Orion Minerals Limited
Incorporated in the Commonwealth of Australia
Australian Company Number 098 939 274
ASX share code: ORN
JSE share code: ORN
ISIN: AU000000ORN1

# Definitive Feasibility Study for Flat Mines Project Outlines Robust Development Pathway for Okiep Copper Project

DFS on Stage 1 development confirms sound financial outcomes from a modern underground copper mine

- Definitive Feasibility Study (DFS) completed for the Flat Mines Project, **part of Orion's** Okiep Copper Project (OCP) **in South Africa's Northern Cape Province**, with results delivering favourable financial outcomes and confirming the ability to deliver a safe, modern, fully mechanised copper mine.
- Key financial outcomes, include:
    - NPV (at an 8% discount rate) of AUD114 million (ZAR1,423 million), pre-tax (AUD75 million (ZAR935 million), post-tax);
    - IRR of 23%, pre-tax (19%, post-tax);
    - Payback period from first production of 5.3 years;
    - Undiscounted free cash flows of AUD219 million (ZAR2,744 million), pre-tax;
    - Peak funding requirements of AUD103 million (ZAR1,290 million);
    - Total project capital expenditure (including contingency) of AUD128 million (ZAR1,604 million);
    - Capital intensity of USD10,383/t, based on nameplate annual copper production;
    - All-in-sustaining costs of USD5,270/t (USD2.39/lb) of copper metal sold;
    - All-in-sustaining margin of 41%, based on average received copper price of USD8,944/t; and
    - Average annual production of 6.5kt of copper (peak production of 9.5kt of copper), with a mine life of 12 years.
- Modest initial capital expenditure given the planned build, own, operate, transfer (BOOT) arrangement for the plant.
- Mineral Resources for the Flat Mines Project total 10Mt at an average grade of 1.3% copper, resulting in 132kt of contained copper.
    - Measured Mineral Resources of 0.44 Mt @ 1.13% copper for 5kt contained copper;
    - Indicated Mineral Resources of 7.2 Mt @ 1.35% copper for 98kt contained copper; and
    - Inferred Mineral Resources of 2.3 Mt @ 1.3% copper for 29kt contained copper.
- Probable Ore Reserves for the Flat Mines Project total 6.1Mt at an average grade of 1.17% copper, resulting in 71.2kt of combined copper metal.
- Phased development approach:
    - Flat Mines Project represents the first phase of Orion's longer-term development strategy at the OCP.
    - Phase 1: Development of FMN only and plant construction for 50% of processing capacity
    - Phase 2: Development of FME over approximately 24 months and plant expansion to 100% of processing design capacity of 65ktpm
    - Phased approach allows Orion to deliver value from the OCP in a way that is more easily achievable for a junior mining company.

- Mining Right secured in 2022, meaning the project is fully permitted. Key approvals in place include:
    - Approved Mine Works Programme (MWP);
    - a Social and Labour Plan (SLP);
    - Environmental Authorisation (EA) and Environmental Management Program (EMPr), including Waste Management;
    - Water Use Licence (WUL) granted in July 2024; and
    - Rezoning of the surface for mining authorised in August 2024, by Nama Khoi Local Municipality (NKLM).
- Externally reviewed
    - The DFS has been externally reviewed by independent technical experts Practara Metals and Mining Advisory (Practara).
- Upside potential
    - The OCP offers substantial exploration potential with ongoing exploration to be a key driver of further Resource/Reserve growth and mine life extensions at the Flat Mines Project.
- The effective date of the DFS is 31 December 2024. The indicative timelines that have been provided in the report are for illustrative purposes and assumes that the project is fully funded at the report effective date.
- Next steps are to advance:
    - Project financing;
    - Project implementation planning;
    - Concentrate offtake negotiations; and
    - Agreements with service providers for key early works activities and long lead time items.

## Disclosure on Forward Looking Statements

Certain information set forth in this Feasibility Study Report contains "forward looking information", including "future oriented financial information" and "financial outlook", under applicable securities laws (collectively referred to herein as forward-looking statements). Information contained herein constitutes forward looking statements.

Forward looking statements are provided to allow potential investors the opportunity to understand management's beliefs and opinions in respect of the future so that they may use such beliefs and opinions as one factor in evaluating an investment. These statements are not guarantees of future performance and undue reliance should not be placed on them. Such forward looking statements necessarily involve known and unknown risks and uncertainties, which may cause actual performance and financial results in future periods to differ materially from any projections of future performance or result expressed or implied by such forward looking statements.

Although forward looking statements contained in this Feasibility Study Report are based upon what management of the Company believes are reasonable assumptions, there can be no assurance that forward looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. The Company undertakes no obligation to update forward looking statements if circumstances or management's estimates or opinions should change except as required by applicable securities laws. The reader is cautioned not to place undue reliance on forward looking statements.

The Definitive Feasibility Study (DFS) reported in this Announcement determines the commercial viability of establishing mining and ore processing operations on the Flat Mines Project at the Okiep Copper Project. The DFS has been prepared with the objective that its findings are subject to an accuracy range of ±15%. The findings in the Study, including the estimates of rates of return, costs, payback, NPV, milling rates, and production rates, should be viewed with this in mind and are subject to all necessary permits, regulatory requirements, financing, Board approval and further works as described throughout.

This Feasibility Study contains Production Targets and Forecast Financial information supported by a combination of approximately 82% Probable Ore Reserves, Indicated Mineral Resources and approximately 18% Inferred Mineral Resources, all classified and disclosed in compliance with ASX Listing Rules and JORC Code (2012) reporting standards. Orion is satisfied that the portions of Inferred Mineral Resources included in the Production Targets (never more than 18% of the mining plan) are not the determining factor in project viability and do not feature as a significant portion early in the mining plan.

Note that 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 portion of the production target reliant on Inferred Mineral Resources will be realised.

The Ore Reserves and Mineral Resources underpinning the Production Target have been prepared by Competent Persons in accordance with the requirements in Appendix 5A JORC Code (2012) in accordance with the ASX Listing Rules.

All material assumptions for the DFS are outlined in this report. These include assumptions about the availability of funding. While Orion 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 DFS will be achieved. Peak funding in the order of ZAR1,290 million (AUD103 million) (which incorporates an 8% contingency allowance) will be required.

### Mining industry risks

The businesses of mining and mineral exploration, development and production by their natures contain significant operational risks. The businesses depend upon, among other things, successful exploration programmes and competent management. Profitability and asset values can be affected by unforeseen changes in operating circumstances, technical issues and market volatility.

Factors such as political and industrial disruption, currency fluctuation, increased competition from other prospecting and mining rights holders and interest rates could have an impact on any future activities on the properties in question. The majority of these factors are, and will be, beyond the control of Orion or any other operating entity.

**Orion's Managing Director and CEO, Errol Smart, commented:**

"The completion of the Flat Mines DFS marks an important step towards our objective of unlocking the long-term potential of the Okiep Copper Project. The DFS for the Flat Mines Project has delivered positive outcomes that confirm the potential to develop an initial underground mining operation with a modest upfront capital requirement that will allow Orion to get into production relatively quickly at Okiep.

"The study only reflects the deposits that were included in the Mine Works Programme that was submitted in support of the Mining Right application by the previous owners before Orion purchased the Mining Right.

"We see this as a modest scale starter project that will operate while we undertake additional exploration drilling to increase the Mineral Resources on more than ten surrounding deposits that were drilled historically by Newmont and Goldfields where we are not yet able to state Mineral Resources or complete and report feasibility studies in accordance with the JORC Code. The Flat Mines concentrator plant, and mine infrastructure will become the core of our growth and expansion plans in the district, with the aspiration of eventually treating ore trucked from multiple satellite deposits.

"Starting small ensures we not only meet the requirements of our approved Mining Right as granted by South Africa's Department of Mineral Resources and Energy (DMRE) but also allows Orion to transition into production in a measured way, with a key focus on training up a highly skilled workforce that can operate to international mining standards and efficiencies.

"The DFS includes a range of Environmental, Social and Governance (ESG) factors, including our commitment to safety; local employment and procurement; tailings management, water stewardship and community engagement. We believe, that together with the development of our flagship Prieska Copper Zinc Mine, the development of OCP will enable Orion to make an important contribution to the economic development of the Northern Cape.

"In addition, we see immense prospectivity in the Okiep district and strongly believe that the Flat Mines Project will present the first of several mines that Orion will develop in the region. We aim to reach our aspirational target to restore production from the OCP to historical levels. We remain committed to rapid resource and reserve growth and will have a targeted and disciplined approach to exploration with the aim of delivering additional value from the Okiep region to all stakeholders.

"Our focus now turns to finalising our funding strategy for both the OCP and Prieska, which we expect will be made up of a combination of debt, equity and offtake-related financing. Negotiations on the concentrate offtake will also be a key focus in the coming months.

"I would like to sincerely thank the team, led by our General Manager of the OCP, Mark Meyer, for the hard work that has gone into delivering this favourable DFS. I would also like to acknowledge the ongoing support from our project partners and shareholders."

**IDC Divisional Executive Industry Planning and Project Development, Rian Coetzee, commented:**

"The IDC's critical Minerals Game Plan seeks to ensure that South Africa becomes one of the biggest producers of critical minerals in the continent. The progress made thus far towards ensuring that Okiep becomes a fully-fledged copper producer is encouraging and adds to our prospects. We reiterate our continued support for this project."

Orion Minerals Limited (ASX/JSE: ORN) (Orion or the Company) is pleased to present the outcomes of the Definitive Feasibility Study for the Flat Mine Project, within the Okiep Copper Project, located in the Northern Cape Province of South Africa.

The DFS outlines a robust long-life underground mining operation with the potential to deliver strong financial returns from a relatively modest capital outlay, with the project representing a valuable 'starter project' for Orion at the OCP that will allow it to commence operations and start generating cash-flow to unlock the broader potential of the asset.

The Flat Mines DFS has been delivered concurrently with the DFS on the Company's flagship Prieska Copper Zinc Project, also located in the Northern Cape and outlines the Company's development plans for its main production hub.

Together, the two projects are expected to underpin Orion's vision to become a significant base metal producer in South Africa's Northern Cape in the next 2-3 years.

## EXECUTIVE SUMMARY

The Flat Mines Project (FM Project or the Project), held by New Okiep Mining Company (Pty) Limited (NOMC), is located in the Northern Cape Province of South Africa (Figure 4). NOMC's majority shareholder, Orion Minerals Limited (Orion), is listed on the Australian Securities Exchange (ASX: ORN) and has a secondary listing on the Main Board of the Johannesburg Stock Exchange (JSE: ORN).

The mineral tenure associated with the FM Project comprises a granted and executed mining right (MR) (NC 10150 MR) for copper and tungsten ore, valid until 2037, held by NOMC and three granted and executed prospecting rights (PRs) (NC 12850 PR, NC 12755 PR and NC 12848 PR) held by Southern African Tantalum Mining (Pty) Limited (SAFTA) (Figure 5).
The FM Project comprises a 12 year (yr) life of mine (LOM) from first concentrate production, mining approximately 65,000 tonnes per month (tpm) at steady state (780,000 tonnes per annum (tpa)) of copper mineralised material at full production, at an average LOM grade of 1.18% copper (Cu). Mineralised material will be sourced from four separate underground mining areas namely, the historically mined Flat Mines North (FMN) and Flat Mines Nababeep (FM-Nab) mines and the planned unmined deposits at Flat Mines East (FME) and Flat Mines South (FMS). All mining areas are located within 3km of each other and the location of the proposed central processing facility.

The excavated run of mine (ROM) material will be processed through a processing plant to be located near FMN, which will comprise particle ore sorters, followed by conventional milling and flotation, to produce an average over the LOM, of approximately 24,000tpa (wet) of copper concentrate at an average grade of 30% Cu. The concentrates will be bagged, trucked to Cape Town, and loaded into shipping containers for transportation to international markets. This will amount to an average over the LOM of 6,500tpa of contained copper metal including ramp-up and ramp-down periods. Nameplate production of 9,300tpa contained copper will be attained and maintained for three years based on the current LOM plan.

The underground mining areas will be sequentially developed. FMN will be developed first using the existing decline, followed by FME using a new twin decline. The FM-Nab and FMS areas will share a common decline with FM-Nab being mined first as development continues to open FMS. A maximum of two mining areas will be fully operational at any one time.

To derisk the project and reduce the initial capital outlay for the process plant, the FM Project will be developed using a phased approach. Phase I will include the mining of approximately 32,500tpm of mineralised material at an average grade of 1.04% Cu for a period of 24 months from FMN. In this phase the mineralised material will be treated through conventional milling and flotation, to produce copper concentrate at an average grade of 30% Cu. Although no ore sorters will be used in Phase I, this time will be used to carry out pilot scale testing in the operational plant. Pilot scale testing is expected to confirm the benefits of ore-sorting indicated during testing of drill core from the various FM Project deposits during the study phase, in which case the installation and commissioning of the full scale ore sorting plant would be expedited. The cost and benefit of the ore sorting plant is excluded from this Feasibility Study.

In Phase II, production from FME will be combined with FMN to achieve a target of 65ktpm of mineralised material delivered to the run of mine (ROM) pad. The process plant will be expanded, possibly inclusive of the installation of ore-sorters to accommodate the increased production from mining. Phase II is designed to maintain steady monthly production of 65ktpm from initially FMN and FME, until FMN production is replaced by production from FM-Nab and FMS. Full production is sustained for 86 months until FME is depleted, after which time, FMS production is treated at a reduced rate limited by the capacity of mining from FMS only. Production is planned to continue for a total of 145 months from first concentrate production.

**Table 1: Key DFS Results for the Flat Mines Project. Note that the Study estimation accuracy level is ± 15%.**

| Executive Dashboard | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Production and Financial Summary** | | | **Key Parameters** | | | | |
| **Price and FX Assumptions** | **Unit** | **Value** | **Financial Performance** | **Unit** | **Value** | **Unit** | **Value** |
| Metal price – Cu | USD/t | 9,396 | NPV pre-tax @ 8% discount rate | ZAR M | 1,423 | AUD M | 114 |
| Metal price – Au | USD/oz | 2,157 | NPV post-tax @ 8% discount rate | ZAR M | 935 | AUD M | 75 |
| Metal price – Ag | USD/oz | 27 | IRR pre-tax | % | 23 | | |
| Exchange rate | ZAR:USD | 18.90 | IRR post-tax | % | 19 | | |
| Exchange rate | ZAR:AUD | 12.50 | Payback from first production | Years | 5.25 | | |
| | | | Undiscounted free cash flow pre-tax | ZAR M | 2,744 | AUD M | 219 |
| | | | Peak funding | ZAR M | 1,290 | AUD M | 103 |
| | | | Capital intensity | * USD/Cu t | 10,383 | * AUD/Cu t | 15,699 |
| **Production Metrics** | **Unit** | **Value** | **Project Cost Metrics** | **Unit** | **Value** | **Unit** | **Value** |
| Life of Mine | Years | 12.08 | Average cash operating unit cost | ZAR/t | 769 | AUD/t | 62 |
| Treatment plant capacity | Ktpa | 780 | All-in-sustaining cost per unit ROM t | ZAR/t | 1,078 | AUD/t | 86 |
| ROM Plant Feed – tonnage | kt | 7,235 | All-in-sustaining cost per unit Cu t sold | USD/t Cu | 5,270 | AUD/t Cu | 7,968 |
| ROM Plant Feed – grade - Cu | % | 1.18% | All-in-sustaining cost per unit Cu t sold | USD/lb Cu | 2.39 | AUD/lb Cu | 3.61 |
| Concentrate grade - Au | g/t conc | 0.9 | Price received (net of NSR) - Cu | USD/t Cu | 8,944 | AUD/t Cu | 13,523 |
| Concentrate grade - Ag | g/t conc | 31.4 | All-in-sustaining margin | % | 41% | | |
| Overall Plant Revocery | % | 91.90% | Operating breakeven grade (Cu) | % | 0.73% | | |
| Concentrate Tonnage (wet mass) - Cu | kt | 285 | **Project Cash Flows** | **Unit** | **Value** | **Unit** | **Value** |
| Concentrate Grade - Cu | % | 30% | LoM net revenue | ZAR M | 12,701 | AUD M | 1,016 |
| NSR as % of metal price – Cu | % | 95.20% | LoM operating costs (+ Royalty and Tax) | ZAR M | 6,608 | AUD M | 529 |
| Metal Sold (in concentrates) - Cu | tonnes | 78,340 | Project Start-up Capital Expenditure | ZAR M | 894 | AUD M | 71 |
| Total Cu Sales | tonnes | 78,340 | Total Project Capital (incl Contingency) | ZAR M | 1,604 | AUD M | 128 |
| | | | Contingency | ZAR M | 90 | AUD M | 7 |
| | | | Sustaining Capital Expenditure | ZAR M | 768 | AUD M | 61 |
| | | | Income Tax | ZAR M | 977 | AUD M | 78 |
| | | | Cash Flow after tax | ZAR M | 2,744 | AUD M | 219 |

Level of Accuracy of Financial Model ± 15%, LoM = Life of Mine, NSR = Net Smelter Return, NPV = Net Present Value, IRR = Internal Rate of Return

There is a low level of geological confidence associated with Inferred Mineral Resources and therefore there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target or financial forecast information referred to in this Study will be realised.

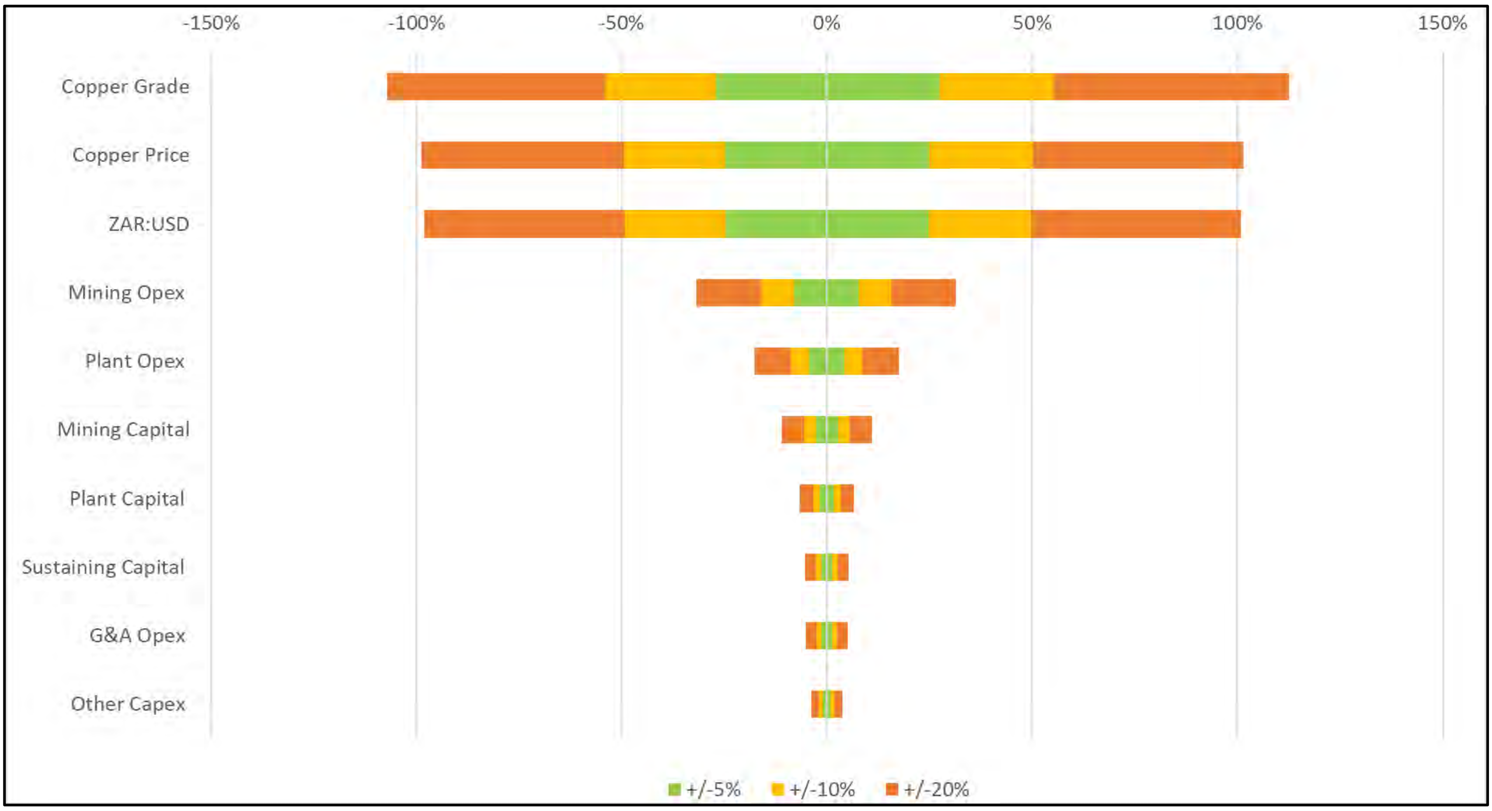


**Figure 1: Sensitivity of the post-tax NPV to changes in key project parameters for the FM Project DFS.**

**Table 2: Effect of fluctuations in metal prices and foreign currency exchange rates on the post-tax NPV and IRR for Flat Mines Project.**

| % Change | -15% | -10% | -5% | 0% | +5% | +10% | +15% | IRR |
|---|---|---|---|---|---|---|---|---|
| Cu Price $/tonne | 7987 | 8457 | 8927 | 9396 | 9866 | 10336 | 10806 | |
| ZAR:USD | | | | | | | | |
| 16.07 | - 393 | - 180 | 28 | 232 | 435 | 635 | 834 | 10.7% |
| 17.01 | - 182 | 38 | 255 | 469 | 681 | 891 | 1,100 | 13.5% |
| 17.96 | 25 | 253 | 479 | 703 | 925 | 1,144 | 1,364 | 16.1% |
| 18.90 | 227 | 466 | 701 | 935 | 1,166 | 1,398 | 1,628 | 18.6% |
| 19.85 | 429 | 676 | 922 | 1,165 | 1,408 | 1,650 | 1,891 | 21.1% |
| 20.79 | 628 | 885 | 1,140 | 1,394 | 1,648 | 1,901 | 2,152 | 23.5% |
| 21.74 | 825 | 1,092 | 1,358 | 1,624 | 1,888 | 2,151 | 2,413 | 25.8% |

## Project levels of study

In April 2021, Orion completed a Scoping Study as part of the company's due diligence and resultant decision to acquire the Okiep Copper Project (which included the FM Project). The Scoping Study investigated the commercial viability of a "proof of concept" scale mining and mineral processing operation and completed to a cost estimation accuracy of ±25%. The scoping study assessed mining of the four deposits that are the focus of this Feasibility Study but also included mining of deposits located on the surrounding PR which were excluded from this Feasibility Study. Conceptual underground mine designs and schedule, as well as unoptimised pit designs and schedules were completed, containing a combination of Measured, Indicated and Inferred Mineral Resources. Mining was planned at a rate of 65,000tpm using open pit methods and underground methods including vertical crater retreat (VCR), long hole open stoping (LHOS) and board and pillar (B&P) methods, where relevant. Processing included crushing and milling, followed by flotation to produce a concentrate with an average grade of 26% Cu. The Scoping Study financial valuation returned an NPV of ZAR1.27bn (post tax) using non-inflation-adjusted estimates and a real discount rate of 10%. The IRR was estimated at 37% (post tax).

Orion commenced with the current Feasibility Study on the FM Project in February 2022 and completed it in March 2025. It was undertaken by the owners team, NOMC and their specialist advisors. Orion prepared the Feasibility Study to meet the industry standard accuracy range of +/-15% with detailed engineering at 20% to 50% complete.

The focus of the Feasibility Study was on the following:

- confirming the Mineral Resources, which had previously been estimated using historical drilling only through confirmatory drilling by NOMC;
- geotechnical testwork and appraisal of surface outcrop and drill core;
- preparing a detailed mine design, optimisation, schedule and costing for the four separate mining areas;
- performing detailed metallurgical testwork to confirm the proposed plant design and recovery factors;
- performing a detailed design, optimisation and costing for the processing plant and associated waste streams;
- performing a detailed design and costing for the supporting infrastructure, both surface and underground;
- completing the required environmental studies to obtain a Water Use License and other regulatory approvals;
- defining an Ore Reserve estimate;
- preparing a Master LOM Schedule;
- assessing the technical and financial risks of the Project; and
- demonstrating the economic merits of the FM Project.

The results of this Feasibility Study have demonstrated the economic merits of the FM Project with the results encapsulated in this Feasibility Study Report. The Feasibility Study results will be used as the basis to raise the required funding to develop the project.

### Project timelines

The effective date of this Feasibility Study is 21 March 2025 and, for illustrative purposes, the months provided in the project timelines assume the FM Project is fully funded at the effective date. The reader is cautioned regarding the actual project start date, with it only occurring once funding is secured and the Financial Investment Decision (FID) finalised.

The successful result of this Feasibility Study and the Orion Board's approval will lead to the development of the FM Project as soon as adequate construction finance, as defined by this report, has been raised by Orion. It is envisaged that fund raising will take two months whereafter awarding of the major contracts will commence. The summary project execution plan (PEP) for the FM Project over the next five years, until the end of 2030, is presented in Table 3.

Construction work for the Phase I process plant is planned to commence in Month 10 with the plant to be completed in Month 21. Production at 32.5ktpm will be reached on completion of commissioning and production ramp-up by Month 24, with first concentrate to be sold in Month 22 (Table 3). Funding required to achieve first production is estimated to be AUD122 million.

Early works, including dewatering and rehabilitation of existing underground development, will commence at FMN in Month 2 with development running concurrently with plant construction. FMN is scheduled to produce its first ROM ore from development in Month 7 which will be stockpiled on the ROM pad at the plant. Steady state production from FMN will be reached in Month 29. Portal construction on FME is scheduled for commencement in Month 15. Following development of the twin decline, initial ROM production will be available in Month 38 with steady state being reached by Month 56. FM-Nab and FMS will be developed together, commencing early works in Month 34. FM-Nab is expected to branch off from the combined decline in Month 47, with ROM ore being produced the following month and steady state production reached in Month 62. FMS will continue to develop and is scheduled to produce first ROM ore in Month 62. Steady state ROM production is expected from FMS in Month 81.

Construction of the upgraded plant is scheduled to commence in Month 44 for Phase II full production planned in Month 50 to coincide with steady state production from FME. Production will continue for the remaining LOM.

### Key contributors

The Feasibility Study was managed by NOMC with contributions from the NOMC and Orion owners team and independent experts. The major contributors included Z Star Mineral Resource Consultants (Pty) Limited (Z*), Sound Mining International (Pty) Limited (Sound Mining), Dayenu Mining Consultants (Dayenu), Paterson & Cooke Consulting Engineers (P&C), JHK Consulting (JHK or Mr Jon Hudson), METC Engineering Consultants Limited (METC), Epoch Resources Limited (Epoch), Prysm Ventilation Services (Pty) Limited (Prysm), Fraser McGill (Pty) Limited (Fraser McGill) and Advisory on Business and Sustainability Africa (Pty) Limited (ABS Africa).

## DETAILS OF THE DEFINITIVE FEASIBILITY STUDY

### Corporate structure

NOMC's FM Project is currently held by Orion through its South African subsidiary Area Metals Holdings No.6 (Pty) Limited (AMH6) (50.63%), with the balance of the shareholding held by the Industrial Development Corporation of South Africa (IDC) (19.37%), Landmark Capital (BEE Entrepreneur) (20%), Orion Nama Khoi Employee Trust (5%), Orion Nama Khoi Community Trust (5%), as set out in Figure 2.

This holding structure meets the BEE requirements of the Mining Charter (2018). The IDC's participation contributes additionally to the 20% minimum required BEE entrepreneurship credentials. The Community and Employee Trusts would not be required to contribute to any up front funding of the Project development. However, all funding contributions made on behalf of the trusts would be entitled to be recovered from FM Project cash flows before any dividend distributions are made to the trusts.

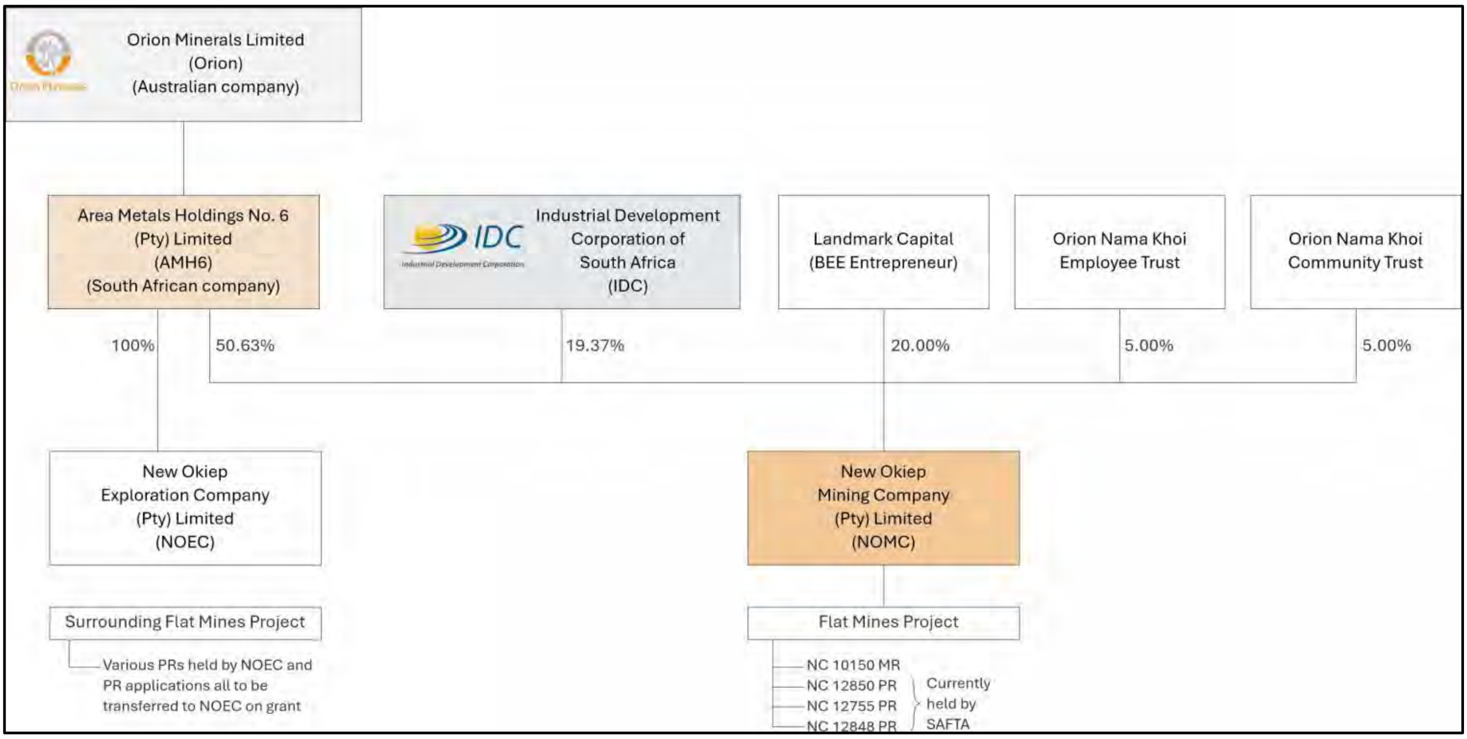


**Figure 2: Corporate structure.**

**Table 3: FM Project Summary project execution plan (PEP) (~5 years).**

| Description | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 | M10 | M11 | M12 | M13 | M14 | M15 | M16 | M17 | M18 | M19 | M20 | M21 | M22 | M23 | M24 | M25 | M26 | M27 | M28 | M29 | M30 | M31 | M32 | M33 | M34 | M35 | M36 | M37 | M38 | M39 | M40 | M41 | M42 | M43 | M44 | M45 | M46 | M47 | M48 | M49 | M50 | M51 | M52 | M53 | M54 | M55 | M56 | M57 | M58 | M59 | M60 | M61 | M62 | M63 | M64 | M65 | M66 | M67 | M68 | M69 |
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| **Feasibility Study completion** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment decision | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project funding activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Establish owners team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction power | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction infrastructure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Award contracts* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Order long lead time items | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Surface infrastructure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bulk power supply | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offices and changehouses | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Service and make-up water | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TSF construction** (Raise 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FMN** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site establishment / pre-works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U/g waste development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ore production build up ** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROM production | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FME** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site establishment / pre-works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U/g waste development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ore production build up ** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROM production | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $ | | | | | | | | | | | | | |
| **FM-Nab** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site establishment / pre-works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U/g waste development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
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| ROM production | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $ | | | | | | | |
| **FMS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site establishment / pre-works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Ore production build up ** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Processing plant** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Procurement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabrication | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Delivery / transport | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site establishment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Processing plant upgrade** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Sale of first concentrate** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **<= CONSTRUCTION AND PHASE I DEVELOPMENT =>** | | | | | | | | | | | | | | | | | | | | | | | | **<= PHASE I FULL PRODUCTION =>** | | | | | | | | | | | | | | | | | | | | | | | | | **PHASE 2 FULL PRODUCTION =>** | | | | | | | | | | | | | | | | | | | |

Notes:
* Contracts include EPCM, O&M, mining, ** Includes: Ore development, grade control drilling, production drilling, VCR blasting and loading

Major milestones and ROM production. $ Steady state production X Breakway of combined decline towards FM-Nab.

## Mineral and surface tenure

The FM Project comprises a granted and executed mining right (MR) (NC 10150 MR) and three granted and executed prospecting rights (PRs) (NC 12850 PR, NC 12755 PR and NC 12848 PR). The MR and PRs are currently held by NOMC and SAFTA, respectively (Figure 5). The reader is to note that NC 10150 MR and NC 12850 PR cover the same surface area but are held for different minerals, with the MR being held for copper and tungsten ore and the PR being held for 26 other minerals.

Similarly, NC 12755 PR and NC 12848 PR cover the same surface area (surrounding NC 10150 MR and NC 12850 PR) and are held for copper and tungsten and 26 other minerals, respectively. Applications for Section 11 permission to cede the PRs have been submitted to the Department of Mineral Resources and Energy (DMRE).

The majority of mining infrastructure, processing plant, roads, powerlines, service water pipelines and portals will be located on approximately 480ha of land belonging to the Nama Khoi Local Municipality (NKLM). A lease agreement has been concluded with NKLM for the duration of the LOM. This portion of the NKLM property has been rezoned for mining (Industrial IV).

The balance of the land within the MR boundary is currently owned by Mora Plase (Pty) Limited (More Plase). NOMC has concluded a purchase agreement with Mora Plase to acquire the land, with payment terms over approximately three years. On payment of the final annual tranche, transfer of the property to NOMC will be affected. The property is occupied and administered by Orion until title transfer is completed.

## Regulatory aspects

As part of the awarding of the MR in 2022, the FM Project holds an approved Mine Works Programme (MWP), Social and Labour Plan (SLP), an Environmental Authorisation (EA), Environmental Management Programme (EMPr) and Waste Management permit. NOMC obtained their Water Use Licence (WUL) in July 2024 and authorisation from NKLM for the rezoning of the surface for mining in August 2024. In accordance with the terms of the mining right and Section 25(2)(b) of the MPRDA, an application for ministerial consent for the extension of the commencement date for mining operations to 31 December 2025 has been submitted to the DMRE.

NOMC is not aware of any other licences that will be required to commence with the current development of the FM Project. A protected and/or indigenous plant removal permit will be obtained prior to commencement of construction.

## Location and access

The FM Project is located in the Northern Cape Province of South Africa, approximately 583km by road north of Cape Town (via the N7 national road) and 20km by road north northwest of the town of Springbok (Figure 4) in an area commonly referred to as the Okiep Copper District. This area has been subject to an extensive history of copper mining primarily carried out by the Okiep Copper Company Limited (OCC), under various holding companies between 1937 and 2003. The FM Project is located within NKLM of the Namakwa District Municipality. Tarred access roads are located to within 3.5km from the MR boundary and 5.0km from the proposed processing facility (Figure 5 and Figure 6).

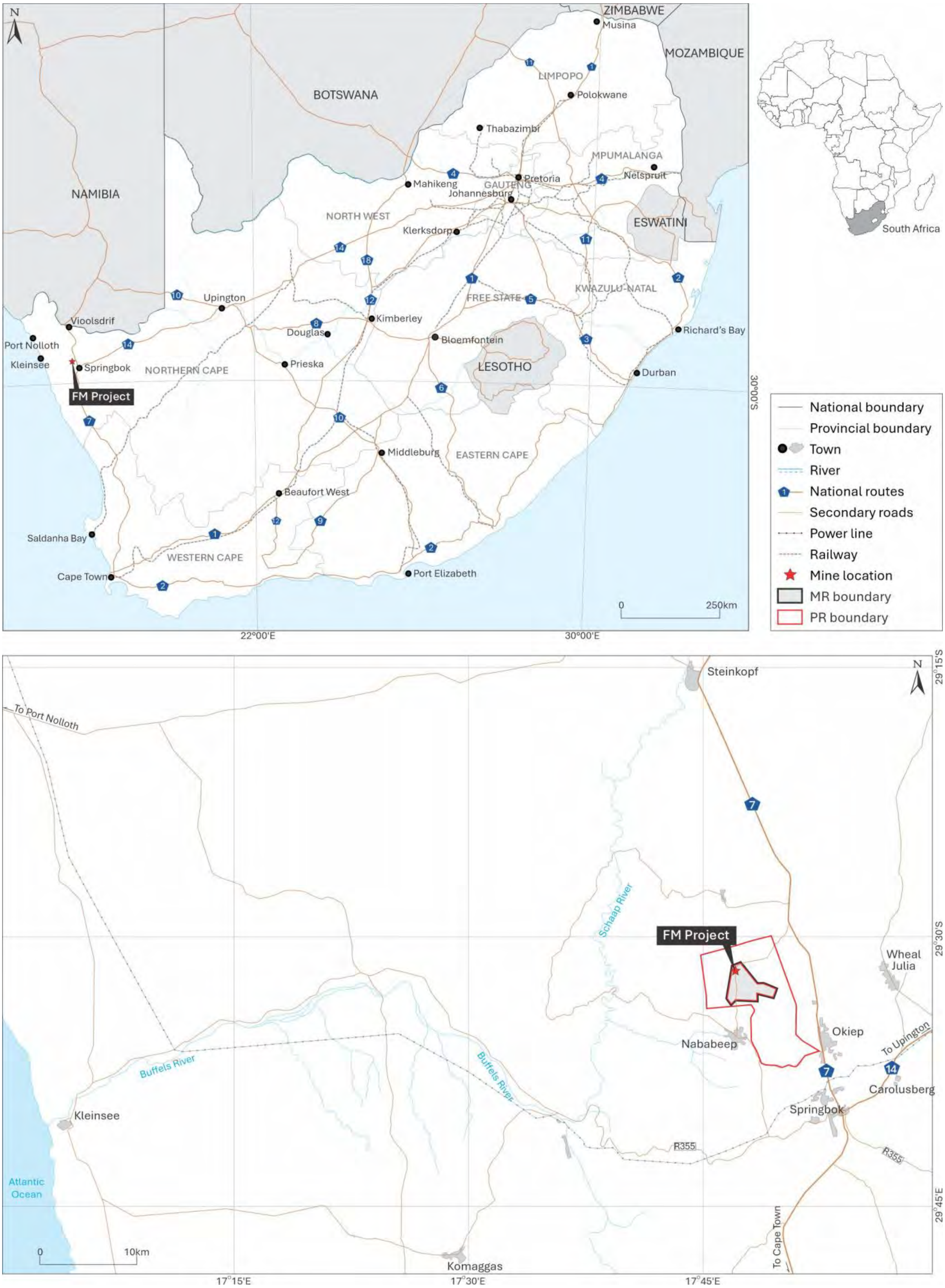



**Figure 4: Regional locality of the Flat Mines Project.**

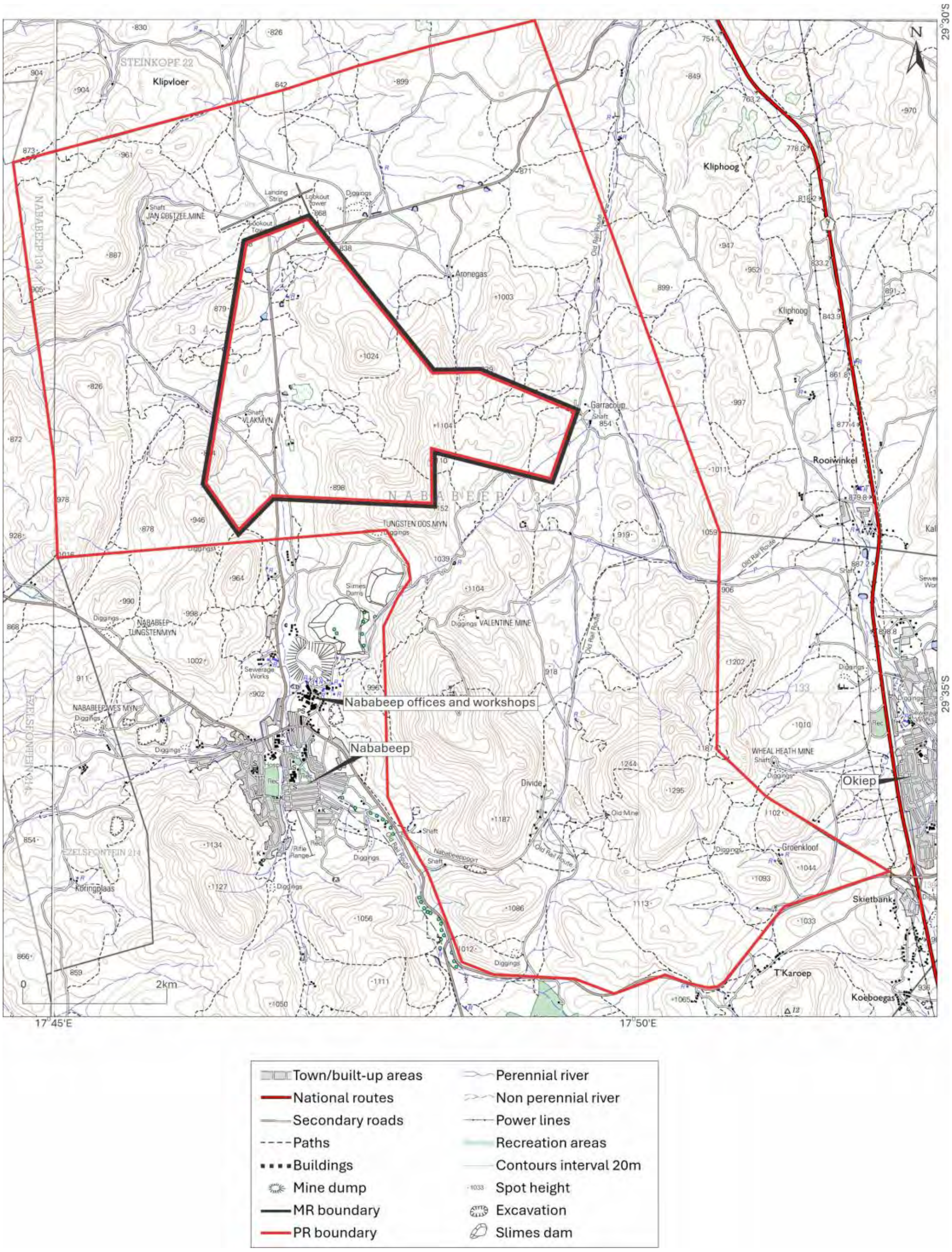



**Figure 5: Topographic map of PR and MR area.**

## Existing infrastructure

Surface infrastructure currently located on site is limited as no formal project development has commenced. A gravel access road passes through the MR (Figure 6), on which NOMC has erected a security control boom.

Other infrastructure is mainly related to historical mining activities on the property and include a water dam, evaporation paddocks and ponds from tungsten mining, an existing decline portal which accessed the historical Wheal Flat Mine (now FMN) and an existing vertical shaft which accessed the historical FM-Nab Mine. Previous OCC administrative offices, a core shed, storage facilities and workshops situated in the town of Nababeep are currently being utilised by the FM Project development and exploration teams.

Current land use within the MR boundary comprises sheep farming, informal temporary dwellings and associated livestock grazing.

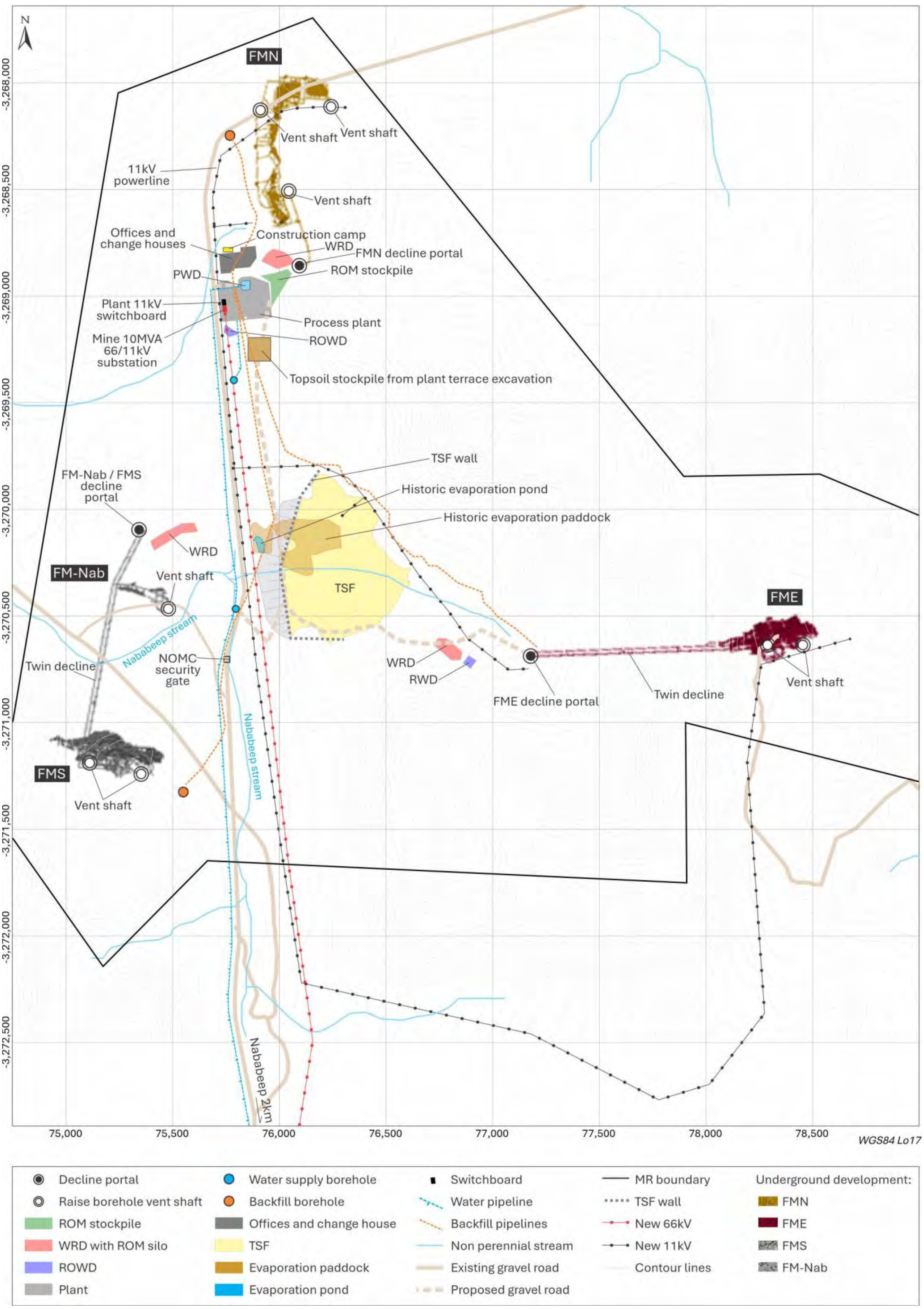



**Figure 6: Proposed site plan.**

## Historical ownership and production

Although copper was identified and extracted as far back as the 1600s, the Okiep Copper District has a history of over 150 years of copper mining. From 1935 to the 1980s copper mining boomed in the area with copper ore being extracted from 32 separate mineralised bodies. Modern commercial copper mining activities commenced in 1937 when the international mining conglomerate, Newmont Mining Company (now Newmont Corporation Limited) (Newmont), consolidated the copper production in the area under OCC.

The company treated ore from multiple mines that fed a centralised concentration plant and copper smelter facility at Nababeep. In 1984, South African mining house, Gold Fields of South Africa Limited (GFSA), bought out Newmont's stake. GFSA's copper assets were later sold to Metorex (Pty) Limited (Metorex) in 1998. Metorex closed the OCC operations in 2003. Formal records available from the 1940s onwards estimated a total of 1.57Mt of blister copper was produced from the OCC mines between the 1940s and 2003. Records from Newmont's operating era (1946-1985) indicate that 72.75Mt of ore were processed at an average mill grade of 1.58% Cu to produce 1.15Mt of blister copper.

The so-called Flat Mine Nababeep (referred to as FM-Nab in this Feasibility Study Report) was mined in the 1950s by OCC under Newmont. Although drilling continued into the late 1970s the actual mining operation was abandoned in 1953. The Wheal Flat Mine (referred to as FMN in this Feasibility Study Report) was initially developed by Newmont in 1981 but closed prior to any mining occurring. In the late 1990s it was reopened by GFSA and mined briefly between 1996-1997. In the early 2000s it was reopened again by Metorex, with ROM material being batch treated at the Nababeep slag processing plant. Almost twenty years later, it was dewatered by SAFTA, shortly after their acquisition of the FM Project, but not mined.

## Survey

A drone digital terrain survey carried out in 2022 which provided the digital terrain model (DTM) of 1m contours over the majority of the MR area. This survey was used by the engineering companies in their design work. The FM Project is currently using the Hartebeesthoek94 Lo17 coordinate system and will continue to do so going forward. The drill hole database is also available in Universal Transverse Mercator (UTM) map projection system, WGS84 in Zone 35 south (S).

## Regional geology and mineralisation

The Okiep Copper District lies within the Namaqualand/Natal mobile belt (Figure 7). The regional geology associated with the Okiep Copper District can be summarised in the following sequence of events:

- formation of the first primitive crust 1,700-2,000 million years (Ma) ago;
- deposition of a supracrustal succession, ~1,650 Ma ago;
- intrusion of large volumes of granite 1,180–1,210Ma ago during the Namaquan Orogeny including the Little Namaqualand Suite and Concordia Granite (Figure 7);
- intrusion of the Rietberg Granite (1,020–1,040Ma ago) and the copper-bearing Koperberg Suite (800 - 845Ma ago) (Figure 7);
- erosion and denudation 1,030 - 550Ma ago removing 20km of crust and exposing the present erosion level;
- deposition 520 – 550Ma ago of sedimentary rocks of the Nama Group; and
- circulation of low-temperature meteoric fluids as part of the Damaran Orogeny (480 – 580Ma ago) resulting in supergene enrichment.

