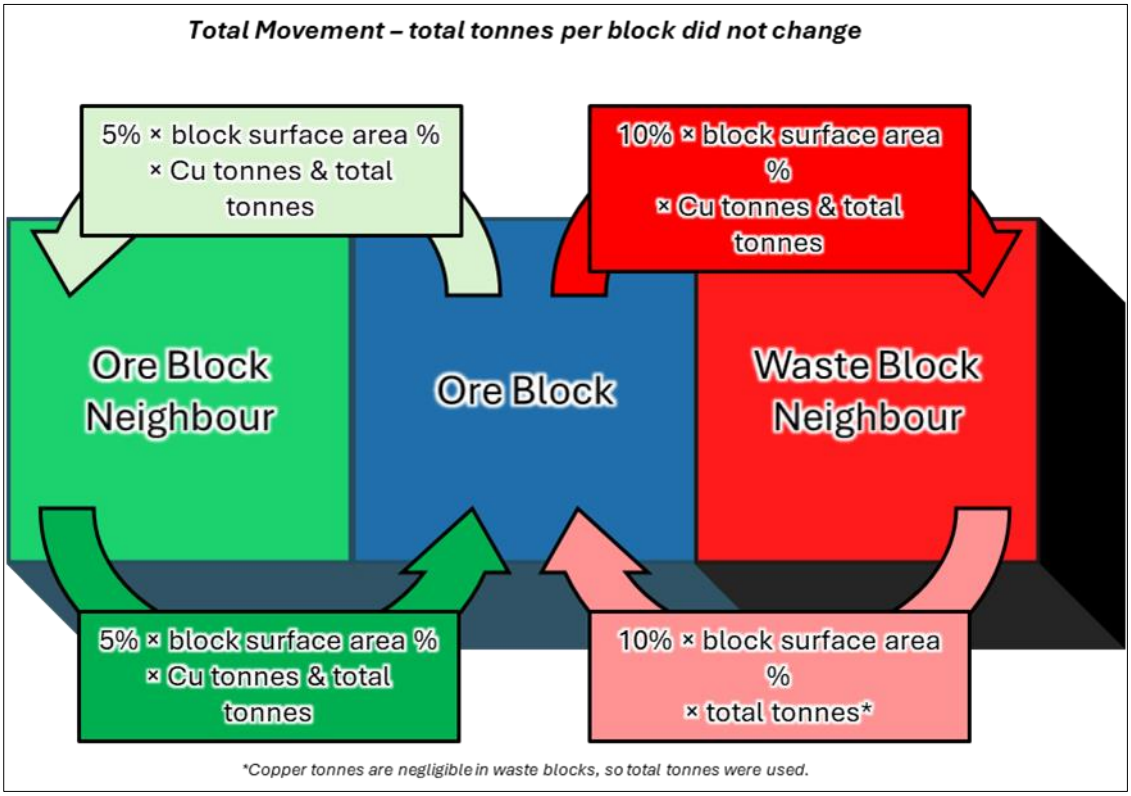

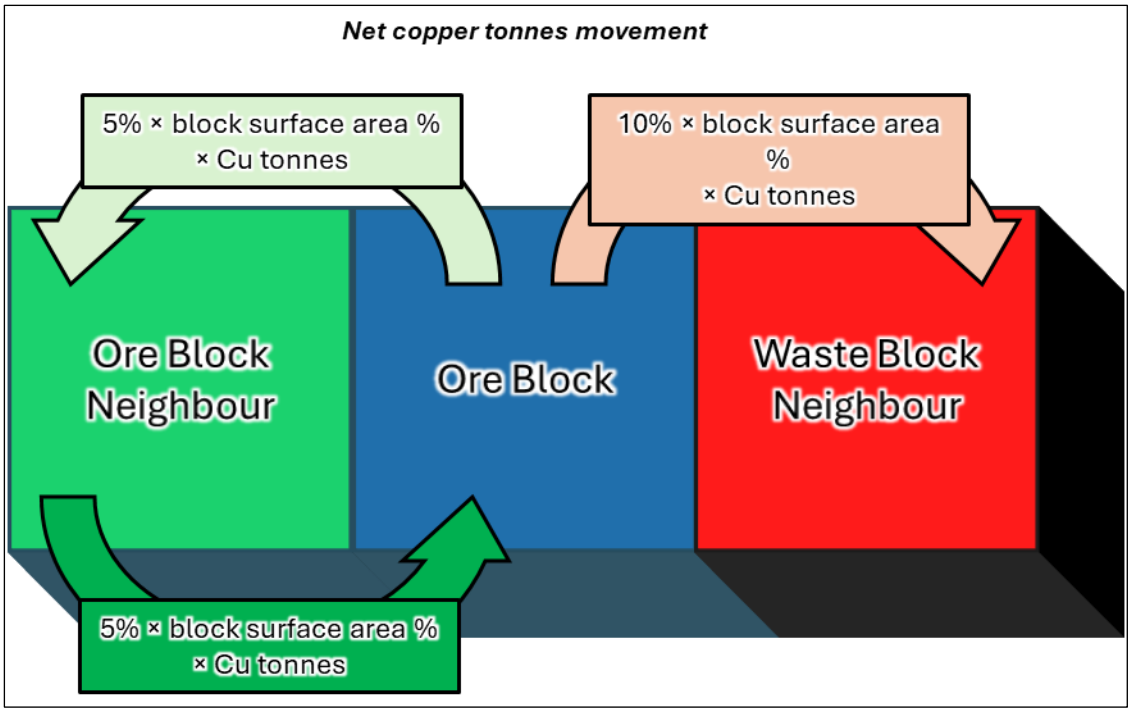

APPENDIX E CONCENTRATE PROCESSING CAPITAL ESTIMATION

6. CAPITAL COST ESTIMATE

6.1 Capital Cost Estimate Work Breakdown Structure

The capital cost estimate has been developed utilising Cyprium's Work Breakdown Structure (WBS). The estimate has been completed using the MIM estimating system following MIM's internal review.

