For personal use only

ASX ANNOUNCEMENT **23 May 2024**

Nifty Scoping Study Demonstrates Economic Viability of Large Surface Mine

Cyprium Metals Limited (**CYM** or the **Company**) is pleased to announce the completion and publication of the Nifty Surface Mine Scoping Study (**Study**).

Highlights include:

- **Optimal pit determined to contain 70mt of sulphide ore at 0.9% Cu for expected 570,000 tonnes of recovered copper through concentrator over life of mine**
- **Truck-shovel surface mine generates approx. 4.5 mtpa ore feed per year**
- **Expected average annual production of 36,000 tonnes of contained copper-in-concentrate through expanded plant**
- **Expected capital expenditure of A$175 million for plant refurbishment, expansion and ancillary site capital, excluding cost of mobile fleet**
- **Preliminary design allows for 89% of LOM waste disposal requirements to be withing current areas permitted for disturbance**
- **$NPV_{8\%}$ of $880 million and IRR of 46% at copper price of AUD 13,000[1]**
- **Board approval to advance to Pre-Feasibility Study**

"This is a meaningful step for Cyprium that consolidates months of work," said Executive Chair Matt Fifield. "The opportunity is clear. This Study outlines the high-level plan for accessing the large sulphide resource at Nifty. A relatively large truck-shovel surface mine enables us to best recover the significant resources at Nifty. A moderate investment in the brownfield processing plant capacity can nearly double the potential throughput of the plant, enabling the surface mine to produce around 36,000 tonnes of copper metal per year by matching strong mine design, right equipment selection and expanded processing capacity. We will refine this plan in the coming months."

Fifield continued, "This Study is focused on the surface mine opportunity at Nifty. Consider the surface mine opportunity described in the Study to be a standalone project and designed without any interaction with or dependency on the copper cathode project, which is a separate workstream dedicated to producing near-term copper through a restart of the adjacent cathode plant. Re-start plans for the copper cathode project are advanced and will be publicly disclosed once finalised."

[1] Assumes adoption of a contractor mining model. See attached Study for more information.

For personal use only

Cautionary Statements

This Scoping Study has been undertaken for the purposes of demonstrating the business case to support the recommencement of surface mining and copper concentrator operations at the Nifty Copper Operation.

It is a preliminary technical and economic study of the potential viability of the Nifty Copper Operation. It is based on low-level technical and economic assessments that are not sufficient to support the estimation of ore reserves.

A level of accuracy of +/-30% is applicable in accordance with Scoping level accuracy. Further evaluation work and appropriate studies are required before Cyprium will be in a position to estimate any ore reserves or to provide any assurance of an economic development case.

The project economics in this Study are derived solely from the mining and processing of Measured and Indicated Mineral Resources. The small amount of Inferred Mineral Resources mined is treated as mineralised waste and does not contribute to the project economics.

The Scoping Study is based on the material assumptions as outlined. These do not include the availability of funding.

While Cyprium considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

Funding in the order of A$175 million (Excluding mining) will likely be required to achieve the range of outcomes indicated in the Scoping Study.

Investors should note that there is no certainty that Cyprium will be able to raise this sum of funding when needed. It is possible or likely (as the case may be) that the required funding may only be available on terms that may be dilutive to or otherwise affect the value of Cyprium's existing shares.

CYM considers that its prospects of securing funding to undertake the large surface mine are strong for the following reasons:

- The project economics are attractive (see Scheduling Outcomes table in Executive Summary)
- The amount of pre-production capital expenditure is relatively modest as the Nifty mine is a brownfields site with established mine infrastructure (see Scheduling and Financial Inputs and Constraints table in Executive Summary)
- The risk profile is considered low to comparable new copper projects. Nifty is in Western Australia, a stable and well-regulated mining jurisdiction. The orebody is proven as the mine operated for 24 years and produced 750 kt of copper. All of the project economics are derived from material within the higher confidence Measured and Indicated Mineral Resource categories
- Demand for copper is very strong. Short and long-term copper futures prices support undertaking a project financing of this scale

Cyprium considers all the company's project financing options, including equity, debt, joint ventures, offtake financing, royalties, contractor financing, equipment financing and hybrid financing structures available to the company. Cyprium has confirmed that it is engaged in discussions with potential financiers.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of this Scoping Study.

For personal use only

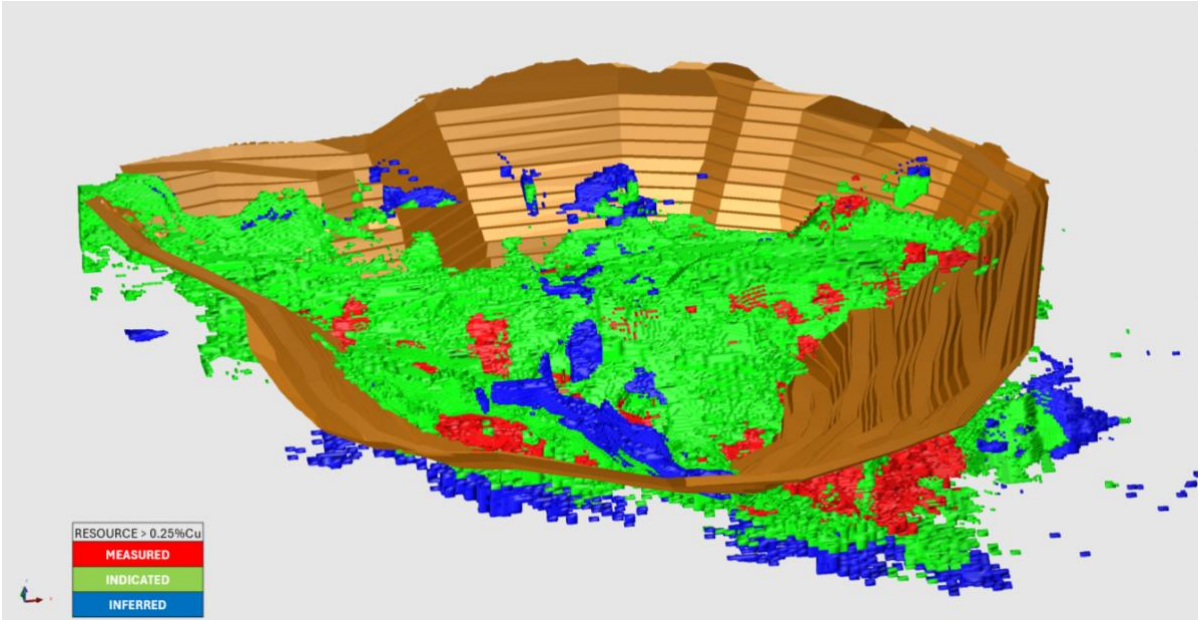
Cyprium and engineering partner MEC Advisory (**MEC**) developed this Study in two distinct phases: Optimization and Scoping Study. Both phases were built off of the March 2024 Mineral Resource Estimate which outlined one million tonnes of contained metal as follows:

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

	JORC 2012 CATEGORY									TOTAL		
	MEASURED			INDICATED			INFERRED					
OXIDISATION TYPE	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t
OXIDE, SAP & TRANS	2,603	1.02	18	17,519	0.74	130,081	849	0.70	5,902	20,971	0.78	162,000
SULPHIDE	35,452	0.98	347,610	63,395	0.80	505,685	5,199	0.43	22,479	104,047	0.84	876,000
TOTAL	38,055	0.98	374,081	80,915	0.79	635,766	6,048	0.47	28,381	125,018	0.83	1,038,000

The figure below shows the Nifty resources by classification and the ultimate pit shell design.

Figure 1. Wireframe of the Nifty Mineral Resource with the LSM pit shell



Phase 1: Optimisation

The first step of the work released today was an optimisation study that determined the best-fit ultimate pit geometry and sequencing to recover the best part of the contained resource in the highest net present value. The optimal pit selected contains ~70 million tonnes of sulphide ore at 0.9% Cu and 250 million BCM of total material moved. All of the

material processed in this mining schedule is classified as Measured and Indicated Mineral Resources.

Significant inputs for this optimisation phase included:

- $13,000 per tonne copper
- Ore feed rate of 3.5 mtpa – a slight expansion to the brownfield plant's nameplate ore feed rate capacity of 2.8 mtpa
- 400 tonne excavator fleet
- Preliminary mining costs as supplied by a 3rd party contractor
- All oxide resources treated as mineralised waste – i.e. not included in economics of study

The balance of the assumptions and outcomes from this phase can be viewed in the technical documentation attached to this announcement.

"The larger part of the existing resources are located at the bottom of the syncline," said Chris Catania, CEO of engineering partner MEC Mining and project lead. "We undertook a significant amount of work during this optimisation phase to study and plan the sequence of waste movement in conjunction with ore recovery. This approach is designed to help cover the costs of early waste movement."

This optimisation phase determined the economic cutoff of the mine given the assumptions used and looked at different intermediate pit shells to sequence the mine plan from initial movements to economic cutoff depth.

The designed ore feed rate of 3.5 mtpa, versus the nameplate capacity of the plant of 2.8 mtpa, was supported by work from an independent engineering group. The original plant was designed for a much higher-grade ore that was targeted by the underground operations, and consequently the back end of the plant is capable of processing higher volumes of lower grade ore feed. A new primary crusher is required, and was matched with existing milling capacity to reach the 3.5 mtpa throughput rate used in the optimisation.

Optimisation stage work focused on developing the ultimate pit, and the progressive pit shells to balance ore exposure with waste movement. The cross sections below show the different cutbacks that allow for access to incremental ore, and the plan view below shows the outer edge of the various stages of the pit development.

For personal use only

For personal use only

Figure 2. Oblique Cross Section of Optimisation Shells

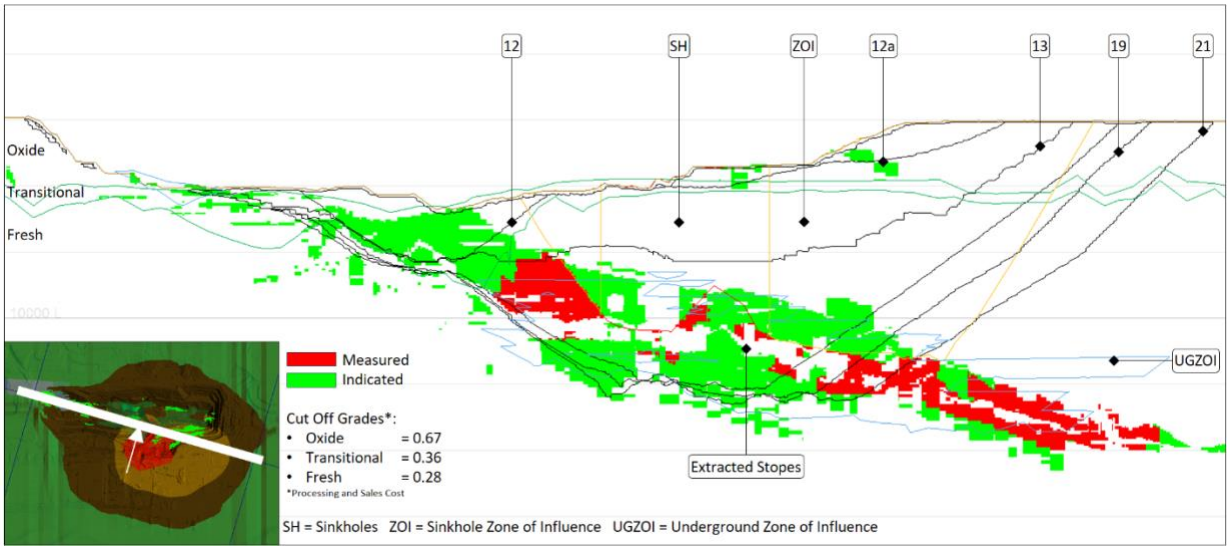
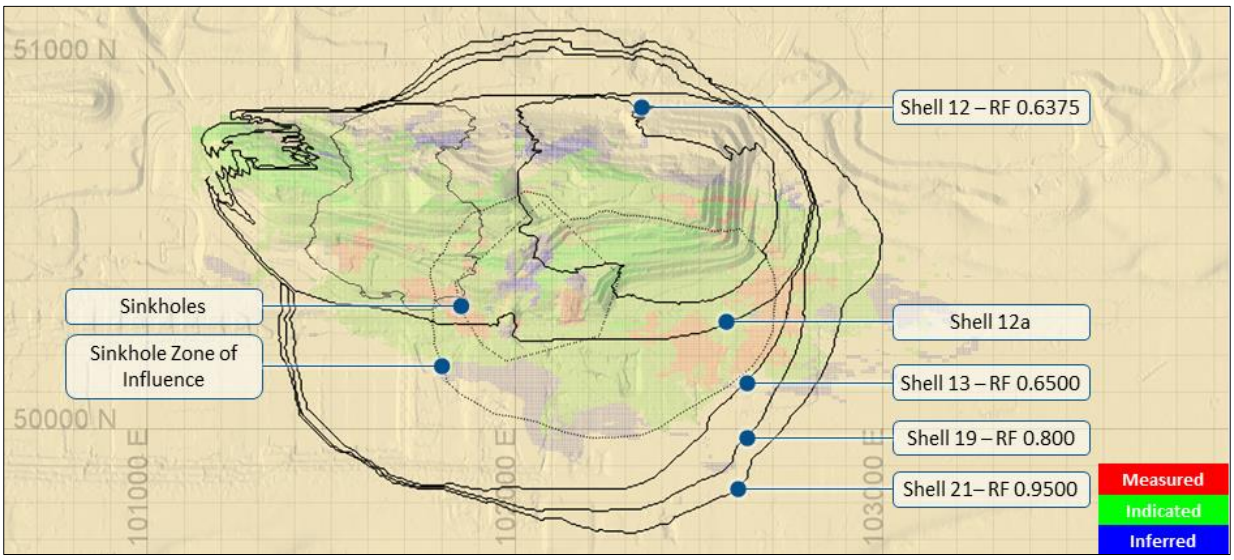


Figure 3. Oblique Cross Section of Optimisation Shells



Phase 2: Scoping Study

The second step of the Study involved a scoping exercise to provide a more detailed analysis of mine scheduling and projected economics. There were a few important differences in the design basis of the Scoping Study phase relative to those used in the Optimisation Phase.

- **Ore feed rate** was increased to 4.5 mtpa, which was the right fit for using three 600-tonne class primary waste excavators.
- **Capital** at the plant was increased over the optimization phase to add additional milling and crushing capacity necessary to process 4.5 mtpa ore.

For personal use only

- **Mining cost** estimates were done from a first-principal basis using MEC benchmark data. For the contractor case appropriate capital and operating margins were added.
- All mining activity rates were adjusted in areas that are influenced by previous mining activities based upon feedback from a 3rd party contractor with experience operating surface mines in similar situations.
- Three cost cases were examined: Contractor, Owner-Operator using purchased mobile equipment, and Owner-Operator using OEM financing at prevailing commercial rates.
- All oxide resources continued to be treated as mineralized waste.

Optimal pit shells were studied and sequenced on a bench-by-bench basis through a Vulcan mine optimizer taking into account mine design considerations such as ramp widths, geotechnical inputs, fleet sizing, and working areas. Stable wall conditions were engineered into the open-pit mine designs and incorporate a level of conservatism relating to the interaction of mining activities with the sinkholes and underground workings. Cyprium notes that the Company will utilise proven and industry standard practises for safely mining through the sinkholes and underground workings.

Preliminary waste emplacement designs were developed to maximize the use of areas already permitted for disturbance, leading to 89% of LOM waste being placed in these areas. Costs for waste haulage were developed at a level sufficient for a scoping study.

“As we worked on the Study, it was clear that there is a strong basis from which to increase the overall throughput of the plant and mine,” said Catania. “This increase in rate reduced total mine life from 22 years to 17 years and created economies of scale on a number of levels. We had detailed information around expansion of the concentrator that allowed for a good match of mining equipment and processing capacities.”

“The economics outputs are compelling,” said Fifield. “With a $NPV_{8\%}$ of $880 million and an IRR of 46% at A$13,000 per tonne copper, this scoping study shows that a surface mine at Nifty can put meaningful copper units into a market that requires them. I’m pleased with the study, the rigor, and both team and individual efforts that went into this work.”

Board Approval to Progress to PFS

The board endorsed this work and has authorized bringing this plan to a higher level of confidence level through a Pre-Feasibility Study. This next phase of work will develop the Study work to a sufficient point of confidence to support a declaration of a reserve via a Reserve Report.

A Pre-Feasibility Study is expected to follow the Reserve Report and will seek to incorporate additional scenarios around the base plan of the Study. With the advantage of on-site natural gas, Cyprium believes that there will be a likely reduction in mining costs via an alternate fuel scenario, and a similar reduction in projected carbon footprint. Other

planned work includes pre-strip scenarios and further optimisation of waste haulage strategy.

Fifield concluded, "Nifty has many advantages that de-risk the ultimate project execution: brownfield site with existing infrastructure, a large resource that can be processed through the on-site concentrator, the choice of world class suppliers and partners in Western Australia, and existing permits that facilitate speed to market. It's clear that we have an economic project concept. With continued execution by the Cyprium team and its strong engineering partners we expect this Study to advance quickly towards execution planning."

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

Further information:

Matt Fifield	John Gardner
Executive Chair matt.fifield@cypriummetals.com	Investor and Media Relations communications@cypriummetals.com

About Cyprium Metals Limited

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

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

Visit www.cypriummetals.com for further information.

Competent Person Statement

The information in this report that relates to the estimation and reporting of the Nifty Mineral Resource Estimate dated 14 March 2024 is an accurate representation of the recent work completed by MEC Advisory Pty Ltd. Mr Dean O'Keefe has compiled the work for MEC Advisory and is Manager of Resources for MEC Mining and a Fellow of the Australasian Institute of Mining and Metallurgy (#112948). Mr O'Keefe has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person (CP). Mr O'Keefe consents to the inclusion in the release of the of the matters based on this information in the form and context in which it appears.

References to Mineral Resources

The information in this announcement that relates to Mineral Resources for Nifty was previously reported by the Company in its announcement dated 14 March 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in those market announcements and, in the case of Mineral Resources, all material assumptions and technical parameters underpinning the estimates 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 been materially modified from the original market announcement.

For personal use only

MEC ADVISORY

TRUSTED EXPERTISE. PROVEN OUTCOMES.









For personal use only

Cyprium Metals Ltd

Nifty Surface Mine Scoping Study

May 2024

FORWARD LOOKING STATEMENT

This document may contain certain forward-looking statements. Such statements are only predictions based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the company's control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement.

The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward-looking statements will be or are likely to be fulfilled. Cyprium undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements).

The information in this document does not take into account the objectives, financial situation or particular needs of any person or organisation. Nothing contained in this document constitutes investment, legal, tax or other advice.

For personal use only

For personal use only

CAUTIONARY STATEMENT

This Scoping Study has been undertaken for the purposes of demonstrating the business case to support the recommencement of surface mining and copper concentrator operations at the Nifty Copper Operation.

It is a preliminary technical and economic study of the potential viability of the Nifty Copper Operation. It is based on low-level technical and economic assessments that are not sufficient to support the estimation of ore reserves.

A level of accuracy of +/-30% is applicable in accordance with Scoping level accuracy. Further evaluation work and appropriate studies are required before Cyprium will be in a position to estimate any ore reserves or to provide any assurance of an economic development case.

The Scoping Study is based on the material assumptions as outlined. These do not include the availability of funding.

While Cyprium considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

Funding in the order of A$175 million (excluding mining) will likely be required to achieve the range of outcomes indicated in the Scoping Study.

Investors should note that there is no certainty that Cyprium will be able to raise this sum of funding when needed. It is possible or likely (as the case may be) that the required funding may only be available on terms that may be dilutive to or otherwise affect the value of Cyprium's existing shares.

CYM considers that its prospects of securing funding to undertake the large surface mine are strong for the following reasons:

- The project economics are attractive (*see Scheduling Outcomes table in Executive Summary*)
- The amount of pre-production capital expenditure is relatively modest as the Nifty mine is a brownfields site with established mine infrastructure (*see Scheduling and Financial Inputs and Constraints table in Executive Summary*)
- The risk profile is considered low to comparable new copper projects. Nifty is in Western Australia, a stable and well-regulated mining jurisdiction. The orebody is proven as the mine operated for 24 years and produced 750 kt of copper. 97% of Nifty's Mineral Resources are in the higher confidence Measured and Indicated categories
- Demand for copper is very strong. Short and long-term copper futures prices support undertaking a project financing of this scale

Cyprium considers all the company's project financing options, including equity, debt, joint ventures, offtake financing, royalties, contractor financing, equipment financing and hybrid financing structures available to the company. Cyprium has confirmed that it is engaged in discussions with potential financiers.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of this Scoping Study.

For personal use only

For personal use only

EXECUTIVE SUMMARY

MEC Mining and Advisory (MEC) were engaged by Cyprium Metals (CYM) to undertake a scoping study to assess the potential and size of a surface mining and processing operation at the Nifty Copper Operation (NCO) targeting the copper sulphide resources based on the March 2024 Mineral Resource Estimate (MRE) as outlined below.

	JORC 2012 CATEGORY									***TOTAL***		
	MEASURED			**INDICATED**			**INFERRED**					
OXIDISATION TYPE	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t
OXIDE, SAP & TRANS	2,603	1.02	18	17,519	0.74	130,081	849	0.70	5,902	20,971	0.78	162,000
SULPHIDE	35,452	0.98	347,610	63,395	0.80	505,685	5,199	0.43	22,479	104,047	0.84	876,000
TOTAL	**38,055**	**0.98**	**374,081**	**80,915**	**0.79**	**635,766**	**6,048**	**0.47**	**28,381**	**125,018**	**0.83**	**1,038,000**

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

This work included optimisation (whittle style), preliminary designs and high-level schedules that indicate the potential for the recommencement of the existing concentrator at Nifty to be fed from a long-life, large-scale surface mining operation to produce saleable copper concentrate.

The study encompassed two parts: selecting the optimal pit size and geometry (**Optimisation**) and refining the pit design through sequencing material movements at a bench level, including preliminary economic outcomes at a scoping study level of accuracy (**Scoping**).

PIT OPTIMISATION

Pit optimisation was completed using a 3.5 mtpa concentrator feed rate, processing costs built from first principles by Cyprium and mining rates and costs provided by a third-party contractor, including but not limited to fixed and variable costs, productivity factoring based on areas impacted by historic underground mining and areas affected by the sink holes.

The optimised pit contains ~77 million tonnes grading 0.91% to generate a 22-year mine life at a 3.5 mtpa feed rate from the measured and indicated mineral resource outside the sinkholes. Oxide material was not considered for either concentration or heap leaching in the optimisation; however, it provides an opportunity to be considered in detailed scheduling.

A summary of the key inputs and outcomes of the optimisation are outlined in the table on the next page, along with plan and sectional views of the optimisation shells.

For personal use only

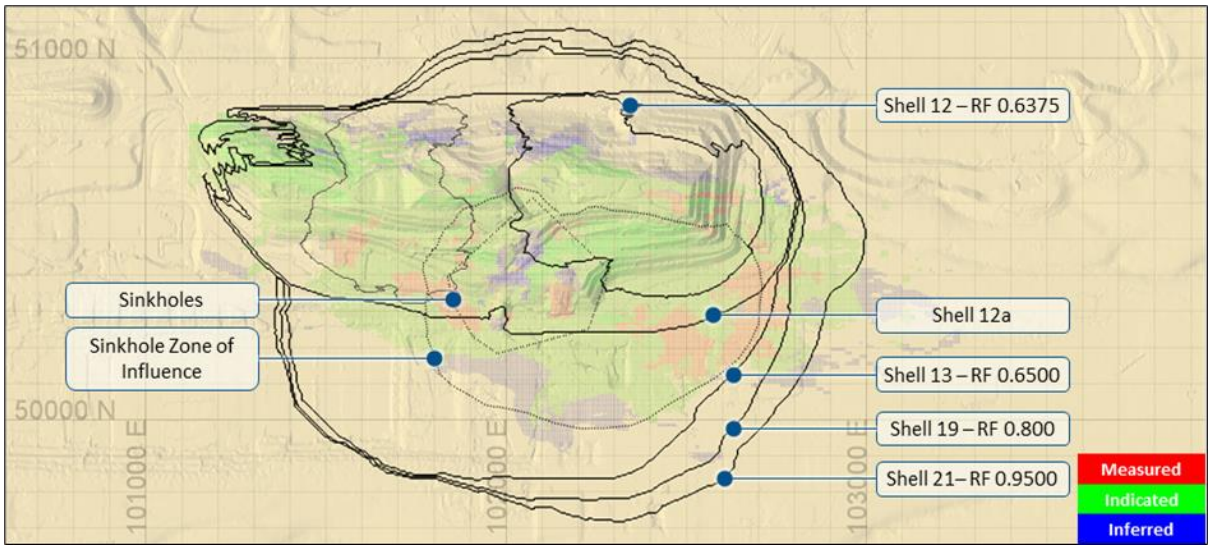
OPTIMISATION INPUTS AND OUTCOMES

Optimisation Input	UoM	Value
Copper Price	US$/t Cu	8,970
Exchange Rate	A$:US$	0.69
Copper Price	A$/t Cu	13,000
NPV Discount Rate	%	6
Processing Cost - Weight Averaged	A$/t	22.7
Mining Cost - Weight Averaged	A$/t	3.5
Selling Cost	A$/dTCu	1,478
Capital	A$M	-
Maximum Concentrator Feed Rate	mtpa	3.5
Maximum Sulphide Recovery	%	95
TMM Maximum Target	mtpa	65
Concentrator Feed - Resource Classification	Resource Classification	Measured and Indicated
Concentrator Feed - Sink Holes	Ore / Waste	Waste
Concentrator Feed - Weathering Profile	Oxidation	Transitional and Fresh

Optimisation Outcome	UoM	Value
Life of Mine (LOM) Total Material Movement (TMM)	mt	650
Total Concentrator Feed	mt	77%
Life of Mine (LOM) Head Grade	Cu%	0.91
Average Annual Copper in Concentrate Produced	t	32,000
Project Life	years	22
Undiscounted Cash Flow	A$M	2,500
NPV	A$M	1,000

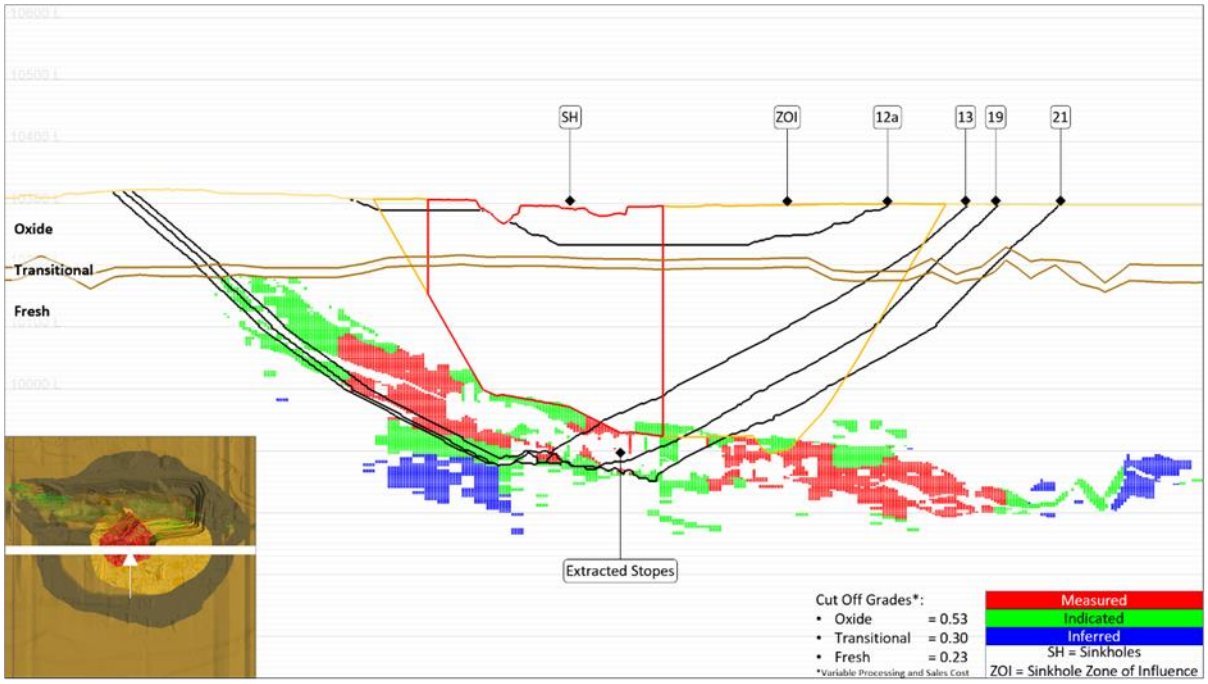
Numbers are rounded to reflect a suitable level of precision and may not sum due to rounding.

SELECTED OPTIMISATION SHELLS

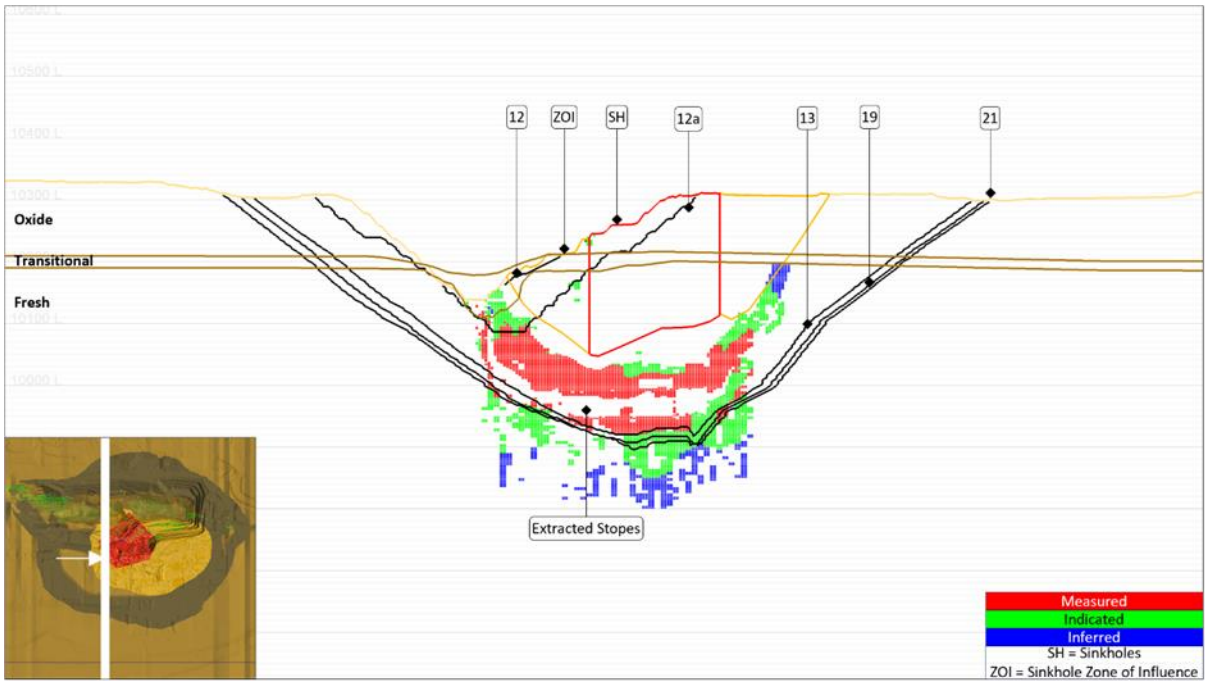


For personal use only

SECTION OF THE PROPOSED OPTIMISATION PIT SHELLS LOOKING NORTH



SECTION OF THE PROPOSED OPTIMISATION PIT SHELLS LOOKING EAST



For personal use only

MINE DESIGN, SCHEDULING AND PROCESS SELECTION

Following the designation of the optimal pit, MEC undertook preliminary mine designs and high-level scheduling to assess the overall economics. Four initial ore feed rates were considered: 2.8 mtpa, 3.5 mtpa, 4.5 mtpa and 6.0 mtpa. These targeted feed rates were designated by Cyprium and matched Cyprium's assessment of the step changes in concentrator throughput capacity. MEC and Cyprium reviewed the target cases and focused on 3.5 mtpa and 4.5 mtpa as the most likely cases. A high-level summary of these cases is outlined in the table below.

SCOPING STUDY MINE SIZE PARAMETERS

Processing Plant Capacity	2.8 mtpa	3.5 mtpa	4.5 mtpa	6.0 mtpa
Approximate Life of Mine	27 Years	22 Years	17 Years	13 Years
Concentrator Expansion Required	Base Case	Crushing	Crushing and 2nd Mill Line	Complete duplication of 3.5 mtpa option
Excavator Class (Tonne)	400	400	600	600 / 800
Truck Class (Tonne)	190	190 / 230	230	230 / 360
Added Risks to the Expanded Cases	Base Case	Few	Incremental upfront capital, working space requirement for larger excavators	Same as 4.5 plus additional construction risk, supply chain risk on ultra-class equipment, specialised operators and maintenance

With the target optimal mine sizes being 4.5 mtpa case, MEC undertook preliminary mine scheduling incorporating ramp widths to accommodate the 4.5 mtpa case.