Copper mineralisation is predominantly hosted within the Koperberg Suite of the mafic to intermediate intrusive bodies (Figure 7). The Koperberg Suite intruded as dykes, plugs, sills and shallow plunging tubular bodies into the Khurisberg Subgroup and Little Namaqualand Suite. More than 1,700 of these basic bodies is known to exist. The bulk of the mafic bodies intruded along east-northeast and east-west trending structures known as 'steep structures'. Major rock types of the Koperberg Suite include anorthosite, leuco-diorite, biotite-diorite, leuco-norite, norite, glimmerite and orthopyroxenite. The most common arrangement of mafic bodies is that of irregular, steeply north dipping dykes, emplaced along antiformal steep structures. Intrusions are composites of multiple phases of intrusion with different mineral endowment.

The Koperberg Suite is a rare example of economic copper mineralisation in rocks of the anorthosite–charnockite family with the only other presently exploited example of this being in Caraiba, Brazil.

Copper deposits are either hosted in sills, dykes or plug-like bodies, with the deposit in the latter being considerably larger than those found in dykes and sills. Mineralisation usually occurs as fine to coarse disseminated copper mineral assemblages with less massive sulphides in the mafic rocks in the following order: bornite > chalcopyrite > chalcocite and less pyrite and pyrrhotite. The more mafic and magnetite rich lithologies typically host the bulk of and higher-grade mineralisation. The copper sulphides are generally regarded to have been deposited by immiscible sulphide liquid.

## Local geology

The FM Project MR is largely underlain by Concordia Granite with some areas of Rietberg Granite and scattered outcrops of metasediment, anorthosite and diorite of the Koperberg Suite. Diorite is the most prospective rock type in the area and these mafic rocks form a very distinctive curvilinear trend towards the east. Diorite as sills (FMN) and dykes (FME and FMS) are less common and are predominantly hosted within the anorthosite. Three dimensional geological models of the mafic bodies and their associated mineralisation envelopes are presented in Figure 8 and Figure 9.

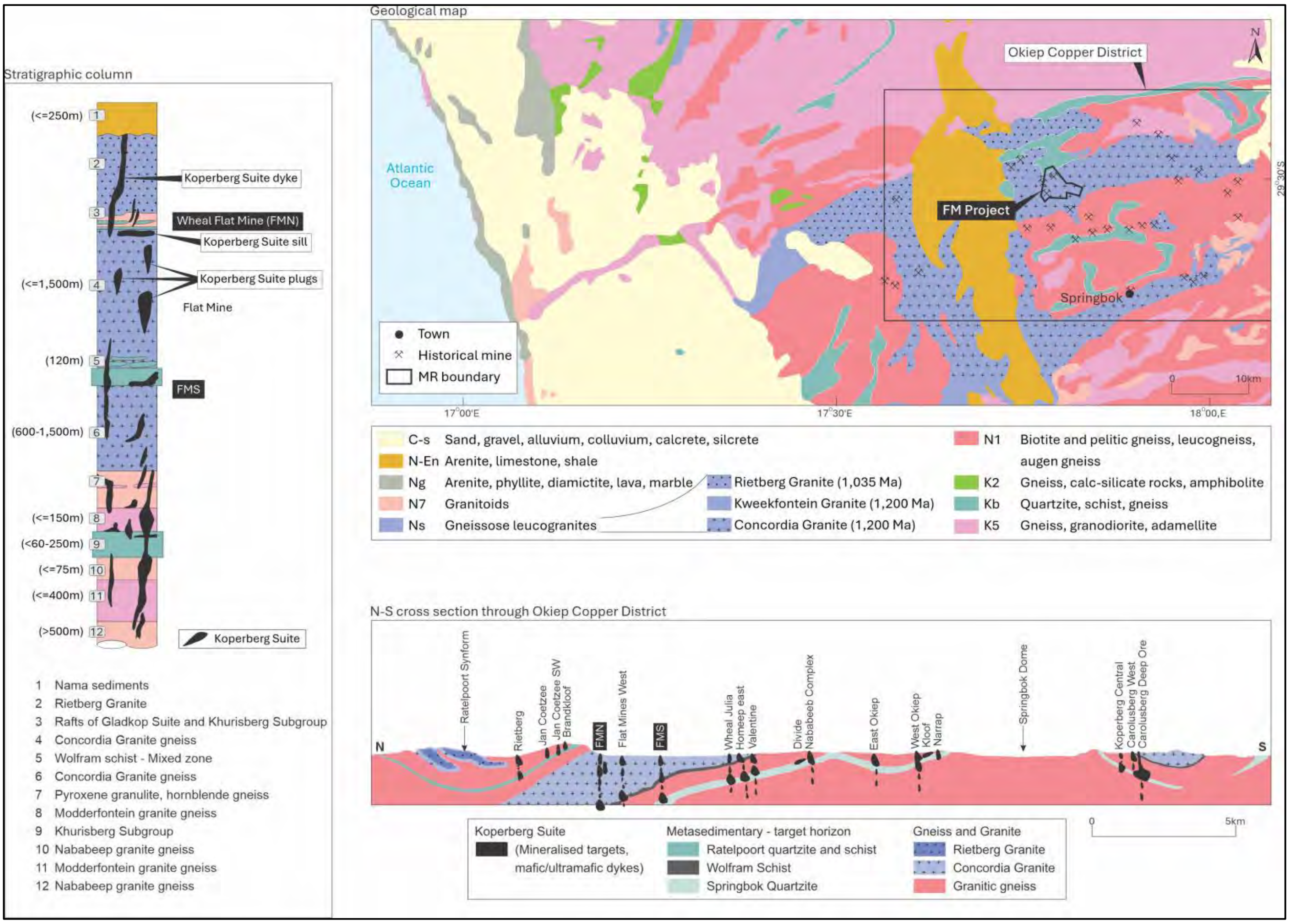



**Figure 7: Geological map, stratigraphic column and cross section through the Okiep Copper District.**

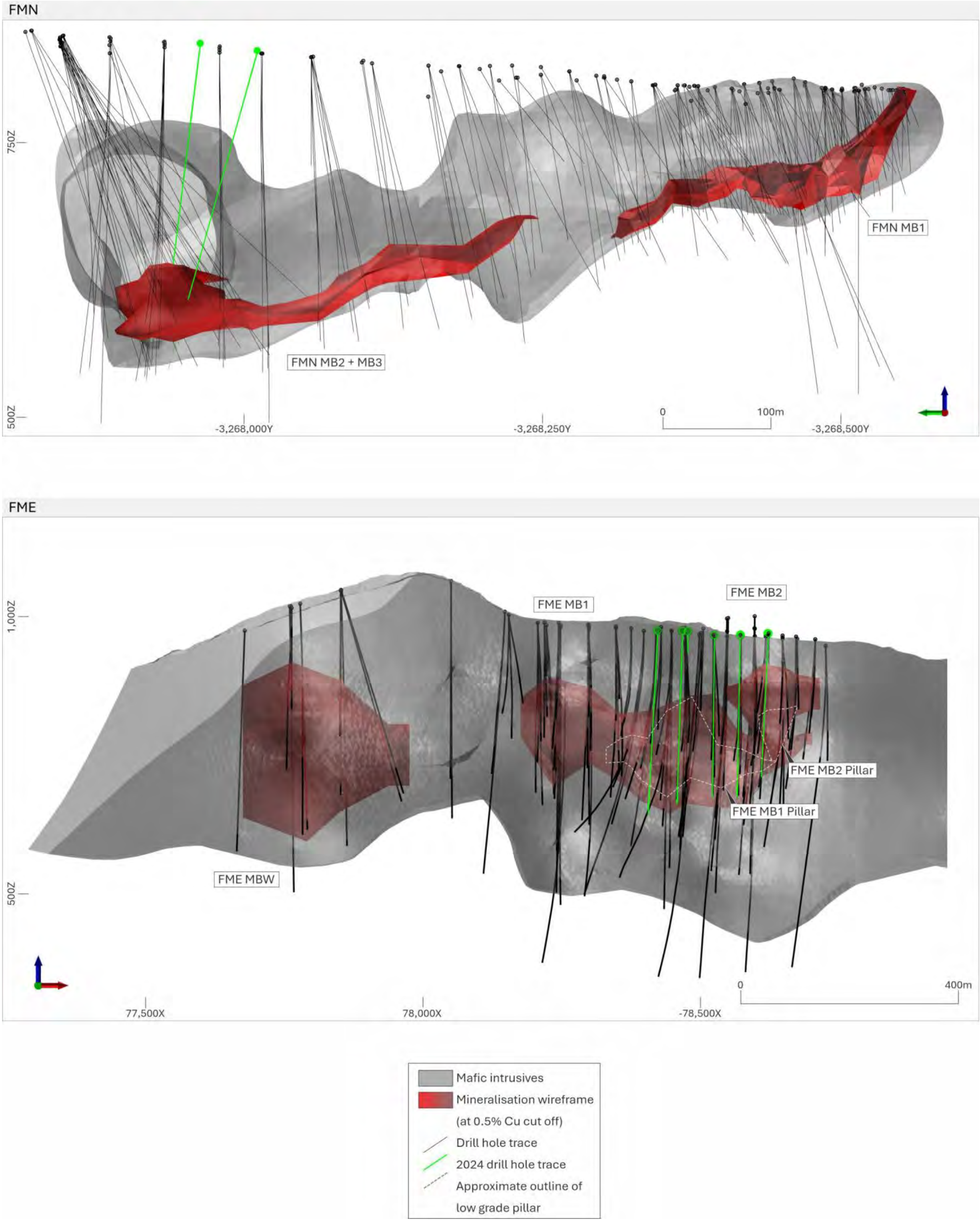



**Figure 8: FMN and FME - Mineralised domains in relation to mafic intrusives and drill hole traces.**


*Source: Matthews (2022)*

**Figure 9: FMS and FM-Nab - Mineralised domains in relation to mafic intrusives and drill hole traces.**

## FMN

Copper mineralisation at FMN is hosted predominantly in anorthosite, biotite-diorite and glimmerite. The mafic rocks occur on the northern flank of a broad east-west striking antiform in Concordia Granite gneiss. The mafic rocks intruded the Concordia granitic gneiss in a lit-par-lit style to form a sill complex consisting of inter-banded mafic rocks and granitic gneiss. The highest copper grades occur within the biotite-diorite and glimmerite where it intruded close to the base of the sill complex.

The geometry of the FMN deposit does not conform to the general attitudes of mineralised bodies in the Okiep Copper District. The deposit strikes for 600m north-south with a shallow plunge to the north and then makes a dogleg in the north to continue eastward on an east-west strike direction. FMN has been divided into three mineralised bodies (MB) namely: FMN-MB1, FMN-MB2 and FMN-MB3.

FMN-MB1 occurs in a channel like feature at the base of the sill complex. This has resulted in the formation of a 250m long, 40m wide and 15 - 50m thick sausage shaped mineral deposit that plunges at 45° northwest for the initial 80m and then flattens out to near horizontal for the next 130m. The plunge direction changes from 345° to due north after 400m and then increases again to 45° for 400m, where the FMN-MB1 mineralisation pinches out. Mineralisation reaches a maximum depth of 120m below surface on the 640m (AMSL) level in FMN-MB1. The mineralisation envelope interpreted for the Mineral Resource estimation was broadly defined on a 0.5% Cu cut-off with exceptions to maintain continuity.

Mineralisation continues again 90m to the north of FMN-MB1 on the 660m level. FMN-MB2 continues for 250m along the same north trend as FMN-MB1 but plunges shallowly at 2° to 25°. The mineralised body attains the same irregular sausage shape, albeit thinner than in FMN-MB1, at 10 - 15m thick and 25 - 50m wide. Mineralisation is hosted by dark biotite rich diorite within a larger anorthosite body. The mafic body is more constrained than the sill complexes hosting FMN-MB1and MB3.

At FMN-MB3, the strike of the mineralisation abruptly changes to east-west, plunging shallowly towards the east for 250m at a depth of 170 to 250m as an irregular lens-shaped body up to 20m thick. Copper mineralisation in this area is hosted by glimmerite and biotite-rich diorite developed at the base of a northerly dipping, 170m thick sill complex.

## FME

At FME, the main mafic intrusive massif is approximately 970m long and 20 to 80m wide. The intrusive strikes at 65° ENE and dips 50° - 75° WNW. The mafic body occupies an ENE trending steep structure within the Concordia Granite and Wolfram Schist. Unlike at FMN and FMS, diorite is not as volumetrically important as norite, which hosts the bulk of the mineralisation. The volume proportion of norite in the mafic body increases to the east. Anorthosite is more erratically mineralised with lower grades.

Drilling has defined three mineralised bodies namely: FME-MB1, FME-MB2 and FME-MBW. Mineralisation is concordant with the steep dip of the main mafic intrusive body. Significant zones of unmineralised tabular or lenticular xenoliths of Concordia Granite occur in both FME-MB1 and FMS-MB2 mineralised bodies.

FME-MB1 is the main mineralised body and occurs over a strike length of 500m. Mineralisation starts at 115m below surface and continues down dip for a maximum of 250m. The width of the mineralisation reaches up to 80m.

FME-MB2 is a smaller body developed structurally above and in the northeastern section FME-MB1. Mineralisation strikes east-west and dips towards the north at 70°. The top of the mineralisation is 25m below surface and it extends down dip to 200m below surface. The total strike length for FME-MB2 is 125m and the maximum true width is approximately 20m.

FME-MBW is a mineralised zone that has been broadly defined by wider spaced exploration drilling. Mineralisation here is predominantly hosted by diorite.

## FMS

Interpretation of drilling indicates that a single mineralised body is present at FMS (FMS-MB1) which has an irregular but continuous east-west strike. The interpreted mineralised body has a strike length of 570m, down dip extent of 530m and a maximum width of 30m. The overall dip of the mineralised body is approximately 40° - 60° but steepening to 80° in the deeper sections. The thicker anorthosite tends to be poorly mineralised and more biotite rich and hybrid-diorite varieties carry blebby rather than disseminated sulphides.

### FM-Nab

At FM-Nab, mafic rocks of the Koperberg Suite consist mainly of anorthosite, biotite diorite and biotite schist. The anorthosite does not host economic copper mineralisation. The FM-Nab mafic intrusive complex outcrops continuously over 1,300m, striking at 70° east of north.

The eastern end of the complex terminates against the Flat Mine Fault while the mafic rocks in the west pinches out approximately 820m WSW of FM-Nab. The dyke-like complex can be up to 100m wide and is vertical to steep northerly dipping. It is commonly intercalated with Concordia granite. In the vicinity of the shaft, 50m of Concordia granite separates the complex into a northern, 35m wide, biotite diorite and biotite schist-dominant dyke that host the FM-Nab deposit and a southern anorthosite-dominant dyke.

Surface mapping, drilling and mine plans shows copper mineralisation to occur over a strike length of 180m with the mineralised body terminating against NNE striking D4 faults on both the eastern and western sides. Mining reached a depth of 150m from surface with an average width of less than 4m. From underground mapping and sampling the mineralisation was reported as lenticular with erratic grades. The mineralised biotite diorite and biotite schist is segmented by unmineralised anorthosite. The best mineralisation is confined to the contact zones with the highest grades developed in the eastern part of the mine where a fairly massive body of high-grade ore was developed.

### Structure

The FM Project MR is situated on the northern limb of the Springbok Dome, the general dip on the S2 fabric and lithological units of the Wolfram Schist are to the north. The most prominent structural feature on the tenement is the D4 north – south striking Flat Mines Fault. This fault has been mapped over a strike of approximately 16km and in the MR the fault zone is up to 80m wide. Regional maps shows that rocks were displaced to the north on the east side of the fault. This indicates sinistral movement, or considering the northerly dip of the strata, down throw on the west side, or a combination of the two.

### Historical exploration and drilling (1953 - 2003)

During the Newmont (1953 – 1983) and later GFSA (1984 – 2003) eras, a substantial amount of exploration was undertaken, and many mineralised outcrops were intensely drilled at shallow depths, but without all progressing to mine development. A massive data repository including the post 1940s mining records and all of Newmont and GFSA's exploration results are available in hard copy with much of the data available in digital format. This was purchased by NOMC in 2021.

The Koperberg Suite rock types have characteristic geophysical signatures, when compared to the granite gneisses they were intruded into, and therefore geophysical methods formed an important reconnaissance exploration tool used in the Okiep Copper District. Reconnaissance surveys were then followed up with more detailed surveys in the vicinity of specific targets, with geophysical results being used to site exploration drill holes.

Historical drilling specifically related to the FM Project is extensive (Table 4) with Newmont having drilled a total of 266 holes (54km) and GFSA an additional 202 holes (~70km). The location of the drill holes is presented in Figure 10.

**Table 4: Summary of exploration drill holes for the FM Project.**

| Location | Company | Year/s | No. drill holes | Total drilling (m) | Used in geological model |
|---|---|---|---|---|---|
| FMN | Newmont | 1953 - 1982 | 209 | 37,764 | 209 |
| | GFSA | 1994 - 1997 | 28 | 3,458 | 28 |
| | SAFTA | 2018 | 10 | 1,525 | 9 |
| | NOMC | 2024 | 4 | 1,071 | 0 |
| Subtotal FMN | | | 251 | 43,818 | 246 |
| FME | Newmont | 1978 - 1981 | 22 | 6,598 | 22 |
| | GFSA | 1992 - 1996 | 129 | 43,992 | 129 |
| | NOMC | 2024 | 10 | 3,040 | 0 |
| Subtotal FME | | | 161 | 53,630 | 151 |
| FMS | Newmont | 1979 - 1982 | 35 | 10,291 | 35 |
| | GFSA | 1987 - 1999 | 45 | 22,468 | 45 |
| | SAFTA | 2018 | 3 | 807 | 2 |
| | NOMC | 2024 | 8 | 4,441 | 0 |
| Subtotal FMS | | | 91 | 38,007 | 82 |
| FM-Nab | Newmont | 1947 - 1978 | 171 | 18,048 | 145 |
| | NOMC | 2024 | 9 | 959 | 8 |
| Subtotal FM-Nab | | | 180 | 19,008 | 153 |
| Total FM Project | | | 683 | 154,462 | 632 |

Note: Deflections included as additional drill holes, 2x twin holes were abandoned and are excluded from the geological model. Source: FM Project SQL drilling database.

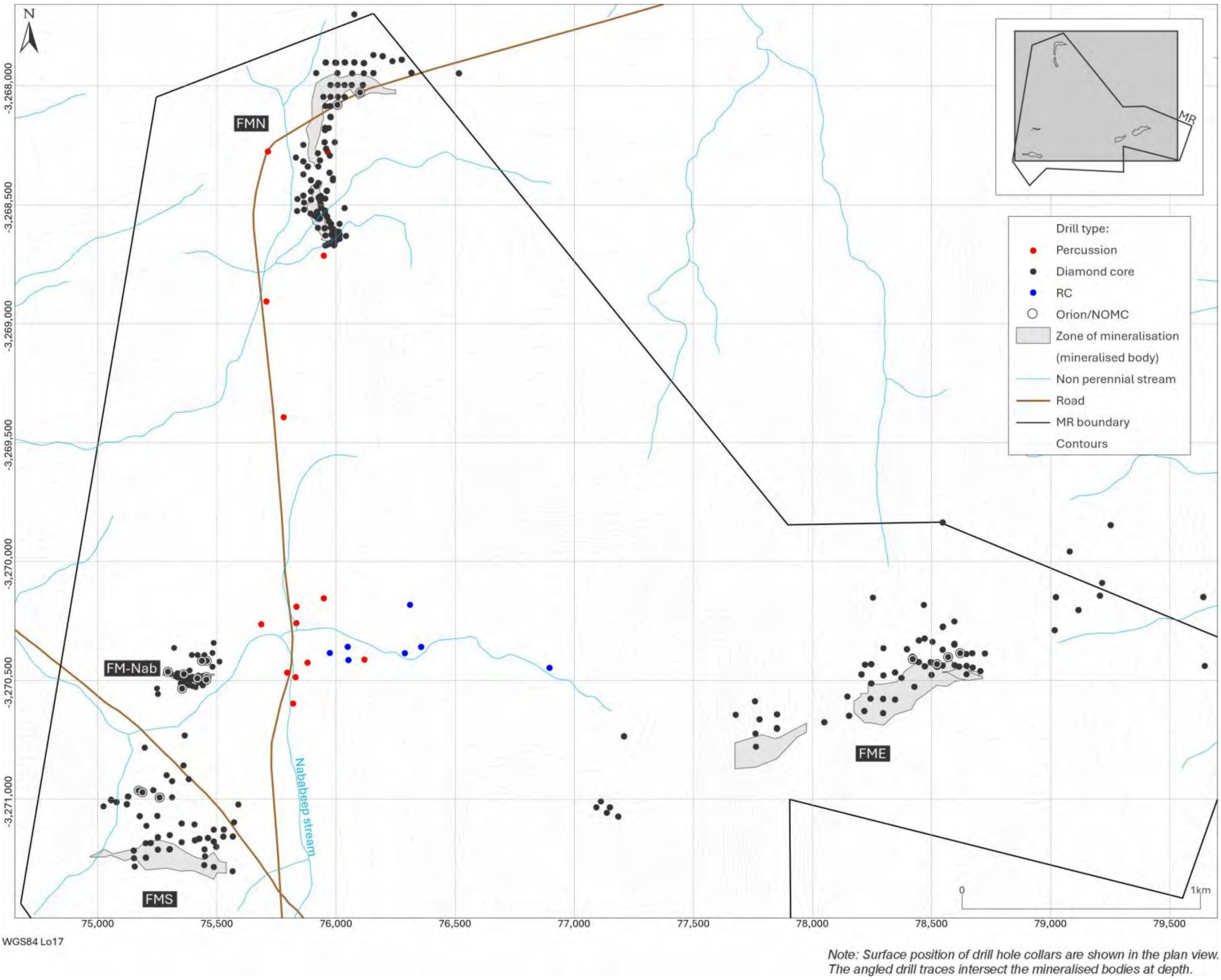



**Figure 10: FM Project - Location of all drilling in MR area.**

The historical drilling has added significantly to the knowledge base of the various mineralised bodies in the FM Project. Evident from the data records readily available in the offices in Nababeep the drilling practises were good, and the data recording was thorough. Drill hole logs of these drilling campaigns are readily available in the OCC offices in Nababeep and have been digitised by NOMC. In addition, the plans and cross sections of these results have provided valuable insight into the interpretation of the mineralised bodies. The Newmont and GFSA drilling results have demonstrated the continuity of the mineralised bodies to an acceptable level which supports the classification of Mineral Resources.

The paucity of QA/QC has meant that the accuracy and repeatability of the assay results could not be verified. As a result, twin drilling was initially undertaken by SAFTA, and later by NOMC to confirm the Newmont and GFSA results. No significant discrepancies have been identified, and this has led NOMC to the conclusion that the historical data is reliable and can be used (in conjunction with the recent results) for the purposes of Mineral Resource estimation and classification.

## Previous exploration and drilling (2004 - 2021)

The previous exploration and drilling, refers to those activities undertaken by SAFTA, prior to Orion's involvement in the FM Project. SAFTA's exploration included two ground geophysical surveys and twin drilling. The focus of the SAFTA twin drilling was the verification of the historical drilling to allow it to be used in the reporting of Mineral

Resource estimates in accordance with the JORC Code (2012). Mineral Resources were estimated by Concession Creek Consulting (CCC) in 2018 and incorporated into SAFTA's Pre-Feasibility Study (2019). A total of 13 holes were drilled at FMN and FMS (Table 4). Drill hole locations included in Figure 10.

The SAFTA drilling represented the first drill campaign undertaken with complete QA/QC records required by modern best practices to demonstrate the accuracy and repeatability of assay results.

According to CCC (2018), the twin holes, although limited in number, confirmed the reliability of the historical drill hole results both in relation to lithology and the copper grades within the mineralised zones. This confirmation provided SAFTA with the confidence to use the historical database to support the Mineral Resource estimation process and reporting in accordance with JORC Code (2012) standards.

As part of the Z* Star Mineral Resource Consultants (Pty) Limited (Z*) sign off of Mineral Resources in accordance with the JORC Code (2012) for the FM Project in 2023, the company carried out a comparison of the SAFTA twinned holes to their historical counterparts. Due to the lack of QA/QC protocols pertaining to the historical data, Z* carried out this analysis to demonstrate that there was no reason to exclude the historical information from the geological modelling database from a statistical standpoint. Z* concluded that there was no reason to assume that the historical data was incompatible and that it could not be incorporated with the SAFTA data for further analysis and estimation purposes.

### Recent exploration and drilling (2021 to present)

Recent exploration is defined as the exploration and drilling activities undertaken on the FM Project since Orion's involvement. Orion carried out a regional airborne geophysical in conjunction with the Council for Geosciences covering a total area of 1,872km$^2$. Two ground geophysical surveys were conducted over the plant location of the TSF to identify structures.

Drilling included limited percussion drilling for groundwater monitoring, and reverse circulation drilling to investigate the ground conditions in and around the planned TSF footprint.

Confirmatory diamond core drilling was undertaken in 2024 (Figure 10). The aim of the confirmatory drilling by NOMC on FMN, FME, FM-Nab and FMS included:

- confirming the historical drilling results and the more recent drilling by SAFTA;
- providing additional evidence on geological and grade continuity required for the estimation of Measured and Indicated Mineral Resources through infill drilling;
- conducting additional geotechnical testwork on the drill cores required for mine planning;
- testing the suitability of the FM mineralised material to ore sorting using the Rados XRF ore sorter; and
- obtaining samples for additional, more detailed metallurgical testwork.

At the date of issue of this Feasibility Study Report, a total of 31 holes including deflections (~9,512m) of drilling had been drilled, logged, sampled and assayed, with their results being assessed in relation to the existing geological model.

The confirmatory exploration programme was undertaken using international, industry best practise standards relating to the drilling, logging, sampling and assaying protocols. Data associated with the programme has been accurately recorded by suitably qualified NOMC personnel and safely stored. The chain of custody has been documented and correctly implemented to ensure sample security. The required QA/QC protocols were implemented and the results assessed to confirm the reliability of the assay results obtained. Therefore, the confirmatory drilling and sampling program results can be relied upon for use in geological modelling and included into the estimation of Mineral Resources and Ore Reserves.

Although the confirmatory drilling for FMN, FME and FMS was not included in the geological model used in this Feasibility Study Report, the results have been considered, both internally by NOMC and independently, in relation to the 2023 geological model and no material differences in volume, density and grade for the mineralised zones were identified. As a result, no update to Mineral Resources used in this Feasibility Study Report was required.

The confirmatory drilling at FM-Nab has been included in the latest geological model and used to update the Mineral Resource released on 28 March 2025, and used in this Feasibility Study.

Importantly, the recent confirmatory drilling results have provided confidence in the accuracy and reliability of the Newmont and GFSA drilling results and have confirmed their acceptability for use in the geological model, Mineral Resource estimation, Feasibility Study, and Ore Reserve estimation.

### Data acquisition, database management and security

In 2021, Orion purchased a substantial dataset from OCC, O'Okiep Australia (Pty) Limited and N7 Transport. The dataset included scanned drill logs, plans and documents and a digital database of historical drilling results compiled by Mr PJ Fourie. The Fourie database included many other prospects over and above those associated with the FM Project. SAFTA validated this database for FMN, FME and FMS only, included the 11 twin drill holes drilled by SAFTA in 2018. Further validation of historical drill hole data was carried out by NOMC in 2021 and 2022 which included data checking and corrections i.e. checking for overlaps, gaps, collar positions and erroneous surveys. NOMC has ready access to all available historical hardcopy records including the following at the Nababeep offices:

- geological logs, assay results and drill sections;
- geological, geophysical and mine plans; and
- geological, geophysical and mine reports.

NOMC is in the process of digitally capturing the remaining priority data from prospects outside the FM Project area. SAFTA twin drill hole cores are also available in the core shed at the Nababeep offices.

The database used for the geological modelling and Mineral Resource estimates for FMN, FME and FMS included all drilling data captured to October 2022. NOMC combined the drill hole data into a single Excel™ spreadsheet (FMN FME FMS Drill Data.xlsx) which was provided to Z*. This file included the following five sheets: Collar (496 records), Survey (7,147 records), Geology (26,956 records), Assay (27,238 records) and SG (3,470 records).

NOMC's 2024 confirmatory drilling data for FMN, FME and FMS have been added to the Orion drilling database. This database was used by NOMC to update the wireframes for each area in August 2024 and was provided to Z* to review the impact of the drilling results on the 2023 Mineral Resource estimate.

The database used for the geological modelling and Mineral Resource estimates for FM-Nab included all drilling data captured to November 2024. This database was used by NOMC to update the wireframes for FM-Nab in December 2024. The database (FM-Nab Drill Data.xlsx) included the following five sheets: Collar (153 records), Survey (381 records), Geology (1,694 records), Assay (2,357 records) and SG (371 records).

All data are currently stored in the DataShed (SQL Server) database on Orion's server. Database access is password protected and is limited to competent personnel through granted permission levels in the database and IT services. The Orion server is backed up automatically and regularly backed up.

### Geological modelling and results

The geological modelling has provided volume, density and grade estimates which are considered sufficiently robust to be relied on for the declaration of Mineral Resources according to international reporting codes. The 2024 confirmatory drilling has provided additional volume, density and grade results which have confirmed the 2023 geological models for FMN, FME and FMS, with no material differences having been identified. For FM-Nab there has been a significant change in the geological interpretation which has been incorporated into the updated Mineral Resource estimate reported in ASX/JSE release 28 March 2025. More importantly the results have reconfirmed the reliability of the historical results where no records were available on sampling methodology, sample security and QA/QC.

The geological modelling and associated estimations for FMN, FME and FMS were undertaken by Mr P Matthews, Orion's CP, in association with Z*, with Z* assuming ultimate responsibility for the Mineral Resource estimation and classification. The 2023 geological model was used for the purposes of mine planning for the Feasibility Study undertaken by Sound Mining and for Ore Reserve estimation.

The geological model for FM-Nab had not been updated since 2021. The recent confirmatory drilling undertaken in 2024 was included into an updated geological model and Mineral Resource estimate. The geological modelling and associated estimations were undertaken by Mr P Matthews, Orion's Competent Person, and Mr Matthews has assumed responsibility for the Mineral Resource estimation and classification for FM-Nab.

### FMN, FME and FMS

The wireframing of the mineralised envelopes was undertaken by Mr P Matthews in late 2022. Mineralisation occurs as lenses within and normally following the general trend of a broader mafic intrusive body. With the irregular intrusive nature of the geology and mineralisation it was difficult to correlate individual lenses between drill holes and in many cases modelling was only feasible by grouping the lenses into a broader mineralisation envelope. A 0.5% Cu cut-off grade was selected for the outer limit of the mineralisation envelope. Wireframing defined eight MBs or domains with volumes. The domain definitions include portions of country rock waste which could, for the most part, not be separated out into three dimensional volumes and were represented by assay data in the drill core at 0% Cu. The wireframe volumes were depleted for the mined out areas at FMN.

These wireframe domains were provided to Z* for grade and density modelling. Each of the areas was treated independently for estimation purposes despite the similarities in geology and copper mineralisation. Following the initial exploratory data analysis FME MB1 and MB2 were combined as was FMN MB1 and MB2 and MB3. Although part of the estimation process, the MB1 Pillar and MB2 Pillar domains at FME were considered as broader regions of internal waste with a low copper grade, often comprising country rock lithologies and hence referred to as pillars.

Estimation was carried out for both copper grades and density using the following general methodology:

- incorporation of the wireframe models for FME, FMN and FMS provided by NOMC;
- NOMC data (collars, assays and survey data) imported and de-surveyed using Datamine Studio™ coupled with validation and selection of data to be used for the estimation;
- incorporation of the wireframe models for FME, FMN and FMS provided by NOMC;
- selection of samples within each estimation domain for analysis of the estimation variables, i.e. Cu% and density (t/m3). Selection of samples was undertaken by Mr P Matthews to ensure compatibility between GEOVIA® GEMS™ sample coordinates and the mineralised zone locations. This was undertaken to ensure no inconsistencies occurred between downhole de-survey techniques used in different software packages;
- exploratory data analysis (EDA), including capping and compositing where necessary;
- creation of an appropriate block model for each area;
- spatial analysis and variogram modelling of estimation variables where possible;
- assigning local variogram and neighbourhood rotations to each block as appropriate. None of the orebodies is tabular and as a result significant changes in dip were considered;
- estimation neighbourhood analysis using a dynamically rotated neighbourhood. This was an iterative process which also provided a suitable method of validating the estimates;
- generation of local block estimates using Ordinary kriging (OK) where possible. OK is a robust technique that typically results in the lowest error variance associated with grade estimates; and
- validation of the local block estimates including examining possible changes to the variography and/or neighbourhood.

The methodology was applied to each of the areas separately, with the FM Project block models created independently of one another.

The twinning analysis undertaken by Z* to compare the historical drill hole sampling and the SAFTA twin drill holes identified that there was no need to make a distinction between these samples for estimation purposes. Therefore, the samples were combined with the historical data to form a single data set.

Salient features of the FMN modelling by Z* included:

- two mineralised domains (FMN MB1 and FMN MB2+MB3) within the mafic unit defined by the mineralised zone cut-off of 0.7% Cu;
- grade capping of three samples at 11.79% Cu;
- 2m grade sample composite length for all mineralised domains;
- block model with no rotation;
- block size of X=30m, Y= 30m and Z= 8m;
- copper content estimation within blocks included a spatial analysis, variogram modelling followed by a neighbourhood analysis using ordinary kriging (OK) and local block estimation;
- density capping of three high samples at 3.17t/m3 and two low samples at 2.79t/m$^3$; and
- density estimation within blocks included a spatial analysis, variogram modelling followed by a neighbourhood analysis and local block estimation.

Salient features of the FME modelling by Z* included:

- three mineralised domains (FME MB1, FME MB2 and FME MBW) with higher copper grade and two pillars (FME MB1 Pillar, FME MB2 Pillar) comprising low grade material were delineated at the mineralised zone defined cut-off of 0.7% Cu;
- pillars are internal waste within the mineralised domains and typically comprised of country rock. Although each pillar was wireframed and modelled separately for grade, density and tonnage by Z*, these do not form part of the Mineral Resource estimate. The pillar volumes were subtracted from the MB volumes for the purposes of Mineral Resource estimation;
- grade capping of five samples at 11.62% Cu in FME MB1 and a single value at 2.16% Cu for FME MBW;
- 2m grade sample composite lengths for all mineralised domains;
- block model with rotation X=-38° and Z=-20°;
- block size of X=30m, Y= 8m and Z= 30m;
- the copper content of blocks in the FME MB1 + MB2 domains consisted of a spatial analysis, variogram modelling, a neighbourhood analysis (and validation) using quantitative kriging neighbour analysis (QKNA) and local block estimation;
- no clear spatial relationship between samples was observed for FME MBW. Therefore, inverse distance weighting (IDW) approach was utilised. This method was finalised after testing multiple exponents including orientating the search neighbourhood (similar to that used for the density estimate);
- no density data were available for the FME MB1 + MB2 domains. As the host lithologies for FME are the same as those of FMN, Z* elected to use these lithologies densities as a proxy. The average density per host lithology in FMN was applied to the logged FME MB1 + MB2 lithologies. To estimate density values for the FME MB1 and MB2 blocks an inverse distance squared technique was applied using the results applied by lithology; and
- density measurements (N=43) were available FME MBW. A local block estimate was calculated using an inverse distance squared weighting methodology.

Salient features of the FMS modeming by Z* included:

- a single estimation domain (FMS MB1) within a steeply dipping mafic zone defined at a cut-off of 0.7% Cu;
- no grade capping was deemed necessary;
- 1.5m grade sample composite length;

- block model with rotation X=-10°;
- block size of X=30m, Y= 6m and Z= 30m;
- copper content estimation within blocks included a spatial analysis, variogram modelling followed by a neighbourhood analysis using OK and local block estimation;
- a multi-pass approach after the initial kriging run was devised to populate the blocks at depth which were edge effects were noted; and
- the IDW approach was utilised to estimate the densities into the blocks, with the copper variogram ranges being used to establish the size of the neighbourhood.

### Additional drilling results

As noted previously, although confirmatory drilling was undertaken by NOMC in 2024, the 2023 geological model and associated 2023 Mineral Resource estimate were not updated due to no material changes being identified. NOMC and Z* reviewed the confirmatory drilling results in relation to the 2023 geological model, in terms of volume, density and grade to confirm that no material changes to the geological model (and the resultant 2023 Mineral Resource estimate) would have occurred had the additional drill holes been included.

More specifically, NOMC included the confirmatory drilling assay results in the 2023 geological model, updated the wireframes for a 0.5%Cu cut-off, and compared the resultant 2024 geological model wireframe volumes to those generated in 2023. This was carried out for each deposit. The volume difference for the FM Project was a decrease of <1%.

Both NOMC and Z* concluded that the 2024 drilling and sampling results did not differ significantly from historical data. It is Z*'s view that the addition of the latest data would not significantly impact the 2023 FMN, FME and FMS Mineral Resource estimates and that changes would be marginal and only on a local scale, i.e. the overall metal content was unlikely to be materially impacted. The confirmatory drilling further supports the decision to include the historical drilling information in the 2023 Mineral Resource estimation.

### FM-Nab

Although various previous interpretations and mineral resource estimates had been completed, there was ongoing uncertainty regarding the validity of the data, primarily relating to significant changes in the geology and copper grades over short distances. However, on thorough checking of the data in 2022, no significant errors were identified but with the some of the data dating back as far of the 1940s, accuracy and transposition errors were considered a risk.

Confirmation drilling was deemed necessary to validate the historical data and was undertaken in 2024. The database used for the geological modelling and Mineral Resource estimation for FM-Nab included all drilling data captured to November 2024. Geology and intersections for the confirmatory drill holes were plotted and viewed, section by section, with the historical drill hole data. The recent drill hole intersections corresponded well with the historical drilling data for most sections in the deposit.

Salient features of the FM-Nab modeming by NOMC (Mr Matthews) included:

- three mineralised domains or zones (main, west and east) were defined at a cut-off of 0.5% Cu;
- grade capping at 10% Cu was applied, in line with Mineral Resource estimations carried out for FMN, FME and FMS;
- no capping was applied to density;
- density values for all historical drill holes were applied by proxy using the average density by lithology from FM-Nab, FMN, FME and FMS;
- all samples composited to 1m;
- block model with no rotation;
- block size of X=2m, Y= 2m and Z= 2m;

- grade estimation into each block was undertaken using the inverse distance squared (ID2) method of interpolation; and
- historical development drives and stopes were modelled and excluded from the volume and grade estimates.

## Mineral Resource estimates

Orion reported Mineral Resource estimates for FMN, FME and FMS in accordance with JORC (2012) in February 2021. This was based on the SAFTA Mineral Resource after Orion had performed their own verification of the historical drilling results and SAFTA modelling. The 2021 Mineral Resource estimate incorporated the drilling database including the results of 235 surface and 17 underground drill holes totalling 43,413m of drilling at FMN, 80 surface holes (32,750m) at FMS and 151 surface holes (51,414m) at FME. Mineralised zones for all three deposits (FMN, FME and FMS) were delineated by using a 0.7% Cu cut-off grade but for many areas a cut-off grade of 0.5% Cu (or lower) was used.

Orion reported a Mineral Resource estimate for FM-Nab in accordance with JORC (2012) on 29 March 2021. The estimate was prepared by Dr Deon Vermaakt and reported in an internal Orion note for the record. The maiden Mineral Resource estimate used 33 surface drill holes totalling 5,462m at FM-Nab and applied a 0.7% Cu cut-off grade.

Orion issued an updated Mineral Resource estimate for FMN, FME and FMS in accordance with the JORC Code (2012) in August 2023. An updated Mineral Resource estimate for FM-Nab is released concurrent with this announcement on 28 March 2025. These represent the current Mineral Resource estimates for the FM Project (Table 5) that formed the basis of the Feasibility Study reported herein.

**Table 5: Summary FM Project Mineral Resource estimates (Inclusive of Ore Reserves).**

| Location | Date | Cut off % Cu | Classification | Tonnes | Grade % Cu | Contained Copper (t) |
|---|---|---|---|---|---|---|
| FMN | 28 August 2023 | 0.7 | Measured | 440,000 | 1.13 | 5,000 |
| | | | Indicated | 940,000 | 1.42 | 13,000 |
| | | | Inferred | 200,000 | 1.5 | 4,000 |
| | | | Total FMN | 1,600,000 | 1.3 | 22,000 |
| FME | 28 August 2023 | 0.7 | Measured | --- | --- | --- |
| | | | Indicated | 3,400,000 | 1.37 | 47,000 |
| | | | Inferred | 1,000,000 | 1.0 | 9,000 |
| | | | Total FME | 4,400,000 | 1.3 | 56,000 |
| FMS | 28 August 2023 | 0.7 | Measured | --- | --- | --- |
| | | | Indicated | 2,600,000 | 1.35 | 35,000 |
| | | | Inferred | 800,000 | 1.6 | 13,000 |
| | | | Total FMS | 3,400,000 | 1.4 | 48,000 |
| FM-Nab | 28 March 2025 | 0.5 | Measured | --- | --- | --- |
| | | | Indicated | 300,000 | 1.07 | 3,000 |
| | | | Inferred | 300,000 | 1.0 | 3,000 |
| | | | Total FM-Nab | 600,000 | 1.0 | 6,000 |
| | | | Total FM Project | 10,000,000 | 1.3 | 132,000 |

Notes: Measured and Indicated tonnes rounded to two significant figures, copper grade rounded to two decimal places. Inferred tonnes rounded to one significant figure, copper grades rounded to one decimal places. All copper content tonnes rounded to the nearest thousand. Totals may not tally due to rounding. Reported in accordance with the JORC Code (2012) in Source: Z* (2023), ASX/JSE-20230828, Matthews (2024b). Refer ASX/JSE release 28 March 2025.

The current Mineral Resource estimate for FM-Nab was compiled and signed off by Mr Paul Matthews (dated 28 March 2025).

The reader is to note that in the case of the FM Project, the lithological model does not directly impact the mineralised component of the estimation domains within the mafic zone. Mineralisation wireframes are based on copper assay values with due consideration given to lithological logs and geological interpretations. No extrapolation was carried out beyond the 0.5% Cu cut-off wireframes prepared by NOMC.

Reasonable prospects for eventual economic extraction (RPEEE) were demonstrated for the various FM Project areas through the results of this Feasibility Study and the declaration of Ore Reserves.

Classification of the FME, FMN, FMS and FM-Nab Mineral Resource estimates was undertaken in accordance with the JORC Code (2012). The location of the classified Mineral Resources, per mining area, are presented in Figure 11.

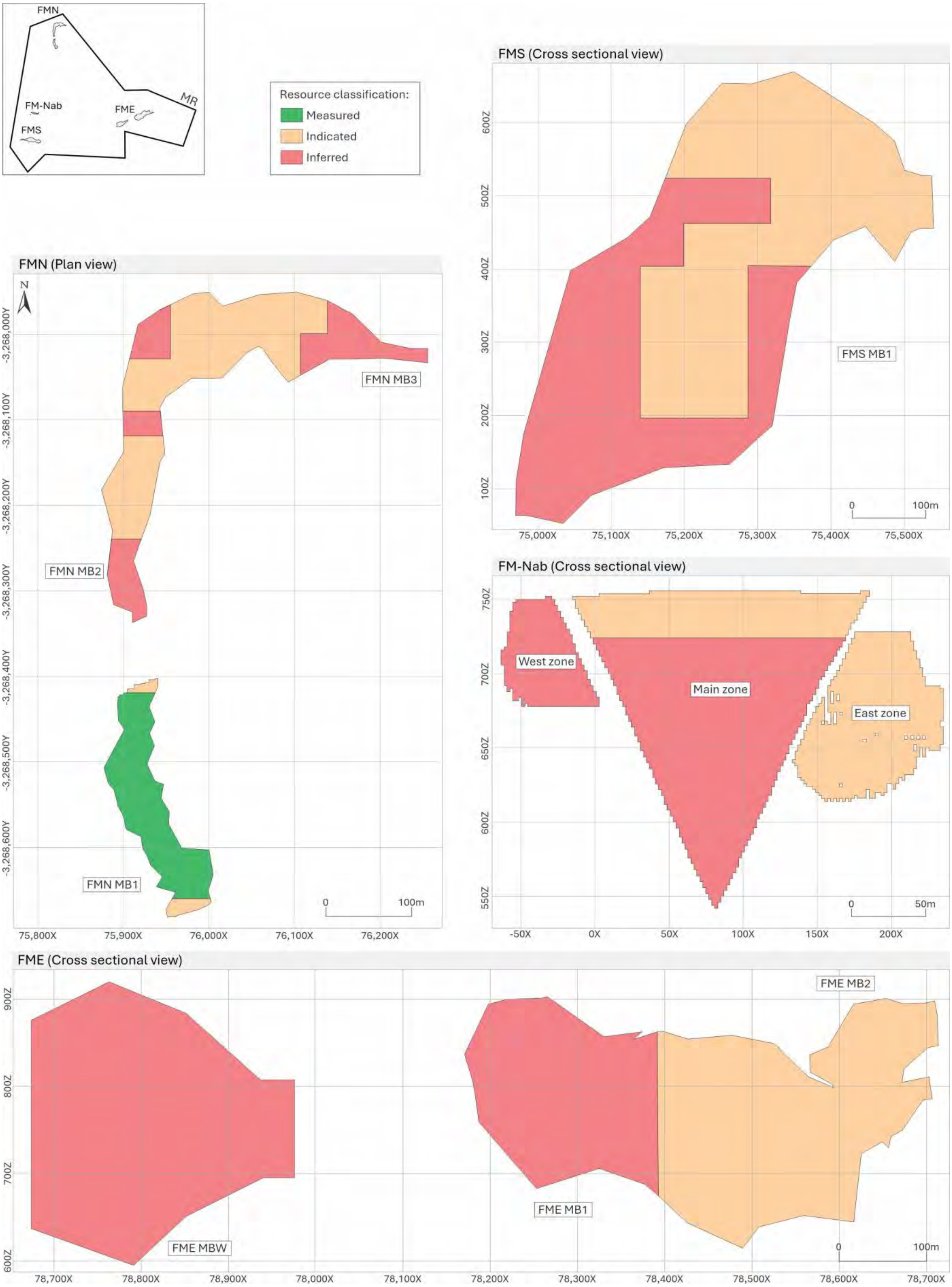



**Figure 11: FM Project - Schematic showing location and classification Mineral Resources.**

Although each of the FM areas was classified independently, the same approach was followed for each , with classification taking cognisance of the uncertainty associated with the following key parameters:

- geological model on a regional and local scale;
- reliability of data obtained from drilling and sample programmes, including the confidence in historical data where supporting documentation was lacking (e.g. QA/QC, drill hole logs, etc.);
- estimation of volumes utilising the defined estimation domains, i.e. the wireframe models;
- confidence associated with Cu% and density (t/m$^3$) estimates; and
- historically mined out areas.

The FM Project Mineral Resources are classified as Measured (4% by contained copper), Indicated (74%) and Inferred (22%). The FM Project comprises a total Mineral Resource estimate of 10.00Mt at an average grade of 1.32% Cu amounting to ~132,00t of contained copper.

Grade tonnage curves (Figure 12) provide an indication of the sensitivity of the Mineral Resources to changes in the cut-off grade and have been provided for each of the FM Project areas for the combined Mineral Resource (Measured, Indicated and Inferred). FMN and FM-Nab have significantly less mineralised rock tonnes when compared to FME and FMS. FMN has a lower range of grades and is therefore less sensitive to changes of the cut-off grade than FME and FMS. FME and FMS show similar sensitivities to changes in the cut-off grade. FME, with the largest associated tonnage, shows the largest sensitivity to rock tonnes and contained copper tonnes with a change in cut-off grade. FM-Nab shows a significant decrease in tonnage above the 0.5% Cu cut-off.

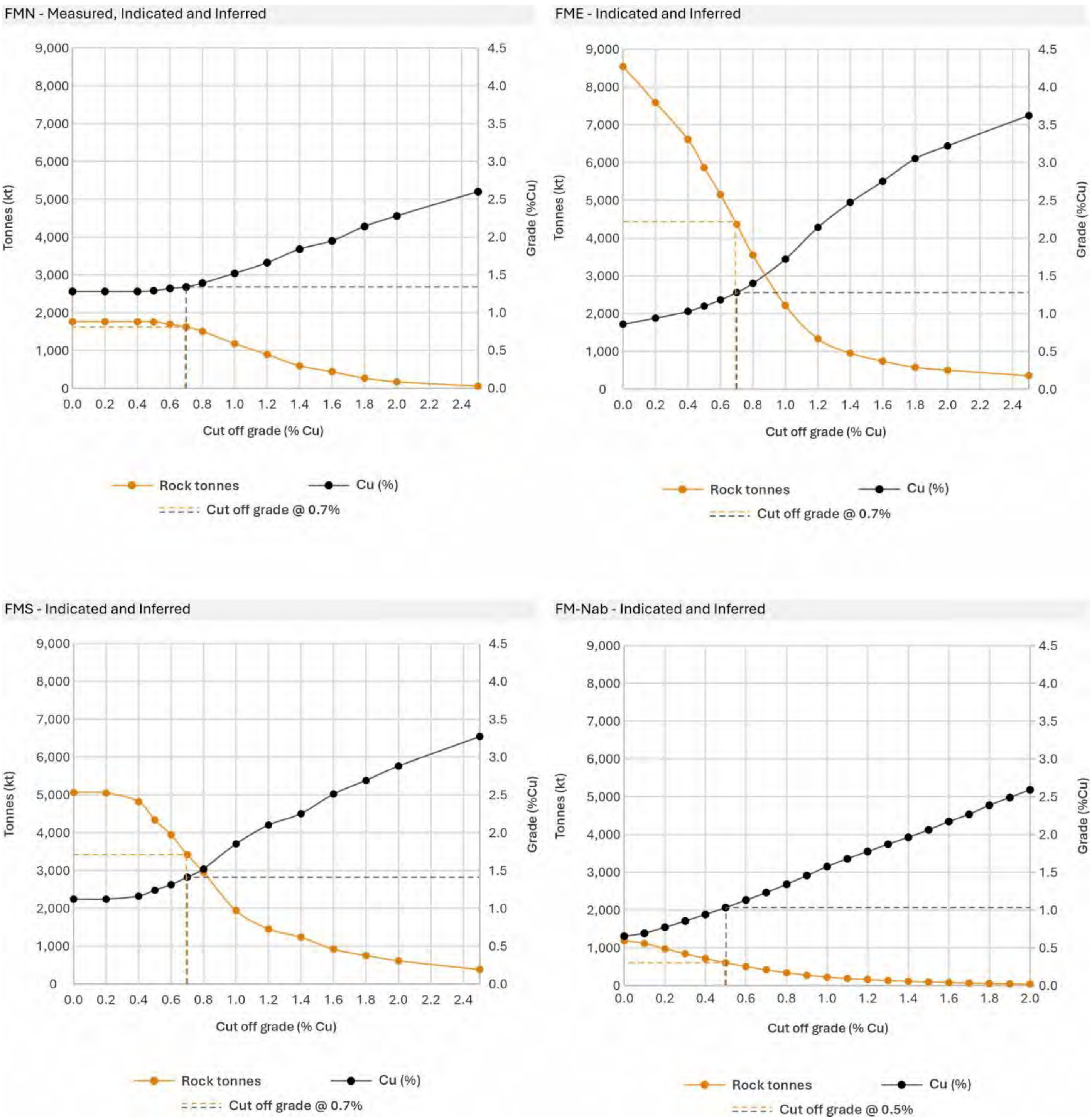



**Figure 12: FM Project - Grade tonnage curves for Mineral Resource rock tonnes.**

## Geohydrology (ground water)

Geohydrological studies involve the determination of the characteristics and conditions of the groundwater. Information on the groundwater is gathered from existing water boreholes or water sources identified during a hydrocensus of the surrounding area. This information is included into a groundwater model which predicts groundwater volumes and flow rates. The importance of groundwater studies is to identify the impact of mining on the groundwater conditions (both physical and chemical) and to determine the dewatering requirements of the underground mining operation.