The refurbishment cost calculated for the balance of the plant in 4Q23 and previously issued to Cyprium, has been included as a PC sum as adjusted during this Study. The work includes the refurbishment of the existing plant to achieve the 3.5Mt/a throughput. The scoping study capital cost may include items, particularly related to piping, that have been included in the refurbishment costs. A more detailed study, including P&IDs, is required to further refine the 4.5 Mt/a and refurbishment costs.

6.2 Capital Estimate Summary

The capital cost summary is provided in Table 6-1. Costs associated with the Study are presented with a +/- 30% accuracy.

Description	Total (AUD)
DIRECT COSTS	75,490,765
Construction Overheads	4,746,579
Plant Infrastructure	0
Construction Plant & Equipment	3,980,899
Earthworks PC SUM	1,947,645
Concrete	10,597,152
Structural	8,124,042
Mechanical	27,233,828
Platework	4,321,920
Piping	4,460,028
Electrical	10,078,672
Tailings Storage Facility	0
INDIRECT COSTS	24,466,584
EPCM	12,172,756
Commissioning	471,129
Contractor Indirects	11,822,698
Temporary Construction Facilities	0
PFS SCOPE GRAND TOTAL	99,957,349
PLANT REFURBISHMENT COSTS (PC SUM)	34,395.770
CONCENTRATOR RESTART COSTS	134,353,119

Table 6-1 : Capital Cost Summary

Alternative summary reports and detailed reports are included in Appendix 13, Capex Cost Report.

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Description	Basis
Platework	Material take-offs, equipment list sizing and drawings from mechanical equipment list where unchanged from preceding Study. Quantities taken from similar projects where new to project. Typical rates applied.
Tankage Field Erect	Material take-offs, equipment list sizing and drawings from mechanical equipment list. Typical rates applied.
Mechanical Equipment	Preliminary quotations from multiple reputable suppliers for majority of equipment. Database costs for new equipment.
Haul Roads	Not applicable or included
Mining	Not applicable or included
Power Station	Not applicable or included
Conveyors	Quantity estimated from equipment list. Typical rates applied.
Piping General	Factored off mechanical and plate work costs and benchmarked against projects of comparable scale.
Overland Piping	Developed from engineering calculations, preliminary layouts, take offs and referencing against previous similar projects. Typical rates applied.
Electrical General	Calculated based on items required, available layouts and costs taken from taken from database for current projects of comparable scale
Electrical HV	Calculated based on items required, available layouts and costs taken from taken from database for current projects of comparable scale
Installation Rates - General	Recent West Australian rates applied from current projects. Installation rates include: • Works of a temporary nature. • Supervision above trade level. • Set-out and survey. • Site storage, offices, amenities, services. • Consumables and tools. • Plant (including yard cranes). • Scaffolding, hoarding and gantries, handrail etc. • Dewatering, dust suppression, weather and noise suppression.
	• Material handling. • Security and safety. • Accommodation costs. • Signs. • Testing.
	• Printing, stationery and general overheads. • Insurance. • Permits, fees and like. • Commercial costs such as provision of bonds and securities, contract finance etc. • Contractor's profit.
Heavy Cranage Supply / Hire	Cranage requirements identified for requirements over and above contractor supplied.

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Description	Basis
Freight General	Factored estimate for sea freight and in country costs
Contractor Mobilisation / Demobilisation	Requirements estimated using base rates.
Site Establishment	Requirements estimated using base rates.
Construction Facilities	Requirements estimated using base rates.
Fencing	Requirements estimated using base rates.
Engineering, drafting, procurement and management	Preliminary work-hour estimate x market rates and detailed expenses estimate.
Consultants (mining, geotechnical)	Not applicable or included
Site Survey / Soils Testing	Not applicable or included
Surveying QA	Not applicable or included
Vendor Representatives	Manhour estimate at market rates
First fill reagents and consumables	Calculated from first principles
Working Capital	Excluded.
Spares	Allowance based on similar projects of comparable scale.
Owner's Project Team	Excluded
Project Insurances and Permits	Excluded
Sterilisation Drilling	Excluded.
Plant preproduction expenses (recruiting, relocation etc.)	Excluded.
Training	Excluded
Owners Expenses	Excluded
Duties and Taxes	Import duties and taxes allowed based on similar projects of comparable scale.
Escalation	Excluded.
Refurbishment cost	Based on detailed assessment in 4Q23, cost is PC and will be schedule of rates

Table 6-2 : Capital Cost Estimate Basis

6.5 Engineering Status

The design status varies considerably based on design maturity, with status ranging from minor amendments to as-built drawings of the facility to scoping and preliminary engineering design (limited vendor data).