SCHEDULING

MEC used internal benchmarking data to build up an owner-operator model from first principles and financially scheduled this in line with a contractor mining model based on the costs used in the optimisation.

Cyprium provided a capital estimate of A$175 million to refurbish and upgrade the current plant to recommence processing operations at a 4.5mtpa throughput. This was based on an order of magnitude estimate deemed sufficient by MEC to meet scoping study requirements.

For personal use only

A summary of the inputs for the schedule and the financial analysis is outlined below.

SCHEDULING AND FINANCIAL INPUTS AND CONSTRAINTS

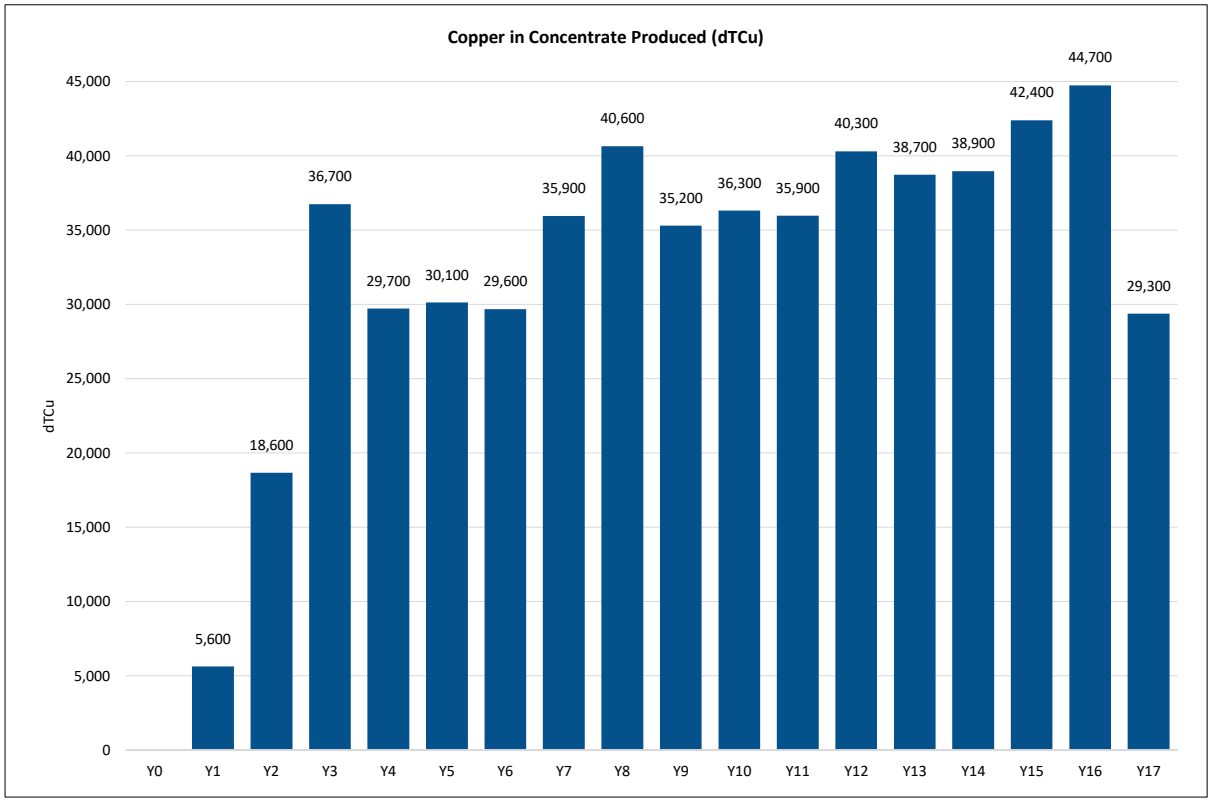
Scheduling and Financial Inputs and Constraints	UoM	1	2	3
Mining Model	Type	Owner Operator	Owner Operator	Contractor
Mining Capital Finance	Type	Self	OEM	Contractor
Concentrator Feed	mtpa	4.50		
Copper Price	US$/t Cu	8,970		
Exchange Rate	A$:US$	0.69		
Copper price	A$/t Cu	13,000		
NPV Discount Rate	%	8		
Plant and NPI Capital	A$M	175		
Maximum Sulphide Recovery	%	95		
TMM Maximum Target	mtpa	65		
Concentrator Feed - Resource Classification	Resource Classification	Measured and Indicated		
Concentrator Feed - Sink Holes	Ore / Waste	Waste		
Concentrator Feed - Weathering Profile	Oxidation	Transitional and Fresh		

As outlined below and over the page, analysis of the schedule outcomes indicates a positive outcome for the project.

SCHEDULING OUTCOMES

Scheduling Outcomes	UoM	1	2	3
Mining Model	Type	Owner Operator	Owner Operator	Contractor
Mining Capital Finance	Type	Self	OEM	Contractor
Mining Fleet Capital	A$M	227	-	-
Plant and NPI Capital	A$M	175	175	175
Total Capital	A$M	402	175	175
Mining Cost - Weight Averaged	A$/t	2.46	2.67	2.94
Processing Cost - Weight Averaged	A$/t	21.83		
Selling Cost - Treatment, Refining, Mine to Port and Royalties	A$/dTCu	1,478		
C1 Cost - Mining, Processing and Administration	A$/dTCu	6,627	6,891	7,223
C1 Cost - Mining, Processing and Administration	US$/dTCu	4,573	4,755	4,984
C1 Cost - Mining, Processing and Administration	US$/lbCu	2.08	2.16	2.27
LOM TMM	mt	745		
Total Concentrator Feed	mt	70		
Life of Mine (LOM) Head Grade	Cu%	0.86		
Average Annual Copper in Concentrate Produced	t	36,000		
Project Life	Years	17		
Undiscounted Cash Flow	A$M	2,700	2,730	2,530
NPV (8%)	A$M	910	1,000	880
IRR	%	35	56	46

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



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

FUTURE WORK

In addition, this study informed the likely limits of surface mining operations, identified gaps in existing data, and outlines work streams to help guide future studies including but not limited to:

- Infill resource drilling and further MRE review
- Geotechnical drilling, modelling and assessment
- Economic analysis and production scaling assessment
- Additional processing strategies for oxide material
- Mine planning optimisation to maximise early mill throughput
- Operational readiness requirements relating to potential mining around the sinkholes and the historic underground workings
- Carbon footprint analysis
- Potential use of natural gas utilising the onsite availability of gas for fuel in the mining fleets
- Review of alternate waste haulage methods, including in and expit crushing and conveying

The scoping study demonstrates that a surface mining strategy can deliver a substantial net present value (NPV) under the disclosed assumptions. Financial analysis was assessed internally with Cyprium and deemed

For personal use only

sufficiently positive in value, rate of return and confidence to justify the advancement of study phases into pre-feasibility study (PFS) stage.

For personal use only

For personal use only

TABLE OF CONTENTS

FORWARD LOOKING STATEMENT ..... **I**
CAUTIONARY STATEMENT ..... **II**
EXECUTIVE SUMMARY ..... **IV**
1 STATEMENT OF JORC COMPLIANCE **1**
2 PROJECT OVERVIEW **2**
2.1 LOCATION 2
2.2 HISTORY 3
2.3 EXISTING INFRASTRUCTURE 4
3 GEOLOGY **6**
4 MINERAL RESOURCE ESTIMATE **8**
5 GEOTECHNICAL PARAMETERS **9**
5.1 GAP ANALYSIS 9
5.2 GEOTECHNICAL REFINEMENT 9
5.3 GEOTECHNICAL DESIGN CONSIDERATION 10
6 OPTIMISATION BASIS, METHOD, CASES AND RESULTS **13**
6.1 OPTIMISATION METHOD 13
6.2 MINE OPERATING ASSUMPTIONS 13
6.3 OPTIMISATION BASIS 14
6.4 OPTIMISATION RESULTS 17
6.5 MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL 24
7 MINE SIZE PARAMETERS **27**
7.1 MINE SIZE 27
7.2 GAP ANALYSIS 27
8 MINE DESIGN AND SCHEDULE **29**
8.1 PIT DESIGN 29
8.2 MINERAL RESOURCE CONTAINED WITHIN THE MINE DESIGN 34
8.3 INTEGRATED WASTE LANDFORM DESIGN 36
8.4 MINING AND FINANCIAL SCHEDULE INPUTS 37
8.5 SCHEDULE OUTCOMES – MINE PRODUCTION 39
8.6 SCHEDULE OUTCOMES – FINANCIAL 42
9 ECONOMIC ANALYSIS **50**
9.1 SENSITIVITY ANALYSIS 50
9.2 MINING FLEET CAPEX 51
9.3 PROCESS PLANT CAPITAL 51
9.4 NON-PROCESS INFRASTRUCTURE CAPITAL 52
9.5 WASTE MINING CAPITALISATION 52
9.6 PROJECT FINANCIAL VIABILITY 52
10 METALLURGY **54**
10.1 CHALCOPYRITE (FRESH) ORE 54
10.2 TEST PROGRAMS 54
10.3 HISTORICAL OPERATING DATA 55

For personal use only

11 PROCESSING 57
11.1 PROCESS FLOW SHEET 57
11.2 CRUSHED ORE STOCKPILE 58
11.3 CRUSHER CAPACITY 59
11.4 GRINDING CAPACITY 60
11.5 MILLING CAPACITY 61
11.6 FLOTATION CAPACITY 61
11.7 DEWATERING CAPACITY 61
11.8 SULPHIDE PLANT UPGRADE SCENARIOS 62
12 ENVIRONMENTAL AND SOCIAL 63
12.1 HISTORY 63
12.2 REHABILITATION PROVISION 63
13 REGULATORY APPROVALS AND PERMITTING 64
13.1 LEGISLATIVE FRAMEWORK 64
13.2 STATE AGREEMENT PROPOSALS 65
13.3 ESTABLISHMENT OF MINING AND TREATMENT OPTIONS 65
13.4 ROADS 66
13.5 ACCOMMODATION FOR THE COMPANY'S WORKFORCE 66
13.6 WATER SUPPLY 66
13.7 POWER SUPPLY 66
13.8 PORT FACILITIES 66
13.9 AIRPORT AND ASSOCIATED FACILITIES 66
13.10 OTHER WORKS, SERVICES OR FACILITIES 67
13.11 USE OF LABOUR, PROFESSIONAL SERVICES, MANUFACTURERS, SUPPLIERS, CONTRACTORS AND MATERIALS 67
13.12 ENGAGEMENT AND TRAINING OF EMPLOYEES 67
13.13 OTHER LEASES, LICENCES AND TENURES OF LAND 67
13.14 ENVIRONMENTAL MANAGEMENT SYSTEM 67
13.15 ENVIRONMENTAL APPROVAL ROADMAP 68
14 FUTURE WORK PROGRAMME 70
14.1 GEOLOGY 70
14.2 GEOTECHNICAL 70
14.3 MINING 70
14.4 METALLURGICAL 70
14.5 CARBON FOOTPRINT ANALYSIS 71
15 REFERENCES 72
APPENDIX A: GEOTECHNICAL DOMAINS 73
APPENDIX B: DETAILED MINING COST INFORMATION 74
APPENDIX C: BLOCK MODEL ATTRIBUTES 78
APPENDIX D: DETAILED PROCESSING COST INFORMATION 79
APPENDIX E: DETAILED FINANCIAL COST INPUTS 81
DOCUMENT INFORMATION 84

For personal use only

LIST OF TABLES

Table 1 HISTORICAL PRODUCTION FROM NIFTY COPPER OPERATIONS 4
Table 2 NIFTY COPPER DEPOSIT MARCH 2024 MINERAL RESOURCE ESTIMATE (MRE) ABOVE 0.25% Cu 8
Table 3 2024 NIFTY MRE UPDATE CUT-OFF GRADES TOTALS 8
Table 4 OPTIMISATION BY RESOURCE CLASS AND PIT AREA 13
Table 5 SUMMARY MINING COST INPUTS 16
Table 6 PROCESSING COST 16
Table 7 PROCESSING CUT-OFF GRADES 16
Table 8 INITIAL OPTIMISATION RESULTS AT NPV_6 17
Table 9 INITIAL OPTIMISATION ANALYSIS WITH SHELL 12A ENTERED 20
Table 10 MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL 24
Table 11 SCOPING STUDY MINE SIZE PARAMETERS 27
Table 12 MINERAL RESOURCE BREAKDOWN BY WEATHERING AND RESOURCE CLASSIFICATION WITHIN THE MINE DESIGN AND SCHEDULE 34
Table 13 MINERAL RESOURCE CONTAINED WITHIN THE MINE DESIGNS 35
Table 14 SCHEDULING AND FINANCIAL INPUTS 37
Table 15 3rd PARTY CONTRACTOR PRODUCTIVITY ESTIMATES BASED ON MATERIAL TYPES 38
Table 16 3rd PARTY CONTRACTOR ANNUALISED PRODUCTIVE HOURS FOR EXCAVATION EQUIPMENT 38
Table 17 ANCILLARY EQUIPMENT ALLOCATION RATIOS 38
Table 18 COMPARATIVE SCHEDULING OUTCOMES 42
Table 19 OWNER OPERATOR MINING (SELF FUNDED) SCHEDULE OUTCOMES 44
Table 20 OWNER OPERATOR MINING (OEM FINANCED) SCHEDULE OUTCOMES 46
Table 21 CONTRACT MINING SCHEDULE OUTCOMES 48
Table 22 ESTIMATED PLANT REFURBISHMENT AND UPGRADE COSTS 52
Table 23 MAJOR TEST PARAMETER COMPARISON 55
Table 24 PLANT UPGRADE SCENARIOS 62
Table 25 PERMIT SUBMISSION STATUS 69
Table 26 GEOTECHNICAL DOMAINS 73
Table 27 GRADE CONTROL COST ESTIMATION 74
Table 28 DRILL AND BLAST PARAMETER AND COST 74
Table 29 DRILL AND BLAST COST ADJUSTMENT FACTORS 75
Table 30 LOADING COSTS 75
Table 31 MINE COST ADJUSTMENT FACTORS 76
Table 32 VARIABLE HAULAGE COST PER M CHANGE IN ELEVATION FROM 76
Table 33 ANNUAL FIXED COSTS 76

Table 34 ON COST BREAKDOWN 77
Table 35 CYM MINING TEAM BUILDUP 77
Table 36 CYM MINING TEAM COST BUILDUP 77
Table 37 BLOCK MODEL CLASSIFICATIONS 78
Table 38 OXIDE PROCESSING COST BREAKDOWN 79
Table 39 TRANSITIONAL PROCESSING COST BREAKDOWN 79
Table 40 FRESH PROCESSING COST BREAKDOWN 80
Table 41 TREATMENT AND REFINING CHARGES 81
Table 42 REALISATION COST BREAKDOWN 82

LIST OF FIGURES

Figure 1 NIFTY LOCATION 2
Figure 2 LOCATION OF NIFTY COPPER OPERATION 3
Figure 3 NIFTY GENERAL LAYOUT 5
Figure 4 SCHEMATIC GEOLOGICAL PLAN & X-SECTION OF THE NIFTY COPPER DEPOSIT 6
Figure 5 SINKHOLE AND UNDERGROUND WORKING GEOTECHNICAL DOMAINS (SPECIAL) 11
Figure 6 AS-BUILT GEOTECHNICAL DOMAINS (SPECIAL) 11
Figure 7 GEOTECHNICAL DOMAINS (STANDARD) 12
Figure 8 PROCESSING RECOVERY 15
Figure 9 OBLIQUE CROSS SECTION OF OPTIMISATION SHELLS 18
Figure 10 INITIAL OPTIMISATION RESULTS 19
Figure 11 INITIAL OPTIMISATION RESULTS WITH SHELL 12A ENTERED 20
Figure 12 SELECTED OPTIMISATION CRESTS 21
Figure 13 SECTION OF PROPOSED PIT SHELLS LOOKING NORTH 1 21
Figure 14 SECTION OF PROPOSED PIT SHELLS LOOKING NORTH 2 22
Figure 15 SECTION OF PROPOSED PIT SHELLS LOOKING EAST 1 22
Figure 16 SECTION OF PROPOSED PIT SHELLS LOOKING EAST 2 23
Figure 17 SECTION OF PROPOSED PIT SHELLS LOOKING ACROSS STRIKE 23
Figure 18 BUILD UP OF OXIDE MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL 25
Figure 19 BUILD UP OF SULPHIDE MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL 25
Figure 20 BUILD UP OF MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL 26
Figure 21 MARCH 2024 MRE EXTENTS 26
Figure 22 2 WAY RAMP HAULAGE 29
Figure 23 STAGE DESIGNS 30
Figure 24 CROSS SECTION OF PIT DESIGNS FROM SOUTHWEST 30

For personal use only

Figure 25 CROSS SECTION OF PIT DESIGNS FROM SOUTHWEST SOUTH 31
Figure 26 DESIGN PIT STAGE 1 31
Figure 27 DESIGN PIT STAGE 2 32
Figure 28 DESIGN PIT STAGE 3A 32
Figure 29 DESIGN PIT STAGE 3B 33
Figure 30 DESIGN PIT STAGE 3C 33
Figure 31 DESIGN PIT STAGE 4 34
Figure 32 CONCEPTUAL IWL DESIGN 36
Figure 33 TOTAL MOVEMENT 39
Figure 34 ORE TONNES AND GRADE 40
Figure 35 COPPER IN CONCENTRATE PRODUCED 40
Figure 36 EQUIPMENT REQUIRED BY YEAR 41
Figure 37 PERSONNEL REQUIREMENT 42
Figure 38 OWNER OPERATOR MINING (SELF FINANCED) CASH FLOW AND DISCOUNTED CASH FLOW 44
Figure 39 OWNER OPERATOR (SELF FINANCED) $/ORE TONNE UNIT COST 45
Figure 40 OWNER OPERATOR (OEM FINANCED) CASH FLOW AND DISCOUNTED CASH FLOW 46
Figure 41 OWNER OPERATOR (OEM FINANCED) $/ORE TONNE UNIT COST 47
Figure 42 CONTRACT MINING CASH FLOW AND DISCOUNTED CASH FLOW 48
Figure 43 CONTRACT MINING $/ORE TONNE UNIT COST 49
Figure 44 NPV SENSITIVITY (%) TO CHANGES IN KEY INPUTS 50
Figure 45 NPV TORNADO SENSITIVITY TO 30% CHANGE IN KEY INPUTS 51
Figure 46 DAILY PLANT DATA - MASS PULL VS UPGRADE RATIO 56
Figure 47 BASIC FLOW SHEET 57
Figure 48 EXISTING CONCENTRATOR PLANT FLOWSHEET 57
Figure 49 POSSIBLE CRUSHED ORE STOCKPILE LOCATION 58
Figure 50 STOCKPILE WITH POSSIBLE NEW PRIMARY, SECONDARY AND TERTIARY CRUSHER LOCATIONS 59
Figure 51 MINING LEASE M271SA 69

For personal use only

Glossary and list of abbreviations

Abbreviation	Description
%	Percent
&	And
cpy	Chalcopyrite
Cu	Copper
CYM	Cyprium Metals Limited
d	Dry
DD	Diamond Drilling
Fe	Iron
G&A	General and administration
GDA	Geocentric Datum of Australia
JORC	Joint Ore Reserves Committee
K	kilo
M	Metre
mE	Metres Easting (MGA2020 Zone 51)
MEC	MEC Mining Group Pty Ltd
mm	millimetres
mN	Metres Northing (MGA2020 Zone 51)
Mt	Million tonnes
pct	Percent
ppm	Parts per million
QAQC	Quality Assurance / Quality Control
RAD	Rotary Airblast Drilling
RC	Reverse circulation
RL	Reduced Level
t/m^3	Tonnes per cubic metre
tpa	Tonnes per annum

For personal use only

1 STATEMENT OF JORC COMPLIANCE

The information in this report relates to a scoping-level mining study. It 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, a consultant to 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



_____ 22nd may 2024

Christofer Catania B.Eng(Mining) MBA FAusIMM 228366 GAICD

Chief Executive Officer MEC Mining

For personal use only

For personal use only

2 PROJECT OVERVIEW

2.1 Location

Cyprium Metals Limited (ASX: CYM) (Cyprium) Nifty Copper Operation (Nifty / NCO) 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 1 and Figure 2.



Figure 1 NIFTY LOCATION

For personal use only

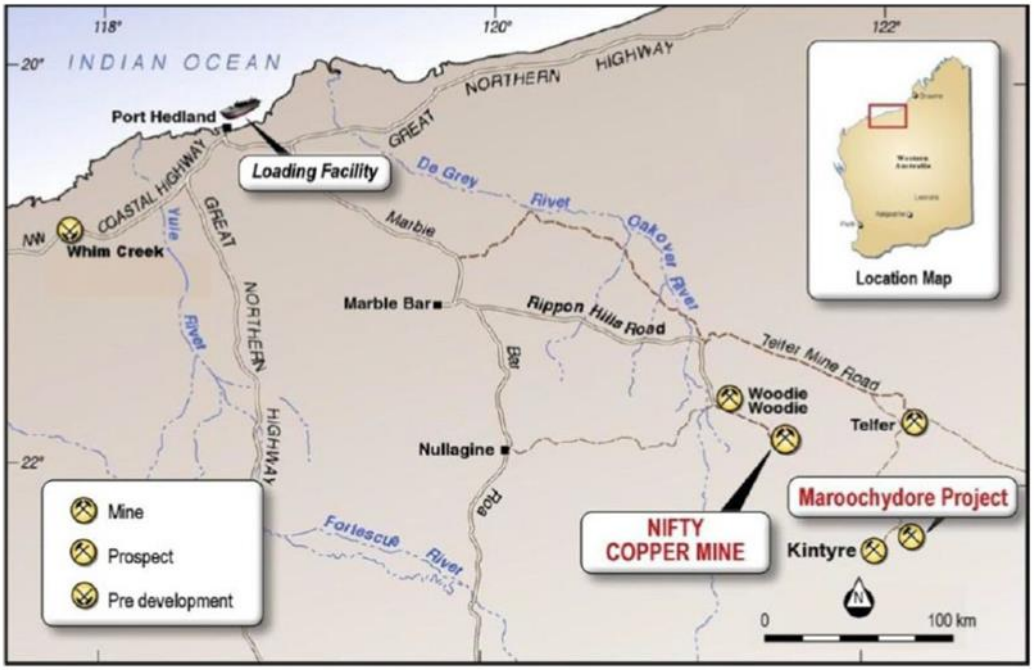


Figure 2 LOCATION OF NIFTY COPPER OPERATION

2.2 History

Nifty has been operating and processing copper ores since 1993.

Initially, copper oxide ores were mined from a surface mine with recovery via a heap leach and SX/EW facility to produce copper cathode. Open-pit mining operations ceased in June 2006 following the establishment of the underground mine. The copper cathode operations produced approximately 25,000 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 scope of which lies outside this study.

An 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 1

For personal use only

Table 1 HISTORICAL PRODUCTION FROM NIFTY COPPER OPERATIONS

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	18.1
2007	0.2	6.9	1.5	50.9
2008	0.7	3.2	1.9	56.0
2009		0.2	2.0	56.6
2010			2.3	65.3
2011			2.1	51.6
2012			2.3	54.1
2013			2.3	51.7
2014			1.1	18.9
2015			1.5	29.6
2016			1.0	20.0
2016			0.7	13.0
2017			1.4	20.2
2018			1.5	20.1
2019			1.0	13.7
Total	**18.0**	**219.5**	**23.2**	**539.7**

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

2.3 Existing Infrastructure

The previous mining activities on-site give Cyprium access to significant existing infrastructure, including but not limited to:

- Existing heaps with associated pumping and drainage infrastructure
- SX/EW processing plant with a previous nameplate capacity of 25,000 tpa
- Copper sulphide concentrator with 2.8 mtpa nameplate capacity
- Tailings storage facility
- Support offices, workshops, stores
- Onsite gas/diesel power generation facilities gas supply via pipeline
- Accommodation and Messing facilities
- Aerodrome to support 100 seater jets

The general arrangement of this infrastructure is outlined in Figure 3.



Figure 3 NIFTY GENERAL LAYOUT

For personal use only

For personal use only

3 GEOLOGY

The Nifty copper deposit is hosted within the Neoproterozoic Broadhurst Formation, comprising part of the Yameena Supergroup. The host rocks are divided into four informal members within the deposit area: the Footwall Beds, the Nifty Carbonate Member, the Pyritic Marker and the Hanging wall Beds (Figure 4).

The deposit comprises a supergene oxide, sulphide, and transitional mineralisation above strata-bound hypogene sulphide mineralisation hosted by carbonaceous and dolomitic shales, principally within the Nifty Carbonate Member. This includes the Middle Carbonate Unit (MCU) and the Lower Carbonate Unit (LCU). Hypogene mineralisation is localised in the northeastern limb and keel of the 15°SE plunging Nifty Syncline. It extends for >1,300 m down plunge. Mineralisation is simple, with the only major sulphide minerals being chalcopyrite and pyrite, with minor sphalerite and galena.

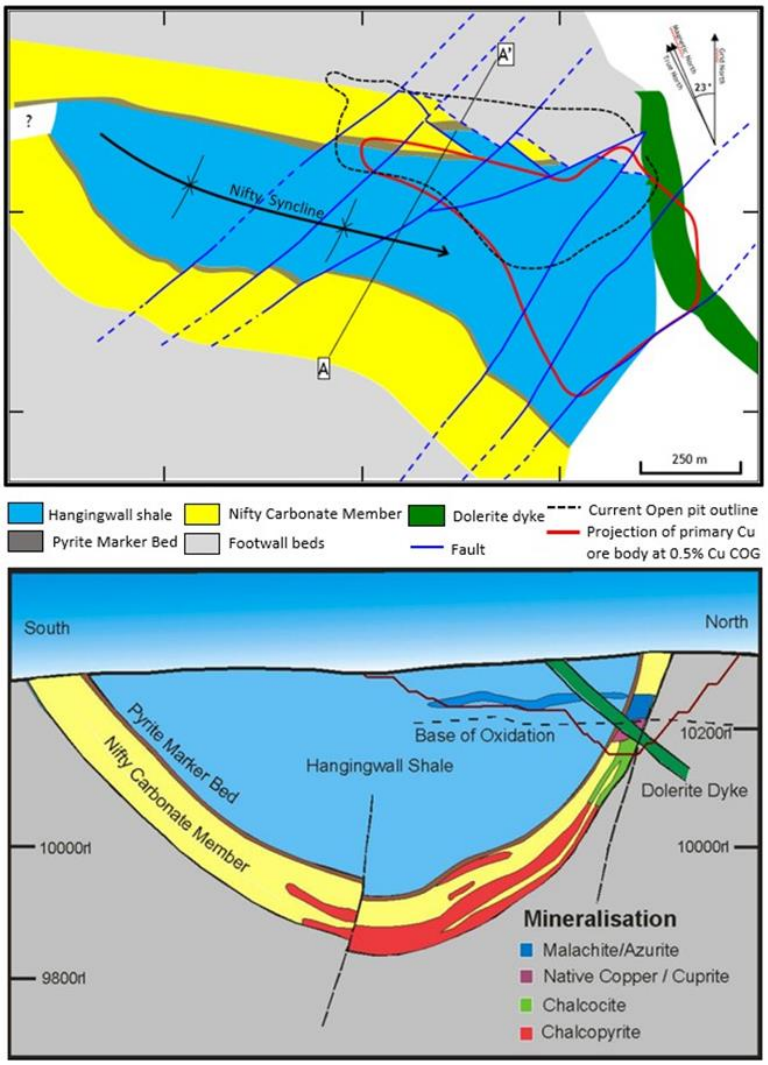


Figure 4 SCHEMATIC GEOLOGICAL PLAN & X-SECTION OF THE NIFTY COPPER DEPOSIT

Weathering of the deposit has altered the mineralisation to a depth of around 200 m, with three main styles of copper mineralisation occurring:

- Oxide dominated mineralisation comprising malachite, azurite, cuprite and native copper, extending to depths up to 100 m below the surface
- Supergene secondary sulphide mineralisation overlying the base of oxidation. This style of mineralisation is dominated by chalcocite and occurs typically between 100 m and 200 m below the surface
- Primary sulphide mineralisation in quartz-dolomite altered carbonates and shales. The primary copper mineral is chalcopyrite with minor covellite and bornite. Pyrite is a common gangue mineral but only occurs with chalcopyrite on the margins of the deposit. The primary sulphide mineralisation is located mainly in the keel of the syncline

The historic surface mine is situated around the northern limb of the syncline and previously mined oxide ore, transitional ore and some of the supergene mineralisation as outlined in Figure 4.

For personal use only

For personal use only

4 MINERAL RESOURCE ESTIMATE

Cyprium Metals Ltd (Cyprium) commissioned MEC Mining Pty Ltd (MEC) in October of 2023 to complete a Mineral Resource estimation (MRE) of the Nifty copper deposit and report the estimate in accordance with the JORC 2012 reporting code (the Code) to obtain an MRE that better reflected the available geological understanding of the deposit. This report was released to the market on 14th March 2024 (Cyprium, 2024)

The MRE undertook significant geological modelling and supporting work. The April 2022 MRE was remodelled completely, focusing on assigning the resource classification and consistent modelling. Ore body statistics were assessed in the revised mineral resource modelling to correct the noted "Spotted Dog" effect in the April 2022 model. The March 2024 MRE also included infill drilling results targeted to provide more information on inferred resources in the April 2022 MRE and to define shallower ore that could form early feed to the concentrator.

The resulting March 2024 MRE is summarised in Table 2 and Table 3. The additional work resulted in upgrading much of the previous inferred resources and re-classifying the measured and indicated resources, particularly considering the influence of resources impacted by previously mined areas and sinkholes.

Table 2 NIFTY COPPER DEPOSIT MARCH 2024 MINERAL RESOURCE ESTIMATE (MRE) ABOVE 0.25% Cu

	JORC 2012 CATEGORY									*TOTAL*		
	MEASURED			**INDICATED**			**INFERRED**					
OXIDISATION TYPE	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t	Kt	CuCut %	Cu t
OXIDE, SAP & TRANS	2,603	1.02	18	17,519	0.74	130,081	849	0.70	5,902	20,971	0.78	162,000
SULPHIDE	35,452	0.98	347,610	63,395	0.80	505,685	5,199	0.43	22,479	104,047	0.84	876,000
TOTAL	**38,055**	**0.98**	**374,081**	**80,915**	**0.79**	**635,766**	**6,048**	**0.47**	**28,381**	**125,018**	**0.83**	**1,038,000**

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

Table 3 2024 NIFTY MRE UPDATE CUT-OFF GRADES TOTALS

Cut-off %	0.15	0.20	0.25	0.30	0.35	0.40
Tonnage (kt)	159,557	141,045	125,018	111,379	99,425	89,823
CuCut (%)	0.69	0.76	0.83	0.90	0.97	1.03

For the full report, refer to "MEC Nifty MRE March 2024 Memorandum Release CYM reviewed.pdf", published via ASX investor release.

For personal use only

5 GEOTECHNICAL PARAMETERS

After the MLX Scoping study (Metals X, 2020) and the CYM 2022 restart study (Cyprium, 2022) MEC reviewed and completed a gap analysis on all existing data. This review identified the need for further geotechnical drilling, logging, and laboratory test work to support the geotechnical assessment of a proposed "large" surface mine. Site work was completed in January 2024 with final assessment and conclusions expected in the second half of 2024.

5.1 Gap Analysis

Before the completion of the optimisation, MEC reviewed the April 2022 MRE, available geotechnical information, heap leach restart study and various operating and cost inputs. Following review, MEC made various recommendations to CYM, including but not limited to:

- Geotechnical modelling and supplementary drilling works
    - That targets a geotechnical assessment to support a large surface mining operation extending beyond the limits of currently available data
    - Targets deeper zones, where previous investigations and assessments were centred on underground operations only
    - Assessment of the impact of the sinkholes and their zone of influence on the eastern extent of the operations

5.2 Geotechnical Refinement

As an interim step to support work to a scoping study level a detailed review of existing data was completed with the CYM restart (Cyprium, 2022) study parameters and further refined and increased in detail. Key modifications include but are not limited to the following:

- Sinkholes and Underground Working as outlined in Figure 5:
    - Division of the original sinkhole area into 2 zones:
        - Sinkholes – 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]
        - Sinkhole Zone of Influence – Remainder of the influence area previously used by MLX
    - Underground Zone of Influence – a projection around all underground workings to 30m vertically and at an angle of 37 Degrees[3] on the basis that all working should be treated as

[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
[3] 3 x 10 m blast benches at the natural rill angle

voids until proven otherwise and ensures capture from a geotechnical assessment and productivity reduction perspective

Application of natural rill angle to as-built surfaces as outlined in Figure 6:

- Waste Dump
- Heap Leach
- In Pit Back Fill

Additional domains below the 10,100 RL and further split in the range as outlined in Figure 7:

- 10,100 RL to 10,000 RL and;
- 10,000 RL to 9,500 RL

Further account was taken of adding dual lane ramps to accommodate 190-tonne class trucks.

