

Re-optimisation of Nifty New Surface Mine significantly reduces strip ratio

Cyprium Metals Limited (ASX: CYM) (Cyprium) is pleased to provide an update relating to its previously released Scoping Study for the new surface mine at the Nifty copper complex. Cyprium's technical partner MEC Mining (MEC) completed an updated geotechnical study to advance Cyprium's knowledge of the expected mining conditions to a Pre-Feasibility (PFS) level of confidence. Following a peer review, this updated geotechnical information has now been incorporated in a new mine optimisation as a part of the forthcoming PFS. The mine re-optimisation has resulted in significantly more favourable strip ratios, and through reduction in footprint, preserved the life of the existing cathode plant.

Highlights include:

- **Reduction in 'concentrator-only' strip ratio by 25% to 7.3:1 (waste:ore) from previous estimate of 9.7:1 in May 2024 Scoping Study**
- **New pit shell preserves SXEW infrastructure over the expected life of heap leach operations, resulting in capital and operating cost reductions**
- **Overall pit strip ratio of 6.3:1 when both concentrator and cathode ore feeds are taken into consideration**
- **Mine life increased to over 20 years**
- **Updated Nifty new surface mine reserve expected in October 2024 with PFS to follow**

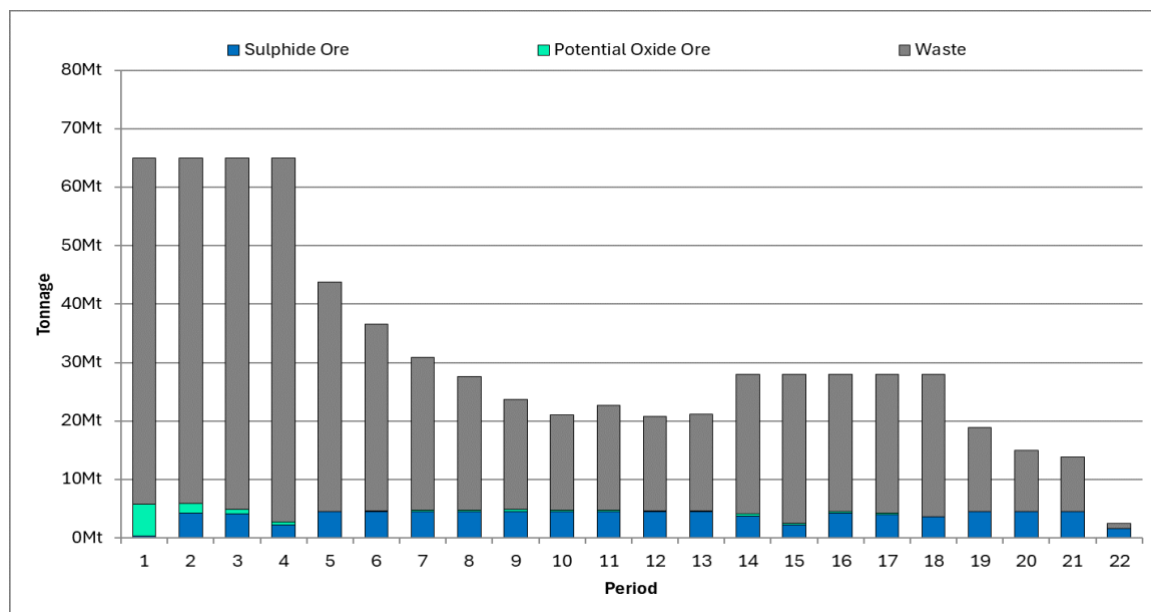
"The updated mine optimisation is a material development for Cyprium and is a result of following a thoughtful mine development sequence from end-to-end," said Cyprium Executive Chair Matt Fifield. "A number of positive outcomes: better economics, reduced footprint, and importantly the ability to continue to generate revenue from the cathode plant throughout the life of the surface mine. We are incorporating these wins into our restart planning and PFS work now."

Table 1 – Updated Mine Optimisation Outcomes

	Scoping Study – Concentrator Feed Only	New Optimisation – Concentrator Feed Only	New Optimisation – Concentrator Feed + Potential Oxide Stream
Heap Leach Potential Ore (Mt)	-	-	11.1
Concentrator Ore (Mt)	69.6	84.4	84.4
Total Ore (Mt)	69.6	84.4	95.5
Total Waste (Mt)	675.2	614.2	603.1
Strip Ratio (W:O)	9.7	7.3	6.3

Note: All tonnages noted are rounded, figures are from block model optimisations and do not constitute reserves. Optimisation shell figures are not designed or scheduled.

Figure 1 – High Level Total Material Movement Schedule



Geotechnical Update

In May 2024 Cyprium completed a Scoping Study that was optimised based on concentrate feed and primarily focused on illustrating the size of the opportunity for the new Nifty Surface Mine.

The Scoping Study identified the requirement for geotechnical refinement (*refer Section 5 of the Cyprium's ASX release 23 May 2024*). The Scoping Study noted that “site work was completed in January 2024 with final assessment and conclusions expected in the second half of 2024.” A final assessment was completed by MEC in July 2024 and then independently reviewed in August 2024, with the overarching recommendation that the new geotechnical data meets the requirements for a Pre-feasibility Study.

MEC's new geotechnical analysis involved reassessment of all historical geotechnical drilling and testing data, along with the inclusion of six new holes drilled in 2023/2024. MEC examined overall rock mass analysis, bench scale rock mass stability and bench face angles stability inclusive of major structures. The resulting analysis has been incorporated into the technical parameters of the new Nifty Surface Mine, resulting in material improvements to the pit optimization. Further details of the new geotechnical work completed has been provided in MEC's report that has been appended to this ASX release.

“This new geotech information highlights the potential for material cost reduction by using steeper wall angles that mirror the natural bedding planes of the shales that overlay the Nifty sulphide orebody,” said Cyprium Chief Operating Officer Colin Mackey. “The smaller footprint lessens the total material movements, increases the speed to first ore, and improves overall site interactions and operational flexibility given the extended preservation of SX-EW infrastructure.”

“One of development sequencing trade-offs we have been thinking through in the background is the interaction between the surface mine and the cathode plant,” said Fifield. “Previously, this meant that while the cathode restart was low complexity and likely very profitable, it also had an uncertain life depending on Cyprium’s ability to progress the new surface mine quickly. Now, the benefit of having a refurbished cathode plant is available for a far longer time. We’re working through what that means in terms of our overall business plan, but it is clear that it is positive.”