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Description	Details and Inclusions	Estimate Basis
Bulk Site Earthworks		Preliminary design & GA drawings
Site Drainage and Culverts		Estimated
Plant Site Roads		Estimated
Carparks and Hardstand Areas		Estimated
Feed Preparation		
Primary Crushing	ROM Bin Approach, ROM Bin, ROM apron feeder, vibrating grizzly feeder, jaw crusher, cone crushers, product screen and discharge conveyors.	Preliminary design and GA drawings
Reclaim	Stockpile and reclaim tunnel and feeders.	Preliminary design and GA drawings
Grinding	Underflow distribution box and new trash screen	Preliminary design and GA drawings
	New ball mill and hoppers	Preliminary process design and GA drawings, no MTOs – used database information
Flotation plant	Includes minor pumps changes	Preliminary design and GA drawings
	New rougher circuit	Preliminary process design and GA drawings, no MTOs – used database information
Tails Pumping	Includes amendments to thickener underflow, new pump sets and tailings line.	Preliminary design
Reagents and Plant Services	No changes	
Reagents		
Water services	No changes	
Electrical Services - General	Additional transformers and switch rooms for plant amendments to existing pump and filtration switchrooms	Estimated
Plant Control System	No changes	
Infrastructure		
Misc. Roads & Tracks	No changes	
Communications	No changes	

Description	Details and Inclusions	Estimate Basis
Event Pond	No changes	
Utilities and Services		
Water Bores	No changes	
Sewage Treatment	No changes	
Power Supply		
Power Supply General	No changes	
HV Switchyard / Substation	No changes	
Mains Power	No changes	
Powerlines	No changes	
Tailings		
Tailings Dam	No changes	
Tailings Pipeline	Delivery line to tailings facility	Estimated
Decant System	New pump and pipeline	Estimated
Buildings - Plant	No changes	
Administrative	No changes	
Underground	No changes	
Buildings - Services	No changes	
Airport	No changes	
Laboratory	No changes	
Village	No changes	
Village Earthworks and Drainage	No changes	
Village Potable Water	No changes	
Village Sewerage System	No changes	
Village Electrical	No changes	
Village Communication	No changes	
Accommodation Buildings	No changes	
Recreation Buildings and Facilities	No changes	
Mining	No changes	
Mining-General	No changes	

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Description	Details and Inclusions	Estimate Basis
Mining Mobilisation and Establishment.	No changes	
Mine Establishment	No changes	
Pre-Stripping	No changes	
Mining Pre-Production	No changes	
Mining Pre-production Expenses	No changes	
Mining Facilities	No changes	
Mining Facility - General	No changes	
Core Shed	No changes	
Engineering Costs	No changes	
Home Office	No changes	
Process / Engineering	Detailed engineering design	Estimated
Drafting	Detailed drafting	Estimated
Projects	Project management, control	Estimated
Project Services	Procurement of items on client's behalf	Estimated
Home Office Expenses	Support for site works	Estimated
Site		
Construction Services	Supervision of construction activities	Estimated
Commissioning		Estimated
Owners Project Costs		
Owners Costs - General		
Owners Project Mng't Team Labour		
Project Insurance	Not included	
Specialist Consultants	Not included	
Plant and Admin Pre-Production	Included	
Admin Pre-production Labour	Included	
Opening Stocks	Included	
First Fill Reagents and Consumables	Included	

Description	Details and Inclusions	Estimate Basis
Plant and Equipment	Included	
Admin Pre-Production Other	Included	
Training	Included	
Spare Parts		
Commissioning Spares	Included	
Consumable Spares	Included	
Fees / Taxes / Duties	Not included	
Services Tax and Import Duties	Not included	
Community Development	Not included	
Community Development	Not included	
Owners Operations Costs	Not included	
Working Capital	Not included	
Working Capital - General	Not included	

Table 6-3 : Facilities descriptions and design basis

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6.6 Quantity Development

Quantity information has been derived from a combination of sources and categorised to reflect the maturity of design information as follows:

- Take-off from engineered detailed design for this and other like projects.
- Take-off from engineered conceptual designs, e.g., engineering sketches or descriptions. For the scope of work defined, allowances have been made from sketches where necessary to enable the application of rates to determine costs.
- Estimated from plot plans, general arrangements, sketches or previous experience.
- Factored from historical project information based on capacity.

The derivation of quantities within these categories by percentage is provided in Table 6-4, weighted by value of the direct permanent works (i.e., excluding temporary works, construction services, commissioning assistance, design, escalation and contingency). Allowances for compaction, waste, rolling margin and the like have been included in the build-up of unit costs.

The quantities below are rounded estimates, in-line with the level of detail of the Class 4 Study.

Classification	Engineered Detailed %	Engineered Concept %	Estimated %	Factored %
Earthworks		50		50
Concrete		50		50
Structural steel		50		50
Platework		50	50	
Tankage				
Mechanical equipment		40	60	
Piping			20	80
Electrical		50		50
Instrumentation		50	5	50

Table 6-4 : Derivation of Quantities

6.7 Pricing Basis

Estimate pricing has been derived from a combination of the following sources:

- Budget quotation - project specific.
- Recent history of similar project pricing.
- Estimated or built-up rates.
- An allowance.

Table 6-5 summarises the source of pricing by major commodity, weighted by the value of the direct permanent works (excluding temporary works, construction services, commissioning assistance, design and contingency) that includes supply and installation.

The prices below are rounded estimates, in-line with the level of detail of the Class 4 Study.

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6.8 Design Services

The Project will be implemented using a standard EPC approach, whereby the EPC Contractor will provide detailed engineering and design, procurement, and construction services.

The EPC services cost estimate includes for the cost of head office and site staffing, sub-consultants, office consumables, equipment and associated project travel. The cost of a fully equipped home design office and all project computing requirements are included under Owner's costs.

The estimate for EPC services costs has been based on a preliminary manning schedule for the anticipated project deliverables and project schedule. The resulting EPC cost estimate is consistent with other projects of this nature in terms of the percentage of the direct costs.

The engineering design component of the EPC estimate for the home office is based on a calculation of required manning levels to complete the Project and benchmarked against MIM experience on other projects.