The full breakdown of all the geotechnical domains is summarised in Table 27 in Appendix A.

5.3 Geotechnical Design Consideration

MEC modelled the geotechnical zones for the pit arrays for the broader pit. The underground and sinkhole-impacted zones were overlayed and categorised as depicted in Figure 5.

These areas were utilised in modifying factor allocations for recovery, classifications, and mine operating assumptions with rate reductions, blasting adjustments, and reduced ore recovery.

For personal use only

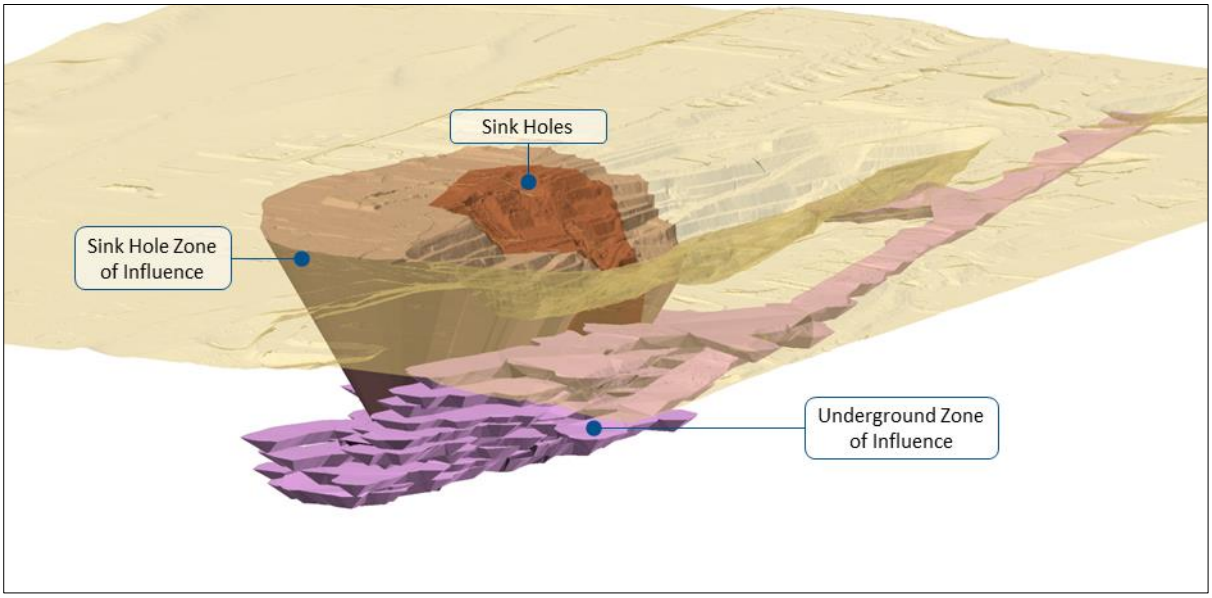


Figure 5 SINKHOLE AND UNDERGROUND WORKING GEOTECHNICAL DOMAINS (SPECIAL)

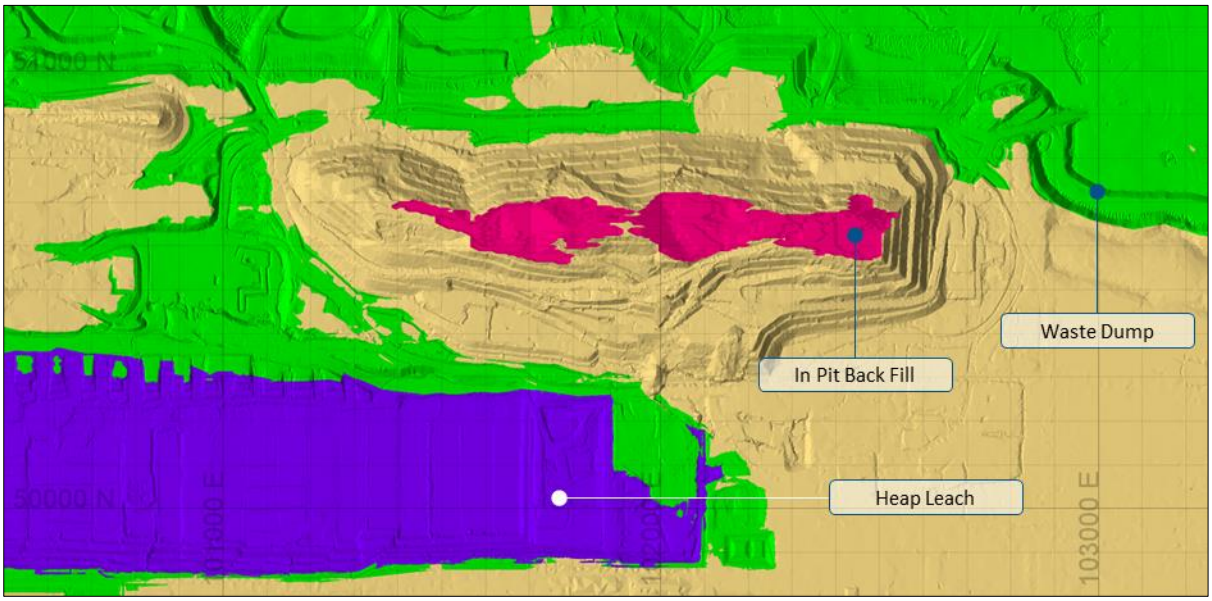


Figure 6 AS-BUILT GEOTECHNICAL DOMAINS (SPECIAL)

For personal use only

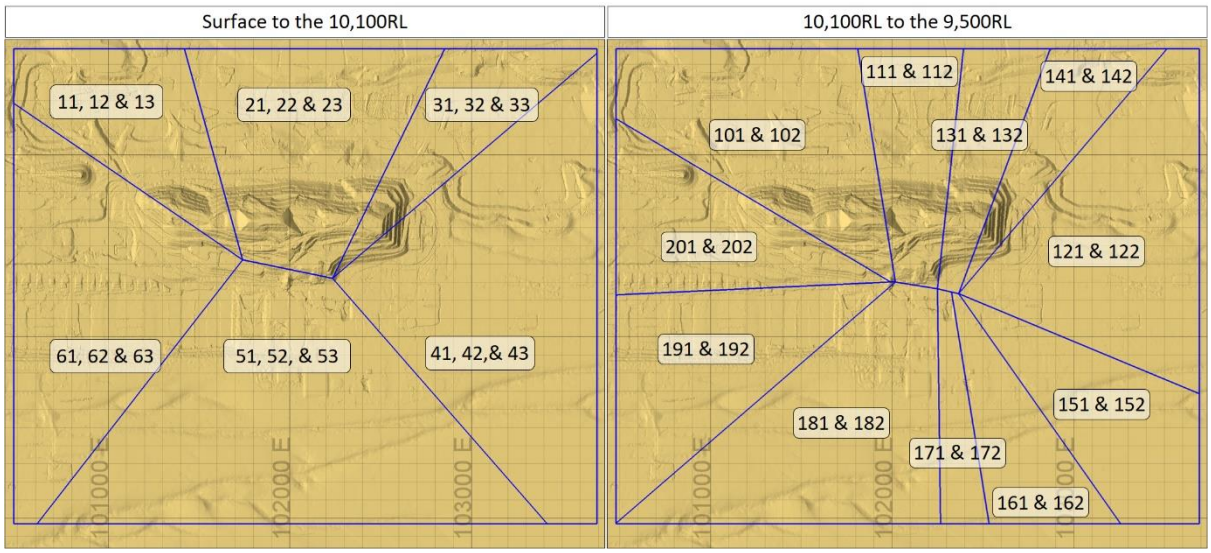


Figure 7 GEOTECHNICAL DOMAINS (STANDARD)

For personal use only

For personal use only

6 OPTIMISATION BASIS, METHOD, CASES AND RESULTS

Following the completion of the March 2024 MRE, MEC undertook to find the optimal pit shell from which to build detailed mine plans.

6.1 Optimisation Method

The Maptek Vulcan Pit optimiser was used for the pit optimisation. The optimiser uses the Lerch Grossman 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 per the assumptions noted in the remainder of this section and Appendix B.

CYM supplied the block model for the Nifty deposit, and it was subjected to the following critical evaluation steps:

- The model was audited, assessing criteria such as the integrity of air blocks, block size, and presented grades and tonnages
- The block model provided was not regularised and was regularised to a 5 x 5 x 2.5
- A series of scripts were applied to the block model to assign the relevant inputs and constraints

The copper output produced was modelled based on the resource classification contained within the block model and constrained to a process plant feed rate of 3.48 mtpa.

6.2 Mine Operating Assumptions

After completing the steps outlined in section 6.1, the pit optimisation analysis was run using the Lerchs-Grossman algorithm method.

The optimisation was applied based on the following:

- Resource classification as outlined in Table 4
- Geospatial locations relative to the sinkholes as outlined in Table 37
- Mine operating adjustment factors were developed in conjunction with a third-party contractor with extensive experience in mining through underground workings and disturbed areas. These adjustment factors are outlined in Table 29 and Table 31

Table 4 OPTIMISATION BY RESOURCE CLASS AND PIT AREA

	Oxide	Transitional	Fresh
Sinkholes	-	-	-
Main Pit	-	Measured and Indicated	Measured and Indicated

For personal use only

6.3 Optimisation Basis

The pit optimisation was run on a 3.5 mtpa ore feed rate case based on design criteria from the client with inputs as outlined. Any oxide material was treated as mineralised waste and not included in the optimisation.

6.3.1 Mineral Resource

The Mineral Resource used for this scoping study was the March 2024 MRE completed by MEC Mining and released on the 14th of March 2024.

6.3.2 Plant Throughput

Cyprium reviewed the MLX scoping study and independently reviewed information relating to refurbishment and expansion costs, as later discussed. The initial basis was set at a mill throughput of 3.48 mtpa should be used for fresh and transitional feed. The 3.48 mtpa was the optimisation basis, with later analysis targeting a larger mill feed rate of 4.5 mtpa.

6.3.3 Dilution and Mining Loss

No specific work was scoped to be completed at this level of study.

However, the following dilution factors and mining recovery/loss were applied to all mill feed blocks based on a 400-tonne class excavator.

- Dilution 10%
- Mining Loss / Recovery 5% / 95%

These factors were applied during optimisation with a dilutant grade of 0% Cu, and no separate mining model was created.

Upon final fleet selection, the loss and dilution should be investigated and the use of adjacent block grade for dilution.

6.3.4 Revenue, Selling Costs, TC/RCs

Detailed financial inputs are outlined in Appendix D, and can be summarised as follows[4]:

- AUD:USD Exchange Rate 0.69:1.00
- Copper Price A$13,000/dT Copper
- Treatment Charges (TC) US$75 / dry metric tonne
- Refining Charges (RC) US$0.075 / lb

[4] Copper Market Analysis - Current cash LME Copper Prices are USD 10,800 / AUD 16,200, the highest prices recorded at any point over the past 5 years. The LME Copper futures curve out to December 2027 is above US$10,000 /t. Supply and demand dynamics are favourable due to increased Chinese manufacturing activity and the LME banning Russian copper from being delivered to the exchange. Additionally, the historically low smelter treatment and refining charges (US 23 c/lb in 2023) are expected to continue to fall due to US 17 c/lb in 2024 due strong smelter demand for the metal. The outlook for copper is robust as the metal is strongly linked to the global trends of electrification and decarbonisation.

For personal use only

6.3.5 Metallurgical recoveries

The study applied one process route, a primary concentrator, limited to transitional and fresh material. No consideration was made for heap leaching or concentration of oxidised material.

Cyprium provided the recoveries to be utilised. MEC Checked and validated these recoveries and deemed them suitable for a scoping-level study.

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.

As outlined in Figure 8, these equations were limited to a maximum recovery of :

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

Otherwise, they were set to:

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

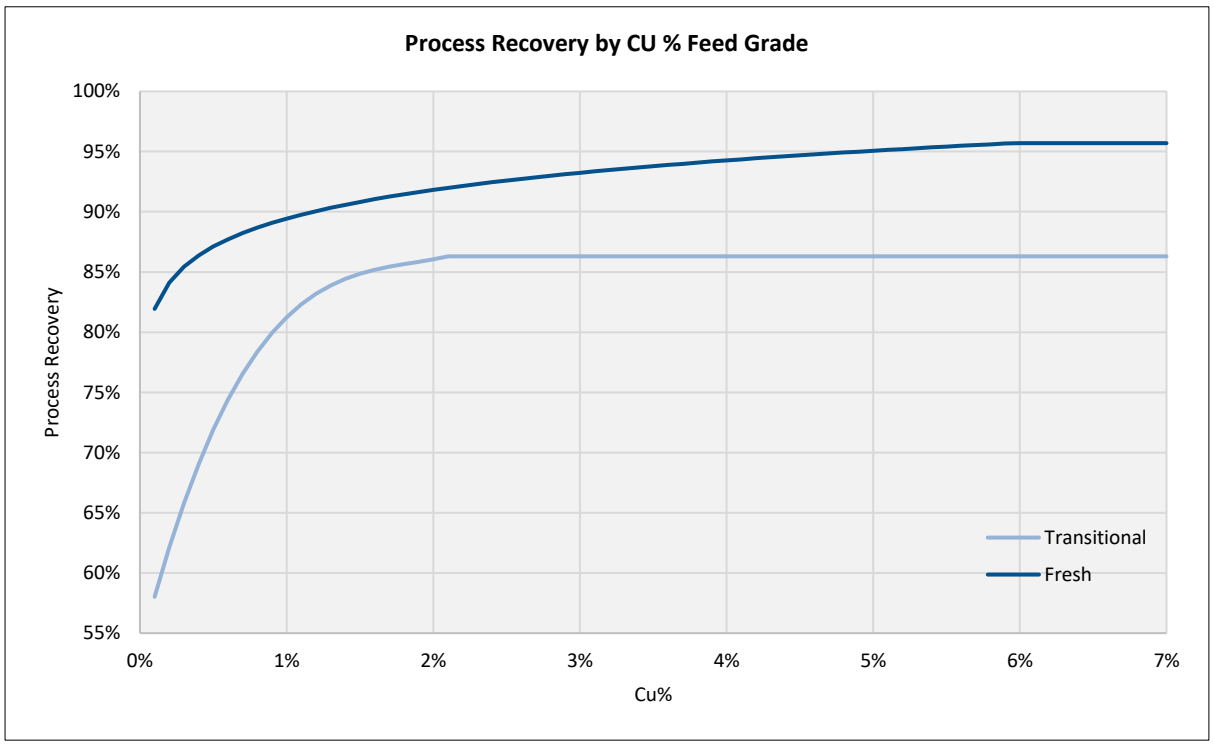


Figure 8 PROCESSING RECOVERY

For personal use only

6.3.6 Mining Cost Inputs

A 3rd party contractor provided cost inputs for all mining activities and adjusted factors to reflect productivity changes that could be reasonably expected, particularly regarding mining around historic underground workings, the sink holes and their associated zone of influence.

These costs and adjustment factors are detailed in Appendix A and summarised as outlined in Table 5.

Table 5 SUMMARY MINING COST INPUTS

		Oxide	Transitional	Fresh
Drill and Blast - Waste	$/BCM	1.87	1.87	1.87
Drill and Blast - Ore	$/BCM	2.15	2.15	2.15
Grade Control - Ore	$/BCM	0.40	0.40	0.40
Loading - Waste	$/BCM	3.30	3.30	3.30
Loading - Ore	$/BCM	3.33	3.33	3.33
Hauling - Waste	$/BCM/mRL	0.01	0.01	0.01
Hauling - Ore	$/BCM/mRL	0.01	0.01	0.01
Fixed Cost - Total	$/BCM	2.07	2.07	2.07

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

6.3.7 Processing Costs

A detailed breakdown of processing costs can be found in Appendix C and summarised in Table 6.

Table 6 PROCESSING COST

Material	Feed Rate tpa	Fixed $/t	Variable $/t	Total $/t
Oxide	1,600,000	23.40	16.56	**39.96**
Transitional	3,480,000	10.76	11.02	**21.77**
Fresh	3,480,000	10.76	11.02	**21.77**

6.3.8 Geotechnical Considerations

MEC modelled the geotechnical zones for the pit arrays for the broader pit. The underground and sinkhole-impacted zones were overlayed and categorised as depicted in Figure 5 and Section 5.

These areas were utilised in modifying factor allocations for recovery, classifications, and mine operating assumptions with rate reductions, blasting adjustments, and reduced ore recovery.

6.3.9 Cut off Grades

The cut-off grades were developed for threshold perspective to feed the optimisation based on the inputs outlined in Table 7.

Table 7 PROCESSING CUT-OFF GRADES

	Oxide[7]	Transitional	Fresh
CoG - Fixed Processing, Variable Processing and Sales Cost	0.67%	0.36%	0.28%
CoG - Variable Processing and Sales Cost	0.53%	0.30%	0.23%

For personal use only

6.4 Optimisation Results

An initial optimisation was run, indicating clear incremental changes above revenue factor (RF) 0.700 with less clear changes below. As such, the optimisation was run from RF 0.500 to RF 0.700 in 0.125 increments and from RF 0.700 to RF 1.200 in 0.050 increments. The results of this optimisation can be seen in Table 8[5], Figure 9 and Figure 10.

These results show the requirement for a significant step increase in total movement to generate ore above 8 million tonnes to produce a large, long-life operation with increased cash flows and NPV's.

A review of the results indicated that based on the inputs provided, the likely staging of the shells should be 12, 13, 19 and 21. However, despite various iterations with smaller increments between shells 12 and 13, no natural stage could be achieved to bridge the gap in total movement.

To bridge this gap, the data was reviewed with an interim stage generated between shells 12 and 13, and the analysis was re-run as outlined in Table 9 and Figure 11.

Table 8 INITIAL OPTIMISATION RESULTS AT NPV_6

Scenario	S010 - Sulphide Feed Only (Transitional and Fresh), Measured and Indicated outside of the Sinkholes												
Pit #	RF #	Stage #	Product MdTCu	Revenue A$M	Total MwT	Waste MwT	Ore MwT	SR WT:OT	Av Grade Cu%	Cash Flow A$M	DCF Best A$M	DCF Worst A$M	Operating NPV A$M
1	0.5000		0.014	173	8	7	1	5.0:1	1.16%	87	82	82	82
2	0.5125		0.014	175	9	7	1	5.0:1	1.16%	88	83	83	83
3	0.5250		0.017	206	10	9	2	5.0:1	1.15%	103	97	97	97
4	0.5375		0.021	253	13	11	2	5.4:1	1.16%	124	117	117	117
5	0.5500		0.021	259	13	11	2	5.4:1	1.16%	127	120	120	120
6	0.5625		0.035	429	23	20	4	5.2:1	1.07%	200	187	187	187
7	0.5750		0.042	516	29	24	5	5.2:1	1.05%	236	219	217	219
8	0.5875		0.052	636	37	31	6	5.5:1	1.05%	285	263	258	262
9	0.6000		0.054	662	39	32	6	5.3:1	1.04%	295	271	266	270
10	0.6125		0.057	702	41	35	6	5.4:1	1.03%	310	285	279	284
11	0.6250		0.059	729	43	36	7	5.4:1	1.02%	320	294	288	293
12	0.6375		0.066	816	50	42	8	5.5:1	1.01%	351	319	311	318
13	0.6500		0.449	5,544	451	395	56	7.1:1	0.94%	1,969	930	826	909
14	0.6625		0.452	5,583	454	398	56	7.1:1	0.94%	1,981	934	826	913
15	0.6750		0.466	5,752	468	410	58	7.1:1	0.94%	2,036	955	824	928
16	0.6875		0.470	5,809	472	414	59	7.0:1	0.94%	2,054	961	821	933
17	0.7000		0.474	5,849	475	416	59	7.0:1	0.94%	2,065	965	818	936
18	0.7500		0.515	6,364	528	463	65	7.2:1	0.93%	2,203	1,010	780	964
19	0.8000		0.537	6,635	555	487	68	7.2:1	0.93%	2,264	1,028	745	972
20	0.8500		0.591	7,300	637	562	75	7.5:1	0.92%	2,390	1,060	631	974
21	0.9000		0.605	7,468	656	578	78	7.4:1	0.91%	2,411	1,065	590	970
22	0.9500		0.625	7,721	690	609	81	7.5:1	0.90%	2,429	1,069	519	959
23	1.0000		0.635	7,845	705	621	84	7.4:1	0.89%	2,433	1,070	476	951
24	1.1000		0.661	8,158	755	667	88	7.5:1	0.88%	2,416	1,065	365	925
25	1.2000		0.727	8,974	914	814	100	8.2:1	0.86%	2,313	1,035	45	837

[5] The "best case" DCF assumes sequential mining of each pit shell up to and including the nominated pit shell in sequence. The "worst case" DCF assumes "top-down" mining of the deposit to the limit of the nominated pit shell in a bench-by-bench fashion. The Operational " DCF combines the 2 at an 80/20 split between the Best and Worst case, representing advanced stripping at 20% of the next stage shell.

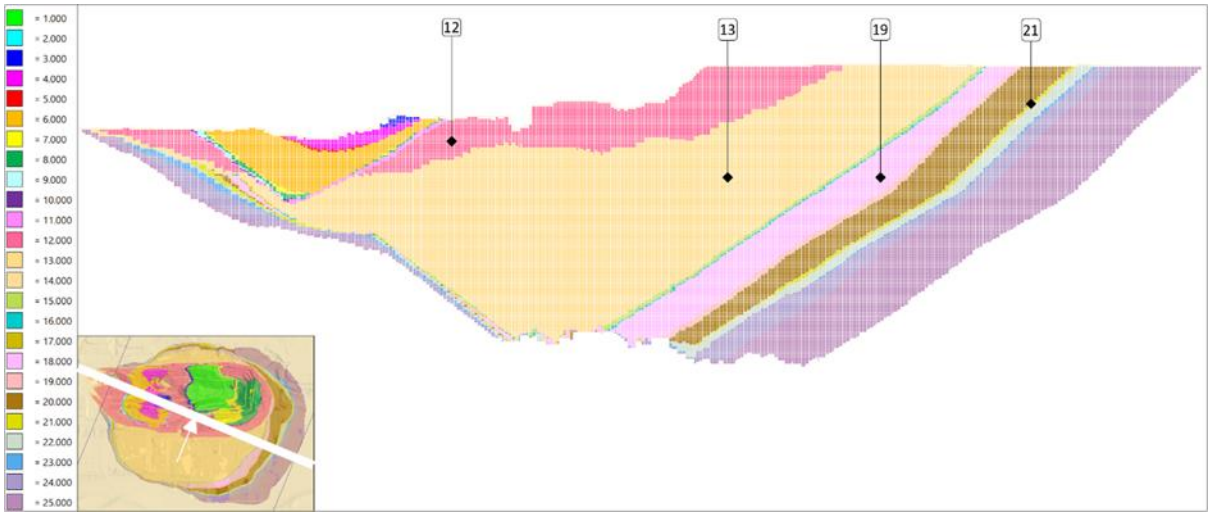


Figure 9 OBLIQUE CROSS SECTION OF OPTIMISATION SHELLS

For personal use only

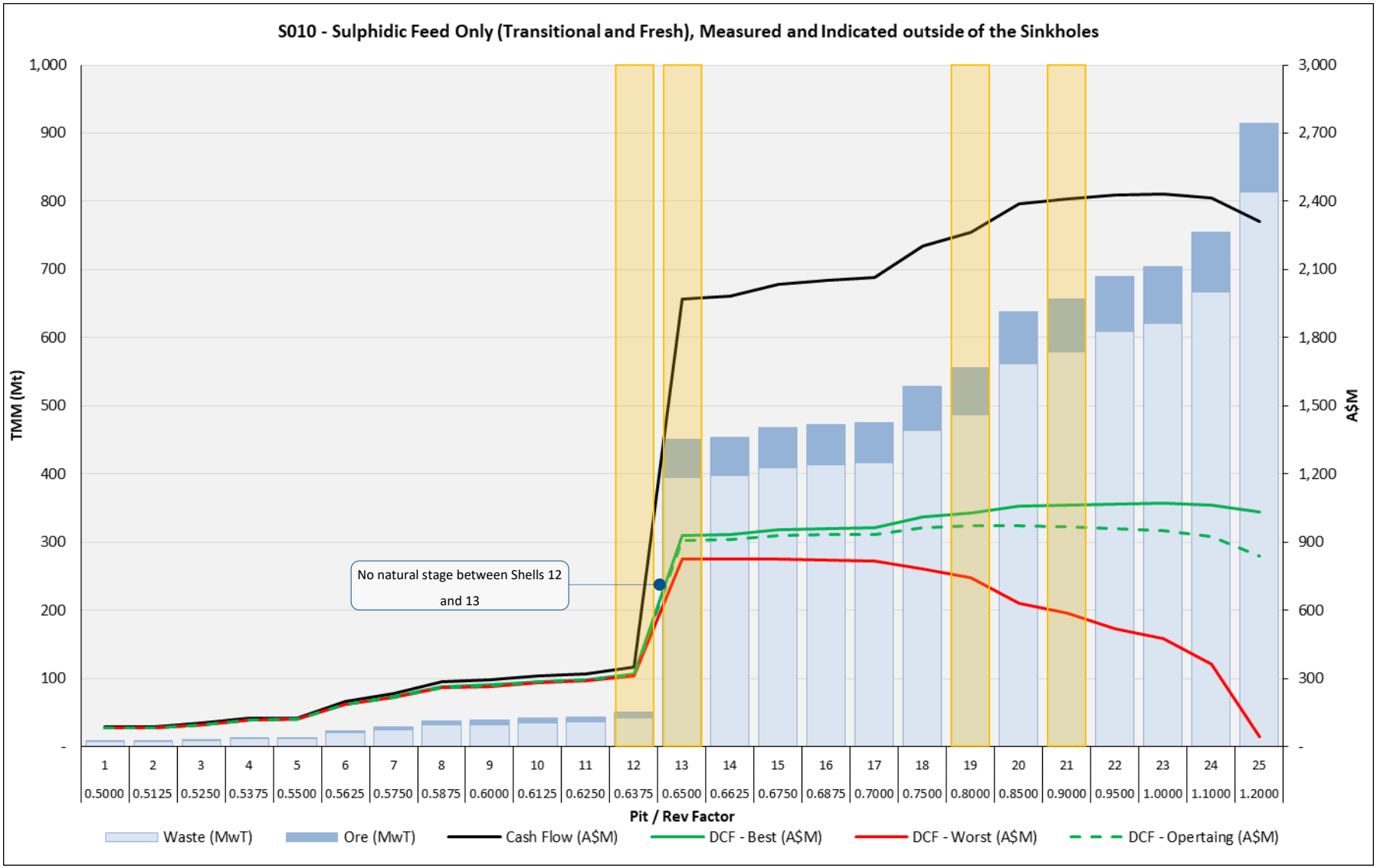


Figure 10 INITIAL OPTIMISATION RESULTS

personal use only

Table 9 INITIAL OPTIMISATION ANALYSIS WITH SHELL 12A ENTERED

Scenario	S010 - Sulphide Feed Only (Transitional and Fresh), Measured and Indicated outside of the Sinkholes with interim stage added												
Pit #	RF #	Stage #	Product MdTCu	Revenue A$M	Total MwT	Waste MwT	Ore MwT	SR WT:OT	Av Grade Cu%	Cash Flow A$M	DCF Best A$M	DCF Worst A$M	Operating NPV A$M
12	0.638	1	0.066	816	50	42	8	5.5:1	1.01%	351	319	311	318
12a		2	0.085	1,052	111	99	11	8.8:1	0.89%	280	247	225	243
13	0.650	3	0.449	5,544	451	395	56	7.1:1	0.94%	1,969	930	826	909
19	0.800	4	0.537	6,635	555	487	68	7.2:1	0.93%	2,264	1,028	745	972
21	0.900	5	0.605	7,468	656	578	78	7.4:1	0.91%	2,411	1,065	590	970

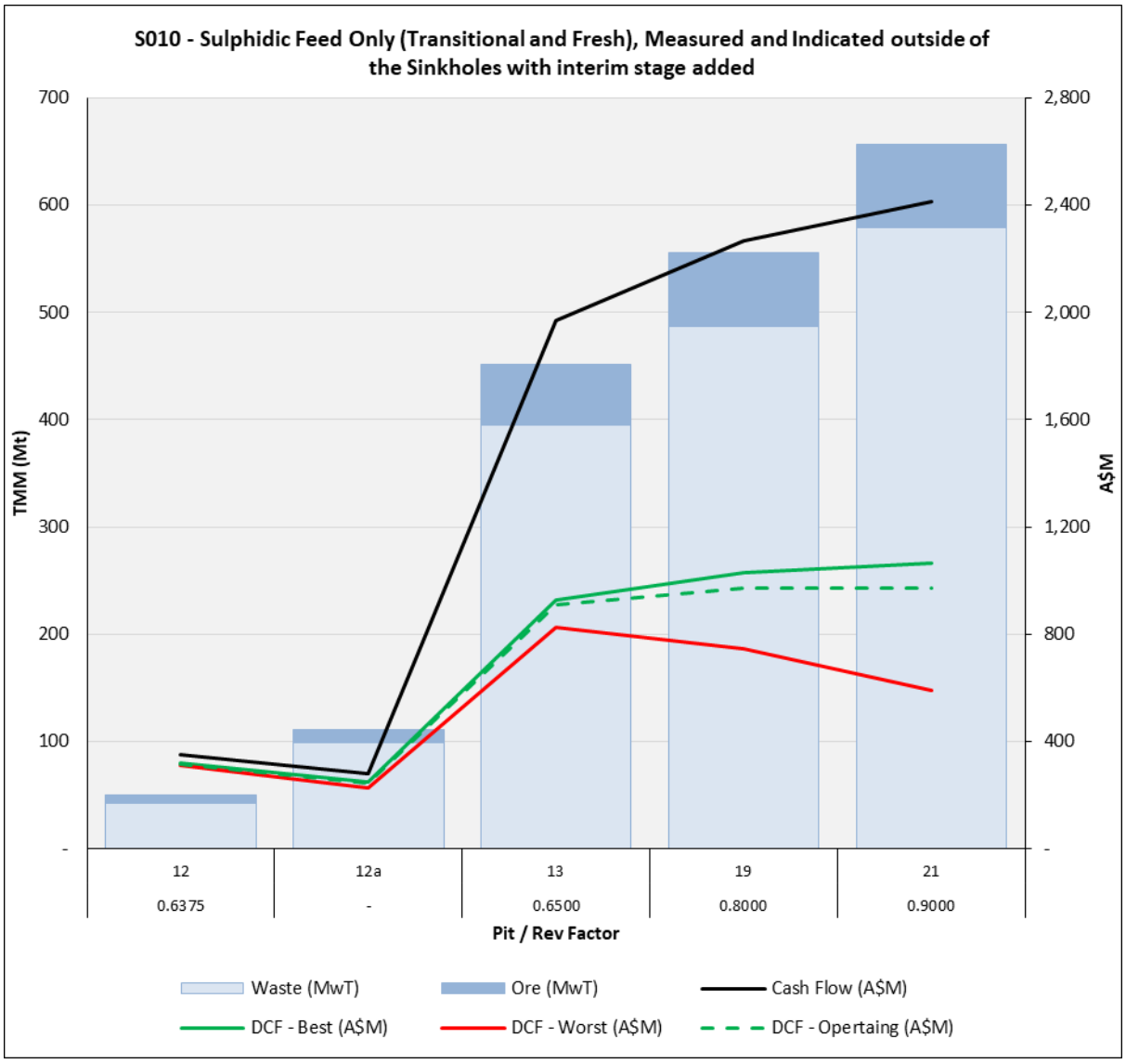


Figure 11 INITIAL OPTIMISATION RESULTS WITH SHELL 12A ENTERED

Figure 12 to Figure 17 outline the detailed results and proposed pit selection based on the measured and indicated ore and show how the ore body drives the position of the wall.