Figure 2 – Optimiser Pit Phases Cross-Section and Scoping Pit Design

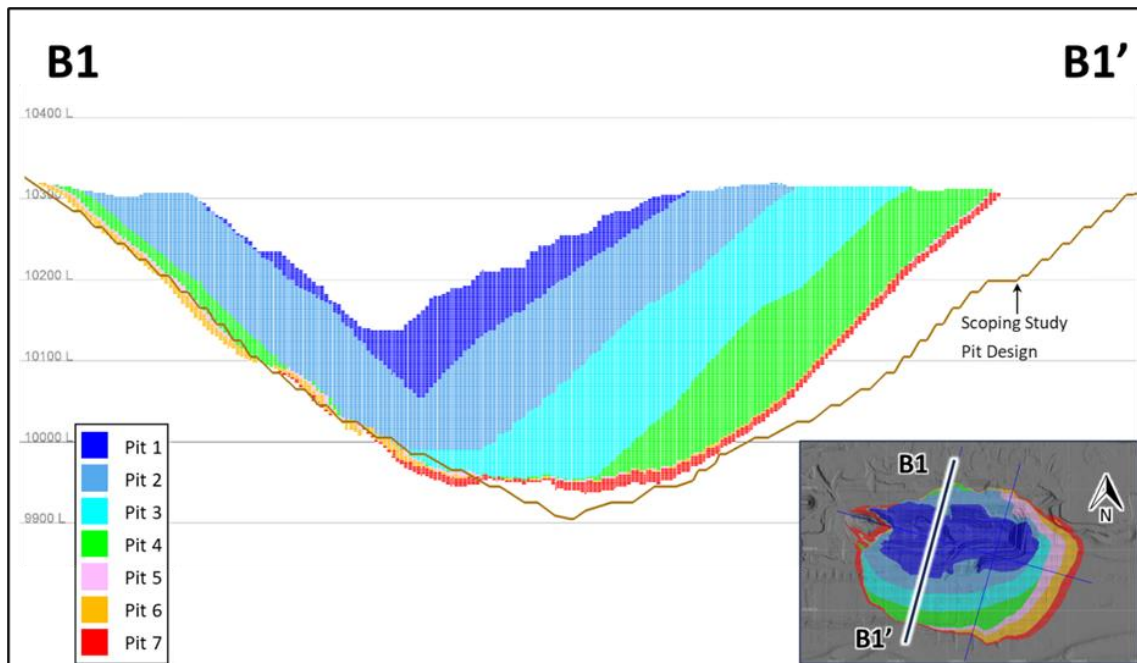
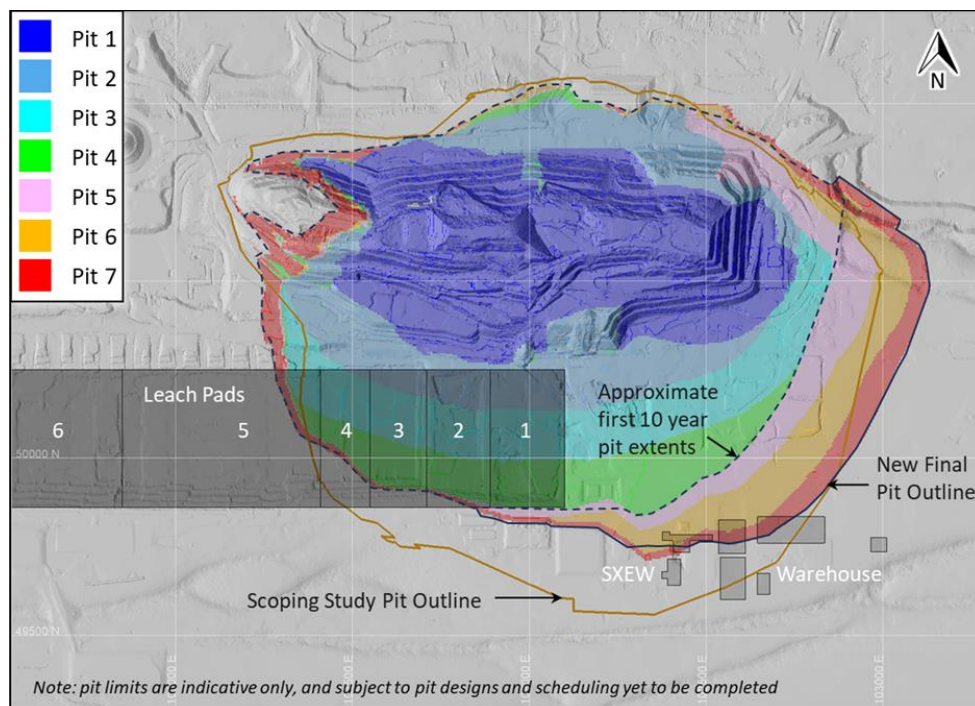


Figure 3 - Comparison of Surface Mine and Heap Leach Interactions



Next Steps

The new Nifty Surface Mine optimization is a key milestone that will cascade into the delivery of important pieces of work for Cyprium.

Ore Reserve & Pre-Feasibility Study

An Ore Reserve is expected to be released in October 2024. This work is a part of the Prefeasibility Study work underway that is focused on around the new surface mine at Nifty and the restart of the existing concentrator.

Given the positive outcomes of the updated new surface mine optimisation, Cyprium is considering the implications of being able to preserve the Cathode Plant infrastructure for significantly longer than previously anticipated. Cyprium's upcoming PFS will also assess potential of additional cathode production from delivery of oxide ore from the new surface mine in conjunction with planned retreatment of material on existing heap leach pads.

"Nifty's sulphide resource remains Cyprium's largest value driver," said Fifield, "and the more we work on it, the better it gets. With a lower strip ratio and full utilization of the cathode plant, we expect that the previously announced positive economics of the May 2024 Scoping Study will become even more attractive."

"We are pleased about sharing these positive announcements – the team's diligent work on restart planning continues to improve the economic potential and speed to market," said Fifield. "We look forward to providing shareholders with additional information on our execution strategy in the near future."

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

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Competent Person Statement

The information in this report that relates to the updated new Nifty surface mine optimisation is based on information compiled by Christofer Catania, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Christofer Catania is employed by MEC Mining Group Pty Ltd as a consultant for Cyprium Metals Ltd.

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

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

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.



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Cyprium – Nifty Copper Operation
271019 – Pit Optimisation Update
September 2024

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REFERENCES

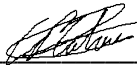
Cyprium - MRE. (2024-c). *Updated Nifty Mineral Resource Estimate Reaches 1 Million Tonnes Contained Copper*. Cyprium.

STATEMENT OF COMPLIANCE

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

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Signed



08th September 2024

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CAUTIONARY & DISCLAIMER

MEC have generated this summary report on pit optimisation works completed as part of ongoing study works. The material contained is for the purpose of examining changes in parameters and does not constitute a scoping or feasibility study, and estimated tonnages do not meet the requirements to be treated with the same confidence levels of JORC code or Scoping study guidelines. Works contained are subject to change and review during the reserves and pre-feasibility study works yet to be completed. All inclusions should be taken as indicative and should not be relied upon for financial modelling or decision. MEC take no liability to use outside the intended purpose and scope as defined in this document.

1 SCOPE & INTRODUCTION

MEC was engaged by Cyprium Metals (Cyprium) to complete an Ore Reserves Estimate and Pre-feasibility study works for the new open pit planned for the Nifty copper complex (NCC), in Western Australia. These scopes follow earlier work completed by MEC, namely the Mineral Resource Estimate (MRE) released in March 2024 and the Open Pit Scoping Study for NCC released in May 2024.

A recommendation from the May 2024 Scoping Study was for the client to commission a Pre-feasibility level Geotechnical Engineering study that re-examined historical data and brought in additional geotechnical information from new drill holes. MEC completed this Geotechnical Study in July 2024, demonstrating improved pit slope parameters.

This Pit Optimisation Update study was completed as part of the ongoing study works, with the primary objective in assessing the effects of the improved geotechnical modelling.