For non-deliverable related activities in engineering, procurement, management and administration, work-hour estimates have been estimated.

The site office work hours have been estimated. An allowance has also been made to allow the phasing of key personnel from engineering, procurement and controls through to construction.

No allowance has been made for permits, fees or license costs.

Additional sums for $1.82M for hopper size increase plus earth works was supplementary to this document. As provided on **:** Thursday, 5 September 2024 at 15:45.

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APPENDIX F CONCENTRATE PROCESSING OPERATING COST ESTIMATION

Estimating Method and Accuracy Statement

The operating costs for the Project have been developed in accordance with the MIM standard for cost estimation. The operating cost estimate is expressed in Australian dollars and is exclusive of Goods and Services Tax (GST). It is based on costs prevailing in the Australian minerals industry for the 1Q24 and conforms to a Class 5 estimate.

No allowance has been made within the operating cost estimate for deferred capital costs for items such as embankment lifts for the TSF.

The cost estimate reflects the plant throughput, the process design criteria (Appendix 1), steady state mass and water balance based on the test work completed by Cyprium and others.

The Project operating cost development methodology has been summarised in Table 16.2. Where there has been a deviation from the standard, the reasoning has been detailed.

All operating costs are in Australian dollars ($) and exclusive of GST.

Item	Minimum Standard	Method Used	Comments
General			
Typical Accuracy Range	±15% for known operations	±15%	
Contingency	Not applied	Not included	
A – Operating Cost Methodology			
A1 Staffing			
A1.1 Staffing Levels	Detailed manning schedule developed for Operations and Maintenance	Detailed manning schedule developed by Cyprium for Administration, Operations and Maintenance personnel	Leave entitlements based on the Commonwealth's Fair Work Act 2009

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Item	Minimum Standard	Method Used	Comments
A1.2 Cost Rates	Detailed	Detailed and based on reviewed Cyprium rates and on costs for superannuation, payroll tax, insurance, etc.	
A2 Consumables	Calculated	Detailed estimate	Based on reagent and equipment vendor submissions and recommended annual consumables or from first principles
A3 Maintenance	Detailed estimate	See A1.1	
B – Operating Cost Basis			
B1 Labour			
B1.1 Labour Cost Rates	Detailed	Refer A1.2	
B1.2 Labour Burden Rates	Detailed	Refer A1.2	
B1.3 Labour Hours	Detailed	Not applicable	Working roster in accordance with Cyprium. Refer to the OPEX estimate spreadsheet in Appendix 6.
B1.4 Labour Overheads/Management Costs	Detailed	Refer A1.2	General overheads or on-costs included in labour rate build-up. FIFO costs from vendor quote for similar project
B2 Utilities and Consumables			
B2.1 Power Costs	Detailed calculation based on budget quotation	Energy costs based on a calculated cost of an average price supplied by Cyprium	Electrical consumption calculated from the electrical load list and typical load factors
B2.2 Water Costs	Detailed calculation	Calculated based on the equipment list, labour schedule, maintenance factors and power consumption	Water supply ex bore field via Cyprium owned and maintained pipeline (i.e. power for pumping is accrued in power and maintenance costs)
B2.3 Fuel Costs (Mobile Equipment)	Detailed calculation based on budget quotation	Fuel cost after rebate of As provided by Cyprium, with vehicle usage rates based on calculated run hours and typical fuel burn rates	
B2.4 Consumables	Detailed calculation based on budget quotation	Detailed calculation based on budget quotations	Usage based on rates from vendors or calculated from first principles. Wear liners have been included here rather than in maintenance costs
B2.5 Supplies and Reagents	Detailed calculation based on budget quotation	Detailed calculation based on budget quotations	Usage based on metallurgical test work or modelling
B3 Plant Maintenance			

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Item	Minimum Standard	Method Used	Comments
B3.1 Maintenance Materials	Detailed estimate	A % of the capital cost has been applied and estimates for large contract works calculated (e.g. mill reline). Major equipment wear parts have been itemised and included as separate items	This approach is consistent with a Class 4 estimate
B4.1 Transport and Logistics	Detailed estimate	Transport for Materials/Consumables – Costs either included in factors used or rates obtained as a delivered to site rate. The rate used was $276/t	Transport costs included reagents and general freight for processing. An allowance for freight was also included in G&A. Concentrate transport costs not included
B5 – Other Operating Costs			
B5.1 Business Systems	Preliminary estimate	Cyprium provided figures	
B5.2 Training	Preliminary estimate	Based on 2% of annual labour cost	
B5.3 Auditing	Preliminary estimate	Cyprium provided figures	
B5.4 Bank Charges	Preliminary estimate	Cyprium provided figures	
B5.5 Communications IT	Detailed estimate	Cyprium provided figures	
B5.6 First Aid	Allowance per person on site	Allowance per person on site	
B5.7 Recruitment	Detailed estimate	Based on $10,000 per position at 20% turnover	Typical for FIFO operations in the Pilbara
B5.8 Consultants	Detailed estimate	Cyprium provided figures	
B5.9 Pre-operations	Preliminary estimate	Preliminary estimate	Refer section 15.5
B5.10 Insurance	Preliminary estimate from broker	Not Included al cost	
B5.11 Escalation	Preliminary estimate	Not Included	
B5.12 Foreign Exchange	Identify equipment and commodities to be imported, basis, values and likely currency	No foreign exchange components, reagents and consumables identified as at the date of the estimate	All reagents and consumables quoted in A$ (excluding GST)

Table 5-4 : Operating cost compilation methodology

The operating cost estimate for the process plant has been broken down into the following main cost components:

- Labour;
- Power;
- Reagents and Consumables;
- Maintenance;
- Administration.