A detailed geohydrological study was completed as part of the requirements of the IWUL application for the FM Project by Irene Lea Environmental & Hydrogeology (iLEH) and various subcontractors. After an initial desktop assessment, a fieldwork programme was completed to characterise the aquifer associated with the FM Project. This included a hydrocensus, geophysical surveys, drilling of 14 dedicated percussion monitoring boreholes, drilling of seven RC boreholes around the TSF footprint, aquifer testing as well as groundwater, surface water and existing mine water sampling and analysis. Thereafter a numerical groundwater flow and contaminant transport model was constructed to assess the impact of the proposed FM Project.

The FM Project geohydrology is strongly controlled by the geological setting. Groundwater occurrence is mainly associated with fracture and fault zones as well as the presence of alluvium. Of specific importance is the presence of a regional north-south striking breccia fault, referred to as the Flat Mines Fault. This fault is regionally associated with stronger groundwater yields and is targeted for groundwater supply. Groundwater will provide potable water and process make-up water for the FM Project. Also present are east-west striking fractures, some of which are water bearing. Unfractured granite has a low permeability and does not transmit groundwater significantly. Recharge to the water bearing fault and fracture zones is thought to be associated with runoff from granite outcrops that is stored in alluvial material as well as the presence of surface water which recharges to the underlying fractured aquifers. Regionally, groundwater flow is in a westerly direction.

During the assessment, impacts associated with underground mining, stockpiling of ROM material and waste, processing activities and the deposition of tailings on a TSF were evaluated.

The zone of impact of groundwater abstraction for the FM Project were assessed as follows:

- in unfractured granite, the cone of depression in groundwater levels due to mine dewatering is unlikely to extend more than 300m from the mining areas;
- along fracture zones, the cone of depression extends significantly further from the mining area, up to 1,200m from deeper mining areas like FMS and FME;
- immediately above the underground workings, groundwater levels may be drawn down by more than 80m. The cone of depression is however likely to be narrow, thus restricting the zone of influence;
- in the deeper mining areas, the zone of impact on groundwater levels is unlikely to extend further than 200m in unfractured granite. Along fractures, the drawdown cone may extend up to 800m from the mining areas; and

  none of the private boreholes identified during the hydrocensus fall within the delineated zone of impact on groundwater levels.

The numerical model was used to estimate the expected dewatering volumes at three mining areas:

- groundwater seepage rates to the FMN underground workings are expected to increase from around 7,400$m^3$/a to ~15,000$m^3$/a. Seepage rates are expected to reduce to around 13,000$m^3$/a towards the end of mining in this area;
- underground seepage rates to the FME mining area could be as high as 19,000$m^3$/a during the development and early stages of stoping but is expected to decrease to ~7,000$m^3$/a toward the end of mining; and
- during development, seepage rates to the FMS underground workings are expected to be <13,000$m^3$/a, but could increase to <24,000$m^3$/a when deeper areas are mined.

The rest water level in the existing historical FMN underground workings is approximately 80m below surface. This suggests that the risk of decant from the underground workings is low. Underground mining will take place at depths greater than 100m below surface. Under these conditions, no subsidence to surface is expected from the underground workings. Unless large scale pillar extraction is undertaken, the risk of decant from the underground workings will remain low in the long-term.

The results of the water monitoring programme, as well as a detailed geochemical study, were used to identify the potential contaminants to groundwater. Results indicated that sulphate is the most dominant anion, specifically associated with historical and existing impacts. The field data and geochemical testwork results indicated that groundwater associated with the historical evaporation paddocks and the historical evaporation pond were most severely impacted. In these areas sulphate concentrations in groundwater exceed 20,000mg/l and pH conditions were extremely acidic. In comparison, ambient groundwater had sulphate concentrations of less than 250mg/l. The available monitoring information suggested that the Water Shaft, mine voids and underground workings were also existing sources to groundwater contamination. The planned residue deposition in the TSF, backfilling of tailings into the underground workings and the storage of dirty water in lined facilities on surface will also contribute to the groundwater sources of contaminants.

The tailings material was classified as a Type 3 waste in terms of prevailing legislation. The TSF footprint area is underlain by historical evaporation paddocks and an evaporation pond used during tungsten mining undertaken during the 1940s. Geochemical analysis of the evaporation paddock material confirms that it is also classified as a Type 3 waste. Wet material from the historical evaporation pond, however, poses the most significant risk to groundwater contamination. Geochemical analysis of this material indicates that it is highly soluble and poses a high risk of acidification. Groundwater monitoring results confirm that significant contamination has already taken place at and down gradient of the paddocks.

The TSF footprint is underlain by four fracture zones, two of which are water-bearing and considered preferential flow paths to groundwater. The presence of these preferential flow paths, as well as the impact of historical groundwater contamination, was taken into consideration during TSF design. The mitigating measures will include:

- double lining the fracture zones over a width of 15m along the length of the fracture zones to ensure that variations in the width of the fractures are taken into consideration in the design; and
- the historical evaporation pond material will be completely removed prior to TSF construction and stored away from the TSF footprint in a suitably lined facility.

The impact assessment indicated that, under optimal design and operation, the preferred alternative TSF design was not likely to result in significant negative impact on groundwater quality. In fact, the removal of the evaporation pond material and deposition of the TSF will be significantly beneficial to the groundwater quality of the area. In addition, the impact of the dewatering and pumping associated with the FM Project on the groundwater levels will not be significant for the existing users.

### Hydrology (surface water)

The surface water study was conducted by Peens & Associates Civil Engineering and Training Consultants (Pty) Limited (Peens) in 2023. This included an assessment of the surface hydrology, flood hydrology, surface water quality, geochemical assessment of the historical evaporation paddocks and pond, and storm water management around the TSF and process plant.

The FM Project is in the F30E quaternary catchment of the Lower Orange River water management area which drains in a westerly direction towards the Atlantic Ocean. There are three non-perennial watercourses in the FM Project area that drain into a single tributary of the Buffel River, which ultimately discharges into the Atlantic Ocean. Surface water only accumulates in drainage channels after good rains, resulting in the streams being non perennial for long periods of time.

The FM Project is located within an area characterised by low rainfall and high evaporation rates. As a result, the few drainages present are all non-perennial. Three catchment areas were identified which drain the MR area and these were quantified according to catchment area, both before and after the construction of the FM Project related infrastructure, and runoff volumes to determine the peak flood events and associated volumes of water.

The revised stormwater management included the design of two rip-rap channels and two diversion berms. A total of five culverts are required, three to be upgraded using the existing ones. All dirty water will be collected in the ROWD. This will also receive water from the TSF toe drains and excess water from FME and FMS. No pollution control dams, nor silt retention dams are required due to the arid climate and very low annual rainfall.

The assessed impact of the FM Project on the size of the catchments was negligible (<5%) and on surface water quality was rated to be low to medium.

The outcome of the geochemical classification of the paddock material based on nett acid generation characteristics was uncertain, with the nett acid production potential of the material most likely being over estimation. As a result, the risk of acid formation from the paddock material was very low. This material was classified as a Type 3 waste.

In the case of the pond material, elements of concern identified as part of the waste classification process included manganese and to a lesser extent nickel. On this basis, the pond material was classified as a Type 1 waste.

### Geotechnical investigations for mining

The latest geotechnical study, undertaken by Dayenu, has informed the current mine design, the LOM plan and the Ore Reserve estimate and is based on the confirmatory drilling specifically undertaken for geotechnical purposes in 2024 and the previous SAFTA drilling results - a total of 31 holes geotechnically logged by the Orion team. Of these, 11 holes were drilled as part of the SAFTA twin drilling programme and the remaining 12 holes were part of Orion's 2024 confirmatory programme. Eight additional drill holes were since completed and geotechnically logged with the primary focus on the FM-Nab mining area.

Geotechnical tests undertaken on rock samples included uniaxial compressive strength (UCS), tensile strength testing (UTB), triaxial strength testing (TCS), base frictional tests BFA, and shear strength of joints. These provided sufficient data for input into Rocscience's RSDATA software to quantify the strength and shear properties of the rock.

Copper mineralisation is found across various rock types, including granites, norites and anorthosites. Due to the complexity of distinguishing between the mineralised material and host rock, as mineralisation was noted across all material types, the geotechnical data was divided into two domains: the host rock and the mineralised zone.

The variability within the rock mass was well supported by the extensive dataset. The rock mass rating (RMR), geological strength index (GSI), and rock quality designation (RQD) values exhibited low variability within each rock material domain. The Q and Q' values for both the host rock and mineralised zones showed significant standard deviation when analysed using conventional statistical methods. Therefore, cumulative distribution curves were created for both domains. It was observed that only a few data points fell below the 20th percentile of the Q and Q' values. Consequently, the decision was made to use the 20$^{th}$ percentile to determine the stability number (N') and for the stope designs.

It is important to note that 80% of the rock mass within both the host rock and mineralised domains is of higher quality than the 20$^{th}$ percentile used in stope span designs. In general, the rock mass conditions are of very good quality with limited structures and weak zones.

The use of the VCR method allows for increased stope spans compared to conventional open stoping methods. VCR is a variation of shrinkage stoping that provides support to the hangingwall, footwall, and endwalls, thus minimising exposure. A critical factor for the VCR method is the stability of the crown, which necessitates the use of a supported crown and hence provides an increased critical hydraulic radius.

An undercut is necessary to facilitate the loading of blasted ore. In areas with significant spans, a semi-room-and-pillar layout is recommended to ensure safe undercut development. The room widths are designed to accommodate the swell from blasting the stope block and the pillars during undercutting.

Pillar dimensions range between 10m and 24m and have been designed using a minimum safety factor of 1.4.

In general, FME has a narrower mineralised zone compared to FMN. The stope spans for both mines were individually assessed. Uncemented hydraulic backfill will be used after the removal of blasted material in most stoping areas. A cemented hydraulic backfill design is also proposed. The freestanding strength of the backfill ranges from 340kPa to 710kPa for stope heights of 15m to 40m, respectively.

Considering the complex requirements related to tailings storage, pumping, and stope design, it is recommended that:

- a combination of backfill types be used at the FM Project;
- cemented backfill should be applied adjacent to pillars to facilitate future pillar retrieval;

- in areas with larger spans, a cemented fill should be placed at the centre of these blocks, requiring the mining of a primary block followed by backfilling and curing; and
- high strength backfill should be used in areas requiring undermining of the stope or where two mining fronts are planned.

Empirical methods were used to design the primary support requirements, and following discussions with the on site mining teams, end anchored rock studs were recommended. These studs should have a minimum ultimate tensile strength of 15t. The primary support spacing and lengths were calculated for all planned primary development, including drill drives and undercut development.

Stope analysis and design have been completed for FMN and FME, as these stopes have been designed and scheduled, providing a clear understanding of stope widths and design parameters.

Eight new drill holes were drilled at FM-Nab and were geotechnically logged in order to obtain geotechnical engineering parameters required to derive rock mass quality indices. The existing geotechnical database was updated using the new core logging data, and four spatially representative boreholes were selected for use in conducting stable span analyses.

The integration of data from the three areas, along with additional drill holes at FM-Nab, provided adequate information for a Feasibility level geotechnical study for all four mining areas. Additional testing to further detail the material properties, complemented by an overarching site visit by Dayenu, provided sufficient confidence for a Feasibility level of study.

A total of 31 geotechnical drill holes were completed in the FM Project area: FMN (12), FME (4), FM-Nab (8) and FMS (5). Significant data was obtained from drilling at FMN, and combining this data helped account for variability in both FMN and FME during the design process. While specific data for FME was limited (4 drill holes) at the time of reporting, the risk was mitigated by integrating the geotechnical data due to the similar composition of materials and rock types.

No significant geotechnical risks were identified in the study.

### Optimisation, mine design, scheduling and costing

The optimisation, mine design, scheduling and costing was undertaken by Sound Mining under the direction of JHK during the latter part of 2024 and first quarter of 2025. The planned development of the FM Project is based on an owner operator model managed using a phased approach. The mine development and production build-up are planned to commence with the FMN decline using its existing mine infrastructure (Phase 1). The development of the FME portal and twin decline with conveyor is planned to commence once the critical path development to the ventilation shafts is in place at FMN (Phase 2). The development of the FMS and FM-Nab is planned from a shared portal and twin decline located approximately 275m north of the FM-Nab surface exposure at the FM-Nab location to reduce the amount of development. FM-Nab is a small low-grade deposit close to surface which is planned to fill the production gap prior to commencing production at FMS. The location of the mining areas in relation to each other and the surface infrastructure is presented in Figure 6.

FMN

The isometric view of the FMN mine layout is presented in Figure 13 and illustrates the development required to access the orebody. The FMN section is separated into three mining sections (Upper Mine, Central Mine and Lower Mine) defined by the mineralised body geometry. The planned workings will extend to a maximum depth of 215m below surface.

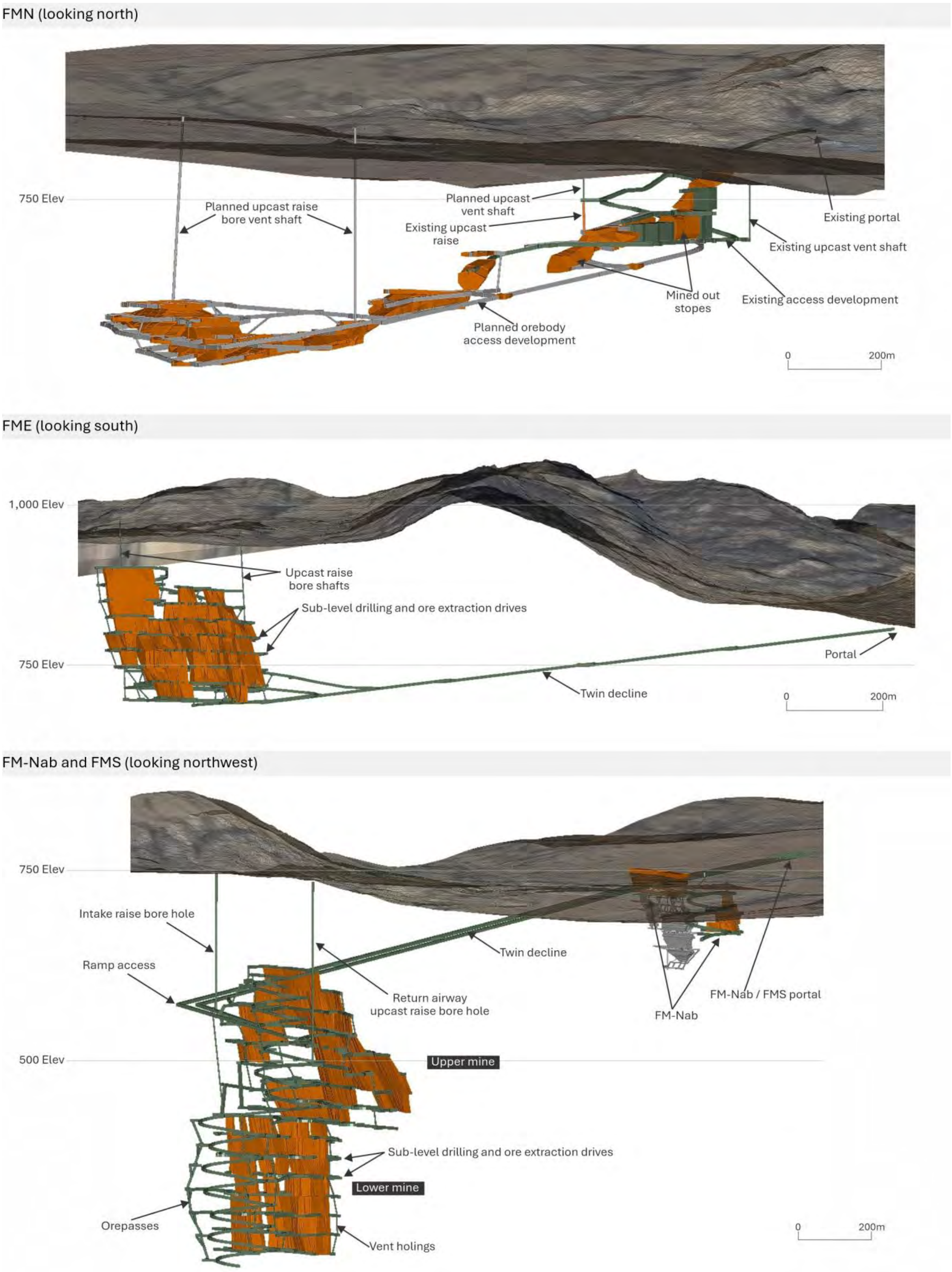



**Figure 13: FM Project - Isometric views of the mining layouts.**

Existing mine development is included in the mine design to provide access to the Upper Mine Zone. Decline development is designed to access the Central and Lower Mine areas from the Upper Mine production level. This decline provides the primary ventilation intake airway and access for men and materials and hauling of ore and waste. Two existing ventilation upcast shafts will serve as ventilation outlets while the deeper development continues. LOM twin ventilation return airways are planned via two new 2.4m diameter raise boreholes (RBH). The planned development required to mine FMN, including total stoping and development tonnages is presented in Table 6.

The FMN mine design yielded total ROM of approximately 1.5Mt for early production at a rate of 30ktpm. The development follows the undulation of the mineralisation. No provision is made for any ore passes hence rock will be loaded by load haul dumpers (LHDs) directly into trucks in loading bays located near the draw points.

**Table 6: FM Project – Design production results.**

| Description | Unit | FMN | FME | FM-Nab | FMS | Total |
|---|---|---|---|---|---|---|
| Total development | m | 8,809 | 20,076 | 1,433 | 24,792 | 55,110 |
| On-reef development | m | 2,178 | 4,543 | 118 | 5,889 | 12,728 |
| Waste development | m | 5,912 | 13,428 | 1,226 | 16,001 | 36,567 |
| Vertical development | m | 720 | 2,104 | 89 | 2,902 | 5,816 |
| Total waste development conveyed and/or trucked to surface | t | 415,700 | 764,364 | 107,929 | 1,108,924 | 2,396,917 |
| Total on-reef development hoisted | t | 129,335 | 429,609 | 4,312 | 274,632 | 837,888 |
| Total stope tonnes reporting to plant | t | 1,260,263 | 2,391,999 | 206,425 | 1,576,563 | 5,435,250 |
| Total pillar tonnes reporting to plant | t | 90,223 | 163,813 | | 658,556 | 912,591 |
| Total ROM reporting to plant | t | 1,479,821 | 2,985,421 | 210,737 | 2,509,750 | 7,185,728 |
| Metal reporting to plant | % Cu | 1.04% | 1.17% | 0.89% | 1.32% | 1.19% |
| Metal reporting to plant | t | 15,399 | 34,794 | 1,874 | 33,205 | 85,272 |
| Stope metal grade reporting to plant | % Cu | 1.08% | 1.21% | 0.88% | 1.30% | 1.19% |
| Stope metal reporting to plant | t | 13,614 | 29,008 | 1,814 | 20,498 | 64,933 |
| Pillar metal head grade | % Cu | 0.91% | 0.96% | 0.00% | 1.44% | 1.30% |
| Pillar metal reporting to plant | t | 820 | 1,574 | | 9,491 | 11,886 |
| On-reef development head grade | % Cu | 0.75% | 0.98% | 1.39% | 1.17% | 1.01% |
| On reef development ROM reporting to plant | t | 965 | 4,212 | 60 | 3,217 | 8,454 |

FME

FME has no existing development in place. The FME deposit and the plant area are separated by a 320m high ridge with no direct surface access between the two areas (Figure 6). The planned layout consists of a twin decline developed from a surface portal. The twin decline will be equipped with a conveyor and an adjacent service road providing access to the surface for all ore, men and material logistics. After completion of the primary development and installation of an underground crusher and conveyor, all ore and waste rock will be conveyed to surface. The planned development required to mine FME, including total stoping and development tonnages is presented in Table 6. The infrastructure is planned to access the bottom of the known mineralisation for bottom-up stoping.

Two RBHs are to be reamed from surface above the workings to provide the additional intake and return ventilation requirements for FME (Figure 6). The locations of the RBHs have been selected at sites accessible by existing tracks on the eastern side of the mountain where the Mineral Resource projects to surface.

The portal is planned in a readily accessible area in the valley southeast and approximately 2km from the processing plant, on the plant side of the mountain and from there the conveyor decline accesses the deepest point of the deposit at an inclination of 7° below the horizontal. This is the shortest connection to the Mineral Resource as any surface access or a portal located on the opposite side of the mountain would result in a longer and difficult access route. The portal is planned to be blasted and excavated in two cuts. The portal will be supported with mesh, rock bolts, cable anchors and shotcrete and equipped with bulk water, power, compressed air and ventilation services.

Minimal ROM ore trucking is envisaged on the levels as rock will be transported on the loading levels to the ore pass system using LHDs. The ore pass system will feed the crusher installed on an interlevel above the conveyor decline below the lowest level of FME. Crushed material will then be fed onto the conveyor and conveyed to an ore-bin at the portal on surface, and from there, overland by truck to the plant.

Ore passes above and below the crusher will provide surge capacity between the LHD tipping operation, the crusher and the conveyor system to ensure the system provides buffer capacity and does not cause LHD waiting time. The crusher chamber and the bottom of the conveyor decline are connected directly to the main return airway, so that dust or, in the unlikely event of a fire, smoke can be prevented from entering the workings.

The FME mineralised body is a wide zone with multiple low-grade areas separating high grade lenses on strike. This results in several parallel stopes and associated reef drives. The FME design yields a waste to ore to waste ratio of 26%.

FM-Nab and FMS

The isometric layout for the combined FM-Nab and FMS access is presented in Figure 13. The main mining block for FM-Nab daylights and will be drilled and blasted from surface but the ore will be loaded from the drawpoints underground. The final void will be backfilled with waste from surface. Additional Indicated ore above the cut-off is mined underground below the surface block and not backfilled. The workings will extend to a maximum depth of 100m below surface.

The twin decline planned to access both FM-Nab and FMS provides primary intake ventilation and access for men and materials and hauling of ore and waste. Twin ventilation return airways are provided via two 2.4m diameter raise bore holes. The FM-Nab design yields a waste to ore ratio of 51%.

The excavation of the shared portal for FM-Nab and FMS are planned as three blasts. Similar to FME the portal will be excavated and supported with mesh, rockbolts, cable anchors and shotcrete and equipped with bulk water, power, compressed air and ventilation services.

The FMS mineralised body is naturally divided into Upper and Lower mining areas defined by Mineral Resource geometry. The planned workings of the lower deposit extend to a depth of 615m below surface. There is no existing development at FMS. The planned access is the same as FME using a twin decline from a surface boxcut and portals to access the bottom of the Upper mining area.

Ore and waste from FMS is planned to be truck hauled to the surface portal area. Surface trucks will then transport ore to the processing plant and waste rock to the TSF embankment. The FMS will be serviced by a twin decline to enhance the intake ventilation capacity to the workings. The installation of an underground crusher and conveyor system similar to FME was considered, but the trucking option was included in the study to minimise capital cost and time for the development of the access to FMS. Should additional resources be proven by exploration drilling, the crushing and conveyor option could be revsited as the twin decline could accommodate this. 2 x RBHs provide the return ventilation requirements for the workings.

The steeply dipping nature of the Mineral Resource does not allow simultaneous mining of both sections (i.e. Upper mine and Lower mine). The twin decline will access the Upper mine first and establish production while development of the decline continues downdip to access the Lower mine for extraction.

Due to the relatively narrow nature of the FMS orebody, the bulk of the stoping is done in stope widths <10m which is amenable to longitudinal long hole stoping. The thicker mining areas >10m will be mined using VCR mining method similar to FME. Backfill as classified tailings is planned to be pumped overland from the processing plant to boreholes feeding directly into the Upper and Lower mining areas.

Ore will be loaded by LHDs into trucks and trucked out the mine. As mining progresses deeper, trucking distances and associated costs will increase.

The FMS design yields a waste to ore ratio of 44%. The waste to ore ratio is high due to the development requirements to accommodate the relatively thin steep dipping nature of the orebody.

### Mineral Resource considerations

The Mineral Resource geometries are presented in Table 7 and demonstrate the range of dimensions and dips found across the wider proposed mining areas. The Datamine™ Mineable Stope Optimiser (MSO) was used to establish mineable shapes for the mine planning and optimisation.

**Table 7: FM Project - Dimensions of the Mineral Resource extract used for the mining study.**

| Description | Unit | FMN | FME | FM-Nab | FMS |
|---|---|---|---|---|---|
| Mineral Resource dip range | ° | 0 - 10 | 50 - 75 | 80 | 80 |
| Mineral Resource thickness range | m | 15 - 50 | 20 - 40 | 5 - 30 | 5 - 30 |
| Mineral Resource strike length | m | 790 | 300 | 200 | 395 |
| Mineral Resource depth - downdip | m | 340 | 205 | 150 | 480 |
| Mineral Resource upper limit | mbsl | Surface | 140 | Surface | 135 |
| Mineral Resource lower limit | mbsl | 250 | 322 | 80 | 615 |

The reader should note that the various cut-offs were estimated at the start of the mine planning phase. In the case of the copper price, the cut-offs were based on analyst long term real copper price consensus and ignored higher prices in the short term forecasts.

### ROM cut-off grade estimation methodology

The FM Project Feasibility Study uses a breakeven grade as a cut-off grade to determine the volume of ROM ore available for mine planning purposes. From the Mineral Resource modelling work and the MSO study, increasing the cut-off grade above the 0.7% Cu breakeven grade results in a significant reduction in total mineable volume of potential ore with increased complexity of stope shapes generated by the MSO process.

The cut-off grade used for the mine planning of FMN and FME is 0.7% Cu based on previous costing (Sound Mining, 2023). A 0.8% Cu cut-off grade is calculated for FMS (Table 8) based on recent costing which accommodates the increased depth of mining. Based on the same logic, a marginal cut-off of 0.6% Cu was used for all mining blocks below the cut-off grade between the payable blocks with shared development and for FM-Nab, which is close to surface and used as supplementary tonnage in the LOM plan to the process plant.

**Table 8: FMS / FM-Nab - Cut-off grade calculation.**

| Cost and revenue parameters | Units | Value |
|---|---|---|
| On-mine direct production costs (C1) | ZAR/ROM t | 932.0 |
| General & admin (G&A) | ZAR/ROM t | 87.0 |
| Royalty (average) | ZAR/ROM t | 75.2 |
| Stay in business (SIB) capex | ZAR/ROM t | 92.0 |
| All-in-sustaining costs | ZAR/ROM t | 1,186.2 |
| All-in-sustaining costs - ex G&A | ZAR/ROM t | 1,099.2 |
| Total direct mining & processing cost | ZAR/ROM t | 1,186.2 |
| Exchange rate (ZAR conversion to USD) | ZAR:USD | 18.90 |
| Total direct mining & processing cost | USD/ROM t | 62.8 |
| Cu price | USD/ t | 9,369 |
| Cu net smelter return (NSR) | % | 93.70% |
| Net Cu price received | USD/ROM t | 8,772 |
| Unplanned mining dilution | % | 2.00% |
| Cu plant recovery factor | % | 91.18% |
| Breakeven in situ Cu grade | % | 0.80% |

The cut-off grade is based on the total direct cost of mining, processing and metal sales, including sustaining capital, but excluding overheads and project capital. In arriving at the break-even grade estimation strategy, the following considerations were considered important:

- the direct production costs are based on the "Real terms financial analysis" and "Leased" scenario selection in the financial model hence capital for mining equipment is largely transferred to operating costs;
- the general & administration (G&A) overhead costs were excluded from the cut-off grade calculation;
- the processing recovery in the breakeven calculation excludes ore sorting. The level of study work for the ore sorting requires more detail and is considered to be at a concept level pending further test work;
- the mining costs for the four FM Project deposits differ significantly due to the variation in development requirements, owing to the differing depth below surface and geometry of the respective Mineral Resources. An average LOM cost was used to calculate an average cut-off grade for the FM Project. FMS, scheduled in the later years of the Project, has the highest unit mining cost due to its depth and higher development required for the relatively narrow Mineral Resources;
- the electricity cost is from ESKOM supply only (via NKLM network and tariff) and excludes any 3rd party power purchase agreement (PPA) which is being investigated;
- the planned (internal) dilution is catered for in the Datamine™ MSO design where rock outside the Mineral Resource boundary may be included within economic stope shapes above the break-even grade. Therefore, only unplanned dilution (outside of the designed stope – i.e. overbreak on stope hanging wall and footwall) is added in the break-even estimation; and
- the marginal cut-off grade calculation excludes the mine development and fixed processing costs cut-off.

Testwork indicates that the precious metal content in concentrates from FMN will realise additional credits but not those from FMS concentrates. No values for gold or silver are included in the FM Project Mineral Resource which may represent future upside. The net smelter return (NSR) calculation therefore excludes any gold or silver revenues.

The marginal cut-off grade calculation is presented in Table 9.

**Table 9: FMS / FM-Nab – Marginal cut-off grade calculation.**

| Cost and revenue parameters | Units | Value |
|---|---|---|
| On-mine direct production costs (C1) | ZAR/ROM t | 723.0 |
| General & admin (G&A) | ZAR/ROM t | 87.0 |
| State Mineral Royalty (average) | ZAR/ROM t | 75.2 |
| Stay in business (SIB) capex | ZAR/ROM t | 92.0 |
| All-in-sustaining costs | ZAR/ROM t | 977.2 |
| All-in-sustaining costs - ex G&A | ZAR/ROM t | 890.2 |
| Total direct mining & processing cost | ZAR/ROM t | 890.2 |
| Exchange rate (ZAR conversion to USD) | ZAR:USD | 18.90 |
| Total direct mining & processing cost | USD/ROM t | 47.1 |
| Cu price | USD/ t | 9,369 |
| Cu net smelter return (NSR) | % | 93.70% |
| Net Cu price received | USD/ROM t | 8,772 |
| Unplanned mining dilution | % | 2.00% |
| Cu plant recovery factor | % | 91.18% |
| Marginal breakeven in situ Cu grade | % | 0.60% |

Mineralisation (ore) determination

The MSO Datamine™ software was used to delineate the economic mineable blocks for mine planning. The software identified and delineated the stope shapes at acceptable grades for the respective mine plans. Pillar location and designs followed the MSO analyses to determine pillar design characteristics which satisfies both geotechnical stability requirements and ensures minimal lockup of copper metal through the delineation of low-grade mining areas below or close to the planned cut-off grade of 0.7% Cu. The final design ore tonnes and grade for the FM Project based on the optimisation process are shown in Table 10.

**Table 10: FM Project - Final design tonnage and grade from the optimisation process.**

| Parameter | Units | FMN | FME | FM-Nab | FMS | Total / avg |
|---|---|---|---|---|---|---|
| Ore tonnes | Mt | 1.5 | 3.0 | 0.3 | 2.4 | 7.2 |
| Cu content | t | 15.4 | 33.8 | 2.1 | 31.0 | 82.3 |
| Cu grade | % Cu | 1.04 | 1.17 | 0.75 | 1.30 | 1.14 |
| Stope tonnes | Mt | 1.4 | 2.4 | 0.3 | 1.9 | 6.0 |
| Stope Cu content | t | 14.6 | 29.0 | 2.1 | 25.1 | 70.8 |
| Stope Cu grade | % Cu | 1.05 | 1.21 | 0.75 | 1.32 | 1.18 |
| Pillar tonnes | Mt | 0.1 | 0.2 | 0.0 | 0.5 | 0.8 |
| Pillar Cu content | t | 0.8 | 1.6 | 0.0 | 6.0 | 8.4 |
| Pillar Cu grade | % Cu | 0.91 | 0.96 | 0.00 | 1.22 | 1.05 |

Production geology and grade control planning

The copper mineralisation in the FM Project occurs in mafic intrusives as irregular shaped lenses with the mining cut-off often not a sharp contact but based on an economic grade cut-off. As a result, diamond core stope delineation drilling is planned (i.e. core drilling during production) to define the economic limits of the mineralisation. The objectives of the grade control drilling, with holes planned at a 20-25m spacing, are to:

- define the ore/waste contacts by grade control drilling and/or geological mapping;
- define the irregular shape (pinching and swelling) of the mineralisation to allow for accurate stope design;
- minimise waste dilution during the mining process;
- facilitate the liaison between mine geologists and the mine planning section for short, medium and long-term planning in optimising ore extraction;
- liaise with the plant operations to ensure that the grades and quality of material delivered to the plant are within specification, and to reconcile plant production with actual mined and resource model estimates;
- provide a performance indicator to feed back into resource estimation and grade control modelling practices to improve estimation and modelling; and
- improve orebody understanding and knowledge.

The grade control system will determine the robustness of the geological block model once in the operational phase, as mining plans including delineation of mineralisation types, grades and tonnages are generated from that model. Monthly reconciliation between the mining and processing plant serves as a tool for monitoring the performance of grade control and the Mineral Resource estimate in the entire mining value chain.

Mine design criteria

The parameters and criteria are based upon Sound Mining's input and historical knowledge of the area, with input from NOMC and Orion. A summary of the mine design criteria and scheduling criteria applied to the FM Project in the LOM schedule is summarised in Table 11.

Table 11: FM Project - Summary of mine design criteria.

| Description | Units | FMN | FME | FM-Nab | FMS |
|---|---|---|---|---|---|
| Primary waste development height | m | 5.0 | 4.5 | 4.5 | 4.5 |
| Primary waste development width | m | 5.0 | 5.1 | 4.5 | 4.5 |
| Waste development height | m | 5.0 | 4.3 | 4.5 | 4.5 |
| Waste development width | m | 4.5 | 4.5 | 4.5 | 4.5 |
| ROMon-reef development height | m | 5.0 | 4.3 | 4.5 | 4.3 |
| ROMon reef development width | m | 4.5/8.0 | 6.0/8.0 | 4.5 | 4.5 |
| Vertical development diameter (drop-raise) | m | 2.4 | 2.4 | 2.4 | 3.6 |
| Gradient | | | | | |
| Maximum development design gradient | ° | 9 | 9 | 9 | 9 |
| Loading | | | | | |
| Loading bay truck height | m | 6.2 | 6.2 | 6.2 | 6.2 |
| Loading bay truck width | m | 4.5 | 4.5 | 4.5 | 4.5 |
| Rates | | | | | |
| Trackless development rate per rig | m/month | 180 | 180 | 180 | 180 |
| Trackless development rate (max) | m/month | 80 | 80 | 80 | 80 |
| Trackless development rate large end (max) | m/month | 60 | 65 | 60 | 60 |
| Vertical development rate (raise bore) average | m/month | 30 | 30 | 30 | 30 |
| Vertical development rate (drop raise) | m/month | 30 | 30 | 30 | 30 |
| Production drill rig rate (152mm diameter) | m/month | 3,500 | 3,500 | 3,500 | 3,500 |
| Stoping LHD loading rate | tpm (hoisted) | 23,000 | 23,000 | 23,000 | 23,000 |
| Stoping trucking loading rate | tpm (hoisted) | 10,000 | 10,000 | 10,000 | 10,000 |
| VCR drilling conversion [1] | tpm | 8 | 8 | 8 | 8 |
| Backfill rate (required) | $m^3$/month | 10,850 | 16,275 | N/A | N/A |
| Backfill rate (available without sorting) [2] | $m^3$/month | 24,000 | 24,000 | N/A | N/A |
| Backfill rate (available with sorting) [2] | $m^3$/month | 19,000 | 19,000 | N/A | N/A |
| Delays | | | | | |
| Ventilation pass drilling start delay | days | 14 | 14 | 14 | 14 |
| Slot cut start delay | days | 14 | 14 | 14 | 14 |
| Stoping start delay | days | 0 | 0 | 30 | 42 to 60 |
| Backfill construction delay | days | 7 | 14 | N/A | N/A |
| Backfill cure delay | days | 28 | 14-28 | N/A | N/A |
| Additions | | | | | |
| Additional development overbreak | % | 7 | 7 | 7 | 7 |
| Additional stoping dilution | % | 5 | 5 | 2 | 2 |
| Pillar mining extraction factor | % | 50 | 50 | N/A | 50-66 |
| Losses | | | | | |
| Mining loss development | % | 3 | 3 | 3 | 3 |
| Mining loss stoping | % | 5 | 7 | 7 | 7 |

Notes: 1 - Includes 10% re-drill, 2 - Refer to Section 20 (Backfilling) for specification. Sources: Sound Mining (2024)

The geotechnical criteria were used for mine planning based on the geotechnical modelling, calculations and planning criteria. The primary support for the mine development excavations is 1.8m rock studs, which are tensioned and post grouted for the main primary development. For the ore development due to temporary nature of the excavations, the rock studs are tensioned only with no post grouting. The rock studs have a minimum ultimate tensile strength of 15t. The primary support spacing and lengths were calculated for all planned primary development, including drill drives and undercut development. The maximum allowable stoping spans (60m to 75m) were determined to be within the calculated critical hydraulic radius for all the FM Project mining areas. Rib and sill pillars (20-30m) have been placed accordingly to constrain the mine design to the maximum allowable spans. No historical mine reconciliations were available to verify the dilution modifying factor.

To estimate the expected dilution due to material qualities, the work of Papaioanou & Suorineni (2017) was referenced, in which equivalent overbreak was measured, and dilution was calculated. For the FM Project, stability numbers associated with the host rock material were superimposed on the stability graph developed by Papaioanou & Suorineni to estimate expected dilution. Using this approach, the anticipated dilution for all operations is expected to be less than 5%, with the highest dilution observed at FMS being approximately 2.5%.

The approximate production rates were applied for the various mining areas as follows; FMN (30ktpm), FME (35ktpm), FM-Nab (10ktpm) and FMS (25ktpm). The rates were based on a maximum vertical drop-down rate of 50 vertical metres per annum and the strategy to optimise the designed plant capacity. The initial processing plant design capacity of 32.5ktpm with one mill installed is to satisfy the initial tonnage requirements from FMN only. The total design processing capacity with both mills and downstream float circuits installed is 65ktpm which is planned to be in place when FME is in full production combined with FMN. Due to the additional development requirements required for FMS, FM-Nab is used as a production gap filler as FMN winds down and FMS builds up.

Mining methodology

Historically, the VCR mining method was successfully practiced by OCC. This mining method is characterised by its adaptability to different stope geometries. A key benefit for VCR mining methods is the ability to mine large excavations leaving broken ore in the stopes as support as is the case in the shrinkage mining method. The VCR method has been customised for application at FMN, FME, FM-Nab and FMS with the following guidelines:

- the VCR method is based on drilling rings of large diameter blast holes from an upper drill drive down to an "undercut" on the loading level pre-developed below. For stope backs over 30m, multiple drill drives are planned for a single drawpoint level (up to 90m stope backs are possible);
- vertical intervals up to 30m between drill drives are planned throughout the stoping areas to limit the blast hole lengths and ensure accuracy of drilling. The drill level spacings are influenced by the geometry of the Mineral Resource to ensure maximum extraction of the ore;
- 152mm diameter blast holes are drilled down from the lowest drill drive, holing into the undercut on the drawpoint level. Accommodating widths of up to 20m, rings will be drilled ranging from 1.8m to 2.4m burden and spacings along the drill drive; and
- once the extraction of mineralised material from a stope is complete, the stope void is filled with deslimed tailings.

A schematic of the VCR mining method is presented in Figure 14.

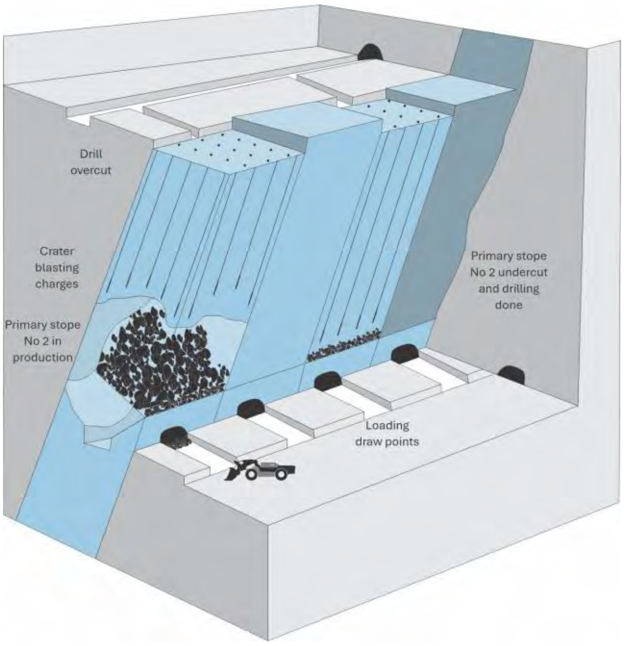



**Figure 14: Schematic of VCR mining method.**

## Equipment selection

The equipment selection is presented in Table 12, indicating the maximum number of machines required and their deployment into the various mining areas.

**Table 12: FM Project - Underground equipment selection.**

| Type | Make | Model | FM Project max. no. | Deployment | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | FMN | FME | FM-Nab | FMS (U) | FMS (L) |
| Truck 30 t | Epiroc | MT 436 dump truck | 10 | 5 | 2 | 2 | 5 | 7 |
| Truck 20t | PAUS | ITC 10'000A | 3 | 3 | 3 | - | 3 | - |
| LHD 10t | Epiroc | ST1030 LHD | 6 | 2 | 2 | 1 | 2 | 2 |
| ITC continuous loader | ITC | ITC 120N Loader | 1 | 1 | 1 | - | 1 | - |
| Twin boom drill rig | Epiroc | Boomer 282 | 3 | 1 | 1 | 1 | 1 | 1 |
| Single boom drill rig | Epiroc | Boomer 281 | 2 | 1 | 1 | - | 1 | 1 |
| Longhole drill rig | Sandvik | DU 311TSeries ITH longhole drill | 3 | 1 | 1 | 1 | 1 | 1 |
| Charging unit | Fermel | LIB - Robotic charger | 3 | 1 | 1 | 1 | 1 | 1 |
| Grader | Fermel | 12t Grader | 1 | 1 | - | - | 1 | 1 |
| LDV | Fermel | Maverick | 8 | 3 | 3 | 1 | 3 | 3 |
| Telehandler | Manitou | 733 with man basket | 3 | 1 | 1 | 1 | 1 | 1 |

Notes: Deployment will be sequential as the various mining areas come on stream. Source: NOMC

## Blasting design

The blasting design was on the FM Project was undertaken by Mr AJ Rorke in 2024 and updated in 2025 based on the latest mine designs.

Development blasting is planned to make use of twin boom drill rig (Boomer 282) and single boom drill rig (Boomer 281) with 4.3m steel to drill an effective 4.0m length hole; expected advance is 3.8m per blast. The layout of the drill holes will vary by excavation size. The main waste development declines are planned to be blasted with small arches and smooth blasting. This is to ensure longevity of the tunnel through improved ground conditions with minimal overbreak. This helps the development cycle time through reduced need for barring and face preparation time. In the LOM plan, there are numerous inter level 2.4m drop raises (ventilation, waste and ore passes) that will be blasted with the longhole rigs in all mining areas.

In the case of stope blasting, in earlier operations by OCC, 160mm blast holes were drilled and Anfex explosives utilised for blasting. The FM Project operations in the Feasibility Study are planned to commence with 152mm blast holes drilled with a Sandvik ITH production drill rig. Blast holes will be charged with emulsion and 150g boosters and electric detonators. The use of detailed explosive planning based on localised ground conditions determined from delineation drilling and using emulsion will result in improved fragmentation compared to historical mining. The VCR mining will also facilitate management and limitation of overbreak and waste dilution.

The FME and FMS deposits are more vertical and narrower than FMN. These stopes are more amenable to longitudinal VCR mining. For thinner stopes <10m in thickness, conventional longhole stoping methods can be implemented using 89mm blast holes.

The provisional VCR stoping blast design parameters and efficiency outputs used for the FMN design and scheduling for all stopes >10m is shown in Table 13. The FME and FMS parameters are presented in Table 14.

**Table 13: VCR stope blasting design parameters.**

| Description | Units | FMN VCR stoping |
|---|---|---|
| Blast design | | |
| Hole diameter | mm | 152 |
| Rise per blast | m | 2.3 |
| Bottom stem plug length | m | 1.4 |
| Bottom stem plug length in hole diameters | m | 9.2 |
| Stope height | m | 30 |
| Stope span | m | 20 |
| Stope width | m | 10 to 50 |
| Burden | m | 1.8 |
| Spacing | m | 1.8 |
| Energy | | |
| Explosives type | | Innovex UG |
| Explosives density | $g/cm^3$ | 1.2 |
| Charge length | m | 0.9 |
| Charge mass/linear metre | kg/m | 21.8 |
| Charge mass per lift/hole | kg | 19.9 |
| Charge scaled depth of burial | m | 0.68 |
| Powder factor | $kg/m^3$ | 2.65 |
| Drilling efficiency | | |
| Maximum drilling m per $m^3$ of rock | m | 0.31 |
| Maximum $m^3$ of rock per m of drilling | $m^3$ | 3.24 |
| Fragmentation | | |
| P95 size | mm | 602 |
| P80 size | mm | 242 |
| P70 size | mm | 157 |
| P60 size | mm | 103 |
| P50 size | mm | 66 |
| P40 size | mm | 40 |
| P30 size | mm | 21 |
| P20 size | mm | 8 |

**Table 14: LHOS blasting design parameters.**

| Description | Units | FME & FMS LHOS |
|---|---|---|
| Blast design | | |
| Hole diameter | mm | 89 |
| Stope height | m | 30 |
| Stope width | m | 10 |
| Tunnel area | $m^2$ | 34 |
| No. holes per ring | # | 15 |
| Burden | m | 2.4 |
| Spacing | m | 2.4 |
| Total hole length drilled per ring | m | 250 |
| Blast volume per ring | $m^3$ | 637 |
| Energy | | |
| Explosives type | | Innovex UG |
| Explosives density | $g/cm^3$ | 1.2 |
| Charge length | m | 159 |
| Charge mass/linear metre | kg/m | 7.2 |

| Description | Units | FME & FMS LHOS |
|---|---|---|
| Charge mass per lift/hole | kg | 19.9 |
| Charge scaled depth of burial | m | 0.68 |
| Powder factor | kg/m³ | 1.79 |
| Drilling efficiency | | |
| Maximum drilling m per m³ of rock | m | 0.39 |
| Maximum m³ of rock per m of drilling | m³ | 2.55 |
| Fragmentation | | |
| P95 size | mm | 918 |
| P80 size | mm | 382 |
| P70 size | mm | 250 |
| P60 size | mm | 165 |
| P50 size | mm | 105 |
| P40 size | mm | 63 |
| P30 size | mm | 33 |
| P20 size | mm | 12 |

Cycle times

Cycle times for the development and stoping were analysed in detail and used to define the production schedule and rate of advance.

The FM Project development production cycle is based on a three 8 hour (hr) shift planning cycle with a blast re-entry for each shift of 1hr. The resultant calculated production hours translate to 14.6hrs/day or 380hrs/month based on planned stoppages and travelling time used for equipment productivity cycles. Using the calculated production hours and the drill and blast development designs a development cycle time was formulated to calculate the monthly advance per rig for each development end type. An average drill rig rate of 180m per month was used for multiple ends in the mine planning.

The twin (service and conveyor) declines at FME and FMS facilitate higher development rates using multi-blast conditions. The adjusted shift cycle based on a three 8hr shift operation planning cycle with 0.5hrs blast re-entry translates to production hours of 17hrs/day or 445hrs/month. A high-level simulation based on the blast cycle for the twin conveyor and service decline shows that it is theoretically possible to blast both declines per day (based on 17 production hrs/day) using multi blast conditions.

Upon completion of the twin development at FMS and FME, the shift cycle reverts to the FM Project production three 8hr shift cycle with one 2hr blast re-entry after the morning shift.

FMN and FM-Nab have a single trucking service decline which is unable to utilise multi blast conditions and therefore use the production shift cycle for the LOM.

The LHD waste loading cycle into 30t dump trucks has been calculated for the respective mining areas. Loading bays have been designed at FMN so that the maximum LHD haul distance does not exceed 200m. An LHD tonne per month calculation for (100m, 150m and 200m) haul distances have been calculated for waste development. The waste truck hauling cycle to the surface waste pad for one-way distances of 1.0km, 1.5km and 2.5km were also calculated.

The stoping production cycle for drilling and charging was based on input from Sandvik regarding the drilling performance of the Sandvik DU311 TK track-mounted ITH long hole drill rig. Based on the production shift cycle, the rig can drill 3,540m/month. Based on 8.7t of ore per metre drilled from the stope blast designs, this equates to 30,800tpm. Using a 5% redrill contingency this equates to an equivalent 8.3t of stope ore per metre drilled.

The LHD loading cycle for ore into a truck (FMN) and into an ore pass (FME) was calculated. Based on an LHD haul distance of 150m an average 23ktpm of ROM was calculated which was used mine planning and fleet calculations. Similarly, truck haul calculations were done for 1.0km, 1.5km and 2.5km one way haul distance which translated to an average 10ktpm of ROM was calculated which was used mine planning and fleet calculations.

ROM production schedules

Production schedules were prepared independently for each of the four mine designs (i.e. FMN, FME, FM-Nab and FMS) which included production derived from pillar extraction operations at the end of the life of each mining area. The FM Project production schedule summary is presented in Table 15, with the combined production graphs presented in Figure 15, Figure 16 and Figure 17. The planned ore processing schedule and build-up of the planned stockpile inventory is shown in Figure 18. The graphs indicate that Phase I production of 32ktpm will be reached by month 30, whilst Phase II steady state production of 65ktpm will be reached by month 44.

**Table 15: FM Project - Production scheduling summary.**

| Description | Unit | FMN | FME | FM-Nab | FMS |
|---|---|---|---|---|---|
| First on-reef development ROM month | | Month 1 | Month 31 | Month 46 | Month 57 |
| First stoping ROM month | | Month 15 | Month 44 | Month 48 | Month 75 |
| Steady-state production | | Month 21 | Month 50 | Month 56 | Month 89 |
| LOM schedule period | months | 77 | 116 | 35 | 150 |
| Maximum stoping production rate | ktpm | 32.6 | 36.7 | 12.7 | 26.0 |
| Maximum development rate | ktpm | 20.4 | 17.8 | 8.4 | 20.6 |
| Maximum mining rate | ktpm | 49.4 | 49.4 | 17.6 | 43.1 |
| Average grade | % Cu | 1.04 | 1.21 | 0.88 | 1.34 |
| Maximum grade | % Cu | 1.56 | 3.40 | 1.62 | 2.71 |
| Development waste | km | 9.2 | 13.4 | 3.0 | 19.9 |
| On-reef development ROM | km | 2.2 | 4.5 | 0.6 | 4.6 |

From approximately month 127, ore production begins to taper off as FME is depleted. Additional drilling of known mineralised bodies within the PR will remain ongoing post FMN commissioning to develop Ore Reserves from these respective areas in order to maintain full steady-state production (potentially Jan Coetzee and Nababeep Kloof which already have Mineral Resource estimates reported in accordance with the JORC Code (2012)).