2 INPUTS & ASSUMPTIONS

The optimisation was completed using assumptions derived from the initial Scoping Study build up and results released in June 2024, incorporating minor updates where subsequent study works had been advanced. No material changes in assumptions were applied in this examination apart from the geotechnical parameters and standard revenue ranging.

Assumptions included:

- Geotechnical primary domains and “Special Zones” with associated overall slope angles
- Rock types – inclusive of “Special Zones”
- Mining cost inclusive of positional cost adjustment factors
- Metallurgical recovery by rock type
- Revenue
- Processing costs by rock type
- Selling Costs
- Mining Loss and Dilution
- Maximum process plant throughput

The geological model utilised in this optimisation is the Mineral Resource block model that was used for the NCC Scoping study. This model was developed as part of the Mineral Resource Estimate March 2024, completed by MEC Mining and released on the 14th of March 2024 (Cyprium - MRE, 2024-c). The MRE is summarised in Table 1.

Table 1 MARCH 2024 MRE

OXIDISATION TYPE	Measured			Indicated			Inferred			Total		
	Mt	%	Cu t	Mt	%	Cu t	Mt	%	Cu t	Mt	%	Cu t
OXIDE, SAP & TRANS	2.6	1.02%	26,471	17.52	0.74%	130,081	0.85	0.70%	5,902	21.0	0.77%	162,454
SULPHIDE	35.45	0.98%	347,610	63.4	0.80%	505,685	5.2	0.43%	22,479	104.1	0.84%	875,774
TOTAL	38.06	0.98%	374,081	80.91	0.79%	635,766	6.05	0.47%	28,381	125.0	0.83%	1,038,228

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

2.1 Geotechnical

MEC completed a Pre-feasibility level Geotechnical study as a recommendation from the Scoping study works. This analysis reassessed all historical geotechnical drilling and testing data, along with inclusion of 6 new holes drilled in 2023/2024. The geotechnical database was regenerated incorporating all the available geotechnical data.

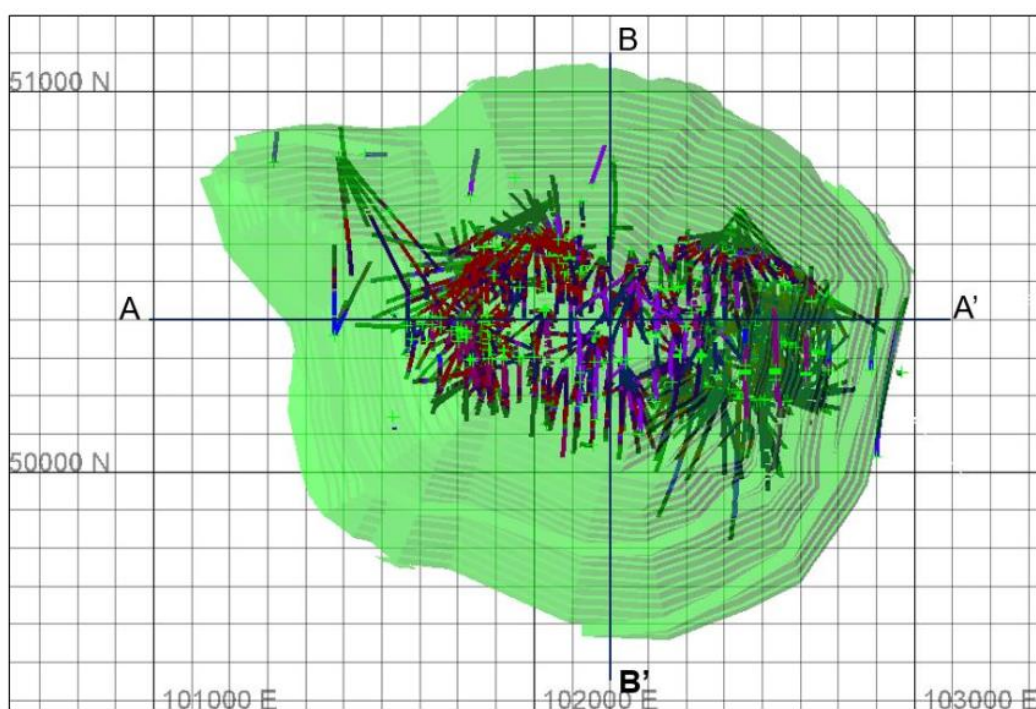


Figure 1. Historical Geotechnical Data (MEC 271100 CYM Geotechnical PFS – final V1.0)

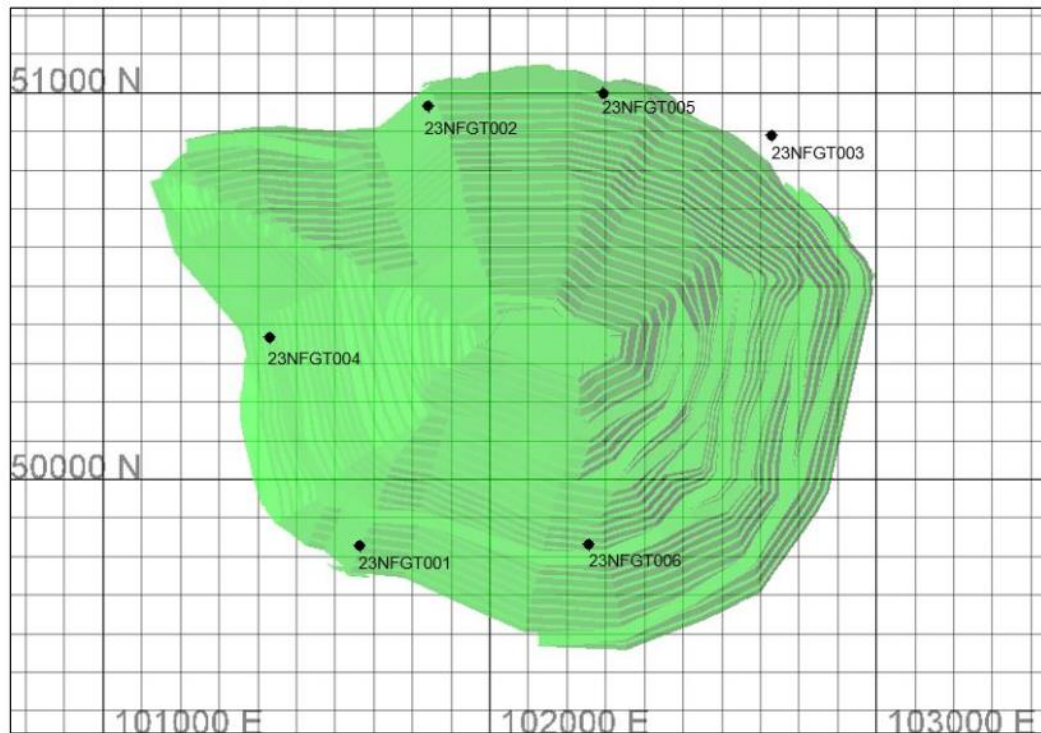


Figure 2. Geotechnical drill hole Locations (2023 drilling) (MEC 271100 CYM Geotechnical PFS – final V1.0)

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

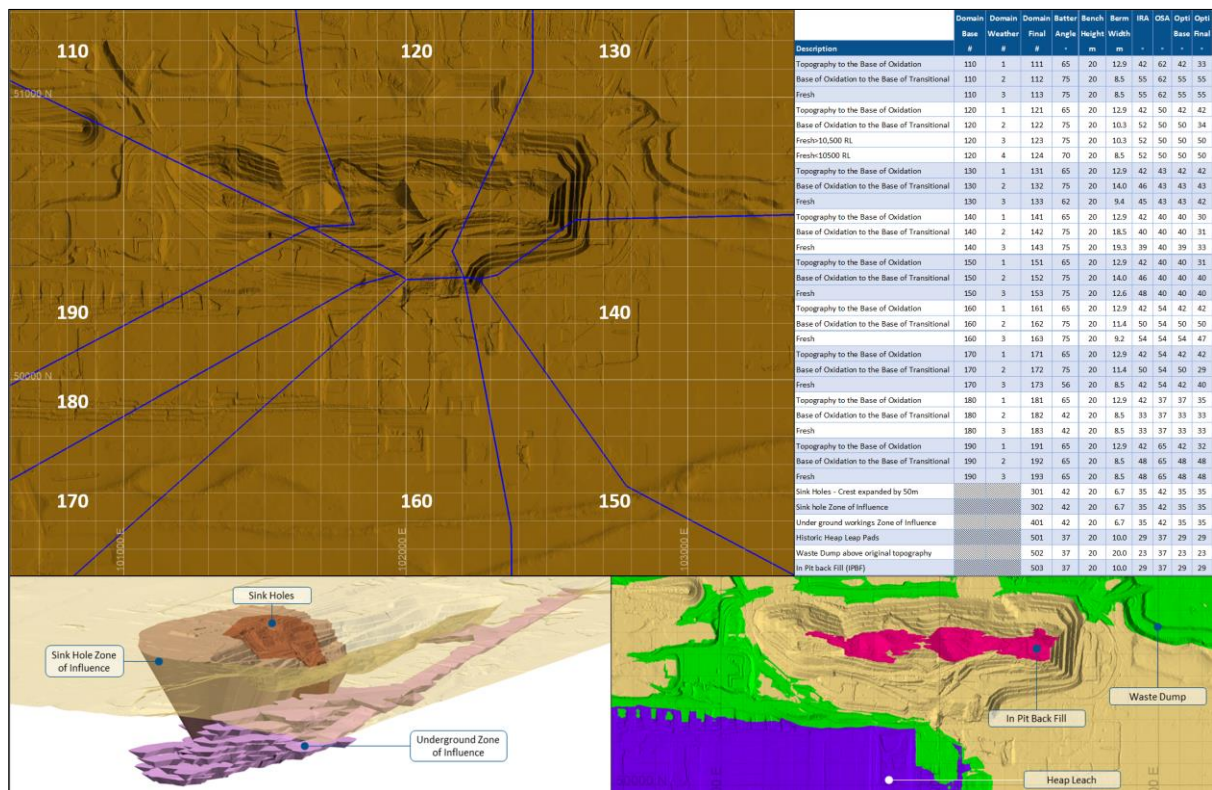


Figure 3. Summary overview of revised geotechnical zones and parameters.

3 OPTIMISATION

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

All Vulcan Pit Optimisations were evaluated on a contained copper basis and calculated using block model scripting and interface inputs in accordance with the assumptions noted in section 2.

3.1 Optimisation Results

3.1.1 Shell Generation

The pit optimisation was completed generating shells for a span of revenue factors from 0.6 to 1.2, the resulting in pit shells allow for selection of final pit extents and phase groupings for analysis and then future design.