The costs presented reflect the plant operating at steady state and nameplate capacity. They are exclusive of process plant sustaining and deferred capital costs.

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5.4 Qualifications and Assumptions

The following qualifications have been made in respect to the operating cost estimate:

- Consumables have been derived from first principles or vendor quotations or in their absence in-house knowledge;
- Labours rates reflect current market conditions and site location; and
- The date of the estimate is 1Q24.

5.5 Salaries and Labour

The salaries and labour costs have been provided by Cyprium and reviewed against recent projects and the 2024 Hays Salary Guide. The costs reflect current labour market conditions and the location of the site. The labour rates are annualised and inclusive of the following on-costs:

- Salary;
- Payroll tax;
- Insurance, workers compensation;
- Annual leave;
- Long service leave provision;
- Superannuation;
- Flights $450 per one-way trip; and
- Messing and accommodation of $63.44/person/day on site.

An on-cost of 26.8% has been applied to the salaries shown above to allow for insurance, leave, superannuation and payroll taxes.

The labour summary is provided in Table 5-5. It is anticipated that maintenance staff will be dual skilled with crane tickets. Operations staff will be dual skilled with forklift and other mobile equipment certifications.

Departments	Personnel	Cost $/y
Process Plant Operations	53	1,685,184
Plant Maintenance	27	1,191,260
Administration (incl. Procurement, HSE and LV mechanics)	29	5,254,592
TOTAL	**109**	**18,864,036**

Table 5-5 : Labour breakdown

5.6 Fuel

A diesel price of $1.51 per litre ($/L) delivered to Cyprium, inclusive of the fuel tax rebate, has been applied to the operating cost estimate. This is sourced from Cyprium. Diesel will be required for maintenance vehicles and light vehicles. Fuel for the mining fleet is excluded from this estimate.

5.7 Mobile Vehicles and Equipment

The allocation of mobile equipment is detailed in Table 5-6.

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Operation	Installed power kW	Avg. Cont. draw kW	Power Cost AUD/a	Power Cost AUD/t
3100 Crushing	3,021	1,911	2,795,146	0.62
3200 Grinding	11,029	9,390	13,736,730	3.05
3300 Flotation	2,076	1,716	2,509,724	0.56
3500 Concentrate Thickening	47	34	50,356	0.01
3600 Filtration and loadout	935	489	714,771	0.16
3700 Tailings Thickening	1,281	1,088	1,591,625	0.35
3800 Tailings storage	-	-	0	0.00
5100 Reagents	69	55	80,874	0.02
5200 Lime	-	-	0	0.00
5300 Water	208	178	260,849	0.06
5400 Plant and instrument Air	55	47	68,842	0.02
Miscellaneous	-	-	0	0.00
Sub Total - Unit Rate	**18,721**	**14,908**	**21,808,917**	**4.85**
Sub Total -Power Demand Cont.			**0**	0.00
Service Charge			**0**	0.00
Total			**21,808,917**	**4.85**

Table 5-7 : Power cost

5.7.2 Maintenance

Maintenance costs include the cost for spare parts and maintenance materials to maintain the process plant. The maintenance cost has been applied as a percentage of the plant area capital cost assumed for replacement of each area. The overall percentage factors, categorised by plant area, are summarised in Table 5-8.

	% of Capital	Capital Cost AUD M	Maintenance Cost Base AUD/y	Fixed Maintenance AUD/y	Variable Maintenance AUD/t ore
3100 Crushing	4.8%	28.5	1,367,395	341,849	0.29
3200 Grinding	3.5%	30.2	1,057,971	264,493	0.23
3300 Flotation	3.5%	53.1	1,859,465	464,866	0.40
3500 Concentrate Thickening	3.5%	10.9	380,498	95,124	0.08
3600 Filtration and loadout	3.5%	3.4	119,000	29,750	0.03
3700 Tailings Thickening	3.5%	1.5	52,500	13,125	0.01
3800 Tailings storage	3.5%	1.7	61,044	15,261	0.01
5100 Reagents	3.5%	2.0	70,000	17,500	0.02
5200 Lime	3.5%	1.5	52,500	13,125	0.01
5300 Water	3.5%	0.5	17,500	4,375	0.00
5400 Plant and instrument Air	3.5%	0.6	20,348	5,087	0.00
Infrastructure	5.0%	2.0	100,000	100,000	0.00
Contract Labour for mill relines, etc			150,000	0	0.04
Mobile Equipment			1,094,665	820,999	0.08
TOTAL ANNUAL COST		**136**	**6,402,887**	**2,185,554**	**1.20**

Table 5-8 : Maintenance costs

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Major wear parts such as crusher and mill liner costs have been included in consumables. The direct labour cost for maintenance personnel has been included in the labour cost category.

5.8 Reagents and Consumables

Reagents and consumables include the following cost elements:

- Crusher wear liners;
- Wear liners for the grinding mills;
- Grinding media for the grinding mills;
- All reagents used in the process;
- Fuel for mobile equipment assigned to the processing or maintenance groups; and
- Lubricants, operating tools and equipment, general and operator supplies.

Reagent addition rates were derived from supplied data, and originally from laboratory testwork. Reagent consumption rates have been calculated on a per tonne of mill feed from the steady state mass balance.