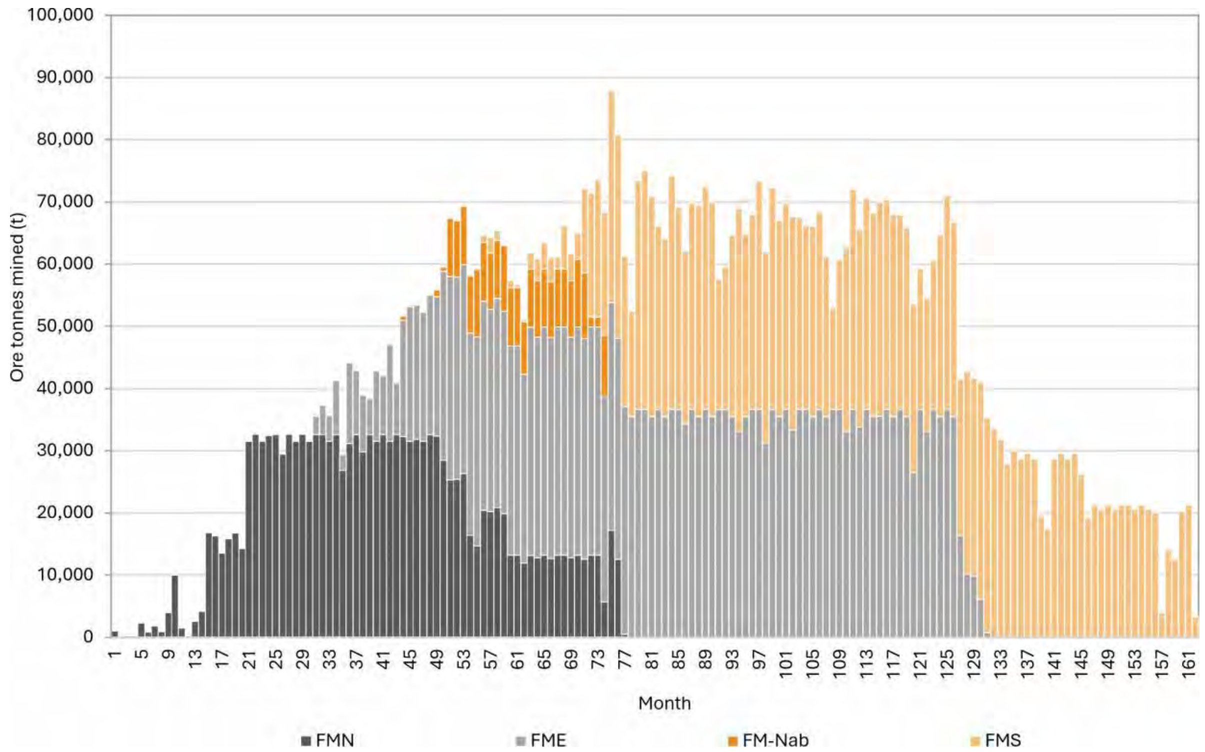



**Figure 15: FM Project – Combined estimated ROM production by mine.**

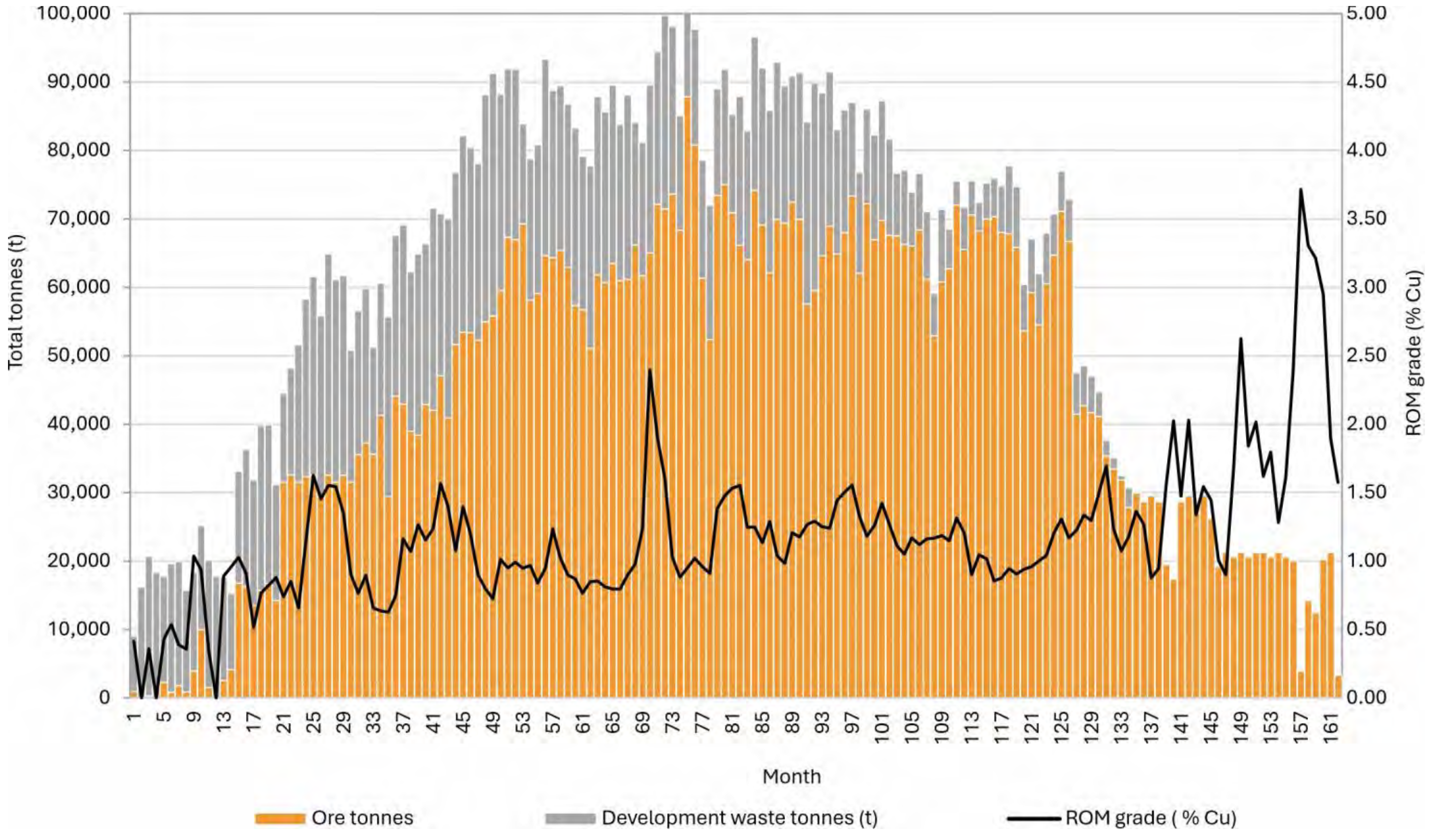



**Figure 16: FM Project – Combined estimated ROM and waste quantities to be trucked / conveyed to surface.**

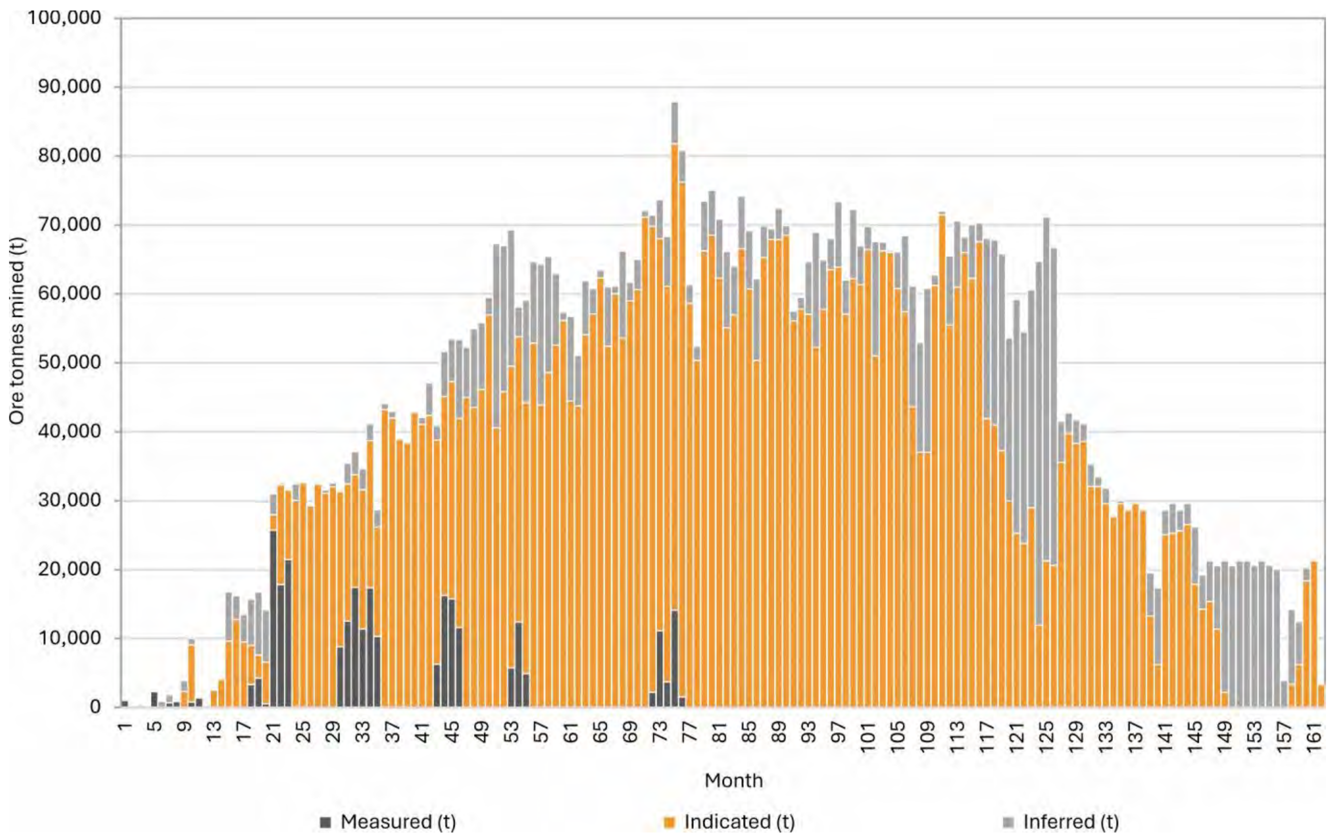



**Figure 17: FM Project – Combined estimated ROM production by Mineral Resource classification.**

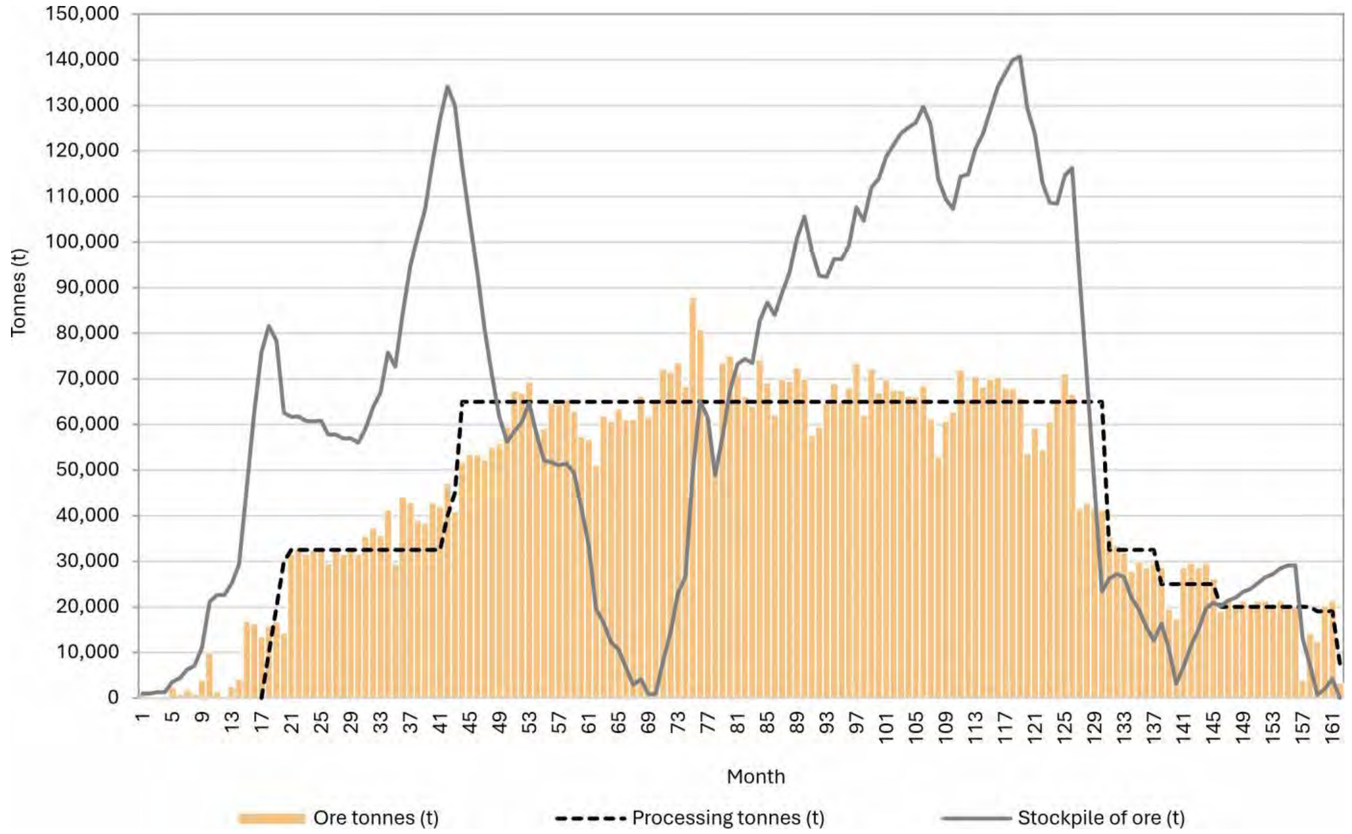



**Figure 18: FM Project – Combined mining and processing production schedule (with stockpile).**

Ventilation

The mining plan uses trackless mining methods heavily reliant on diesel powered equipment. Special ventilation arrangements must be made to manage the diesel emissions (i.e. gases, fumes, diesel particulate matter (DPM) and heat), as well as the normal ventilation requirements for personnel operating in the underground workings. As part of the Feasibility Study a ventilation analysis was initially undertaken by Prysm in 2024, and updated in 2025, with the purpose of defining the following:

- primary and secondary ventilation strategies and layouts;
- heat loads and cooling requirements;
- main fan operating duty points;
- peak power for ventilation requirements;
- primary ventilation fan equipment lists;
- capital and power estimates for the primary and auxiliary ventilation systems; and
- refuge bay requirements and costs.

The air flow requirements for each mining area were determined based on the mining fleet size coupled to production rates over time, with design provided for the various stages of each mining areas development. VentSim electronic models were constructed, incorporating the main fan positions, the airflow directions and required volumes, auxiliary fans and ducting and finally, refuge chamber positions.

The designs and costings were undertaken to Feasibility Study level for FMN and FME. With Concept Study level designs undertaken for the FM-Nab and FMS combined ventilation requirements.

## Backfilling

Paterson & Cooke Consulting Engineers (P&C) were appointed by NOMC to carry out a Conceptual Study to investigate the feasibility of underground backfill as an additional tailings disposal method for the FM Project. Subsequent to this, and on the back of the geotechnical study results, it was also recognised that backfill would be required for stope void support and to maximise pillar extraction.

It is planned to backfill FMN, FME and FMS with classified tailings and FM-Nab with waste rock to be sourced from the waste development from FM-Nab and FMS. Backfill is planned to commence at FMN in the third year after commencement of the FMN development after the process plant has been commissioned. Based on the production schedule from the respective mines, the backfill requirements for the FM Project combined was compared with the backfill availability assuming ore sorting and no ore sorting scenarios. The potential for ore sorting is being investigated by and assumes that 30% of ROM would be discarded as low grade (<0.25% Cu) material. A mass balance including ore sorting and concentrate mass pull of 4.5% was developed to determine the mass of tailings available for backfilling.

The proposed hydraulic backfill (HBF) system arrangement consists of a cyclone plant located at the main processing plant with backfilled to be delivered via an overland pipeline to the various mines and gravity fed underground where possible. The cyclone plant has therefore been incorporated into the process plant design and cost.

No testwork was conducted by P&C during the 2023 Scoping Study work. The PSDs of the tailings and cyclone underflow and overflow were based on a cyclone simulation using Cavex software. The backfill cyclone underflow PSD requires less than 10% of particles passing 10µm sieve to achieve the permeability requirements of hydraulic backfill (HBF).

A surface pumping hydraulic analysis was carried out for FMN, FME and FMS and included an assessment of elevation profile, hydraulic gradient line (HGL) with pump head heights, HDPE pipe requirements and pump sizing were determined. The detailed results are presented in P&C (2023). Thereafter an underground distribution hydraulic analysis was carried out for the mining areas.

The underground distribution system for FMN is relatively straightforward, i.e. the mine can be fed by a borehole with a feed hopper straight from the overland transfer system. No additional pumps are required.
In order to avoid high pressure piping and significant pumping requirements the areas of FME at an elevation above the decline portal will not be filled. Two initial concept routes were assessed for the FME pumping system, one for the close voids and one for those further away. For the close voids, the fill pipe will run down the decline to a fill cubby in between the second and third breakaway points.

The cubby will be approximately 15m long and developed at a dip to allow for emergency deposition and dumping in the cubby. From there a borehole will be drilled from the muck level down to the fill cubby using the long hole production drilling rigs. On the muck level the pipe can be distributed on level and another borehole can be drilled from the relevant drill drive to bring the fill pipe to the desired fill level. For the more distant voids, the fill pipe will run down the decline to a fill cubby opposite the third breakaway point. The cubby will be approximately 15m long and developed at a dip to allow for emergency deposition and dumping in the cubby. From there a borehole will be drilled from the decline. Ideally a small break tank will be located at this point. The backfill pipes will then run down the decline to the relevant drill drive and be operated in slack flow.

The pipeline to FM-Nab will be a take-off from the FMS line. The system was sized to meet the needs of the furthest pumping point which is FMS.

The Conceptual Study indicated that, at a consolidated density of 1.5t/m³ of dry tailings, 8,200m³/m can be placed into the mined out stopes. Backfilling will benefit the FM Project as follows:

- reduction of the size of the TSF and associated surface impact;
- underground support of open voids decreasing the risk of underground stope closure and resultant surface subsidence; and
- allowing for sequential mining and increased ore tonnage extraction.

The backfill design, was deemed conceptual in nature by P&S in the 2023 primarily due to the lack of specific PSD testing. The percentage of minus 10µ defines the percolation rate, which is the maximum target for the underflow PSD and is important from the perspective that water must not be retained in the fill. However, the actual percolation rate achievable is not critical from a timing perspective. The worst case scenario is that to achieve the required minimum percolation rate, it may be necessary to install a second stage cyclone in the backfill plant to remove more fines from the underflow without a loss in mass recovery to the underflow. This could have a cost implication of less than ZAR1m.

This is unlikely to materially impact the pumps, surge tanks or pipelines specifications or the costs thereof. All these items are based on recent quotations for the piping and pump equipment costs. Therefore, NOMC considers the backfill workstream to be at a level better than Scoping Study, but not at Feasibility Study level.

## Underground infrastructure and engineering

The underground infrastructure and engineering provided the design and costing to access to the underground workings and deliver the ore to surface. This was undertaken by NOMC in conjunction with the various service providers.

### Decline portals

The location of the existing FMN portal, along with the proposed positions for FME and FMS / FM-Nab are indicated on Figure 6.

FMN will use the existing portal and decline which is adequate for the haulage of ore from the underground drawpoints using low profile articulated dump trucks delivering directly to the ROM pad at the plant. The existing FMN portal and decline is nominally 4.2m wide by 4.0m high. Isolated areas have been identified in the decline where slyping of the hanging wall is required to achieve the minimum 4.0m height required. This slyping is planned to be carried out as part of the refurbishment programme, which will include the installation of rock studs according to the new support standards of the mine. The existing decline will not require the installation of ventilation ducting hence the dimensions are sufficient for the passage of haulage trucks and other mining machines. New development in FMN will be 4.5m wide by 5.0m high.

In the interests of reducing long term operating costs, transport of ore and waste to surface from the depths of FME is planned to use an electrically driven conveyor.

FME will be accessed via a portal with twin declines including a conveyor decline and service decline. The conveyor decline will be 4.5m wide by 4.5m high, with the service decline used by the mining machines being 4.5m wide by 5.0m high. The conveyor decline will accommodate a 750mm wide conveyor belt with a receiving ore bin on surface, where ore will be transferred to surface haulage trucks and transported to the ROM pad at the plant.

The development of FMS and FM-Nab is planned from a shared portal and twin service declines at the FM-Nab location to minimise the amount of development. The portal and declines are designed to accommodate trucks for flexibility purposes to accommodate both mines. Ore and waste will be trucked to surface temporary stockpiles and rehandled using a FEL and surface trucks. The FMS / FM-Nab trucking service declines will be 5.0m wide by 5.0m high.

The FME and FMS / FM-Nab portals will be the main access for all mining services including electrical, compressed air and service water supplies. An 11kV electricity supply, compressor station and service water storage tanks will be located in close proximity to the portals. Office infrastructure will be limited to a first aid station, assembly area and ablutions.

Confirmatory geotechnical drilling is planned for the FME and FMS portals and declines while FMN is in production. A total drilling, geotechnical logging and analysis cost of ZAR1.61m has been included in the financial model.

### Ventilation and emergency evacuation shafts

RBHs will be used to provide exhaust ventilation airways from the underground workings, with the main decline serving as the main intake airway. The 2.4m diameter of the RBHs is sufficient for these to be equipped with a rescue cage and used as emergency evacuation shafts should this become necessary. The location of the ventilation shafts of the respective mining areas are indicated on Figure 6.

Each vent shaft will be equipped with multiple exhaust fans installed on surface, to provide redundancy in the event of a fan failure, as well as facilitating the use of these units in future developments. The 11kV surface electrical reticulation will include a transformer at the fan installations to provide the 690V supply required by the fan motors.

Emergency evacuation equipment consisting of a 15kW winch, steel head frame and skeleton cage has been designed to facilitate the hoisting of four men from 300m below surface. The winch is fitted with all the necessary braking and safety systems required for permitting by the DMRE.

As production at FMN ends prior to the commencement of FMS, its mining, ventilation and general engineering equipment will be transferred to FMS.

Crushing, conveying and surface bins

NOMC appointed Lambani Engineering Projects (LEP) to design and estimate the costs of the underground crushing and conveying systems required for FME. In the case of FMN, crushing and conveying systems will not be required with all rock hauled to surface via the existing decline.

In the case of FME, the haulage of ore and waste from underground will be via two in-series conveyors installed in the main access decline. Prior to rock being loaded onto the conveyor belt, it will be sized to ensure the flow of material is uninterrupted and that the belt is not damaged. This requires that all payable ore be crushed before being loaded on the conveyor. Development waste will be sized by steel grizzlies at the ore pass tips before being fed directly onto the conveyor belt.

Ore from stopes (and on-reef development) will be loaded from drawpoints by LHDs and tipped into the ore tips. Ore tips will be fitted with static grizzlies with 500 x 500mm aperture, serviced by a static hydraulic rock breaker to ensure rocks are small enough to enter the underground jaw crusher. The jaw crusher selected has a feed aperture of 1,060mm x 700mm and a 110kW electric motor drive. The jaw crusher will be fed from the ore pass system via a vibrating grizzly feeder. From the crusher the rock will be discharged into a short ore pass below the crusher chamber.

Waste rock will be loaded by LHDs on the upper levels and tipped into a main waste ore pass feeding the crusher. The waste-tips are to be fitted with a static grizzly with 300 x 300mm apertures to limit the size of rock that can enter the ore pass. The bottom of the waste pass will be fitted with a vibrating feeder to control the feed rate of waste rock onto the belt. The design of the ore pass system and feeding arrangement will be such that the feeder pan will be protected from rocks falling from potentially significant height.

A mobile hydraulic rock breaker will be available to break near size rocks on the waste tip grizzly, with large oversize boulders to be removed to a designated cubby for secondary blasting where necessary.

FME requires a total conveyor length of 1,286m and elevation gain of 175m. NOMC specified that two conveyor flights be installed in the decline to limit the installed power of the drives, as well as ensure the duty remained within the capability of fabric reinforced belting to reduce cost and facilitate ease of maintenance. LEP utilised the Sidewinder Conveyor Design® software for the design of the mechanical equipment for each of the two conveyors. A 750mm wide conveyor belt was selected based on a maximum particle size of the rock to be conveyed of 200mm which has ample capacity for the required duty.

A crushing and conveyor system similar to FME could be utilised in FMS, but this option has not been included in this study in favour of trucking of rock out the mine to minimise development requirements.

The FMS mineralised bodies are at a greater depth than both the FMN and FME mineralised bodies, with FMS being scheduled to be mined after FMN has been mined out.

### Compressed air

The stope production drill rig selected for the VCR mining method is the Sandvik DU-311-TK model. This is a diesel/electric powered track rig for mobility fitted with an in-the-hole (ITH) hammer for drilling the blast holes of 152mm diameter. The ITH is a compressed air driven pneumatic percussion hammer requiring approximately 21m$^3$/min of compressed air at 7bar pressure supplied to the machine from the main compressed air reticulation. The Sandvik DU machine has an on-board booster compressor to boost the air pressure to 20bar for peak performance. The primary requirement of the compressed air reticulation in each mine is therefore 21m$^3$/min at 7bar (or approximately 750 cubic feet per minute (cfm) at 100 pounds per square inch (psi) in Imperial terms).

In addition to the production drill rigs, compressed air will be required for the occasional use of handheld jackhammers for the installation of eyebolts, L-irons and other accessories for the suspension of pipes and cables in the haulages and declines. Air driven portable reciprocating pumps (e.g. Sandpiper pumps) will also be used by construction and haulage maintenance teams for the clearing of accidental build-up of water and maintenance of settler sumps. This maintenance requirement would be typically less than 5m3/min (250cfm) at 7bar.

It is proposed to install a 5m$^3$/min compressor for each mine during the construction phase. Once the primary development and drill drive development has been completed, production drilling requiring the installation of 21m3/min compressors will commence. Each mine will include one 45kW, 5m$^3$/min screw compressor and two 160kW, 21m3/min screw compressors (one running, one on standby) installed on surface at the portals, or in the case of FMN, at the collar of the No.2 vent raise.

### Electrical reticulation

The bulk power supply and surface electrical reticulation is described under surface infrastructure.

A network of 11kV overhead powerlines supplied from the main 11kV switchboard at the process plant will distribute power to all the underground loads. The overhead lines will terminate at the portals of FME and FMS, and in the case of FMN, at the collar of the No.2 vent-raise. At each of these sites, an 11kV ring main unit (RMU) will facilitate the supply of a local step-down transformer for the surface equipment relevant to each of the mining sections. It will also provide a connection to the 11kV cable leading into the underground workings for the supply of underground mining equipment.

The medium voltage (MV) distribution voltage will be 11kV via cross-linked-polyethylene (XLPE) insulated cables installed on straining wire suspended in a safe area in the haulages and declines, to prevent damage from the mobile equipment travelling in these areas. Step down transformers to the low tension (LT) distribution voltage of 690V will be housed in portable mini substations fitted with suitable LT distribution boards for distribution of the LT supply to MCC's and gulley boxes installed close to the loads. The mini substations selected include dry type transformers in mining specification steel housings to minimise the risk of fire underground and facilitate the relocation of the equipment to follow the advancing mining operations.

All electrical infrastructure has been selected with the view for re-use in future operations beyond the life of the FM Project described in this Feasibility Study. The design of pump stations, drainage pumps and ventilation systems will be replicated in the development of future deposits within the FM Project PR area.

The electrical reticulation design was completed by METC based on the digital mine development layouts and load lists for each mine.

### Dewatering reticulation

Underground dewatering takes into account the initial dewatering of FMN and later FM-Nab, dewatering during decline development and ongoing mine dewatering.

Decline development at a dip of 1: 7 downgrade is scheduled in all the FM Project mining areas. A pumping system is required to cater for drilling water used and any fissure water encountered during the development. From the geohydrological study, the ingress of water from fractures is expected to be low, but intersections with fractures (quartz veins) and other features are likely.

Standard practice will be to drill cover holes using an underground diamond drilling machine to intersect these features well in advance of the face. Where necessary, water producing fractures will be grouted with cement to reduce fissure water ingress to a manageable minimum.

All water generated will report to the face of the decline. The drill rigs will be equipped with submersible pumps which have limited head capability of approximately 40m. A skid-mounted hi-lift pump will be provided to receive water pumped from the submersible at the rig and pump this out the decline to surface.

During the decline development phase in each of the FM Project areas, a Netzsch pump (NM076-02S) and steel receiving tank will be mounted together on a steel skid. This will allow the pumping unit to be relocated from cubby to cubby as the decline face advances, receiving water pumped from the development end by the small submersible on the drill rig. This Netzsch pump unit will have a duty of 30m$^3$/hr at a vertical head of 150m, driven by a 22kW motor at 400rpm pump speed. The Netzsch pump is a positive displacement type (mono pump type) that is capable of handling drain water efficiently at high heads. This will be used during the decline development stage at the respective FME and FMS declines until the permanent pumping arrangements are established.

The hydrogeological study on the FM Project, undertaken by iLEH, estimated the groundwater flow into the underground workings of the various mines. As the FM Project area is dominated by granite host rocks which have relatively low permeability, the potential for significant inflows of groundwater into the underground workings is low, with inflow from service water and backfilling expected to be more significant than seepage.

Backfilling is the major contributor to the mine water. The design backfill rate is 77m3/hr of slurry at 55% solids by mass, implying 45m3/hr of water in the fill. The maximum drainage rate of water from the fill (assuming 15% water by mass retained in situ) is estimated at 42m3/hr. In practice, the percolation rate from uncemented backfill will be significantly lower than the instantaneous inflow of total water contained in the backfill pumped underground.

The capacity of the main dewatering pumps is planned for 60m3/hr, which provides a 25% surplus capacity over the estimated peak ingress of water. Each pump station will be equipped with a standby unit which is available in the event of a breakdown.

The FMN and FME mines are relatively shallow with the deepest point of the workings in FMN at 226m below the portal elevation on surface. The bottom of the decline in FME is 181m below the portal elevation. For these two mines, a pump station, consisting of a simple grit and silt trap designed to be cleaned by an LHD, will be established. Settled water will be pumped into a dam with a minimum capacity of 50kl. A hi-lift multistage pump (plus spare pump unit) will be installed on the dam to pump the drain water to surface. The pump selected for the duty has a duty of 60m$^3$/hr at the required pumping head at FMN. The slightly reduced head requirement in FME will require the pumps to operate at below 1,400rpm using a variable speed drive (VSD).

FMS is significantly deeper (633m below surface), therefore three stage pumping will be necessary using similar pump stations established in series. The FMS development and production will commence at FM-Nab (where the first pump station and settler sump will be established) and then continue progressively deeper. A second pump station will be established at the 390m level with a sump equipped with vertical spindle pumps. The lowest multistage pump station will be established on the 580m level, with the bottom of the mine being 633 level where a settler sump with 22kW vertical spindle pump will be installed.

The main dewatering pump station at all mines (accommodating the multi-stage pumps) will not be located at the lowest point of the workings, but rather at an elevation at least 15m above this point. A sump will be constructed at the lowest point for the installation of a vertical spindle type mine drainage pump (RNE) pumps are preferred because of their robust design for mining applications) to keep the lowest level dry.

In the event of an extended power or pump failure at the main dewatering pump station, the capacity afforded by the 15m elevation above the lowest working level will facilitate additional capacity for the accumulation of water while pumping is restored. This will avoid any damage to major electrical or pumping infrastructure should the lowest level be inundated by water, allowing normal pumping operations to recommence with minimum delay or cost.

Underground Mining Conclusions

The FM Project comprises four separate mining areas. As such, NOMC has focussed their Feasibility Study efforts according to the order in which they will be developed – FMN, FME, FM-Nab and finally FMS. In addition, much of the underground support infrastructure will be transferred from one operation, upon closure, to the next. This approach enables the costing and designs implemented to be transferred, with the necessary adjustment to subsequent mining sections thereby bringing the underground infrastructure sequentially to full Feasibility Study level and beyond.

For FMN and FME, the underground infrastructure has been designed and costed to sufficient detail to meet Feasibility Study level requirements with a costing accuracy range of +/- 15% and detailed engineering at 20% to 50% complete. No specific geotechnical drilling has been undertaken for the FME and FMS portals and declines. However, surface reconnaissance and satellite imagery analysis by NOMC geologists familiar with the area was done without any evidence of notable geotechnical features. Significant exploration and geotechnical drilling data in close proximity to the locations of the planned portal and decline developments is available indicating geotechnical anomalies are unlikely to be encountered. Both decline portals and twin declines will be developed in Concordia Granites as presented in Figure 7. The FMN decline development was similarly excavated in the Concordia Granite with little evidence of faulting, fracturing or related failures which provides sufficient evidence that similar geotechnical structure can be expected in the respective FME and FMS decline pairs. Further geotechnical drilling is, however, planned for these portals and declines once FMN is operational.

## Metallurgical testwork

Metallurgical testwork and results relating to the FM Project were reviewed by METC ahead of the company's involvement with the process plant design scope of work. Metallurgical testwork has included the early Scoping Study testwork carried out in 2014, followed by the Pre-Feasibility Study testwork leading up to the publishing of the Pre-Feasibility Study by SAFTA in 2019. The current Feasibility Study metallurgical testwork campaign commenced in 2022 and has continued through to 2024 using drill holes cores from the recent confirmatory drilling programme.

The testwork carried out on the FM Project during the Scoping, Pre-Feasibility and Feasibility Study periods has been extensive including various campaigns of metallurgical teswork on crushing and flotation, tailings characterisation, particle sorting using Rados ore sorters, settling and filtration. These campaigns were used to inform the Feasibility Study as follows:

- confirmed the flowsheet and performance of the Suntech and Rados tests;
- developed data for process and engineering design;
- demonstrated processing variability from different mining zones;
- demonstrated processing variability between ROM and preconcentrated flotation feed; and
- demonstrated the ability to produce > 25% Cu with overall recovery > 90%.

Ore sorting technology is considered for the FM Project to remove waste rock from crushed ROM material prior to milling. Separating out gangue and low-grade ore at the earliest opportunity optimises downstream processing. The application of ore sorting for this Project adds a threefold advantage:

- increasing the grade of the head feed to the processing plant, which typically results in the potential for better copper recoveries during flotation;
- decreasing the volume of material to the processing plant, thereby decreasing monthly operating costs through reduced reagent, water and power requirements; and
- ensuring a less variable copper grade of the feed material to the plant.

Various test runs have been concluded for XRF particle sorting of FM Project mineralised zones (FMN, FMS and FME) to determine the amenability to preconcentration and level of accuracy achievable with respect to cut-off grade, mass pull and copper recovery. These tests were conducted between 2022 and 2024 and were divided into eight stages. The following conclusions were drawn from the sorting testwork:

- the 2022 samples had a significantly higher proportion of particles in the 0.10–0.20% Cu range, which supports more effective low-grade rejection and increased discard tonnage. The 2024 samples showed fewer particles in the 0.05–0.20% Cu range, reducing the amount of material available for low-grade rejection;
- noting that the 2022 samples had almost double the quantity of 0.0-0.2% Cu when compared with 2024 samples, it was then interrogated what the mining distribution likely will be for all mineralised zones and which drill core (2022 versus 2024) would be more representative. Most of the mineralised material tested in 2022 was sourced from old stockpiles and drill cores while 2024 drill cores were sourced from recent exploration drilling and would therefore be more representative of the planned mining zones;
- understanding the distribution of the mining zones, one approach could be that Rados considers creating a composite dataset based on proportions of each hole tested. It was recommended that further investigation into this methodology be actioned;
- using material with on-specification feed grades in future testwork, the FM Project can apply sorting performance curves (mass pull versus upgrade ratio and recovery) for precise modelling of the ore sorter performance per mining block; and
- ore sorting with a single cut point threshold parameter proved to be inadequate to achieve target discard grade at optimal recovery of copper with a mass pull of limited variability for this project. Multiple cut-point parameters were then applied for a more refined separation. The multiple cut-point threshold parameters achieved promising target discard grades. Opportunity therefore exists to further optimise the sorter performance with respect to ideal mass pull and more favourable copper recovery.

The overriding conclusions from the metallurgical testwork on the FM Project include the following:

- milling indices were very hard, with FMN being the hardest and FMS the softest of the three mineralised materials. The hardness indices were different to back-calculated historical plant operations (approximately 15kWh/t) but were confirmed in previous testwork conducted by Maelgwyn (2018) and Suntech (2022) as well as recent testwork conducted by Geolabs (2024). Hard rock milling was therefore incorporated in the process plant design;
- sorting has been included in Feasibility Study design on a 15% m/m reject and 99% recovery basis, but further economic benefit assessments are required for this stage. Additional opportunity exists to also address any risk of underground mining and/or internal mineral dilutions. All three mineralised mining areas were amenable to upgrading successfully at parameters mentioned with a variable mass pull. FM Project test data indicated difficulty in achieving cut-off grade of <0.15% Cu. Additional bulk testwork, preferably on site, is recommended when mining has started;
- the FME and FMN sample head assays had minor presence of other base metals such as Pb, Zn and Co. Feed mineralogy showed that the main Cu-bearing minerals in the FME samples were chalcopyrite and bornite. The main Cu-bearing minerals in recently tested FMN mineralised zones were bornite and chalcocite. Similar results were reported historically for FMN (SGS, 2014 and Suntech, 2022);
- the detailed chemical analysis of the final FMN and FME concentrates showed that Ag is present at similar concentrations for both mineralised materials while Au is more prevalent, and at higher concentrations in FMN mineralised material. Both these elements were upgraded into the copper concentrate which could add potential financial benefit in the form of sales credits. NOMC is mindful of significant MgO and F constituents reported for FME and FMN mineralised materials. Both these deleterious elements upgraded into the copper concentrate with significant concentrations reported for the FMN ore. Further testwork may be required to investigate the successful reduction thereof through the use of a more suitable depressant / increased depressant dosing / a second cleaner stage / a regrind stage. FMN mineralised materials contained U and Th which needs to be tested for its contribution to radioactivity to comply with IAEA Regulations;

- the selected optimal grind size of P90 -106µm established for FME flotation is also confirmed in historical plant operations for FMN and FMS ores (P60 -75um, which is closely equivalent to P90 -106µm) and similarly in testwork concluded by Suntech in 2022. A finer grind size of P80 -75µm in recent testwork completed, did not significantly improve copper recovery and was therefore not considered to benefit the Project at the time. The three different grind size concentrates produced in testwork was unfortunately not analysed to enable comparisons in the extent of gangue mineral rejections. Opportunity exists to investigate a finer grind size for improved liberation of copper and ideal rejection of MgO and F gangue minerals;
- flotation testwork matches historical operations and past testwork done but has better reagent selection and consumption. The final process flowsheet selected for design includes flash flotation, rougher and one stage cleaner flotation. Space can be reserved for installation of a future second cleaning step if the process demands a higher product grade. The plant design parameters derived from 2024 testwork is listed in Table 16;

**Table 16: FM Project – Process plant design parameters selected from testwork.**

| Design parameter | Unit | Value | | | |
|---|---|---|---|---|---|
| Sorters: | | | | | |
| Mass pull (relative to sorter feed) | % m/m | 15 | | | |
| Recovery | % Cu m/m | 99 | | | |
| Grinding: | | | | | |
| BBWi | kWh/t | 24.7 | | | |
| Optimal grind (P90) | µm | 106 | | | |
| Flotation: | | Flash flotation | Rougher | Cleaner | Overall |
| Mass pull | % m/m | < 3.0 | < 7.5 | < 3.0 | < 4.2 |
| Recovery | % Cu m/m | < 60.0 | < 93.5 | < 76.5 | < 92.5 |
| Concentrate grade | % Cu | < 25.8 | < 18.4 | < 38.0 | ≥ 30.0 |
| Reagents: | | Flash flotation | Rougher | Cleaner | Overall |
| Frother | g/t | 50 | 50 | 30 | 130 |
| Collector 1 | g/t | 80 | 40 | - | 120 |
| Collector 2 | g/t | 120 | 60 | - | 180 |
| Depressant | g/t | 80 | 40 | 20 | 140 |
| Flocculant tailings | g/t | 12 | | | |
| Flocculant concentrate | g/t | 10 | | | |
| Concentrate: | | | | | |
| Concentrate moisture | %m/m, unflocculated | 15 | | | |
| | % m/m, flocculated | 12 | | | |

- the flotation recipe concluded in FME testwork is adequate for part of FMN mineralised material too. As it is not desired to stray from FME suite, the use of a more selective Mg depressant is preferred for all mining zones, together with a higher depressant and frother dosing strength for FMN ores;
- site water quality was found to have no significant impact on copper selectivity in previous flotation testwork (Suntech, 2022);
- the concentrate thickener overflow turbidity measured were <50NTU, producing reasonably clean water for recycling as process water. The first filtrate produced in filtration was not clear, therefore it is recommended that the filtrates be recycled to the thickener feed for clarification of filtrate and recovery of valuables;
- it is recommended to consider a pinned bed clarifier as a suitable alternative technology for use in concentrate dewatering;
- plant cake moistures are expected to be approximately 12% if flocculated or 15% unflocculated. The transportable moisture limit (TML) was not tested. The filter cakes at consistencies up to 15% moisture appeared to be suitable to be transported without fear of slumping. Testing of TML is recommended; and
- The testwork and interpretation present a robust process design.

The review of historical operations and recent testwork have identified differences in milling comminution indices between testwork and back calculated operations. However, the numerous confirmation tests support using the recent testwork values for design. The design has presented a single ball mill to meet the 65,000tpm requirement. It is suggested that the use of two parallel ball mills may provide a more flexible operational option to address this and provide opportunity to operate the plant at a lower throughput if required.

Numerous tests have been conducted on the use of XRF sorting technology to assist with early waste removal to reduce downstream processing requirements. These results, although beneficial, are not showing the extent of benefits expected. As such, the plant design allows for the use of sorters but delays the installation. This delay will provide the opportunity to test larger samples of actual ROM material on pilot scale to more conclusively determine the benefit of ore-sorting, inlcuding the use of different sensor technologies. Only XRF has been tested to date, with XRT, a similar X-ray based technology, touted as possibly a superior option in this case.

Early process testwork did not encounter any problems with deleterious elements which would report to the concentrate. However recent testwork on core samples from two core drill holes into FMN identified the presence of MgO and F which did show slightly elevated concentrations to report to the concentrate. Although this could initiate penalties on the sale of this concentrate, it is believed a slight change in flotation reagent recipe and possible ore blending will mitigate this issue.

### Plant process metallurgy and design

The process plant metallurgy and design were carried out by METC. The plant is designed on a nominal feed rate of 65,000tpm. The process design criteria are presented in Table 17.

**Table 17: FM Project – Process design criteria.**

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Plant feed grade | % Cu, design | 1.27 | Orion, NOMC |
| | % Cu, nominal | 1.19 | Orion, NOMC |
| Plant treatment capacity | tpa | 780,000 | METC |
| Shift roster | shifts/day | 3 | METC |
| Shift duration | h/shift | 8 | METC |
| Crushing | | | |
| Crushing circuit utilisation | % | 76.36 | METC |
| Operating hours | h/annum | 6,598 | METC |
| Design crushing rate | t/h | 120 | METC |
| ROM specific gravity | t/m³ | 2.90 | Testwork |
| Feed size (F100) | mm | 400 | METC |
| Product size (P100) | mm | 20 | METC |
| Design bond abrasion index | g | 0.35 | Testwork |
| SMC - A*b | | <50 | Calculated |
| Milling | | | |
| Concentrator circuit utilisation | % | 90 | METC |
| Operating hours | h/a | 7,776 | METC |
| Design milling rate (incl. preconcentration) | tph | 91 | METC |
| Design Bond ball work index | kWh/t | 24.7 | Testwork |
| Product size (P90) | µm | 106 | Testwork |
| Reagents | | | |
| Flocculant consumption | g/t | 22 | Testwork |
| Frother consumption | g/t | 130 | Testwork |
| Collector 1 consumption | g/t | 120 | Testwork |

| Parameter | Unit | Value | Source |
|---|---|---|---|
| Collector 2 consumption | g/t | 180 | Testwork |
| Depressant consumption | g/t | 140 | Testwork |
| Concentrate production | | | |
| Dewatering plant utilisation | % | 90 | METC |
| Filter feed | t/h, dry solids | 8 | Calculated |
| Filter feed moisture | % m/m | 45 | METC |
| Specific filtration rate | $t/h/m^2$ | 0.465 | Testwork |
| Design concentrate moisture | % m/m | 12 | Testwork |
| Design concentrate grade | % Cu, m/m | 30 | Calculated |
| Design copper recovery | % | 92.50 | Calculated |
| Concentrate production | t/a | 30,991 | Calculated |

The crushing and sorting plant is designed for 65,000tpm throughput. The sorter discard is expected to vary, depending on the mineralogy and head grade, with higher head grades resulting in a lower discard proportion. Based on the sorting testwork, the plant, from milling onward, was designed assuming a discard of 30%m/m of the feed to the sorters. This was later updated to 15% m/m mass rejection to ensure that discard cut-off grade criterion was met. This results in a design feed rate to the downstream (milling) plant of 90tph. The reader is to note that, should the sorters be offline, or if the discard rate is below 15% m/m, then the associated downstream equipment will not be able to handle the full 65,000tpm.

Post crushing and sorting, the fine ore silo provides 12hrs of supply to allow continuous feed to the concentrator plant to provide a buffer between mining operations and the plant.

Flash flotation removes liberated copper minerals at an early stage to prevent over-grinding of ore and to minimise the challenges of recovering fine particles in flotation.

The block flow diagram for the copper concentrator is presented in Figure 19 which reflects both the testwork conducted in 2022 and 2024. The general layout of the plant is presented in Figure 20. The Phase II plant will comprise the following major equipment:

- primary jaw crusher;
- 2x Rados International Technologies (Rados) X-ray fluorescence (XRF) bulk particle ore sorter (coarse and fine);
- secondary cone crusher;
- primary ball mill;
- flotation plant including conditioner, rougher and cleaner cells;
- concentrate filter press and bagging plant; and
- tailings cyclone and thickener.

### Mass and metal balance

A summary of the mass balance is presented in Table 18. The driving criteria, verified through variability testwork, included the following:

- feed head grade is 1.27% Cu at throughput capacity of 65,000tpm;
- sorter discard to waste is 10% m/m with a cut-off grade <0.15% Cu; and
- flotation concentrate produced is 4.0% m/m (including flash float) with a grade of approximately 30% Cu.