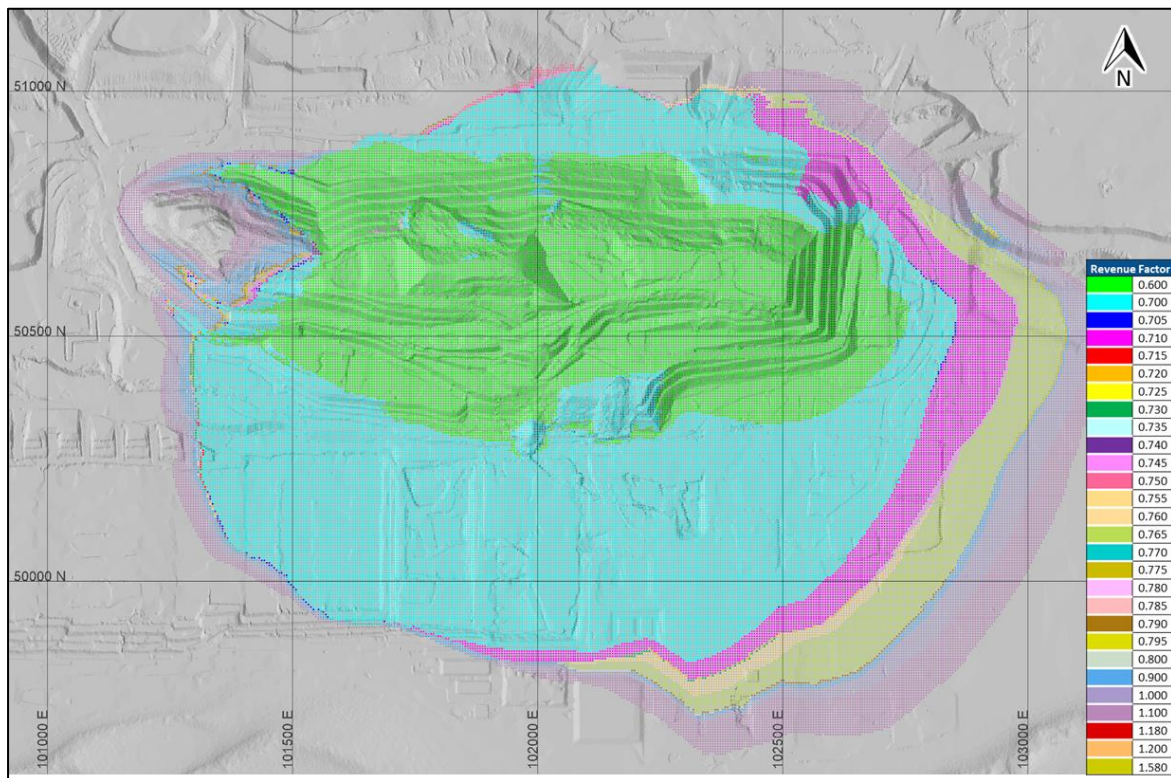


Figure 4. Initial Optimisation Overview

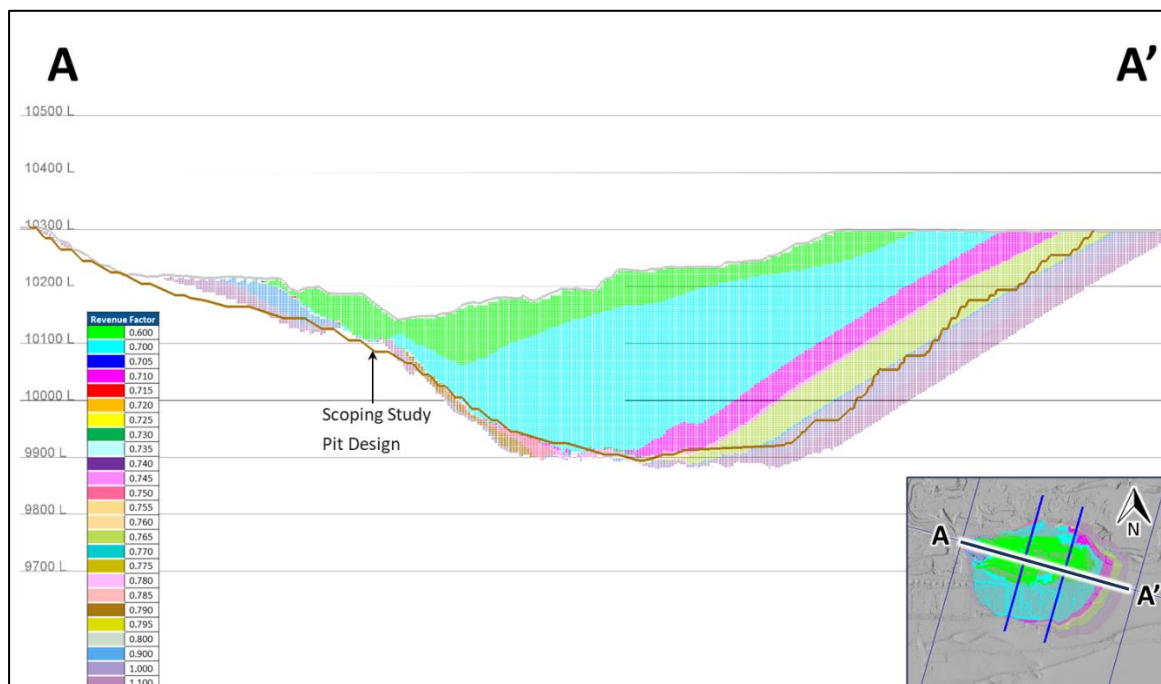


Figure 5. Optimisation pits long-section with Scoping study pit design.

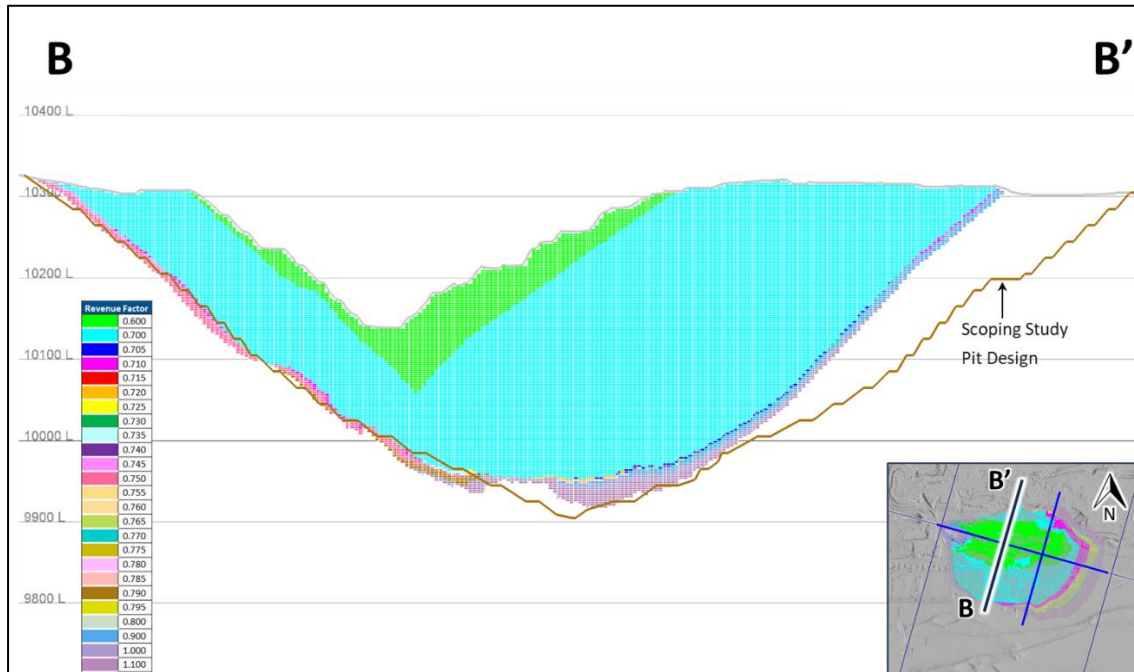


Figure 6. Optimisation pits cross-section with Scoping study pit design.

Pits were then examined to determine the key phase groupings based on pit positions and physicals for practical mining phase shapes, selection pits are shown in Table 2.

Table 2. Initial optimisation pit physicals.

Pit	Revenue Factor	Total Stripping Ratio	Sulphide Stripping Ratio	Waste (Mt)	Total Ore (Mt)	Rock (Mt)	Fresh (Mt)	Transitional (Mt)	Oxide (Mt)	Concentrate Feed (Mt)
1	0.600	3.0	5.2	36.7	12.4	49.1	7.5	0.4	4.5	7.9
2	0.700	5.8	6.8	386.2	66.3	452.4	57.3	0.7	8.2	58.1
3	0.705	5.8	6.8	387.3	66.6	453.9	57.6	0.7	8.3	58.4
4	0.710	5.9	7.0	444.4	74.7	519.2	64.3	0.8	9.7	65.0
5	0.715	5.9	7.0	444.6	74.8	519.5	64.4	0.8	9.7	65.1
6	0.720	5.9	7.0	445.5	75.0	520.5	64.5	0.8	9.7	65.3
7	0.725	5.9	7.0	445.6	75.0	520.6	64.6	0.8	9.7	65.3
8	0.730	5.9	7.0	446.9	75.4	522.2	64.9	0.8	9.7	65.6
9	0.735	5.9	6.9	447.1	75.4	522.5	65.0	0.8	9.7	65.7
10	0.740	5.9	6.9	447.5	75.6	523.2	65.1	0.8	9.7	65.9
11	0.745	5.9	6.9	451.2	76.4	527.6	65.8	0.8	9.8	66.6
12	0.750	5.9	6.9	453.4	76.9	530.3	66.3	0.8	9.8	67.1
13	0.755	6.0	6.9	465.2	78.1	543.3	67.6	0.8	9.8	68.3
14	0.760	6.0	6.9	466.8	78.4	545.2	67.9	0.8	9.8	68.7
15	0.765	6.3	7.3	530.2	84.4	614.6	73.3	0.8	10.3	74.2
16	0.770	6.3	7.3	531.2	84.7	615.8	73.5	0.8	10.3	74.4
17	0.775	6.3	7.3	532.0	84.9	616.9	73.7	0.9	10.3	74.6
18	0.780	6.3	7.3	532.0	85.0	617.0	73.7	0.9	10.3	74.6
19	0.785	6.3	7.3	532.1	85.0	617.1	73.8	0.9	10.3	74.7
20	0.790	6.2	7.2	535.0	85.6	620.6	74.4	0.9	10.4	75.3
21	0.795	6.2	7.2	535.2	85.7	620.9	74.5	0.9	10.4	75.4
22	0.800	6.2	7.2	536.3	86.0	622.4	74.8	0.9	10.4	75.6
23	0.900	6.2	7.1	554.5	90.1	644.6	78.3	1.0	10.8	79.3
24	1.000	6.3	7.3	603.1	95.5	698.5	83.4	1.0	11.1	84.4
25	1.100	6.6	7.6	692.6	104.5	797.1	91.9	1.0	11.5	92.9
26	1.180	6.6	7.6	706.0	106.7	812.7	93.8	1.0	11.9	94.8
27	1.200	6.8	7.8	751.1	109.7	860.8	96.7	1.1	11.9	97.8
28	1.580	7.4	8.4	893.0	120.7	1,013.6	107.2	1.1	12.5	108.2

Pit selected to guide stage design Pit selected to guide final pit design

3.1.2 Pit Phases

The initial optimisation pits were then grouped into suitable pit phases to enable minable phases to be represented. A total of 7 pit phases were considered for this analysis, these phases are required to be further rationalised and grouped in the future pit design works.

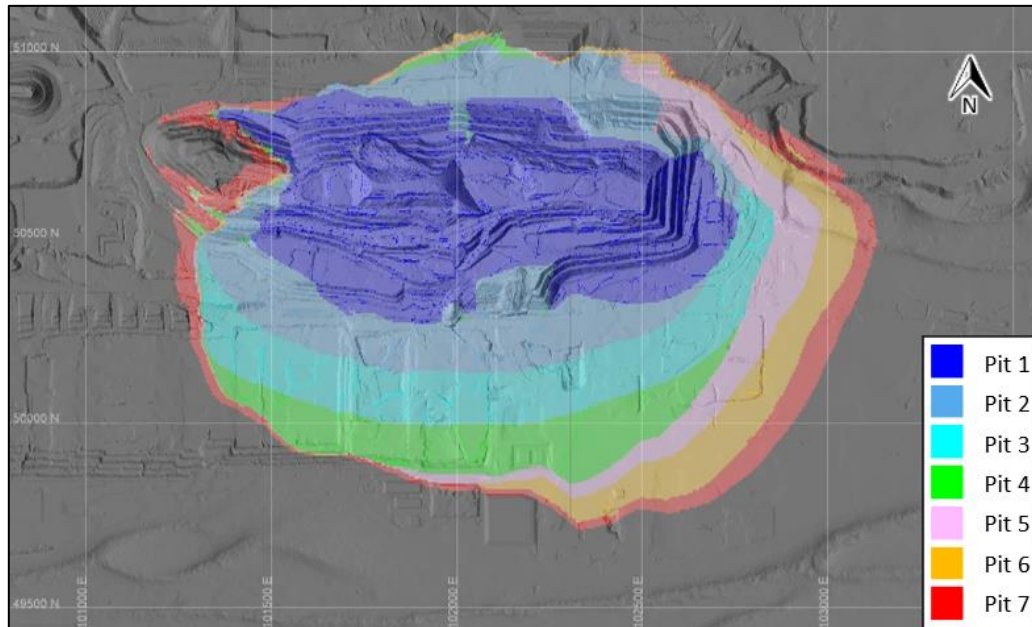


Figure 7. Pit phases overview

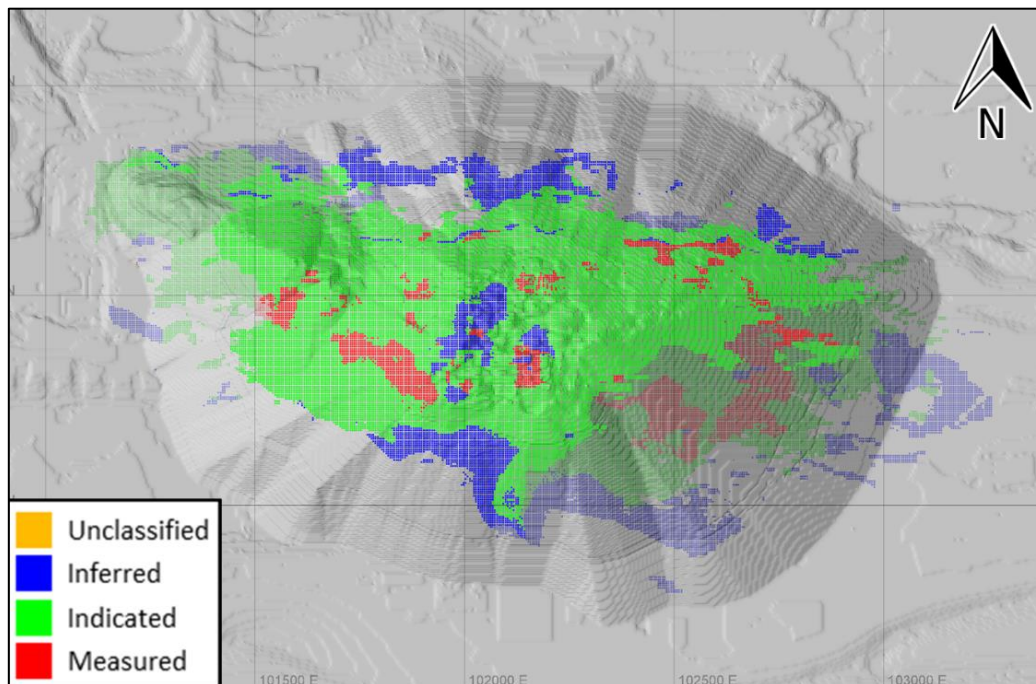


Figure 8. Pit extents with Resource category overlay.

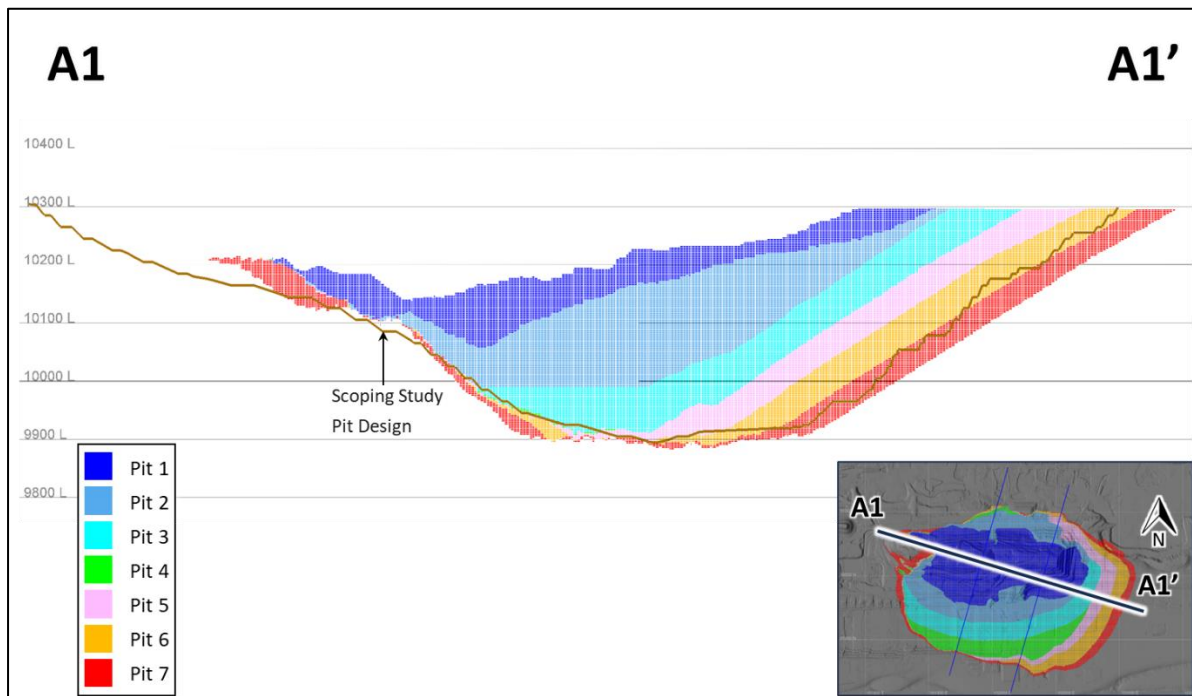


Figure 9. Optimiser pit phases long-section and Scoping pit design.

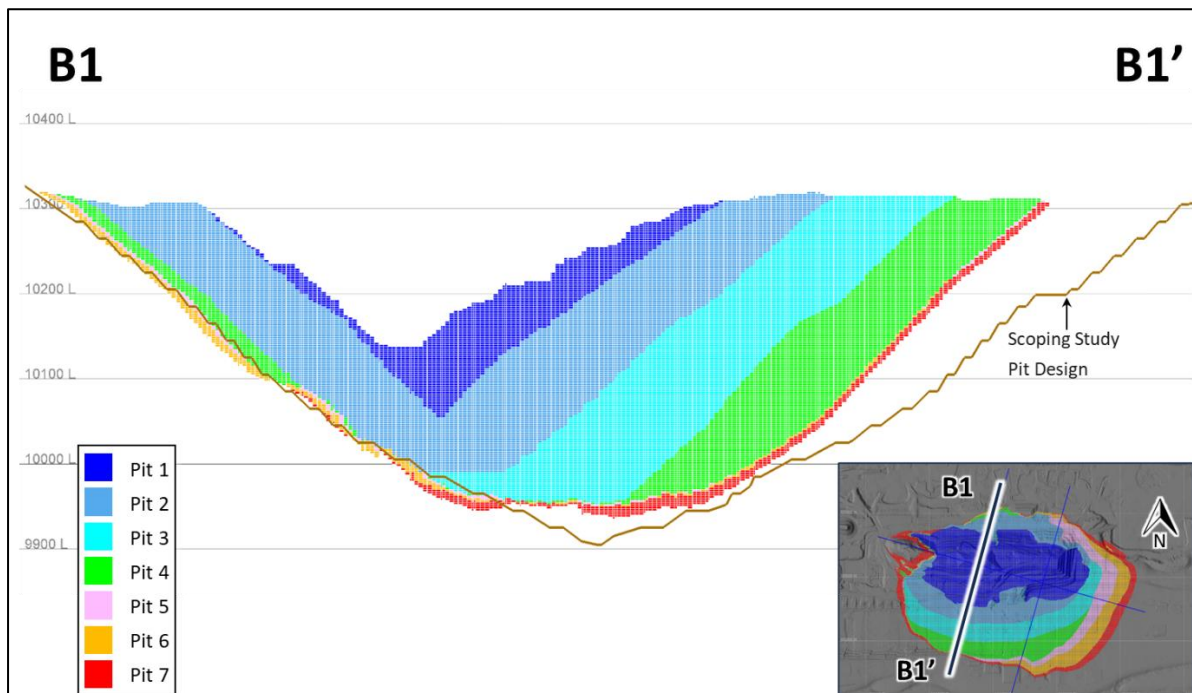


Figure 10. Optimiser pit phases cross-section and Scoping pit design.

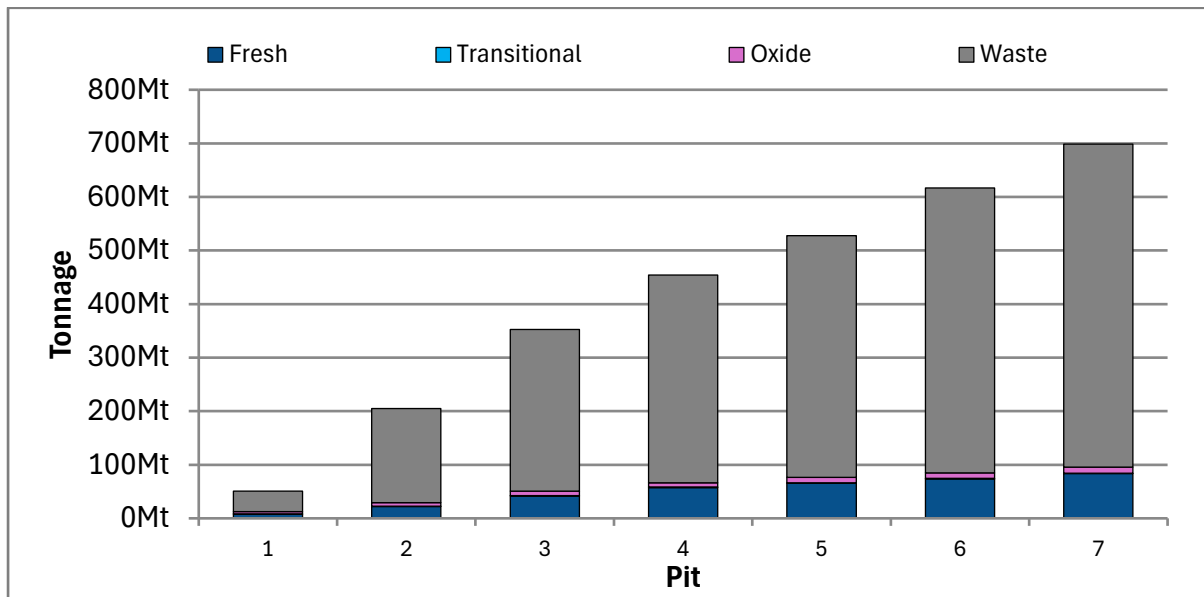


Figure 11. Pit phase physicals

3.2 High Level Schedule

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

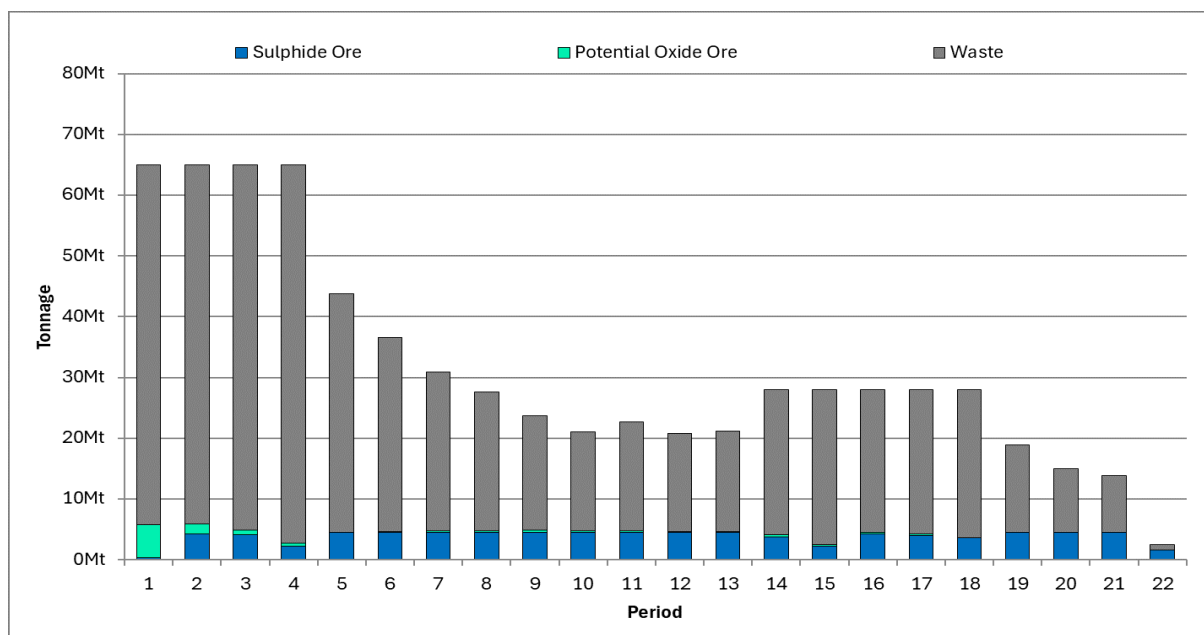


Figure 12. High level physicals per year.

4 OUTCOMES & RECOMMENDATIONS

The resultant pit extents with the revised geotechnical parameters demonstrate significant reductions in the overall pit size, delivering an improved stripping ratio from the Scoping study at 9.7:1 to approximately 7.3:1 on a comparable basis, see Table 3. This decrease in the pit extents delivers a material difference in the timing that the mining activities will likely impact the existing Solvent Extraction and Electro Winning (SX-EW) facilities, compared the initial Scoping study pits, see Figure 13.

Table 3. Optimisation phase physicals.

Pit	Total Stripping Ratio	Sulphide Stripping Ratio	Waste (Mt)	Total Ore (Mt)	Rock (Mt)	Fresh (Mt)	Transitional (Mt)	Oxide (Mt)	Concentrate Feed (Mt)
1	3.0	5.2	38.3	12.7	51.0	7.8	0.4	4.4	8.2
2	5.9	8.1	175.5	29.5	205.0	22.0	0.7	6.9	22.6
3	5.9	7.3	301.5	50.8	352.3	41.9	0.7	8.2	42.6
4	5.8	6.8	387.3	66.6	453.9	57.6	0.7	8.3	58.4
5	5.9	6.9	451.2	76.4	527.6	65.8	0.8	9.8	66.6
6	6.3	7.3	532.0	84.9	616.9	73.7	0.9	10.3	74.6
7	6.3	7.3	603.1	95.5	698.5	83.4	1.0	11.1	84.4

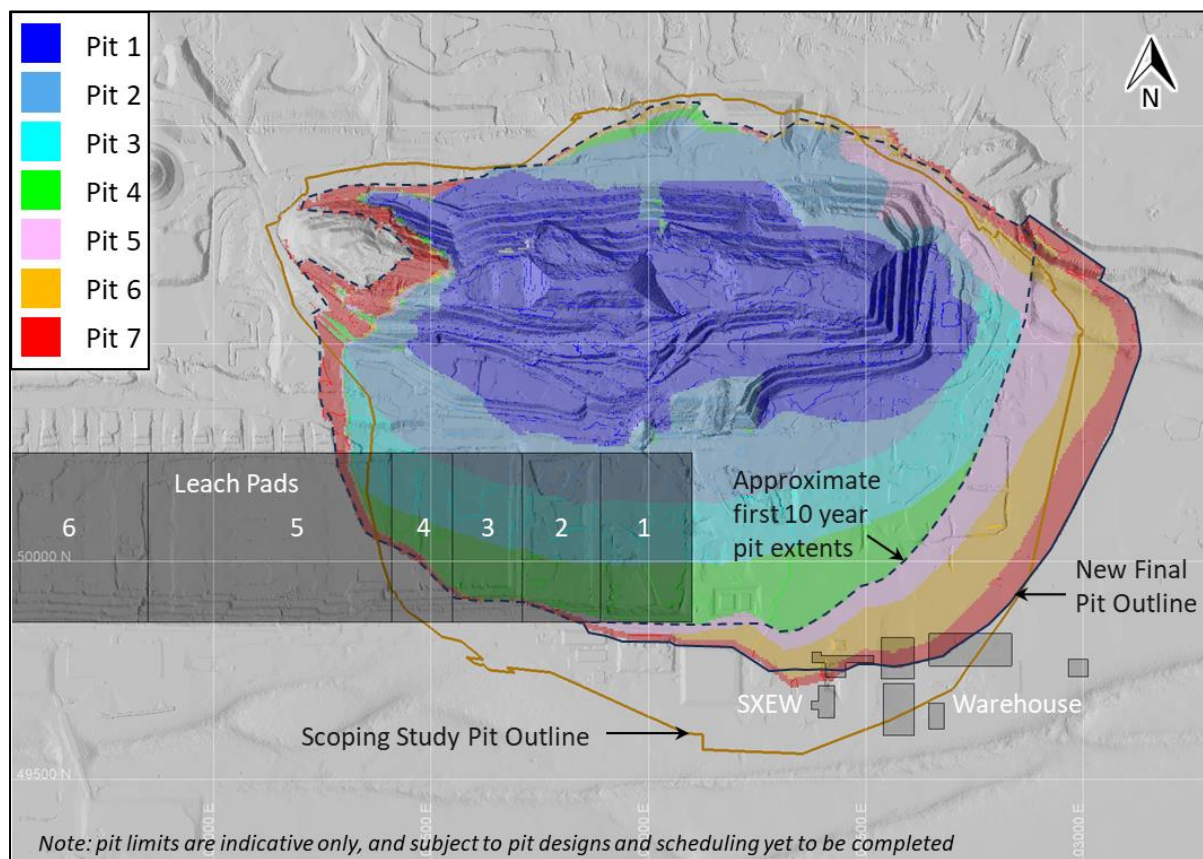


Figure 13. Pit phases versus Scoping pit with SXEW infrastructure.

The change in pit phase timing presents potential to maintain the SXEW plant for the first half of the mine life, based on high level sequences. This is a material change as the Scoping study assumed that the Oxide ores within the pit were to be treated as waste, with no maintainable processing facilities to enable metal recovery of this material stream. Considering the potential Oxide ore processing stream, MEC modelled the Oxide ores that existed in the waste profile for the Sulphide pit. This material has not been assessed for financial viability in this optimisation study. The potential oxide tonnes and their timing have been calculated demonstrating the majority of the resource classified tonnes are mined predominately in the first four years. Inclusion of the oxide ore potential would further improve the project stripping ratio to 6.3:1 should the full oxide be economic.

Table 4. Optimisation versus Scoping Pit

Material Type	Scoping Study Pit Design Concentrator Feed Only	Optimisation Shell Concentrator Feed Only	Optimisation Shell Potential Oxide & Concentrator Feed
Waste	675.2Mt	614.2 Mt	603.1 Mt
Oxide ore	0 Mt	0 Mt	11.1 Mt
Sulphide & Transitional ore	69.6 Mt	84.4 Mt	84.4 Mt
Total Ore	69.6 Mt	84.4 Mt	95.5 Mt
Stripping Ratio	9.7	7.3	6.3

All tonnages noted are rounded, figures are from block model optimisations and do not constitute reserves. Optimisation shell figures are not designed or scheduled.

4.1 Recommended Further Work


MEC recommend that a potential Oxide stream be explored in the next phase of studies, including detailed economic analysis of the oxide processing stream with consideration of the oxide being stripped in the sulphide pit sequence.

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3.	Christofer Catania	Principal Advisor/ CEO		08/09/24