Operating Consumable		Cost	Rate	Annual cost	
		AUD/unit	Unit/year	AUD/t	AUD
Comminution					
Primary Jaw Crusher	Fixed Jaw	19,072	14.1 set/yr	0.060	268,988
	Moving Jaw	15,995	9.8 set/yr	0.035	156,934
Secondary Cone crusher					
	Mantle	20,213	22.9 set/yr	0.103	463,550
	Bowl	21,597	22.9 set/yr	0.110	495,304
Tertiary Cone crusher					
	Mantle	20,213	29.6 set/yr	0.133	598,575
	Bowl	21,597	23.2 set/yr	0.111	500,307
Screen panels					
	Top Deck	31,310	2	0.014	62,620
	Bottom deck	25,291	2	0.011	50,583
Primary Mill	Lifters/Liners	5,226	945	1.097	4,938,408
Secondary Mills	Lifters/Liners	5,226	473	0.549	2,469,204
Grinding Media	125 mm	1,724	4,113	1.576	7,090,812
	60 mm	2,076	4,113	1.897	8,538,588
Flotation					
Xanthate		3,196	1,139	0.809	3,638,646
Frother		5,776	1,103	1.415	6,368,040
Sodium Hydroxide		$556	-	0.000	0
Quicklime		$943	6,615	1.386	6,237,945
Flocculant					
	Concentrate	6,752	0.299	0.000	2,018
	Tailings	6,752	67.011	0.101	452,459
Floticor		2,316	1,049	0.540	2,428,326
Lime Mill balls	25 mm	2,000	33	0.015	66,150
Filtration					
Filter cloths		645,669	1	0.143	645,669
Water					
Antiscalant		18,126	1.5	0.006	27,189
RO plant membranes		25,276	1	0.006	25,276
Operator Consumables	Allowance	150		0.004	16,350

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Operating Consumable		Cost	Rate	Annual cost	
		AUD/unit	Unit/year	AUD/t	AUD
Water Treatment	Potable water	0.10		0.001	2,920
	Sewage Treatment	0.10		0.000	2,190
Diesel	Bores	1,150	32,808	0.012	55,875
	Mobile equipment			0.14	623,931
TOTAL COST				**10.273**	**46,226,857**

Table 5-9 : Reagent and consumable costs

.9 Laboratory

An allowance has been made in the Administration budget for laboratory costs, as per Cyprium advice.

Item	Annual cost	
	$/a	$/t
Sampling & Analysis consumables	75,000	0.021
Assay Lab Reagents	37,500	0.011
Other Assay Supplies	7,500	0.002
Met lab Reagents	18,750	0.005
Laboratory Consumable and Supplies	3,000	0.001

Table 5-10 : Laboratory cost allowances

.10 General and Administration

Administration costs have been generally taken from the costs provided by Cyprium.

Item	Annual Costs		Notes
	AUD	AUD/t	
Office & Gen. Supplies	5,559	0.002	From client opex
Tools & Equipment	15,000	0.004	From client opex
Mechanical Maintenance Materials	7,500	0.002	From client opex
Electrical Maintenance Materials	7,500	0.002	From client opex
Oils & Greases	15,000	0.004	From client opex
Instrument Maintenance Materials	3,000	0.001	From client opex
Maintenance Consumables	3,000	0.001	From client opex
Training	297,540	0.085	2% of annual labour cost
First Aid	5,450	0.002	$50/pp
Recruitment	218,000	0.062	$10,000 pp at 20% turnover
Communications Maintenance Materials	4,000	0.001	From client opex
DCS / SCADA Maintenance Materials	1,500	0.000	From client opex
Sampling & Analysis consumables	75,000	0.021	From client opex
Assay Lab Reagents	37,500	0.011	From client opex
Other Assay Supplies	7,500	0.002	From client opex
Metlab Reagents	18,750	0.005	From client opex
Laboratory Consumable and Supplies	3,000	0.001	From client opex
Environmental Costs	361,000	0.103	From client opex
IT Expenses	2,000	0.001	From client opex
Software fees / licences	1,500	0.000	From client opex
It Consultant	10,000	0.003	From client opex

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Item	Annual Costs		Notes
	AUD	AUD/t	
Office Comms / Equipment	20,000	0.006	From client opex
Office Cleaning Services	300	0.000	From client opex
Consultants - Allowance			
Personal vehicle leases	0	0.000	From client opex
Equipment Hire & Leasing	0	0.000	From client opex
Contract Dayworks	30,000	0.009	From client opex
Contract Electrical Expenses	100,000	0.029	From client opex
Contract Mining Expenses		0.000	From client opex
Contract Crushing Expenses		0.000	From client opex
Contract Power station Expenses		0.000	From client opex
Product Transport / Insurance (1)		0.000	From client opex
Product Refining Charges (1)		0.000	From client opex
TOTAL	**1,249,599**	**0.357**	

Table 5-11 : General and administration costs

5.11 Sustaining and Deferred Capital

Sustaining capital has been estimated to allow for the ongoing costs of repairing the existing process plant, including structural, concrete, electrical and platework repairs. An allowance of 5% of the installed plant cost as provided by Cyprium has been allowed, as shown in Table 5-12.

	% of Capital	Capital Cost	Maintenance Cost Base	% Fixed	Fixed Maintenance	Variable Maintenance
		AUD M	AUD		AUD/y	AUD/t ore
Sustaining capital	5.0%	136	6,796,979	25%	6,796,979	6,796,979

Table 5-12 : Sustaining capital allowance

5.12 Pre-production Costs

Pre-production costs are excluded from the estimate. These are included in Owner's costs.

5.13 Ramp-up

Figure 5-2 shows the McNulty ramp-up curve for the Project. The curve reflects the percentage of the expected nameplate capacity (tonnes milled) of the on-specification concentrate production over the first 12 months of operations. Actual ramp up will be dependent on the mining ramp-up schedule. Nifty is expected to match or exceed McNulty Series 1 due to the maturity of the plant and process.