**Table 18: Summary of plant mass and metal balance.**

| Parameter | Mass (tpm) | Grade (% Cu) | Cu mass (tpm) | Mass pull (% m/m) | Recovery (%) | Mass pull overall (% m/m) | Recovery overall (%) | Mass (tph) |
|---|---|---|---|---|---|---|---|---|
| ROM feed | 65,000 | 1.27 | 830 | 100.0 | 100.0 | 100.0 | 100.0 | 118.0 |
| Sorter fails | 6,700 | 0.08 | 10 | 10.3 | 0.6 | 10.0 | 0.6 | 12.0 |
| Mill feed | 58,300 | 1.41 | 820 | 90.0 | 99.4 | 90.0 | 99.4 | 90.0 |
| Flotation tails | 56,200 | 0.10 | 60 | 96.4 | 6.9 | 86.5 | 6.9 | 87.0 |
| Flotation conc. | 2,100 | 36.38 | 760 | 3.6 | 93.1 | 3.2 | 92.5 | 3.2 |
| Total tailings | 62,900 | 0.10 | 60 | 96.8 | 7.5 | 96.8 | 7.5 | 97.0 |

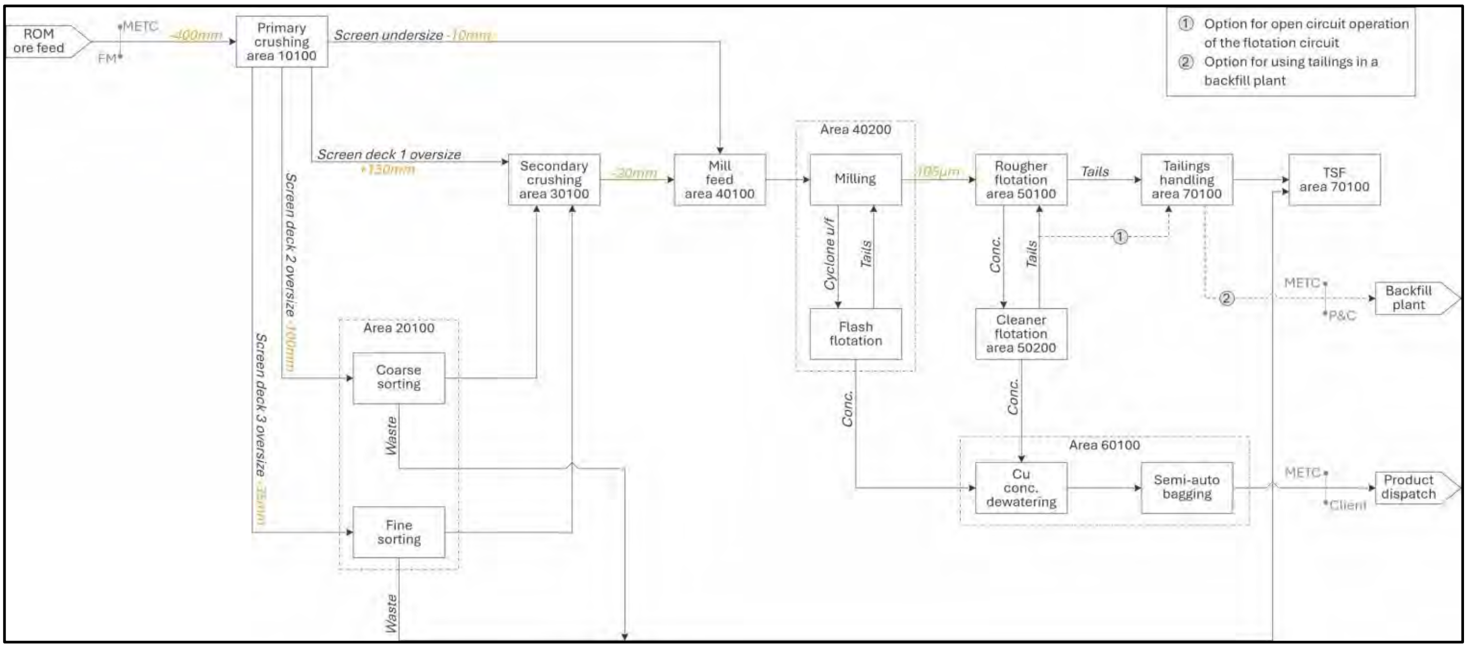



**Figure 19: Proposed block flow diagram.**

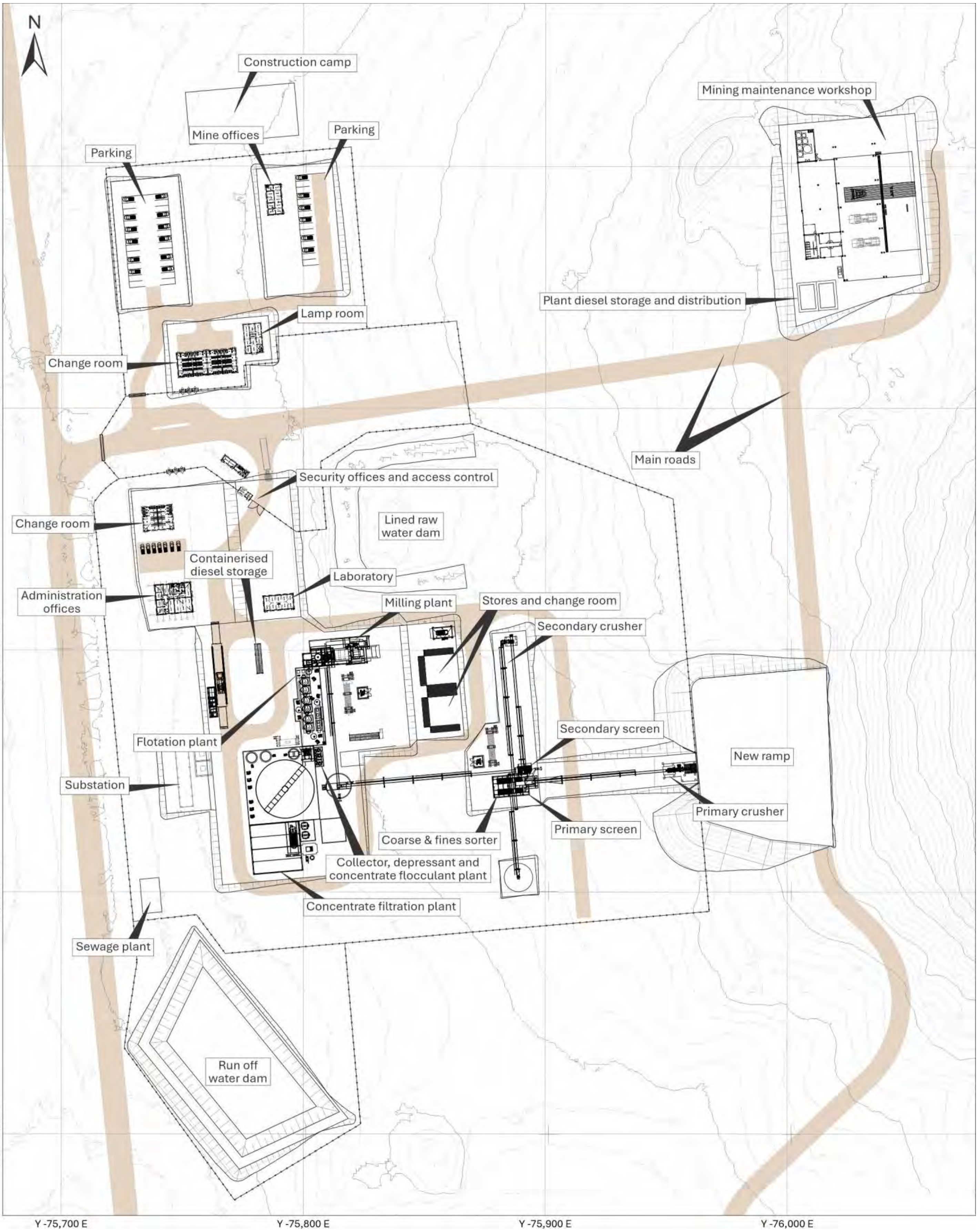



**Figure 20: General plant layout.**

## Copper recovery model

The FM Project copper recovery regression model was derived using the various Feasibility Study flotation test data conducted using FMN and FME domain drill cores and FMN pre-concentrated and ROM composites. The FMN drill core samples represent the expected mine deposit during the first few years of copper production, while the FME drill core samples represent the mine deposit which will form most of the copper production for the LOM. FMS mine deposit testwork on recent core drill samples was not yet completed by the time of writing this report and thus not used in the recovery model estimate. Results from testwork on core samples tested in the 2022 testwork campaign indicated copper recoveries and concentrate grades similar to FME results are achievable. The FME composite samples represent the expected mine blend with a feed grade of 1.27% Cu. Testwork data showed a strong relationship between concentrate mass pull, achievable upgrade ratios, recovery and, consequently final concentrate grade.

The modelled LOM recovery estimate for copper as presented in Table 19 reflects the steady state recovery profile relative to plant feed grade.

**Table 19: FM Project - Copper recovery algorithm.**

| Feed grade range (% Cu) | Conc. grade range (% Cu) | Recovery caps (%) |
|---|---|---|
| 0.70 - 2.00 | 25 - 38 | 95.1 @ 25% conc. grade |
| | | 94.6 @ 30% conc. grade |
| | | 93.6 @ 38% conc. grade |

## Metallurgical Costing

The base date of the processing plant cost estimate is Q4 2024. The METC design and costing has provided capex and opex to a level of accuracy of +/- 15%.

The capex estimate for the process plant equipment supply and spares is ZAR645m, including a contingency of ZAR43m. This amount excludes any project contingency. The cost estimate captured the mechanical equipment, civil, structural, platework, pipework, electrical and instrumentation as well as detailed engineering and design. Allowance has also been made for construction management, site supervision and commissioning costs. The capital cost estimate has been prepared making use of recent market related quotations. Up to date market related pricing has been obtained for the major mechanical equipment. Updated costing has been obtained for the earthworks, civil and structural steel works packages.

The opex cost estimate from first principles is ZAR385.13/t milled for Phase I (32.5ktm) and ZAR291.40/t milled for Phase II (65.0ktm). The difference in these rates is on account of the fixed cost portion of processing opex (labour, TSF operations for example) being allocated over a reduced processing tonnage in Phase 1 of the Project. In practice the average processing cost over the LOM includes varying processing rates as well as savings achieved in energy costs through energy purchases from a renewable energy power purchase agreement.

The production of copper concentrate utilises conventional and well understood technology which has been supported by the results of recent metallurgical testwork.

## Near surface geotechnical investigations

Geotechnical near surface investigations are typically used to determine and identify possible problematic soils, depth of bedrock, presence of water seepage, etc. These were undertaken InRoads (Pty) Limited (InRoads) in and around the proposed TSF site.

### Tailings Storage Facility (TSF) site

The geotechnical investigation of the TSF site was key to the design, depositional strategy, understanding of the seepage regime below the TSF and the potential environmental impact associated with it, which ultimately influenced the cost of the TSF. A total of 27 test pits were excavated, 23 from the proposed TSF footprint and four from the location of a previously planned runoff water dam (ROWD) footprint. Thirteen test pits were also excavated within four possible borrow pit sites specifically for sourcing sand for use as a cushion for the high-density polyethylene (HDPE) liner for the TSF and ROWD.

The planned TSF and ROWD footprints are predominantly blanketed by loose to medium dense silty sand of hill wash origin which almost extends to the bottom of most of the pits at depths of between 0.2 – 3.0m, averaging 0.8m, where it is underlain by residual granite and occasionally dorbank. Most of the soils occurring within the site classify as clayey sand and silty sand soil types. The undisturbed and remoulded samples have an effective friction angle of 30 – 39° and an effective cohesion ranging from 0 - 5kPa. The permeability coefficients of the undisturbed and remoulded samples are generally of the order of 10-6m/s. Excavating throughout the sites is likely to be difficult and hard excavation can be expected below an average depth of 1.0m.

The reader is to note that post the InRoads (2023) report, Epoch has determined that only the fault lines beneath the TSF need to be lined, not the entire TSF footprint area. Therefore, the bedding material requirement has been significantly reduced compared to initial estimate of 120,000m³. Sufficient bedding materials for beneath the TSF HDPE lining (over faults only) is available on site.

No adverse soil conditions have been identified beneath the TSF and the previously planned ROWD.

Plant site
No specific geotechnical assessments of the soil conditions beneath the proposed plant site have been carried out. However, two test pits were excavated for Borrow pit 3 (BP3) which is largely representative of the plant site, and four test pits excavated for BP4 <200 m north of the proposed plant site. The sites were pitted and visually assessed during the geotechnical investigation for borrow pit material. Therefore, for the purposes of this Feasibility Study, the subsurface horizons present in the plant site, and their associated geotechnical characteristics are expected to be similar.

## TSF design

Epoch consultants were appointed by NOMC to carry out the Feasibility Study for the TSF. The terms of reference for the TSF design were a single paddock, valley containment facility which could accommodate 4.07Mt (dry) of tailings at a production rate of 32,500tpm over a 12yr LOM. The site selection was based on the findings of a site selection study in 2021 and also that:

- the TFS needed to be located within the existing MR to avoid any additional permitting requirement which would result in significant delays to the development of the FM Project;
- the location of the existing evaporation paddocks and pond, made this specific site negatively impacted already; and
- by removing these contamination sources prior to TSF deposition, the FM Project would significantly improve the current environmental status.

The battery limits for the TSF design were as follows:

- downstream of the point where the slurry delivery pipeline intersects the TSF containment embankment;
- upstream of the first flange exiting any return water facility's outlet pipe, before any pump station or similar return facility; and
- the boundary fence around the TSF.

The following was concluded from the detailed design of the FM Project TSF:

- based on the expected tailings production rate of 32.5kt/m, the TSF will reach a tailings elevation of 789.5mamsl at the end of the 12yr LOM;
- TSF has additional capacity post the 12yr LOM tailings volumes;
- Moss Group classified the tailings as a Type 3 waste with the waste rock and coarse ore rejects also classified as a Type 3 waste subsequently requiring Class C liner;
- the preferred liner system which involved lining over the fracture zone as well as the upstream slope of the Raise 1 embankment, returned seepage rate entering the basin equivalent to natural recharge rates;

- the geohydrological study concluded that the removal of the evaporation paddock and pond material together with lining the fracture zones reduced the mass plume movement and extent of the plume when compared to the do-nothing option;
- the deterministic water balance yielded average returns of 36%. Returns as high as 66 % can be expected during the wet season with a low of 4 % expected during the dry season;
- stability analyses indicated that the downstream slopes of the facility have factors of safety well above that of the required 1.5 for static conditions;
- stability analyses indicated that the downstream slopes of the facility have factors of safety well above that of the required 1.1 for pseudo-static conditions;
- a high-level assessment of the effect of the 1: 10,000yr storm and seismic event yielded factors of safety above 1.5 and 1.1 for static and pseudo-static conditions, respectively; and
- based on the nature of the materials to be deposited in the TSF and the assessment criteria specified by SANS 10286:1998, the TSF is a medium hazard facility. The number of residents downstream of the TSF is unknown and satellite imagery indicates no large settlements or residential areas. NOMC can confirm that the number of residents in the zone of influence will not exceed 10.

The capex cost estimate for Raise 1 was prepared by Clifford Hutton (Pty) Limited in September 2023 and was estimated at ZAR81.5m. The costing was based on a detailed bill of quantities and market related rates at the time of preparation. The costing includes all lining, pumps and piping for the required for the complete TSF, contingencies and P&Gs. The capex has been escalated in the financial model and may be considered appropriate to a Feasibility Study, i.e. costing within the range +/- 15%.

The costing for Raises 2-4 has been included as opex and is based on detailed estimates of the respective volumes.

### Ore Reserve estimate

The Ore Reserve estimate presented in this Feasibility Study Report has been prepared by Sound Mining in conjunction with Mr Jonathan Hudson of JHK in accordance with the JORC (2012) and represent NOMC's first Ore Reserve estimate for the FM Project.

The Ore Reserve estimate is based on the Mineral Resource Estimates and models compiled by Z* for FMN, FME, FMS (refer ASX/JSE release 28 August 2023) and by Orion for FM-Nab (refer ASX/JSE release 28 March 2025). Mineral Resources are reported inclusive of Ore Reserves. The four Mineral Resource models were supplied to Sound Mining. The FMN, FME and FMS models were in a Datamine format: 022023_FME_FIN, 022023_FMN_FIN, 022023_FMS_FIN. FM-Nab was in a comma delimited format: FMNAB-CLASS; converted into Datamine file format. These models were used as a basis for the mine design and stope optimisation process.

The cut-off grade used for the stope optimisation and mine planning of FMN and FME is 0.7% Cu based on previous costing. A 0.8% Cu cut-off grade was used for FMS and FM-Nab based on latest costing from the financial model. A marginal cut-off of 0.6% Cu was calculated and used for all the marginal mining blocks below the cut-off grade with shared development. A marginal cut-off was used for FM-Nab, which is used as supplementary tonnage in the LOM plan for the process plant. The cut-off calculation is based on the total direct cost of mining, processing and metal sales, including sustaining capital, but excluding overheads. The marginal cut-off calculation excludes the waste development costs, fixed processing costs and overheads. MSO Datamine software was used in conjunction with the calculated cut-of grades to delineate the economic mineable blocks for mine planning of FME and FMS. The MSO results for FMN and FM-Nab yielded irregular, impractical stope shapes, with unacceptably low grades. A selective manual approach was therefore used to design the stopes, targeting the higher-grade mineral resource areas.

The LOM plan supporting the Feasibility Study includes Inferred Mineral Resources (18% by tonnage). An alternative mine plan ('Reserves only plan'), based on only Measured and Indicated Mineral Resources, was prepared and used to support the estimation and reporting of a Probable Ore Reserve. The Reserves only plan is economically viable and confirms that the Inferred Mineral Resources included in the LOM plan are not the determining factor in project viability. The Ore Reserve estimate is derived from the respective mine schedules. The mine plan is considered technically achievable and economically viable. Material modifying factors have been considered (pillar design and mine extraction, dilution and mining loss). The modifying factors applied in determining the ROM ore in the LOM plan are presented in Table 20. The stoping dilution modifying factors consider planned and unplanned dilution. An unplanned stoping dilution of 2% for mixing of waste and backfill contamination was applied to all the mines based on benchmarking. Note that for FMS and FM-Nab a 25cm skin was applied to the hanging wall and footwall of the stope shapes as part of the MSO optimisation process to more accurately simulate the impact of dilution. The 2% stoping dilution for FM-Nab and FMS represents the unplanned dilution only.

**Table 20: FM Project - Modifying factors.**

| Description | Units | FMN | FME | FM-Nab | FMS |
|---|---|---|---|---|---|
| Additional development overbreak | % | 7 | 7 | 7 | 7 |
| Additional stoping dilution (planned and unplanned) | % | 5 | 5 | 2 | 2 |
| Pillar mining extraction factor | % | 50 | 50 | N/A | 50-67 |
| Mining loss development | % | 3 | 3 | 3 | 3 |
| Mining loss stoping | % | 5 | 7 | 7 | 7 |

Notes: for FMS and FM Nababeep a 25cm skin was applied around the stope shapes as part of the MSO optimisation process to more accurately simulate the impact of dilution. The 2% dilution in the table above represents the unplanned dilution only. Source: Mr J Hudson.

The Ore Reserve estimate is presented in Table 21. All Measured and Indicated Mineral Resources were converted to Probable Ore Reserves. The Measured Mineral Resource at FMN has been converted to a Probable Ore Reserve due to the reduced level of confidence in the modifying factors, costs and planning assumptions specific to the location of the Measured Resource blocks . The proportion of Measured Mineral Resources in the mine plan is approximately 4% by tonnage. Mineral Resource to Ore Reserve reconciliations were compiled for each of the four FM Project mining areas on ore tonnes and copper content, highlighting the impact of the modifying factors to the final Ore Reserve estimate.

The cut-off grade used for the stope optimisation and mine planning of FMN and FME is 0.7% Cu based on previous costing (Sound Mining, 2023).  A 0.8% Cu cut-off grade was used for FMS and FM-Nab based on recent costing. A marginal cut-off of 0.6% Cu was calculated and used for all the marginal mining blocks below the cut-off grade with shared development. A marginal cut-off was used for FM-Nab, which is used as supplementary tonnage in the LOM plan for the process plant. The in-situ cut-off calculation is based on the total direct cost of mining, processing and metal sales, including sustaining capital and overheads, net copper price received post Net Smelter Return (NSR) conversion, unplanned dilution and copper plant recovery. The in-situ marginal cut-off calculation excludes the waste development costs, fixed processing costs and overheads.

**Table 21: FM Project – Summary Ore Reserve estimate.**

| Location | Date | Cut off (% Cu) | Ore Reserve category | Tonnes (t) | Grade (%Cu) | Contained copper (t) |
|---|---|---|---|---|---|---|
| FMN | 28-Mar-25 | 0.70 | Proved | - | - | - |
| | | | Probable | 1,238,000 | 0.99 | 12,300 |
| | | | Subtotal / average FMN | 1,238,000 | 0.99 | 12,300 |
| FME | 28-Mar-25 | 0.70 | Proved | - | - | - |
| | | | Probable | 2,635,000 | 1.21 | 31,900 |
| | | | Subtotal / average FME | 2,635,000 | 1.21 | 32,000 |
| FMS | 28-Mar-25 | 0.70 | Proved | - | - | - |
| | | | Probable | 2,026,000 | 1.24 | 25,100 |
| | | | Subtotal / average FMS | 2,026,000 | 1.24 | 25,100 |
| FM-Nab | 28-Mar-25 | 0.50 | Proved | - | - | - |
| | | | Probable | 215,000 | 0.87 | 1,900 |
| | | | Subtotal / average FM-Nab | 215,000 | 0.87 | 1,900 |
| | | | Total FM Project | 6,114,000 | 1.16 | 71,200 |

Notes: No Inferred Mineral Resources are included in the Ore Reserve estimate.
Tonnage and grade reported as delivered to the metallurgical plant.
Measured Mineral Resources at FMN have been converted to Probable Ore Reserves due to insufficient confidence relating to the modifying factors, costs and planning assumptions.
The proportion of Measured Mineral Resources in the mine plan is approximately 4% by tonnage.
Probable tonnes rounded to nearest 1,000t, copper grade rounded to two decimal places, copper content tonnes rounded to the nearest hundred. Totals may not tally due to rounding.
Reported in accordance with the JORC Code (2012).

The premise of the Reserve Only plan and production schedule was based on the full LOM plan as shown in the Executive Summary for the FM Project but excluding Inferred Mineral Resources. Inferred Mineral Resources of approximately 18% by tonnage in the LOM plan have been excluded from the Reserves only plan and Ore Reserve estimate. All development in the Reserves only plan classified as Inferred Mineral Resource is trammed to waste.

The Reserves Only plan is considered technically achievable and economically viable. The revenue calculation (in real monetary terms) is premised on a forecast long term copper price of USD9,369/t, an exchange rate of ZAR/USD 18.90, a payability deduction of USD96/t, treatment and refining costs of USD81/t which results in a net smelter return of 93.6%. The forecast copper price of USD9,369/t is based on analyst consensus commodity price forecast.

There is a reasonable expectation that the Inferred Mineral Resources for the four mining areas will be converted to Indicated Mineral Resources and Ore Reserves which would add significant value to the FM Project. The ranked valuation sensitivity shows that the FM Project is most sensitive to copper grade and price but also sensitive to mining operating expenses.

A risk assessment was conducted on the FM Project Feasibility Study with risk ratings and mitigating actions. The Competent Person is not aware of any material impediments to the FM Project.

## Surface infrastructure

The design of the surface infrastructure required for the successful development and operation of the FM Project is discussed in the sections to follow, with the proposed site plan presented in Figure 6.

### Access and roads

The existing public gravel road will be upgraded, repaired and treated with a dust suppression agent. Haul roads will be constructed to transport ore from the various mine portals to the ROM pad at the plant and waste rock to the TSF embankment. These will be constructed within the controlled mine area to avoid sharing of roadways with private vehicles, as far as possible, and to minimise construction effort.

### Security and access control

The current site security includes a security boom gate across the access road (Section 1.5.1). Fencing of the exclusive active mining area will include a 5.3km long, 1.2m high stock fence to ensure no unauthorised access of people or livestock. In addition, a 2.4m and 1.5km long high security mesh fence will enclose the high security areas, including the process plant area, mining offices, change houses and workshops complex.

NOMC intends implementing a comprehensive integrated security strategy specific to the FM Project site. Entry to the high security areas will be under the supervision of the security department, with automated biometric access control at booms and turnstiles. Security surveillance will be undertaken using CCTV cameras on the perimeter fencing of the plant and mining areas and within selected buildings. Pan-tilt-zoom cameras will be located at secure high points in the mining area to monitor traffic entering and within the mining area as required.

Run of mine (ROM) pads

Each portal will have an associated ROM pad situated on surface for storage of the ROM material prior to transport to the processing plant. For FMN, ROM material will be hauled from underground directly to the plant ROM pad using underground dump trucks. In the case of FME and FMS, ROM material will be transported to a surface ROM bin at the portal via a decline conveyor, FMS ROM material will be trucked to a pad near the portal and transferred to the plant ROM pad by surface trucks.

Waste rock dump (WRD)

Each portal will have an associated WRD. All mines will haul waste from underground to the WRDs using underground haul trucks (or in the case of FME, by conveyor once installed) Waste will be loaded from the WRDs by FEL onto tipper trucks and transferred to the TSF embankment, where the waste will be placed and compacted according to the requirements of the embankment design.

Explosives storage magazine

A bulk emulsion storage facility will be installed on surface near the FMN decline portal which will supply all the mines with emulsion explosives for development and stope blasting operations. The bulk emulsion storage tanks will be supplied and installed by the explosive's supplier. Provision is made for two 30t vertical silos. No bulk storage of cartridges and explosives accessories will be required on the mine site as this will be the responsibility of the explosives supplier in existing magazines located within 10km of the mine site near Nababeep. An underground magazine will be constructed on 42 level in FMN for the storage of two weeks supply of accessories. FMN and FME will each be provided with a mobile emulsion charging unit.

Fuel depot

Refuelling of all utility vehicles and haul trucks will be carried out at the central bulk fuel depot near the surface workshops. Refuelling of other less mobile machines, including LHDs and drill rigs will be done using an underground rated utility vehicle mounted mobile refuelling tank fitted with the necessary pumps, metering and safety equipment.

Mining offices, stores and workshops

The FMN mining complex will include the main workshops, lamp room and change house facilities which will also service the other mining areas. Offices and stores will be located centrally in the office complex near the process plant (Figure 6). These facilities will be utilised for the FMN, FME, FMS and FM-Nab mines in the current FM Project scope.

Change house, lamp room and laundry

The FMN mining complex will include the change house facilities, lamp room and laundry which will also service the other mining areas. The construction of the lamp room and change house will be prefabricated type, fully equipped from source.

Plant ROM stockpile

ROM material will be delivered to the ROM stockpile to be located adjacent to the plant (Figure 6) from each of the respective mine portal ROM pads by truck. The ROM pad is designed to accommodate 100,000t of ore, to facilitate the stockpiling of high- and low-grade ore separately in demarcated areas.

Process water dam (PWD)

The basic structure for the PWD exists and is located adjacent to the FMN decline portal. This dam will be re-profiled and lined over an area of 4,000m² to provide an estimated 8,500kl of storage for the processing plant. This dam will initially receive the water currently accumulated below the 103 level of the existing FMN workings which will be dewatered prior to the commencement of further development of the FMN.

Tailings storage facility

A co-disposal TSF will be constructed to the east of the access road as a single paddock, valley containment facility. The TSF will be partly positioned over the existing evaporation paddocks and pond. At full capacity the TSF will have a maximum footprint of 29.913ha, a maximum wall height of 27m and will accommodate 3.761Mm$^3$ of material, including 2.797Mm$^3$ of tailings.

Processing plant offices, change house, stores and workshops

The processing plant area will include offices, stores and workshops dedicated to processing operations. These will be located within the fenced and access-controlled plant area. Consistent with the strategy to minimise permanent concrete and immovable structures on the site, the process plant workshops and stores will be constructed using shipping containers for the lock-up portions of the facility, forming the walls of the facility.

Laboratory

An onsite laboratory will be established in the plant area. Broadly, the function of the onsite laboratory is to provide a quick turn around on results to enable process control, metal accounting and concentrate grade control in the operation. The laboratory is expected to receive a total of 100 samples per day from these work streams. The sample matrix used for laboratory design includes 20 samples / day for grade control and 10 samples / day special samples. Exploration drilling samples will be analysed externally by accredited laboratories.

Bulk water supply

The water balance for the entire site was prepared by Orion in conjunction with their specialist consultants for submission as part of the IWUL application. The mining operations are water positive, receiving water from fissures, backfill and service water (222,868 kilo litres per annum (kl/annum)) and losing water only to ore and waste mining and backfilling (75,353kl/annum). The nett (155,652kl/annum) will be pumped to the PWD for use in the plant.

The plant is expected to consume or lose 425,201kl/annum of water to ore sorter waste, concentrate, backfill and tailings. The plant will receive water from feed ore, TSF return water, FM Project sewage plant, underground workings and storm water. The balance or make up water (129,217kl/annum) will be supplied from the Nababeep Wastewater Treatment Works (WWTW) and four process water boreholes (Figure 6).

The primary long-term source of make-up water for the processing plant is the Nababeep WWTW, which is the sewage treatment plant operated by the NKLM and services the town of Nababeep. This plant currently discharges approximately 1,000kl/day of untreated sewage into the Nababeep stream. Refurbishing of this plant is underway by NKLM using funding from the National Government, with assistance from NOMC. NOMC have provided funding of ZAR1.9m in terms of the company's SLP commitment and assistance with project management and supervision of the refurbishment process.

NOMC has an off-take agreement with the NKLM for 1,000kl per day of treated effluent from the WWTW at no cost.

Bulk power supply

The total power requirement for the FM Project is 10 MVA, with peak operating power of 8,729kW and total energy consumption being 58 Mega Watt hours per annum (MWh/annum). This includes the simultaneous operation of three mining production centres, which is only likely to occur for a limited period when production from a depleting section overlaps with production from a new mining section being developed.

The process plant will be equipped with an 11kV distribution switchboard, for the distribution of power at 11kV to local containerised step down substations and switchboards within the plant area, located near to the various processing areas to minimise cable runs required for low-tension supply to motors. A network of 11kV overhead lines is planned to service the remote mining centres, with 11kV armoured cables installed in declines and access shafts to extend electrical supply for the underground drilling, ventilation and pumping equipment.

The requirement is therefore to provide an 11kV supply of 5MVA for the plant demand, with a further 5MVA supply via overhead lines to the mining sections. Two viable alternatives for a bulk power supply to the FM Project were considered by NOMC:

- a direct 66kV Eskom supply from the 66kV line to Henkries along the N7; or
- a NKLM supply from the existing Old Nababeep substation (in use by the neighbouring Copper 360 operations).

It was concluded that the optimum solution would be to construct a new 66/11kV substation on the mine site adjacent to the plant. This substation would require 66kV incoming supply from either Eskom directly, or from the Old Nababeep substation.

The proposed 11kV reticulation was modelled in to simulate the load flow parameters and determine the appropriate conductor sizes required to safely supply the required steady state load. Under normal operating conditions, all lines will operate within acceptable current and voltage drop limits.

The 66kV reticulation connecting Nababeep, Carolusberg and Okiep to the Eskom Nama STS substation near Springbok was originally built and operated by OCC until the company closed in 2003 and the infrastructure was donated to NKLM. Since 2003, following the cession of mining operations, the notified maximum demand for the supply point from Eskom was reduced to 4.5MVA, although the installed distribution equipment had not changed. Much of the switching and protection equipment needs to be refurbished or replaced. The overhead lines, however, were well constructed and are currently operating reliably.
The FM Project processing plant is situated approximately 5km from the 66kV substation on the old mine site in Nababeep, representing an opportunity to provide a 66kV or 11kV supply to the mine site at relatively low capital cost and short construction time.

An application to NKLM for a 10MVA supply was approved by management and a joint Power Supply Steering Committee was established with NKLM to expedite the finalisation of a comprehensive Power Supply Agreement. An agreement has been concluded in principle to purchase electricity through the NKLM network at an electricity supply tariff based on a margin on "cost from Eskom" of 10%.

It is estimated that the FM Project will require approximately 1.5MVA power for plant construction and the extension of development in the FMN. The NKLM existing 11kV capacity at the Old Nababeep substation is sufficient to supply the 1.5MVA required and the NKLM have agreed to a connection, with NOMC free to continue with construction immediately.

The inability of Eskom to consistently provide sufficient power to supply South Africa's needs introduced the concept of "load shedding" where electrical load is shed across the various users during different times. While the reliability and performance of Eskom power stations has undoubtedly improved, the high cost of generation and non-payment by municipalities is putting upward pressure on Eskom electricity tariffs. This is borne out by the recent application by Eskom for a 36% tariff hike. The implication for the FM Project is that a combined back-up and alternative energy supply solution must be provided to mitigate against the possible insecurity of supply, as well as the increasing tariffs from Eskom.

It is proposed to delay any commitment to a PPA until the FM Project is well into the construction phase, by which time it is anticipated that there will be more clarity on the path and structure of future Eskom tariffs. In the interim, backup diesel generators on rental will be installed at the plant substation to provide back-up for possible power outages during the construction phase. This will be sufficient to support the underground development operations at FMN and FME, as well as the plant construction in the event of Eskom power failures.

Effective available roof space over the offices, change houses and carports will be fitted with solar panels and hybrid inverters to take advantage of the abundant sunshine. This will have the benefit of offsetting the energy consumption of the infrastructure and providing clean uninterrupted back-up power to the office complex. It is estimated that approximately 238kWp of solar could be accommodated in this manner.

Offices and general administration
The FM Project will utilise the existing offices in Nababeep for senior management, administration and technical services staff. The Nababeep office complex includes an area of approximately 5,000m$^2$ under roof, of which less than 500m$^2$ is currently utilised. It is planned to systematically renovate sections of the building to accommodate expansion of the exploration core yard, as well as satisfy the training needs of the business.

Accommodation
No accommodation will be provided by the FM Project as sufficient private housing is available in the nearby towns of Nababeep, Okiep, Carolusberg and Springbok, all located less than 20km from the project area. In terms of agreements with the local community, preference will be given to local applicants for the filling of vacancies.

### Information and communications technology (ICT)

Cellular networks are available in the area, although reception is poor on the FM Project site. The backbone of communications for the FM Project will be via a dedicated wireless internet feed from a high site established on the farm Nababeep 134 Portion 16, currently owned by Mora Please and which is in the process of being acquired by NOMC.

The FM Project is required, in terms of the MPRDA, to install proximity detection and collision avoidance systems (CASs) on all mobile machines and personnel present within the mine site, either on surface or underground. NOMC intends to use this system as the core of an integrated mine-wide communication and data distribution system.

Provision has been made to establish in-house Mine planning and scheduling capabilities. Specialist technical equipment and software will be required to operate the FM Project which will include mine scheduling software, survey and ventilation instruments.

### Waste management

Waste reduction and avoidance will be primarily achieved through selection of suppliers that provide operational consumables and materials with minimal packaging needs and careful stock management to ensure goods are utilised before their expiry date. NOMC will develop and implement separate programmes to deal with non-hazardous solid waste / general waste, hazardous waste and organic waste.

### Sewage

A containerised package sewage treatment plant will receive all grey and black water generated in the change houses and offices in both the plant and mining areas. This plant is designed to receive up to 25kl/day of wastewater.

### Conclusions

The FM Project is located in an historical mining area, within 3km from the town of Nababeep. As such regional infrastructure is well established and comprehensive, although roads, power sources and the local wastewater treatment plant will require some restoration work. The various mining nodes associated with the FM Project are located within 3km of each other, with a central plant, thus facilitating the sharing of infrastructure between these and future satellite mining sections.

The existing offices and workshops in Nababeep, which NOMC has purchased and is occupying, will enable proximal project management during the development phase and administration thereafter. This office complex although old and in need of renovation in certain areas, has ample available office space, as well as numerous fireproof strongrooms, some of which are currently used for the storage of hard copy legacy maps and data.

Although the existing infrastructure located on the FM Project site is minimal, the existing decline portal and associated development at FMN offers a significant advantage to the FM Project, in that the development time to steady state production from FMN is significantly reduced compared to a greenfield development. It also facilitates valuable firsthand insight into the mining conditions that can be expected in the FM Project area.

The position of the proposed TSF over an existing environmentally impacted location (the evaporation paddocks) will ensure that FM Project impact to the site is kept to a minimum. NOMC is currently assisting the NKLM with the refurbishing of the Nababeep WWTW which is a commitment in terms of the SLP in the MR as well as a requirement to provide good quality process water for the FM Project. These measures will remove the sources of serious pre-existing environmental impacts in the valley, reducing the overall environmental impact of the operations.

The investigation into the options for the bulk power received significant attention. The performance of Eskom in terms of the cessation of load shedding has undoubtedly improved, yet the non-payment for electricity by municipalities and other Government entities poses another risk to supply in the form of high energy costs.

From the outset, municipalities look to mining companies for assistance wherever possible, hence it is a reality that mines are necessarily involved the management and particularly the maintenance of critical infrastructure such as water, electricity and wastewater treatment. NOMC is already having an impact on the refurbishing works for the Nababeep WWTW.

By opting for a NKLM bulk electricity supply, the FM Project will see reduced capex of almost ZAR80m compared to an Eskom connection. The annual revenue benefit likely to accrue to the NKLM from electricity sales is likely to be ZAR11m per annum, which will be recognised by the NKLM and local community as a significant positive impact by NOMC to the host community. This will open the door for energy savings through the use of renewable energy in one form or another in collaboration with the NKLM, once construction is underway.

### Environmental baseline descriptions

The environmental baseline descriptions provide a detailed assessment of the receiving environment for the FM Project. They comprise a series of specialist studies which are reported on, by discipline, in the sections to follow. The baseline descriptions have provided information required to compile the EIA for the MR application, EMPr and IWUL application. In addition, these form the basis on which all future impacts of the Project will be measured. The environmental aspects of the FM Project were coordinated by ABS Africa, who is NOMC's appointed Environmental Assessment Practitioner.

All baseline studies, as required by the EIA, and the approval of the MR and IWUL have been successfully completed. Studies have included the following aspects of the FM Project:

- soils, land use and land capability;
- surface water and aquatic ecology;
- hydropedology;
- terrestrial ecology;
- air quality;
- noise;
- socio-economic;
- heritage; and
- palaeontology.

Taking cognisance of the location of the FM Project in an isolated and hidden valley, away from significant population centres, the following studies were not required:

- visual (aesthetic) impact;
- blasting and vibration; and
- traffic.

Although a traffic study was not required from a environmental perspective, NOMC is required to contact SANRAL to obtain written permission prior to the transportation of abnormal loads.

Although the Project most certainly has an impact on the receiving environment, none of the impacts resulted in a "No-Go" option. Post the mitigation measures set out in the Final Environmental Impact Assessment Report of 2019 (FEIR, 2019) all impacts were assessed to be very low to medium low and medium, with the only exception being the potential impact rated as medium high to the groundwater quantity and quality. During the IWUL application further, more detailed studies were undertaken which have enabled this risk to be further mitigated.

The following physical characteristics of the FM Project and environmental choices have reduced inherent potential impacts on the baseline environment:

- rural location away from any settlements of significant size. Those present (numbering approximately three) are situated in the south of the MR, and away from the location of the major infrastructure;
- underground mining which significantly reduces the visually impact but also reduces those associated with blasting, noise and emissions;
- prevailing wind directions where it is located downwind of sensitive receptors;

- reduced TSF footprint because of backfilling of tailings into the mined out areas;
- positioning of the TSF footprint on an already environmentally compromised site;
- concentrated plant and offices footprint to the east of the access road and adjacent to the existing FMN decline, which is already an environmentally impacted site; and
- the MR is located in an area with an arid climate and low rainfall and therefore all watercourses are non-perennial, and no wetlands exist, except for the Nababeep stream which being artificially fed with water sewage from the Nababeep WWTW.

Positive impacts on the baseline environment are significant and will include:

- removal and containment of the evaporation paddocks and pond which will remove the current source of groundwater pollution;
- renovation of the WWTW which will significantly improve the surface water quality in the Nababeep stream and return it to its natural non-perennial state;
- upgrading the access road;
- creation of employment opportunities and job security with the associated economic benefits;
- income generation for landowners; and
- production of copper for sale on the international markets, bringing export revenue to the country.

## Environmental, social and governance initiatives

Orion is focussed on meeting the growing global trend for corporates and stock exchanges alike to assess compliance and the level of compliance of individual modern companies against a list of recognised environmental, social and governance (ESG) parameters.

Orion has developed a Sustainability Framework which provides a holistic and integrated approach to sustainability management. It is based on a process of continual improvement combined with supporting the objectives of the United Nations Sustainable Development Goals (SGDs). Orion's top four priority SDGs are key to ensuring responsible resourcing within the global mineral value chain with the company aiming to:

- substantially increase the number of youths and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship (SDG 4);
- achieve higher levels of economic productivity through innovations and decent work (SDG 8);
- increase resource-use efficiency through adoption of clean and environmentally sound technologies and industrial processes (SDG 9); and
- ensure responsible, inclusive, participatory and representative decision making at all levels (SDG 16).

## Global compliance gap analysis

The International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability (2012, as amended) are a collection of standards developed by the IFC for managing social and environmental risks and impacts with the aim of enhancing development opportunities. The standards provide guidance on identifying and managing risks and impacts and include guidance on stakeholder engagement and disclosure obligations. Comprising of eight standards supported by several general and sector-specific technical guidelines, the IFC performance standards (PSs) are recognised as a global good practice standard for environmental and social performance.

The Equator Principles (EP) (2020, as amended) have been developed in conjunction with the IFC, in an attempt to establish an international standard with which companies must comply with in order to be considered for project financing from Equator Principles Financial Institutions (EPFIs). The latter have adopted the EP as a framework for identifying, assessing, and managing environmental and social risks when financing projects. EPFIs are required to only provide finance and loans to projects that meet the relevant requirements of Principles 1 to 10

ABS Africa, an independent environmental consulting and advisory company, conducted a high-level gap analysis of the FM Project against the requirements of the IFC's PS and the EP. This review concluded that the FM Project broadly complies to the IFC PS 1 to 8 and EP 1 to 10. A total of 16 action plans have been developed to address the compliance gaps identified in FM Project's 2022 gap analysis. With these action plans implemented, it is expected that adequate management controls will be in place to ensure ongoing compliance to the IFC PS and EP.

A single gap was identified relevant to IFC PS 1 and 3 and EP 1 and 2. To close this gap the preparation and costing of a detailed plan for the removal and disposal of the historically contaminated material is required, ahead of the TSF embankment wall extension. The reader should note that the TSF embankment wall extension at this location will only be required in year 4 or beyond of the LOM.

### Carbon neutral footprint

The global mining industry is responsible for 10% of greenhouse gas (GHG) emissions and 10% of the world's energy consumption, with the majority of this energy sourced from fossil fuels. South Africa, heavily reliant on the mining industry, is the 14$^{th}$ largest emitter of GHGs, with its carbon footprint largely due to the heavy use of fossil fuels for power generation. South Africa's copper production also has amongst the highest unit carbon emission footprints in the world.

The FM Project aims to manage GHG emissions by focusing on reducing the amount of carbon dioxide emitted. Carbon dioxide is the main GHG contributing to the greenhouse effect - widely accepted as the mechanism by which global temperatures are detrimentally increasing. The Project is to be developed targeting a carbon neutral footprint for all metals being produced, i.e. there will ultimately be no direct emissions from the production activities of the Project. To achieve this reduction in carbon dioxide emissions, a study into the best means to establish a carbon neutral roadmap is recommended.

The FM Project has inherent advantages to achieving a carbon neutral footprint in that:

- the primary commodity to be produced (copper) is an essential contributor to both Fourth Industrial Revolution (4IR) technologies and a low carbon future;
- a new mining operation is to be established which can wholly adopt the most current technologies and inculcate operating philosophies that are in keeping with contemporary standards for global sustainability; and
- the Project is located within a geographic region with some of the highest solar and wind energy resources on the African continent for renewable energy generation. The backbone infrastructure for the development of renewable energy facilities is either already in place, under development or planned in the vicinity.

### Environmental and social impacts, risks and management

The environmental and social impacts of the FM Project were assessed as at September 2019, and are re-assessed annually, in accordance with the minimum requirements in the EIA Regulations (2014) and the associated official guidelines. Specialist studies were undertaken as part of IWUL application process. As at the date of issuing the Feasibility Study Report, no environmental issues were identified that resulted in the 'No Go' option being executed.

For the purposes of Feasibility Study level reporting, environmental, social and governmental aspects meet the necessary requirements. In addition, the FM Project has largely met the IFC and EP requirements for global compliance.

### Social and Labour Plan (SLP)

An SLP was developed by SAFTA as part of the MR application. This was reviewed by Orion and the DMRE prior to the granting of the MR, and the revised SLP became effective in December 2022 as part of the granting of the said right. Once the MR is granted by the DMRE, the commitments laid out in the SLP become legal obligations with specific targets, budgets and implementation timelines.

The SLP is broadly aimed at the following:

- improving socio-economic circumstances for mine employees and communities;
- transformation within the mining industry; and
- community development, otherwise known as local economic development programmes.

The SLP financial commitments are ZAR8.289m over a period of five years.

## Health and safety

The health and safety obligations for the FM Project sites are vested with NOMC, as the employer in terms of the MHSA, NOMC is responsible the health and safety aspects of the Project. All the required legal appointments in terms of the MHSA of personnel responsible for the Mining Right are currently in place pertinent to the level of activity on the site. Prior to commencement of mining activities additional appointments will be made as required, which will include Safety officers, Occupational hygiene practitioners and emergency medical services.

The MHSA stipulates standards and procedures to ensure a safe working environment. It ensures that a mining operation achieves the correct levels of design, monitoring and adherence concerning safety and health. Therefore, in accordance with all the requirements set by the MHSA and the DMRE, a Mine Safety Management System (MSMS) will be developed prior to the construction phase of the FM Project. This will be further extended during construction and again in preparation of full production. The MSMS will maintain a working environment that is safe and that does not pose risks to the health of employees, visitors or the community.

## Project execution and operations management

### Execution philosophy

Historically, large scale mining projects were executed using the EPCM methodology. In the last 10 years many mining organisations have reassessed the value of EPCM in terms of execution efficiency, risk transfer and overall value gained. It has been widely published that EPCM contracts often lack the ability to transfer risk from the owner to the EPCM and in some cases the EPCM takes on work scopes that are ill suited to their capability set. Other criteria that influence the choice of EPCM or other methodologies relates to geographic location. In Africa there are a range of execution approaches ranging from full EPCM to hybrid arrangements with a strong owner's presence. Since then, new insights emerged, balancing execution capability, practicality, integration, value and risk.

The execution philosophy for the FM Project considers the best-fit for the combined work packages and for Orion as an organisation. This required that the following matters be considered:

- the trends, successes and failures of various execution strategies globally and in South Africa;
- analysing work packages for complexity, risk and unique characteristics, schedule and interdependencies to determine the appropriate contracting methodologies;
- avoiding unnecessary management overhead and duplication;
- introduce specialist construction contractors with experience of similar underground work;
- building an experienced Owner's team with the required project management systems;
- the location of the FM Project relative to regional and local infrastructure, services and skills; and
- the selection of service providers and suppliers who share Orion's vision.

After analysis of the above points, the execution phase of the project is planned to be implemented by a combination of EPCM, EPC and Owner's team led work packages.

### Execution phases

Each of the FM Project mining areas require a significant amount of primary and secondary development to access the target mineralisation prior to any production. The critical path to production is the mining development to establish access, ventilation and stope preparation; plant construction is not the critical path element. NOMC intends to utilise the "owner mining" approach as opposed to "contractor mining" to minimise the cost of mining production. This requires that NOMC, from the outset, resolves to establish a culture of excellence in mechanisation in order to achieve the required operational productivity of men and machines, as well as high machine availability.

The commencement of a project presents significant challenges and potential for delays. To derisk the FM Project and reduce the initial capital outlay, it will be developed using a phased approach. The phases of the project are outlined as below and presented in Table 3:

- Early works – duration four months:
  - construction of process dam;
  - dewatering of FMN workings;
  - rehabilitation/re-support of FMN decline;
  - establish temporary surface infrastructure, power, water, workshops, change houses etc. for FMN development; and
  - procurement of development TMMs for FMN development;
- Phase I – duration 18 months construction, 24 months production at 32,500tpm:
  - develop FMN decline, ventilation raise-boreholes, etc to establish production at 32,500tpm by owners team;
  - construction of process plant for 32,500tpm capacity by build-own-operate-transfer (BOOT) service provider;
  - construction of 66kV overhead lines, step down substation and 11 kV surface power distribution;
  - construction of TSF by contactor;
  - construction of process water supply; and
  - processing of FMN ROM material at 32,500tpm and conduct pilot scale ore-sorting tests;
- Phase II:
  - development of FME portal and twin-decline, ventilation RBHs;
  - install FME decline conveyor and underground crusher system;
  - establish sustainable FME production at 35,000tpm; and
  - expand processing capacity to 65,000tpm and including the ore sorting plant.

An early works program utilising a small team of core personnel will undertake the setup of temporary surface infrastructure, power and water supplies while dewatering and rehabilitation of the existing FMN workings ensue. This will ensure all required infrastructure, equipment and systems are in place prior to Phase I commencement.

Phase I will include the development of an access decline to the FMN main body to establish the production of approximately 32,500tpm for a period of 24 months from FMN only.

Phase II will take the project to full design production capacity and will comprise the development and plant expansion required for the mining of approximately 65,000tpm (combined production from FMN and FME), processing through particle ore sorters followed by conventional milling and flotation. To sustain Phase II, the FMS decline will need to commence timeously in anticipation of the required FM-Nab and FMS production replacing FMN. The steady state labour complement, at 65ktpm, is expected to be approximately 300 people.

The high-level PEP for the development of the FM Project is outlined in Table 3.

NOMC project team

NOMC will establish a Project team to manage progress and interface with various EPCs and local contractors responsible for various workstreams as presented in Figure 21.

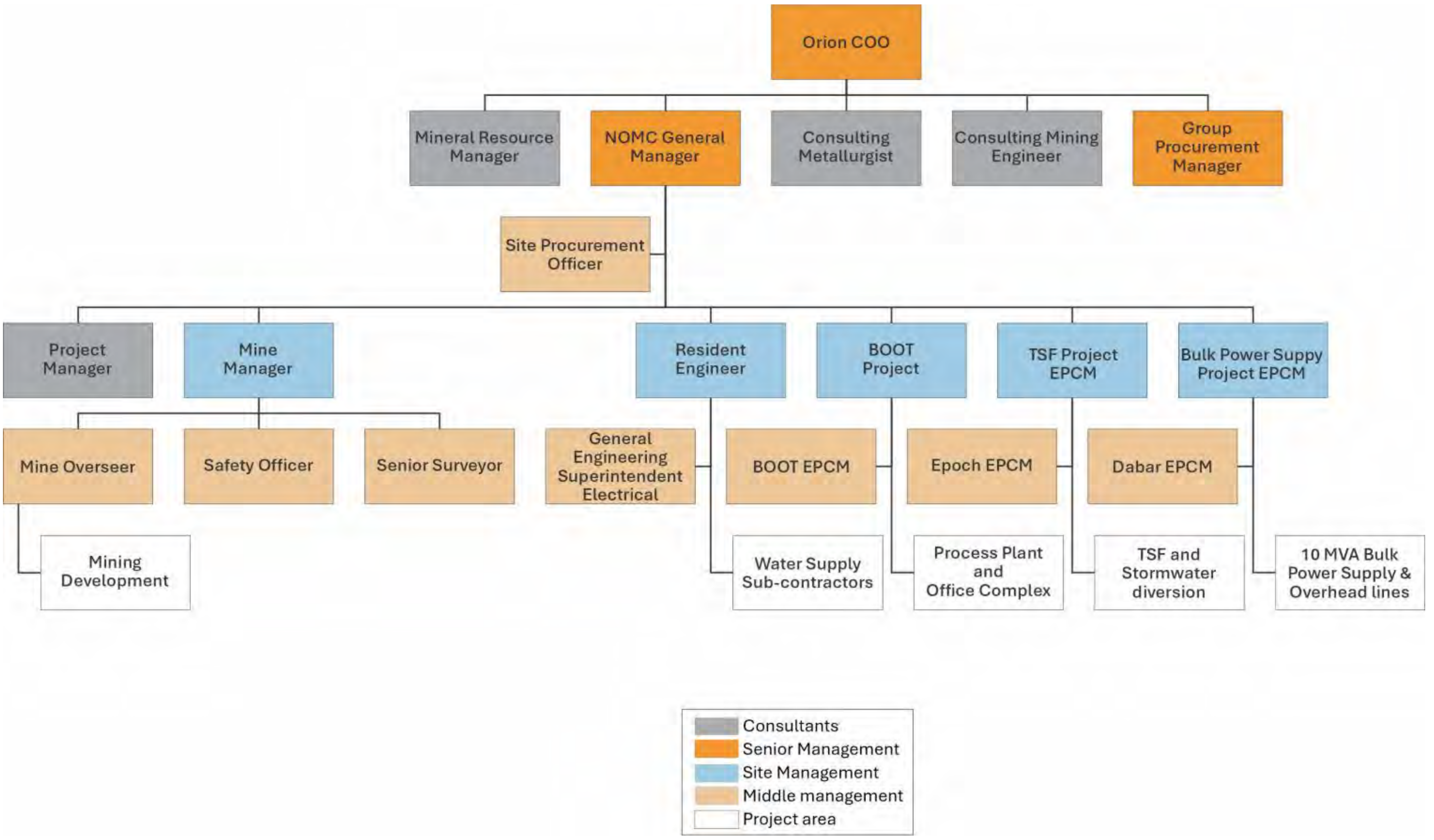



**Figure 21: FM Project – Execution organogram.**

Process Plant Funding and BOOT arrangement

NOMC has opted to enter into a build-own-operate-transfer (BOOT) arrangement for the process plant construction and operation. The BOOT service provider, who is a well established original equipment manufacturer (OEM) with strong operational expertise, will be responsible for the funding, detailed design, procurement, construction and operation of the process plant in the two Phases of construction outlined above. The BOOT term will operate for 60 months from the date of commissioning of each phase, hence the total duration of the BOOT contract would equate to seven years from first concentrate production. During this term, monthly payments in terms of the BOOT financing will be made by NOMC and at the end of the term, ownership of the plant would be transferred to NOMC. The BOOT provider will provide all technical, operational and maintenance requirements of the plant according to fixed monthly and variable per ton milled rates defined in the BOOT contract. The BOOT period will serve as a training period for the Owners team employees who will continue operations after the BOOT period.

A draft contract with all the related terms has been received.

Master Schedule

The FM Project Master Schedule was developed from the FM Project scope of work and schedules provided by the respective consultants and moderated by the Orion owners team. In the execution phase of the FM Project, contractors' detailed schedules will be used to develop the schedule further.

Below is a list of schedules and the sources that were used to generate the FM Project Master Schedule:

- early works: Owner's team schedule;
- underground development: Sound Mining Services schedule;
- infrastructure: METC and Orion owner's team;
- TFS; Epoch;
- earthworks: METC schedule;

- civils: METC schedule;
- SMPP: METC schedule;
- EC&I: estimated durations; and
- commissioning: estimated durations.