For personal use only

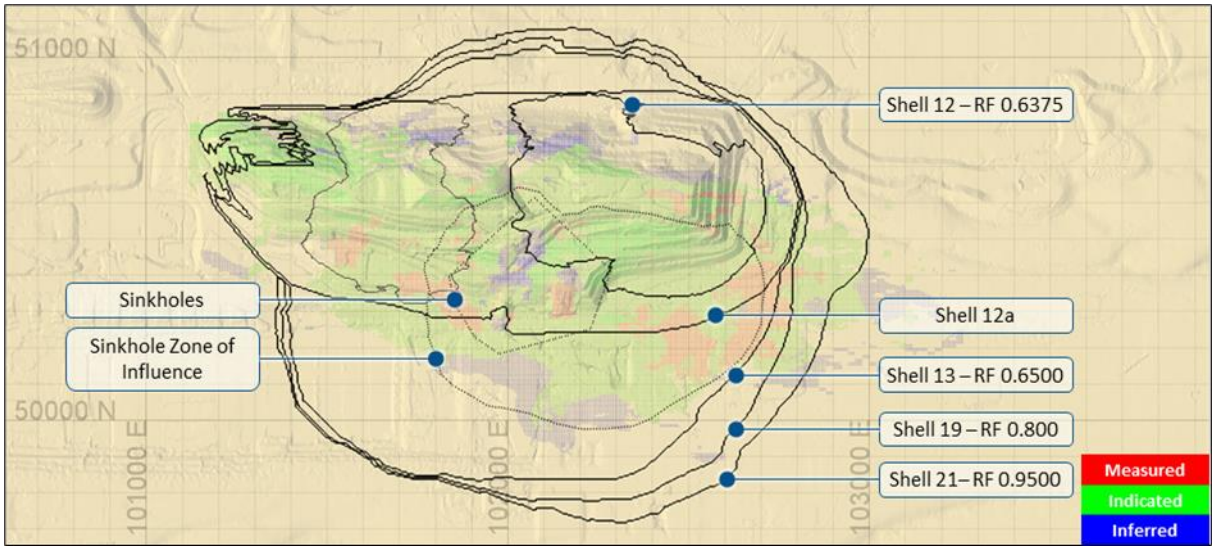


Figure 12 SELECTED OPTIMISATION CRESTS

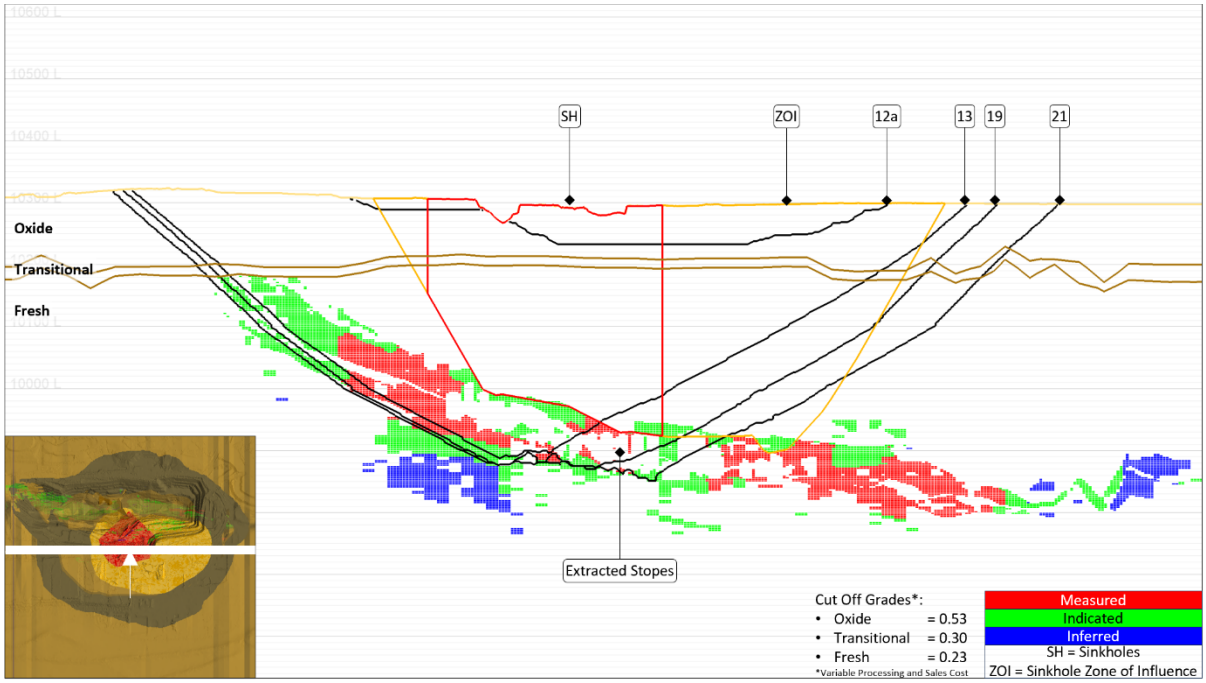


Figure 13 SECTION OF PROPOSED PIT SHELLS LOOKING NORTH 1

For personal use only

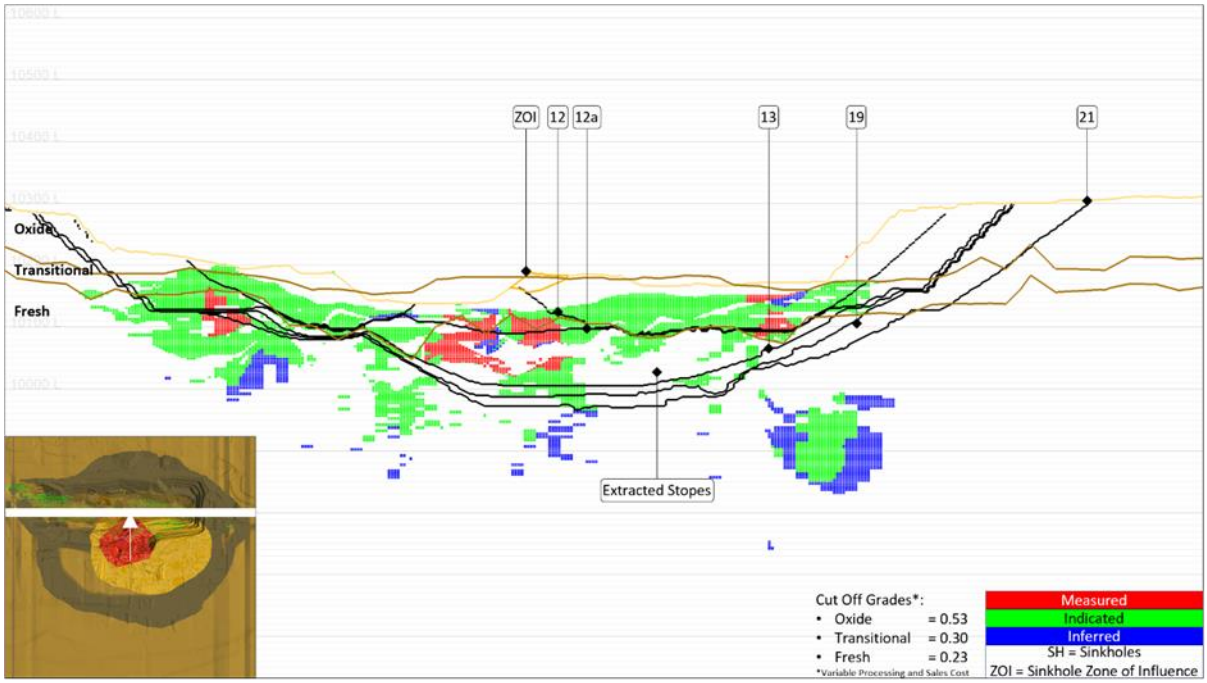


Figure 14 SECTION OF PROPOSED PIT SHELLS LOOKING NORTH 2

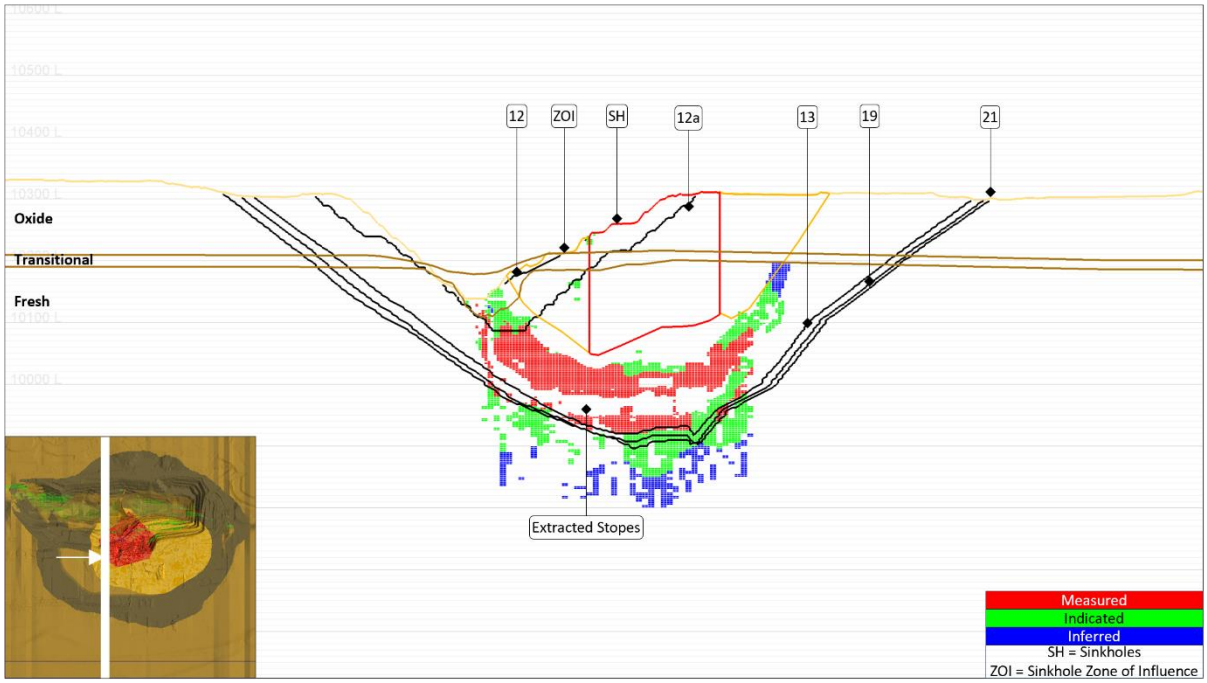


Figure 15 SECTION OF PROPOSED PIT SHELLS LOOKING EAST 1

For personal use only

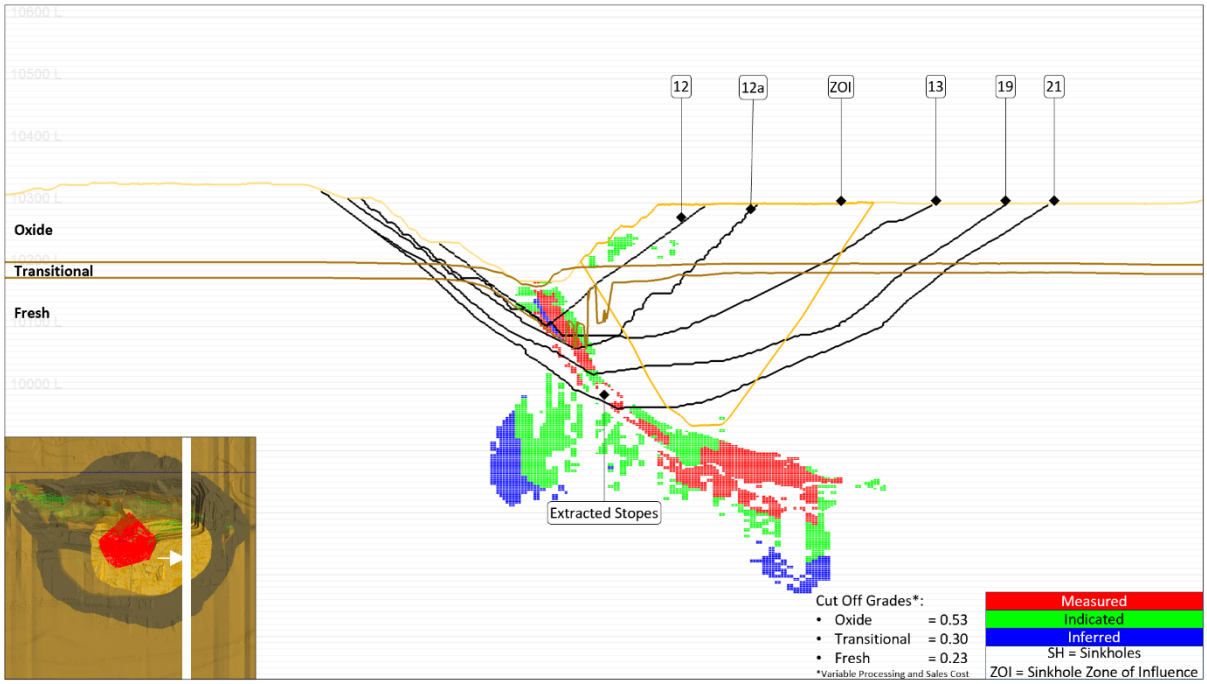


Figure 16 SECTION OF PROPOSED PIT SHELLS LOOKING EAST 2

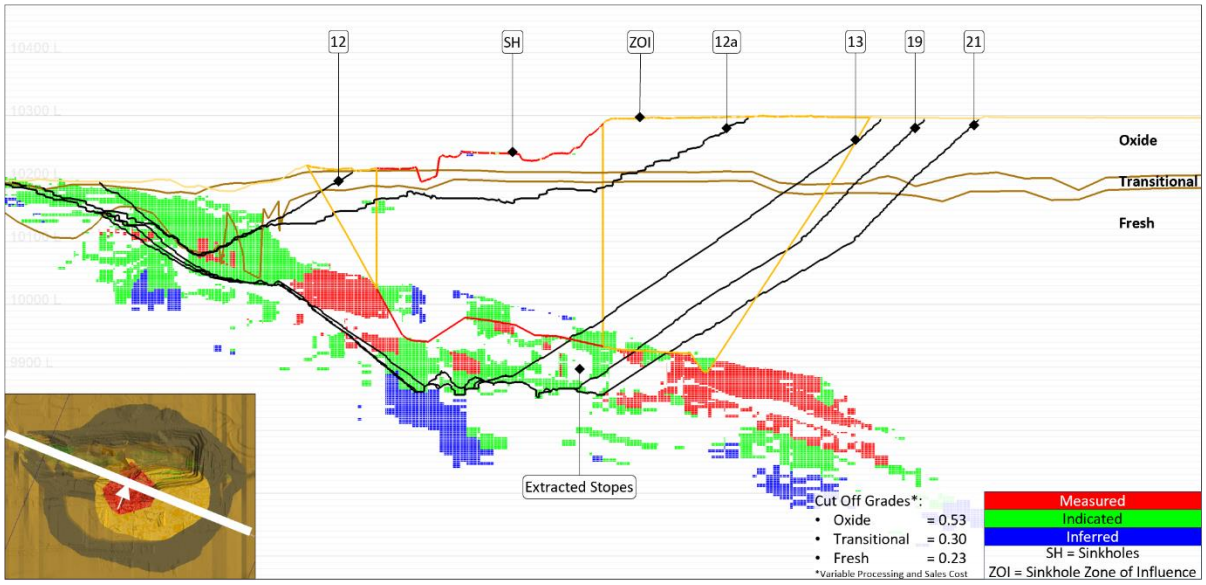


Figure 17 SECTION OF PROPOSED PIT SHELLS LOOKING ACROSS STRIKE

For personal use only

For personal use only

6.5 Mineral Resource within the Optimisation Shell

The optimisation shells show the stage wall positions based on the economic limits of the inputs for:

- Measured and Indicated resources only
- Transitional and Fresh (Sulphide) feed only

In addition, Inferred mineral resources also exist within the optimised shells. A breakdown of all mineral resources within the selected pit shell is outlined in Table 10, Figure 18 and Figure 20. Figure 21 outlines the total extent of the mineral resource.

Table 10 MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL

Oxide Mineral Resource Above Processing Cut-off Grade				
Pit	**Feed**	**Resource Classification**	**Mt**	**Cu%**
Main Pit	Oxide	Measured and Indicated	1.4	1.18%
Main Pit	Oxide	Inferred	0.0	0.80%
Main Pit	**Oxide**	**Total**	**1.4**	**1.18%**
Sinkholes	Oxide	Measured and Indicated	0.1	1.66%
Sinkholes	Oxide	Inferred	0.0	0.92%
Sinkholes	**Oxide**	**Total**	**0.1**	**1.64%**
Total	Oxide	Measured and Indicated	1.5	1.22%
Total	Oxide	Inferred	0.0	0.89%
Total	**Oxide**	**Total**	**1.5**	**1.22%**

Sulphide Mineral Resource Above Processing Cut-off Grade				
Pit	**Feed**	**Resource Classification**	**Mt**	**Cu%**
Main Pit	Sulphides	Measured and Indicated	75.8	0.94%
Main Pit	Sulphides	Inferred	2.6	0.53%
Main Pit	**Sulphides**	**Total**	**78.5**	**0.92%**
Sinkholes	Sulphides	Measured and Indicated	5.1	0.91%
Sinkholes	Sulphides	Inferred	0.9	0.73%
Sinkholes	**Sulphides**	**Total**	**6.0**	**0.89%**
Total	Sulphides	Measured and Indicated	80.9	0.93%
Total	Sulphides	Inferred	3.5	0.58%
Total	**Sulphides**	**Total**	**84.4**	**0.92%**

Mineral Resource Above Processing Cut-off Grade				
Pit	**Feed**	**Resource Classification**	**Mt**	**Cu%**
Main Pit	Total	Measured and Indicated	77.2	0.94%
Main Pit	Total	Inferred	2.6	0.53%
Main Pit	**Total**	**Total**	**79.8**	**0.93%**
Sinkholes	Total	Measured and Indicated	5.2	0.93%
Sinkholes	Total	Inferred	0.9	0.73%
Sinkholes	**Total**	**Total**	**6.1**	**0.90%**
Total	Total	Measured and Indicated	82.4	0.94%
Total	Total	Inferred	3.5	0.58%
Total	**Total**	**Total**	**85.9**	**0.93%**

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

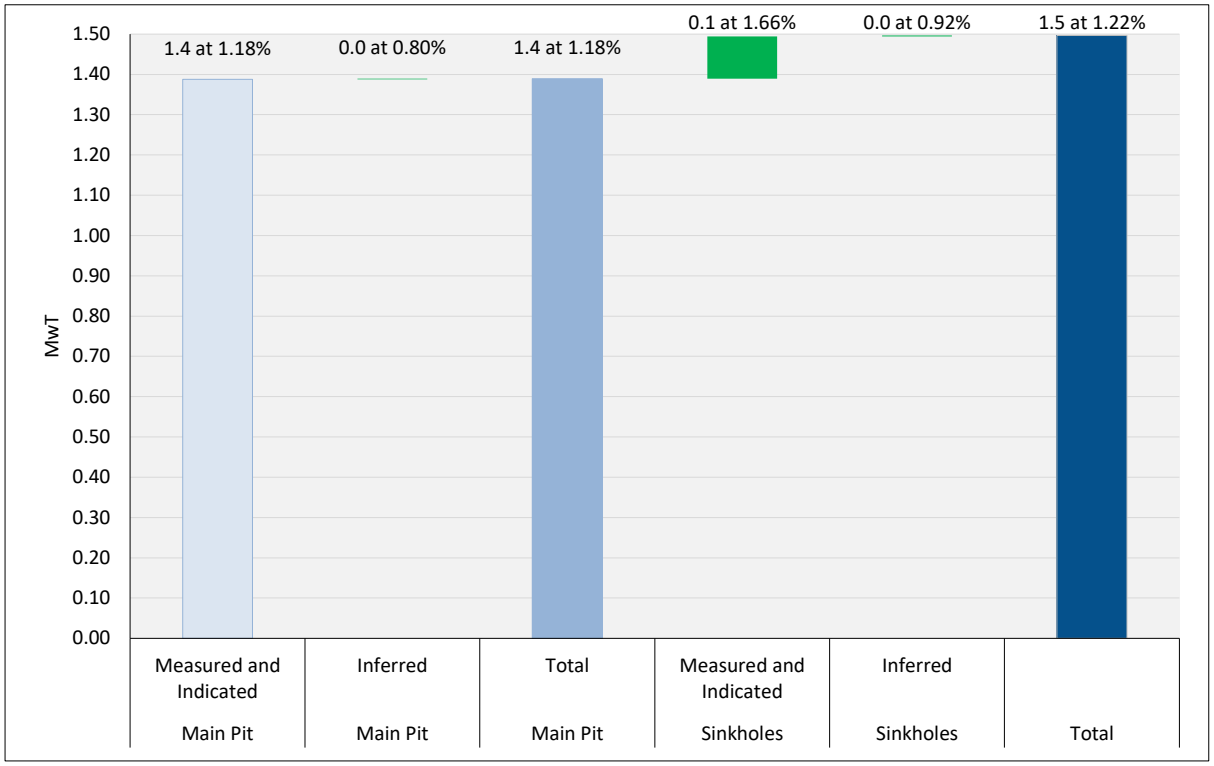


Figure 18 BUILD UP OF OXIDE MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL

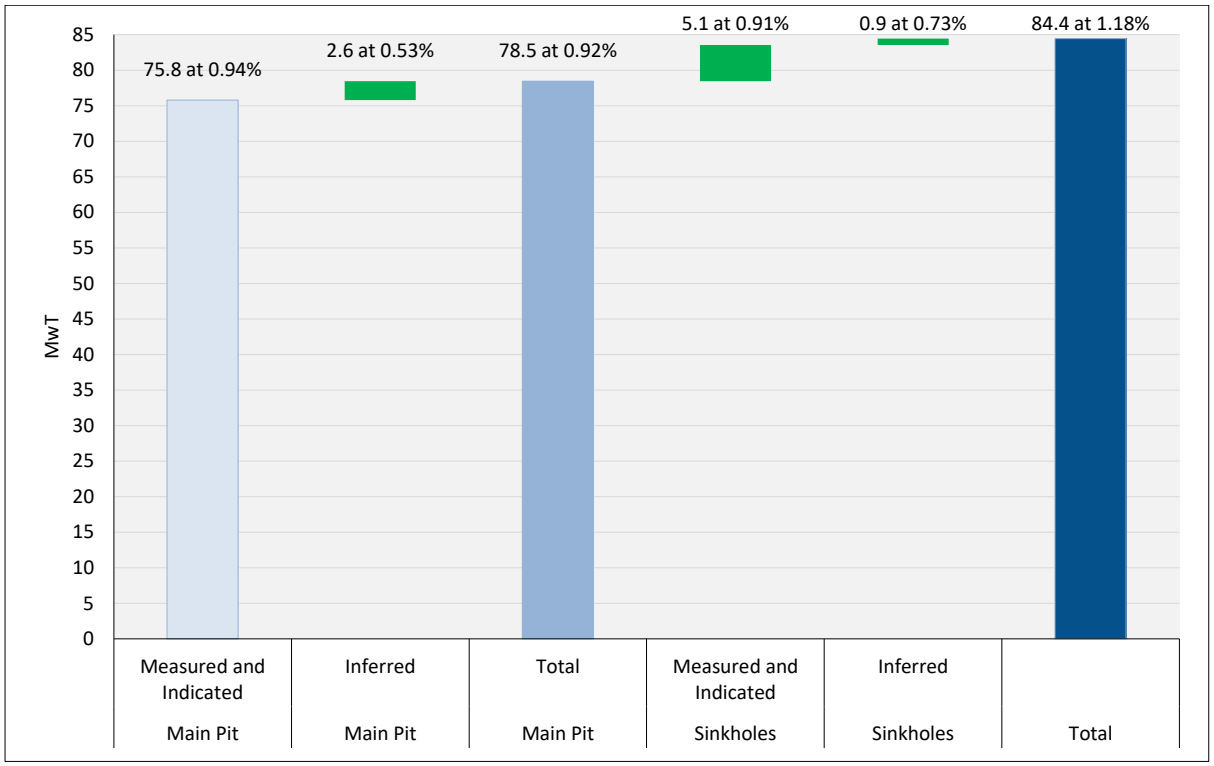


Figure 19 BUILD UP OF SULPHIDE MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL

For personal use only



Figure 20 BUILD UP OF MINERAL RESOURCE WITHIN THE OPTIMISATION SHELL

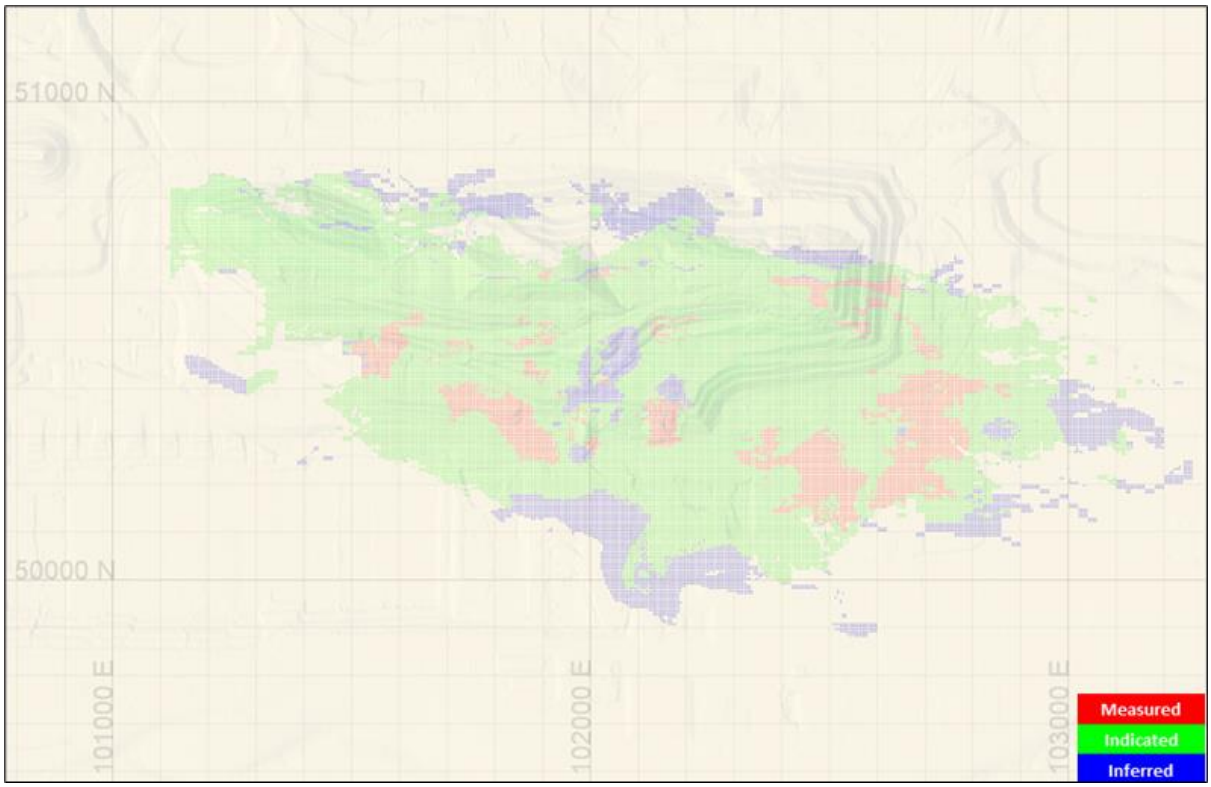


Figure 21 MARCH 2024 MRE EXTENTS

For personal use only

For personal use only

7 MINE SIZE PARAMETERS

7.1 Mine Size

After determining optimal ultimate pit shells, MEC 's scope of work moved to preliminary mine designs. This work included determining mining rate scenarios in consultation with Cyprium.

With the ultimate optimal pit containing 750 mt of total material and clear pit stage limits from the optimisation, the operating fleets, facilities and processing options were considered as outlined in Table 11.

Table 11 SCOPING STUDY MINE SIZE PARAMETERS

Processing Plant Capacity	2.8 mtpa	3.5 mtpa	4.5 mtpa	6.0 mtpa
Approximate Life of Mine	27 Years	22 Years	17 Years	13 Years
Concentrator Expansion Required	Base Case	Crushing	Crushing and 2nd Mill Line	Complete duplication of 3.5 mtpa option
Excavator Class (Tonne)	400	400	600	600 / 800
Truck Class (Tonne)	190	190 / 230	230	230 / 360
Added Risks to the Expanded Cases	Base Case	Few	Incremental upfront capital, working space requirement for larger excavators	Same as 4.5 plus additional construction risk, supply chain risk on ultra-class equipment, specialised operators and maintenance

Considering the project's mine life, facilities requirement and scale, the 4.5mpta case was deemed the most appropriate baseline to model, with suitable space for the fleet class maximised and the revenue suitable for the associated cost base.

Overall, pit sequencing was considered, and bench-level scheduling was undertaken. Waste movements were considered at a high level but not run through a detailed scheduling exercise.

The mining cost basis for scoping study mine design buildup moved from those supplied by the 3rd party contractor to a bottoms-up first principle basis using MEC's benchmarking data following equipment selection.

Non-mining costs were built from a time and staffing model on first principles.

7.2 Gap Analysis

Before completing the optimisation, MEC reviewed the April 2022 MRE, available geotechnical information, heap leach restart study (Cyprium, 2022) and various operating and cost inputs. Following review, MEC made various recommendations including but not limited to:

- Economic analysis and production scaling options assessments
    - Cut over grade strategies to enable grade streaming and step-down criteria in different stages of ore supply
    - Concentrator production rate and scale-up options
    - Potential for alternate feed options to supplement Alterative ore feed options during advanced stripping works, including oxide ore
    - Cost revision at the noted scales and fleet levels
- Operational assessments
    - The void and relevant backfill within the historic workings should be reconciled to ensure correct material movements and mitigate the impact on geotechnical parameters

Cyprium reviewed, agreed, and commenced work, with some information completed before this scoping study with others on going and or awaiting results. The work completed included:

- Geotechnical appraisal of data available for use in this study based on a large surface mine
- Alternate processing strategies
- Fleet scale and costs

For personal use only

8 MINE DESIGN AND SCHEDULE

8.1 Pit Design

The optimisation results determined that producing a mine schedule that minimised early waste movement whilst generating early ore delivery would maximise the value. As such, the selected shells were used as a baseline, and four preliminary stage designs with two further substages were created to generate adequate dig room for larger equipment ramp placement to minimise waste haulage and ensure multiple ingress and egress points. The stages are outlined in Figure 23 to Figure 31.

The primary design constraints were geotech (see Section 5), cut-off grades, resource classification (see section 6.3.1), ramp width, and minimum mining width for cut-backs.

Consultation with CYM indicated that the pit should be designed to accommodate a 600t class excavator and 230t class truck fleet. As such, the minimum cut-back mining width was determined to be 100m, and the ramp width built up from first principles to 35m, as outlined in Figure 22.