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5.14 Exclusions

The following have been excluded from the operating cost estimate and generally addressed in the financial model (by Cyprium):

- Sustaining and deferred capital;
- Mining operating costs,
- Escalation;
- Contingency;
- Third Party or Native Title Royalty Agreements or ongoing compensation package costs Corporate costs, outside site general and administration
- Product marketing costs;
- Treatment and refining costs, including price participation and penalty costs;
- Foreign exchange variations;
- Licences, permitting and levies (ongoing);
- Royalties;
- Closure and rehabilitation;
- Cash flow forecasting;
- Depreciation and amortisation;
- Residual value;
- Pre-operating costs; and
- Shire road maintenance.

APPENDIX G SXEW PROCESSING CAPITAL ESTIMATION

CYPRIUM

Cathode Plant Refurbishment

Capital Cost Estimate

Cyprium has estimated the total capital required for the refurbishment of the Heap Leach and SX-EW to be A$30m (*refer Table 1 for breakdown*). Cyprium estimates the maximum project level drawdown for the project to be ~A$37m, taking into consideration early mining, processing, G&A and working capital movements prior to first cathode production.

Table 1 – Heap Leach and SX-EW Refurbishment Capital

Capital Cost Estimate	A$m
Heap Leach Costs	0.3
Construction Direct Costs	21.4
Total Indirects	2.5
Miscellaneous	2.4
Contingency	3.4
Total Heap Leach & SX-EW Capex	**29.9**

The refurbishment costs are being incurred because the system, last operated in January 2009, requires significant updates. The prolonged downtime, combined with an improperly executed shutdown (and the haphazard method of leaving copper cathode plates in various stages of formation within the cells speaks to this) has led to equipment being in varying states of functionality. Importantly, new or updated capital items have been considered to increase operational efficiency. Additionally, changes in legislation, including updates to hazardous area classifications, have rendered some previously compliant equipment obsolete.

There is no immediate need or requirement to relocate any significant infrastructure to restart the historic heap leach pads via an SX-EW operation.

PPM Global reviewed the site previously as part of the 2020 MLX restart plans, and again in 2024 to support the Cyprium downsized restart plan, and concluded that:

- **Heap leach pond and pumping infrastructure is still in place from the former full-scale operations and much of the equipment remains serviceable due to the requirement for managing heap leach run-off from an environmental perspective**
- **Processing equipment and supporting infrastructure is still in place at the SX/EW plant, albeit needing some refurbishment and replacement of certain equipment items**

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APPENDIX H SXEW PROCESSING OPERATING COST ESTIMATION

Operating Costs

Table 2 provides a breakdown of operating costs for the Nifty Cathode Restart, on a unit cost basis over the life of mine as well as the Steady State (FY28-FY31) average annual expenditure.

Table 2 – Operating Cost Breakdown

Operating Costs	A$/ t Cu	Steady State (A$m pa)
Mining	335	1.9
Processing	5,366	30.9
Site Administration	556	3.1
Selling Costs	1,044	6.4
Total	**7,301**	**42.2**

Note: Selling costs include insurance, ocean freight, trucking, state government royalties and marketing fees

Processing Costs

The major cost impacting the economics of the Nifty Cathode Restart relates to processing. Specifically, sulphuric acid and labour costs represent the highest proportion of total processing costs for the Nifty Cathode Restart (*refer Figure 22*). A breakdown of Steady State annual processing costs is also provided in Table 3.

Figure 22 – Processing Cost Breakdown

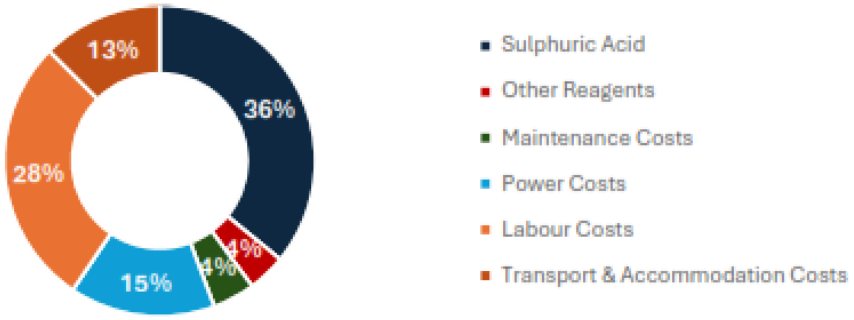

Table 3 – Processing Cost Breakdown

Processing Costs	Steady State (A$m pa)
Sulphuric Acid	11.5
Labour	8.3
Power	4.6
Transport & Accommodation	3.7
Maintenance	1.4
Other Reagents	1.3
Total	**30.9**

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Sulphuric Acid

The Steady State annual sulphuric acid cost used in Cyprium's modelling is A$11.5m per annum. This has been determined based on the assumption that 10kg of sulphuric acid will be required for every tonne of ore mined (*refer Table 4*).

Table 4 – Build up Sulphuric Acid Consumption

Sulphuric Acid Cost	
Tonnes Mined Per Annum	2,530,809
Sulphuric Acid Consumption (kg/t mined or exposed)	10
Sulphuric Acid Consumption (kg/ annum)	25,308,094

Labour, Transport & Accommodation

Total manning for the site has been determined to be 44 and is summarised in Table 5. Average labour costs, transport and accommodation have been forecast to be ~A$12 million per annum.