BOOT contractor

The BOOT contactor will be the key management entity that controls and plans the day-to-day construction activities related to the process plant and surface infrastructure. This will include detailed design, procurement and contract management. Safety, health and environmental management will form part of the contractor's responsibility, subject to the mine standard procedures and oversight by the Mine Manager and Resident Engineer. The majority of the BOOT team will be site based with design engineers and drafting office staff located at the contractor's head office.

EPC contractors

Several work packages have been structured as standalone EPC type contracts whereby a preferred service supplier has already been selected by Orion to undertake specialised design and construction. These are listed below with the respective companies involved:

- design and construction of the 10MVA bulk power and 11kV overhead lines installations: Dabar;
- design and construction of surface infrastructure: METC, Speedspace;
- design and construction of the TSF: Epoch;
- mine design and scheduling: Sound Mining; and
- water supply works ; local contractors under supervision of the NOMC Project team.

Before the Project construction begins, a value engineering exercise is planned with the various EPC contractors in collaboration with NOMC's project management team so that any Project improvements made can be incorporated into the relevant designs before detailed engineering starts. Once the FM Project is underway, the EPC contractors will utilise management documents to assist with the day-to-day management of the Project construction.

### Procurement operating framework

NOMC will implement the Orion procurement operating framework designed to establish a consistent, transparent, and efficient procurement model that supports multiple mine sites, ensuring compliance with governance standards and delivering value across all purchasing activities. Through this framework, the organisation ensures that procurement is conducted ethically, efficiently, based on best practice expertise and in full compliance with all regulatory and corporate requirements, while also enhancing operational continuity, cost-effectiveness, and positive community impact.

Procurement will be managed from an Orion Group level to leverage the combined group buying power to the maximum advantage. Specialist procurement resources are provided through Orion for the negotiation and drafting of supply and services contracts, with site based procurement staff handling ad hoc local purchasing and receiving functions.

### Capex

This Feasibility Study has provided capex cost estimates which have an accuracy within the standard targeted range of +/- 15%. The total capex estimate for the FM Project is ZAR1,605m (AUD128m) including contingencies and BOOT financing of the process plant.

The summary of the FM Project capital estimate (before financing) by area is presented in Table 22. The mining capex forms the majority of the capex cost at 45%, with the mining fleet accounting for 32% of total capital items. The process plant at an estimated ZAR645m accounts for 39% of total capex. In the surface infrastructure, bulk power supply and TSF construction (including water supply and contingency) are significant costs at ZAR70m and ZAR113m, respectively.

NOMC proposes to defer capex by financing the process plant through the BOOT arrangement described above.

**Table 22: FM Project – Summary of capex.**

| Area | Sub area | Subtotal capex cost (ZARm) | Contingency (%) | Contingency (ZARm) | Total capex cost (ZARm) | % of total capex cost |
|---|---|---|---|---|---|---|
| Mining | Underground mining machines | 494.41 | 8.0% | 39.55 | 533.96 | 32% |
| | Stationary machinery | 140.26 | 8.0% | 11.22 | 151.48 | 9% |
| | Portal establishment | 30.58 | 8.0% | 2.45 | 33.03 | 2% |
| | Backfill piping & equipment | 11.91 | 30.0% | 3.57 | 15.48 | 1% |
| | Technical services equipment & software | 8.90 | 8.0% | 0.71 | 9.61 | 1% |
| | Subtotal mining | 686.06 | 8.4% | 57.50 | 743.56 | 45% |
| Processing | Equipment supply | 370.36 | 8.0% | 29.63 | 399.99 | 24% |
| | Installation | 187.86 | 5.0% | 9.33 | 197.20 | 12% |
| | Spares | 44.72 | 8.0% | 3.58 | 48.30 | 3% |
| | Subtotal processing | 602.94 | 7.1% | 42.54 | 645.48 | 39% |
| Surface infrastructure | Power supply | 64.74 | 8.0% | 5.18 | 69.92 | 4% |
| | Alternative and backup power supply | 0.00 | 0.0% | 0.00 | 0.00 | 0% |
| | Mining and plant offices & change houses | 34.72 | 8.0% | 2.78 | 37.49 | 2% |
| | Mining stores & workshops | 15.07 | 8.0% | 1.21 | 16.28 | 1% |
| | TSF and water supply | 104.96 | 8.0% | 8.40 | 113.36 | 7% |
| | Land, roads and fencing | 21.05 | 4.8% | 1.01 | 22.07 | 1% |
| | Subtotal surface infrastructure | 240.54 | 7.7% | 18.57 | 259.12 | 16% |
| | Total FM Project capex | 1,529.54 | 7.8% | 118.61 | 1,648.16 | 100% |

Notes: Excludes sustaining capex. Source: NOMC financial model

The capex estimate has been compiled assuming the proposed mine development would be managed by an Orion owner's team, working with a plant BOOT contractor to manage engineering, procurement, construction and commissioning of the process plant. The BOOT contractor has the capacity and necessary skills in-house to execute a project of this scale.

The capital estimate was compiled by the various specialist consultants in collaboration with the NOMC Project General Manager. The basis of estimate includes:

- development of an accuracy range of +/- 15%;
- base date of Q4 2024;
- base currency is ZAR;
- most of the major capital items in the capex estimate have significant foreign exchange exposure and ZAR values will change with marked fluctuations in rate of exchange. To date, the rate of exchange has not changed significantly to warrant revaluation of the capital items; and
- capex estimate prepared in constant money terms.

Contingency has been applied taking cognisance of the following:

- level of detail of the designs and unaccounted engineering development costs;
- basis of the estimate including inaccuracies in quantitative evaluation and allowances; and
- pricing risk.

## Opex

This Feasibility Study has provided opex cost estimates which have an accuracy within the standard targeted range of +/- 15%. The summary of the costs by area is presented Table 23. Mining comprises the majority of the cost (47%), followed by processing (22%) and concentrate logistics (10%).

**Table 23: FM Project – Summary of opex.**

| Area | Total opex (ZAR/ROM t) | % of total Opex |
|---|---|---|
| Mining | 559.03 | 48% |
| Processing | 262.35 | 22% |
| Off-mine | 132.42 | 11% |
| Concentrate logistics | 121.15 | 10% |
| Sustaining capex | 106.15 | 9% |
| Total FM Project opex | 1,181.10 | 100% |

Opex for all disciplines was built up from first principles or where applicable from contractors tendered prices and using up to date consumable prices and rates. The basis of estimate includes:

- development of an accuracy +/-15%);
- the base date is Q4 CY2024;
- an allowance has been made for escalation, costs reflected are in current terms;
- no contingency was applied for consumables; and
- the base currency is ZAR. No allowance has been made of variations in exchange rate.

Mining opex

Stoping and mining development costs are based on cost estimates per metre of development and per stoping ton mined using the Candy model from an independent estimator. Mining labour numbers were based on the number of machines as determined by development meters planned and tons hauled, with the required supervision per working shift. Mining labour is calculated and allocated per mining section depending on state of development and production. Mining shared labour applies to categories of employees that can not be allocated to any particular mining sections and are shared between multiple mining sections. This category of labour inlcudes management, technical services, engineering and safety personnel, for example.

Other mining costs include consumable costs unrelated to labour for supporting the mining operations and inlcudes mining electricity, underground diamond drilling consumables, backfilling consumables and maintenance and technical services software and instrument maintenance.

**Table 24: FM Project – Summary of mining opex.**

| Mining opex | ZAR/ROM t |
|---|---|
| Total development cost | 118.56 |
| Total stoping cost | 106.34 |
| ROM and waste transport costs | 35.12 |
| Total mining labour | 136.30 |
| Total mining shared labour | 68.13 |
| Other mining costs | 38.95 |
| Surface and indirect | 55.63 |
| Total mining opex | 559.03 |

Note: Real costs shown. Source: NOMC financial model

Total mining costs for the FM Project are low compared to other similar scale mining operations. This is as a result of the relatively shallow mining depths and wide mineralisation bodies allowing efficient bulk mining methods to be effectively applied.

Processing Opex

Total processing opex is recorded at ZAR262/t ROM feed processed, as presented in Table 25. The most significant costs in the FM Project processing plant are:

- plant labour;
- electricity;
- mill balls and liners; and
- flotation reagents.

**Table 25: FM Project – Summary of plant opex.**

| Processing opex | ZAR/ROM t |
|---|---|
| Total plant labour | 77.00 |
| Crushing and screening | 3.07 |
| Ball milling - balls and liners | 43.30 |
| Ball milling - electricity | 54.36 |
| Savings with PPA ball milling - electricity | -13.24 |
| Flotation reagents | 25.40 |
| Other variable costs | 5.18 |
| Total variable costs | 118.07 |
| TSF operations | 8.56 |
| Power costs - excluding ball mill | 43.12 |
| Savings with PPA power costs - excluding ball mill | -10.76 |
| Maintenance cost | 9.01 |
| Assay Laboratory - plant samples | 1.35 |
| Sorter licence/maintenance | 0.00 |
| BOOT Interest | 16.00 |
| Total fixed monthly costs | 67.28 |
| Total processing cost | 262.35 |

The labour rates are based on a benchmarking exercise of Northern Cape mining operations, combined with estimated staffing numbers allocated to the plant in terms of adequate management, maintenance and operations staff.

Total milling costs including mill balls, liners and mill energy consumption are relatively high compared to other mining operations owing to the high work index of the ROM material to be processed. This fact is a significant incentive motivating further investigation and implementation of ore-sorting in the process to remove "unpay" material from the mill and thereby reducing milling costs. The implementation of ore-sorting could potentially reduce the cost of milling by up to 30%.

Electricty is a significant cost due to the high milling work index requiring high energy consumtion in the milling plant to achieve the required particle size for the flotation. To mitigate the high energy demand of the milling plant, NOMC intends to enter into a power purchase agreement (PPA) with a credible independent power producer (IPP). Energy wheeling proposals have been received in which up to 80% of total energy consumption by the operation can be supplied by an IPP at a significant discount to current Eskom tariffs. Energy cost savings via a PPA have been incorporated into the financial model achieving energy cost savings of up to 25% as is indicated in Table 25.

The savings achievable through a PPA with power wheeling from remote renewable energy generation site, (wind and solar) are largely as a result of a PPA tariff at an initial discount to Eskom energy tariffs, coupled with a variance between the Eskom future escalation forecast by National Energy Regulator of South Africa (NERSA), and the PPA escaltion which is linked to consumer price index (CPI).

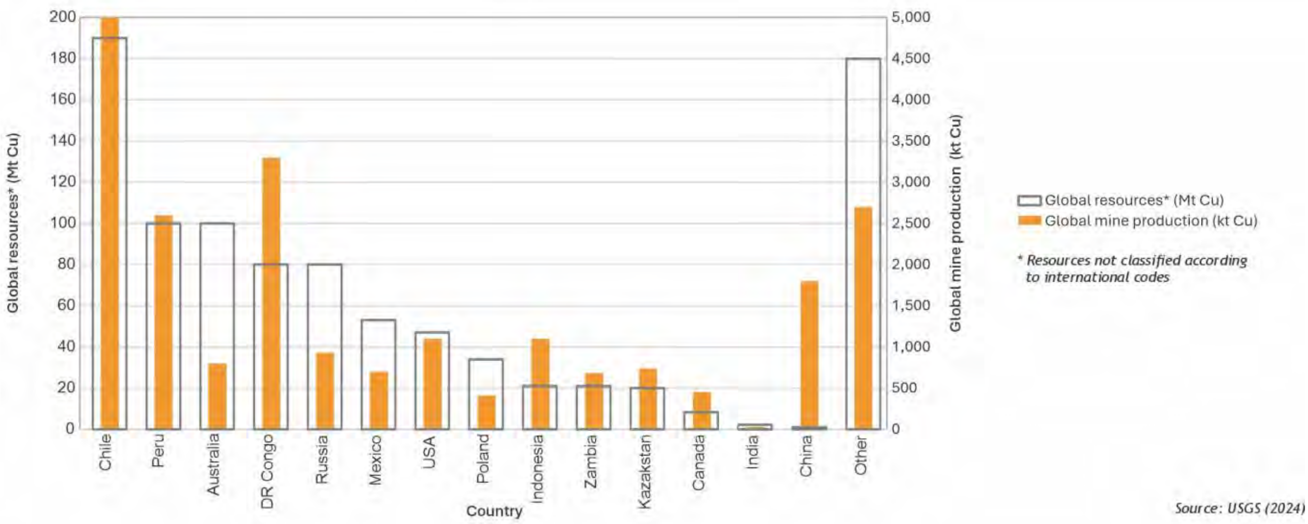
## Market assessment

Copper is a common alloying metal with superior electrical conductivity, mechanical strength, and endurance, which makes it the material of choice for industrial products. Copper is frequently used in construction for roofing materials, plumbing and heating systems. As the most conductive non-precious metal, copper is the recommended option for electrical wiring in residential, commercial, and industrial structures due to this superior electrical conductivity but also its resistance to corrosion. With the push toward green energy sources, battery metals have seen rapid increase in demand. However, a similar trend is expected for copper, with it being used almost four times more in electric vehicles than in vehicles fitted with hybrid or internal combustion engines. Copper's widespread use makes it a valuable indicator of global economic health.

Copper deposits primarily occur in either igneous or sedimentary rock types. Porphyry copper deposits are associated with igneous intrusions and supply approximately 60% of the world's copper production. These are primarily located in western North and South America. Sedimentary deposits host approximately 25% of the copper production and include the central African copper belt and the Zechstein basin of eastern Europe. The Okiep Copper District copper deposits, although primarily hosted with mafic intrusives, are not porphyry deposits but form a unique type of mineralisation associated with steep structures.

Global copper resources were estimated at ~940Mt in 2024 and are primarily located in Chile (20%), Peru (11%), Australia (11%) and the Democratic Republic of Congo (DR Congo) (9%) (Figure 22). Global mining production totalled an estimated 23.0Mt in 2024 (USGS, 2024) compared to 22.4Mt in 2023, an increase of 2.8%. Global mining production is dominated by Chile (23%), DR Congo (15%) and Peru (11%) (Figure 22). Interesting to note that China has significantly less resources than the other major copper mining countries but contributes 8% to the total. There has been a lack of significant investment into new copper deposit exploration and development according to S&P Global Commodity Insights over the last ten years, with most exploration being focussed on assets discovered 30 to 40 years ago. However, this is set to change with supply pressures forcing copper mining companies to prioritise exploration and expansion.

Global copper resources and mined production by country (2024)




Annual refinery copper production and copper usage versus price (2010 – 2024)

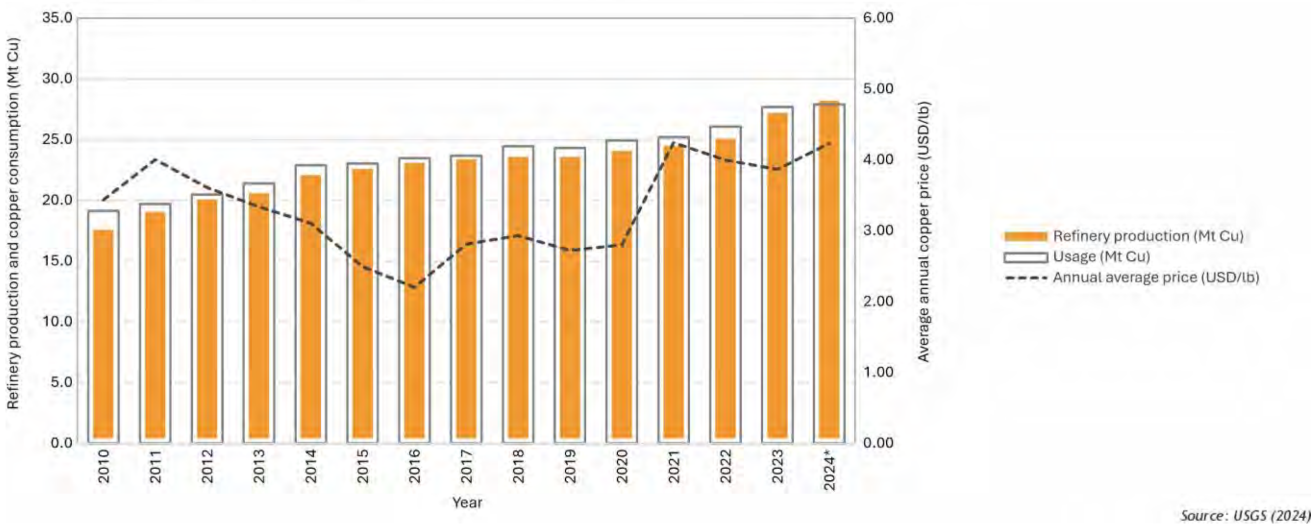



**Figure 22: Graphs of global copper resources, mine production and refinery production.**

Refined copper production has increased from 18.0Mt (2010) to 28.6Mt estimated for 2024, an increase of 37% over the last 15 years, with both smelter and refinery capacity dominated by China. Annual copper consumption was an estimated 27.89Mt in 2024, an increase of less than 1% from 2023 (27.69Mt) (Figure 22). Consumption is dominated by China, and when combined with the rest of Asia, amounted to 77%.

According to the World Bureau of Metal Statistics (WBMS) the global refined copper production was 27.62Mt with consumption being 27.69Mt which resulted in a supply shortage of 0.066Mt in 2023. Although the issues in the Chinese construction industry persist, copper has a positive long-term outlook due to its place in the green energy transition and electronics, supported by the drop in the supply side in 2023 which is unlikely to change in the short term. The majority of copper supply coming from countries known for political instability adds to the supply risk. In addition, there had been a significant lack of investment into new copper deposit exploration and development, but this is set to change.

The recent copper prices are presented in Figure 23 indicating an increasing trend since 2016.


**Figure 23: Graph of recent copper prices (2010 – 2025)**

Current global warehouse stocks are approximately 270,000t (November 2024), reflecting a significant increase since 2021 (Figure 24). This increase in inventory, coupled with an increased demand, has contributed to a trading price between USD8,000 – USD10,000/t price range during the period. Although prices have since stabilised at around USD9,200/t, demand remains robust, particularly in the USA, where supply chain disruptions and shipping delays, such as those more recently caused in the Panama Canal, have tightened local availability and with the expected decreasing stock levels, the price is expected to increase in the short term.

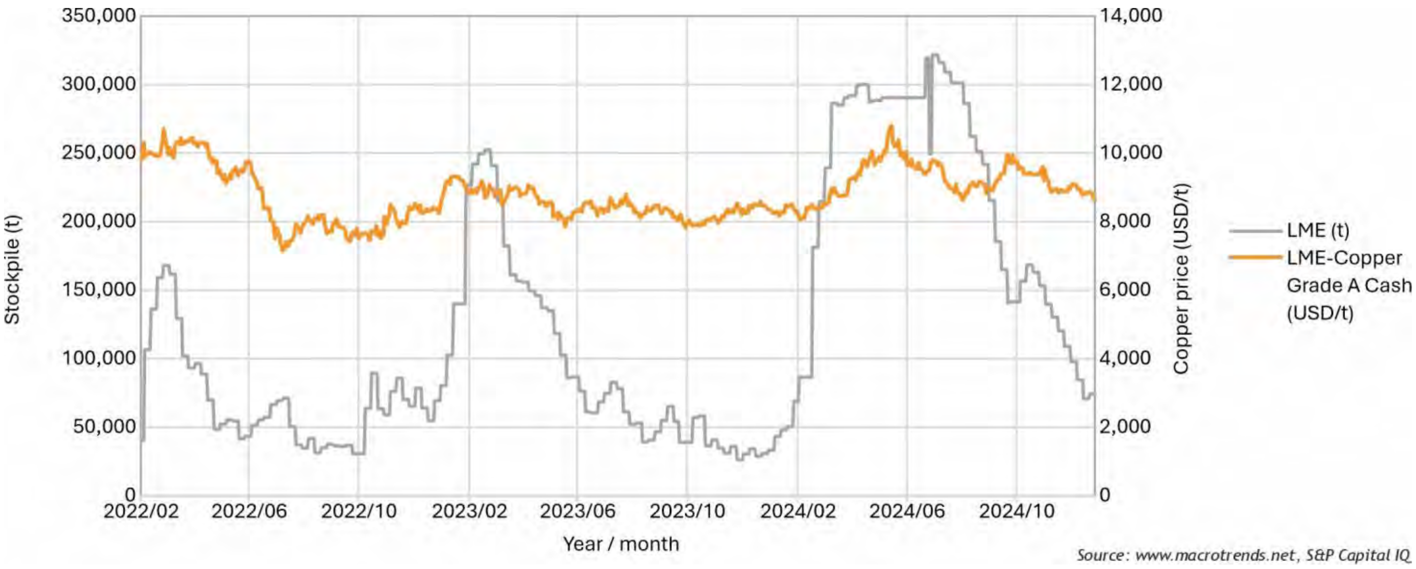



**Figure 24: Graph of copper stockpile levels versus copper price (Feb 2022 – Feb 2025).**

Price forecasts integrated into the Feasibility Study evaluation were provided by a leading reputable bank financial analyst forecast in December 2024. This estimate of USD4.25/lb (USD9,369/t) from 2028 onwards (Figure 25) was adopted for Ore Reserve estimation and mine planning purposes. This price modelling ensures robust revenue projections that consider global trends, including inventory fluctuations, economic sentiment and geopolitical factors. The weighted average effective copper price used for financial analysis over the FM Project LOM is USD9,565/t.

The weighted average effective copper price used in the financial analysis over the FM Project LOM is USD9,396/t.

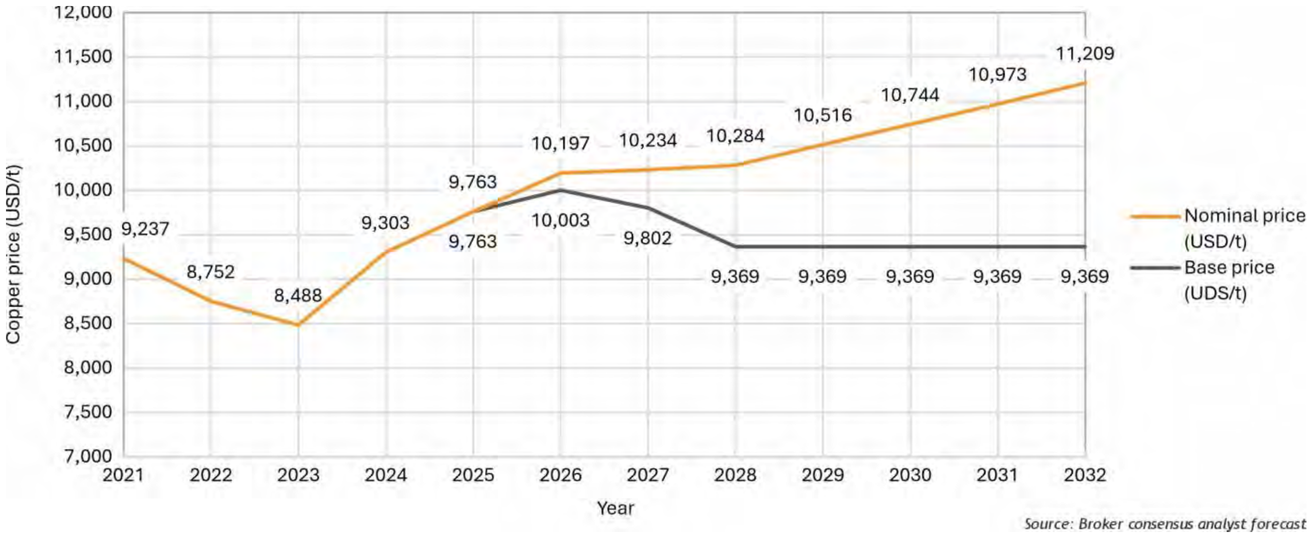



**Figure 25: Graph of forecast copper prices (2021 – 2032).**

The impact of the FM Project on the global copper market will be negligible, with the average annual production over the LOM estimated at 6,500tpa of contained copper metal. However, the tight global supply coupled with the expected increase in demand from energy transformation pressures and current metal supply deficit bodes well for the copper market and associated price in the medium term.

The planned delivery of the FM Project concentrate to Cape Town will enable the FM Project to sell to either the European or Asian markets.

## Marketing and sales contracts

### Concentrate specification

The typical specifications of the FMN and FME concentrates have been prepared from the results of the metallurgical testwork specifically from these mining areas and are presented in Table 26. The reader is to note that the historical copper production from the various mines in the Okiep Copper District was highly sought after and regarded as free of deleterious elements. An estimated total of 1.57Mt of blister copper was produced from the OCC mines between the 1940s and 2003.

**Table 26: FMN and FME – Typical concentrate specifications.**

| Element / mineral | Unit | Average value FMN | Average value FME |
|---|---|---|---|
| Cu | % | 36.90 | 36.00 |
| Zn | % | 0.013 | 0.021 |
| Fe | % | 5.50 | 12.00 |
| Total S | % | 10.78 | 15.60 |
| Ag | ppm | 32.97 | 40.00 |
| Total Au | ppm | 2.42 | 0.48 |
| Cl | ppm | 107.00 | 50.00 |
| F | ppm | 1,522.00 | 253.00 |
| $Al_2O_3$ | % | 6.36 | 6.80 |
| CaO | % | 3.25 | 2.92 |
| MgO | % | 4.94 | 3.00 |
| Pb | % | 0.005 | 0.005 |
| $SiO_2$ | % | 26.00 | 18.90 |
| As | % | <0.01 | 0.00 |
| Cd | ppm | 0.92 | <0.001 |
| Co | % | 0.003 | 0.004 |
| $Cr_2O_3$ | % | 0.098 | 0.040 |
| MnO | % | 0.06 | 0.06 |

| Element / mineral | Unit | Average value FMN | Average value FME |
|---|---|---|---|
| Mo | ppm | 23.60 | 50.00 |
| Ni | % | 0.03 | 0.02 |
| Ti | % | 1.38 | 1.36 |
| V | ppm | 109.00 | - |
| K | % | 0.58 | 0.19 |
| Na | % | 0.61 | - |
| Ba | ppm | 105.00 | - |
| Bi | ppm | 6.95 | <0.005 |
| Ge | ppm | 1.08 | - |
| Hg | ppm | 0.076 | 0.062 |
| In | ppm | 0.52 | - |
| Sb | ppm | 0.22 | <0.005 |
| Se | ppm | 277.00 | <0.005 |
| Sn | ppm | 2.25 | - |
| Te | ppm | 412.00 | - |
| Th | ppm | 9.43 | - |
| U | ppm | 1.35 | - |

Notes: Revenue elements highlighted in orange.
Potential penalty elements highlighted in grey.

## Marketing contract and nett smelter returns

No marketing or sales contract has been signed by NOMC on the FM Project concentrates. NOMC has opened discussions with several reputable concentrate traders and obtained an indicative term sheet in December 2024. Taking the terms into consideration, the net smelter return (NSR) for the FM Project is calculated and presented in Table 27.

**Table 27: FM Project – NSR.**

| Parameter | Unit | Value |
|---|---|---|
| Metal prices | | |
| Copper price | USD/t | 9,396 |
| Silver price | USD/oz | 27 |
| Gold price | USD/oz | 2,157 |
| Metal revenue – copper | | |
| Concentrate Grade | % | 30 |
| Cu payability deduction (grade) | % | 0 |
| Payable copper grade | % | 30 |
| Copper metal value (in conc.) | USD/t conc. | 2,819 |
| Copper payability | % | 96.6 |
| Copper price post payability | USD/t conc. | 2,723 |
| Treatment cost | USD/t conc. | 50 |
| Refining cost | USD/lb Cu | 0 |
| Refining cost | USD/t conc. | 33 |
| Net copper price received | USD/t | 2,640 |

| Parameter | Unit | Value |
|---|---|---|
| NSR - copper | | |
| Copper metal value (in conc.) | USD/t conc. | 2,819 |
| Payability deduction | USD/t conc. | 96 |
| TCs & RCs | USD/t conc. | 83 |
| By-product credits | USD/t conc. | 87 |
| Total penalties | USD/t conc. | 0 |
| Net smelter return (NSR) | USD/t conc. | 2,727 |
| | | |
| NSR percentage - copper | % | 96.8 |

The reader is to note that NSR percentage copper provided in Table 27 varies during the LOM according to the material mined and its associated gold and silver content. The average LOM NSR in the financial model is 95.2%. The NSR varies significantly from 95% to 98% depending on the source of concentrates as gold and silver credits have a bearing on the NSR. All the FM Project deposits have similar silver content reporting to concentrates, while only FMN concentrates contain gold at approximately 1.95g/t of concentrates which is well above the payability threshold for gold credits. Early production during Phase I of the operations will see concentrates produced from FMN only, hence in this period, NSR values will exceed 98% because of the significant gold credits received. With production dominated by FME and FMS in the later years, no gold credits are expected hence the lower NSR in the later years of the LOM. There is an opportunity to maximise the NSR during operations by managing the combined processing of FMN and FME ROM materials.

## Route to market

The planned transport route for the copper concentrate is indicated on Figure 13. Concentrate will be packaged into 2t polypropylene bulk bags, trucked to Cape Town, containerised and shipped to the market. The all in concentrate logistics were estimated at ZAR121/ROM t.

## Economic assessment

The economic assessment was prepared by NOMC using inputs from the various independent specialist experts and engineers as well as the owners team. The level of accuracy of the financial model is +15% - 15%.

The foundation of the financial model is based on a mining tonnes and grade schedule for each of FMN, FME and FMS/FM-Nab mines. The mine designs and schedules were developed by Sound Mining in collaboration with JHK (Competent person for the Ore Reserve estimate). The development metres, stoping tonnes and grades generated by the mine design software are based on realistically achievable mining rates and methods. The LOM plan is graphically presented in Figure 15 to Figure 17.

Mining fleet, personnel and consumables requirements and costs are applied to the schedule to produce a cashflow model for DCF analysis.

The financial model was designed and verified by Fraser McGill, independent experts in financial evaluation models. Various scenarios were considered for which dashboard switches were incorporated to select a combination of scenarios. The scenarios included in the FM Project financial model are the following:

The scenarios included in the FM Project financial model are the following:

- include BOOT, or NOT;
- include ore sorting, or NOT;
- lease TMM fleet, or OWN; and
- electricity supply Eskom, or PPA.

The scenario with the most favourable financial outcome is as follows:

- BOOT arrangement for processing;
- include ore sorting;
- own TMM fleet; and
- electricity PPA from IPP.

The base economic and technical assumptions are presented in Table 28 along with the results.

### Feasibility Study result

The FM Project processes a total of 7.235Mt at an average grade of 1.18% Cu, with copper metal sales totalling 78,340t. Total project capital required is ZAR1.604bn (AUD128m) with start-up capital to first revenue of ZAR894m (AUD71m) and peak funding of ZAR1.29bn (AUD103). The graph of net cash flows after tax is presented in Figure 26.

Costs included a 8% contingency on capital.

The net result of the DCF analysis is a post tax NPV of ZAR935m (AUD75m) at an 8% discount rate and an IRR of 19%, with capital payback of ~5.25yrs from first concentrate production. The project yields an all-in sustaining cost (AiSC) margin of 41% at an AiSC cost of USD5,270/t Cu or USD2.39/lb Cu. It has a capital intensity metric of USD10,383/t Cu (AUD15,699/t Cu) nameplate production per annum. The model is based on the copper price forecast compiled from analyst consensus by a leading bank in December 2024 with the weighted average LOM price forecast of USD9,396/t Cu (USD4.26/lb Cu).

The scheduled LOM production includes Inferred Mineral Resources of approximately 18% by tonnes. There is a low level of geological confidence associated with Inferred Mineral Resources and therefore there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target or financial forecast information referred to in this Feasibility Study will be realised. The impact of excluding the Inferred Mineral Resources from the LOM and the gold and silver credits were assessed, and the results indicated a post tax NPV of ZAR349m (AUD28m) at a discount rate of 8% and an IRR of 12%, , confirming that the Inferred Mineral Resources included in the LOM plan are not the determining factor in project viability.

The key economic assessment results of the Phase I and Phase II DCF are presented in Table 27.

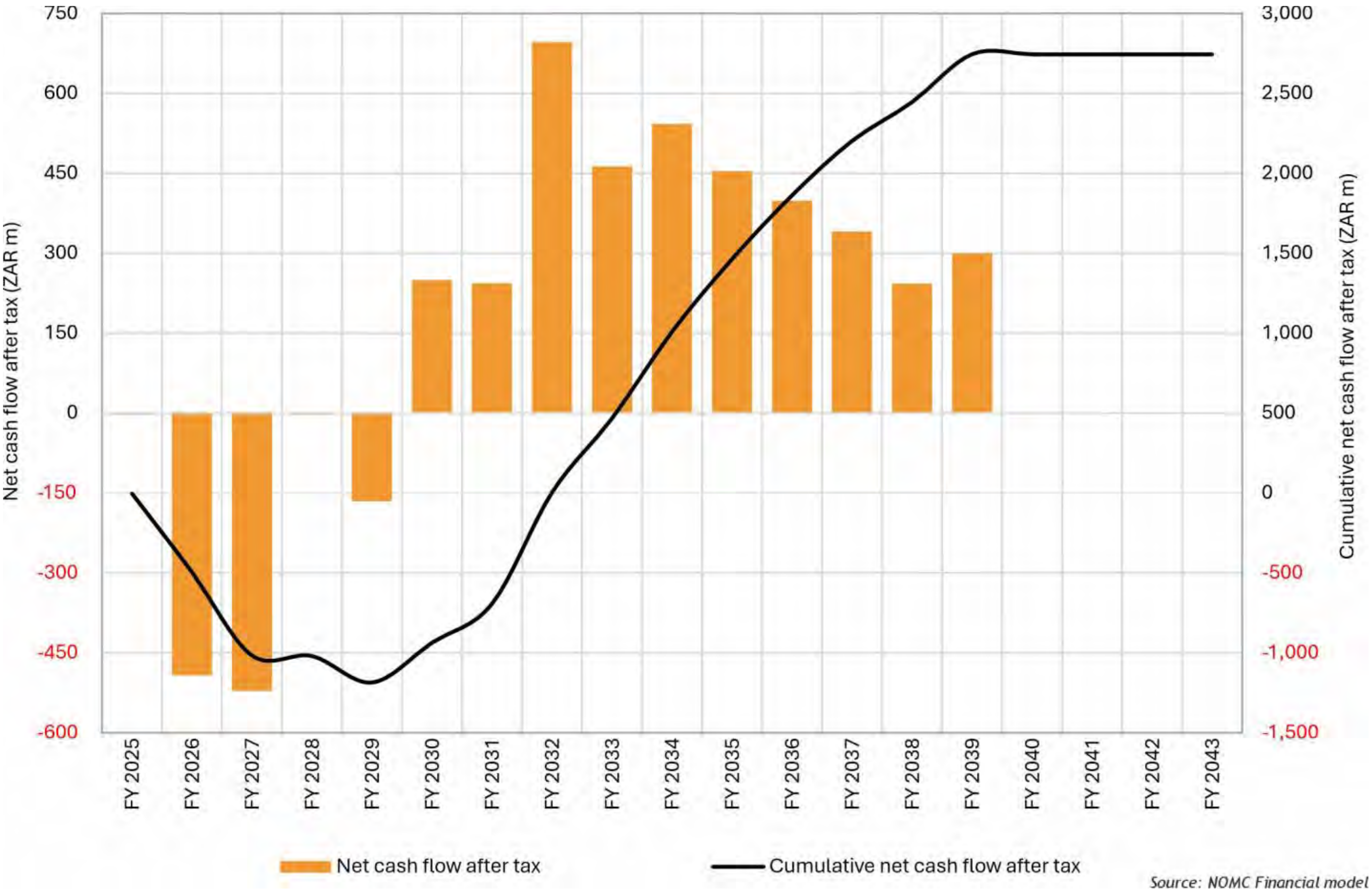



**Figure 26: FM Project - Graph of net cash flows after tax**

**Table 28: FM Project - Executive dashboard (real model).**

| Price and forex assumptions | Unit | Value |
|---|---|---|
| Metal price - Cu | USD/t | 9,396 |
| Metal Price - Au | USD/oz | 2,157 |
| Metal Price - Ag | USD/oz | 27 |
| Exchange rate | ZAR:USD | 18.90 |
| Exchange rate | ZAR:AUD | 12.50 |

| Production metrics | Unit | Value |
|---|---|---|
| LOM (from first concentrate production) | years | 12.08 |
| Treatment plant capacity | ktpa | 780 |
| ROM - tonnage | kt | 7,235 |
| ROM - grade | % | 1.18 |
| Concentrate grade - Au | g/t conc | 0.9 |
| Concentrate grade - Ag | g/t conc | 31.4 |
| Overall plant recovery | % | 91.9 |
| Concentrate tonnage (wet mass) - Cu | kt | 285 |
| Concentrate grade - Cu | % | 30 |
| NSR as % of metal price - Cu | % | 95.2 |
| Metal sold (in concentrates) - Cu | tonnes | 78,340 |
| Total Cu sales | tonnes | 78,340 |

Source: NOMC financial model

Note: There is a low level of geological confidence associated with Inferred Mineral Resources and therefore there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target or financial forecast information referred to in this Feasibility Study will be realised.

| Financial performance | Unit | Value | Unit | Value |
|---|---|---|---|---|
| NPV (pre-tax) @ 8% discount rate | ZARm | 1,423 | AUDm | 114 |
| NPV (post-tax) @ 8% discount rate | ZARm | 935 | AUDm | 75 |
| IRR (pre-tax) | % | 23 | | |
| IRR (post-tax) | % | 19 | | |
| Payback from first production | years | 5.25 | | |
| Undiscounted free cash flow (pre-tax) | ZARm | 2,744 | AUDm | 219 |
| Peak funding | ZARm | 1,290 | AUDm | 103 |
| Capital intensity | * USD/Cu t | 10,383 | * AUD/Cu t | 15,699 |
| **Project cost metrics** | **Unit** | **Value** | **Unit** | **Value** |
| Average cash operating unit cost | ZAR/t | 769 | AUD/t | 62 |
| AiSC per unit ROM t | ZAR/t | 1,078 | AUD/t | 86 |
| AiSC per unit Cu sold | USD/t Cu | 5,270 | AUD/t Cu | 7,968 |
| AiSC per unit Cu sold | USD/lb Cu | 2.39 | AUD/lb Cu | 3.61 |
| Price received (net of NSR) - Cu | USD/t Cu | 8,944 | AUD/t Cu | 13,523 |
| AiSC margin | % | 41 | | |
| Operating breakeven grade - Cu | % | 0.73 | | |
| **Project cost flows** | **Unit** | **Value** | **Unit** | **Value** |
| LOM net revenue | ZARm | 12,701 | AUDm | 1,016 |
| LOM operating costs (+ royalties) | ZARm | 6,608 | AUDm | 529 |
| Project start-up capital expenditure (until first revenue) | ZARm | 894 | AUDm | 71 |
| Total project capital (incl contingency) | ZARm | 1,604 | AUDm | 128 |
| Contingency | ZARm | 90 | AUDm | 7 |
| Sustaining capital expenditure | ZARm | 768 | AUDm | 61 |
| Income tax | ZARm | 977 | AUDm | 78 |
| Cash flow after tax | ZARm | 2,744 | AUDm | 219 |

Note: * Currency/nameplate annual copper tonne produced. Level of Accuracy of Financial Model ± 15%, LoM = Life of Mine, NSR = Net Smelter Return, NPV = Net Present Value, IRR = Internal Rate of Return

## Sensitivity analysis

A sensitivity analysis was carried out on the FM Project cash flow at intervals of +/- 5%, +/-10% and +/-20% for copper grade, ZAR:USD exchange rate, copper price and various capex and opex inputs. The sensitivity results are presented as a tornado graph in Figure 27. The results indicate that the cash flow is most sensitive to revenue drivers of copper grade and copper price and the ZAR:USD exchange rate.

For perspective, an increase in copper price of 5% from the NOMC modelled estimate of USD9,396/t to USD9,866/t will result in an increase in th FM Project post tax NPV from ZAR935m to ZAR1,166m, an increase of 25%.

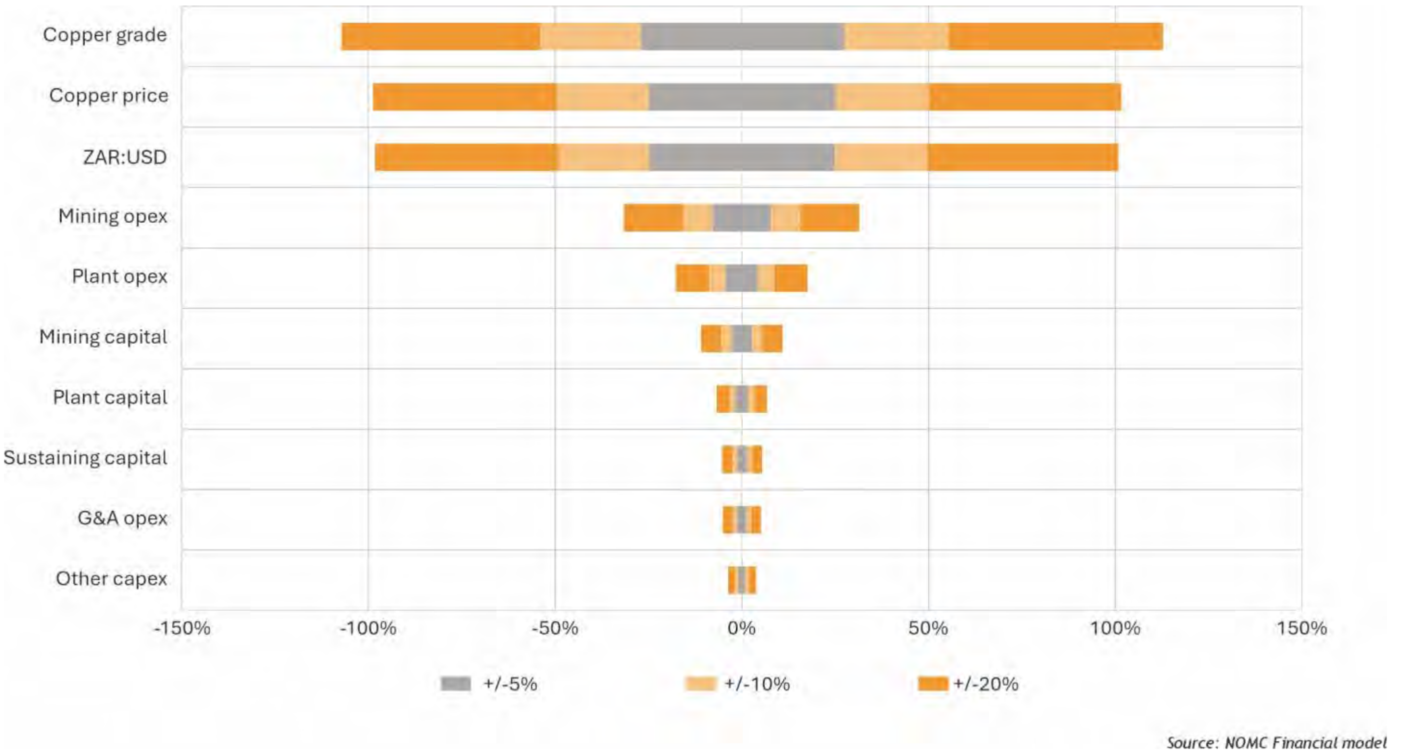



**Figure 27: FM Project - Graph of sensitivity analysis (% change in undiscounted free cash flow).**

## Funding

The peak funding requirement for the FM Project is estimated at ZAR1.290bn (AUD103m).

Orion, NOMC's ultimate holding company, is an Australian domiciled company that is listed on the ASX (ASX: ORN) and has a secondary listing on the Main Board of the JSE (JSE: ORN). Orion intends to fund the development of the FM Project through a combination of a BOOT arrangement for the plant, asset backed finance for the mining equipment, offtake related pre-payments, debt from development finance institutions / commercial banks and equity.

Orion has commenced initial discussions with commercial banks and metal traders and will progress these discussions in the next three to six months.

## Project risks

An assessment of risks was carried out by the NOMC, the Orion owner's team and their specialist consultants. A risk register was prepared detailing each risk and its proposed mitigation measures. The risk scoring matrix was applied to the risks which took into account the likelihood of the risk occurring and the severity of its impact on the FM Project in terms of *inter alia* timing, cost and reputation. Eash risk was rated pre- and post-mitigation.

The risks ranked as significant and higher are graphically presented in the form of a heat map in Figure 28. These risks are tabulated according to the post-mitigation likelihood, impact and risk rating in Table 29.

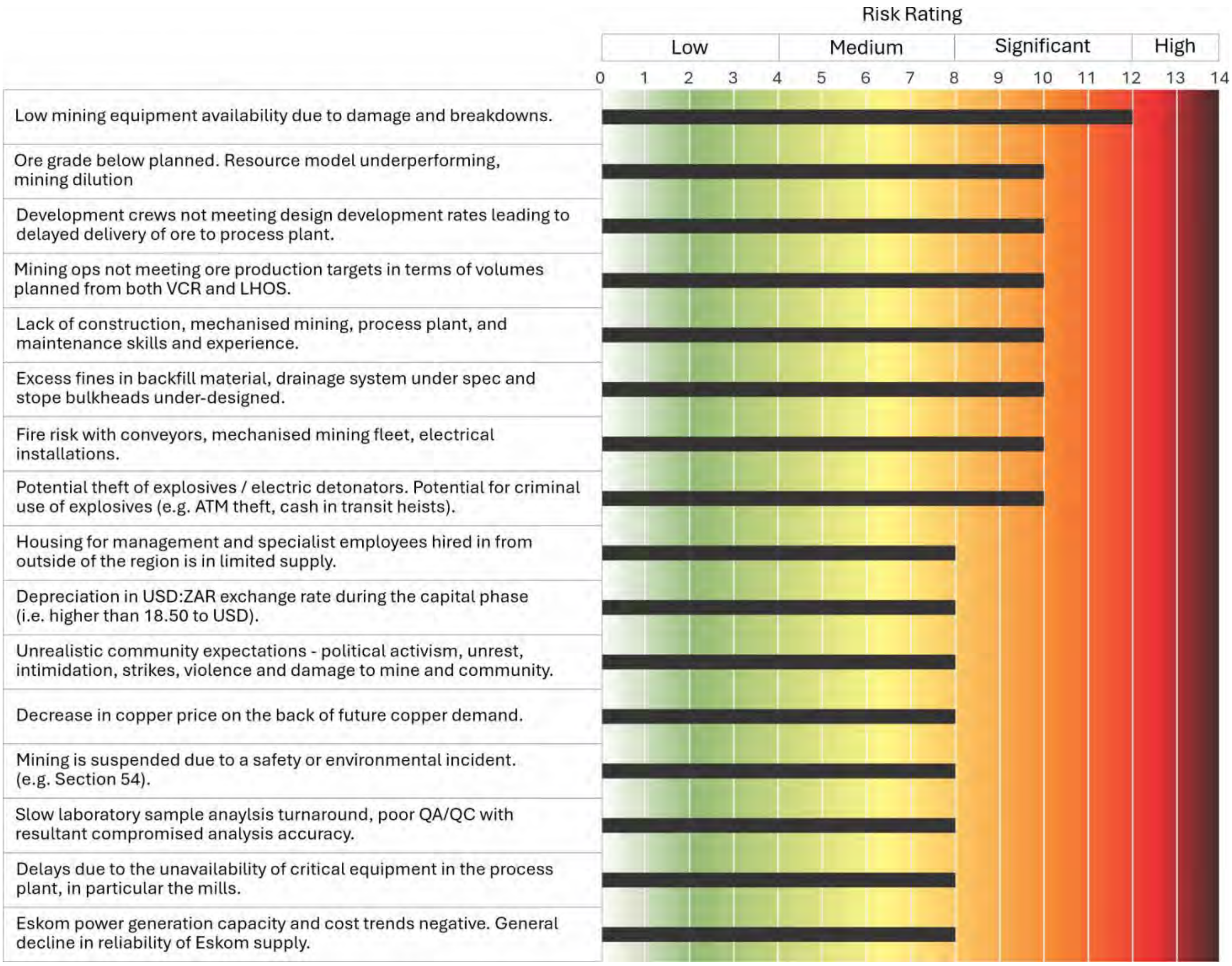



**Figure 28: FM Project – Graph of significant risks post mitigation.**

**Table 29: FM Project – Significant risks post mitigation.**

| Risk | Description | Mitigation measures | Likelihood | Impact | Post mitigation score |
|---|---|---|---|---|---|
| Execution and operations management | | | | | |
| Long delivery time equipment not available. | Delays due to the unavailability of critical equipment including mining machinery and mills. | • Develop strategic alliance with OEMs.<br>• Consider the use of refurbished second hand equipment. | 2 | 4 | 8 |
| Mining | | | | | |
| Equipment availability. | Low equipment availability due to damage and breakdowns. | • Equipment maintenance philosophy .<br>• Surface workshop design.<br>• Short Interval control management of maintenance plan and execution.<br>• Skilled and experienced supervisors, artisans and operators.<br>• OEM service and spares/repairs.<br>• Standby units.<br>• UG satellite workshops. | 3 | 4 | 12 |
| ROM head grade not meeting planned ore grade delivered to the plant. | Actual ore grade below planned grade being delivered. Mineral Resource model underperforming, mining dilution. Plant underperformance, reduced revenue and poor reputation with off takers. | • Robust ore definition drilling, grade control drilling.<br>• Timeous sample turnaround time at on site laboratory.<br>• Good mining practice, 3rd party & peer reviews.<br>• Implementation of ore sorting technology.<br>• Competent grade control geologist and mining supervisors. | 2 | 5 | 10 |
| Not meeting development targets to access production stopes. | Mechanised development crews do not meet and exceed the required development rates leading to late start of ore production. Inexperienced mechanised supervisors / operators / artisan, poor OEM backup. Delayed start to on- ore development leading to late start of process plant. | • Implement fleet management system to improve cycle time management (costs and labour).<br>• Short Interval control project management of critical path development (mining engineering team and costs).<br>• Skilled and experienced operators.<br>• Run scenario with an additional development crew to mitigate development shortfall. | 2 | 5 | 10 |
| Not meeting ore production targets in terms of volume planned from both VCR and LHOS. | Below par performance of production crews, poor mining practices (poor fragmentation, hot work conditions), less than optimal stope design, injuries and damage to equipment leading to plant stoppages due to no ore. Inexperienced mechanised supervisors/operators. Poor discipline, poor production logistics, poor ventilation design and controls, poor explosive performance and poor OEM backup. Serious injuries, production delay/stoppages, equipment damage. | • Select a shrinkage mining method (VCR) to mitigate the effects of horizontal stresses.<br>• Short interval control project management of critical path development (mining engineering team and costs).<br>• Skills transfer and mentorship.<br>• Skilled and experienced supervisors and operators.<br>• Retraining of operators in alternative mining method. | 2 | 5 | 10 |
| Explosives theft. | Potential theft of explosives / electric detonators. Potential for criminal use of explosives (e.g. ATM theft, cash in transit heists). | • Management and control of explosives (reconciliation).<br>• Security checks. | 2 | 4 | 8 |

| Risk | Description | Mitigation measures | Likelihood | Impact | Post mitigation score |
|---|---|---|---|---|---|
| Human resources | | | | | |
| Lack of construction, mechanized mining, process plant, and maintenance skills and experience. | Below par execution of construction and production build up plans, poor safety, injuries and equipment damage due to lack of competence and experience at the operational level. Lack of skilled and experience construction, mining, process and maintenance personnel. Poor safety and production performance, high equipment maintenance cost, low employee morale. | • Develop robust HR skills attraction and retention strategy, including rosters, accommodation and fit for purpose training & development strategy (use of OEMs, BOOT contractors, advisors etc);<br>• Seamless onboarding process. | 2 | 5 | 10 |
| Lack of accommodation. | Housing for management and specialist employees hired in from outside of the region is in limited supply. | • Limited proclaimed plots are available in Springbok for the construction of new houses.<br>• Land owned by the company could be made available to developers for the establishment of a mine village to house staff if required.<br>• Develop an accommodation management plan. | 2 | 4 | 8 |
| Macroeconomic | | | | | |
| Exchange rate. | Depreciation in USD:ZAR exchange rate during the capital phase (i.e. higher than 18.50 to USD). | • Development a procurement strategy, build it into the contingency applied. | 4 | 2 | 8 |
| Geopolitical | | | | | |
| Community engagement. | Unrealistic community expectations - political activism, unrest, intimidation, strikes, violence and damage to mine and community property etc. | • Open and honest communication.<br>• Executing the community development plans (mine, government and community).<br>•Transparent grievance mechanism. | 2 | 4 | 8 |
| Market | | | | | |
| Metal price uncertainty. | Decrease in copper price on the back of future copper demand. | • Ensure operating costs remain low.<br>• Mine at a higher grade for a short period of time.<br>• Flexibility in phasing of project if still in the capital phase. | 2 | 4 | 8 |
| Legal, regulatory | | | | | |
| Safety and environmental. | Mining is suspended due to a safety or environmental incident, e.g. Section 54. | • Develop a safe and modern mechanised mine using advanced technology and best practise always placing underground personnel in safe working places.<br>• Similarly in the plant - develop comprehensive safe work procedures, pre-start inspections etc. | 2 | 4 | 8 |
| Geotechnical | | | | | |
| Underground backfill system inadequate. | PSD of backfill material, design of the drainage system and stope bulk heads must achieve satisfactory drainage of the backfill material. | • Detailed testwork to be done on flotation tailings.<br>• Detailed design of backfilled stope drainage and bulkheads done before backfilling commences.<br>• Routine and regular testing of backfill material leaving the plant.<br>• Fitting of monitoring equipment to the bulkheads. | 2 | 5 | 10 |
| Underground infrastructure | | | | | |
| Fire. | Fire risk with conveyors, mechanised mining fleet, electrical installations. | • Good housekeeping.<br>• Fire suppression for belt installation and mobile fleet.<br>• Fire truck and trained emergency response (Proto team).<br>• Ensure sufficient refuge chambers in place as per ventilation plan.<br>• Decline conveyor connected directly to exhaust airway. | 2 | 5 | 10 |

| Risk | Description | Mitigation measures | Likelihood | Impact | Post mitigation score |
|---|---|---|---|---|---|
| Process plant including on-site laboratory | | | | | |
| Plant metal recovery to concentrate <92%. | Recovery less than planned reduces concentrate production and copper content. | • Design of the plant has been based on testwork results and sound plant design.<br>• Historical plant performance in the same recovery range.<br>• Short interval controls - QA/QC and quick turnround at laboratory on process control samples.<br>• Efficient and productive operation of the process plant by the BOOT team by implementing a laboratory management system. | 2 | 5 | 10 |
| On-mine laboratory capacity, efficiency and quality. | Slow turnaround, poor QA/QC with resultant compromised analysis accuracy - round robin analyses etc. | • Recruiting of experienced lab manager and technicians which will include the transfer component of the BOOT process.<br>• Skills transfer will be critical.<br>• Export analyses will go via third-party accredited lab which will directly impact on speed of invoicing and payment receipt thus improving cash flow. | 2 | 4 | 8 |
| Bulk power | | | | | |
| Eskom power unreliable or expensive. | Eskom power generation capacity and cost trends are trending above inflation. General reliability of Eskom supply. | • Preferential supply agreement with Eskom with committed escalations as an energy intensive user in the region.<br>• Investigate alternative energy supplies in the form of wheeling from an IPP and/or on-site generation - diesel or renewable. | 2 | 4 | 8 |

## Upside mineral resource potential and value engineering opportunities

Opportunities exist for the FM Project to declare additional mineral resources (with the potential to extend the LOM) and to pursue other opportunities to improve the economics and/or technical parameters associated with the FM Project. These have not been investigated to a Feasibility Study level and are therefore simply included here to alert the reader to the possibilities available to NOMC. These will be further investigated as the FM Project moves through its development stages.