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

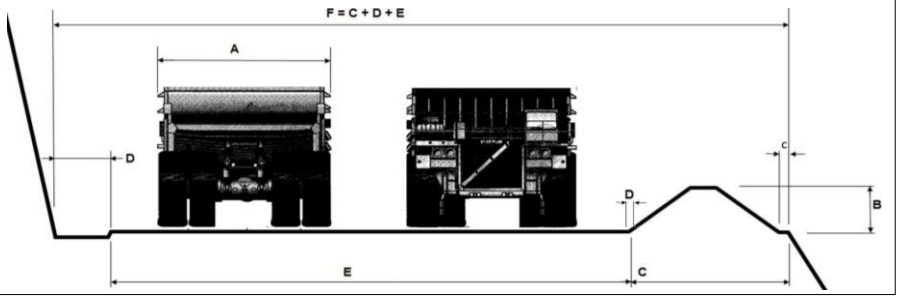


Figure 22 2 WAY RAMP HAULAGE

For personal use only

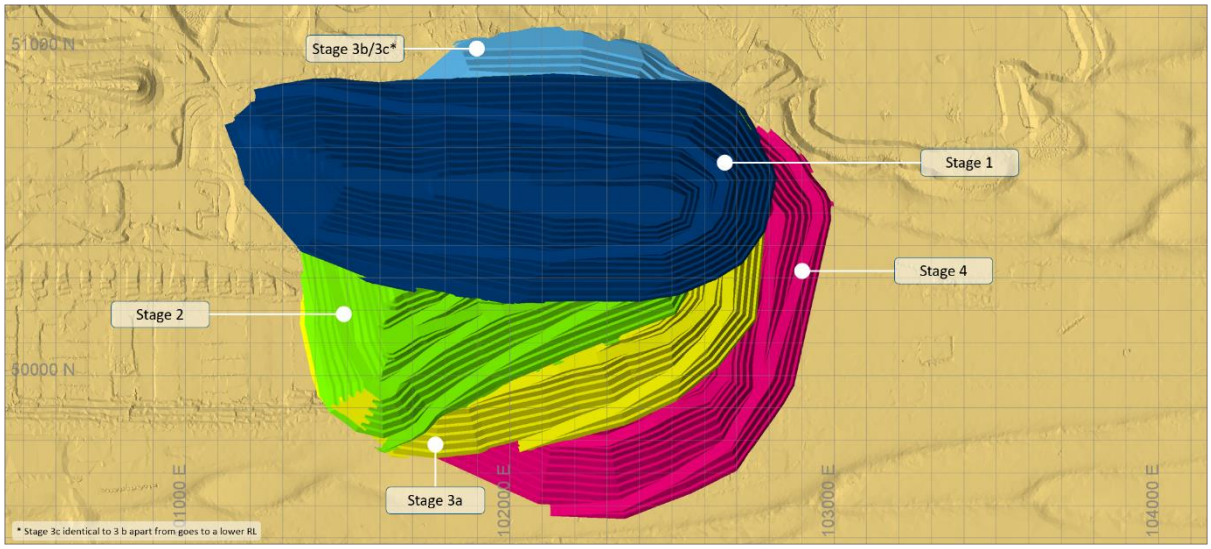


Figure 23 STAGE DESIGNS

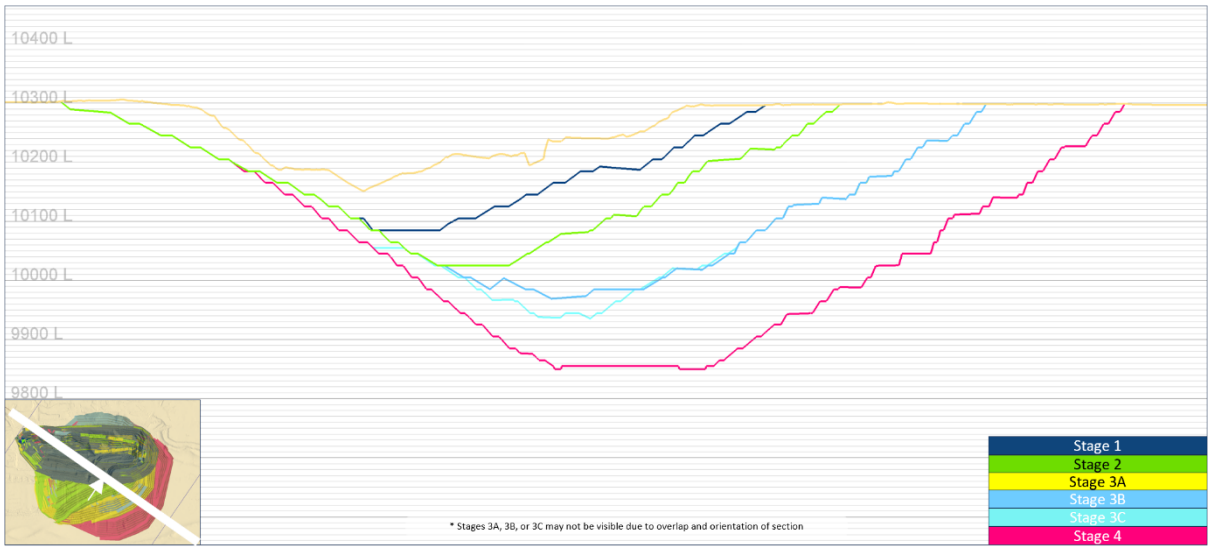


Figure 24 CROSS SECTION OF PIT DESIGNS FROM SOUTHWEST

For personal use only

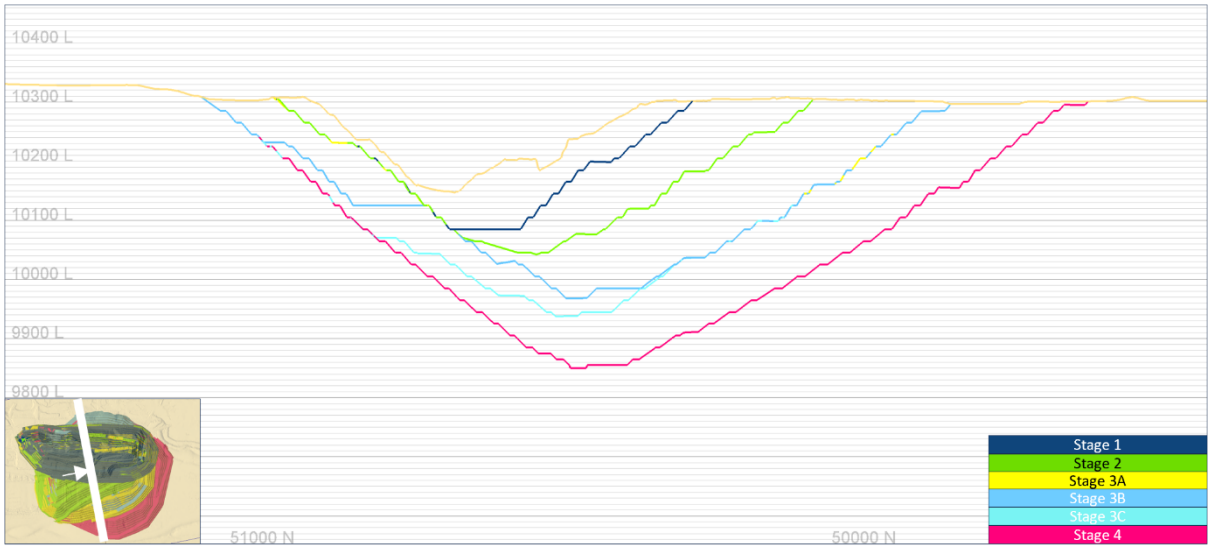


Figure 25 CROSS SECTION OF PIT DESIGNS FROM SOUTHWEST SOUTH



Figure 26 DESIGN PIT STAGE 1

For personal use only

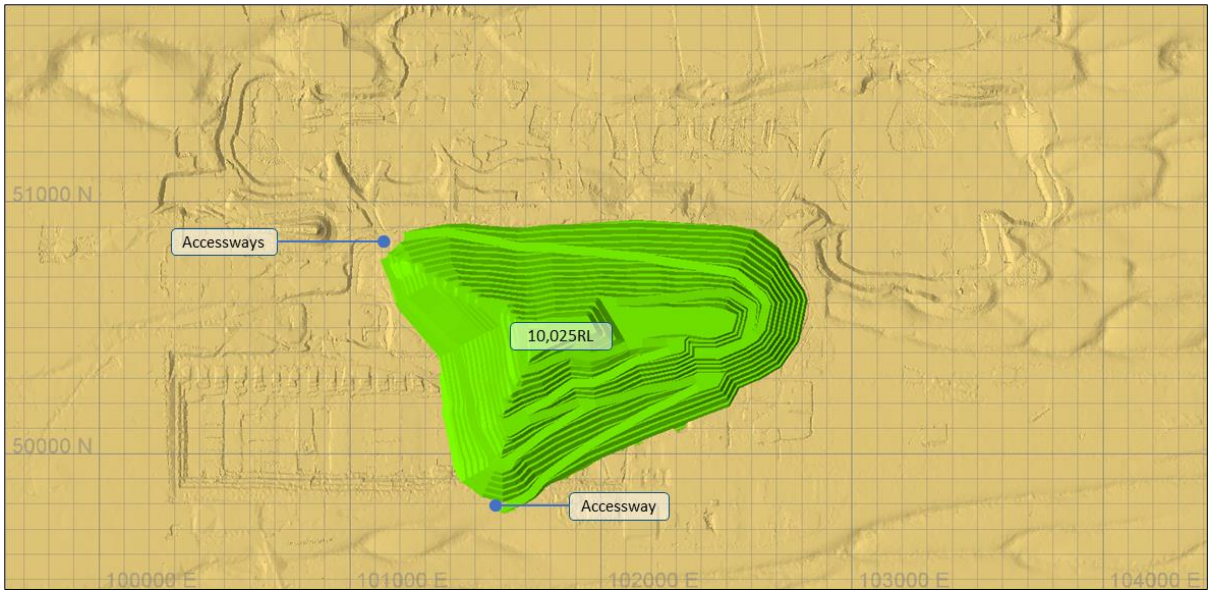


Figure 27 DESIGN PIT STAGE 2

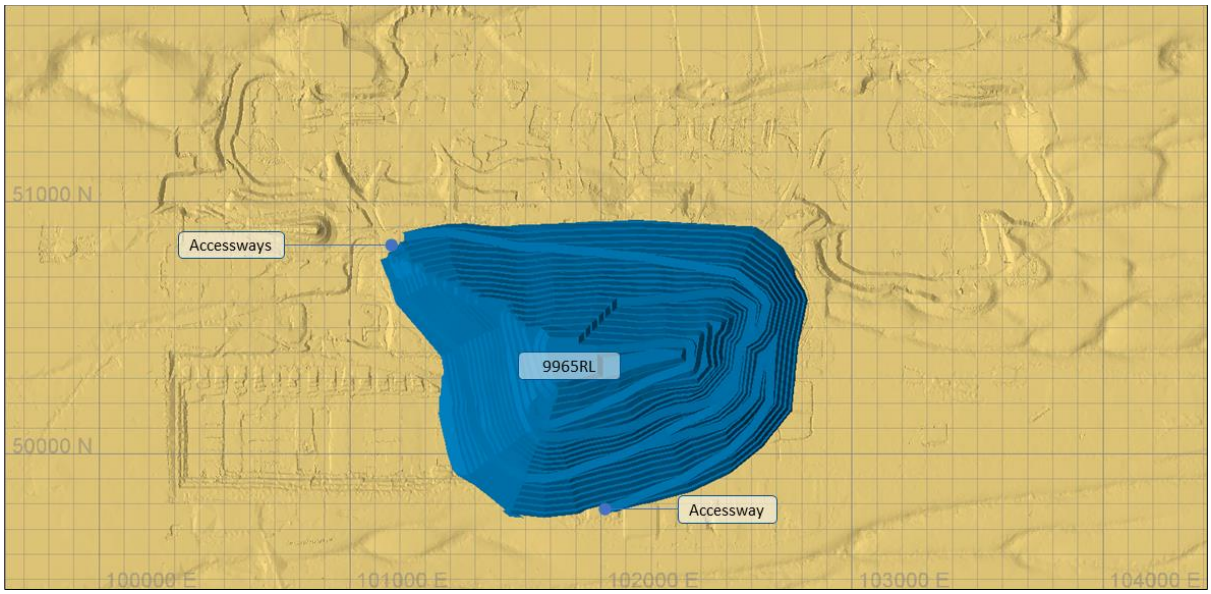


Figure 28 DESIGN PIT STAGE 3A

For personal use only

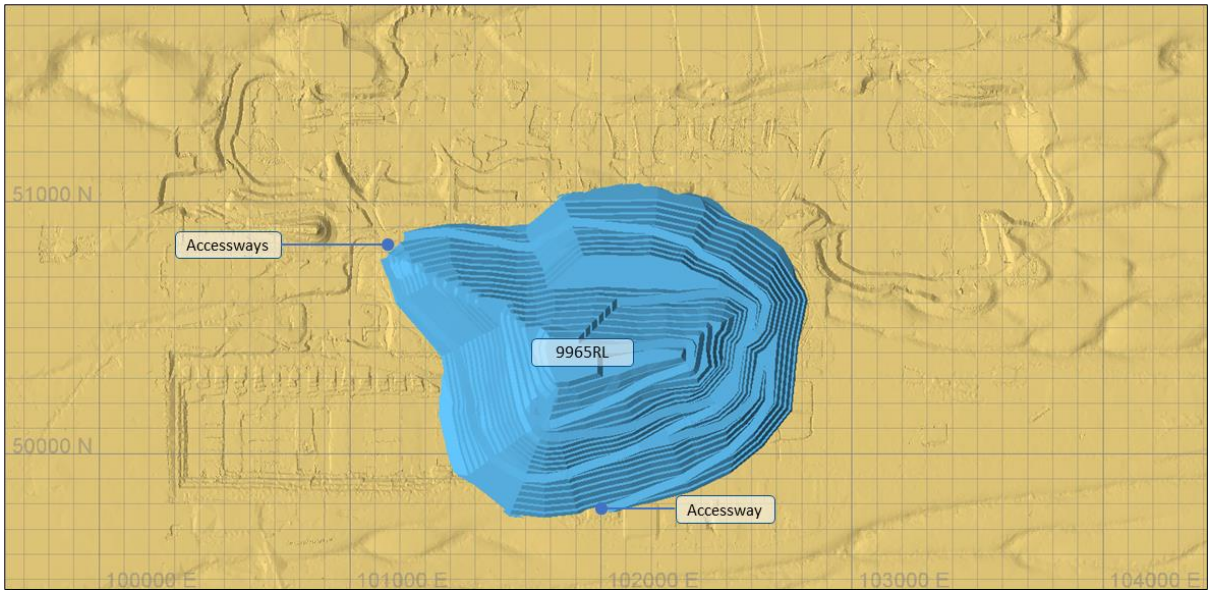


Figure 29 DESIGN PIT STAGE 3B

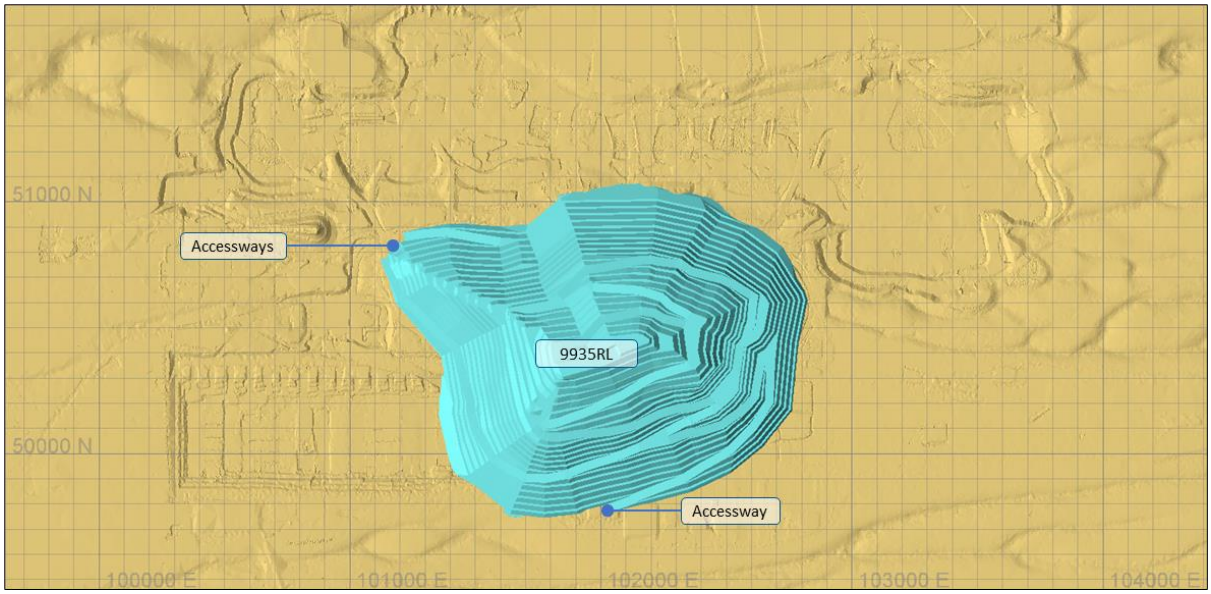


Figure 30 DESIGN PIT STAGE 3C

For personal use only

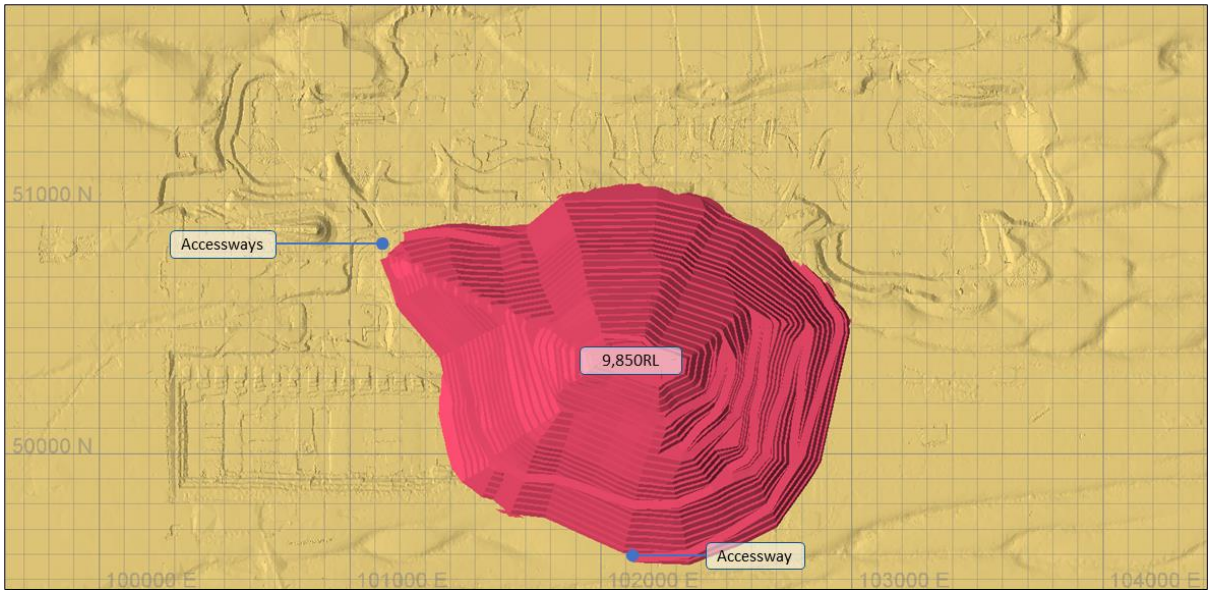


Figure 31 DESIGN PIT STAGE 4

8.2 Mineral Resource Contained Within the Mine Design

A mineral resource report was run upon completion of the designs, from which a schedule was completed. Based on the work by Cyprium outlined in section 4, the scheduled mineral resource included oxide, transitional (sulphide) and fresh (sulphide) in the measured, indicated and inferred[6] classifications. It did not include any material in the sinkholes. A percentage breakdown of the scheduling mineral resource is outlined in Table 12, and a detailed breakdown is in Table 13.

Table 12 MINERAL RESOURCE BREAKDOWN BY WEATHERING AND RESOURCE CLASSIFICATION WITHIN THE MINE DESIGN AND SCHEDULE

Resource Class | Weathering	Oxide	Transitional	Fresh	Total
Measured	0%	0%	29%	**29%**
Indicated	2%	1%	65%	**68%**
Inferred	0%	0%	3%	**3%**
Total	**2%**	**1%**	**97%**	**100%**

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

In total, designs generate ~745 Million Tonnes of total movement for 70 Million Tonnes of Ore at 0.96% (Oxide, Transitional and Fresh) at a strip ratio of 9.7:1, with ~95% of the ore transitional and fresh (sulphide) feed in the measured and indicated classification.

[6] 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 that the production target itself will be realised

For personal use only

Table 13 MINERAL RESOURCE CONTAINED WITHIN THE MINE DESIGNS

Ore / Waste	Weathering	Resource Category | Stage	1		2		3a		3b and 3c		4		Total	
			MwT	Cu%	MwT	Cu%	MwT	Cu%	MwT	Cu%	MwT	Cu%	MwT	Cu%
Summary Scheduled Inventory														
Waste	Total		114.4		118.9		155.2		54.8		231.9		675.2	
Ore	Total		10.6	0.92%	8.3	0.79%	11.3	0.92%	12.1	1.05%	27.3	1.01%	69.6	0.96%
TMM	**Total**		**125.0**		**127.2**		**166.5**		**66.9**		**259.2**		**744.8**	
Strip Ratio			**10.8**		**14.3**		**13.7**		**4.5**		**8.5**		**9.7**	
Total Scheduled Inventory by Oxidation and Resource Classification														
Waste	Oxide		59.3		59.9		44.5		15.3		59.1		238.2	
Waste	Transitional		22.5		8.9		8.6		6.1		12.8		58.8	
Waste	Fresh		32.6		50.2		102.0		33.4		160.0		378.2	
Waste	**Total**		**114.4**		**118.9**		**155.2**		**54.8**		**231.9**		**675.2**	
Ore	Oxide	Measured	0.1	1.10%	-	-	0.0	1.20%	0.0	0.81%	0.0	1.34%	0.1	1.15%
Ore	Oxide	Indicated	1.1	1.27%	-	-	0.0	1.31%	0.0	1.14%	0.1	0.98%	1.2	1.25%
Ore	Oxide	Inferred	0.0	1.04%	-	-	-	-	-	-	-	-	0.0	1.04%
Ore	**Oxide**		**1.2**	**1.26%**	**-**	**-**	**0.0**	**1.27%**	**0.0**	**1.08%**	**0.1**	**1.05%**	**1.3**	**1.24%**
Ore	Transitional	Measured	0.0	0.64%	0.0	0.66%	-	-	0.0	0.69%	0.0	0.35%	0.0	0.60%
Ore	Transitional	Indicated	0.6	0.51%	0.0	0.64%	-	-	0.0	0.58%	0.0	1.00%	0.6	0.53%
Ore	Transitional	Inferred	0.0	0.34%	-	-	-	-	0.0	0.38%	-	-	0.0	0.36%
Ore	**Transitional**	**Total**	**0.6**	**0.51%**	**0.0**	**0.64%**	**-**	**-**	**0.0**	**0.60%**	**0.0**	**0.87%**	**0.7**	**0.54%**
Ore	Fresh	Measured	1.6	0.99%	2.6	0.94%	5.5	1.09%	3.5	1.14%	6.8	1.11%	20.1	1.08%
Ore	Fresh	Indicated	7.0	0.87%	5.7	0.73%	4.7	0.80%	8.3	1.02%	19.8	0.99%	45.4	0.92%
Ore	Fresh	Inferred	0.2	1.17%	0.0	0.44%	1.1	0.59%	0.2	1.04%	0.6	0.57%	2.1	0.68%
Ore	**Fresh**		**8.8**	**0.90%**	**8.3**	**0.79%**	**11.3**	**0.92%**	**12.1**	**1.05%**	**27.2**	**1.01%**	**67.6**	**0.96%**
Ore	**Total**		**10.6**	**0.92%**	**8.3**	**0.79%**	**11.3**	**0.92%**	**12.1**	**1.05%**	**27.3**	**1.01%**	**69.6**	**0.96%**
TMM	**Total**		**125.0**		**127.2**		**166.5**		**66.9**		**259.2**		**744.8**	

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

personal use only

8.3 Integrated Waste Landform Design

Following completion of the pit designs, a total waste movement of ~675 Million Tonnes / 273 Million Loose Cubic Metres (LCM) was estimated and would require capturing in a series of integrated waste landforms (IWL).

The IWL concept minimises disturbance by encapsulating the required tailings storage by waste material, as outlined in Figure 32.

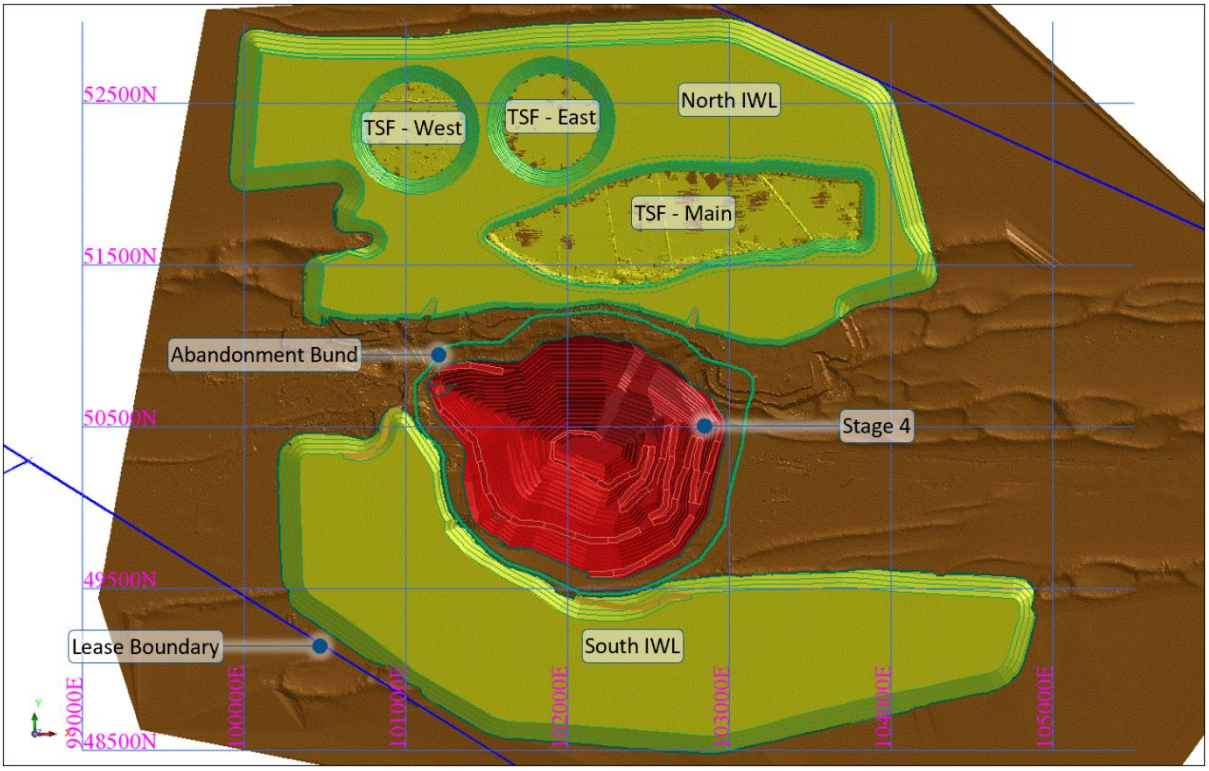


Figure 32 CONCEPTUAL IWL DESIGN

Key considerations for the design were:

- Waste dump rehabilitated batter angle 18° with no berm – future work may consider concave slopes.
- Tailings Dam internal batter angles of 27° (1:1.96)
- Maximum elevation 10,340mRL (The minimum elevation for the fly-over zone for the site aerodrome)
- 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
- No consideration was made to material characterisation, particularly potentially acid-forming (PAF) materials. However, these should be considered as part of future studies

Two waste rock dumps are required to accommodate the volume, not interfere with aerodrome operations and stay within the current mining lease boundaries.

For personal use only

For personal use only

Conceptual designs based on the constraints provided indicate that approximately 89% of the waste mined can be stored in the proposed designs; as such, future work will be required to maximise the capacity of the waste rock dumps, including but not limited to the cost-benefit of aerodrome relocation based on minimising and optimising waste mass movement and extension of the waste rock dump outside existing lease and permitting boundaries.

8.4 Mining and Financial Schedule Inputs

8.4.1 High-level Level Financial and Production Constraints and Inputs

The block model was flagged using the staged pit designs to allocate the resource and waste block by stage and bench, which was then used to complete a high-level schedule at a 4.5 mtpa throughput rate as outlined in Section 8.5.

MEC performed a first principles mining cost build-up to understand the difference between 3 financial scenarios:

1. Owner Operator Mining Fleet – Self-Financed
2. Owner Operator Mining Fleet – Financed through OEMs
3. Contractor Mining Fleet

All other costs and inputs were as per those used in the optimisation. Cyprium provided a capital estimate of A$175 million to support a 4.5 mtpa operation.

A summary of the key inputs used in the schedule is outlined in Table 14.

Table 14 SCHEDULING AND FINANCIAL INPUTS

Scheduling and Financial Inputs and Constraints	UoM	1	2	3
Mining Model	Type	Owner Operator	Owner Operator	Contractor
Mining Capital Finance	Type	Self	OEM	Contractor
Concentrator Feed	mtpa	4.50		
Copper Price	US$/t Cu	8,970		
Exchange Rate	A$:US$	0.69		
Copper price	A$/t Cu	13,000		
NPV Discount Rate	%	8		
Plant and NPI Capital	A$M	175		
Maximum Sulphide Recovery	%	95		
TMM Maximum Target	mtpa	65		
Concentrator Feed - Resource Classification	Resource Classification	Measured and Indicated		
Concentrator Feed - Sink Holes	Ore / Waste	Waste		
Concentrator Feed - Weathering Profile	Oxidation	Transitional and Fresh		

For personal use only

8.4.2 Equipment Assumptions

A third-party contractor provided inputs and constraints based on their experience in other copper operations and after working in large operations that intersect underground workings and subsidence zones. These inputs were benchmarked by MEC and deemed reasonable for a scoping-level study. These inputs are summarised in Table 15, Table 16 and Table 17.

Table 15 3rd PARTY CONTRACTOR PRODUCTIVITY ESTIMATES BASED ON MATERIAL TYPES

		Ex Class	600	400	200	100
Feed	**Weathering**	**UoM | Truck Class**	**230**	**230**	**230**	**230**
Ore	All	BCM/h	1,130	922	522	331
Waste	Oxide	BCM/h	1,479	1,279	762	452
Waste	Transitional 1	BCM/h	1,419	1,160	659	419
Waste	Transitional 2	BCM/h	1,314	1,074	611	388
Waste	Fresh	BCM/h	1,314	1,074	611	388
Ore	All	wT/h	3,558	2,903	1,643	1,042
Waste	Oxide	wT/h	3,106	2,686	1,599	950
Waste	Transitional, Fresh	wT/h	3,725	3,044	1,731	1,099

Table 16 3rd PARTY CONTRACTOR ANNUALISED PRODUCTIVE HOURS FOR EXCAVATION EQUIPMENT

Item	Hours	Comments
Calendar Time	8,760	Available calendar time
Scheduled Time	8,760	Available work time Based on 3 panels 14/7, 2 x 12-hour shifts, 365 days a year.
External Operational Delays	195	Inclement Weather conditions (based on Telfer BOM weather station)
Maintenance Delays	1,008	Planned and Unplanned Maintenance
On Shift Delays (Operational Delays)	1,825	Includes: - Crib Times - Travel Times - Shift Change - Toolboxes - Blast Delays - Cleanup Delays - Geotechnical Delays - Void-related Delays
Available Hours	7,752	Machine available hours
Utilised Hours	**5,732**	**Annual machine work hours for schedule**
Availability	88.5%	Hours machine is available to do work
Utilisation of Availability	73.9%	% of available time that the machine is utilised
Calendar Utilisation	65.4%	% of calendar time that the machine is utilised

Table 17 ANCILLARY EQUIPMENT ALLOCATION RATIOS

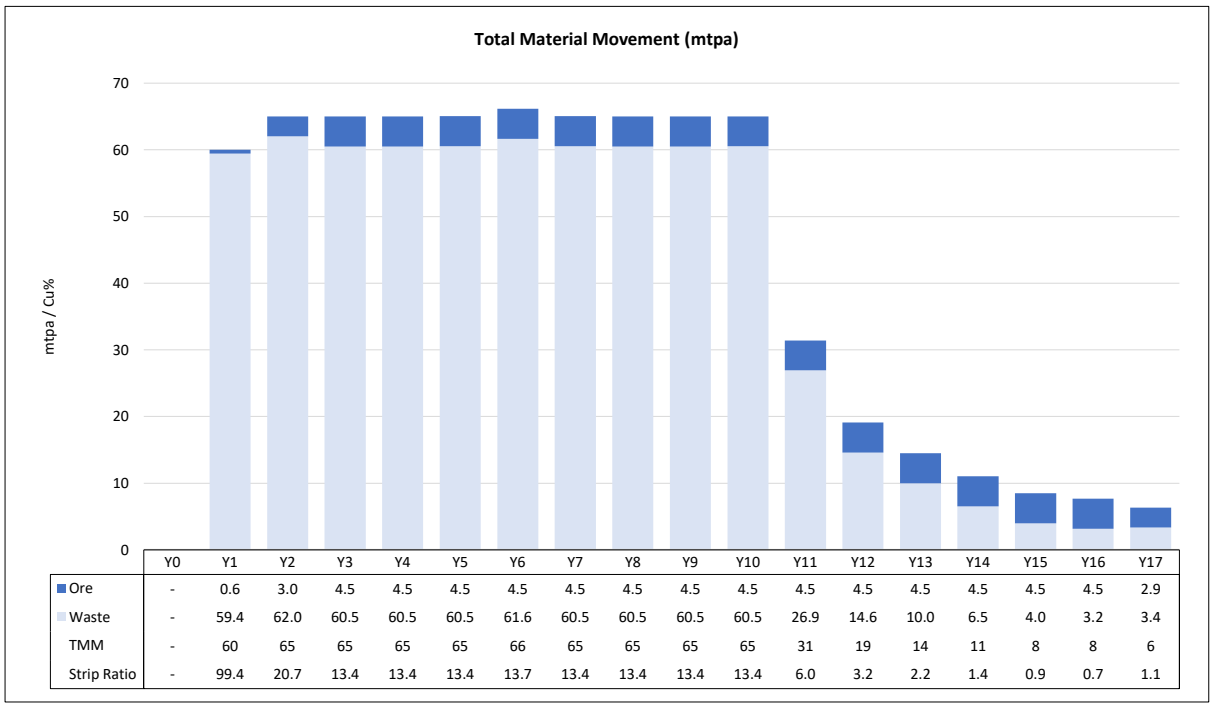
Ancillary Plant Hours	Basis of Measurement	Typical Hard Rock Factor	Nifty Factor	Comment
Water Cart Hours	% of Truck Hours	12%	12%	
Water Cart Hours	% of Loading Unit Hours	5%	5%	
Grader Hours	% of Truck Hours	10%	12%	The grader and dozer will work together to cover the site and move between pits, roads and dumps.
Grader Hours	% of Loading Unit Hours	5%	8%	The Grader and Dozer will work together to cover the site and move from pits, roads and dumps.
Dozer Hours	% of Loading Unit 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.