Table 5 – Build up Nifty Cathode Labour

Labour	Employees Per Shift	Number of Employees
Management	5.0	5
Process Plant - Technical	2.0	5
Process Plant - Production	7.0	16
Fixed Plant & Mobile Equipment Maintenance	7.0	9
Laboratory	1.0	2
Services (Supply, HSE, Power, Water)	3.5	7
Total	**25.5**	**44**

Power

Power consumption is based on the site's analysis of previous power consumption values for periods when the heap leach operated at various production rates, and interpolating that to 6,000 tpa cathode production rates. The power consumption includes borefields, camp and other NPI power consumption, and matches well with the Newpro bottom-up power consumption estimates for a similar size SXEW operation. Power costs are based on generator supply which is currently connected at site and has the capacity for the heap leach re-start requirements. Power costs used are AUD 0.144/kWh. Fixed power has been included in the estimate.

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Maintenance

Annual maintenance costs (~A$1.4m per annum) have been determined by applying a 3.5% factor to the estimated replacement cost for the SX-EW facilities as well as an annual allowance for heap leach irrigation replacement.

Sustaining Capital

The Nifty Cathode Restart assumes Cyprium will convert from a contractor mining model to an owner operator mining model after 12 months. The purchase of 1x PC1250 120t excavator, 2x PC 490 50t excavators and 3x HD605 60t trucks have been classified as sustaining capital. Approximate $9m in sustaining capital has been included over the life of the Nifty Cathode Restart.

Post-production Operating Costs

Cyprium estimates that post final cathode plating (March 2032) that a cost of approximately A$7 million for the completion of leached ore removal from the heap leach pads to the designated waste storage area, as well as for the decommissioning of the SX-EW plant. These expenses are primarily associated with labour and ancillary power for non-process infrastructure (NPI), general site administration and the camp.

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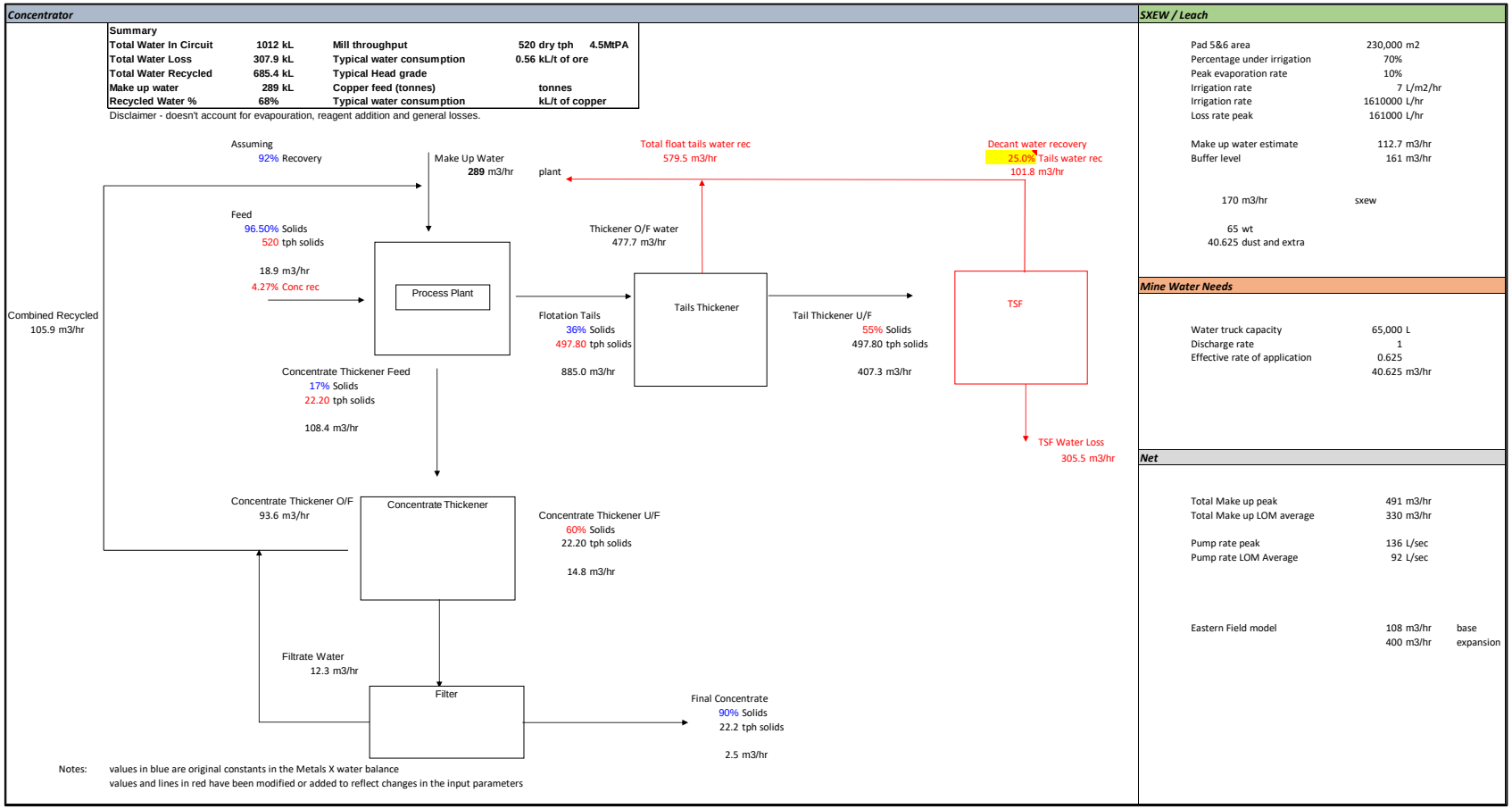
APPENDIX I WATER BALANCE NEEDS ESTIMATES



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15	Christofer Catania	CEO MEC Mining		25/11/2024