### Upside Mineral Resource potential

The NOMC MR and the surrounding SAFTA PRs offer significant opportunities for mineral resource, definition, followed by mining and processing using its planned centrally located infrastructure hub and processing plant. These opportunities include:

- significant Inferred Mineral Resources located at FME and FMS that are not included in the current LOM plan;
- additional Inferred Mineral Resources, located within the SAFTA PRs, at Jan Coetzee Mine and Nababeep Kloof Mine that are not considered in this Feasibility Study Report;
- two additional prospects within the NOMC MR, namely Flat Mines Extension North and Franco's pit, which have been historically drilled and explored; and
- an additional 21 identified prospects and/or historical mines within the SAFTA PRs which have been historically drilled and/or exploited to varying extents.

### Value engineering opportunities

Further value engineering opportunities are available to the FM Project but these will require additional, more detailed studies going forward. These are tabulated in Table 30 according to their main disciplines.

**Table 30: FM Project – Value engineering opportunities.**

| Opportunity | Description |
|---|---|
| | Mining geotechnical |
| Reduce pillar sizes with optimisation. | Detailed numerical modelling will be used to assess and improve on the stability of the pillar per operation. Additional material strength testing can add to the confidence of improved and reduced pillars. |
| Approach 100% pillar extraction in certain areas through the use of cemented backfill. | The use of cemented (as opposed to uncemented) backfill in selected stopes will be evaluated for the potential to approach 100% extraction. |
| Increase stope dimensions with additional geotechnical data. | Re-evaluation of stope dimensions based on recent Q and Q' index measurements implying upside potential to increase stope spans, heights and backs in selected areas once a higher density of geotechnical data is available from production experience and further delineation drilling. |
| | Mining and Ore Reserves |
| Include FMN Measured Resources into Ore Reserves estimate and mine plan. | Drone survey of mined out areas at FMN will provide clarity on what Measured Resources remain for early extraction and can be classified as Ore Reserves. |
| Improve grade consistency to plant. | Blending of underground ore loaded from draw points through sampling resulting in a more consistent grade throughput to plant. Opportunity to stockpile low grade / high grade. |
| Improve blast efficiency, fragmentation and safety. | Utilise a drill and blast expert consultant from the emulsion supplier to provide recommendations on explosives handling and management to improve blast efficiency, fragmentation and safety. |
| | Underground infrastructure |
| Decrease haulage costs from FME to plant. | Rail link for ore from FME to plant using battery locomotive and rail cars. Operating cost of transfer of ore to plant from FME by rail bound battery locomotive and railcars could be considerably lower than surface trucks as planned. |
| Decrease loading costs. | Use of cable-electric LHDs on draw point levels. Fuel and maintenance costs of electric loader far lower than diesel powered loaders. |
| | Metallurgical testwork |
| Evaluate the impact of XRT or XRT/XRF combination ore sorting during Phase I. | Plant start-up will be at half capacity for a duration of 24 month Phase I mining development. This gives opportunity to defer installation of ore sorters with minor plant modifications. Sorting testwork can run in parallel to this phase. Sorting testwork can benefit from a continuous feed with consistent head grade range from mining operations to validate performance of XRF sorting technology with inclusion of multi parameter criteria. In parallel to XRF testwork, it also allows Orion to compare XRF to XRT technology or a combination of XRT and XRF performance. |
| Confirm FMS flotation performance | While project is in execution phase, opportunity exist to confirm FMS flotation reagent suite, achievable recovery and grade. Alternatively, FMS is the last mineralised zone scheduled for extraction as per mining plan. The process plant will have an on-site laboratory which can be used for FMS flotation testwork while operations continue with FMN and FME mineralised zones. |
| | Process plant |
| Reduce the tailings thickener size. | Future settling testwork will be undertaken to assess this potential and its impact on capex. |
| Reduce the concentrate thickener size | Future settling testwork will be undertaken to assess this potential and its impact on capex. |
| Recovery of additional by-products from milled ore e.g. magnetite, PGMs from FMN concentrates. | Magnetite content in tailings is known to exist in certain mineralised deposits in potentially economic concentrations, similarly PGEs in the FMN concentrate streams. This will be investigated further and plant add-ons implemented to extract additional minerals, and/or credits negotiated for these minerals in the copper concentrate. |

| Opportunity | Description |
| --- | --- |
| Surface infrastructure | |
| Decrease energy costs and environmental impact. | Significant potential to reduce energy costs for the project by installing on-site solar and/or wind generation capacity with battery storage. |
| Supply chain | |
| Use Orion combined purchasing power to negotiate favourable supplier contracts. | Pressure consumable, equipment suppliers for discounts on the basis of increased purchasing power from the FM Project, Orion's PCZM operation and other mines in the area. Leverage from OEMs with the quantum being purchased by Orion. |

## Recommendations for further work

Additional work has been identified by either Orion / NOMC and / or their specialist consultants, which is recommended to be carried out during the development of the FM Project.

### Drilling

NOMC has identified the requirement for additional drilling at FME and FMS to upgrade the Inferred Mineral Resources to an Indicated classification. The plan is to undertake diamond core drilling from underground, from a single selected collar position along the respective declines during their development. Drilling from underground has the benefit of reduced drilling costs, as the drill holes will be shorter. In addition, access will be easier, especially in some areas where surface access is difficult due to steep slopes and a paucity of roads.

### Portal and decline geotechnical drilling

While cover drilling will remain ongoing during decline development, NOMC has similarly identified the requirement for additional geotechnical drilling for the FME and FM-Nab / FMS portals and declines to provide updated RQD data for the portal bench designs as well as support requirements for both the boxcut, portal and decline excavations. This drilling will be done from surface, the portal holes at 70° inclinations and the decline holes vertical if practical due to the topography between the FME portal and the planned underground workings.

### Backfilling

Additional recommendations include carrying out PSD and permeability tests on actual tailings material from the FM Project.

### Metallurgical testwork

Based on the overall conclusions of the FM Project metallurgical testwork, METC made the following recommendations for further work:

- test bulk particle sorting, preferably on site, when mining has started;
- investigate the successful reduction of MgO and F through the use of a more suitable depressant / increased depressant dosing / a second cleaner stage / a regrind stage;
- test FMN mineralised materials which contained U and Th for their contribution to radioactivity to comply with IAEA Regulations;
- investigate a finer grind size for improved liberation of copper and ideal rejection of MgO and F gangue minerals;
- investigate the potential for filtrates be recycled to the thickener feed for clarification of filtrate and recovery of valuables; and
- test TML in relation to plant cake moisture.

### Surface geotechnical studies

Perform geotechnical pitting and testwork at the plant site to confirm the soil conditions prior to the commencement of plant construction.

### TSF related testwork

The following recommendations were made by Epoch regarding the TSF:

- the detailed design of the TSF be undertaken in line with GISTM requirements;
- undertake geotechnical testwork on a sample of the "fine" tailings to determine its strength parameters and placed dry density;
- undertake waste classification analyses for FME;
- re-evaluate the placed dry density of the total placed tailings and confirm the required capacity for the TSF;
- undertake a detailed costing for Raises 2-4; and
- appoint an experienced and accredited contractor to undertake the installation of the liner system.

### Feasibility Study level of completion and outstanding work

The FM Project comprises four separate mining areas supported by shared disciplines including, but not limited to, the central processing plant, surface infrastructure and ESG. The assessment of the FM Project in relation to the Feasibility Study level of completion is therefore separated into these five areas – i.e. the shared disciplines and each of the four mining areas. Spider graphs of the five areas provide a schematic representation of the status of the FM Project in relation to industry standard Feasibility Study requirements (Figure 29). The graphs also indicate the relative importance of the various workstreams in terms of impact on the FM Project's cost, delivery and quality.

The enormous task of bringing four independent mining operations to Feasibility Study level simultaneously should not be lost on the reader. NOMC's strategy has been to focus their efforts on the shared services which are required immediately, and then each mining operation according to its respective timing in the LOM plan.

The graphs clearly demonstrate that the shared disciplines are approaching 100% Feasibility Study level completion, barring the minor surface geotechnical requirement for pitting at the plant site. In respect of the mining areas, and according to their order of development, FMN has an average completion result of approximately 93%, FME 92%, FM-Nab 97% and FMS 89%.

The reasons for the mining areas' Feasibility Study completion ratings being less than 100% are two-fold:

- no Proved Ore Reserves are reported and no Measured Mineral Resources have been classified for FME and FMS. All Mineral Resources at FME and FMS are classified as Indicated and Inferred. Stope definition is planned from primary development using underground diamond drill rigs to provide the required drilling density to upgrade Indicated Mineral Resources to Measured Mineral Resources prior to the commencement of stoping operations; and
- the work done on backfilling for the mines has not been completed to Feasibility Study level, due to testwork on flotation tailings to determine the mass recovery to the cyclone underflow at the required PSD of <10% minus 10µ particles required to achieve a minimum percolation of water in placed hydraulic backfill for drainage. The backfill design and costing has been based on cyclone performance simulations with a 30% contingency on costs applied. Testwork for the completion of the study will be undertaken using actual flotation tailings samples once the plant is in operation.

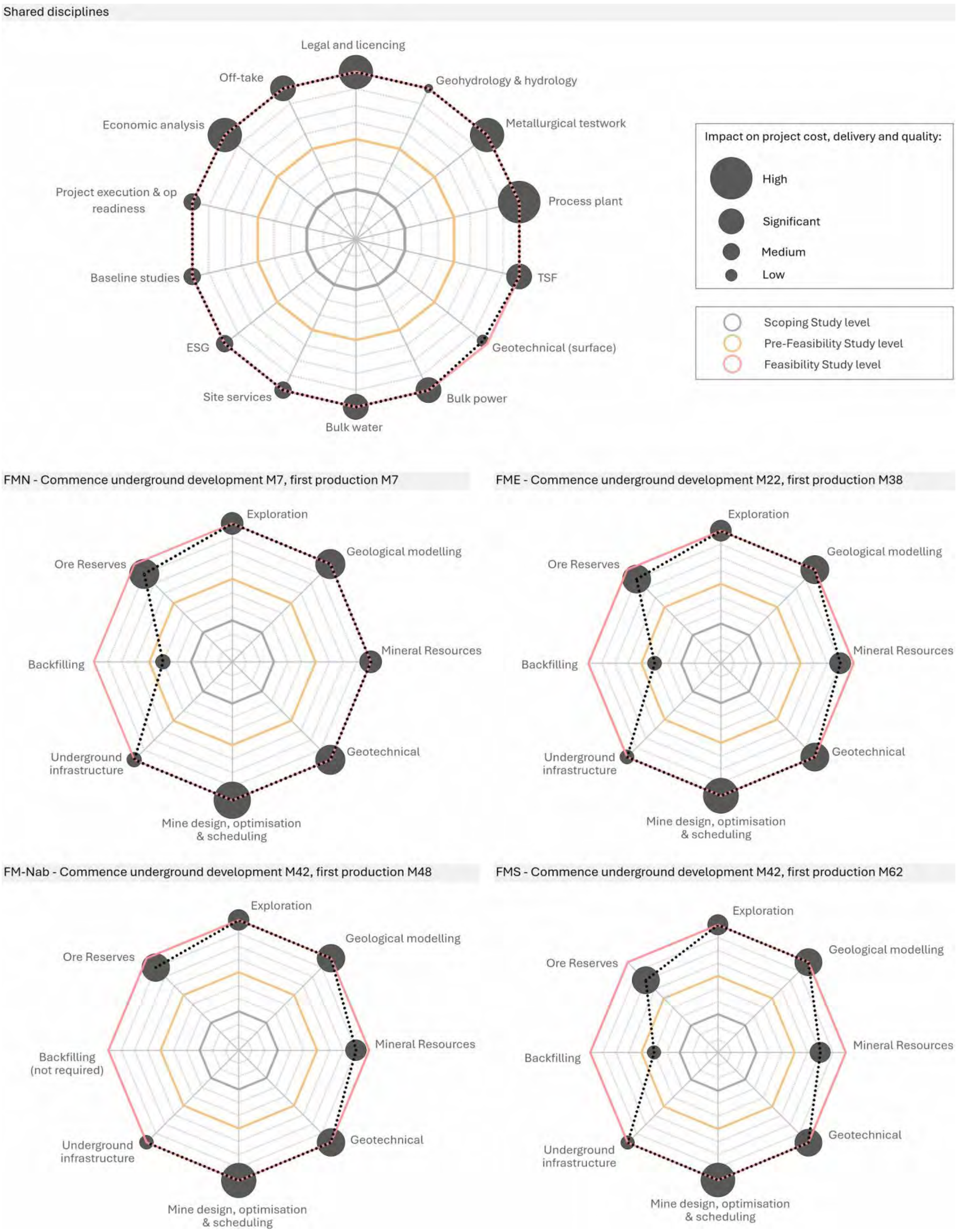



**Figure 29: FM Project - Spider graphs of Feasibility Study completion levels for shared disciplines and mining areas.**

## Conclusions

The FM Project Feasibility Study marks the culmination of project work starting in 2022 where numerous refinements and improvements to the earlier studies have been made. The Project is underpinned by Mineral Resources reported in accordance with the JORC Code (2012), culminating in an economical LOM plan, integrating the four mining areas ($NPV_{8\%}$ = ZAR935m). An alternative Reserves Only mine plan was compiled (excluding gold and silver credits) which also shows economic value ($NPV_{8\%}$ = ZAR349m) and confirms that the Inferred Mineral Resources included in the LOM plan are not the determining factor in project viability.

The Feasibility Study has indicated the FM Project to be economically feasible to produce a total of 78,340t of copper metal over period of 12yrs from first concentrate production. NOMC is committed to advancing the LOM operation as its business plan. Comprehensive drilling plans have been put in place to upgrade the Inferred Resources contained in the LOM plan to Indicated Resources for inclusion as Probable Reserves in the business plan. Orion anticipates that in the longer term, additional Mineral Resources will be delineated to increase the FM Project mining inventory.

This Feasibility Study has reached a level of costing accuracy and engineering design approaching 100% for the shared services. In respect of the mining areas, and according to their order of development, FMN is approaching 100%, FME is at an average of 93%, FM-Nab at 89% and FMS at 89%. Orion is expecting to bring the latter mining operations up to full Feasibility Study level at least six months before commencing their development.

The execution strategy is to develop the project in phases to defer capital expenditure as far as possible while focussing on the critical path activities. The FM Project plan is to mine two mining areas simultaneously to achieve a viable scale of operation in the context of the FM Project deposits. The critical activity in the project is the establishment of world class development teams to undertake the decline development planned in each of the FM Project deposits. The FM Project benefits from the existing FMN decline and development enabling the time to steady state production to be significantly reduced. The plant and surface infrastructure will also be phased to meet the production requirements for FMN only initially in Phase I, with later Phase II expansion to coincide with FME production coming online.

This strategy provides unique benefits for the FM Project which include:

- the commencement of development in FMN only will allow the full focus of management to provide staff training and orientation to establish efficient development practices to exceed development targets,
- highly proficient decline development teams proven in FMN will be transferred to FME decline development to expedite access to the FME resources, and thereafter to FMS.
- staff experience gained during the development and mining of FMN will benefit subsequent operations;
- mining on multiple fronts provides added flexibility in managing tons and grade delivered to the ROM pad at the plant
- mining machinery and underground support equipment will be transferred from one mining operation to the next, thus limiting the required capital outlay;
- technical information obtained during the development and mining of FMN will be used to inform and optimise the designs for the subsequent operations;
- staggered processing plant capital outlays; and
- ability to test and quantify the benefits of ore sorting in an operational environment with large sample population.

The downside of the phased approach is that although the risk of project delays and cost overruns is reduced, the production buildup to design capacity is longer than could possibly be achieved should the development of FMN and FME commence simultaneously. The increased time to full production increases the payback time from first production and reduces the IRR reported in the financial analysis.

The time to first production in Phase I of the project and subsequently the time to full production in Phase II is defined by the development rates achieved in decline development in FMN initially and then in FME. The development rates built into the mining schedule is determined by the Competent Person according to South

African benchmarking values for development. These development rates are exceeded in many mining jurisdictions around the world, hence there is potential to reduce the development time in these declines. The impact of bringing full Phase II production forward will have a significant positive impact on the project economics, and this objective will be the priority of the Execution Team.

Key project risks, as outlined in the risk chapter, have been identified with mitigation strategies developed to manage and control these challenges. Community matters have been included in the top risks, however NOMC started engaging with the FM Project's host communities since 2021 and a well-established and robust community Stakeholder Engagement Forum has been in place since then. A number of NOMC sponsored community focused projects and training programmes have been implemented over this period and aspirational host community employment (50%) and procurement (30%) targets have been mutually agreed and are being worked towards. These interactions are expected to foster a cooperative and harmonious relationship with the local community into the future.

Over and above the economic benefits to the Orion shareholders, the FM Project will improve the local environment by removing and containing the historical evaporation pond currently polluting the groundwater. In addition, NOMC has already commenced with refurbishment of the Nababeep WWTW which has been contaminating the non perennial Nababeep stream with raw sewage.

The NOMC MR and the surrounding SAFTA PRs offer significant opportunities for continued mineral resource definition, followed by mining and processing using its planned centrally located infrastructure hub and processing plant, with Nababeep set to become an important new mining hub in the Northern Cape.

This Feasibility Study has also demonstrated that there is potential to further optimise the FM Project economics through the inclusion of focussed value engineering studies.

For and on behalf of the Board.

Errol Smart
Managing Director & CEO

28 March 2025

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### Competent Person's Statements

The information in this report that relates to Exploration Results (metallurgical testwork results) is based on information compiled under the supervision of Mr John Edwards (Pr.Sci.Nat), a Competent Person who is a Member of *The Australasian Institute of Mining and Metallurgy*, a 'Recognised Professional Organisation' (RPO) for JORC Code (2012) purposes. Mr Edwards is an employee of METC Engineering (Pty) Ltd, which is fully independent of Orion and the FM Project. Mr Edwards has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code (2012). Mr Edwards consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on information compiled under the supervision of Mr Jon Hudson (Pr.Sci.Nat), a Competent Person who is a Fellow registered with the South African Institute for Mining and Metallurgy (SAIMM), a 'Recognised Professional Organisation' (RPO) for JORC Code (2012) purposes. Mr Hudson is also a Professional Engineer registered with the Engineering Council of South Africa (ECSA). Mr Hudson is an employee of JHK Consulting which is fully independent of Orion and the FM Project. Mr Hudson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code (2012). Mr Hudson holds a B Eng. (Hons) Mining degree and MBA. Mr Hudson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Reference to Previous Reports

Information on the Flat Mine North (FMN), Flat Mine East (FME), and Flat Mine South (FMS) Mineral Resources is extracted from the report entitled 'Orion upgrades Mineral Resources at the Flat Mines Area, Okiep Copper Project as BFS nears completion' dated 28 August 2023, available to view on https://www.orionminerals.com.au, and compiled by Mr Sean Duggan (Pr.Sci.Nat), a Competent Person who is registered with the SACNASP (Registration No. 400035/01) and an employee of Z* which is independent of Orion. Orion confirms that it is not aware of any new information or data that materially affects the FMN, FME and FMS Mineral Resources included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Orion 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.

Information on the Flat Mine Nababeep (FM-Nap) Mineral Resources is extracted from the report entitled "Orion Updates Mineral Resources at Okiep Copper Project" dated 28 March 2025, available to view on https://www.orionminerals.com.au, and compiled by Mr Paul Matthews (Pr.Sci.Nat.), a Competent Person who is a member of SACNASP (Registration No. 116880/17 and a full-time employee of Orion. Orion confirms that it is not aware of any new information or data that materially affects the FM-Nap Mineral Resource included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Orion 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.

## Disclaimer

This release may include forward-looking statements. Such forward-looking statements may include, among other things, statements regarding targets, estimates and assumptions in respect of metal production and prices, operating costs and results, capital expenditures, mineral reserves and mineral resources and anticipated grades and recovery rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements inherently involve subjective judgement and analysis and are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Orion. Actual results and developments may vary materially from those expressed in this release. Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. Orion makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release. All information in respect of Exploration Results and other technical information should be read in conjunction with Competent Person Statements in this release (where applicable). To the maximum extent permitted by law, Orion and any of its related bodies corporate and affiliates and their officers, employees, agents, associates and advisers:

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## Appendix 1: The following tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of Ore Reserves for the Okiep Copper Project.

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | • Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.<br>• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.<br>• Aspects of the determination of mineralisation that are Material to the Public Report.<br>• In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. | Drilling and sampling was undertaken during four distinct periods since the initial discovery of mineralisation:<br>• Prior to 1984 by O'Okiep Copper Company (OCC) under the ownership of Newmont.<br>• 1984 – 1999 by OCC under the ownership of Goldfields of South Africa (GFSA).<br>• In 2018 - 2021 by South Africa Tantalum Mining (SAFTA).<br>• From 2021 by Orion Minerals (Orion).<br>Newmont and GFSA:<br>• For diamond drilling carried out by OCC between 1947 and 1999, there is limited detailed documentation available on sampling techniques for core. However, it is known from discussions with OCC exploration department personnel that all drill core was brought to the exploration offices in Nababeep to be logged and sampled.<br>• With exploration and resource management being carried out under the supervision of OCC, it is considered by the Competent Person that there would be procedures in place to the industry best practice standard at that time. This is based on discussions with personnel employed by OCC.<br>• Drill samples from Newmont and GFSA drilling were all sent to OCC on-mine laboratory in Nababeep.<br>• Samples were generally taken over 1.5 to 2m intervals adjusted to accommodate geological contacts.<br>• Newmont whole core was submitted to the laboratory (AX core size). A 5 to 10cm representative length of core was archived for each mafic sample and for each change in rock type.<br>• GFSA drilled both AX and BX size core. If the core was visually mineralised or showed any unusual characteristics, it was cut with a core cutter at the core yard and half core was submitted to the assay laboratory over the entire sample interval. The other half was retained for the record.<br>• For both Newmont and GFSA, core samples were numbered with sample tickets and bagged in canvas sacks at the core yard before being dispatched to the assay laboratory in Nababeep.<br>• No formal QC samples were inserted at the time by the geologists on the |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | | exploration site. OCC laboratory developed its own standards, and those were used internally in the laboratory. No record exists on the preparation method of the standards. Duplicate samples were also inserted to check for repeatability. No records exist on the percentage of duplicates or standards.<br>• No historical Standard Operating Procedures are available.<br>SAFTA:<br>• SAFTA carried out a twin drilling campaign in 2018. Drillholes consisted of an upper percussion portion followed by a diamond tail. The diamond tail commenced when either significant deviation was encountered in the percussion portion, or at 2m to 3m above the targeted mineralisation.<br>• Diamond core samples were demarcated and collected across all visible mineralisation estimated at least 0.05% Cu. No percussion chip samples were analysed.<br>• At least 1m hangingwall and footwall material was also sampled.<br>• The average sample length was approximately 1m with minor variations to accommodate for geological boundaries.<br>• Sampling was carried out by an experienced sampler/geologist according to Standard Operating Procedures (SOP).<br>• Sampling of the mineralised drill core was of a high standard and found suitable for estimation purposes.<br>• QC samples were inserted, and the records are available.<br>Orion:<br>• Sampling was carried out using industry standard procedures. NQ-size diamond drill cores were longitudinally split in half using a diamond core cutting machine. Half core was cut to quarter core where duplicates were taken.<br>• HQ core size was only drilled in the upper weathered portion and no HQ core was sampled at FMN, FME or FMS. A total of 8.84 metres of oxide mineralisation was sampled from HQ core in three holes from FMNb.<br>• One-metre sample lengths were taken in most cases in the mineralised zones, with two-metre sample lengths generally taken in poorly mineralised zones and sections of internal waste. Sample lengths were varied to honour geological and mineralisation boundaries. |

| Prospect | Min Sample Width | Max Sample Width |
| --- | --- | --- |
| FME | 0.35 | 2.00 |
| FMN | 0.22 | 1.19 |
| FMS | 0.40 | 2.10 |
| FMNb | 0.30 | 2.24 |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • Areas of sampling for laboratory assay were selected based on rock type and readings from a handheld Niton XL3t 500 XRF analyser (standard analytical range >25 elements from S to U with additional elements Mg, Al, Si and P via helium purge).<br>• A minimum of five metres of hangingwall and footwall samples were collected.<br>• Sampling was carried out by an experienced geologist according to Standard Operating Procedures (SOP).<br>• Sampling of the mineralised drill core was of high standard and found suitable for estimation purposes.<br>• QC samples were inserted as per Orion's sampling SOP, and the records are available. |
| *Drilling techniques* | • *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).* | Newmont:<br>• All intersections were by core drilling.<br>• BX core size was drilled in the weathered zone followed by AX core size<br>• Core orientation was not done.<br>GFSA:<br>• All intersections were by core drilling.<br>• AX and BX core sizes were drilled.<br>• Core orientation was not done.<br>SAFTA:<br>• Twin drilling in 2018 consisted of an upper percussion portion followed by a diamond tail.<br>• The diamond tail commenced when either significant deviation was encountered in the percussion portion, or at 2m to 3m above the targeted mineralisation.<br>• NQ size diamond core was drilled through the targeted mineralisation.<br>• The shallower holes at Flat Mine North commenced with NXC size core for 2m to 5m followed by NQ drilling.<br>• Core was oriented using a Reflex ACT instrument.<br>Orion:<br>• Diamond core drilling was undertaken.<br>• HQ and NQ size core was drilled using a standard tube. HQ core size was only drilled in the upper weathered portion of approximately 6m. No copper mineralisation was visually identified in the HQ core except for three holes at FMNb where oxide copper mineralisation was intersected |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | | and sampled. No HQ core was sampled from FMN, FME or FMS.<br>• Core was oriented using a Reflex ACT III™ for selected holes at FMN (2), FME (4), FMS(6). No core orientation was carried out for holes at FMNb. |
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | Newmont:<br>• All mineralised intersections were drilled with diamond core.<br>• Core stick-ups reflecting the depth of the drill hole were recorded at the rig at the end of each core run.<br>• A block with the depth of the hole written on it was placed in the core box at the end of each run.<br>• Core recoveries were measured for each run.<br>• No records exist for core recoveries on individual samples.<br>• Intersections were in hard rock and good recoveries are envisaged through the mineralisation and core recoveries were reported to be generally around 90%.<br>GFSA:<br>• All mineralised intersections were drilled with diamond core.<br>• Core stick-ups reflecting the depth of the drill hole were recorded at the rig at the end of each core run.<br>• A block with the depth of the hole written on it was placed in the core box at the end of each run.<br>• At the core yard, the length of core in the core box was measured for each run. The measured length of core was subtracted from the length of the run as recorded from the stick-up measured at the rig to determine the core lost.<br>• Core recoveries were done for individual samples.<br>• Intersections were in hard rock and good recoveries were encountered through the mineralisation.<br>SAFTA:<br>• Core was carefully packed, marked and measured in order to determine core recoveries according to SOP.<br>• Recoveries are recorded as part of the geological and sampling logs.<br>• Core stick-ups reflecting the depth of the drill hole were recorded at the rig at the end of each core run.<br>• A block with the depth of the hole written on it was placed in the core box at the end of each run.<br>• Core recoveries were measured for each run.<br>• The 2018 twin drill program recorded excellent core recoveries, with an average of 98.1% for the entire diamond tail. |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | | • Excellent recoveries were due to highly competent rocks and a shallow weathering profile.<br>• Good recoveries were obtained within the mineralised zones with no anticipated sample bias.<br><br>Orion:<br><br>• Core 'stick-ups' reflecting the depth of the drill hole were recorded at the rig at the end of each core run. A block with the depth of the hole written on it was placed in the core box at the end of each run. At the core yard, the length of core in the core box was measured for each run. The measured length of core was subtracted from the length of the run as recorded from the stick-up measured at the rig to determine any core loss.<br>• Core recovery was found to be very good (>98%) within the mineralised zone.<br>• Ground conditions below the shallow (maximum 6 metres) weathered zone were generally very good.<br>• No obvious relationship exists between sample recovery and grade.<br>• No core/sample loss or gain was experienced which could result in sample bias. |
| *Logging* | • *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | Newmont and GFSA:<br><br>• All relevant intersections for surface holes have been logged by qualified geologists and all of this information is available.<br>• No geotechnical information is available for the historical drill holes.<br>• Core was not photographed.<br>• Logs were recorded in the core yard on standard log sheets.<br>• Quantitative estimates of sulphide mineralogy were done.<br>• Core of the entire drill hole length was geologically logged and recorded on standardised log sheets by qualified geologists.<br><br>SAFTA:<br><br>• Percussion chips and core were logged by experienced and qualified geologists.<br>• All diamond core was logged, recorded and digitally captured.<br>• Core was photographed.<br>• Standard codes describing lithology, alteration, mineralisation and structure were applied.<br>• Structural measurements were collected from orientated core for all but two drill holes completed.<br>• A total of thirteen twin holes were drilled resulting in approximately 1,260 |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | metres of percussion chips and 1,109 diamond core metres logged.<br>• All of the twin holes were geotechnically logged for RQD.<br>• Two of the thirteen holes failed to intersect mineralisation due to excessive deviation and were abandoned.<br><br>Orion:<br><br>• Core of the entire hole length was geologically logged by qualified geologists.<br>• The core was logged to a level of detail that is sufficient to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.<br>• Geological logging was qualitative and was carried out using a standard sheet with a set of standard logging codes to describe lithology, structure and mineralisation. The logging sheet allows for free-form description to note any unusual features.<br>• Geological logs were captured electronically.<br>• All cores were photographed before sampling.<br>• All generated core was logged from collar to end of hole and data was electronically captured.<br>• A total of eleven holes and eleven deflections (wedges) were drilled at FMN, FME and FMS resulting in approximately 5,470 diamond core metres logged.<br>• A total of nine holes were drilled at FMNb resulting in approximately 959 diamond core metres logged.<br>• Geotechnical logging was completed on oriented core. The data collected per drill run consisted of core recovery, length of core greater than ten centimetres, longest piece, fracture count, alpha and beta angles for all joint types and lithological contacts, joint infill types and their strength as well as nature of joint surface. |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.*<br>• *Whether sample sizes are appropriate to the grain size of the material* | Newmont:<br><br>• The entire whole core sample length was submitted to the laboratory except for a 5 to 10cm piece of core retained as a reference every 2m in a mineralised intersection.<br>• Sample preparation included crushing, splitting and pulverising and was undertaken by the OCC Laboratory.<br>• The retention of the maximum 10cm length of core from every 2m or from a change in lithology will not result in maximum representativity of samples. However, this methodology was employed for numerous prospects which were successfully mined, and the Competent Person considers the sub-sampling and sample preparation acceptable. The |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *being sampled.* | Competent Person is not aware of any quality control procedures adopted to maximise the representivity of samples or to ensure that the sampling is representative of the in-situ material. No duplicate samples were taken.<br>GFSA:<br>• BX core was cut at the core yard and half core was taken as a sample.<br>• With core samples, the entire sample length is cut and sampled.<br>• Sample preparation included crushing, splitting and pulverising and was undertaken by the OCC Laboratory.<br>• The Competent Person is not aware of any quality control procedures adopted to maximise the representivity of samples or to ensure that the sampling is representative of the in-situ material. No duplicate samples were taken.<br>SAFTA:<br>• NQ core was halved and quartered by diamond saw.<br>• Samples were crushed and pulverised to 85% passing <75µm.<br>• The sub-sampling and sample preparation methods used by SAFTA is considered appropriate for this type of mineralisation.<br>• Mineralisation is generally massive to disseminated.<br>• Field duplicates consisted of identical quartered core of initial sampling. Field duplicates showed good correlation with only two samples slightly off the linear regression curve.<br>Orion:<br>• NQ core was cut, and half core was taken as a sample. Quarter core samples were taken for duplicates.<br>• HQ core size was only drilled in the upper weathered portion and HQ core was only sampled in three holes at FMNb where copper oxide mineralisation was intersected.<br>• Sample preparation was undertaken at ALS Laboratory in Johannesburg (ALS), an ISO accredited laboratory, and is considered appropriate. ALS utilised industry best practices for sample preparation involving drying samples, weighing samples, crushing to <2mm if required. Crushed samples were riffle-split and a 250g portion pulverised with +85% passing through 75 microns.<br>• Crushing and pulverising QC tests were applied by ALS and found acceptable.<br>• Fifty quarter core field duplicates were taken from the mineralised zones as per geologist's cut sheet whilst the laboratory had 58 pulp repeats. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Analysis of results for both show excellent precision with HARD of 0.6-3.15% and HRD of -0.7 –0.16% for copper.<br>• All sample sizes are deemed appropriate. |
| *Quality of assay data and laboratory tests* | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | Newmont and GFSA:<br>• No detailed records exist for laboratory quality procedures for the OCC laboratory.<br>• Samples were assayed for copper content by atomic absorption techniques.<br>• No physical records have been located for the QAQC protocols and the Standard Operating Procedures used.<br>• No geophysical tools, spectrometers or handheld XRF instruments were used.<br>• No record is available on quality control methods. It is the Competent Person's opinion that the quality of the assay results was acceptable as the historical results were sufficiently consistent with SAFTA and Orion results where industry standard quality control methods were employed.<br>SAFTA:<br>• No geophysical tools, spectrometers or handheld XRF instruments were used for grade determination.<br>• Samples from the 2018 twin drilling program were analysed by the ISO17025 accredited ALS laboratory (ALS) in Johannesburg, South Africa.<br>• Samples were analysed using the ME-OG62 4 Acid digestion method and finished by ICP-AES.<br>• Assay precision is within 7-10% with a lower detection limit of 10ppm (0.001%) Cu.<br>• The quality of assay data / results was monitored by insertion of approximately 5% CRMs, 5% Blanks and 5% field duplicates.<br>• At least five different and applicable CRMs were used, two low grade (<1% Cu) and three medium grade (1% – 2% Cu).<br>• A total of 422 samples were analysed, including 24 blanks, 21 CRMs, 17 duplicates, 15 coarse rejects and 11 pulp duplicates.<br>• All but two CRM results were within the accepted two standard deviation limits.<br>• The blanks performed exceptionally well, denoting a low level of contamination of sample preparation.<br>• Pulp duplicates (eleven in total, one from each successful hole) across the broad range of grades were renumbered and submitted to ALS and the same analytical method. A very good correlation was obtained.<br>• Sixteen reject samples were re-analysed by ALS and a good correlation |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | was obtained.<br>• Limited data swap and labelling errors were encountered and rectified.<br>• Blanks, standards and duplicates comprised 15% of all field samples, the total QC samples comprised 21% of the entire 422 samples dispatched.<br>• For FMN a total of 335 samples from 9 drill holes were submitted, including 17 CRMs, 17 blanks and 13 duplicates.<br>• For FMS a total of 102 samples from 2 drill holes were submitted including 4 CRMs, 7 blanks and 4 duplicates.<br><br>Orion:<br><br>• Areas of sampling were selected based on visual observations and readings from a handheld Niton XL3t 500 XRF analyser (standard analytical range >25 elements from S to U with additional elements Mg, Al, Si and P via helium purge).<br>• Samples submitted to ALS were analysed for base metals and gold.<br>• All samples were analysed by an appropriate high-grade aqua regia ICP-AES method, ALS code ME-ICP41a.<br>• Samples where assays returned >5% Cu were re-assayed by aqua regia digestion and ICP-AES method, ALS code MEOG-46.<br>• Samples were assayed for gold by fire assay and AAS, ALS code AU-AA25 method.<br>• Orion inserted CRMs every 10th sample. A total of one hundred and forty-two (142) CRMs were inserted. CRMs were alternated throughout the sample stream and where possible, matched to the sample material being analysed.<br>• Five CRMs were used. AMIS0399 (1.014 %Cu), AMIS0847 (1.05%Cu), AMIS0809 (2.97 %Cu) and AMIS0088 (0.3 %Cu) and AMIS0440 (1.74g/t Au).<br>• All CRMs, with the exception of one batch, returned acceptable results within two standard deviations of the CRM average. The one batch failed Orion failure criteria when three consecutive assays plotted outside the two standard deviation limits. This batch was re-assayed, and the CRMs passed for the re-assay.<br>• Chip blanks are inserted at the beginning of each batch and after any sample that may be considered high grade. A total of eighty-eight (88) blanks were used. Acceptable results were returned indicating no contamination.<br>• The laboratory conducts their own checks which are also monitored. The accuracy and precision of the geochemical data reported on has deemed to be acceptable with HRD of -0.16% and HARD of 0.60%.<br>• Results from the three (3) quarter core field duplicates showed acceptable correlation coefficient of 0.98, HRD of -0.7% and HARD of |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | | 3.15%.<br>• No external laboratory checks have been carried out at this stage. |
| *Verification of sampling and assaying* | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | Newmont and GFSA:<br>• No records are available for the verification of data.<br>• Exploration was managed by the OCC exploration departments, consisting of qualified geologists.<br>• No adjustments to assay data were reported.<br>SAFTA:<br>• Thirteen twin drill holes were drilled, ten at FMN and three at FMS.<br>• One hole at FMN and one hole at FMS missed the mineralised bodies due to excessive deviation.<br>• Records of verification data/samples are available.<br>• Verification samples were submitted to a second laboratory, namely Intertek, Australia.<br>• A subset of approximately 5% of the total samples across the grade spectrum was submitted and analysed.<br>• The 22 samples and one CRM were assays by the 4AO/OM method, i.e. 4 Acid digest and ICP-OES finish.<br>• The verification samples showed excellent correlation with the original ALS analyses.<br>• No adjustments have been made to the assay data.<br>Orion:<br>• Orion's exploration geologist personally supervised the drilling and sampling along with a team of experienced geologists.<br>• Drill holes at FMN, FME and FMS were not intended as "twin holes"; however, due to the density of historical holes, most holes intersected mineralisation in close proximity to historical holes.<br>• Analysis of the grades of these holes showed a reasonable correlation with historical holes in close proximity.<br>• Holes at FMN, FME and FMS were planned to intersect close to historical holes to confirm the geological interpretation and historically reported assays. Comparable intersections were returned to the Competent Person's satisfaction, for example.<br>  o FME: Orion's OFMED153 returned 49.00m at 4.89% from 231.00m which compares well to the 59.10m at 3.55% Cu returned in historical hole FME035 approximately 13m to the east.<br>  o FMN: Orion's OFMND243 intersected 36.30m at 1.11% Cu |

| Criteria | JORC Code explanation | Commentary |
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| | | from 234.00m which is comparable to historic hole FMN207, 25m away, which intersected 24.40m at 1.45% from 255.30m.<br>• Holes at FMNb were planned to infill within the reported Orion 2021 Mineral Resource that was prepared based on historical data, and to confirm limited strike extensions. Results and the position of the mineralised intersections showed a good correlation with historical drilling to the Competent Person's satisfaction.<br>• The Competent Person has reviewed the raw laboratory data and confirmed the calculation of the significant intersections.<br>• No adjustments have been made to the assay data. |
| *Location of data points* | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | Newmont and GFSA:<br>• All drill hole collars were initially located using local grids and ground positions surveyed in by a qualified company surveyor. The next stage was pegging of collars and pick up utilising the Cape Lo17 grid system pre 1990 and South African grid (Hartebeesthoek 94) post 1990 by the surveyor.<br>• On completion drill collars were capped and labelled.<br>• Down-hole surveys are available for the majority of the historical Newmont and GFSA holes.<br>• Downhole survey was conducted utilising two multi-shot Eastman survey instruments and a Sperry-Sun single shot instrument. The Sperry-Sun instrument was used mostly for underground holes during ore delineation.<br>• Some down-hole surveys are missing for a few of the shallow holes at FMS. Deviations at these hole depths is not considered by the Competent Person to be of material significance.<br>• Check surveys of Newmont and GFSA collars confirmed coordinates as accurate within an acceptable margin of error.<br>• Mineralised intersections for Newmont and GFSA holes showed a close spatial correlation with Orion holes indicating Newmont and GFSA down hole surveys were within an acceptable margin of error.<br><br>SAFTA:<br>• All collar positions of the holes were initially located using a hand-held Garmin GPS and have been subsequently surveyed by a qualified surveyor using a differential GPS. The local South African Lo17 (Hartebeesthoek94) grid system is used.<br>• On completion drill collars were capped and labelled.<br>• The eleven holes which successfully intersected mineralisation have |

| Criteria | JORC Code explanation | Commentary |
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| | | been surveyed down-hole. A north seeking Reflex SPRINTIQ gyro tool was used for the down-hole surveys. Two holes were abandoned due to excessive deviation and missing the mineralised zone.<br><br>Orion:<br>• All collar positions of the holes were initially located using a hand-held Garmin GPS and have been subsequently surveyed by a qualified surveyor using a differential GPS.<br>• On completion drill collars were capped and labelled.<br>• The local South African Lo17 (Hartebeesthoek94) grid system is used.<br>• All the holes have been surveyed down-hole. A north-seeking Reflex SPRINTIQ gyro tool was used for the down-hole surveys. |
| *Data spacing and distribution* | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | Newmont and GFSA:<br>• Exploration holes were generally drilled aiming to achieve a 60m by 30m spacing, considered sufficient to establish the degree of geological and grade continuity appropriate for the mineralisation style, estimation procedures and classifications applied.<br>• FMN northern body was drilled at a 15m line spacing in fans from underground decline development for orebody definition and grade control.<br><br>SAFTA:<br>• No resource definition holes were drilled, twin holes were drilled at FMN and FMS to confirm and verify historical drilling and data.<br>• Twin hole locations were selected based on historical drill data and accessibility.<br>• Ten holes were drilled at FMN and three holes were drilled at FMS. No twin holes were drilled at FME.<br>• The twin holes, although limited, have provided a good degree of confidence in the grade distribution and geological model.<br><br>Orion:<br>• At FME drill spacing for confirmatory drilling was at 50m. At FMN two holes were drilled 108m apart. FMS drill spacing was constrained by accessibility to ideal drill pads at 75m apart.<br>• Drill spacing at FMNb was variable with the main constraint being the avoidance of historical stopes. Drill spacing varied between 30m and 60m along strike.<br>• The combined drill spacing of the Orion and historical drillholes is considered sufficient to establish the degree of geological and grade |

| Criteria | JORC Code explanation | Commentary |
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| | | continuity appropriate for the Mineral Resource and Ore Reserve estimation and classifications.<br>• Two-metre samples were taken in wider zones of internal waste or barren zones separating hanging wall and footwall mineralised zones. Within the mineralised zones one-metre samples were taken. |
| *Orientation of data in relation to geological structure* | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | Newmont and GFSA:<br>• Historical drilling is generally oriented perpendicular, or at a maximum achievable angle to, the attitude of the mineralisation.<br>• As a result, most holes intersect the mineralisation at an acceptable angle.<br>• No sampling bias is anticipated as a result of drill hole orientations.<br>SAFTA:<br>• The twinning drill holes were drilled from surface at inclinations ranging between -60° and -78°.<br>• Generally, the mineralisation is steeply dipping to the north with some occasional flatter dipping mineralised bodies at FMN.<br>• Drill intercepts range between 70 – 100% of the true widths and are considered to be representative and unbiased.<br>• Only two holes had excessive lateral deviations, and the intercepts were not as perpendicular to strike and dip of the mineralisation as planned.<br>Orion:<br>• To achieve unbiased sampling, drilling was oriented as close as possible to perpendicular, or at a maximum achievable angle to the attitude of the mineralisation.<br>• No sampling bias is anticipated because of drill hole orientations. |
| *Sample security* | • *The measures taken to ensure sample security.* | Newmont and GFSA:<br>• No details of sample security are available. However, during the mining operations, the site was fenced and gated with security personnel employed as part of the staff.<br>• All sampling was done in the coreyard of the OCC geological offices.<br>• Assay laboratory reject samples were stored at the planning department until the economic appraisal of the prospect had been completed.<br>SAFTA:<br>• Core and sampling storage was at a secure location.<br>• Sample security and storage followed standard procedures. |

| Criteria | JORC Code explanation | Commentary |
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| | | • Samples were properly bagged, tagged and sealed with cable ties.<br>• Samples were handed over by the site geologist and shipped via couriers to the laboratories.<br>• Laboratories received all samples in good order and no breaches were reported.<br>• Records of chain of custody exist.<br>Orion:<br>• Core and sample storage was at a secure location.<br>• Sample security and storage followed standard procedures.<br>• Samples were properly bagged, tagged and sealed with cable ties.<br>• Samples were handed over by the site geologist and shipped via couriers to the laboratories.<br>• Laboratories received all samples in good order and no breaches where reported.<br>• Records of chain of custody exist. |
| *Audits or reviews* | • *The results of any audits or reviews of sampling techniques and data.* | Newmont and GFSA:<br>• No audits and/or review records or documentation are available.<br>SAFTA:<br>• Drilling procedures, sample collection and preparation techniques were audited by external and independent consulting exploration and resource geologists.<br>• Site visits were undertaken to review adherence to the SOPs.<br>• The drill hole database was reviewed.<br>• QA and QC sample collection protocols were reviewed, interrogated and found to be adequate for the inclusion of the data in resource estimation.<br>Orion:<br>• Drilling procedures, sample collection and preparation techniques were audited by external and independent consulting exploration and resource geologists e.g. from The Mineral Corporation (TMC) and Practara.<br>• Site visits were undertaken to review adherence to the SOPs and confirm field locations of drill collars.<br>• The drill hole database was reviewed as part of the Mineral Resource estimation process.<br>• QA and QC sample collection protocols were reviewed, interrogated and found to be adequate for inclusion of the data in the Mineral |

| Criteria | JORC Code explanation | Commentary |
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| | | Resource estimation. |