8.5 Schedule Outcomes – Mine Production

8.5.1 Mine and Plant Production

The scenario ramps up to 4.5Mt of ore over three years and then delivers 4.5Mt annually until the ore is depleted. Total mining targets a maximum of 60-65 Mt annually until sufficient ore is exposed.

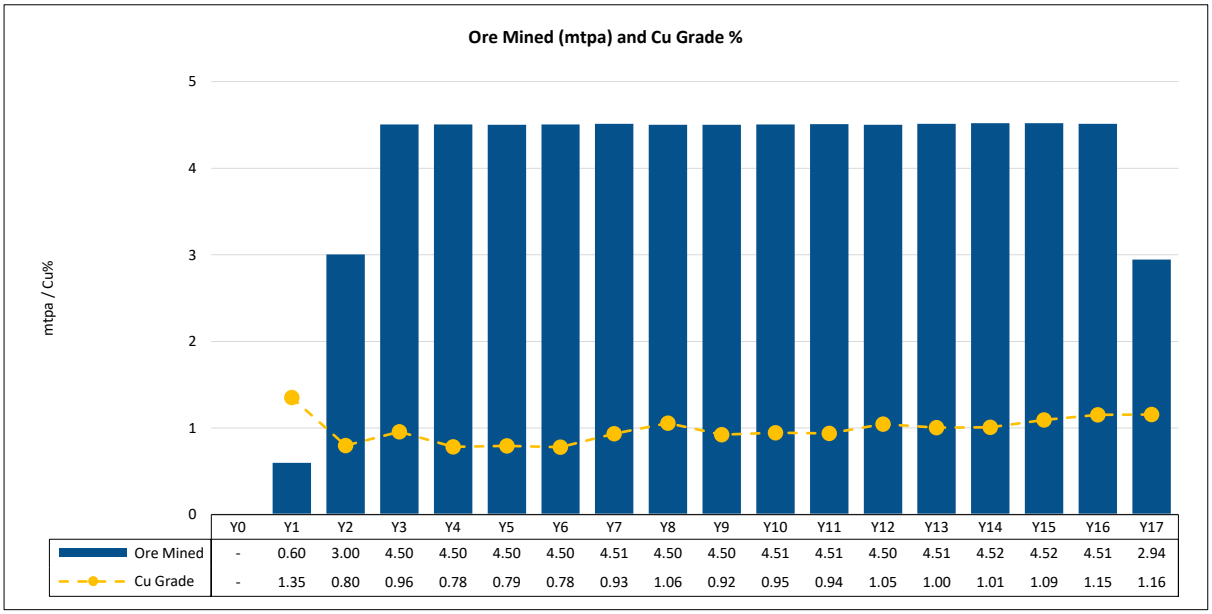
The schedule lasts 17 years and is outlined in Figure 33 and Figure 34. Most waste removal happens over Years 1 to 10. Then, it tapers down to the waste required to deliver the yearly ore target. The schedule allows delivery of 4.5Mt of ore from Year 3 to Year 16, as outlined in Figure 33 and Figure 34. The average mined grade slightly increases over the schedule due to increased proportions of fresh ore. It generates, on average, approximately 36,000 dTCu copper in concentrate per year, as outlined in Figure 35.



	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Ore	-	0.6	3.0	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	2.9
Waste	-	59.4	62.0	60.5	60.5	60.5	61.6	60.5	60.5	60.5	60.5	26.9	14.6	10.0	6.5	4.0	3.2	3.4
TMM	-	60	65	65	65	65	66	65	65	65	65	31	19	14	11	8	8	6
Strip Ratio	-	99.4	20.7	13.4	13.4	13.4	13.7	13.4	13.4	13.4	13.4	6.0	3.2	2.2	1.4	0.9	0.7	1.1

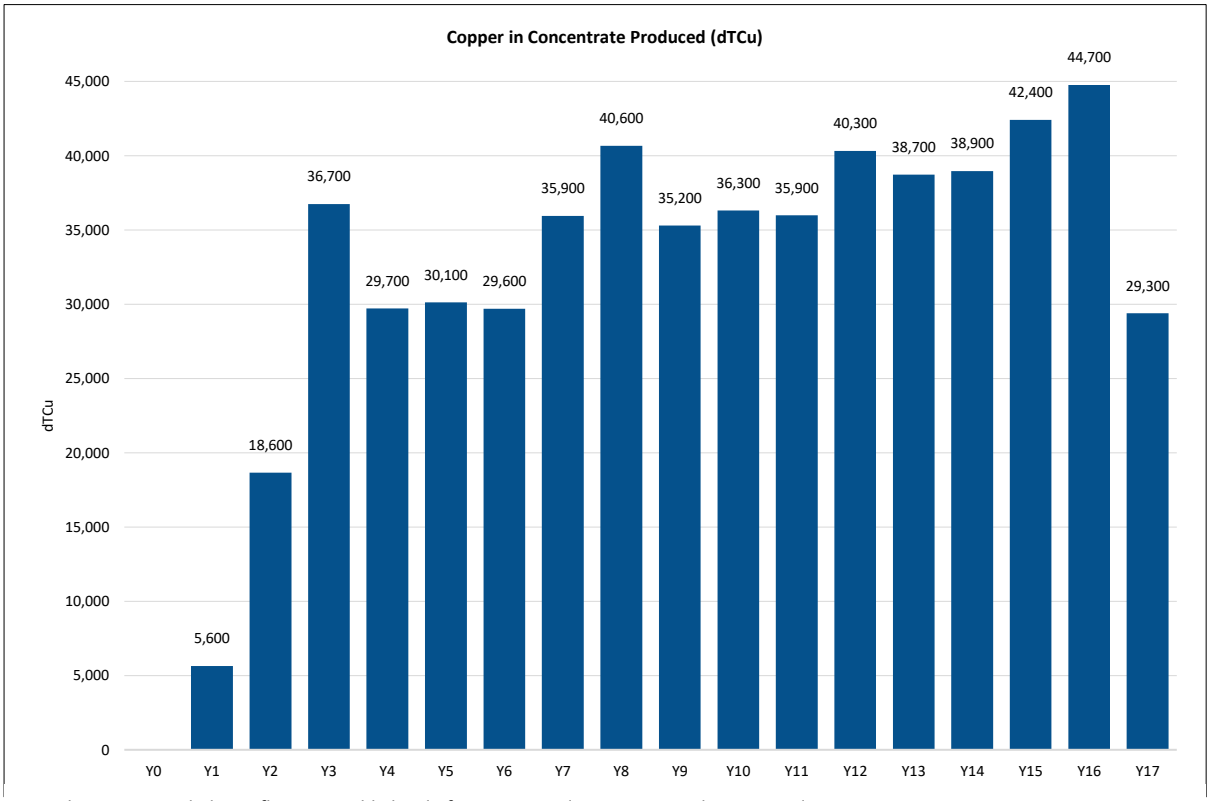
Figure 33 TOTAL MOVEMENT

For personal use only



	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Ore Mined	-	0.60	3.00	4.50	4.50	4.50	4.50	4.51	4.50	4.50	4.51	4.51	4.50	4.51	4.52	4.52	4.51	2.94
Cu Grade	-	1.35	0.80	0.96	0.78	0.79	0.78	0.93	1.06	0.92	0.95	0.94	1.05	1.00	1.01	1.09	1.15	1.16

Figure 34 ORE TONNES AND GRADE



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

Figure 35 COPPER IN CONCENTRATE PRODUCED

For personal use only

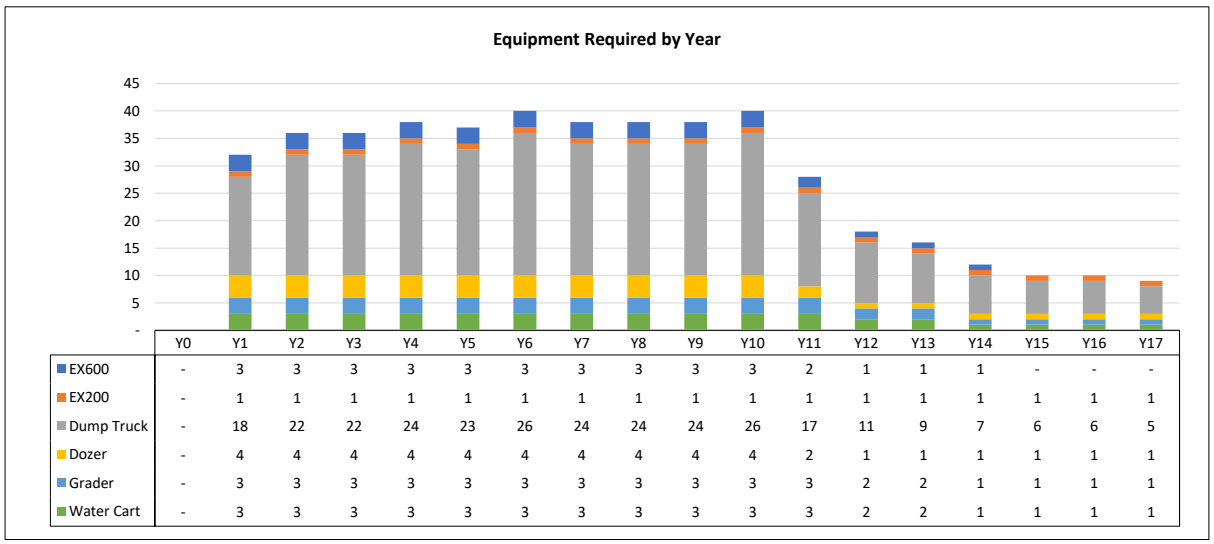
8.5.2 Equipment Requirement

600t excavators were selected for waste mining and 200t excavators with the acceptance that some interchangeability would be required. The total hours and excavators required can be calculated based on the productivity and time usage estimates outlined in section 8.5.2. It is estimated that three 600t excavators and one 200t excavator will be required to meet the schedule.

In the early stages of production, where the total material movement is consistent at ~65Mt, the number of trucks must ramp up from eighteen to a peak of twenty-nine associated with increasing haulage distances.

The ancillary equipment was calculated based on factors linked to excavator and haulage hours, as outlined in Table 17.

As TMM decreases from the initial level of 65 mtpa, the number of excavators, trucks and ancillary equipment reduces, as summarised in Figure 36.



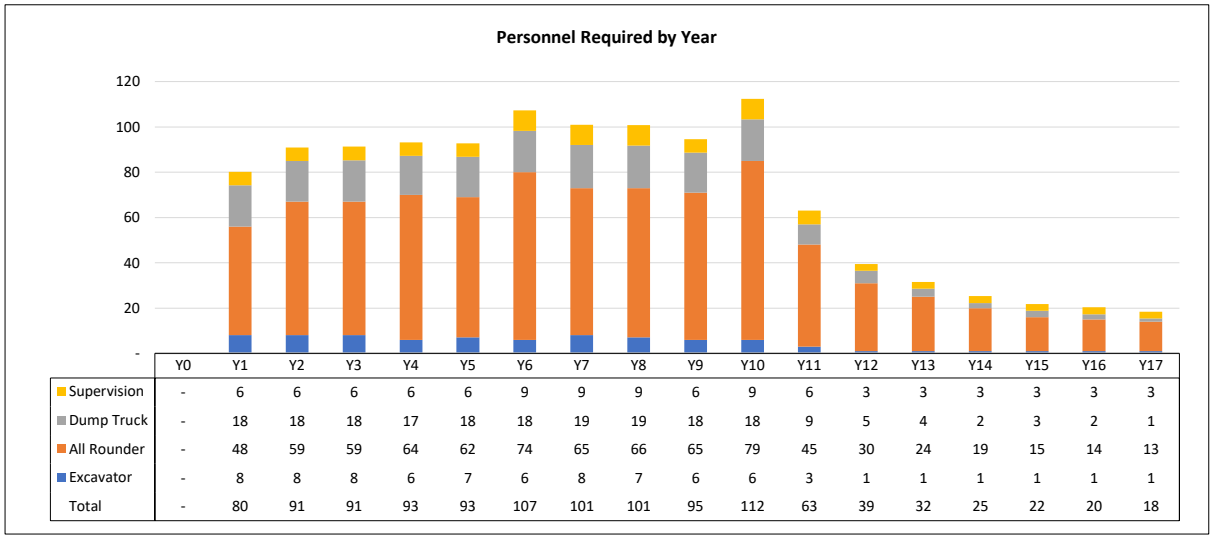
	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
EX600	-	3	3	3	3	3	3	3	3	3	3	2	1	1	1	-	-	-
EX200	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dump Truck	-	18	22	22	24	23	26	24	24	24	26	17	11	9	7	6	6	5
Dozer	-	4	4	4	4	4	4	4	4	4	4	2	1	1	1	1	1	1
Grader	-	3	3	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1
Water Cart	-	3	3	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1

Figure 36 EQUIPMENT REQUIRED BY YEAR

8.5.3 Employee Requirements

Based on the equipment required, leave coverage and supervisory requirements, the employee numbers based on a 14:7 roster for mining operations inclusive of supervision have been estimated at 27 and 38 employees per roster panel. The total personnel requirement is summarised in Figure 37.

For personal use only



	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Supervision	-	6	6	6	6	6	9	9	9	6	9	6	3	3	3	3	3	3
Dump Truck	-	18	18	18	17	18	18	19	19	18	18	9	5	4	2	3	2	1
All Rounder	-	48	59	59	64	62	74	65	66	65	79	45	30	24	19	15	14	13
Excavator	-	8	8	8	6	7	6	8	7	6	6	3	1	1	1	1	1	1
Total	-	80	91	91	93	93	107	101	101	95	112	63	39	32	25	22	20	18

Figure 37 PERSONNEL REQUIREMENT

8.6 Schedule Outcomes – Financial

8.6.1 Summary Financial Outcomes

As outlined in section 8.4, MEC tested 3 financial schedules:

1. Owner Operator Mining Fleet – Self-Financed
2. Owner Operator Mining Fleet – Financed through OEMs
3. Contractor Mining Fleet

The outcome of these scenarios is outlined in Table 18. A detailed breakdown is shown in sections 8.6.2 and 8.6.3

Table 18 COMPARATIVE SCHEDULING OUTCOMES

Scheduling Outcomes	UoM	1	2	3
Mining Model	Type	Owner Operator	Owner Operator	Contractor
Mining Capital Finance	Type	Self	OEM	Contractor
Mining Fleet Capital	A$M	227	-	-
Plant and NPI Capital	A$M	175	175	175
Total Capital	A$M	402	175	175
Mining Cost - Weight Averaged	A$/t	2.46	2.67	2.94
Processing Cost - Weight Averaged	A$/t	21.83		
Selling Cost - Treatment, Refining, Mine to Port and Royalties	A$/dTCu	1,478		
C1 Cost - Mining, Processing and Administration	A$/dTCu	6,627	6,891	7,223
C1 Cost - Mining, Processing and Administration	US$/dTCu	4,573	4,755	4,984
C1 Cost - Mining, Processing and Administration	US$/lbCu	2.08	2.16	2.27
LOM TMM	mt	745		
Total Concentrator Feed	mt	70		
Life of Mine (LOM) Head Grade	Cu%	0.86		

For personal use only

Average Annual Copper in Concentrate Produced	t	36,000		
Project Life	Years	17		
Undiscounted Cash Flow	A$M	2,700	2,730	2,530
NPV (8%)	A$M	910	1,000	880
IRR	%	35	56	46

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

For personal use only

For personal use only

8.6.2 Owner Operator - Mining Capital Self-Financed Schedule Outcomes

Table 19 OWNER OPERATOR MINING (SELF FUNDED) SCHEDULE OUTCOMES

Scheduling Outcomes	UoM	1
Mining Model	Type	Owner Operator
Mining Capital Finance	Type	Self
Mining Fleet Capital	A$M	227
Plant and NPI Capital	A$M	175
Total Capital	A$M	402
Mining Cost - Weight Averaged	A$/t	2.46
Processing Cost - Weight Averaged	A$/t	21.83
Selling Cost - Treatment, Refining, Mine to Port and Royalties	A$/dTCu	1,478
C1 Cost - Mining, Processing and Administration	A$/dTCu	6,627
C1 Cost - Mining, Processing and Administration	US$/dTCu	4,573
C1 Cost - Mining, Processing and Administration	US$/lbCu	2.08
LOM TMM	mt	745
Total Concentrator Feed	mt	70
Life of Mine (LOM) Head Grade	Cu%	0.86
Average Annual Copper in Concentrate Produced	t	36,000
Project Life	Years	17
Undiscounted Cash Flow	A$M	2,700
NPV (8%)	A$M	910
IRR	%	35

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

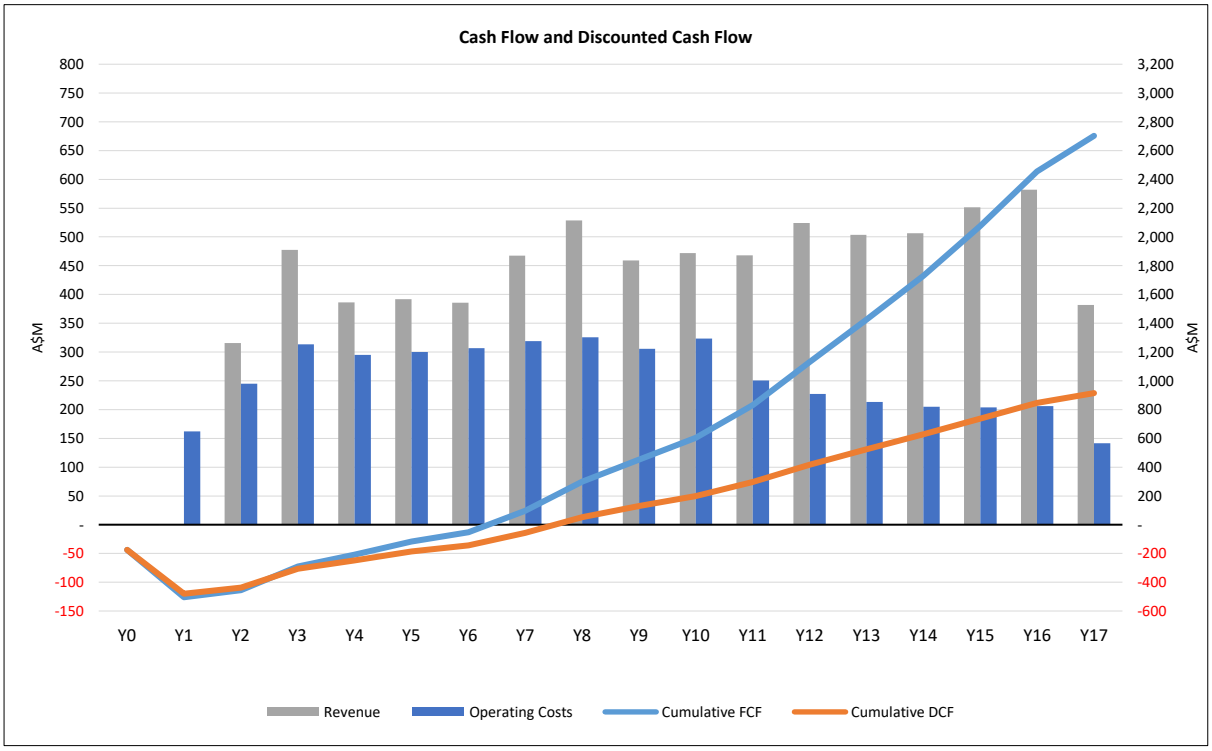


Figure 38 OWNER OPERATOR MINING (SELF FINANCED) CASH FLOW AND DISCOUNTED CASH FLOW

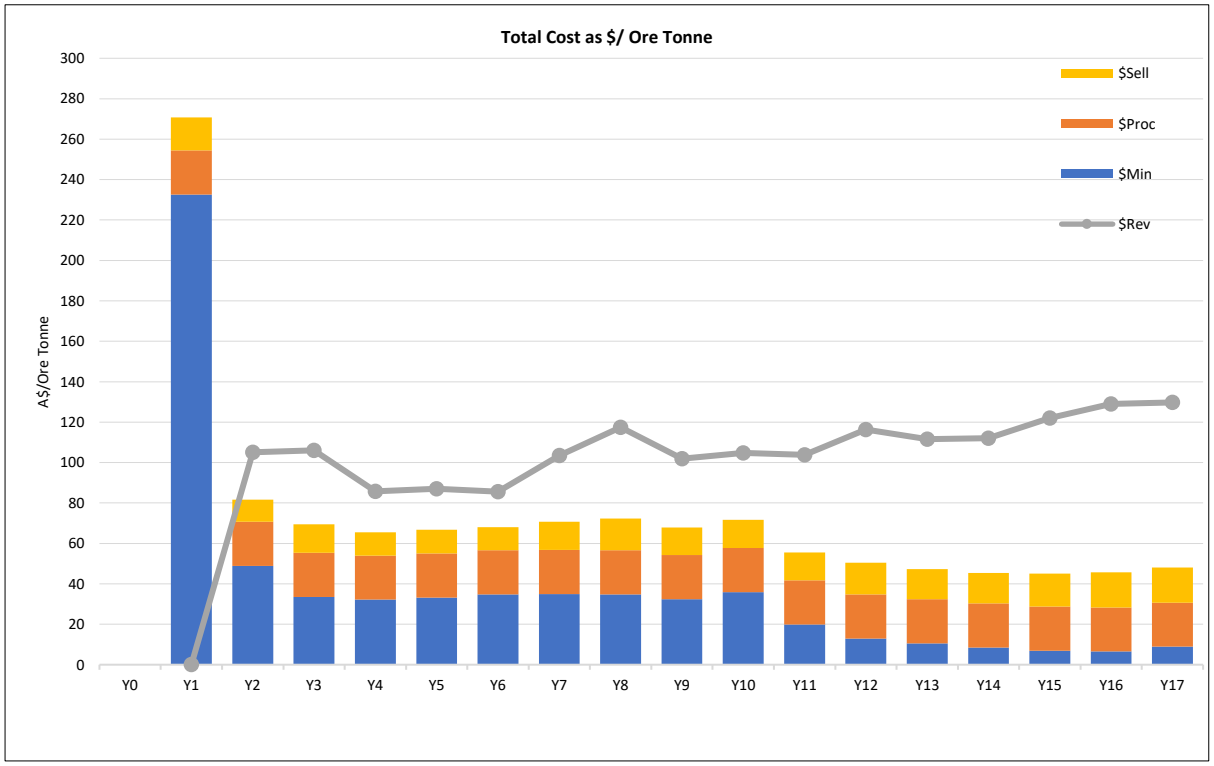


Figure 39 OWNER OPERATOR (SELF FINANCED) $/ORE TONNE UNIT COST

For personal use only

For personal use only

8.6.3 Owner Operator - Mining Capital OEM Financed Schedule Outcomes

Table 20 OWNER OPERATOR MINING (OEM FINANCED) SCHEDULE OUTCOMES

Scheduling Outcomes	UoM	2
Mining Model	Type	Owner Operator
Mining Capital Finance	Type	OEM
Mining Fleet Capital	A$M	-
Plant and NPI Capital	A$M	175
Total Capital	A$M	175
Mining Cost - Weight Averaged	A$/t	2.67
Processing Cost - Weight Averaged	A$/t	21.83
Selling Cost - Treatment, Refining, Mine to Port and Royalties	A$/dTCu	1,478
C1 Cost - Mining, Processing and Administration	A$/dTCu	6,891
C1 Cost - Mining, Processing and Administration	US$/dTCu	4,755
C1 Cost - Mining, Processing and Administration	US$/lbCu	2.16
LOM TMM	mt	745
Total Concentrator Feed	mt	70
Life of Mine (LOM) Head Grade	Cu%	0.86
Average Annual Copper in Concentrate Produced	t	36,000
Project Life	Years	17
Undiscounted Cash Flow	A$M	2,730
NPV (8%)	A$M	1,000
IRR	%	56

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

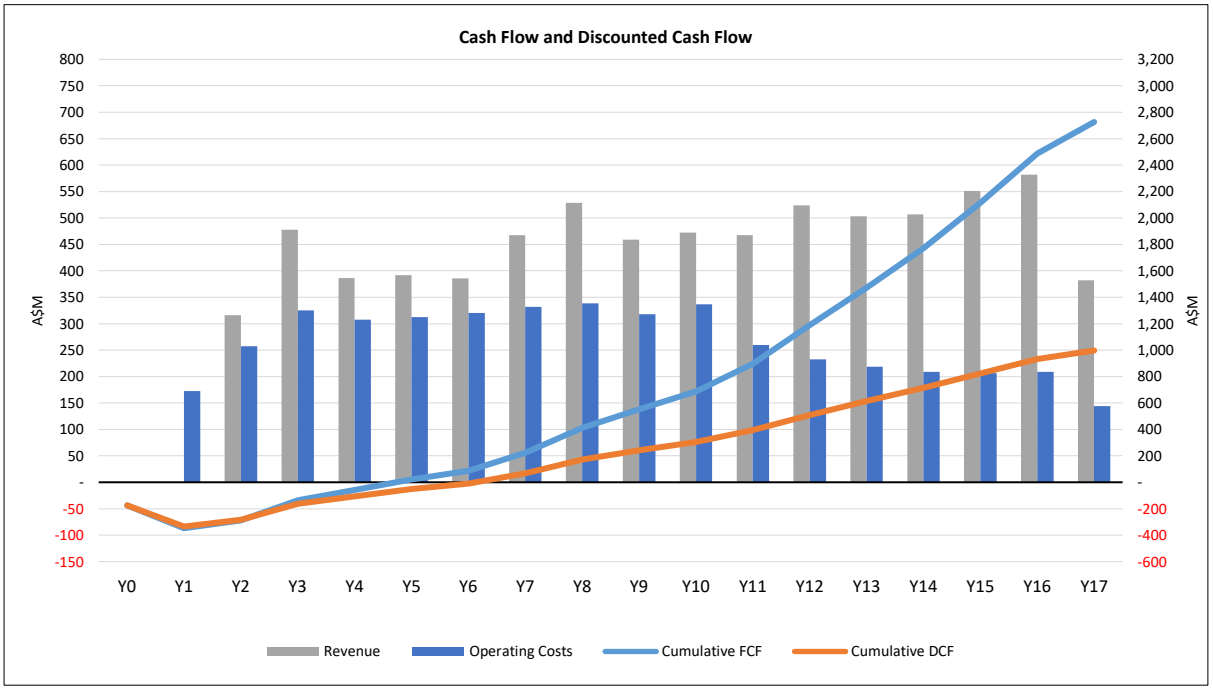


Figure 40 OWNER OPERATOR (OEM FINANCED) CASH FLOW AND DISCOUNTED CASH FLOW

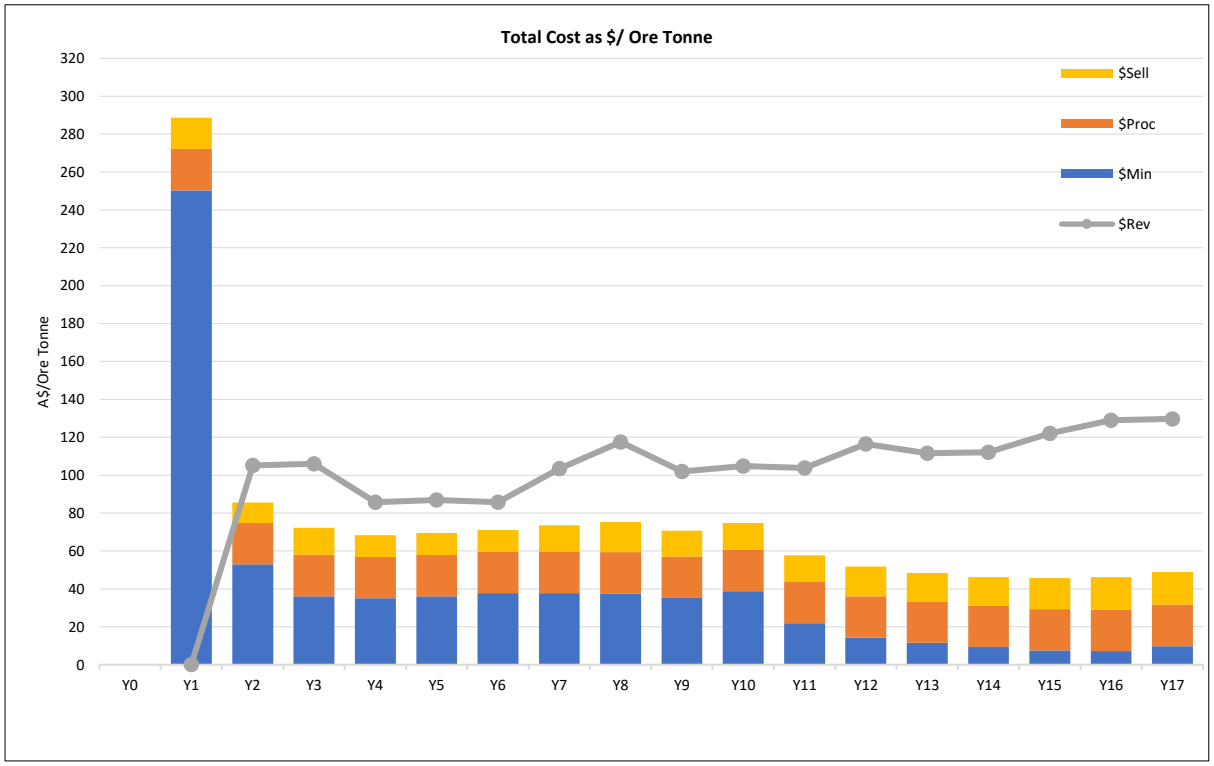


Figure 41 OWNER OPERATOR (OEM FINANCED) $/ORE TONNE UNIT COST

For personal use only

For personal use only

8.6.4 Contract Mining Schedule Outcomes

Table 21 CONTRACT MINING SCHEDULE OUTCOMES

Scheduling Outcomes	UoM	3
Mining Model	Type	Contractor
Mining Capital Finance	Type	Contractor
Mining Fleet Capital	A$M	-
Plant and NPI Capital	A$M	175
Total Capital	A$M	175
Mining Cost - Weight Averaged	A$/t	2.94
Processing Cost - Weight Averaged	A$/t	21.83
Selling Cost - Treatment, Refining, Mine to Port and Royalties	A$/dTCu	1,478
C1 Cost - Mining, Processing and Administration	A$/dTCu	7,223
C1 Cost - Mining, Processing and Administration	US$/dTCu	4,984
C1 Cost - Mining, Processing and Administration	US$/lbCu	2.27
LOM TMM	mt	745
Total Concentrator Feed	mt	70
Life of Mine (LOM) Head Grade	Cu%	0.86
Average Annual Copper in Concentrate Produced	t	36,000
Project Life	Years	17
Undiscounted Cash Flow	A$M	2,530
NPV (8%)	A$M	880
IRR	%	46

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

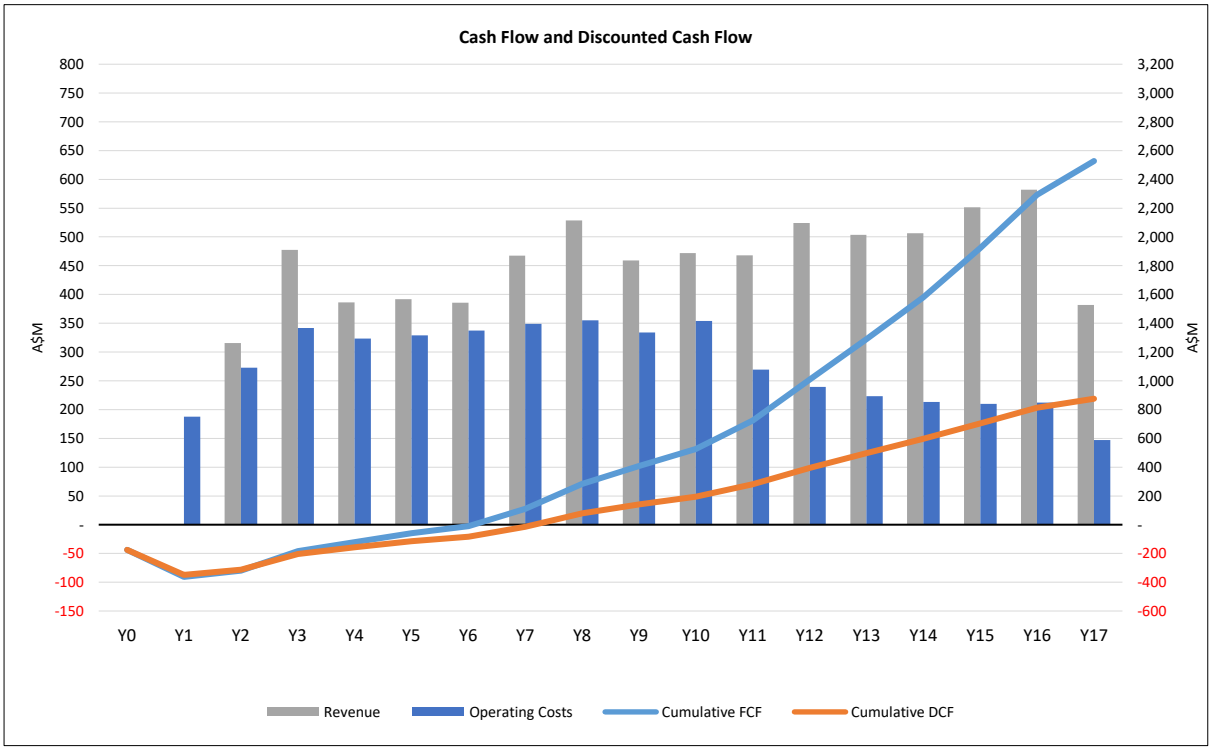


Figure 42 CONTRACT MINING CASH FLOW AND DISCOUNTED CASH FLOW

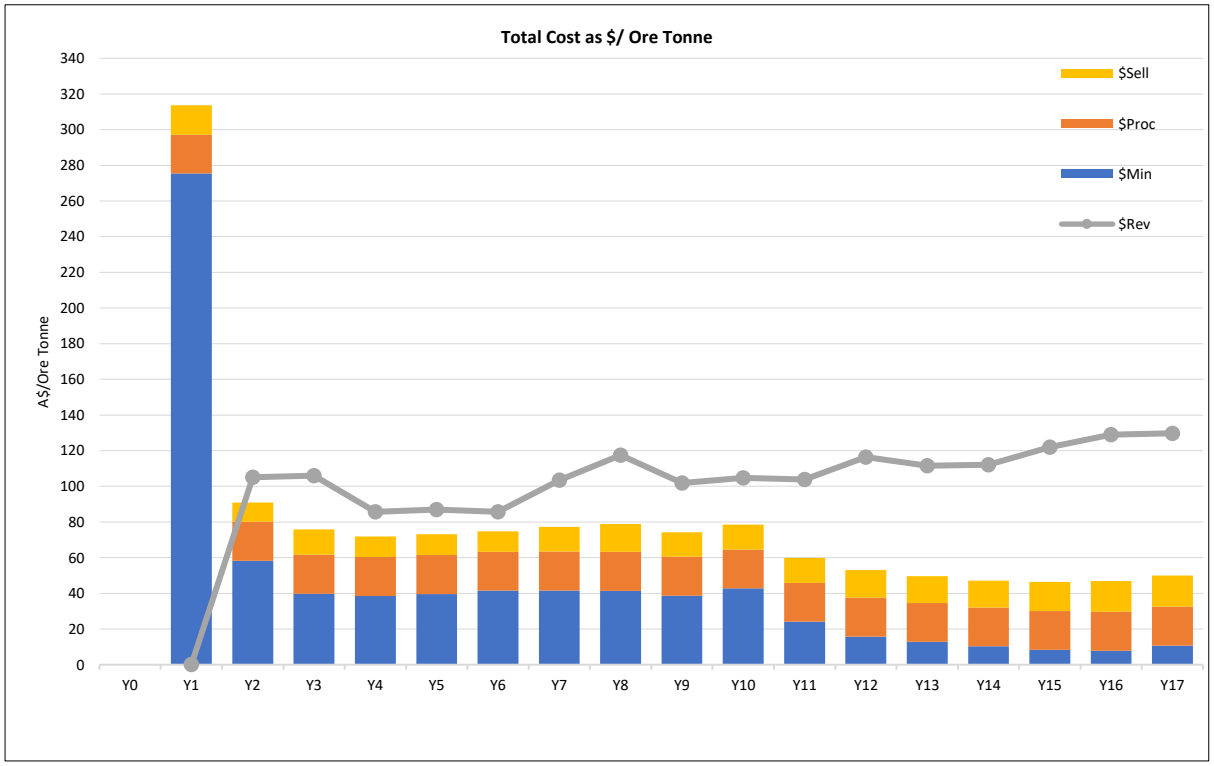


Figure 43 CONTRACT MINING $/ORE TONNE UNIT COST

For personal use only

For personal use only

9 Economic Analysis

9.1 Sensitivity Analysis

Sensitivity analysis was conducted on the base schedule. It tested changes in mining, processing, and selling costs, revenue capital and exchange rate, as outlined in Figure 44 and Figure 45.

The results demonstrate a linear relationship, with no gradient adjustments for sensitivity tests -30% to 30% for all but the exchange rate. From this, it can be inferred that the project is highly sensitive to revenue and exchange rate but can still sustain break even with up to a 30 % drop in revenue and a 30 % increase in exchange rate.

The sensitivity demonstrated in mining, processing and selling costs presents an opportunity in the next study phase to explore cost reductions and improve the economic outcomes.

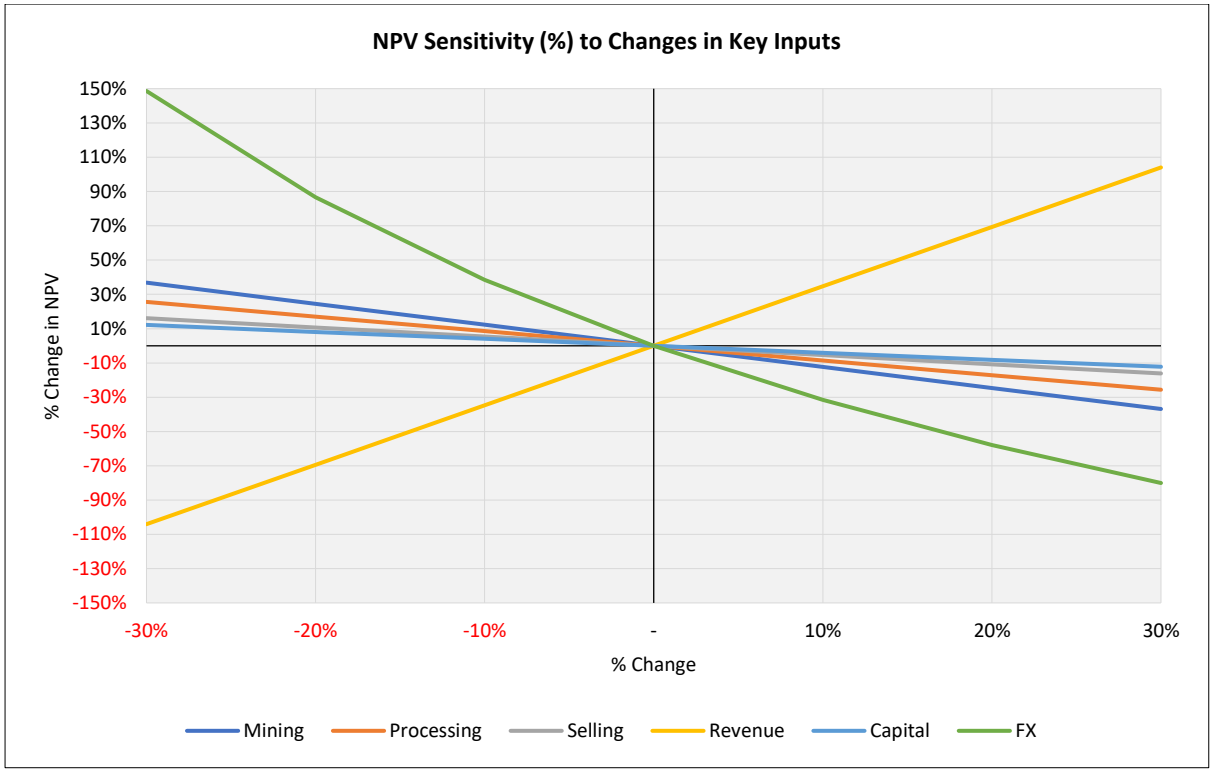


Figure 44 NPV SENSITIVITY (%) TO CHANGES IN KEY INPUTS

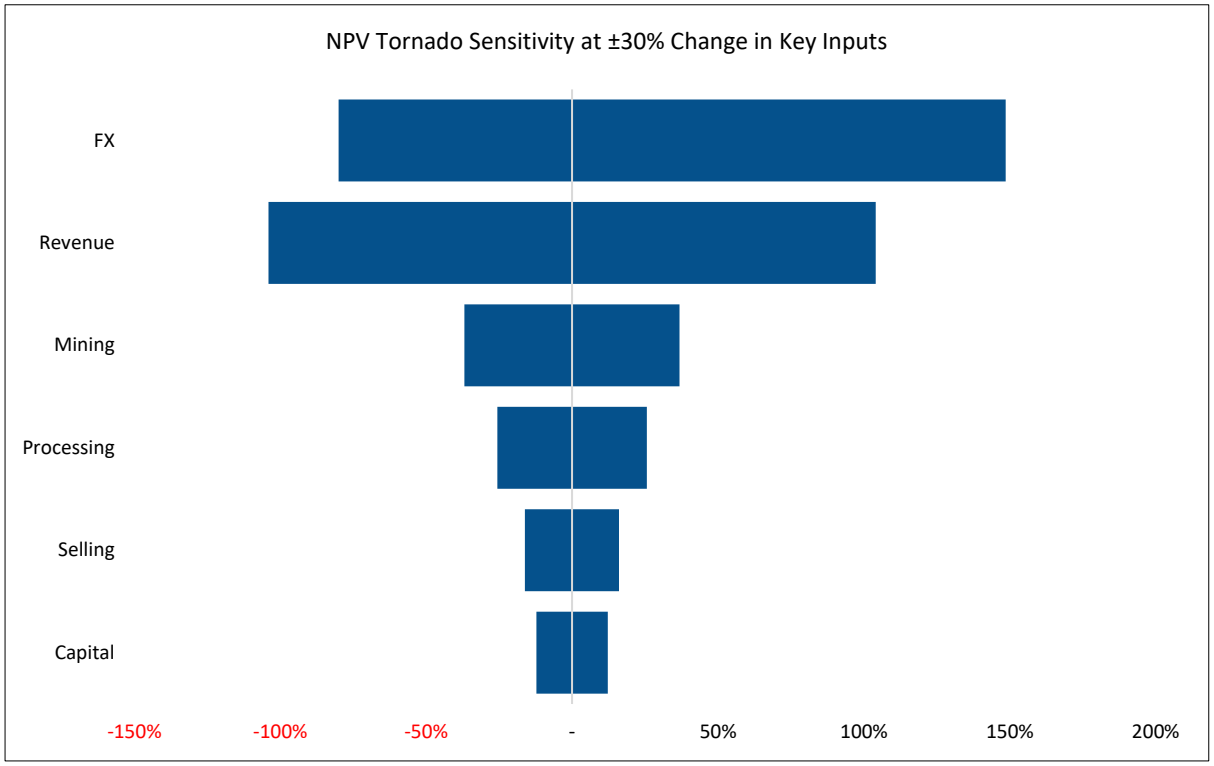


Figure 45 NPV TORNADO SENSITIVITY TO 30% CHANGE IN KEY INPUTS

9.2 Mining Fleet Capex

The estimated capital required for the mining fleet, as outlined in Section 8.6 and based on benchmarked purchase pricing from OEMs, is A$227 Million.

9.3 Process Plant Capital

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

The capital cost estimate for the processing plant upgrades was factored from a recent WA project utilising similar processing equipment and scaled using the engineering scale factor of 0.6. Additionally, prices were indexed to allow for inflation between 2022 and 2024.

These costs were provided by a third-party contractor on an Engineer, Procure, Contract and Manager (EPCM) as outlined in Table 22.

For personal use only

Table 22 ESTIMATED PLANT REFURBISHMENT AND UPGRADE COSTS

Scope	Item	A$M
Refurbishment	Existing 2.8 mtpa plant	35.51
Upgrade to 4.5 mtpa Plant	ROM	2.63
Upgrade to 4.5 mtpa Plant	Crusher	34.22
Upgrade to 4.5 mtpa Plant	Primary Crushed Stockpile	10.21
Upgrade to 4.5 mtpa Plant	Ball Mill	16.53
Upgrade to 4.5 mtpa Plant	Reagent System	0.50
Upgrade to 4.5 mtpa Plant	Float Cells	15.20
Upgrade to 4.5 mtpa Plant	Thickener	4.81
Upgrade to 4.5 mtpa Plant	Filter	4.68
EPCM and Contingency		34.40
Total		**158.69**

9.4 Non-Process Infrastructure Capital

The non-processing capital works include camp and office upgrades (where additional to processing). These works are estimated at A$17 million.

9.5 Waste Mining Capitalisation

No allowance has been made for capitalising waste mining costs / pre-strip; however, it should be considered part of future studies.

9.6 Project Financial Viability

The scoping study schedule demonstrated the surface mine sulphide mining strategy delivering a substantial net present value under the disclosed assumptions. Financial analysis was assessed internally with Cyprium and deemed sufficiently positive in value and rate of return to justify the advancement of study phases into pre-feasibility study (PFS) stages.

CYM considers that its prospects of securing funding to undertake the large surface mine are strong for the following reasons:

- The project economics are attractive (*see Scheduling Outcomes table in Executive Summary*)
- The amount of pre-production capital expenditure is relatively modest as the Nifty mine is a brownfields site with established mine infrastructure (*see Scheduling and Financial Inputs and Constraints table in Executive Summary*)
- The risk profile is considered low to comparable new copper projects. Nifty is in Western Australia, a stable and well-regulated mining jurisdiction. The orebody is proven as the mine operated for 24 years and produced 750 kt of copper. 97% of Nifty's Mineral Resources are in the higher confidence Measured and Indicated categories

For personal use only

- Demand for copper is very strong. Short and long-term copper futures prices support undertaking a project financing of this scale.

Cyprium considers all the company's project financing options, including equity, debt, joint ventures, offtake financing, royalties, contractor financing, equipment financing and hybrid financing structures available to the company. Cyprium has confirmed that it is engaged in discussions with potential financiers.

For personal use only

For personal use only

10 METALLURGY

10.1 Chalcopyrite (Fresh) Ore

Of the three ore types (oxide, the chalcocite (transitional) and the chalcopyrite (Fresh)), the chalcopyrite has the most significant body of test work, coupled with over 2,000 data points of daily operational data. As outlined in the initial schedules (Section 8.4), the ore available for feed to the concentrator existed in the following ratio:

- Oxides ~2%
- Chalcocite ~1%
- Chalcopyrite ~97%

The high volume of Chalcopyrite feed helps de-risk the project significantly as it is well understood, tested and optimised after many years of concentrator operation.

10.2 Test Programs

Two major test programs have been undertaken on the primary chalcopyrites: the initial 2003 Ammtec testing for the Birla feasibility study and a 2019 optimisation program by BV for MLX. 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 separate chalcocite testing. MEC reviewed this work and deemed it sufficient for use in a scoping-level study.

- 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 3 different drill holes
- The spread of drill data covers the subsequent underground operations and the newly planned concentrator feed
- The 2019 MLX testing was conducted at the eastern and western ore zones from 17 different drill holes, independent from the previous Birla drilling
- A further 6 additional diamond holes were drilled in 2021, forming part of the 2024 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 further two diamond holes were completed in early 2024 to provide additional ore for oxide, chalcocite and chalcopyrite sighter testing for the 2024 Met testing program.

A summary of the parameters optimised during the two major testing programs is shown as follows:

For personal use only

Table 23 MAJOR TEST PARAMETER COMPARISON

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 Float testing	Yes	
2 Stage cleaner testing	Yes	
Locked cycle testing	Yes	

Optimised Result		
Cu Head Grade	2.86% Cu	2.14% Cu
Cu Recovery	97.54%	96.0%
Cu con grade	19.68% Cu	17.2% Cu

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

10.3 Historical Operating Data

As described in the memo Grade Recovery Curve Derivation (13), data from daily summary flotation performance spanning from December 2011 through to May 2019 was analysed. This appears to be 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
- 125 mm 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.

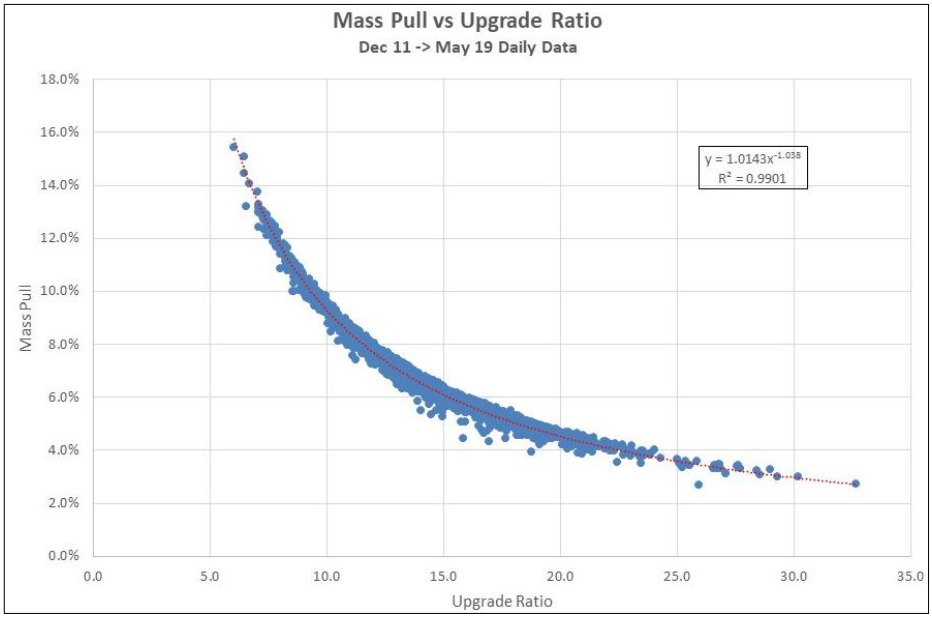


Figure 46 DAILY PLANT DATA - MASS PULL VS UPGRADE RATIO

For personal use only

For personal use only

11 PROCESSING

11.1 Process Flow Sheet

Significant process information is available from the operation of the Nifty concentrator on chalcopyrite feed for 8+ years. Several reports mention various details of the sulphide concentrator operation or design. Pulling these numbers into a current Process Design Criteria allows for the determinations and observations in the next sections.

The basic processing flow sheet is summarised in Figure 47



Figure 47 BASIC FLOW SHEET

A detailed breakdown of the existing processing facilities at Nifty is outlined in Figure 48

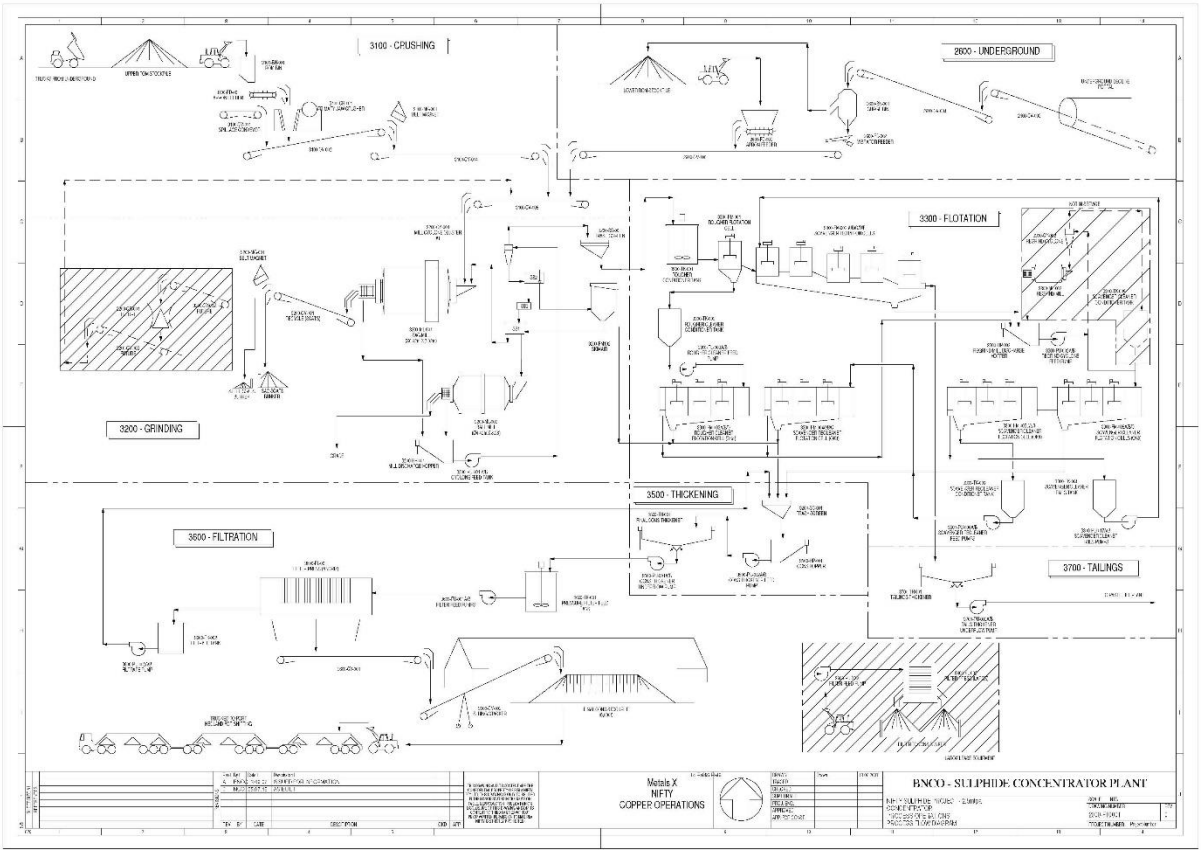


Figure 48 EXISTING CONCENTRATOR PLANT FLOWSHEET

For personal use only

11.2 Crushed Ore Stockpile

The current design has one ROM primary crusher feeding directly into one SAG mill with no surge capacity; this could be improved by decoupling the crusher and the sag mill via an intermediate surge stockpile.

Historically, this appeared to be mitigated to some extent because there were two operating crushers (ROM and Underground) and a crushed ore stockpile with an emergency loader-fed feeder. It is unclear how this stockpile was filled historically. However, from operating photos, it appears this was merely an overflow stockpile rather than a continuous grinding feed source.

With only a ROM surface crusher to service the Nifty grinding operations, there is currently no ability to divert crushed ore onto a crushed ore stockpile. For optimal grinding and flotation operational stability, a fully separated crushed ore stockpile from which all grinding feed is sourced must be instigated for all concentrator operating scenarios.



Figure 49 POSSIBLE CRUSHED ORE STOCKPILE LOCATION

For personal use only

11.3 Crusher Capacity

Historical test work provides no Crusher Work Index (CWi) data required for crusher sizing. The 2003 Study (Straits Resources (SNCL), 2003) for the Nifty concentrator design also mentioned in the physical testing information the complete absence of either UCS or crushing work index data. This is required for correct equipment selection in the crushing circuit and power consumption assessment.

After this, UCS data must have been obtained as listed in the 2004 PDC (Straits Resources (SNCL), 2004); however, no CWi information can be found for any other type.



Figure 50 STOCKPILE WITH POSSIBLE NEW PRIMARY, SECONDARY AND TERTIARY CRUSHER LOCATIONS

Without calculations of crushing power, estimates of throughput capacity are best based on operating data.

To this end, the GRES (GR Engineering Services, 2010)) operational review report conducted in 2009 indicated the primary crusher capacity with a closed side setting of 110 mm to be 270 tph. This and the 2004 PDC (Straits Resources (SNCL), 2004) as part of the Birla concentrator design, which mentions the primary crusher capacity at 290 tph, are the only two references made to the ROM surface primary crusher capacities, despite several plant performance review reports conducted. It is suspected that when two crushers were available, the

For personal use only

performance of each unit did not often contribute to overall plant bottlenecks and therefore did not feature in comminution performance increases assessments such as the OMC (Oreway Mineral Consultants, 2009) report.

The predominant constraint on the primary crusher is the need to operate at a small, closed side setting to facilitate higher SAG throughput rates, a need that the installation of a secondary and tertiary crushing option could alleviate.

11.4 Grinding Capacity

The grinding circuit capacity can be calculated using the Bond formula with Rowland adjustment factors. An estimate for the SAG mill capacity can be provided using the CWi for coarse feed ranges, the Rod Mill Work Index (RWi) for medium feed ranges (16 mm-4 mm) and the Ball Mill Work Index (BWi) for lower-end feed size ranges. A more accurate estimate could be provided by accessing SMC test data. Unfortunately, neither the SMC data nor the CWi data are available. While the BWi data is available for a range of sulphide feed types, only a single RWi data point is available.

Consequently, for mill capacity calculations it was assumed that both the SAG and the Ball Mill responded as a ball mill. This is a valid assumption for final throughput scenarios containing a secondary and tertiary crusher SAG feed size. For other scenarios containing only a primary crusher – this provides a rough estimate only until additional physical ore characteristics can be tested.

A check against operating data was conducted, comparing the current calculated predicted throughputs to the previous throughputs mentioned in the 2020 MLX Overview of Nifty Capacity report (Metals X Limited, 2020).

This report shows capacities of 350-400 tph through the grinding circuit were achieved (presumably crusher unconstrained), which equates to an annualised maximum capacity of 3.26 mtpa. Notably, on a spreadsheet showing the daily production data from 2011 through 2019, of the slightly over 2,000 operating days, only two days matched or exceeded the claimed 400 tph throughput rates for an entire 24-hour period. These two days were not at the end of the concentrator operating period when attempts were being made to maximise throughput; rather occurred on the 15th of December 2011 and the 12th of March 2014, putting some doubt as to the sustainability of 400 tph treatment rates.

Nevertheless, compared to the 3.26 mtpa, the current calculation of crusher unconstrained throughput shows 2.95 mtpa through the grinding circuit when using the average BWi value.

Either this means that the ore treated during the MLX capacity constraint assessment was softer than the average (BWi ranges from 12.8 to 19.3 with an average of 17.2 kWh/t), or the assumption that the SAG mill performs similarly to a ball mill understated the grinding capacity.

For personal use only

In the grinding capacity calculations, when the ore is tertiary crushed to a P80 of 12.5 mm and the SAG can validly be treated as a ball mill, the maximum capacity possible through the grinding circuit is 3.48 mtpa, suggesting that the MLX assessment of 3.26 mtpa rates may have been affected by softer than average ore.

It is assumed that with only a primary crusher upgrade, the circuit capacity is 2.95 mtpa. Further, it is calculated that with the addition of a suitably sized secondary and tertiary crusher to make full use of installed SAG and BM power, the circuit capacity increases to 3.48 mtpa.

The grinding power constraint must be alleviated to upgrade the circuit capacity further. To a degree, SAG mill volumetric constraints can be managed by adjusting grate and pebble port sizes. If required, more efficient pulp lifters, so generally the cheapest grinding circuit power upgrade is an additional ball mill installation. Since a controlled feed split between two different-sized ball mills would be difficult, the most logical upgrade consists of a similarly sized ball mill to the existing one, which adds 2.5 MW of installed grinding power.

The addition of another ball mill increases the calculated circuit capacity to 4.5 mtpa.

11.5 Milling Capacity

One note of caution: although the Nifty Concentrator Throughput Capacity memo (5) mentioned that SAG power of 4600-4700 had been achieved (with a peak slightly over 4,850kW) by increasing ball levels in the SAG mill, there was no assessment of the structural maximum weight the SAG mill could be operated at. At this stage, it is assumed that, as stated in the memo, further power increases to industry standard 88 or 89% of installed power can readily be achieved.

11.6 Flotation Capacity

Various flotation test works on sulphide ore in the early 2000's and late 2000's suggested that eight minutes of residence time in the rougher / scavenger circuit was sufficient to maximise recoveries sensibly. The plant at a scale-up factor of 2.5 relates to 20 minutes of residence time, achieved at all but the last upgrade scenario of 4.6 mtpa.

As such, additional test work will assess any flotation upgrades for the final upgrade to 4.55 mtpa.

11.7 Dewatering Capacity

The MLX circuit capacity report mentions no throughput constraints in either flotation or thickening/thickener underflow pumping at the 400 tph rate tested.

Thickener sizing calculations using the settling tests data available in the 2004 PDC show that the thickeners may need upgrading for the final upgrade to 4.55 mtpa. In this scenario, the existing tailings thickener would be

reassigned to concentrate duties, and a new upsized tailings thickener would be installed. Additional settling tests will confirm this.

The plant filter press is in poor condition and needs to be replaced entirely. As such, it can be sized for whatever final maximum duty is selected.

11.8 Sulphide Plant Upgrade Scenarios

Using existing equipment capacities provides logical upgrade scenarios, as outlined in Table 24. These are initial estimates only, detailed ore characteristic assessment will need to be conducted on the four main ore types to allow confirmatory circuit capacity modelling.

Table 24 PLANT UPGRADE SCENARIOS

Incremental Upgrade Case	Capacity	Predominant Constraint
Secondary / Tertiary crusher added	3.5 mtpa	Mill power constrained.
Duplicate ball mill installed	4.6 mtpa	Float & thickener upgrades are potentially required.

For personal use only

For personal use only

12 ENVIRONMENTAL AND SOCIAL

12.1 History

Approvals for operations at the Nifty Copper Project were first submitted by Western Mining Corporation (WMC) to the Western Australian Department of State Development in 1992.

In September 1992, surveys were scheduled to assess the flora and fauna on the site, emphasising a commitment to minimising impacts on the local wildlife and incorporating survey findings and recommendations into construction and ongoing operations. Notably, it was observed that the Nifty Region lacked surface water resources. Additionally, concurrent efforts were pledged to manage topsoil effectively and to rehabilitate waste dumps and roads. Aboriginal heritage surveys conducted at that time identified culturally significant locations. However, these were situated relatively remote (+15 km) from the areas of disturbance. WMC acknowledged its responsibility to protect these sites despite their remote accessibility, noting limited opportunities for visitation. Furthermore, WMC restricted public access to the newly created access roads.

Approvals were then compiled and subsequently approved for the expansions to the operation, including the SX-EW plant and the heap leach pads, through the periods of ownership by both WMC and Straits Resources Limited.

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

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.

12.2 Rehabilitation Provision

The Nifty Copper Project is located within State Agreement Mining Lease M271SA (referred to earlier in section 3.2). The rehabilitation of the operation remains covered by an AUD 6 million unconditional performance bond (UPB) administered under the Mining Act 1978 (WA) and held against the tenement.

The current system applied to all new and existing projects whereby rehabilitation of the tenement/s is covered by the Mining Rehabilitation Fund Act 2012 (WA) implemented on the 1st of July 2013.

All other Cyprium tenements are covered by the provisions contained within the Mining Rehabilitation Fund Act 2012 (WA).

For personal use only

13 REGULATORY APPROVALS AND PERMITTING

13.1 Legislative Framework

13.1.1 General

The main Acts and Regulations governing environmental activities at Nifty are -

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

Cyprium must also comply with the existing conditions on various existing licences and permits.

13.1.2 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. 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 to develop the mineral resource. These terms and conditions are contained within what is known as State Agreements, which are ratified by individual Acts of Parliament.

A State Agreement is a legal agreement between the WA Government and a proponent of a major project within the boundaries of WA. It is a highly visible sign of WA's and the proponent's support for and commitment to the project.

State Agreements have been used to develop resource projects in WA for over sixty years. The first State Agreement was enacted in 1952 for the BP Oil Refinery at Kwinana. In State Agreements, significant responsibility is put on companies for infrastructure development, both industrial and social.

In the case of the agreement as it applies to Nifty Copper Pty Ltd, the early approval process by way of State Development submission was based on the heap leach SX-EW proposal under WMC ownership and then converted to the underground and concentrator proposal while under the ownership of Aditya Birla Limited.

Effectively, the agreement works within the normal permitting regimes as primary and secondary proposals. In contrast, a primary proposal is submitted for Approval before 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 before 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 will 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 according to any Act from time to time in force.

13.2 State Agreement Proposals

The State Agreement requires the submission of proposals and amendments to proposals under Clause 6, which is the original obligation undertaken by WMC 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.

The original proposal was the 1992 Nifty Development Proposal and Supplement, which outlined the development of the surface mine heap leach and SX-EW operation based around the oxide component of the Nifty orebody. Once a proposal is submitted, under Clause 8, the Minister has a defined period to accept or reject the proposal or ask for further information. If the proposal is rejected, there is an arbitration process; if the proposal is accepted, there is still an obligation to obtain other necessary legislative approvals.

The subsequent extensions and addendums to this proposal were submitted under Clause 9 Additional Proposals, where if there is a significant alteration or modification or otherwise vary its activities, the company must submit a proposal which covers off against Clause 7 and Clause 8 requirements.

The development of the Underground Mine and Copper Concentrating Facilities was submitted under this clause in 2004, as well as subsequent modifications such as the new Paste Fill Plant and successive raises to the Tailings Storage Facility.

This restart of the Nifty Copper Project is being proposed under Clause 9. The proposal submitted must comply with the agreement's requirements, particularly Clauses 7 and 8. The following sections summarise the requirements of the agreement under those clauses.

13.3 Establishment of Mining and Treatment Options

Operations are already established as a surface mine, heap leach, SX-EW and concentrator; the restart does not exceed that profile. An increased area of disturbance is allowed for waste dump and heap leach pads.

For personal use only

For personal use only

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.

13.4 Roads

No new roads are required to access the Nifty site, and recently, parts of the current access roads have been refurbished to accommodate restart activity.

13.5 Accommodation for the Company's Workforce

No increase in accommodation is required and the existing camp has commenced a refurbishment programme to lift the general standard of the rooms and messing facilities.

13.6 Water Supply

Water for the process will be sourced from the existing underground mine via boreholes and pumps. A 26D application is required to amend the existing water abstraction licence to deal with the change in extraction method. The balance of the remaining water supply will come from the existing East Nifty bore fields.

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

13.7 Power Supply

The power supply will initially be generated by the existing 21MW capacity gas power generation currently supplied by the existing gas pipeline.

Over the longer term, other power supply arrangements and agreements will be investigated including solar.

13.8 Port Facilities

It has been assumed that export will be via containerised concentrate haulage and port storage on hard stand, with ship loading into panamax style vessels via a container discharge system. An example of this system is Qube's RotaBox System.

Future work will investigate options for bulk storage and ship-loading to optimise costs. Cyprium has confirmed that initial conversations have commenced with the Pilbara Port Authority (PPA)

13.9 Airport and Associated Facilities

The current airport facilities are sufficient for the project restart and refurbishment has been completed for the facility to comply with current standards. There are several "grandfathered" conditions within the current

approvals (due to the age of the airstrip), which will remain unchanged for the usable life of the current installation.

13.10 Other Works, Services or Facilities

All other facilities are appropriate. Where necessary, the required refurbishment has been completed or is planned for completion.

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

Most labour, contractors and professional services are expected to be sourced from within Western Australia.

Transport to the 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.

Where possible, equipment, supplies, and materials are located out of Western Australia and are sourced from within Australia or elsewhere on a skill-needs basis.

13.12 Engagement and Training of Employees

The 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. This programme may include local employees from the Traditional Owner groups within the greater Pilbara region.

13.13 Other Leases, Licences and Tenures of Land

The operation utilises the existing facilities, and any licensing required deals with changes in terms and conditions covered under the State Agreement, Mining Proposal and Works Approval processes.

13.14 Environmental Management System

Cyprium has 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.

The Management System is the suite of processes and procedures to ensure an organisation can fulfil all tasks required to achieve predetermined objectives.

The ISO14001 system is an internationally recognised Guideline for Environmental Management Systems against which an organisation can be assessed for compliance and obtain certification. The guideline specifies the minimum requirements for an organisation concerning policies, the identification and management of

For personal use only

environmental, safety and health aspects/risks, compliance with legal and other requirements, and continual improvement of environmental performance.

13.15 Environmental Approval Roadmap

Government approvals are required for any new activities within the project scope. Nifty is located on a State Agreement Act tenement M271SA, as outlined in Figure 51. Ministerial Approval is required to amend the project size and operating life.

An amended Mining Proposal is required to restart the surface mine and concentrator, including submitting a Mine Closure Plan. An amended Works Approval is required for the restart of the concentrator.

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 operations is outlined in Table 25.

For personal use only

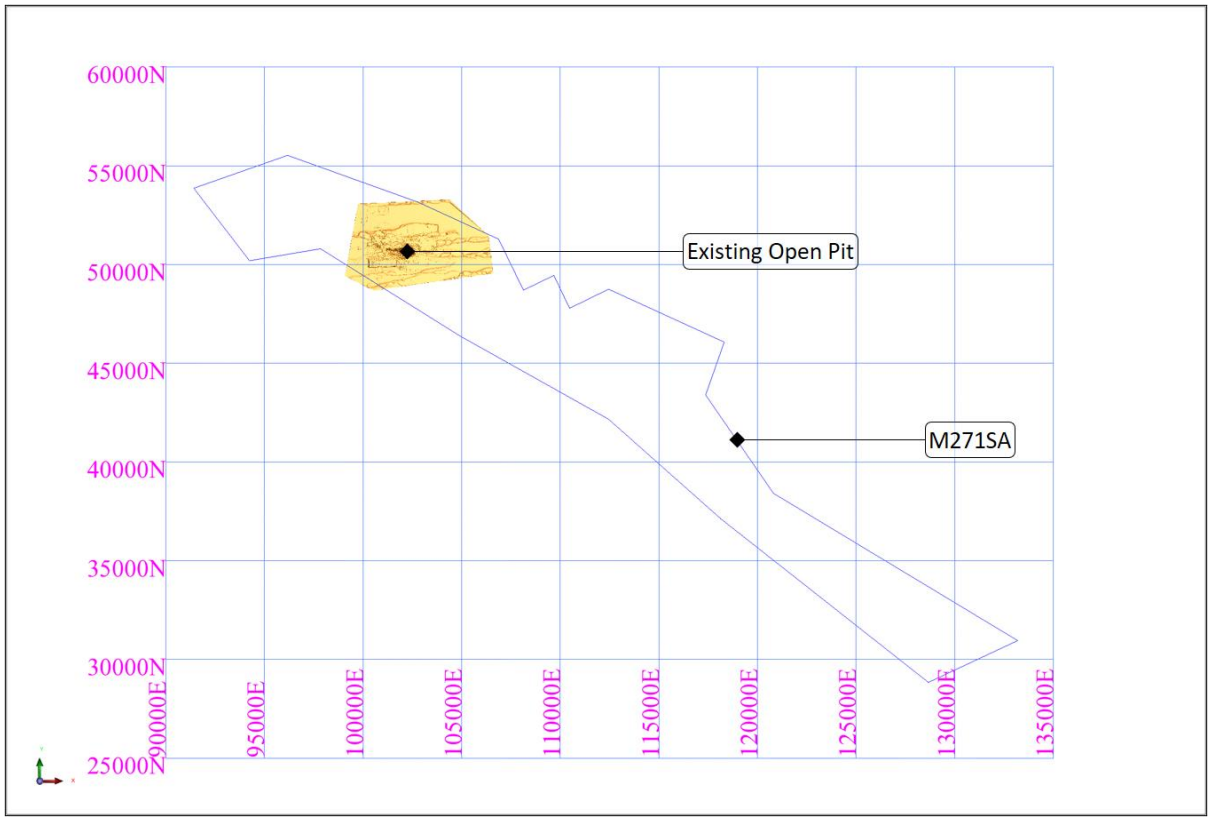


Figure 51 MINING LEASE M271SA

Table 25 PERMIT SUBMISSION STATUS

Permit/Item	Legislation	Department	Description	2022 Status	2024 Status – Heap Leach	2024 Status - Concentrator
Works Approval and Licence	Environmental Protection Act (1986)	Department of Water & Environmental Regulation (DWER)	Amended Prescribed Activities Licence to enable processing	Approved	Approved	Need to submit an amendment when we have project details
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	Extended	Extended
Mining Proposal	Mining Act (1978)	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	Approval for mining activities and construction of mine infrastructure	Approved	Submitted May 24, awaiting approval	Need to submit a new submission when we have project details
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 required 2025	Update required 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	Approved	Approved

For personal use only

For personal use only

14 FUTURE WORK PROGRAMME

14.1 Geology

Resource infill drilling has been undertaken to convert inferred category resource material to indicated inside the pit optimisation extents. Results have been received when writing this report and will inform a potential MRE update.

Metallurgical test work diamond drilling has been sampled and assayed to 1m intervals using the mine analytical suite to enable the selection of the metallurgical test work master composite. These assays may also be used in a potential MRE update.

Mine extension, near mine and regional exploration are being analysed to enable programme design to commence.

14.2 Geotechnical

Detailed reassessment of the historical geotechnical data has been conducted on Nifty. Geotechnical drilling to support the large pit extents and areas with proposed walls. Analysis, numerical modelling and revised geotechnical study works are proposed to capture and refine these parameters for further feasibility studies.

14.3 Mining

The mining cost basis for the Nifty pit demonstrates significant early-stage costs that can improve the project value if mining unit costs can be improved early in the mine life and at later stages when the pit depth becomes significant. Future works should consider, but not be limited to:

- Alternative fuel options
- Electrification, including trolley systems
- Inpit and Expit crushing and or conveying options
- Owner vs contractor mining models

Early-stage engagement with contract miners who can support these options and give cost certainty early for Nifty will reduce the cost risks associated with the mine cash flow profile.

Optimisation of the mining schedule in the early years will enable ore to be brought forward to maximise early concentrator feed.

14.4 Metallurgical

Although the performance of the processing plant at Nifty is well documented opportunity exists to optimise performance, reduce cost and increase throughput. In addition, the potential exists to utilise the current heap

leach pads and SXEW plant (at a reduced rate) to supplement early cash flows and support early operations at the mine.

It is recommended that a detailed assessment of the mineral resource and likely recovery achievable from the historic heap leach pads be assessed, as well as the requirements to leach fresh oxide ores produced from mining.

Additional test work and validation are required to support the processing of oxide ores through the concentrator in the early stages of operation.

Some works are required to optimise reagent usage and ideal upgrades for the 4.5 mtpa rate at the revised feed grade expected.

14.5 Carbon Footprint Analysis

Work on Green House Gas (GHG) emissions accounting should be completed and used to inform strategic decision-making relating to alternate power or mining methodologies, for example, electrification or hybrid fuels.

For personal use only

15 REFERENCES

Cyprium. (2022). *Nifty Restart Rev O Final_20220325.* CYM.

Cyprium. (2024). *Updated Nifty Mineral Resource Estimate Reaches 1 Million Tonnes Contained Copper.* Cyprium.

GR Engineering Services. (2010). *11678 0028_C Birla Nifty Optimisation.* GR Engineering Services.

Metals X. (2020). *Nifty Copper Operations-2020 OP Scoping Study_Final.* MLX.

Metals X Limited. (2020). *Overview of Nifty Mill Capacity.* Metals X.

Oreway Mineral Consultants. (2009). *Comminution Circuit Optimisation.* OMC.

Straits Resources (SNCL). (2003). *2003 Nifty Expansion Study.* SNCL.

Straits Resources (SNCL). (2004). *2004 Nifty Expansion Study.* SNCL.

For personal use only

For personal use only

APPENDIX A: GEOTECHNICAL DOMAINS

Table 26 GEOTECHNICAL DOMAINS

Description	Code	Weathering State	Batter Angle ◦	Bench Height m	Berm Width m	IRA ◦	OSA ◦
Topography to the Base of Oxidation	11	Ox	50	20	9.0	37.8	37.8
Base of Oxidation to the Base of Transitional	12	Tr	55	20	9.0	41.0	41.0
Base of Transitional to the 10,100 RL	13	Fr	60	20	8.5	44.9	44.9
Topography to the Base of Oxidation	21	Ox	50	20	9.0	37.8	37.8
Base of Oxidation to the Base of Transitional	22	Tr	55	20	10.5	39.2	39.2
Base of Transitional to the 10,100 RL	23	Fr	60	20	10.5	42.2	42.2
Topography to the Base of Oxidation	31	Ox	50	20	9.0	37.8	37.8
Base of Oxidation to the Base of Transitional	32	Tr	55	20	9.0	41.0	41.0
Base of Transitional to the 10,100 RL	33	Fr	60	20	8.5	44.9	44.9
Topography to the Base of Oxidation	41	Ox	60	20	8.0	45.7	42.5
Base of Oxidation to the Base of Transitional	42	Tr	65	20	8.5	48.3	44.4
Base of Transitional to the 10,100 RL	43	Fr	70	20	9.0	50.9	46.1
Topography to the Base of Oxidation	51	Ox	50	20	9.0	37.8	35.5
Base of Oxidation to the Base of Transitional	52	Tr	55	20	9.5	40.4	37.5
Base of Transitional to the 10,100 RL	53	Fr	60	20	10.5	42.2	38.7
Topography to the Base of Oxidation	61	Ox	58	20	8.0	44.3	41.3
Base of Oxidation to the Base of Transitional	62	Tr	60	20	8.5	44.9	41.5
Base of Transitional to the 10,100 RL	63	Fr	65	20	9.5	46.7	42.6
10,100 RL to the 10,000 RL	101	Fr	55	20	10.0	39.8	39.8
10,100 RL to the 10,000 RL	111	Fr	50	20	10.0	36.8	36.8
10,100 RL to 10,000 RL	121	Fr	45	20	10.0	33.7	33.7
10,100 RL to the 10,000 RL	131	Fr	55	20	10.0	39.8	39.8
10,100 RL to the 10,000 RL	141	Fr	75	20	5.0	62.6	57.2
10,100 RL to the 10,000 RL	151	Fr	75	20	5.0	62.6	57.2
10,100 RL to the 10,000 RL	161	Fr	60	20	10.0	42.9	39.7
10,100 RL to the 10,000 RL	171	Fr	60	20	10.0	42.9	39.7
10,100 RL to the 10,000 RL	181	Fr	45	20	10.0	33.7	31.6
10,100 RL to the 10,000 RL	191	Fr	40	20	10.0	30.6	28.9
10,100 RL to the 10,000 RL	201	Fr	40	20	10.0	30.6	28.9
10,000 RL to the 9,500 RL	102	Fr	55	20	10.0	39.8	39.8
10,000 RL to the 9,500 RL	112	Fr	50	20	10.0	36.8	36.8
10,000 RL to the 9,500 RL	122	Fr	45	20	10.0	33.7	33.7
10,000 RL to the 9,500 RL	132	Fr	55	20	10.0	39.8	39.8
10,000 RL to the 9,500 RL	142	Fr	75	20	5.0	62.6	54.1
10,000 RL to the 9,500 RL	152	Fr	75	20	5.0	62.6	54.1
10,000 RL to the 9,500 RL	162	Fr	60	20	10.0	42.9	37.9
10,000 RL to the 9,500 RL	172	Fr	60	20	10.0	42.9	37.9
10,000 RL to the 9,500 RL	182	Fr	55	20	10.0	39.8	35.4
10,000 RL to the 9,500 RL	192	Fr	40	20	10.0	30.6	27.8
10,000 RL to the 9,500 RL	202	Fr	75	20	5.0	62.6	54.1
Sinkholes - Crest expanded by 50m	301	Ox, Tr & Fr	37	10	3.0	31.6	31.6
Sinkhole Zone of Influence	302	Ox, Tr & Fr	45	20	7.0	36.5	36.5
Underground workings Zone of Influence	401	Ox, Tr & Fr	45	20	7.0	36.5	36.5
Historic Heap Leap Pads	501	Ox, Tr & Fr	36	20	-	36.0	36.0
Waste Dump above original topography	502	Ox, Tr & Fr	36	10	-	36.0	36.0
In Pit Back Fill (IPBF)	503	Ox, Tr & Fr	37	20	-	37.0	37.0

APPENDIX B: DETAILED MINING COST INFORMATION

Grade Control

Grade control was estimated by CYM and was assumed to be via blast hole sampling in ore only, as outlined in Table 27.

Table 27 GRADE CONTROL COST ESTIMATION

		Oxide[7]	Transitional	Fresh
Assay Cost	$/Sample	-	-	-
Drilling Cost	$/m	20.00	20.00	20.00
Burden	m	4.50	4.50	4.50
Spacing	m	5.40	5.40	5.40
Angle	Deg	90.00	90.00	90.00
Sample Interval	m	2.50	2.50	2.50
Waste Contingency	%	20.00%	20.00%	20.00%
Total cost	$/Ore BCM	0.3951	0.3951	0.3951

Drill and Blast Cost

A 3rd Party Contractor provided the Drill and Blast Costs in October 2023 on a $/BCM rate exclusive of oxidation state or ore classification[8], as outlined in Table 28.

Table 28 DRILL AND BLAST PARAMETER AND COST

			Oxide	Transitional	Fresh
Waste	Burden	m	6.00	6.00	6.00
Waste	Spacing	m	7.00	7.00	7.00
Waste	Depth	m	10.00	10.00	10.00
Waste	Diameter	m	0.229	0.229	0.229
Ore	Burden	m	4.50	4.50	4.50
Ore	Spacing	m	5.40	5.40	5.40
Ore	Depth	m	10.00	10.00	10.00
Ore	Diameter	m	0.165	0.165	0.165
Waste	Cost	$/BCM	1.87	1.87	1.87
Ore	Cost	$/BCM	2.15	2.15	2.15

[7] Although oxide material wasn't used in the optimisation, the optimisation was set up to include if required as such the costs were estimated and are shown for reference purposes only
[8] MEC Transposed these values by oxidation state to ensure future cross referencing was easier

For personal use only

For personal use only

Drill and Blast Cost Adjustment Factors

Drill and Blast Cost Adjustment Factors (DCAF) were used to modify costs, including but not limited to productivity and volume relating to oxidation state, free dig potential, and interaction with underground workings and sinkholes outlined in Table 29.[9]

Table 29 DRILL AND BLAST COST ADJUSTMENT FACTORS

		Oxide	Transitional	Fresh	Comment
Waste	DCAF %	50%	100%	100%	Oxide Free Dig
Ore	DCAF %	50%	100%	100%	Oxide Free Dig
In Pit Back Fill	DCAF %	-	-	-	Free Dig
Waste Dump	DCAF %	-	-	-	Free Dig
Heap Leach	DCAF %	-	-	-	Free Dig
Sinkhole Zone of Influence	DCAF %	75%	75%	75%	Broken Ground
Underground Zone of Influence	DCAF %	110%	110%	110%	Probing and Productivity
Sinkholes	DCAF %	50%	50%	50%	Broken Ground

Loading Cost

Loading costs were provided on a $/BCM basis by 3rd Party Contractor in October 2023 based on a 400t class excavator for ore and waste only[10], as outlined in Table 30

Table 30 LOADING COSTS

		Oxide	Transitional	Fresh
Waste	$/BCM	3.2966	3.2966	3.2966
Ore	$/BCM	3.3311	3.3311	3.3311

Mining Cost Adjustment Factor

Mine Cost Adjustment Factors (MCAF) were used to modify costs relating, but not limited to, productivity and methodology variances when related to free dig potential and interaction with the sinkholes and the underground workings.

Discussion with 3rd Party Contractor in October 2023 on their experience in operations with similar complexity indicated that the adjustment factors, as outlined in Table 31, were reasonable.

[9] DCAF's are not compounded, priority is from top (lowest) to bottom (highest) of the table
[10] MEC Transposed these values by oxidation state to ensure future cross referencing was easier

For personal use only

Table 31 MINE COST ADJUSTMENT FACTORS

		Oxide	Transitional	Fresh	Comment
Waste	MCAF %	100%	100%	100%	
Ore	MCAF %	100%	100%	100%	
In Pit Back Fill	MCAF %	90%	90%	90%	Free Dig
Waste Dump	MCAF %	90%	90%	90%	Free Dig
Heap Leach	MCAF %	90%	90%	90%	Free Dig
Sinkhole Zone of Influence	MCAF %	100%	100%	100%	
Underground Zone of Influence	MCAF %	120%	120%	120%	Remote Operations, Exclusion etc
Sinkholes	MCAF %	120%	120%	120%	Remote Operations, Exclusion etc

Haulage

3rd Party Contractor provided haulage cost by ore to the ROM and waste to the dump, as outlined in Table 32. The base elevation for haulage is the 10,300RL.

Table 32 VARIABLE HAULAGE COST PER M CHANGE IN ELEVATION FROM

		Oxide	Transitional	Fresh
Waste	$/BCM/mRL	0.0083	0.0083	0.0083
Ore	$/BCM/mRL	0.0087	0.0087	0.0087

Fixed Costs

The annualised fixed mining cost is A$2.07 / BCM[11] and can be broken down as outlined in Table 33.

Table 33 ANNUAL FIXED COSTS

Area	$/Year	BCM / Year	$/BCM
CYM	11,296,674	20,708,055	0.55
3rd party Contractor Provided	31,559,076	20,708,055	1.52
Total	**42,855,750**	**20,708,055**	**2.07**

A breakdown of inputs used in the Cyprium costs[12] is outlined in Table 34 to Table 36

[11] Based on ~21 million BCM TMM
[12] No information was provided on vehicles or consumables to support mining operations. However, the overhead rates provided were deemed sufficient to support these items.

For personal use only

Table 34 ON COST BREAKDOWN

Oncost	%	Source
Superannuation	11.0%	CYM
Payroll Tax	5.5%	CYM
Workers Compensation	2.7%	CYM
Annual Leave Accrual	2.6%	CYM
Insurances	2.0%	CYM
Long Service Leave Provision	3.0%	CYM
Total	**26.8%**	

Table 35 CYM MINING TEAM BUILDUP

Role	Number	Base Salary	Oncost	Total	Source
Manager Mining	1	280,000	75,040	355,040	Hays Salary Guide FY2324
Chief Mining Engineer	1	235,000	62,980	297,980	Hays Salary Guide FY2324
Chief Mine Geologist	1	235,000	62,980	297,980	Hays Salary Guide FY2324
Senior Mining Engineer	1	187,500	50,250	237,750	Hays Salary Guide FY2324
Senior Mine Geologist	1	180,000	48,240	228,240	Hays Salary Guide FY2324
Senior Geotech Engineer	1	187,500	50,250	237,750	Based on Senior Mining Engineer
Senior Surveyor	1	190,000	50,920	240,920	Hays Salary Guide FY2324
Mining Engineer	2	167,500	44,890	424,780	Hays Salary Guide FY2324
Mine Geologist	2	140,000	37,520	355,040	Hays Salary Guide FY2324
Mine surveyor	1	155,000	41,540	196,540	Hays Salary Guide FY2324
Survey Assistant	2	100,000	26,800	253,600	Based on Pit/Geological Technician
Pit/Geological Technician	6	100,000	26,800	760,800	Hays Salary Guide FY2223
Total	**20**	**2,157,500**	**578,210**	**3,886,420**	

Table 36 CYM MINING TEAM COST BUILDUP

Area	$/Month	$/Year	Source
Personnel Payroll	323,868	3,886,420	Hays Salary Guide FY2324
Flights	309,831	3,717,969	CYM
Accommodation Camp	113,524	1,362,285	CYM
Rehabilitation	100,000	1,200,000	CYM
Day works	60,000	720,000	CYM
GMP Maintenance Support	25,000	300,000	CYM
Survey Equipment Maintenance/Support	4,167	50,000	CYM
Geotech Software Maintenance/Support	833	10,000	CYM
Production Database Maintenance/Support	4,167	50,000	CYM
Total	**941,390**	**11,296,674**	

APPENDIX C: BLOCK MODEL ATTRIBUTES

Table 37 BLOCK MODEL CLASSIFICATIONS

Attribute	Description	Code / Value
m_class	Resource Classification	Meas – Measured Ind – Indicated Inf – Inferred Unc - Unclassified
m_rock	Oxidation and Mining state	"oxide" – material to the base of the lower saprolite "transitional" – Transitional inclusive of the chalcocite "fresh" - Fresh
m_gt_sink	Influence of sinkholes and other as-built features	301 – Sinkholes 302 – Sinkhole Zone of Influence 501 – Historic heap leach pads 502 – Waste dump (Above natural topography) 503 – In Pit Back Fill
m_gt_ugzoi	Influence of the underground workings	401 – Underground workings zone of influence
m_gt_zone_all	Final geotech coding based on the most conservative angle where zones overlap	011 - 503
cu_pc_ad	In situ undiluted Cu %	Cu%

For personal use only

For personal use only

APPENDIX D: DETAILED PROCESSING COST INFORMATION

Cyprium provided reviewed and updated processing costs by feed rate and type as outlined below:

- Oxide[7] 1.60 mtpa $39.96/wT
- Transitional 3.48 mtpa $21.77/wT
- Fresh 3.48 mtpa $21.77/wT

A full breakdown of these costs is outlined in Table 38, Table 39 and Table 40.

Table 38 OXIDE[7] PROCESSING COST BREAKDOWN

Area	Material	Feed Rate tpa	Fixed %	Variable % %	Year $	Month $	Fixed $/t	Variable $/t	Total $/t
Direct Labour	Oxide	1,600,000	100%	-	18,864,037	1,572,003	11.79	-	11.79
Transport & Accommodation	Oxide	1,600,000	100%	-	4,239,746	353,312	2.65	-	2.65
Power	Oxide	1,600,000	-	100%	7,586,971	632,248	-	4.74	4.74
Fuel	Oxide	1,600,000	100%	-	680,000	56,667	0.43	-	0.43
Maintenance	Oxide	1,600,000	100%	-	11,510,000	959,167	7.19	-	7.19
Reagents & Consumables	Oxide	1,600,000	-	100%	18,910,000	1,575,833	-	11.82	11.82
Equipment Hire	Oxide	1,600,000	-	100%		-	-	-	-
Product Transport	Oxide	1,600,000	-	100%		-	-	-	-
Contract – General Expenses	Oxide	1,600,000	100%	-	2,140,000	178,333	1.34	-	1.34
ROM Rehandle	Oxide	1,600,000	-	100%		-	-	-	-
Corporate Overheads	Oxide	1,600,000	-	100%		-	-	-	-
Total	**Oxide**				**63,930,754**	**5,327,563**	**23.40**	**16.56**	**39.96**

Table 39 TRANSITIONAL PROCESSING COST BREAKDOWN

Area	Material	Feed Rate tpa	Fixed %	Variable % %	Year $	Month $	Fixed $/t	Variable $/t	Total $/t
Direct Labour	Transitional	3,480,000	100%	-	18,864,037	1,572,003	5.42	-	5.42
Transport & Accommodation	Transitional	3,480,000	100%	-	4,239,746	353,312	1.22	-	1.22
Power	Transitional	3,480,000	-	100%	12,491,890	1,040,991	-	3.59	3.59
Fuel	Transitional	3,480,000	100%	-	680,000	56,667	0.20	-	0.20
Maintenance	Transitional	3,480,000	100%	-	11,510,000	959,167	3.31	-	3.31
Reagents & Consumables	Transitional	3,480,000	-	100%	25,850,000	2,154,167	-	7.43	7.43
Equipment Hire	Transitional	3,480,000	-	100%		-	-	-	-
Product Transport	Transitional	3,480,000	-	100%		-	-	-	-
Contract – General Expenses	Transitional	3,480,000	100%	-	2,140,000	178,333	0.61	-	0.61
ROM Rehandle	Transitional	3,480,000	-	100%		-	-	-	-
Corporate Overheads	Transitional	3,480,000	-	100%		-	-	-	-
Total	**Transitional**	**3,480,000**			**75,775,673**	**6,314,639**	**10.76**	**11.02**	**21.77**

Table 40 FRESH PROCESSING COST BREAKDOWN

Area	Material	Feed Rate tpa	Fixed %	Variable % %	Year $	Month $	Fixed $/t	Variable $/t	Total $/t
Direct Labour	Fresh	3,480,000	100%	-	18,864,037	1,572,003	5.42	-	5.42
Transport & Accommodation	Fresh	3,480,000	100%	-	4,239,746	353,312	1.22	-	1.22
Power	Fresh	3,480,000	-	100%	12,491,890	1,040,991	-	3.59	3.59
Fuel	Fresh	3,480,000	100%	-	680,000	56,667	0.20	-	0.20
Maintenance	Fresh	3,480,000	100%	-	11,510,000	959,167	3.31	-	3.31
Reagents & Consumables	Fresh	3,480,000	-	100%	25,850,000	2,154,167	-	7.43	7.43
Equipment Hire	Fresh	3,480,000	-	100%		-	-	-	-
Product Transport	Fresh	3,480,000	-	100%		-	-	-	-
Contract – General Expenses	Fresh	3,480,000	100%	-	2,140,000	178,333	0.61	-	0.61
ROM Rehandle	Fresh	3,480,000	-	100%		-	-	-	-
Corporate Overheads	Fresh	3,480,000	-	100%		-	-	-	-
Total	**Fresh**	**3,480,000**			**75,775,673**	**6,314,639**	**10.76**	**11.02**	**21.77**

For personal use only

For personal use only

APPENDIX E: DETAILED FINANCIAL COST INPUTS

Cyprium provided the following Revenue assumptions relating to copper price:

- Copper Price US$ 8,970 /dTCu
- Exchange Rate AUD : USD 0.69
- Copper Price A$ 13,000 /dTCu

Payability and Realisation Costs

The payability and Realisation Costs were provided by CYM and calculated at:

- Oxide Feed 78.18% of Gross Revenue inclusive of 5% royalty
- Transitional Feed 82.27% of Gross Revenue inclusive of 5% royalty
- Fresh Feed 82.27% of Gross Revenue inclusive of 5% royalty

Table 41 TREATMENT AND REFINING CHARGES

Concentrate Grade Range		Oxide	Transitional	Fresh
Greater than	Cu%	-	18%	20%
Less than or Equal to	Cu%	18%	20%	100%

Payability - Greater of		Oxide	Transitional	Fresh
Payability % - Standard	% of Assayed Cu	96.5%	96.5%	96.5%
Minimum Payment	Units of Cu	1.1%	1.1%	1.0%

I.e. if 18% x 96.5% (17.37%) is less than 18% - 1.1% (17.9%), then use 18% x 96.5%, else use 18% - 1.1%

TCRC		Oxide	Transitional	Fresh
Treatment Charge	US$/dmT	75.000	75.000	75.000
Refining Charge	US$/lb Cu	0.075	0.075	0.075

For personal use only

Table 42 REALISATION COST BREAKDOWN

Production and Revenue	UoM	Oxide[7] USD	Oxide[7] AUD	Transitional USD	Transitional AUD	Fresh USD	Fresh AUD
Annual Copper Concentrate - Wet	$/wT	60,000	60,000	120,000	120,000	120,000	120,000
Moisture	%H_2O	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%
Grade	%Cu	20.00%	20.00%	27.50%	27.50%	27.50%	27.50%
AUD:USD Exchange Rate	AUD : USD	0.69	0.69	0.69	0.69	0.69	0.69
Copper Price	$/dTCu	8,970	8,970	8,970	8,970	8,970	8,970
Freight and Handling Costs - RotaBox	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
RotaBox - Road Haulage	$/wT	62.76	90.95	62.76	90.95	62.76	90.95
RotaBox - Port Charges	$/wT	1.65	2.39	1.65	2.39	1.65	2.39
Ocean / International Freight	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
International Freight	$/wT	30.00	43.48	30.00	43.48	30.00	43.48
Insurance	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Insurance	%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
Royalty	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Royalty - WA State	%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Royalty – 3rd Party	%	-	-	-	-	-	-
Treatment Costs	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Concentrate Treatment Charge	$/dT	75.00	75.00	75.00	75.00	75.00	75.00
Refining Charges - Payable Copper	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Payability % of total Copper	%	96.50%	96.50%	96.50%	96.50%	96.50%	96.50%
Refining Charges - Refining Charge	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Refining Charges of payable copper	$/lb	0.075	0.075	0.075	0.075	0.075	0.075
lb/kg	lb/kg	2.2046	2.2046	2.2046	2.2046	2.2046	2.2046
Realisation Cost Buildup	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Gross Revenue	$M	97.41	141.18	267.89	388.25	267.89	388.25
Realisation Cost - Ex Royalty	$M	16.39	23.75	34.11	49.44	34.11	49.44
Realisation Cost - Royalty	$M	4.87	7.06	13.39	19.41	13.39	19.41
Total Realisation Cost	$M	21.26	30.81	47.51	68.85	47.51	68.85
Realisation Cost %	**UoM**	**USD**	**AUD**	**USD**	**AUD**	**USD**	**AUD**
Realisation Cost - Ex Royalty	%	16.82%	16.82%	12.73%	12.73%	12.73%	12.73%
Realisation Cost - Royalty	%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Total Realisation Cost	%	21.82%	21.82%	17.73%	17.73%	17.73%	17.73%
Total Realisation	%	78.18%	78.18%	82.27%	82.27%	82.27%	82.27%

It is assumed that haulage and ship loading will be via a containerised system to Port Hedland as CYM no longer holds a lease for a Bulk Concentrate shed in Port Hedland.

A 3rd Party Royalty, based on a threshold of copper production, was not included but should be part of any future financeable study.

Treatment Costs and Refining Charges (TC/RC) were confirmed by CYM, as outlined in Table 41.

Shipment costs were confirmed as ~US$30/wT ex Port Hedland, as confirmed by email with a shipping broker.

A full breakdown of the inputs for calculating payability and realisation is outlined in Table 42

For personal use only

For personal use only

DOCUMENT INFORMATION

Status	**Final**
Version	00
Print Date	22/05/2024
Author(s)	Rod Bonner, Grant Malcolm and Christofer Catania
Reviewed By	Christofer Catania

DOCUMENT REVIEW AND SIGN OFF

Version	Reviewer	Position	Signature	Date
00	Christopher Catania	CEO MEC Mining		22/05/2024