## JORC Table 1: Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The mineral rights to the properties are vested in the State and the Minerals and Petroleum Development Act, 2002, (MPRDA) regulates the exploration and mining industry in South Africa.<br>Newmont and GFSA:<br>• OCC and GFSA held vast areas under prospecting and mining rights, most of these have been relinquished.<br>Orion:<br>• Flat Mines Mining Right. A mining right, NC30/5/1/2/2/10150MR was granted on 28 July 2022 to Southern African Tantalum Mining (Pty) Ltd (SAFTA) in terms of section 23 of the MPRDA to mine for a period of fifteen years. The right may be renewed for periods of up to 30 years. The mining right was ceded to Orion indirect subsidiary, New Okiep Mining Company (Pty) Ltd (NOMC) on 12 December 2023. The right is for copper ore and tungsten are over a portion of portion 3, a portion of portion 13, a portion of portion 14 and a portion of portion 21 of the farm Nababeep No 134 situated within the Administrative District of Namaqualand. The area measures 1,214Ha in extent.<br>• A prospecting right, NC30/5/1/1/2/12850PR (Prospecting Right), for the same area was granted to SAFTA on 27 June 2023 in accordance with section 17 of the MPRDA for 3 years for 26 additional minerals including gold and silver.<br>• A prospecting right, NC30/5/1/1/2/12755PR was granted on 21 June 2024 to SAFTA in terms of section 17 of the MPRDA to prospect for a period of 3 years, renewable for 3 years. The right is for copper ore and tungsten ore for portion of Portion 3, portion of Portion 10, portion of Portion 13, portion of Portion 14, Portion 15, Portion 16, portion of Portion 21 of the farm Nababeep 134 and Okiep Township Plot 2086, situated within the Administrative District of Namaqualand. The total area measures 7,164Ha in extent. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • A prospecting right NC30/5/1/1/2/12848PR was granted on 21 June 2024 to SAFTA in terms of section 17 of the MPRDA for the same area as the prospecting right NC12755PR for 3 years (renewable for 3 years) for 26 additional minerals including gold and silver.<br>• Orion acquired 56.25% of the tenement rights through the SAFTA-Orion Acquisition Agreement. The remaining 43.75% is held by the Industrial Development Corporation of South Africa (IDC) (refer ASX/JSE releases 2 August 2021, 7 September 2022, 14 November 2022, 17 April 2024, 6 May 2024). Applications for Section 11 consent in terms of the MPRDA to cede the rights to NOMC are submitted once each right is granted and are in preparation and process.<br>• The area was mined historically for copper and tungsten. |
| *Exploration done by other parties* | • *Acknowledgment and appraisal of exploration by other parties.* | Newmont and GFSA:<br>• Surface geological mapping is of a high quality and detail. Underground mapping is also available for FMN and FMNb.<br>• Historical data included in the Mineral Resource estimation were generated by OCC and GFSA. Later very limited follow-up exploration was completed by Metorex.<br>• The historical data were collected via standard industry practices at the time and are considered suitable and acceptable for Mineral Resource estimation and classification. |
| *Geology* | • *Deposit type, geological setting and style of mineralisation.* | **O'Okiep Copper District (OCD):**<br>• These Cu deposits are part of the well-known Namaqualand Metamorphic Complex which consists primarily of meta-volcanic sedimentary and intrusive rock types.<br>• Copper mineralisation is primarily associated with irregular, elongated and steeply dipping Koperberg Suite mafic intrusives.<br>• The Koperberg Suite intrusives are mainly restricted to so-called 'Steep Structures' of extensive strike lengths and steeply dip to the north.<br>• The Koperberg Suite consists of anorthosite, diorite and norite intermediate rock types.<br>• Mineralisation usually occurs as blebs to disseminated Cu mineral assemblages bornite > chalcopyrite > chalcocite and less pyrite and pyrrhotite.<br>• The more mafic and magnetite-rich lithologies generally host the bulk of and higher-grade mineralisation.<br>• The OCD has a long exploration and mining history, and the geology is well known and understood. |

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Drill hole Information</td><td><ul><li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<ul><li>easting and northing of the drill hole collar</li><li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li><li>dip and azimuth of the hole</li><li>down hole length and interception depth</li><li>hole length.</li></ul></li><li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li></ul></td><td>No new exploration results are reported in this report.<br><br>Newmont and GFSA:<ul><li>All historical grade and density information are incorporated in the database.</li><li>Historically, 483 holes were drilled, totalling 127,278m. Tables of the historical drillhole information were included in the following previous releases:<ul><li>10 February 2021 – 'Orion reports maiden JORC Mineral Resource for the Okiep Copper Complex, Flat Mines'; and</li><li>29 March 2021 – ' Orion further expands Mineral Resources at the Okiep Copper Project, Flat Mines Area.</li></ul></li></ul>SAFTA:<ul><li>Thirteen twin holes and 2,370m were drilled in 2018.</li></ul>Orion<ul><li>Drillhole information for the holes drilled by Orion were reported in the following previous releases:<ul><li>3 September 2024 – 'Okiep Confirmation Drilling Successfully Completed';</li><li>23 October 2024 – 'New Standout Intercepts Confirm Down-Dip Continuation of High-Grade Copper Mineralisation at Flat Mine South'; and</li><li>17 December 2024 – 'Strong New Copper Intercepts Indicate Significant Additional Potential of Flat Mine South – Okiep Project'.</li></ul></li><li>Eleven holes were drilled at FMN, FME and FMS comprising 4,327.74m. Each hole had a deflection (wedge) drilled totalling an additional 1,142.34m. The primary purpose of the deflections was to provide material for geotechnical and metallurgical test work.</li><li>Of these eleven holes, two holes were drilled at FMN comprising 561.33m in the mother holes, and an additional 88.38m in the deflections. Five holes were drilled at FME comprising 1,536.56m in the mother holes, and an additional 555.03m in the deflections. Four holes were drilled at FMS comprising 2,229.85m in the mother holes, and an additional 498.93m in the deflections.</li><li>At FMNb, a total of nine holes were drilled comprising 959.47m.</li></ul></td></tr>
<tr><td>Data aggregation methods</td><td><ul><li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li></ul></td><td>No new exploration results are reported in this report. However, comparable intercepts are presented to compare recent and historical drilling results and were prepared using the following data aggregation methods:</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • A minimum 0.7% Cu cut-off was used to calculate intercepts.<br>• Allowance was made for 3m internal waste.<br>• A cut-off of 1.0% Cu was used for the higher-grade inclusions.<br>• Weighted grades were calculated as follows: %Cu x sample length(m)<br>• The Competent Person is of the opinion that the above aggregation methods are acceptable for this type of deposit.<br>• No metal equivalents are reported.<br>• No capping of assay results was required. |
| *Relationship between mineralisation widths and intercept lengths* | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').* | Newmont and GFSA:<br>• Historical drilling is generally oriented perpendicular, or at a maximum achievable angle to the attitude of the mineralisation.<br>• Generally, drill hole inclinations ranged between -55° to -80°.<br>• For the shallower historical drill holes, the true widths are 70 to 100% of the down-hole intercepts, especially at the flatter dipping mineralised zones of FMN.<br>SAFTA:<br>• For the shallower twin holes, the true widths are 70 to 100% of the down-hole intercepts, especially at the flatter dipping mineralised zones of FMN.<br>• Down-hole lengths are reported.<br>Orion:<br>• For the two Orion holes drilled into the sub-horizontal FMN mineralisation true widths are 90-100% of the down-hole intercepts.<br>• For the five Orion holes drilled into the moderately steep dipping FME mineralisation true widths are 80-100% of the downhole intercepts.<br>• For the four Orion holes drilled into the steep dipping FMS mineralisation, true widths are estimated at 60-80% of the downhole intercepts.<br>• For the eight Orion holes drilled into the moderately steep dipping FMNb mineralisation, true widths are estimated at 70-90% of the downhole intercepts.<br>• Down-hole lengths are reported for all intercepts. |
| *Diagrams* | • *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | • Numerous plans and cross-sections are available and were utilised during the geological and mineralisation modelling.<br>• All historical data is available as hard copies and is currently being digitised and incorporated into a GIS system. |
| *Balanced reporting* | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades* | • No new Exploration Results are reported in this report.<br>• The Mineral Resource estimation for FMN, FME and FMS is based on all |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | available and verified historical and 2018 twin drilling data.<br>• The Mineral Resource estimation for FMNb is based on all available and verified historical and Orion 2024 drilling data.<br>• Although limited, statistical comparisons of matching twin and historical holes indicates a close correlation.<br>• Peer review of the geological modelling and resource estimation has found it to be a reasonable assessment of the mineralisation. |
| *Other substantive exploration data* | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • Detailed surface maps and drill sections were extensively consulted and utilised in the understanding of geology and mineralisation.<br>• Regional and detailed geophysical maps (magnetic) were also consulted.<br>• Historical surface and down-hole geophysical work were executed to industry best practices. |
| *Further work* | 1. *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>2. *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Deeper mineralisation as well as en-echelon type mineralised lenses are potentially present and should be further investigated.<br>FMN:<br>• Closely spaced drilling is required to bridge the gap at the northern end of the southern body.<br>FME:<br>• Delineation drilling of higher-grade lenses down plunge and up dip is required.<br>• Gaps exist and in-fill drilling is required to establish continuity and delineate potential extensions and upgrade Inferred to Indicated Resources of higher confidence.<br>FMS:<br>• The deeper western portions require in-fill drilling to upgrade from Inferred to Indicated Resources.<br>FMNb<br>• Further investigation of the continuation of the mineralised body to the west of the west bounding fault is required. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1 and where relevant in Section 2. also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Database integrity* | • *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*<br>• *Data validation procedures used.* | • Historical and Orion data has been digitally captured from hand-written documents, plans and sections.<br>• All data are presented MS Excel spreadsheet format.<br>• Integrity checks by the Competent Person have found the database to be an accurate representation of the original data.<br>• Data checking and corrections were also made, i.e. checking for overlaps, gaps, collar positions and erroneous surveys.<br>• All drill hole data has been imported into a DataShed™ data management system which allows for easier and automated checks and verification. |
| *Site visits* | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • A site visit was undertaken by the Competent Person in January 2023.<br>• No major issues were observed which could have had a material impact. |
| *Geological interpretation* | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • Geological interpretation was done based on drill hole sections.<br>• Mineralisation is found to occur predominantly in most of the intermediate rock types also crossing lithological boundaries.<br>• Mineralisation generally does not extend into the granitic and gneiss host rocks and the contact is usually sharp.<br>• Due to the complex nature of these intrusive lithologies and different phases of intrusion and mineralisation, mineralisation envelopes based on grade were constructed.<br>• Grade envelopes were constructed for FMN, FME, FMS and FMNb using a minimum sample length weighted cut-off grade of 0.5% Cu.<br>• The intermediate mineralised rocks are structurally controlled and pinching and swelling is a common feature, in both strike and dip. |
| *Dimensions* | • *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | FMN:<br>• The mineralisation occurs as three mineralised bodies within a continuous mafic intrusive.<br>• The southern and central bodies strike north-south for approximately 280m and 260m respectively, with a shallow dip of approximately 15° to the north.<br>• There is a gap of approximately 80m between the northernmost limit of the southern body and the southernmost limit of the central body.<br>• There is continuity of mineralisation between the central body and the northern body which is flat-lying with and has an east-west strike, which is more typical for the O'Okiep Copper District (OCD), of 340m. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • FMN extends from surface to a known maximum depth of 230m.<br>• An existing decline is developed from the south to the southern section of the central body. The decline is in extremely good condition indicating strong geotechnical conditions.<br>• Two stopes were mined in the northern body from 1996 to 1998 with approximately 96,000 tonnes extracted.<br><br>FMS:<br><br>• Mineralisation has an east-west strike length of approximately 580m.<br>• The mineralisation envelope is undulating but has a general steep dip of 75° towards the north.<br>• The mineralisation envelope is from 130m to 750m below surface.<br>• The intermediate rocks containing the Cu mineralisation have an irregular continuous configuration.<br>• The FMS mineralisation is typical for the OCD.<br><br>FME:<br><br>• Mineralisation at FME consists of two en-echelon 'eastern bodies' with a strike of 560m and an average dip of 55° to the north-northwest.<br>• The mineralised zones (medium to low grade) are concordant with the hosting steep structure and comprise of at least two to three, stacked lenticular bodies.<br>• Higher grade (>5% Cu) 'lenses' occur within these larger bodies and are considered an important component.<br>• The strike lengths of these bodies range between 30m to 100m.<br>• All mineralised bodies occur at sub surface, extending from 50m to 330m below surface.<br>• A separate lower grade 'western body' has a strike of 320m and a dip of 65° to the north-northwest. The FME western body extends from 100m below surface to 400m.<br><br>FMNb<br><br>• The main zone of the mineralisation occurs as a relatively continuous east-west striking body between a west bounding fault and an east bounding fault.<br>• The mineralisation is offset to the south of the western fault by approximately 60m and to the north of the eastern fault by approximately 35m.<br>• The mineralised portion between the two bounding faults is 200m long, strikes east – west and steeply dips towards the north.<br>• The mineralisation to the western side of the western fault has a known |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | strike of approximately 70m.<br>• The mineralisation to the eastern side of the eastern fault has a known strike of approximately 100m.<br>• The FMNb Mineral Resource occurs at surface to sub-surface to approximately 210m depth.<br>• The mineralisation was historically mined at depth. |
| *Estimation and modelling techniques* | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | • Mineralised zones for all four deposits (FMN, FME, FMS and FMNb) were delineated by creating interpreted strings along successive vertical sections using a 0.5% Cu cut-off grade.<br>• Mineralisation often occurs as discrete mineralised lenses within a larger mafic body. Generally, individual lenses were grouped together to allow for correlation, interpretation and modelling of mineralisation between successive vertical sections and to create a viable mineralisation domain for Mineral Resource estimation.<br>• For the two FME main bodies, a 'waste pillar' comprising lower grade lenses predominantly associated with granitic inclusions within the bodies was modelled. These waste pillars were treated as a separate domain for Mineral Resource estimation.<br>• No differentiation was made between the oxide and sulphide mineralisation as generally the oxide component is insignificant within the Flat Mines deposits.<br><br>FMN:<br><br>• Samples were composited to 2m lengths.<br>• Cu values were capped to selected thresholds using Parker methodology. Three samples were capped to 11.79% Cu.<br>• A block model was created with dimensions 30m X by 30m Y by 8m Z, with no rotation. Sub-cell size was 1m by 1m by 1m.<br>• Following a spatial analysis, the composite data were used to estimate the block grades using ordinary kriging (OK).<br>• In order to reduce the impact of single drillholes, the semi-major search range was reduced from 17m (variogram range) to 8m, with a maximum of four samples per drillhole in four quadrants. Neighbourhood analysis resulted in an optimum search neighbourhood of 45m x 25m x 8m for local block estimation.<br>• 72% of blocks (94% of the volume) were estimated by the first pass. Blocks that were not estimated by the first-pass OK were estimated using the first pass estimates as input to a moving average with the search radii doubled. |

| Criteria | JORC Code explanation | Commentary |
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| | | FME:<br>• Samples were composited to 2m lengths.<br>• Cu values were capped to selected thresholds using Parker methodology. For the eastern bodies, six samples were capped to 11.62% Cu, while for the western body one sample was capped to 2.16% Cu.<br>• A block model was created with dimensions 30m X by 8m Y by 30m Z. The block model was first rotated by -20º around the Z axis and then by -38º around the X axis. Sub-cell size was 1m by 1m by 1m.<br>• Following a spatial analysis, the composite data were used to estimate the block grades using ordinary kriging (OK) for the eastern bodies.<br>• For the eastern bodies, neighbourhood analysis resulted in an optimum search neighbourhood of 100m x 5m for local block estimation, corresponding to the variogram range. The second-pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii doubled. 93% of blocks were estimated by the first pass, with the remaining blocks estimated by the second pass. For the waste pillars the length weighted average grade was applied.<br>• For the western body there is a lower sample density and no clear spatial relationship between samples. Local block estimation using OK was not feasible and an inverse distance weighting (to a power of two) ($IDW^2$) approach was utilised instead. The FME Cu% ranges of 100m x 100m x 5.8m were applied. The $IDW^2$ estimate resulted in 60% of blocks being estimated in the first pass. The second pass was populated using a moving average with the first pass estimates as the input data.<br>FMS:<br>• Samples were composited to 1.5m lengths.<br>• Cu values were assessed for capping using Parker methodology. No capping for Cu was necessary.<br>• A block model was created with dimensions 30m X by 6m Y by 30m Z, with a rotation of -10º around the X axis. Sub-cell size was 1m by 1m by 1m.<br>• Following a spatial analysis, the composite data were used to estimate the block grades using ordinary kriging (OK).<br>• Neighbourhood analysis resulted in an optimum search neighbourhood of 70m x 70 x 5.5m (corresponding to the variogram range) for local block estimation. The second-pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii increased. 54% of blocks were estimated by the first pass, with the |

| Criteria | JORC Code explanation | Commentary |
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| | | remaining blocks estimated by the subsequent passes.<br>**FMNb**<br>• Samples were composited to 1.0m lengths.<br>• Cu values were assessed for capping. A threshold of 10% was determined and three samples were capped.<br>• A block model was created with dimensions 2m X x 2m Y x 2m Z. No rotation was applied. No sub-celling was applied.<br>• Estimation was carried out by inverse distance weighting (to a power of two) ($IDW^2$).<br>• A previous estimate carried out by Orion in 2021 (refer ASX/JSE release 29 March 2021).<br>• A comparison between the 2025 and 2021 estimates indicates a similar volume for the geological interpretation (at a zero cut-off) but a significant drop in tonnage (41.1%) and grade (27.6%) at a 0.5% Cu cut off.<br>• The difference is largely a result of the 2021 estimate applying null values to areas not sampled (predominantly unmineralised granitic internal waste) while the 2025 estimate applied half detection limit to these areas not sampled. |
| *Moisture* | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • No moisture content was calculated, and the core was naturally dried when logged and sampled. The estimated tonnages are therefore based on a natural basis. |
| *Cut-off parameters* | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • A cut-off of 0.7% Cu was used for the Mineral Resource statement for FMN, FME and FMS. This corresponds with reasonable prospects of economic extraction using today's economics. This is based on the break-even grade resulting from the financial model used for the 2021 Scoping Study.<br>• A cut-off of 0.5% Cu was used for the Mineral Resource Statement for FMNb. The deposit outcrops at surface and development and mining costs are considered to be significantly lower. The grade-tonnage curve also steepens significantly at 0.5% Cu with a significant tonnage drop above 0.5% Cu. |

| Criteria | JORC Code explanation | Commentary |
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| *Mining factors or assumptions* | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | • FMN is the only deposit with existing and accessible mining infra-structure, i.e. a 100m deep decline, ore drives and mined stopes.<br>• FMNb was mined historically in the 1950's and the historical workings are currently flooded and inaccessible.<br>• Mining is planned to consist of historically proven access declines, drill drives, ore access and draw points.<br>• The development method is considered to be based on drill-and-blast executed with trackless mobile equipment.<br>• The stoping method to be used is a variation on long-hole open stoping referred to as 'Vertical Crater Retreat' (VCR). Both VCR and conventional long-hole open stoping were historically successfully implemented. |
| *Metallurgical factors or assumptions* | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.* | Newmont and GFSA:<br>• Historical extraction of bornite, chalcopyrite, and chalcocite by OCC was done using sulphide flotation for recovery.<br>SAFTA:<br>• Although the mineralogy is relatively consistent throughout the licence area, only samples from FMN and FMS were included in SAFTA's metallurgical test work.<br>• A laboratory-scale locked cycle test was conducted by Maelgwyn Metallurgical Laboratory.<br>• Samples were ground to 80% passing 75 microns in order to generate a grade versus recovery grade.<br>• A recovery of 96% was achieved with a concentrate grade of over 21% Cu.<br>• Tailings grade was 0.15% Cu.<br>• Calculations indicate that over the life of mine concentrates with a grade in excess of 25% Cu with a Cu recovery between 84 to 88% are achievable.<br>Orion:<br>• Comprehensive metallurgical tests were conducted from 2022 to 2024.<br>• These tests included ore sorting, pre-concentration, comminution, flotation, and the thickening of both concentrate and tailings.<br>• Key service providers involved in this process were Suntech Geomet Laboratories, Geolabs Global, Maelgwyn South Africa, SGS, and Rados International Technologies.<br>• Flotation testwork on FMN, FME and FMS indicated the following parameters: |

| Criteria | JORC Code explanation | Commentary |
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| | | ➢ Feed grind ~ 90% passing 106 microns<br>➢ Concentrate Grade >30% Cu<br>➢ Flotation Recovery >92.5%<br>➢ Mass pull to concentrate ~4.0% m/m<br>• A grade recovery curve was created from the optimised flotation test data for the NSR estimations.<br>• Processing test work guided the design of the plant, utilising established technology and aligning with historical operations. |
| *Environmental factors or assumptions* | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | • The mining site (deposits) is located within a relatively non-ecologically sensitive location.<br>• A number of potential sites were investigated for waste rock and tailings as part of the minimisation of the operational footprint.<br>• Mining operations will likely be underground limiting rehabilitation and decommissioning.<br>• Already spoilt areas will be used for siting of new infra-structure where possible.<br>• Existing access roads will be used during the operations.<br>• Finer material will be pumped to the Tailings Storage Facility (TSF) to be established on existing old evaporation pans close by. |
| *Bulk density* | • *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*<br>• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • Bulk density (B.D.) data is available for Newmont, GFSA, SAFTA and Orion drill core.<br>• The B.D. data was acquired using the Archimedes method by weighing drill core in air and water, a practical method considered appropriate for these competent rock types.<br>• For FMN there was a good spread of density measurements through the deposit with a total of 549 data points. For FMS there are 79 density measurements, but these are restricted to the shallower holes in the deposit. For FME eastern bodies there are no recorded density measurements with 43 measurements in the FME western body.<br><br>FME:<br><br>• With no B.D. measurements in the main eastern bodies, density values were assigned to logged lithologies based on density statistics from FMN where host lithologies are similar.<br>• No capping was applied to the B.D. values assumed for FME main or western bodies.<br>• For the eastern bodies B.D. was estimated using IDW² technique (using the density values assumed from logged lithology).<br>• The orientation and range of the search neighbourhood was defined by the Cu % models, i.e. a search range of 100m x 100m x 5.8m orientated |

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| | | in the plane of the orebody as defined by the experimental variography for the FME Cu % analysis. A second pass was done from using first pass block estimates and a moving average with the search radii doubled.<br>• For the western body, the same search neighbourhood was used for IDW² as for the eastern bodies. A second pass was done from using first pass block estimates and a moving average with the search radii doubled.<br><br>FMN:<br><br>• For FMN density outliers, higher values were capped to 3.17t/m3, while lower values were capped to 2.53 t/m3.<br>• For FMN, OK was applied with a search neighbourhood of 45m x 23m x 11m. The first pass resulted in 53% of the blocks estimated. A second pass using first pass estimates as input data and using a moving average with the search radii doubled populated the remainder of the blocks.<br><br>FMS:<br><br>• B.D. measurements are restricted to the upper part of the orebody. No capping was applied to density values for FMS.<br>• Due to insufficient data, IDW² was used using FMS Cu% variogram ranges in the plane of mineralisation. The first pass estimated only 10% of the parent blocks. The first pass estimates were used as input to a moving average to inform the remainder of the blocks.<br><br>FMNb<br><br>• B.D measurements are available for the nine Orion drillholes.<br>• No B.D measurements are available for historical holes. Density values were assigned to logged lithologies based on density statistics from 2024 Orion drillholes at FME, FMN, FMS and FMNb where host lithologies are similar.<br>• No capping was applied to the B.D. values assumed for FMNb.<br>• B.D. was estimated using IDW² technique (using the density values assumed from logged lithology).<br>• The orientation and range of the search ellipse was defined by the Cu % models. |
| *Classification* | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *Whether appropriate account has been taken of all relevant factors, i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.* | • Mineral Resource classification incorporated the confidence in the quality of the drill hole data, data distribution, geological and grade continuity and consideration of reasonable expectation for eventual economic extraction. |

| Criteria | JORC Code explanation | Commentary |
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| | • *Whether the result appropriately reflects the Competent Person(s)' view of the deposit.* | FMN, FME, FMS<br>• The Mineral Resources are classified as Measured, Indicated and Inferred. Cognisance was taken of the potential uncertainties related to mineralised envelope delineation and therefore the associated volume estimation, as well as that this Mineral Resource estimation is based on historical data.<br>• The geological models are considered by the Competent Person to be defined to an acceptable level.<br>• It is considered by the Competent Person that there is sufficiently accurate data to produce local block estimates using OK in all areas apart from FME western body where IDW² estimation was employed. For FME western body and other areas where there is a limited number of samples, resources are defined as Inferred.<br>• Although there is a moderate level of uncertainty associated with the estimation of bulk densities at FME and FMS, the common lithologies associated with the mineralisation have a relatively narrow range of density values.<br>• In most parts of the deposits, there are sufficient data for reasonably accurate local block estimates of grade (FMN 72%; FME 93%; FMS 54% of blocks populated by first-pass kriging). The kriging performance parameters, e.g. slope of regression, together with an assessment of the areas of blocks that were populated by first-pass kriging, were utilised to make a distinction between the Measured, Indicated and Inferred levels of confidence.<br>• Some infill drilling will be required to increase the confidence and upgrade the Inferred Resources. The results conform to the view of the Competent Person.<br>FMNb<br>• The resources are classified as Indicated and Inferred. Cognisance was taken of the potential uncertainties related to mineralised envelope delineation and, therefore the associated volume estimation, as well as that some areas of this resource estimation are based on historical data.<br>• The geological models are considered by the Competent Person to be defined to an acceptable level.<br>• Although there is a moderate level of uncertainty associated with the estimation of bulk densities, the common lithologies associated with the mineralisation have a relatively narrow range of density values.<br>• The main zone between the West and East bounding faults there is generally a high density of information with both surface and underground drilling. |

| Criteria | JORC Code explanation | Commentary |
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| | | • The main zone between the west and east bounding faults, above 724m elevation, above the mine workings, and where there is reasonable coverage by Orion 2024 drillholes is classified as Indicated.<br>• The main zone between the west and east bounding faults, below 724m elevation, there is uncertainty regarding the full extent of mining as historical records might not be accurate, and this area has been classified as Inferred.<br>• For the mineralisation west of the west fault, there are only historical drillholes, with a lower density of information and this area has been classified as Inferred.<br>• For the mineralisation east of the east fault, there is a reasonable density of historical information and two Orion 2024 intersections. This area has been classified as Indicated.<br>• Twin drilling will be required to increase the confidence and upgrade the Inferred Resources. The results conform to the view of the Competent Person. |
| *Audits or reviews* | • *The results of any audits or reviews of Mineral Resource estimates.* | • The Mineral Resource estimates have been internally audited by Orion. No external audit has been carried out to date. |
| *Discussion of relative accuracy/confidence* | • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The geological and mineralisation model, geological and grade continuity has been demonstrated to an acceptable confidence level in order to support the mineral categories classification.<br>• Various statistical and geostatistical methods were applied to quantify relative accuracy of the resource estimation.<br>• Final estimates for all variables in the deposits were validated by comparing the mean composite grades to the mean estimate grades. The data for Cu with the first pass and final estimates are within 5% of the composites mean.<br>• Composite and estimated final grade and density distributions were compared to ensure that the block estimates represent the original data distribution. These were found to be reasonably compatible.<br>• Swathe Trend plots were created in the Y, X and Z directions and all the estimates followed the trend of the composite data.<br>• All estimates were studied graphically and compared to the composite data in three-dimensional space, and they compared reasonably well, given the high variability of the sample data.<br>• The only deposits with historical production are FMN and FMNb.<br>• For FMN, full detailed production information is not available but partial records show that approximately 84,000 tonnes was mined at a grade of 1.5% Cu between October 1995 and June 1998. Additional mining took place in the early 2000's and survey plans of old stopes in |

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| | | conjunction with the block model indicate that approximately 180,000 tonnes at 1.4% Cu has been mined in total from FMN.<br>• For FMNb, historical mine records indicate that 141,000 tonnes was mined at a grade of 2.72% Cu in the 1950's. |

## Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
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| *Mineral Resource estimate for conversion to Ore Reserves* | • *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.*<br>• *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.* | • The Ore Reserve Estimate compiled by Mr Jonathan Hudson for the NOMC Flat Mines Project is based on the Mineral Resource Estimates and models compiled by Z Star Mineral Resource Consultants for FMN, FME, FMS (refer ASX/JSE release 28 August 2023) and by Orion for FM-Nab (refer ASX/JSE release 28 March 2025).<br>• The following four Mineral Resource models were supplied to Sound Mining Solution (Pty) Ltd (Sound Mining). 022023_FME_FIN, 022023_FMN_FIN, 022023_FMS_FIN and FMNAB-CLASS; These models were used for the mine design and optimisation process.<br>• Mineralised zones for FMN, FME and FMS were delineated by using a 0.7% Cu cut-off grade but for many areas a cut-off grade of 0.5% Cu (or lower) was used to provide continuity. FM-Nab shows a significant decrease in tonnage above the 0.5% Cu cut-off.<br>• Mineral Resources are reported inclusive of Ore Reserves<br>• Mr Jonathan Hudson is the Competent Person and has relied on the integrity and accuracy of the Mineral Resource estimates for the Ore Reserves. |
| *Site visits* | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • Mr Jonathan Hudson undertook two site visits to the NOMC Flat Mine Project from 13/3/2024 to 15/3/2024 and from 12/6/2024 to 14/6/2024. The following areas were visited;<br>o Exploration drilling and inspection of core.<br>o Underground site visit to existing FMN infrastructure.<br>o Surface infrastructure (including roads, mine offices FME portal site).<br>• General discussions took place on site regarding the proposed VCR mining method and planning methodology (infrastructure, rock handling and logistics, geotechnical environment and ventilation planning) |
| *Study status* | • *The type and level of study undertaken to enable Mineral Resources to* | • A Feasibility Study has been compiled and is used to derive the Ore |

| Criteria | JORC Code explanation | Commentary |
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| | *be converted to Ore Reserves.*<br>• *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.* | Reserves.<br>• The life of mine plan supporting the feasibility study includes Inferred Mineral Resources (18% by tonnage) which were excluded for the Ore Reserve estimation.<br>• Various aspects of the project are at a lower level of accuracy. These are considered no material risk to the project.<br>o Backfill design and costing (requires further testwork on plant tailings).<br>o Portal design requires geotechnical drilling and support design).<br>• The mine plan is considered technically achievable and economically viable based on the planned assumptions and costs.<br>• Material modifying factors have been considered (pillar design and mine extraction, dilution and mining loss) |
| *Cut-off parameters* | • *The basis of the cut-off grade(s) or quality parameters applied.* | • The in-situ cut-off grade used for the planning of FMN and FME is 0.7% Cu based on previous study work (Nov,2023). A 0.8% Cu cut-off grade was used for FMS based on recent costing. A marginal cut-off of 0.6% Cu was calculated and used for all the marginal mining blocks below the cut-off grade with shared development. The marginal cut-off was used for FM-Nab, which shares the access infrastructure of FMS is close to surface and is used as supplementary tonnage in the life of mine plan for the process plant.<br>• The in-situ cut-off calculation is based on the total direct cost of mining, processing and metal sales, including sustaining capital and overheads, Net Cu price received post Net Smelter Return (NSR) conversion, unplanned dilution and Cu plant recovery.<br>• The in-situ marginal cut-off calculation excludes the waste development costs, fixed processing costs and overheads.<br>• Mineable Shapes Optimiser (MSO) Datamine software was used in conjunction with the calculated cut-of grades to delineate the economic mineable blocks for mine planning of FME and FMS. The MSO results for FMN and FM-Nab yielded irregular, impractical stope shapes, with unacceptably low grades. A selective manual approach was therefore used to design the stopes, targeting the higher-grade mineral resource areas. |
| *Mining factors or assumptions* | • *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*<br>• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design* | • The main mining method used in the feasibility study is Vertical Crater Retreat (VCR) mining which was historically practiced at mines in the Okiep Copper District. The reason for using VCR mining was to negate the high horizontal stresses at depth. The method allows the mining of large excavations with reduced hydraulic radius by leaving broken ore in the stopes as support (similar to shrinkage mining). The VCR mining method is |

| Criteria | JORC Code explanation | Commentary |
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| | *issues such as pre-strip, access, etc.*<br>• *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.*<br>• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*<br>• *The mining dilution factors used.*<br>• *The mining recovery factors used.*<br>• *Any minimum mining widths used.*<br>• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*<br>• *The infrastructure requirements of the selected mining methods.* | characterised by its adaptability to different stope geometries.<br>• For mining widths >10m VCR mining method has been utilized.<br>• For mining widths <10m traditional long hole open stoping methods have been utilised.<br>• Based on geotechnical calculations, the VCR mining spans can sustain strike lengths of 75 meters with a maximum height of 30 meters, due to the limited exposure during blasting operations. The planned dimensions may be adjusted to 75 meters vertically and 30 meters on strike. Vertical height is not a critical factor in the VCR method due to the limited exposure based on the shrinkage methodology which allows for relatively long strike lengths.<br>• Individual Critical Hydraulic Radius (CHR) have been determined for the hanging wall, footwall, sidewall and crown for all the mines.<br>• The highest CHR is 14.7 < 100mbs and the lowest is 6.8 for 600mbs<br>• Using the VCR and LHOS mining methods with shrinkage multiple levels (90 to 120m) can be mined with stoping spans of (60m to 75m)..20-30m rib and sill pillars have been placed accordingly to constrain the mine design to the maximum allowable spans. Based on leaving a shrinkage pile within 7.5m of the blasted stope face, the hydraulic radius for the stopes design cannot exceed 3 which is within the design limits.<br>• A critical factor for the VCR method is the stability of the crown, which necessitates the use of a supported crown and hence provides an increased CHR.<br>• Post backfilling of the mining voids using classified tailings is a two-fold requirement.<br>o to reduce the amount of tailings on the tailings dam; and<br>o to allow for a higher mining extraction through post pillar extraction.<br>• Grade control drilling and modelling based on a 15m x 15m grid is planned to be done to improve the accuracy of the stope shapes and minimise the impact of unforeseen structures prior to the commencement of the production drilling.<br>• The planned production long hole drill rig is the Sandvik DU 311TK Series ITH Longhole which is flexible for down the hole drilling of larger diameter blast holes. 152mm blast holes have been designed for the VCR mining method and 89mm blast holes for the long hole mining method.<br>• Based on drill and blast designs for the VCR mining method, an 8 ore tonne per metre ratio has been calculated and used for planning purposes which allows for 10% redrill of blast holes.<br>• For the VCR mining method 44% of the ore is removed for shrinkage purposes until the stope is fully mined whereupon the remaining 56% of |

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the ore is removed.
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<li>A planned drilling buffer of approximately six months production has been planned for VCR mining to allow for shrinkage and independent drilling, charging and blasting.</li>
<li>No historical stope reconciliations were available to verify the dilution and mining loss modifying factors.</li>
<li>Based on geotechnical modelling, the anticipated dilution for all operations is expected to be less than 5%.</li>
<li>The dilution modifying factor considers planned and unplanned dilution. An unplanned dilution of 2% for mixing of waste and backfill contamination was applied to all the mines based on benchmarking.</li>
<li>For FMS and FM-Nab a 25cm skin was applied around the stope shapes as part of the MSO optimisation process to more accurately simulate the impact of dilution. An additional 2% dilution was added as shown in the table below which represents the unplanned dilution only.</li>
<li>The following modifying factors were applied to each of the mines.</li>
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<table>
<tr><th>Description</th><th>Unit</th><th>FMN</th><th>FME</th><th>FM Nab</th><th>FMS</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Development Overbreak</td><td>%</td><td>7</td><td>7</td><td>7</td><td>7</td></tr>
<tr><td>Stoping Dilution</td><td>%</td><td>5</td><td>5</td><td>2</td><td>2</td></tr>
<tr><td>Pillar Mining Extraction Factor</td><td>%</td><td>50</td><td>50</td><td>N/A</td><td>50-67</td></tr>
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<tr><td>Mining Loss Development</td><td>%</td><td>3</td><td>3</td><td>3</td><td>3</td></tr>
<tr><td>Mining Loss Stoping</td><td>%</td><td>5</td><td>7</td><td>7</td><td>7</td></tr>
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<ul>
<li>1.3 Mt of Inferred Mineral Resources at 1.1% Cu grade have been excluded from the Ore Reserves and the financial valuation. 0.17Mt of Inferred Mineral Resources have been included as internal stoping dilution for FME, FMN and FM-Nab with no attributed copper grade or content. Any Inferred Mineral Resource ore development in the mine plan has been trammed to waste. The financial impact of removing the inferred Mineral Resources from the mine plan reduces the NPV by approximately ZAR 400 million.</li>
<li>FMN has an existing portal and underground infrastructure which needs to be rehabilitated and dewatered</li>
<li>Separate underground infrastructure is required to be developed for FME, FMS and FM-Nab.</li>
<li>FME requires a twin mining access with conveyor and service declines.</li>
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| Criteria | JORC Code explanation | Commentary |
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| | | • The access for FMS and FM-Nab is planned from a shared portal and twin decline at the FM-Nab orebody location to reduce the amount of development required.<br>• FM-Nab is a smaller and lower grade deposit close to surface which is planned to fill the production gap prior to production commencing at FMS.<br>• FMS comprises Upper and Lower mining sections. The FMS Lower section has a high proportion of Inferred Mineral Resources down to a depth of 615m below surface, which has been excluded from the Ore Reserve mine plan.<br>• Ore and waste are planned to be conveyed out of FME and trucked out of FMN and FM-Nab / FMS.<br>• Ore from FMN is trucked directly to the RoM pad at the process plant.<br>• Ore from FME is transferred to a surface bin at the portal entrance and truck hauled to the RoM pad using surface trucks.<br>• Ore from FM-Nab and FMS is trucked to a temporary ore pad close to the portal and then rehandled using a Front End Loader and surface trucks to the RoM pad.<br>• The FM-Nab / FMS twin decline is designed to allow for the installation of a conveyor to assist the mining of the FMS Lower deeper section (if required) post additional exploration work.<br>• All the waste is trucked or conveyed to surface and rehandled for use at the tailings dam, stope backfilling or to temporary waste rock dumps. |
| *Metallurgical factors or assumptions* | • *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*<br>• *Whether the metallurgical process is well-tested technology or novel in nature.*<br>• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*<br>• *Any assumptions or allowances made for deleterious elements.*<br>• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*<br>• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?* | • The process plant metallurgy and design were carried out by METC.<br>• The metallurgical process is well-tested technology. The Okiep Copper District orebodies were historically mined and processed. Historical plant performance provides an indication of the amenability of the Okiep Copper District mineralised material to processing via crushing, milling and flotation.<br>• The copper ore minerals were predominantly disseminated chalcopyrite and bornite with some chalcocite in areas of the orebody.<br>• The testwork carried out on the Flat Mines Project during the Scoping, Pre-Feasibility and Feasibility Study periods has been extensive from 2014 to 2024.<br>• Testwork was done on a bulk sample for FMN and exploration core samples for FMN, FME, FM-Nab and FMS.<br>• The conclusions from the testwork were that the milling indices were very hard, with FMN being the hardest and FMS the softest. Hard rock milling was therefore incorporated into the design.<br>• Investigations and testwork were done on the use of fine and coarse XRF particle ore sorting to reduce energy and water consumption in crushing |

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| | | and milling of ore, but further economic benefit assessments are required for this stage.<br>• Feed mineralogy showed that the main Cu-bearing minerals in the FME samples were chalcopyrite and bornite. The main Cu-bearing minerals in recently tested FMN mineralised zones were bornite and chalcocite<br>• Detailed chemical analysis of the final FMN and FME concentrates showed that Ag is present at similar concentrations for both mineralised materials while Au is more prevalent, and at higher concentrations in FMN mineralised material. Both these elements were upgraded into the copper concentrate which could add potential financial benefit in the form of sales credits.<br>• Because Ag and Au have not been assayed (apart from in the Orion confirmation drillholes) or included in the Mineral Resource estimate, these additional revenue streams have been excluded from the financial analysis for the Ore Reserves.<br>• Early process testwork did not encounter any problems with deleterious elements which would report to the concentrate. However final testwork on FMN identified the presence of MgO and F which did show slightly elevated concentrations reporting to the concentrate. Although this could initiate penalties on the sale of this concentrate, it is believed a slight change in flotation reagent recipe and possible ore blending will mitigate this issue.<br>• Numerous tests have been conducted on the use of XRF sorting technology to assist with early waste removal to reduce downstream processing requirements. These results, although beneficial, are not showing the extent of benefits expected. As such, the plant design allows for the use of sorters but delays the installation. This delay will allow access to better samples to perform further sorting testwork using different technologies.<br>• The crushing and sorting plant is designed on a nominal feed rate of 65,000tpm and will operate 24hrs a day seven days a week.<br>• The design has presented a single ball mill to meet the 65,000tpm requirement. The use of two parallel ball mills has been put into the design as a more flexible operational option to provide an opportunity to operate the plant at a lower throughput if required. |
| *Environmental* | • *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.* | • Environmental studies have been conducted in compliance with South African regulations (NEMA, 1998), including waste rock characterisation and tailings management.<br>• The project has received environmental approvals for underground mining. |

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| | | <table><tr><th>Environmental Permit</th><th>Flat Mines Mining Right NC10150MR</th></tr><tr><td>Environmental Authorisation</td><td>Granted 16 April 2021</td></tr><tr><td>Waste Management Licence</td><td>Authorised 16 April 2021</td></tr><tr><td>Integrated Water Use Licence</td><td>Approved 25 July 2024</td></tr></table><br>• The following Financial Provisions have been provided to the Authorities. These are in the form of financial guarantees underwritten by Centriq. The estimate agreed with the Department of Mineral and Petroleum Resources (DMPR) for the financial provision is currently ZAR2,000,000 based on annual rehabilitation, closure costs and residual impacts of the proposed mine which is revised annually.<br>Financial Provisions Provided to the Authorities as Centriq Guarantees<br><table><tr><th>Guarantee Description</th><th>Amount (ZAR)</th></tr><tr><td>Flat Mines Mining Right</td><td>3,000,000</td></tr></table><br>• Financial provisions, in the form of Centriq financial guarantees, lodged with the DMPR for the SAFTA) prospecting rights, NC12755PR, NC12848PR and NC12850, in the amounts of ZAR320,000, ZAR100,000 and ZAR100,000 respectively.<br>• It is noted that as a condition of the EA granted in support of the Vardocube MR, a guarantee for a further ZAR6.4 million is required to be lodged with the DMPR within four years of the commencement of operations (2026).<br>• The financial provisions are audited annually by an independent Environmental Assessment Practitioner in accordance with legislation. |
| *Infrastructure* | • *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.* | • Nababeep, Okiep and Springbok are historical mining towns with housing and local accommodation in place.<br>• OCC has existing infrastructure which includes offices, roads, power and water<br>• The planned surface infrastructure includes power supply, alternative power supply, mining and plant offices, change houses, mining stores and workshops, water supply and land, roads, etc.<br>• The power supply to the mine includes the main 66kV incoming supply |

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| | | substation and a network of 11kV overhead powerlines. The overhead lines will terminate at the portals of FME and FMS, and in the case of FMN, at the collar of the No.2 vent-raise. The total peak power demand for the FM Project is estimated to be 7,958 KW. This includes the simultaneous operation of three mining production centres, which is only likely to occur for a limited period when production from a depleting section overlaps with production from a new mining section being developed.<br>• The water balance for the entire site was prepared by Orion in conjunction with their specialist consultants for submission as part of the IWUL application and with input from METC during the process plant design. The total water requirements for the mine are planned at approximately 600 Ml/ annum. |
| *Costs* | • *The derivation of, or assumptions made, regarding projected capital costs in the study.*<br>• *The methodology used to estimate operating costs.*<br>• *Allowances made for the content of deleterious elements.*<br>• *The source of exchange rates used in the study.*<br>• *Derivation of transportation charges.*<br>• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*<br>• *The allowances made for royalties payable, both Government and private.* | • The definition of project capital expenditure (capex) is up to the commencement of first production and sales from the processing plant.<br>• The project capex estimate for the FM Project is ZAR1.6 bn including contingency. A list of the main capital items includes the process plant, underground mine development, underground and surface infrastructure, backfill plant.<br>• The life of mine on site operating costs for the FM project is ZAR 828/ RoM t. The costs include a provision for a 3rd party electricity wheeling agreement. This provision translates to a life of mine saving of ZAR 61/t compared with the forecast Eskom power costs based on discussions with several suppliers.<br>• The All in Sustaining Costs (AISC) including sustaining capex is ZAR 1,083/ RoM t.<br>• The capital and operating cost estimate is built up from quotations and from first principle calculations with a base date of Q4 2024.<br>• The operating cost assumptions and productivity inputs are based on an owner mining operating model.<br>• The labour rates based on regional benchmarking in the Northern Cape, South Africa.<br>• No deleterious elements are present in FME or FMS concentrates. Flourine (F) has been detected in concentrate samples from the last flotation tests on FMN only which was not in any previous testwork. F is associated with talc in rock which can be suppressed from floating.<br>• The exchange rate assumption of ZAR/USD 18.90 is based on the long-term S&P weighted average forecast.<br>• The copper concentrate will be packaged into 2t polypropylene bulk bags, trucked to Cape Town, containerised and shipped to the market. The cost per bag is R302/2t bag, sample analysis is R12/ t conc (one analysis per 500 t batch), shipping is US$110/ t conc. |

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| | | • The basis of forecasting for the combined treatment and refining costs of (USD 84/t) is based on a proposal from a leading global metals trader in February 2025 quoting 20% discounts.<br>• The government royalty calculation is included in the financial model based on selling of concentrate as an unrefined mineral. |
| *Revenue factors* | • *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*<br>• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.* | • The revenue calculation (in real monetary terms) is premised on the forecast long term copper price of USD 9,369/t, an exchange rate of ZAR/USD 18.90, a payability deduction of USD 96/t, Treatment and Refining costs of USD 81/t which results in a net smelter return of 93.6%.<br>• The forecast copper price of USD 9,369/t is based on analyst consensus commodity price forecast as at 2 December 2024.<br>• As stated in the "metallurgical factors or assumptions" section no Ag and Au by products have been included in the Mineral Resource estimate, the NSR calculation or as additional revenue streams in the financial analysis for the Ore Reserves. |
| *Market assessment* | • *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*<br>• *A customer and competitor analysis along with the identification of likely market windows for the product.*<br>• *Price and volume forecasts and the basis for these forecasts.*<br>• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.* | • The impact of the FM Project on the global copper market will be negligible, with the annual production estimated at 31,000tpa of copper concentrate at an estimated grade of 30% Cu or ~9,300tpa of contained copper metal. Copper concentrates of this grade and high purity are in high demand from numerous off-takers. The tight global supply coupled with the expected increase in demand from energy transformation pressures and current metal supply deficit bodes well for the copper market and associated price in the medium term. The planned delivery of the FM Project concentrate to Cape Town will enable the FM Project to sell to either the European or Asian markets. |
| *Economic* | • *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*<br>• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.* | • A positive NPV for the Ore Reserves was calculated based on the 8 % discount rate in real monetary terms, which is derived from the Orion weighted average cost of capital (WACC) calculation (listed on JSE).<br>• The escalation rates for salaries and labour, consumables and electricity costs were based on 5-year historical average. The fuel price escalation rate was based on a 10-year historical average.<br>• The IRR was calculated to be approximately 8% (in real monetary terms).<br>• The ranked sensitivity chart shows that the project is most sensitive to copper grade and price but also sensitive to mining operating expenditure (opex). An 10% drop in grade or 30% increase in operating cost will result in negative NPV for the Reserves only plan.<br>• There is a reasonable expectation that the Inferred Mineral Resources for the four mines will be converted to Indicated Mineral Resources and Ore Reserves. The LOM plan including Inferred Mineral Resources was calculated to significantly increase the NPV and IRR for the FM Project. As previously mentioned, it is likely that a high proportion of the Inferred |

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Mineral Resources will be converted to Indicated Mineral Resources post exploration work.</td></tr>
<tr><td>Social</td><td><ul><li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li></ul></td><td><ul><li>The Social and Labour Plan (SLP) forms part of the Mining Right and was revised by Orion prior to grant of the Mining Right by the Department of Mineral and Petroleum Resources (DMPR). The SLP was approved on execution and became effective on the 14 December 2022. Following execution of the Mining Right the commitments laid out in the SLP become legal obligations with specific targets, budgets and implementation timelines.</li><li>A MR holder must submit a new SLP every five years for the duration of the LOM which must be approved by the Minister of Mineral and Petroleum Resources.</li></ul></td></tr>
<tr><td>Other</td><td><ul><li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:<ul><li>Any identified material naturally occurring risks.</li><li>The status of material legal agreements and marketing arrangements.</li><li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li></ul></li></ul></td><td><ul><li>A risk assessment was done on the FM Project feasibility study with mitigating actions.</li><li>The main risks identified in the risk assessment were related to:<ul><li>Mining (non-achievement of development rates, productivity, mined grade, backfilling and availability of skilled personnel).</li><li>Macroeconomic (Copper price, exchange rates)</li><li>Local legal and regulatory issues</li><li>Surface infrastructure (power availability and costs)</li></ul></li><li>The competent person is not aware of any material impediments to the project.</li><li>New Okiep Mining Company (Pty) Ltd (NOMC) currently holds the following mineral rights, granted by the DMPR for 15 years (renewable):<ul><li>Mining Right (NC 10150MR) – 2022</li></ul></li></ul>
<table>
<tr><th>Licence</th><th>Flat Mines Mining Right NC10150MR</th></tr>
<tr><td>Mining Right (including SLP)</td><td>Granted 28 July 2022</td></tr>
<tr><td>Environmental Authorisation</td><td>Granted 16 April 2021</td></tr>
<tr><td>Waste Management Licence</td><td>Authorised 16 April 2021</td></tr>
<tr><td>Integrated Water Use Licence</td><td>Approved 25 July 2024</td></tr>
<tr><td>SPLUMA Rezoning to ‘Extractive Industry’</td><td>Approved 13 August 2024</td></tr>
</table>
<ul><li>Southern African Tantalum Mining (Pty) Ltd (SAFTA) currently holds the following mineral rights, granted by the DMPR for 3 years (renewable).</li></ul></td></tr>
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| Criteria | JORC Code explanation | Commentary |
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| | | These are currently in process of being ceded to NOMC:<br>o Prospecting Right (NC 12755PR) – 2024<br>o Prospecting Right (NC 12848PR) – 2024<br>o Prospecting Right (NC12850PR) - 2023<br>• An integrated water use license, Licence number 10/F30E/ACGIJ/14949 was granted in July 2024 by the Department of Water and Sanitation.<br>• Post the completion of the feasibility study a revision to the Mine Works Programme (MWP) is required. A section 102 amendment in terms of the MPRDA and the EIA regulations will be undertaken once the revised MWP has been completed. |
| *Classification* | • *The basis for the classification of the Ore Reserves into varying confidence categories.*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.*<br>• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).* | • The life of mine plan for the Flat Mines Project includes 18% Inferred Mineral Resource tonnage which have been excluded from the Ore Reserve plan<br>• The Indicated Mineral Resources for the Flat Mines Project have been converted to Probable Ore Reserves<br>• The Measured Mineral Resources at FMN has been converted to Probable Ore Reserves due to due to an equal confidence relating to the modifying factors, costs and planning assumptions as applied to the Indicated Mineral Resources.<br>• No historical stope reconciliation data for benchmarking of the VCR mining method is available. There is a requirement for grade control drilling and a database of stope reconciliation and production data to firm up the modifying factors. This would support a higher confidence in the modifying factors and classification of Reserves.<br>• The proportion of Measured Mineral Resources in the life of mine plan is approximately 4% by tonnage. |
| *Audits or reviews* | • *The results of any audits or reviews of Ore Reserve estimates.* | • This is a maiden Ore Reserve, so no previous audits or reviews have been done. |
| *Discussion of relative accuracy/ confidence* | • *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *Accuracy and confidence discussions should extend to specific* | • The competent person has not assessed the relative accuracy or confidence limits of the Ore Reserve estimate.<br>• No historical stope production and reconciliation data is available for benchmarking of the modifying factors for the VCR mining method for the FM Project.<br>• Factors that affect the global tonnage and grade;<br>o Geological interpretation<br>o Mining Ore recovery<br>o Mining dilution<br>o Processing performance<br>• The geotechnical modelling for the FM Project highlights that the rock is extremely competent and likely to be minimal dilution using the VCR and Longhole mining methods with shrinkage. |

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| | *discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*<br>• *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | |