Orion Minerals

ASX/JSE RELEASE: 3 May 2021

Okiep Copper Project Scoping Study confirms potential for early cash flow and 'Proof-of-Concept' copper production

Scoping Study encompasses five initial deposits, providing a solid benchmark for determining the economic merit of the 25 priority targets identified by Orion

HIGHLIGHTS

- **Scoping Study completed for a proposed 'proof-of-concept'-scale copper mining operation at the brownfields Okiep Copper Project, located in the Northern Cape Province of South Africa.**
- **The Study was completed as part of Orion's due diligence program under its Option Agreement to acquire the Okiep Project, with results from the study confirming that:**
  - **Okiep-style deposits have potential to be mined at low cost by both open pit and underground mining methods;**
  - **potential exists to rapidly advance the project to production, with critical permitting processes already underway;**
  - **a 'proof-of-concept'-scale operation requiring low upfront capital investment can provide commercially attractive returns and early cashflows; and**
  - **potential exists to identify significant operational synergies with the fully permitted Prieska Copper-Zinc Project, also located in the Northern Cape Province, which now awaits funding before mine construction commences.**
- **The Scoping Study is focused on the SAFTA portion of the Okiep Copper Project where Orion is evaluating the purchase of a 56.2% shareholding to partner with the Industrial Development Corporation which currently owns 43.8%.**
- **Next steps are to:**
  - **Complete the due diligence evaluation of the option to acquire the Project;**
  - **In the event of the Project being acquired, advance licencing and permitting activities; and**
  - **Advance mine feasibility studies to prepare for commencement of project construction at the earliest opportunity, subject to funding and a Final Investment Decision.**

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

"The outcome of the Scoping Study supports the economic merit of developing a foundation phase mining operation while Orion conducts the required work and engineering studies to evaluate the potential to re-establish mining operations with outputs as were previously sustained for decades by previous owners. Newmont managed to produce 30,000 - 40,000 tonnes per annum of copper.

"Most importantly, we now have a benchmark for determining the potential economic merit of the twenty-five targets prioritised by Orion, which have historical mineral resources in place that were not mined. Thus far we have successfully verified and reported JORC 2012 Mineral Resources for an initial six deposits, with this Study now providing guidance for the targeted cut-off grades for open pit and underground mining that are required for these deposits to be of economic merit."

"While the five deposits included in the foundation phase Scoping Study have a significantly lower grade than the historical average mining grade of 1.7% copper maintained in the district by previous owners (and which Orion is targeting for ongoing exploration), the lower-grade remnant mineralisation presents a very attractive early production opportunity.

"Given the current strong copper market conditions and the potential for further price escalation given very firm global demand fundamentals, we believe the potential for early profitable production from a small-scale foundation phase is very encouraging – particularly given the Scoping Study assumes a conservative copper price of USD7,600 per tonne compared to recent prices of over USD10,000/tonne.

"In addition, the presence of a highly regarded partner such as the Industrial Development Corporation, which currently holds 43.8%of SAFTA and shares Orion's values of sustainable mining development and high ESG standards, is also a very important consideration for this potential investment.

"Whilst the 25 targets previously drilled and evaluated by Goldfields are the focus for our resource estimation and engineering evaluation team, our exploration geological team members are identifying high quality drill targets, where they believe modern geophysical methods have potential to catalyse the discovery of high tonnage, high grade mineralisation as previously mined in the district. The exploration team is also progressing plans to fly the first ever high power, high resolution electromagnetic survey flown over this district, expanding our targets beyond historic discoveries.

"Based on the strength of the Scoping Study results, we're now pressing ahead to complete final due diligence programs at the Okiep Copper Project, with a final decision on the project acquisition to be made by 31 July 2021."

Cautionary Statement on Forward Looking Statements

The Scoping Study reported in this Announcement assessed the commercial viability of establishing mining and mineral processing operations at the Okiep Copper Project (**Okiep Project** or **Project**). It is a preliminary technical and economic study of the potential viability of the Okiep Project. It is based on low level technical and economic assessments that are not sufficient to support the estimation of Ore Reserves. Further evaluation work and appropriate studies are required before Orion will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The Scoping Study was prepared to a capital cost estimation accuracy of ± 25%. It contains Production Targets and forecast financial information that are supported by a combination of Measured Mineral Resources, Indicated Mineral Resources and Inferred Mineral Resources. All Mineral Resources used in the Study were classified and disclosed in compliance with ASX Listing Rules and JORC Code (2012) reporting standards. No Ore Reserves have been estimated nor incorporated in the report.

The Mineral Resources underpinning the Production Target have been prepared by Competent Persons in accordance with the requirements in the JORC Code (2012).

Orion is satisfied that the portions of Inferred Mineral Resources included in the Scoping Study and the Production Targets (approximately 21% of the mining plan) are not the determining factor in Project viability and do not feature in a manner that minimises their overall impact on 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.

All material assumptions for the Scoping Study are outlined in this report. These include assumptions about the availability of funding. While Orion considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved. To achieve the range of outcomes indicated in the Scoping Study, funding in the order of AUD58 million (which incorporates a 15% contingency allowance) will be required. This funding is expected to be sourced from a combination of project financing debt and equity.

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

KEY SCOPING STUDY OUTCOMES

- **The Scoping Study indicates the potential to establish a financially robust foundation-phase copper mining project with:**
  - **First production possible within 16 months of the start of construction;**
  - **Average annual undiscounted free cash flows of AUD32 million post-tax;**
  - **All-in-sustaining costs of USD4,478/t (USD2.03/lb) of copper sold;**
  - **All-in-sustaining margin of 40%;**
  - **Break-even grade of 0.8% Cu for both un-optimised open pit and underground mining operations is well below the Mineral Resource grades of the deposits considered in the Scoping Study and the historical head grades typical of the Okiep Copper District;**
  - **Peak funding requirements of AUD58 million (including 15% contingency); and**
  - **Peak annual production of 9kt of copper-in-concentrate, potentially supplementing the 22kt a year of copper production planned from Orion's flagship project, the Prieska Copper-Zinc Project.**
- **The life-of-mine for the 'proof-of-concept' foundation phase is modelled for 12 years, during which time concurrent exploration and mine expansion scenarios will be planned and potentially implemented.**
- **Total milled production for the foundation phase of 9Mt at 1.29% Cu (comprising 33% Measured Mineral Resources, 46% Indicated Mineral Resources and 21% Inferred Mineral Resources), with the plan delivering a total of 102kt of copper in saleable concentrates.**
- **Only Mineral Resources from the Flat Mines area of the greater Okiep Copper Complex are incorporated in the foundation-phase plan, leaving significant potential for future expansion scenarios to be considered.**

Orion Minerals Ltd (**ASX/JSE: ORN**) (**Orion** or **Company**) is pleased to present the outcomes of a foundation phase scoping study completed for the development of the Flat Mines and Jan Coetzee copper deposits at the Okiep Copper Project (**Okiep Project** or **Project**) (referred to herein as the **Scoping Study** or **Study**). The Okiep Project is located in the Northern Cape Province of South Africa, approximately 450km to the west of Orion's flagship Prieska Copper-Zinc Project (**Prieska Project**).

The Scoping Study was completed as part of the due diligence program currently being undertaken in relation to Orion's exclusive option to acquire the Okiep Project (refer ASX release 2 February 2021). The exclusivity option expires on 31 July 2021.

The Study evaluates the commercial merits of a foundation phase mining operation, with a production level in line with the pending Mining Right Application applied for by the project vendors (760ktpa plant throughput). Orion's primary interest in the district is in the long-term potential to re-establish mining operations at a level similar to that delivered by Newmont and later Goldfields, who produced 30,000 - 40,000 tonnes of copper metal per annum over several decades.

The foundation-phase Scoping Study investigated the commercial viability of establishing mining and mineral processing operations that would produce saleable copper concentrates from the exploitation of Mineral Resources delineated within a sub-area of the Okiep Project, referred to herein as **the Flat Mines Project area.** The concept-level Study was prepared to a capital cost estimation accuracy of ± 25% and targets a production scale that is manageable to test mine operating practices best suited to exploiting the numerous copper deposits identified within the region and are being considered in future production expansion scenarios (hence '**proof-of-concept**' scale).

The Scoping Study demonstrates that potential exists to establish foundation-scale mining operations as per the scale of processing included in the Mining Right Application. These foundation scale operations could be in production within 16 months of the commencement of construction, requiring a low upfront capital expenditure commitment of AUD53 million (including a 15% contingency allowance), whilst providing substantial early cashflows averaging AUD32 million annually, high operating margins (40% all-in-sustaining margin, 37% IRR, post-

tax) and attractive overall commercial returns, with a project Net Present Value (**NPV**) of approximately AUD114 million (post-tax) at a 10% discount rate, using a copper price of @ US$7,600/t .

The proposed foundation scale mining operations could run for 12 years at a design processing plant throughput of 760,000 tonnes per year, resulting in 9,000 tonnes per year of copper sold in marketable concentrates. Both underground and surface mining methods would be used in conjunction with mineral processing by conventional froth-flotation concentration to produce the copper concentrates for export.

This 'proof--of-concept' phase of the planned operation targets the mining of only those Okiep Project copper deposits for which Orion has verified and reported Mineral Resources during the early phase of the due diligence period. The resulting Production Target is therefore supported by 33% Measured Mineral Resources, 46% Indicated Mineral Resources and 21% Inferred Mineral Resources. In compliance with disclosure requirements, 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 Production Target or financial forecast information outlined in this document will be realised.

Key assumptions and Project performance parameters resulting from the Scoping Study are presented in Table 1 below:

Executive Dashboard							
Price and Forex Assumptions	**Unit**	**Value**	**Financial Performance**	**Unit**	**Value**	**Unit**	**Value**
Metal price - Cu	USD/t	7,593	NPV (pre-tax) approximated @10% discount rate	ZAR (M)	1,896	AUD (M)	170
Metal price – Au	USD/oz	1,889	NPV (post-tax) approximated @10% discount rate	ZAR (M)	1,267	AUD (M)	114
Metal price – Ag	USD/oz	24	IRR (pre-tax)	%	44%		
Exchange rate	ZAR : USD	17.2 :1	IRR (post-tax)	%	37%		
Exchange rate	ZAR : AUD	11 .1: 1	Payback from first production	years	3.25 years		
Production Metrics	**Unit**	**Value**	Undiscounted free cash flow (pre-tax)	ZAR (M)	4,607	AUD (M)	413
Life of Mine (Proof-of-Concept Phase)	Years	11.8	Peak funding	ZAR (M)	643	AUD (M)	58
Treatment plant capacity	ktpa	780	**Project Cost Metrics**	**Unit**	**Value**	**Unit**	**Value**
Proof-of-Concept Phase tonnage - RoM	kt	9,011	Average cash operating unit cost (C1)	ZAR/t	781	AUD/t	70
Proof-of-Concept Phase tonnage – RoM U/G	kt	7,479	All-in-sustaining cost per unit RoM t	ZAR/t	873	AUD/t	78
Proof-of-Concept Phase tonnage – RoM O-Pit	kt	1,531	All-in-sustaining cost per unit Cu t sold	USD/t Cu	4,478	AUD/t Cu	6,904
RoM Plant Feed Grade - Cu - U/G	%	1.29%	Price received (net of NSR) - Cu	USD/t Cu	7,441	AUD/t Cu	11,473
RoM Plant Feed Grade - Cu – O-Pit	%	1.28%	All-in-sustaining margin	%	40%		
RoM Plant Feed Grade – Au	g/t conc	2.2	Operating breakeven grade - Cu	%	0.83%		
RoM Plant Feed Grade – Ag	g/t conc	34	**Project Cash Flows**	**Unit**	**Value**	**Unit**	**Value**
Overall Plant Recovery - Cu	%	87.4%	LoM net revenue	ZAR (M)	12,712	AUD (M)	1,142
Concentrate tonnage - Cu	kt	386	LoM operating costs (plus State Royalty)	ZAR (M)	7,320	AUD (M)	657
Concentrate grade - Cu	%	25.8%	Project Start-up Capital Expenditure	ZAR (M)	595	AUD (M)	53
NSR as % of metal price - Cu	%	96.9%	Sustaining Capital Expenditure	ZAR (M)	188	AUD (M)	17
Metal sold (in concentrates) - Cu	Tonnes	102,329	Income Tax	ZAR (M)	1,368	AUD (M)	123
Total Cu Sales	Tonnes	386,787	Cash Flow After Tax	ZAR (M)	3,241	AUD (M)	291

Level of Accuracy of Financial Model ± 25%, 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. Source: *ORN Okiep Financial Model revision 4.0*

Table 1: Key assumptions and project performance parameters for the Okiep Copper Project (Flat Mines Project area) (numbers may contain apparent rounding errors).

The modelled scenario returns undiscounted free cashflows of approximately AUD413 million pre-tax (AUD291 million post-tax), a Net Present Value (**NPV**) of approximately AUD170 million pre-tax and post-royalties (AUD114 million post-tax, post royalties), using non-inflation-adjusted estimates and a discount rate of 10%. The Project

achieves an Internal Rate of Return (**IRR**) of approximately 44% pre-tax (37% post-tax). The financial modelling assumes long-term forecast metal prices of USD7,593/tonne for copper[1].

Peak funding requirements total AUD58 million, including a 15% contingency allowance. This is forecast to occur in the second year of the capital expenditure (**Capex**) program. Payback is planned to occur 4.5 years from the start of construction or 3.25 years from the start of production, shown in the figure below.

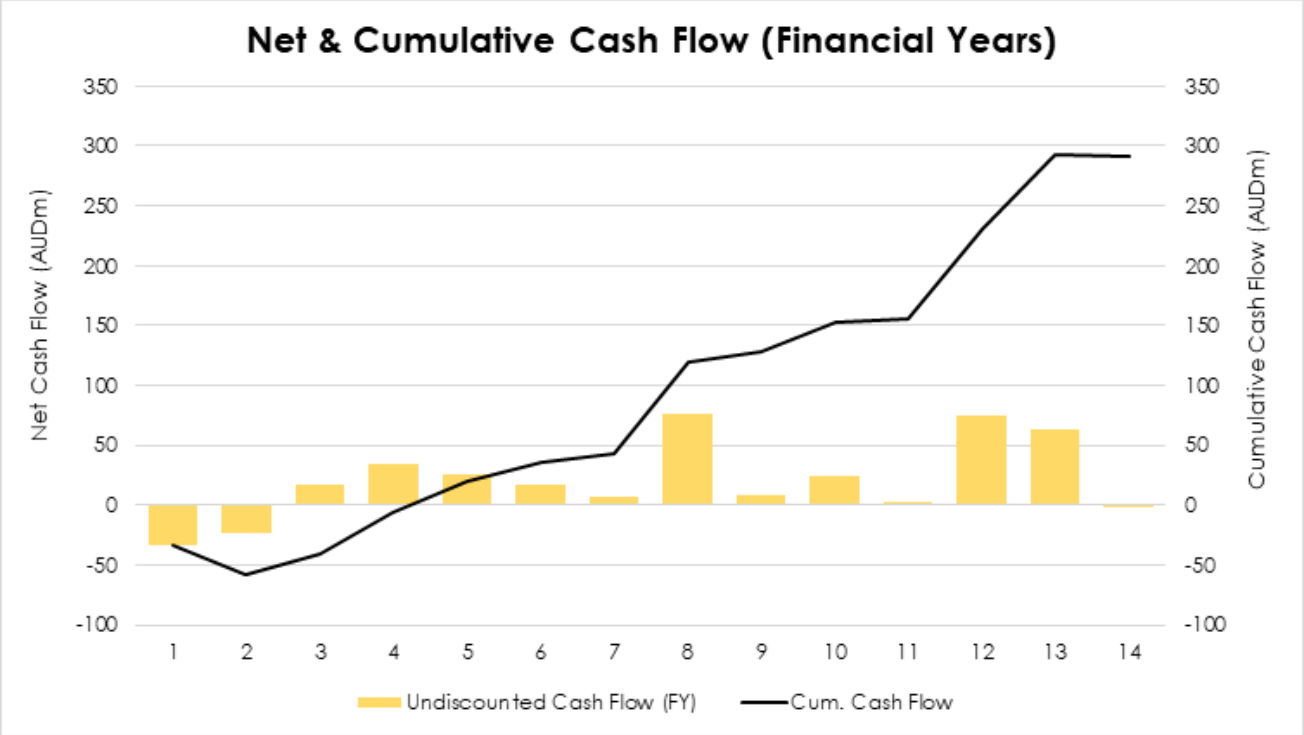


Figure 1: Cashflow profile over the life of mine.

The unit all-in-sustaining costs (**AiSC**) over the proposed mine life (**LoM**) are estimated to be AUD6,904/t (USD4,478/t) (USD2.03/lb) copper metal sold. The realised price (net of smelter charges) over the LoM is forecast to be AUD11,344/t (USD7,358t) (USD3.34/lb) copper metal sold, yielding in the order of a 40% all-in-sustaining margin. The operating breakeven grade is estimated at 0.8% copper, well below the Run of Mine (**RoM**) feed grade of 1.3% copper applied in the production schedule. The break-even grade using direct production costs (**C1**) is estimated at 0.7% copper, in line with the cut-off grade used for stating the supporting estimated Mineral Resources.

Foundation Phase Project Financial Assumptions Sensitivity Analysis

The NPV is most sensitive to variances in the copper grade, copper price, ZAR-USD foreign currency exchange (**Forex**) rate and copper recoveries. Project capital expenditure variances have relatively low impact on the NPV. The post-tax NPV ranges from AUD71 million (-37%) to AUD156 million (+35%) as the applied copper head grade is varied from -10% to +10% of the base assumption of 1.29%. The post-tax NPV ranges from AUD76 million (-33%) to AUD151 million (+31%) as the copper price is varied from -10% to +10% of the base assumption of 7,593 USD/t for year 1. The post-tax IRR ranges from 24% to 47% as the assumed ZAR-USD Forex rate varies from -15% to +15% against base assumption (shown below).

[1] Metal price assumptions based on S&P Global Capital commodity long-term real forecast (May 2021).

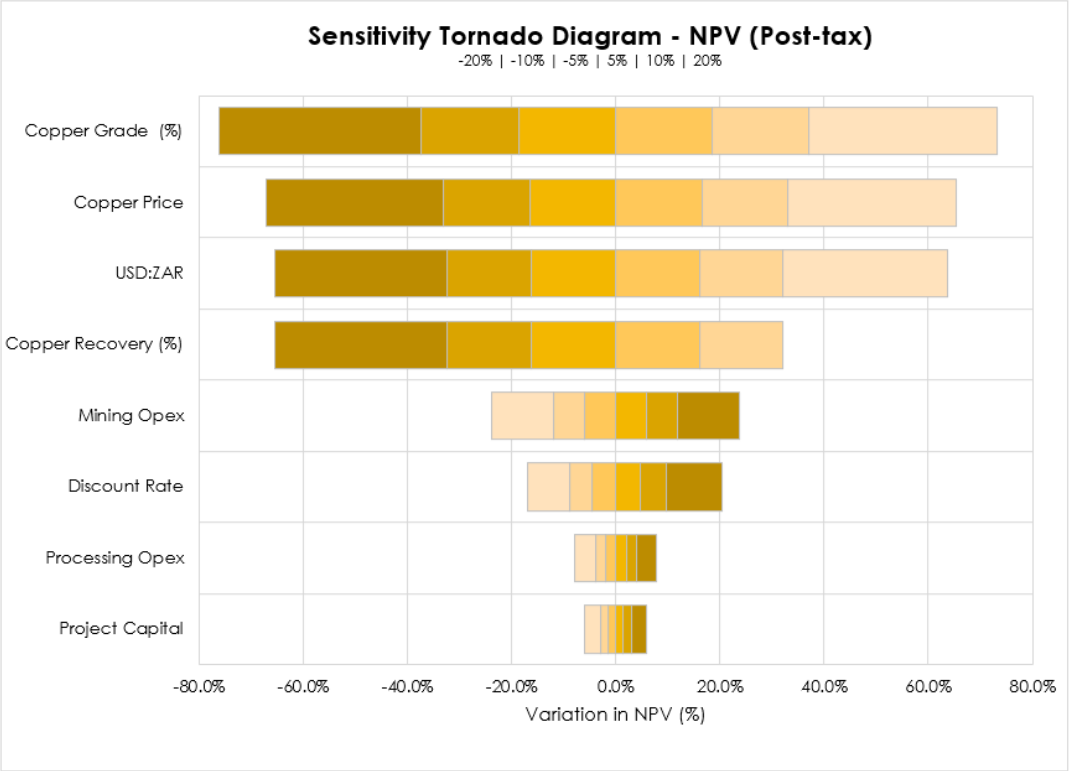


Figure 2: Sensitivity of the post-tax NPV to changes in key input assumptions for the Okiep Copper Project (Flat Mines Project area).

Synergies with the Prieska Copper-Zinc Project

Production of 9,000 tonnes of copper each year would potentially supplement the 22,000 tonnes of copper planned to be produced each year[2] from the Prieska Project, also located in the Northern Cape Province, South Africa (refer ASX release 26 May 2020). Combined production volumes could provide opportunities arising from economies of scale to be investigated, such as the ability to share some administrative costs, supply logistics, supply of power from a common renewable energy facility and potentially justify the case to investigate the beneficiation of the copper concentrates to produce metals locally.

OKIEP SCOPING STUDY TECHNICAL REPORT EXTRACTS

Nature of and Contributions to the Scoping Study

The Scoping Study was completed as part of the due diligence by Orion to evaluate the option to acquire the Okiep Project (refer ASX release 2 February 2021).

The Study investigates the commercial viability of a 'proof-of-concept' scale mining and mineral processing operation. Once proved, the operating concept could become the scalable basis for potential future expansions to increase metal concentrate output from the Okiep Project operations to match or exceed historical production levels. Newmont Mining Corporation's historical production from the copper district peaked at 40,000 tonnes of copper per year, (refer ASX release 2 February 2021).

The Scoping Study has been completed to a cost estimation accuracy of ±25% and is supported by Mineral Resources classified by a Competent Person and reported in accordance with JORC Code (2012) guidelines, as announced in February 2021 and March 2021 (refer ASX releases 10 February 2021 and 29 March 2021). 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, with no more than 21% Inferred Mineral Resources supporting the Production Target. This Announcement of the Scoping Study

[2] The Prieska production target and schedule were first reported in the ASX release of 26 May 2020: "Updated Feasibility Study Delivers…" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. All material assumptions underpinning the production target detailed in the initial report continue to apply and have not materially changed.

complies with Australian Securities Exchange (**ASX**) listing rules and Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code (2012)**) reporting standards.

The Study was carried out and managed by Orion and an experienced team of experts and specialists including: A&B Global Mining Ltd (Mining); ABS Africa (Pty) Ltd (Environmental); Falcon and Hume Attorneys Inc.; Fraser McGill (Pty) Ltd (Financial Modelling); Gariep Mining and Exploration (Pty) Ltd (Process plant equipment); Epoch Resources Ltd (Tailings storage facility); METC Engineering Ltd (Process plant) and PCDS Consultants (Pty) Ltd (Safety and Health).

The Study also references some information from a Pre-Feasibility Study completed by Minxcon (Pty) Ltd (**Minxcon**) in 2019 on behalf of Southern African Tantalum Mining (Pty) Ltd (**SAFTA**)(**SAFTA PFS**).

The reference date of this report and for the cost estimates and key financial assumptions applied therein is April 2021. All costs and financial assumptions are reported as of the base date, with no allowance for escalations or future fluctuations. Production schedules and cashflow modelling have been compiled in monthly intervals for the LoM duration.

Project Overview

Background

The Okiep Project consists of the collective mineral prospecting and mine development interests held by SAFTA, the Nababeep Copper Company (Pty) Ltd (**NCC**) and the Bulletrap Copper Co (Pty) Ltd (**BCC**). These mineral rights cover extensive areas of the Okiep copper district. This copper district is of significant historical importance, with large mines in the area having historically produced more than 2Mt of copper metal over a 150-year period ending in 2003.

The Scoping Study is focused on evaluating the scenario to develop and mine two copper deposits as open pit mines (these being the Flat Mine Nababeep (**FM Pit**) and Jan Coetzee deposit (**JC Pit**) and three copper deposits as underground mines (these being the Flat Mine North (**FMN**), Flat Mine South (**FMS**) and Flat Mine East (**FME**) deposits) (see Figures 4 and 7). The area proposed for this initial 'proof-of-concept' phase of mining is a subset of the wider Okiep Project and is herein referred to as the **Flat Mines Project area** with all**. All deposits within the Flat Mines Project area** are held by SAFTA with applications for Prospecting and Mining Rights pending.

The report incorporates the results from a discounted cashflow financial model based on a scenario to mine the five mentioned discrete deposits, processing the resulting RoM material at a centralised concentrator to produce saleable copper concentrates, over a projected LoM of approximately 12 years.

The planned mining operations would serve as a proof-of-concept, run concurrently with exploration, mineral resources definition and mine feasibility studies that would aim to advance planning for production expansion scenarios.

Project Geography

The Project is located in the Northern Cape Province of South Africa. The next figure illustrates the location of the Company's exploration and mine development activities, with the Okiep Project located at the north-western extent of the province, approximately 20km north-west of the town of Springbok.

Figure 3: Location of the Okiep Copper Project, Northern Cape Province, South Africa.

The Project is in a semi-desert region with very hot summers and cold winters, with mean maximum and minimum daily temperatures of 30°C for January and 5°C for July respectively. Rainfall is mainly in the winter months with a mean annual precipitation of 153mm. The landscape of the area features huge granite and gneiss domes, smooth glacis and disintegrated boulder kopjes supporting open shrubland up to 1m tall.

The Project is within the Namakwa District Municipality, and the Nama Khoi Local Municipality (NKLM). The area is sparsely populated, with a population of 115,842 as at the 2019 census. Approximately 90% of the region is used for livestock grazing, with the remainder comprising agriculture and urban development.

Existing Infrastructure

The Project is serviced for most amenities and accommodation by the regional centre of Springbok and the smaller nearby towns of Nababeep and Okiep. The project site is accessible via a tarred regional highway from Springbok, where a 1.5km tarred airstrip is in service. Power supply to the area is via a municipal power grid that sources power from the national electricity grid via an ESKOM substation located 23km from the Project site. A municipal water pipeline traverses the site, drawing water from the Orange River 135km away. The administrative buildings that would service the Project are located at Nababeep.

Mineral Tenements, Licencing and Project Ownership

Mineral Tenements

The Flat Mines Project area (a subset of the Okiep Project area) is covered under two mineral tenement applications in the name of SAFTA, these being the SAFTA Mining Right application and the contiguous SAFTA Prospecting Right applications. Together, these tenements cover a combined 8,300 hectares. This is shown in the following figure and table.

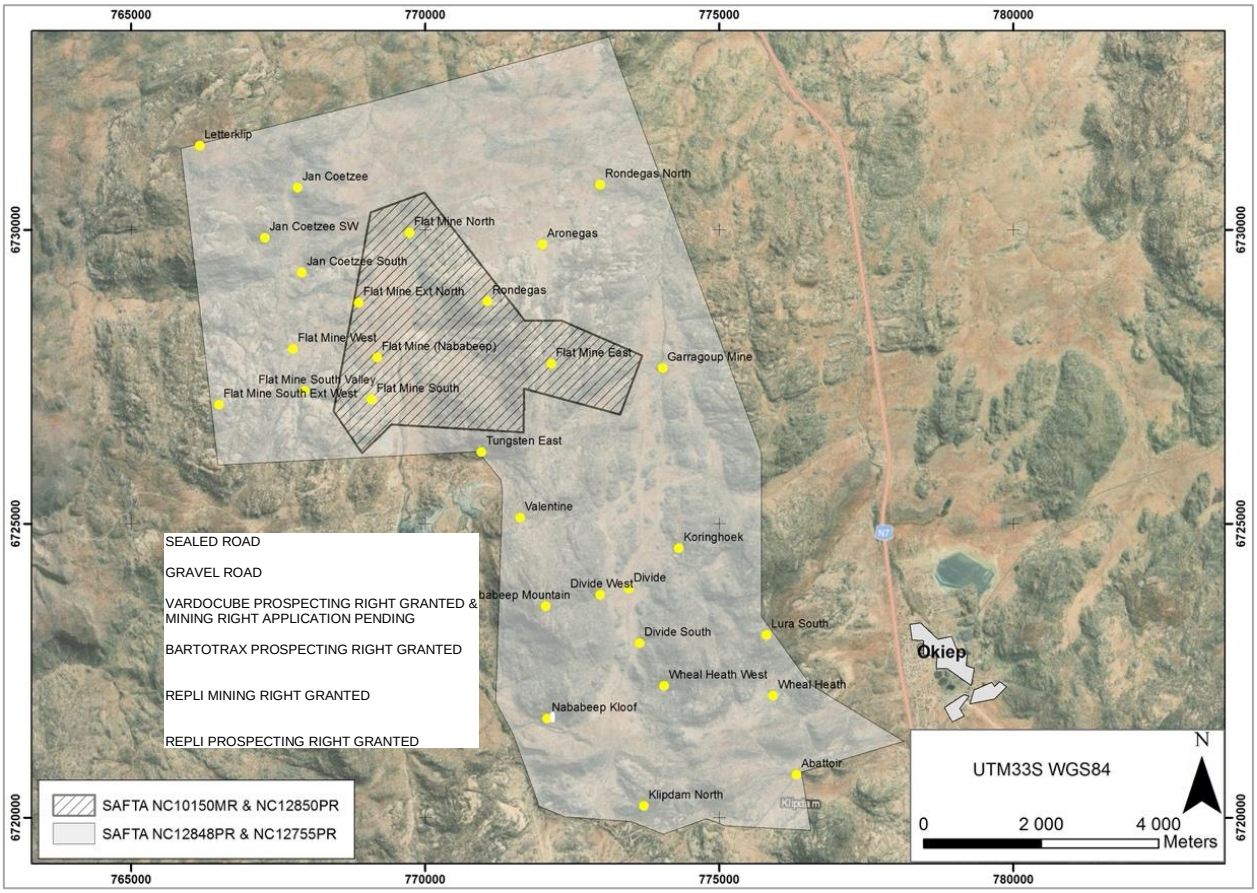


Figure 4: Mineral tenement map for the Flat Mines Project area.

Right Application Reference Number	Applicant Holder	Type of Right	Submission Date	Acceptance Date	Term (Years)	Extent (Ha)	Minerals
NC10150MR (SAFTA Mining Right)	SAFTA	Mining Right Application	4 October 2018	4 March 2019	15	1,214	Cu, W
NC12755PR (SAFTA Prospecting Right)	SAFTA	Prospecting Right Application	9 October 2020	In process	5	7,042	Cu, W
NC12848PR & NC12850PR (SAFTA Prospecting Rights)	SAFTA	Prospecting Right Application	4 February 2021	Awaiting Acceptance	5	8,256	Various commodities including Au and Ag

Table 2: Mineral tenement applications for the Flat Mines Project area.

The wider Okiep Project area incorporates additional prospecting rights and prospecting right applications adjacent to the Flat Mines Project area that are owned by related entities other than SAFTA. The Okiep Project area extends over 30,000 hectares in area, effectively covering most of the large historical mines previously operated by the O'Okiep Copper Company (see below).

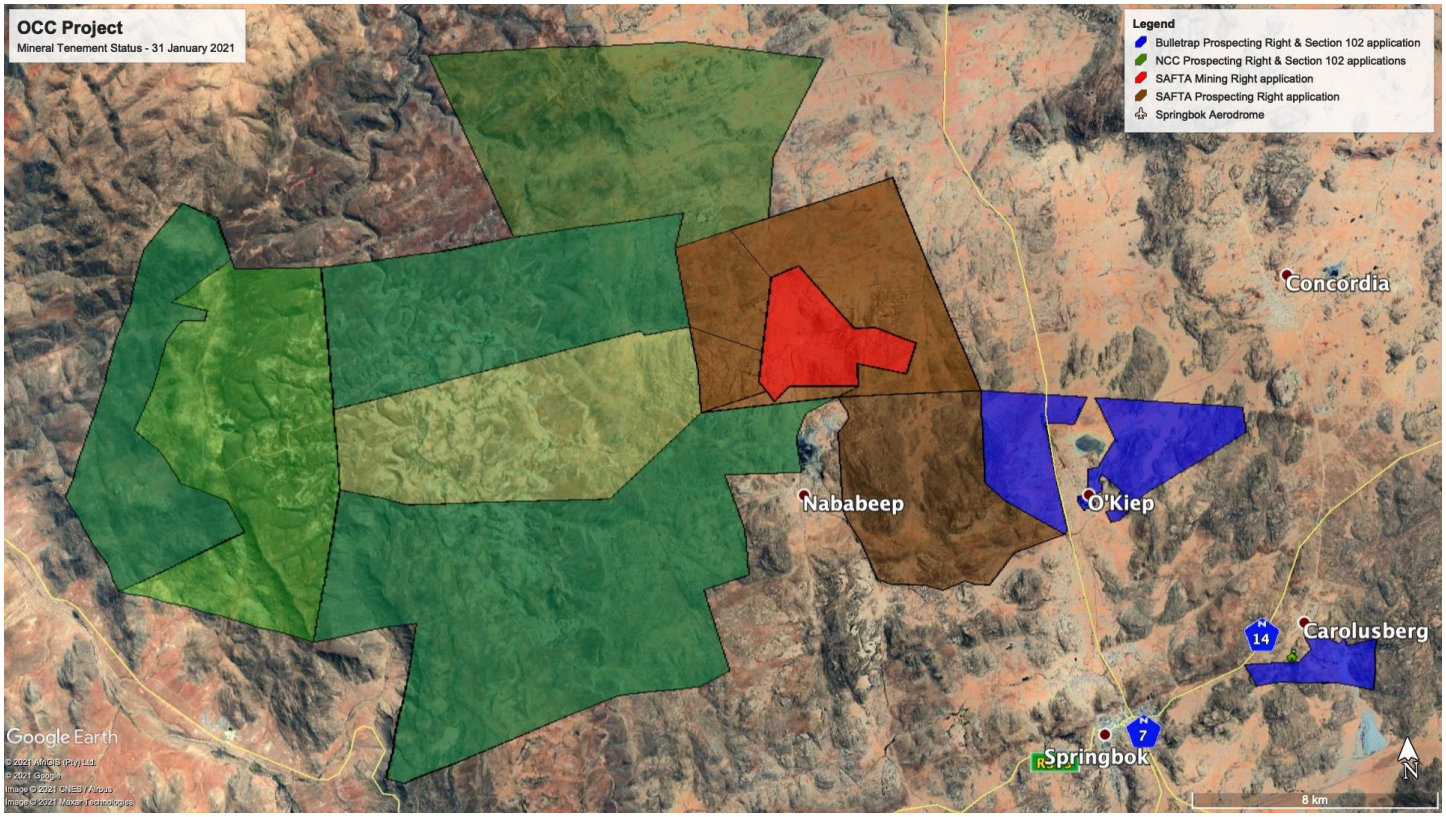


Figure 5: Mineral Tenement Map for the whole Okiep Project area (including the Flat Mines Project sub-area).

Licencing Status

Along with applications for mining and prospecting rights pending for the Flat Mines Project area, Environmental Authorisations and an Integrated Water Use Licence (**IWUL**) have been applied for and are pending processing as is required to allow exploration and mining activities to be authorised. A summary of the status of key Project licences is tabled below.

Type of Authorisation/Licence	SAFTA Mining Right Application area	SAFTA Prospecting Right Application area
Environmental Authorisation (and Waste Use Licence)	Submitted 4 October 2018	Submitted 9 October 2020
Mining Right	Submitted 4 October 2018	Submitted 9 October 2020
Water Use Licence	Resubmitted 20 April 2021	Not currently required
Special Zone (Extractive Industry)	Application planned once Mining Right is granted	Not currently required

Table 3: Status of key licences required for exploration and mine construction activities within the Flat Mines Project area.

Option to acquire Okiep Project and Project-related data

On 2 February 2021, Orion announced that it had signed an exclusive option to undertake due diligence to acquire the following:

- a 56.25% interest in SAFTA – alongside the Industrial Development Corporation of South Africa Limited (**IDC**) who hold 43.75%;
- 100% of NCC; and
- 100% of BCC,

(together herein being referred to as the '**Okiep Copper Project**' or '**Okiep Project**').

SAFTA is currently owned by the IDC (43.75%) in partnership with six other private and corporate entities (56.25%).

Under the terms of the agreement, Orion was granted an exclusivity period extending to 31 July 2021, during which time Orion could exercise an exclusive option to acquire the Okiep Project.

On 15 February 2021, Orion announced that it had also secured an option to acquire the furnished head office and database from the O'Okiep Copper Company Proprietary Limited, O'Okiep Australia Pty Ltd and N7 Transport CC. The database includes all historical mining and exploration records over much of the Okiep Project area. The database also includes O'Okiep exploration records and historical due diligence reviews undertaken by Newmont and Goldfields over much of the Northern Cape Province, including Orion's Prieska Copper-Zinc Mine and the Areachap Belt. This information would be important to the exploration, Mineral Resources definition and mine feasibility studies planned for the Project.

Proforma Ownership Structures

Orion's proforma corporate structure for its attributable ownership of the Okiep Project, in the event of completing the acquisition of the target group of mineral tenements, is shown in the organogram in the figure below.

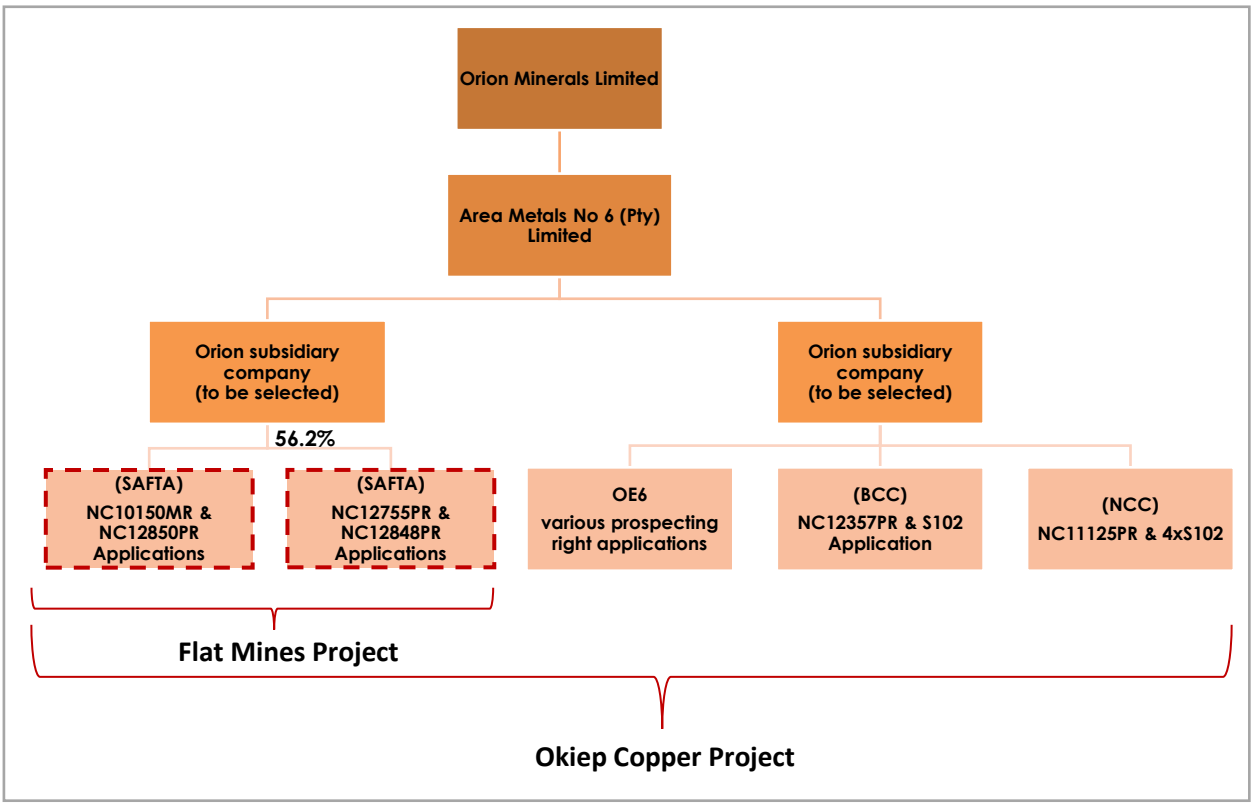


Figure 6: Proforma Orion corporate structure showing the attributable ownership (56.2%) of the Flat Mines Project mineral rights at the Okiep Copper Project, Northern Cape Province, South Africa.

Ownership interests in the Project would be adjusted to pre-emptively comply with the ownership guidelines stipulated by the Broad-based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry, 2018 (Mining Charter 2018). As such, Orion and the IDC would adjust ownership allocation to make provision for at least 5% Community Trust and 5% Employees' Trust and 20% BEE Entrepreneur ownership. The IDC's participation is neutral in its contribution to the required BEE entrepreneurship credentials[3] . 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 project cashflows before any dividend distributions are made to the trusts.

History

Recorded commercial exploitation of copper from the Okiep region dates back to the late 1800s. Modern era mechanised mining commenced with Newmont Mining Corporation's acquisition of the O'Okiep Copper

[3] In terms of documentation submitted for the MRA, IDC holds BEE Level 1 Certification.

Company in 1940 and their subsequent consolidation of the copper production from the region. Some important historical events since Newmont's arrival are summarised in the table below.

Year	Event
1940	Newmont Mining Corporation acquires the O'Okiep Copper Company for £537 870 15s 8d, mining at rates of up to 40,000tpa copper production. The company assets included 105,000 acres of mineral holdings, mineral rights to a further 50,000 acres, plants and equipment, the narrow-gauge railway to Port Nolloth and the jetty to that port. Historical ore reserves (non-JORC Code (2012)) at the time of takeover were estimated at 10,200,000 short tons at an average grade of 2.45% copper.
1984	Goldfields acquires the O'Okiep Copper Company.
1998	Metorex acquires O'Okiep Copper Company from Goldfields.
2003	Metorex moves the plant to their project in central Africa and closes the operations in Springbok. PJ Fourie acquires O'Okiep Copper Company from Metorex for ZAR1.00 including all environmental liabilities.
2013	SAFTA Prospecting Rights granted over the Flat Mines and others.
2018	IDC funds the Flat Mine Project in exchange for equity. SAFTA applies for a Mining Right over the Flat Mines area.
Feb 2021	Orion secures an option to acquire – SAFTA, NCC and BCC interests in the Okiep Copper Project.

Table 4: Chronology of key historical events at the Okiep Copper Project.

The Okiep Project covers the core of a premier historical copper-producing district that produced more than 2Mt of copper over a 150-year period ending in 2003. About 20% of recorded production was pre-1920, including production from the O'Okiep Copper Company that produced approximately 2.2Mt of hand-sorted ore and concentrates at an average grade of 14% copper.

Main sources of ore production pre-1920 were:

- Okiep Mine (907,000 tonnes at 21% copper);
- Tweefontein (at least 139,000 tonnes at 25% copper); and
- Nababeep South (816,000 tonnes at 5.5% copper).

After 1940, Newmont mined at a production rate of up to 40ktpa Cu, at an average RoM head grade of 1.9% Cu. The Newmont operations sourced ore from multiple mines that fed a centralised concentration and copper smelter facility at Nababeep. Newmont sold the business to Goldfields in 1984, which in turn sold on to Metorex in 1998. Metorex stopped mining in 2003 (refer ASX release 2 February 2021).

Geology and Exploration

Regional Geology and Mineralisation

The Okiep Copper District lies within the Bushmanland Sub-province of the Namaqua-Natal Mobile Belt, intruded by the Koperberg Suite and having the Richtersveld Sub-province to the north and the Gariep Supergroup to the west. Metamorphism reached greenschist/ lower amphibolite facies (~520°C) around 540Ma ago. The predominant rock type in the Flat Mine area is the Concordia granite.

Copper mineralisation occurs in basic to intermediate rocks of the intrusive Koperberg Suite comprising mainly anorthosite, biotite diorite, pyroxene diorite and pyroxenite, as well as minor glimmerite and orbicular diorite, within the granulite grade gneisses and granites of the Okiep Group. The anorthosite appears to be the oldest member of the suite, followed by increasingly more mafic varieties i.e., leucodiorite, hypersthene diorite (norite) and minor hypersthenite. The sulphides occur mainly as disseminations in the diorite and were generally regarded as having formed by immiscibility.

The common sulphide minerals are chalcopyrite, bornite, chalcocite and pyrrhotite with relatively sparse pyrite and galena. Bornite and chalcopyrite are usually found together at some of the deposits. Frequently bornite predominates over chalcopyrite or occurs to its exclusion.

Nearly all the reported Mineral Resources are comprised of sulphides which would be expected to produce the high-grade sulphide material which is well known from the Okiep area, with resulting clean and simple metallurgy known historically to provide greater than 93% metal recovery[4].

Deposit Geology

Mineral Resources estimates have been reported for five deposits within the Flat Mines Project area, namely FMN, FMS, FME, Flat Mine (Nababeep) and Jan Coetzee Mine (see figure below). A brief discussion on their specific geology follows with the tabulated Mineral Resources.

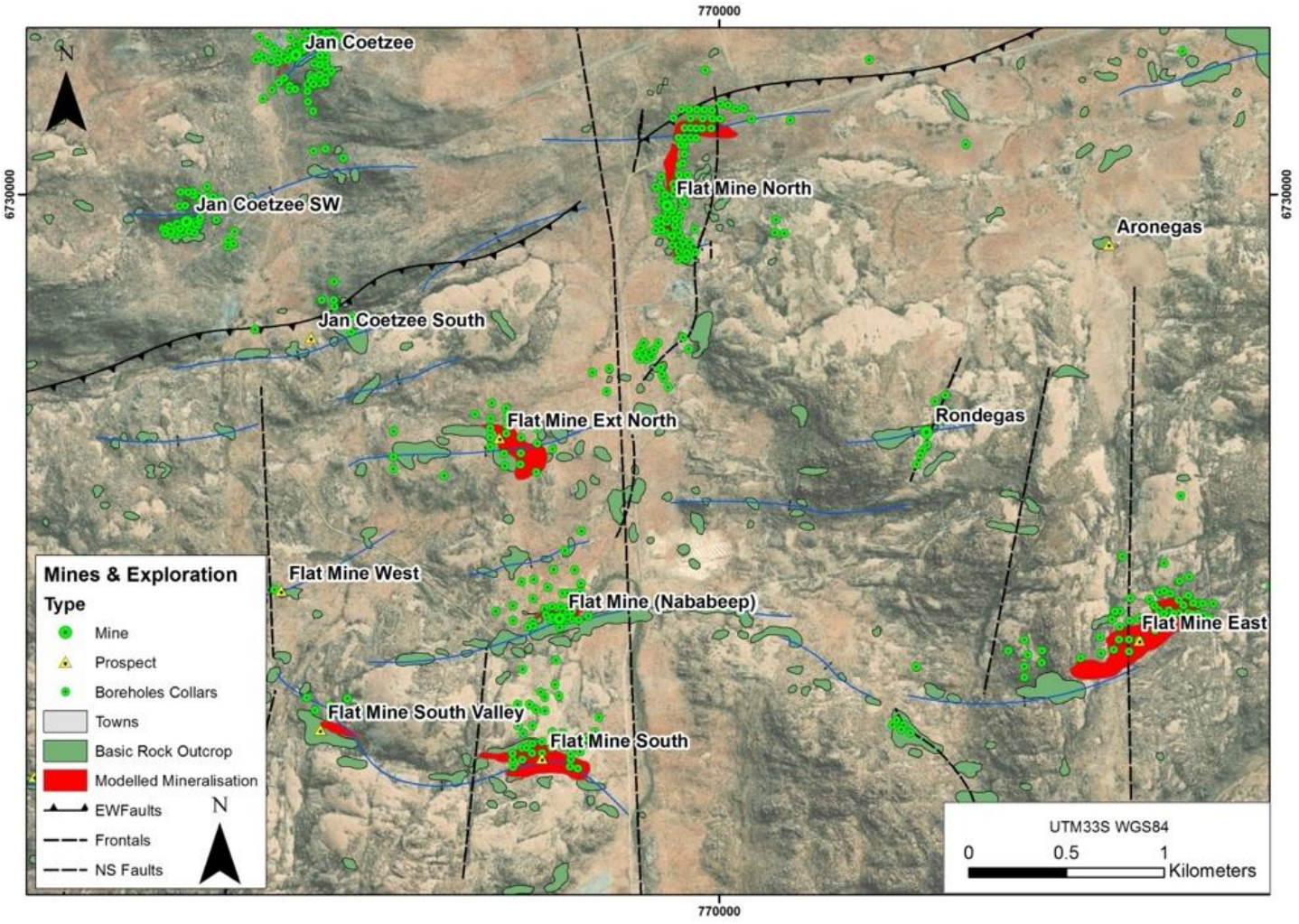


Figure 7: Plan showing the copper deposits within the Flat Mines Project area.

Flat Mine North: The Flat Mine area covers a north-south trending valley with the Flat Mine fault along approximately the centre of the valley and approximately 500m west of the FMN body. There is a strong tendency for sulphides to accumulate towards the footwall so that the Koperberg Suite is "bottom-loaded" with occasional assay intervals exceeding 5% Cu. The southern portion of the FMN mineralised deposit has an irregular pipe-like structure 180m long and 40m wide varying from 15 to 50m in vertical thickness. It strikes 345° and plunges

[4] Historical metallurgical test work from FMN was reported in the ASX/JSE release of 10 February 2021: "Orion reports maiden JORC Mineral Resource…" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Exploration Results: Errol Smart. Orion company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. Orion confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

steeply (45°) for the first 60m from surface and then flattens out to become horizontal for the remaining 120m, attaining a maximum depth of 100m. Usually referred to as the Flat Mine North Extension, the remainder of the FMN mineralisation virtually adjoins the southern body at its northern extremity like the cross on a "T" at a depth of 170 to 250m.

Flat Mine East: At FME, the main Koperberg intrusive massif is about 970m long and 20 to 40m wide extending easterly at a depth of 700m and is open ended. The intrusive dips -50° to -75° WNW and appears to occupy an ENE–WSW steep structure cutting across the gently dipping Concordia Granite with rafts of Wolfram Schist and deeper Nababeep Gneiss. Unlike FMN and FMS, diorite is not as volumetrically important as norite which hosts the bulk of the mineralisation while anorthosite is more erratically mineralised with lower grades.

Flat Mine South: Intruding the Nababeep Gneiss and Concordia Granite with Wolfram Schist bands, the FMS mafic body has an irregular but continuous configuration; about 600m long and generally about 30m wide extending to >700m depth where it is often less than 10m thick. A small section outcrops in the middle. The east-trending Koperberg Suite is mainly sub-surface and dips at about -80° N at >500m depth and is still open ended.

Flat Mine (Nababeep) and Jan Coetzee: The Flat Mine (Nababeep) and Jan Coetzee Mine mineralised deposits generally strike east-west and dip steeply to the north. Flat Mine (Nababeep) is approximately 225m long and 35m wide and Jan Coetzee Mine has an approximate 170m strike length and is 70m wide.

Exploration

Exploration in the Flat Mine area was carried out intermittently in the period 1953 to 1984, with very little exploration of the area done from 1985 to 2003. Exploration included: geophysical surveys, surface mapping, prospect pitting, and drillholes (235 surface and 17 underground) totalling 43,413m for the FMN deposit, 80 surface holes totalling 32,750m for the FMS deposit, and 151 surface holes totalling 51,414m for the FME deposit.

In 2018, a set of historical drill sites were selected by SAFTA from the Okiep Copper Complex database for twin drilling to test the veracity of the historical data and specially to test significant mineralised intervals, for the geological modelling and mineral resource estimation. One twin drillhole was done at each of the 13 selected historic sites at both FMN and FMS.

The twin drilling program consisted of 1,260m percussion and 1,109m diamond drilling. Comparisons of the twin drill data with the historical drillhole data shows a generally close comparison, in both lithology and assay, except where excessive deviation had deflected the twin hole. The Competent Person therefore considered that the historical data were acceptable for use in Mineral Resources estimation.

No twin or verification drill holes have yet been drilled at Flat Mines (Nababeep) and Jan Coetzee. At least 55 historical surface drillhole data (15,263 drill metres) and 158 historical drillhole data (216,693 drill metres) were digitised and used to re-model Flat Mine (Nababeep) and Jan Coetzee Mine deposits respectively. Numerous underground drill holes exist but have not yet been digitally captured and used for modelling purposes.

Mineral Resources Estimation

Mineral Resources

An extensive catalogue of historical data was used to guide the verification and twin drilling campaign on FMN. This program culminated in the declaration of Mineral Resources estimated by a Competent Person and classified in accordance with JORC Code (2012) guidelines.

Orion's maiden Mineral Resource estimate for the Okiep Project was reported on 10 February 2021. This estimate was for the dormant Flat Mines: FMN, FMS and FME. On 29th March 2021, Orion reported further Mineral Resource estimates, this time for the dormant Flat Mines (Nababeep), Jan Coetzee and Nababeep Kloof mines. The total of the Orion Mineral Resource estimates, as reported to the ASX on 29 March 2021, are tabulated below.

Total Mineral Resource Estimate for the Flat Mines Area of the Okiep Project (0.7% Cu cut-off)[5] Effective Date: 29 March 2021									
Mine / Prospect	Measured			Indicated			Inferred		
	Mt	% Cu	t Cu	Mt	% Cu	t Cu	Mt	% Cu	t Cu
Flat Mine (Nababeep)	-	-	-	-	-	-	1.0	1.4	15,000
Jan Coetzee Mine	-	-	-	-	-	-	1.0	1.4	14,000
Nababeep Kloof Mine	-	-	-	-	-	-	0.5	1.2	6,000
Flat Mine East	3.166	1.43	45,000	0.80	1.11	8,900	-	-	-
Flat Mine North	0.339	1.27	4,300	0.97	1.50	14,500	-	-	-
Flat Mine South	-	-	-	3.32	1.41	45,600	0.4	0.8	3,000
Total	**3.505**	**1.41**	**49,300**	**5.00**	**1.38**	**69,000**	**3.0**	**1.3**	**38,000**

Table 5: Total Mineral Resource Estimate for the Flat Mines Area of the Okiep Project (0.7% Cu cut-off).

The mining studies that form part of this Scoping Study are informed by the Mineral Resource estimates for FMN, FMS and FME (underground), Flat Mine (Nababeep)(open pit) and Jan Coetzee Mine (open pit). For the Mineral Resource estimates used in the Scoping Study mine plan, the proportion of Inferred Mineral Resources is 21%.

Mineral Resources Classification Criteria for the Minerals Resources Estimates
For the FMN, FMS and FME Mineral Resources, refer to ASX release 10 February 2021.
For the Flat Mine (Nababeep), Jan Coetzee and Kloof Mineral Resources, refer to ASX release 29 March 2021.

Cut-off Grade Determination for Mineral Resources Estimation
The Mineral Resources were reported using a base case of 0.7% Cu. The incremental break-even grade resulting from the financial model used for the Scoping Study is 0.7% Cu. This is the break-even grade estimated using direct operating C1 costs. This incremental break-even grade is similar to the cut-off grade used to report Mineral Resources used in the Scoping Study.

Mining Operations

Overview

The Okiep district has been the focus of intensive surface and underground mining, including large-scale mechanised underground mining, with workings extending to depths of 1,900m below surface. With a well-documented mining and geotechnical history and with more than 150 million tons of ore historically extracted, mostly from underground mines but with numerous small open pits and glory holes also mined, the districts mining conditions are well understood, and previous learnings are readily applicable to this Study.

The proposed mining operations involve both open pit and underground mining from five mineralised bodies in the Project area, namely:

- the FMN, FME and FMS deposits for underground mining; and
- the Flat Mine (Nababeep) and Jan Coetzee deposits for open pit mining.

[5] Mineral Resource for Nababeep, Jan Coetzee and Nababeep Kloof mines reported in ASX/JSE release of 29 March 2021: "Additional Mineral Resource Estimate for the Okiep Copper Prospect, Flat Mines" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Mineral Resource: Dr Deon Vermaakt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

Mineral Resource for FMN, FMS and FME reported in ASX/JSE release of 10 February 2021: "Orion reports maiden JORC Mineral Resource for the Okiep Copper Complex, Flat Mines" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Mineral Resource: Dr Dion Brandt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

The open pits are planned to be mined using conventional drilling and blasting in conjunction with loading and hauling methods. The underground deposits would be mined using trackless, mechanised mobile equipment. Mine production would commence in Month 11 from FMN which has pre-existing decline and level accesses, ventilation raises and some production areas already partially prepared for production blasting by the previous mining operations. Scheduling has allowed installation of mine services and mine dewatering before start of production at FMN as the underground workings are flooded to within 80m vertical depth from the decline entrance.

The FM-Pit is scheduled to commence production in Month 16, allowing time for a new pit to be established and to coincide with the commissioning of the mineral processing plant. The Flat Mine Pit deposit was partially mined in the past via a small underground operation to a shallow depth. The delineated Mineral Resources extends from surface to approximately 180m depth so are amenable to surface mining.

The FME and FMS deposits are undeveloped, hence they will require new decline access to be established from surface. Production is scheduled to commence in Month 51 and Month 102 respectively, in time to replace production as the FMN and Jan Coetzee deposits are depleted. The Jan Coetzee deposit was previously mined via underground access, with a separate limb to the deposit now planned as an open pit operation much later in the mine life, from Month 138, to allow for mine permitting activities to be completed.

Combined production from the FMN underground and Flat Mine Pit is scheduled to build up to the steady state output of 65ktpm by Month 19, as shown in the figure below.

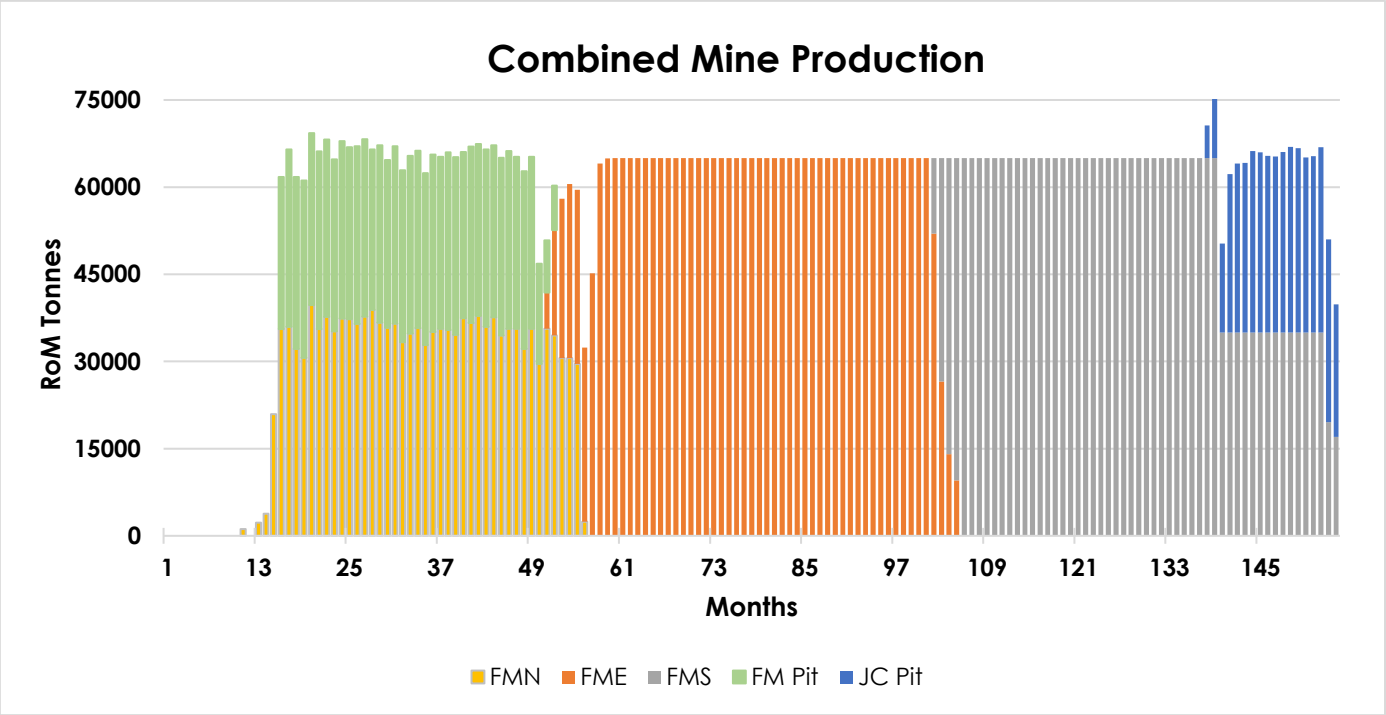


Figure 8: Plan showing the proposed production from the copper deposits within the Flat Mines Project area.

Underground Mining

Underground Mine Design

The Flat Mines would be accessed by decline from surface, with drill drives, access tunnels and draw point drives to be developed. A new mine design was prepared for the FMN deposit, while for the FME and FMS mine designs, the layouts prepared by the SAFTA PFS have been used. Planned dimensions for development excavations are as listed in the following table.

Excavation	Profile	Method	Width (m)	Height (m)	Diameter (m)	Cubby Factor (Eq.m / m)
Declines	Square	Drill & Blast	5.0	4.5	n/a	1.3
Draw-point Drives	Square	Drill & Blast	5.0	4.5	n/a	1.2
Drill Drives	Square	Drill & Blast	6.0	4.0	n/a	1.0
Ventilation raises	Circular	Raise-bore	n/a	n/a	2.3	1.0

Table 6: Planned excavation dimensions.

Assumed development advance rates are based on two scheduled blast-times a day using the development drilling parameters as shown below.

Item	Planned Metric
Blast hole length	3.8m
Effective advance per blast	3.4m
Drill bit diameter	48mm
No of drilled holes per blast.	61

Table 7: Development drilling parameters.

The deposits targeted for underground mining display considerable variation in height and width. As a result, three stoping methods are proposed to optimize extraction, dilution and mining costs. Historically the FMN ore was being extracted successfully using Vertical Crater Retreat (**VCR**) mining. It is proposed to continue using this method, supplemented by Bord & Pillar and Long Hole Open Stoping (**LHOS**) mining methods due to the size and configuration of some zones of the known deposits. Typical VCR, Bord & Pillar and LHOS layouts are shown in the next three figures.

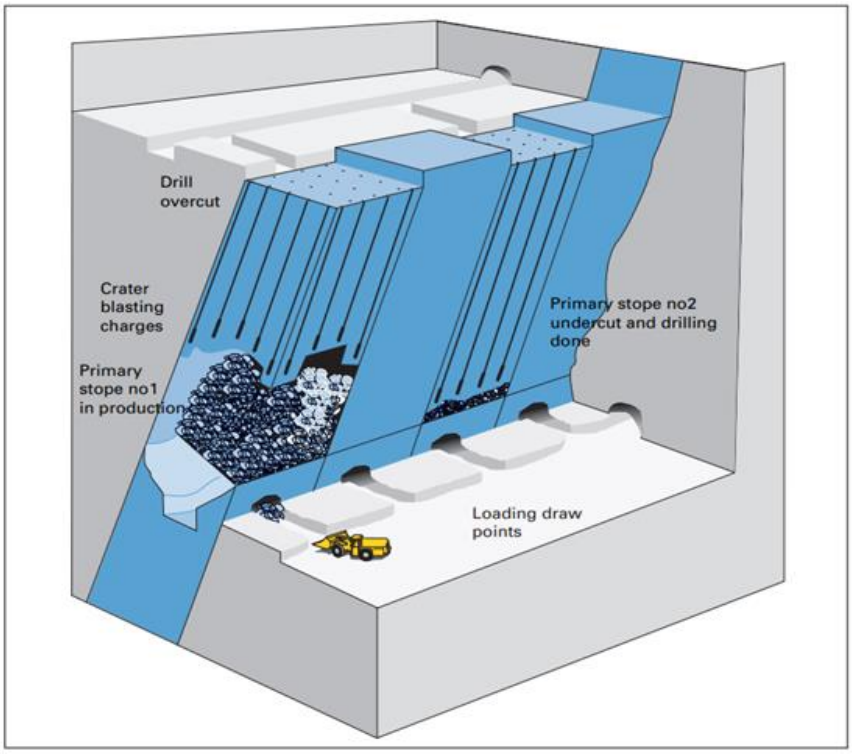


Figure 9: An illustration of Vertical Crater Retreat (VCR) Stoping.

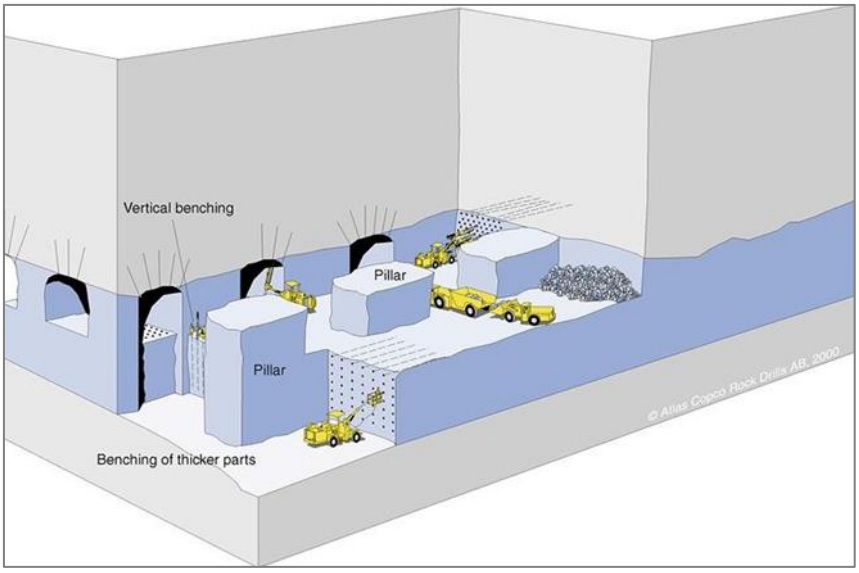


Figure 10: An illustration of Bord and Pillar mining.

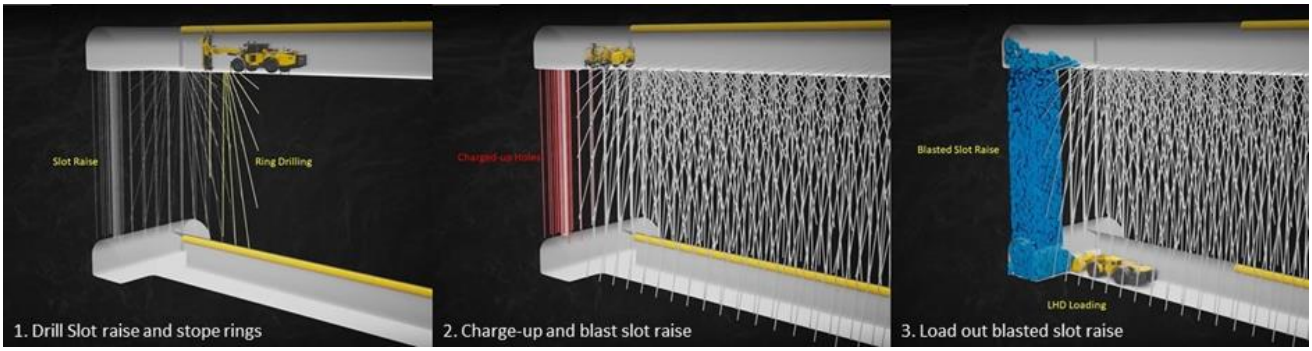


Figure 11: An illustration of Long Hole Open Stoping.

Based on the estimated Mineral Resources (prepared by Competent Persons and classified in accordance with the JORC Code (2012)), approximately 1.4 million production tonnes have been planned from FMN at an average RoM grade of 1.17% Cu. The average production rate is expected to be 35,000 tpm over six and half years.

Production stoping from FME is planned at 3.1 mt at an average RoM grade of 1.33% Cu over 4.6 years. A year and half of decline development would be required to access the first stoping areas. From this point a further 10 months would be required to reach steady state production of 65,000 tpm. The head grade is variable ranging from 0.7% Cu and peaking at 2.7% Cu.

Production stoping from FMS is planned at 2.9 mt at an average RoM grade of 1.31% Cu over 4.5 years. Sixteen months of decline development would be required to access the first stoping areas. From this point a further 5 months would be required to reach steady state production of 65,000tpm. The head grade profile is similar to FME ranging from 0.7% Cu and peaking at 2.5% Cu.

Dilution and recovery factors were applied to the underground Mineral Resource tonnages to determine the scheduled RoM tonnes and grade. The modifying factors used for underground mine planning are shown in the table that follows.

Modifying Factors - Development	Decline	Waste Development	Stope Development	Stoping
Geological & pillar losses (% tonnes)	0.0%	0.0%	0.0%	25.0%
Overbreak (% tonnes)	5.0%	5.0%	5.0%	5.0%
Overbreak grade (% Cu)	0.0%	0.0%	0.0%	0.0%
Mining recovery (% tonnes)	n/a	n/a	100%	95%

Table 8: Underground design modifying factors.

Underground Mine Ventilation Design

A diagram outlining the mine development, production and ventilation layout for FMN is shown below.

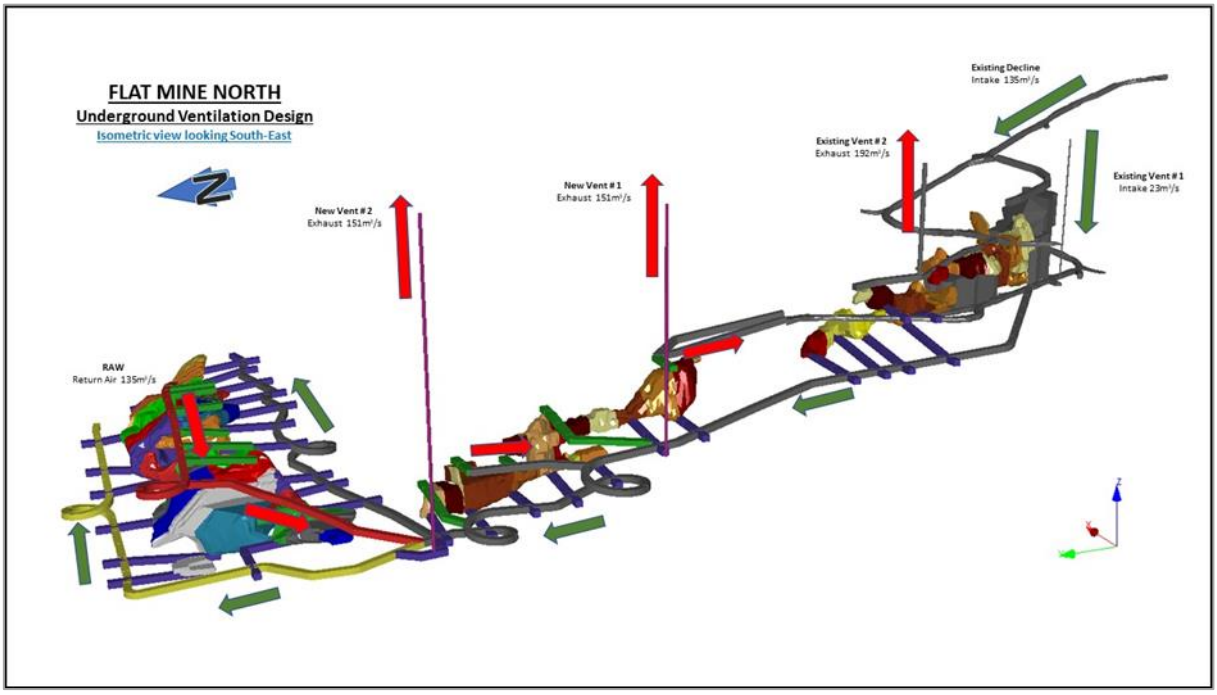


Figure 12: The FMN Deposit mine design.

Ventilation for all the underground mines would be via fresh air intakes down the declines and vent shafts and return air upcasting through vent raises to surface. The ventilation requirements were determined by the equipment scheduled to achieve the planned production targets. For the FMN, with a maximum production rate of 35ktpm, the maximum equipment numbers required have a total effective engine power of 1,672 kW. The quantity of air required to ventilate the FMN, based on 0.06 m^3/s per kW as stipulated by South African Mining Regulations is 134m^3/s. The ventilation requirements for the FME and FMS were determined in a similar way.

Open Pit Mining

Flat Mine (Nababeep) and Jan Coetzee Mineral Resources outcrop at surface and have been identified as potential open pit operations. Contract mining is planned to be used for all drill & blast and load & haul activities which will eliminate upfront mining fleet capital costs for Orion.

Pit optimisation was not performed at this concept study level, and the ultimate pit shells were determined by estimating a realistic pit depth based on the specified pit slope criteria. Pit-shell optimisations will be performed during the next study phase to improve the economics of the open pit operations. Production scheduling was performed using the Datamine™ Enhanced Production Scheduler (**EPS**). The key mine design parameters used to develop the conceptual pit designs are tabled below.

Parameters	Flat Mine (Nababeep)	Jan Coetzee
Face Angle (^{0})	90	90
Bench Height (m)	10	10
Berm Width (m)	5	5
Ramp Width (m)	15	15
Slope Angle (^{0})	53	57
Maximum ramp inclination	10%	10%
Mineralised block dimensions:		
Width	25	25
Length	25	25
Height	10	10
Overburden block dimensions:		
Width	25	25
Length	25	25
Height	10	10
Maximum scheduling rates:		
Mineralised rock (tpm)	30,555	31,916
Overburden (tpm)	244,435	213,882

Table 9: Open Pit mine design criteria.

The Flat Mine (Nababeep) Mineral Resource is irregular in shape and approximately 200m in length and 35m at its widest point, extending approximately 180m below surface. The proposed pit is planned to mine 1.05 million tonnes at an average RoM grade of 1.32% Cu over a 3-year period to a depth of 150m, with a stripping ratio of 5.8:1 (waste tonnes: ore tonnes). Historical drift mining following the higher grade 'seam' has taken place in the deposit from a small vertical shaft. The resultant voids from historic mining will need to be considered in the open pit mining sequence, however, it is quite common to encounter these voids in open pit mines and mining can be conducted safely by experienced contractors. A general view of the Flatmine (Nababeep) open pit including the Mineral Resources model is shown in the following diagram. The grade profile shows an increasing trend as the pit extends deeper, starting at 1.0%Cu and peaking at 2.5%Cu.

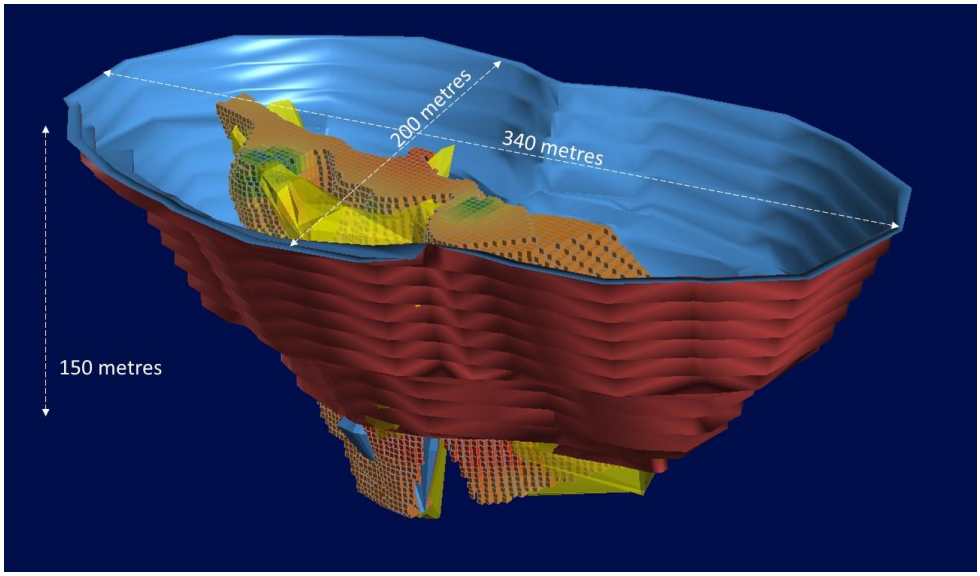


Figure 13: The Flat Mine (Nababeep) Open Pit.

The Jan Coetzee deposit also outcrops on surface and has an irregular structure comprising several lenses. The Mineral Resource has a length of 170m on surface and is approximately 80m wide, extending 300m below surface. The proposed pit is planned to mine 480,000 tonnes at an average RoM grade of 1.15% Cu over 18 months to a depth of 120m. The average stripping ratio is estimated to be 5.4 to 1 (waste tonnes : ore tonnes). Similar to the Flat Mine Open Pit, the RoM product rate for Jan Coetzee Open Pit is expected to be approximately 30ktpm. A general view of the proposed pit including the Resource model is shown in the following diagram.

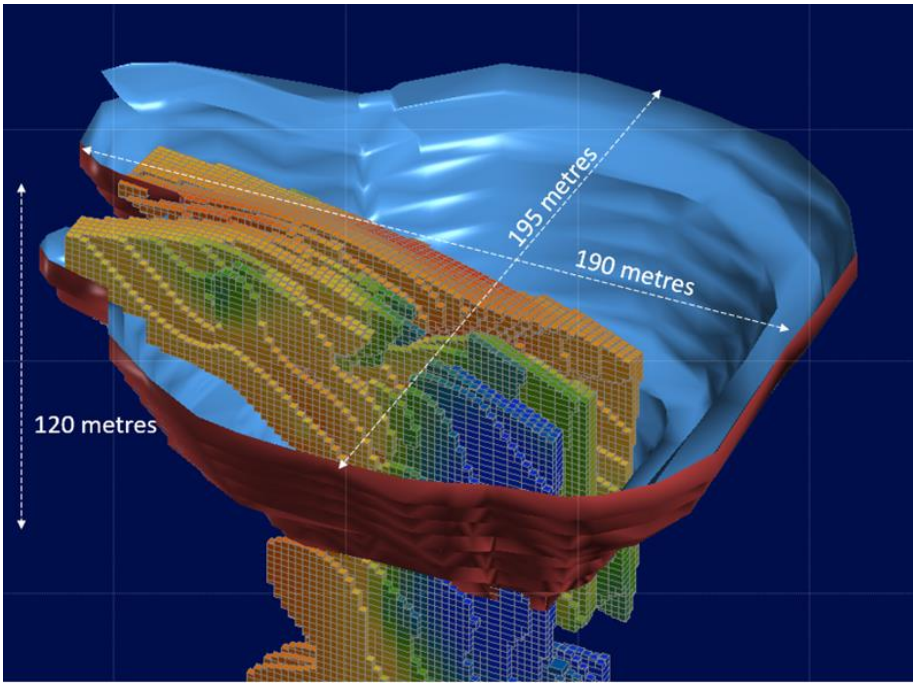


Figure 14: The Jan Coetzee Open Pit.

Dilution and recovery factors were applied to the open pit Mineral Resources to determine the scheduled RoM tonnes and grade. Mining recovery was assumed to be 95%. Dilution was planned at 5% for the Flat Mine (Nababeep) and 8% for the Jan Coetzee deposits respectively. Higher dilution is expected in Jan Coetzee due to the multiple lens structures. The modifying factors used for open pit mine planning are shown in the table below.

Parameters	Flat Mine (Nababeep)	Jan Coetzee
Dilution	5.0%	8.0%
Mining recovery	95%	95%
Swell factor	1.67	1.67

Table 10: Open Pit design modifying factors.

Break-even Grade Calculations

The Scoping Study operating costs were applied to the financial model to determine break-even grades for the underground and open pit mining scenarios. Due to the stripping ratio of the two open pits averaging 5.7:1, this has resulted in similar costs for both open pit and underground mining, hence similar break-even grades for the two mining methods. These numbers are shown below.

Cu Cut-off Grade	Unit	Combined	Underground	Open Pit
All-in Sustaining Cost	ZAR/t RoM	873	871	882
FX	ZAR:USD	15.88	15.88	15.88
Total cash operating cost	USD/t RoM	55	55	56
Cu price	USD/t RoM	8271	8271	8271
Cu NSR	%	97%	97%	97%
Net Cu price received	USD/t RoM	8014	8014	8014
Unplanned Mining Dilution	%	5.0%	5.0%	5.0%
Cu Plant Recovery	%	87.4%	87.4%	87.4%
Break-even in-situ copper equivalent grade	**%**	**0.83%**	**0.82%**	**0.84%**

Table 11: Break-even Grade calculations.

The Production Target was estimated from a Mineral Resources base comprised of 33% Measured, 46% Indicated and 21% Inferred Mineral Resources.

Life-of-Mine Planned Production

The LoM mining production is summarised in the following table.

Parameter	Combined	FMN	FME	FMS	FM Pit	JC Pit
Tonnes mined (Mt)	9.01	1.44	3.15	2.89	1.05	0.48
Tonnes milled (Mt)	9.01	1.44	3.15	2.89	1.05	0.48
Grade diluted (% Cu)	1.29%	1.17%	1.33%	1.31%	1.32%	1.15%
Contained Cu (Kt Cu)	**115.85**	**16.75**	**41.75**	**37.99**	**13.83**	**5.53**

Table 12: LoM Planned Production.

Processing Plant and Product Sales

Overview

The Okiep cluster of copper deposits were intensively mined for 150 years until early 2000s and have produced over 1.5 million tonnes of copper metal. The remarkable metallurgical consistency across deposits mined in the district, with good recoveries using froth flotation for concentration of sulphide copper ore, is documented in mine records and published papers. SAFTA undertook limited confirmatory metallurgical test work and achieved results consistent with historic records.

Historical plant performance figures indicated that 85% to 94% of the copper was recovered into a concentrate grading between 20% and 36% Cu, depending on the copper head grade and mineral composition. The copper ore minerals were predominantly disseminated chalcopyrite and bornite with some chalcocite in the deeper portions of the orebody. Overall grades were relatively consistent, between 1% – 2% copper. Processing for the planned Okiep Copper Project is expected to treat very similar mineralisation.

The proposed design for the plant was compiled by METC Engineering Ltd and is a crushing-grinding-flotation circuit with a design capacity of 65ktpm, producing copper concentrate containing Au and Ag by-products. The concentrate will be exported and so transport costs have allowed shipping to Asian markets.

METC compiled capital cost estimates for the plant using new equipment and an alternative scenario of the plant using second-hand equipment. A diagram showing the proposed flowsheet is shown overleaf.

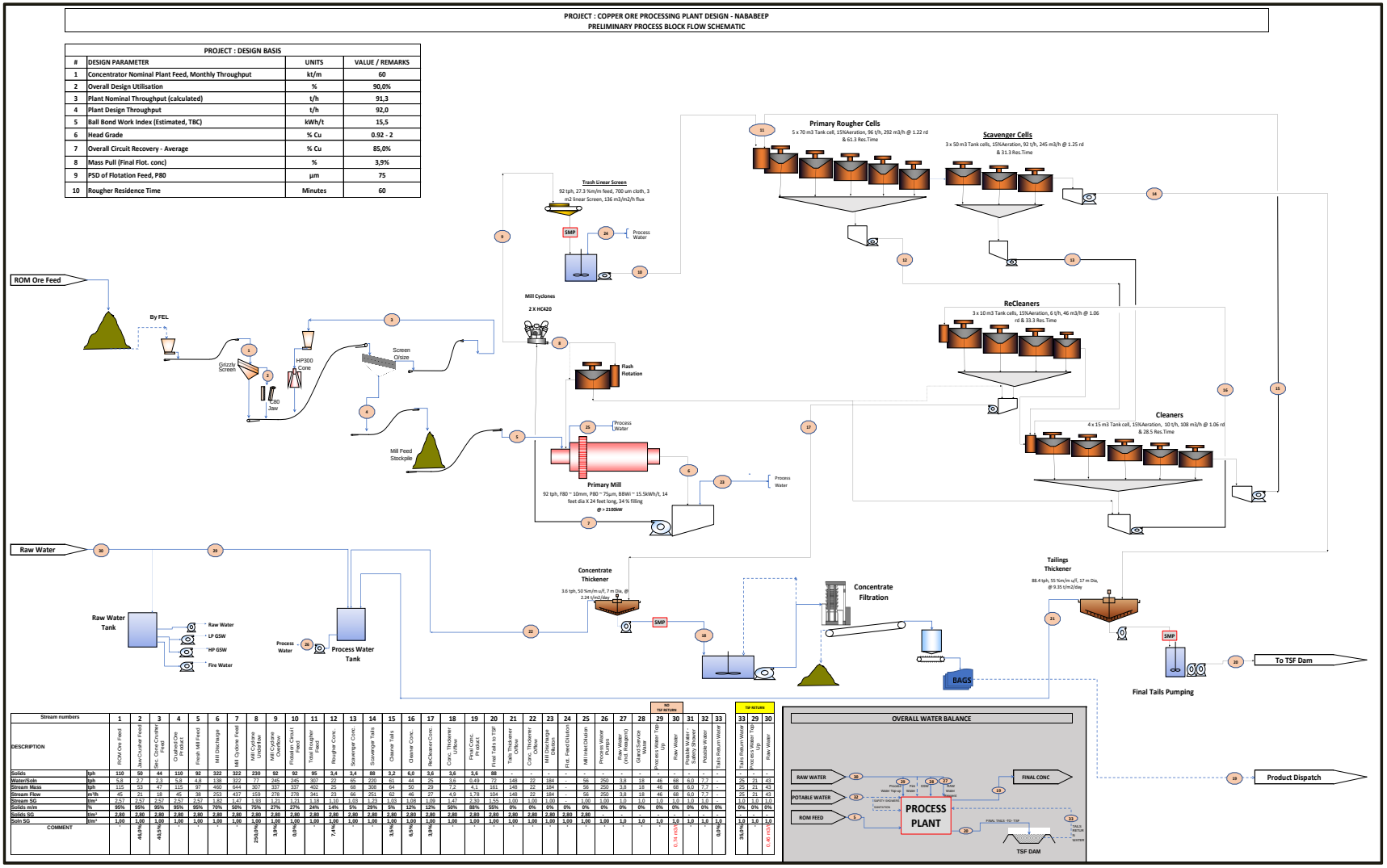


Figure 15: Processing plant flowsheet.

Metallurgical Test Work

The following table shows the assay results from concentrate analysis carried out during the SAFTA PFS on FMN material in 2018, the main elements being the Cu and Au (at 2.18 ppm or g/t)[6]. Deleterious elements are in low concentrations and the concentrate can be described as "very clean".

Elements	Units	Assays	
		First	Second
Copper	(%)	22.9	23.1
Nickel	(ppm)	293	289
Cobalt	(ppm)	60	63
Silica	(%)	11.7	11.2
Aluminium	(%)	1.57	1.59
Iron	(%)	13.2	12.6
Manganese	(ppm)	983	986
Gold	(ppm)	2.18	2.17
Palladium	(ppm)	0.98	1.14
Platinum	(ppm)	0.22	0.23
Silver	(ppm)	>10	>10
Selenium	(ppm)	335	324
Tellurium	(ppm)	193	182
Arsenic	(ppm)	34	34
Sulphur	(%)	13.3	13.7

Table 13: Concentrate assay results.

It was recognised during the SAFTA PFS and by later work carried out by METC that the above sample cannot be considered fully representative of the mineralised material and that future metallurgical test work with more representative samples would be required during subsequent plant studies.

Given that the geology in the area is similar from one deposit to another, historical information from the previous operations at Okiep Copper Mines provide a reasonable basis for selecting design criteria such as the Bond work index. METC took historical information on the mill sizes with their energy consumption and plant throughput to back estimate the Bond work index of the ball mills to be 15.5kWh/t. This was used for the required energy consumption for this Study. In the next phases of project additional test work will be carried out to confirm this estimate.

Processing Design

Crushing and Milling

Production material will be fed to a primary jaw crusher at 110 t/h either directly from underground or open pit trucks or using front end loaders reclaiming from a RoM stockpile as required. Production material will be reduced to -10mm and conveyed to the crushed ore stockpile which will contain eight hours of continuous mill feed. From here material will be reclaimed into the milling circuit.

Mill feed is planned at a nominal 92 t/h. A single primary ball mill has been selected for the milling duty. The mill cyclone cluster which separates discharge from the mill into coarse and fine streams is designed at a cut point of 80% passing 106µm. The cyclones underflow (coarse material) is directed to a flash flotation unit. The overflow

[6] Historical metallurgical test work from FMN was reported in the ASX/JSE release of 10 February 2021: "Orion reports maiden JORC Mineral Resource…" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Exploration Results: Errol Smart. Orion company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. Orion confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

(finer material) slurry flows by gravity to the flotation conditioning tank where flotation reagents are added, and the pH is adjusted.

Flotation

Over-grinding of the copper minerals and in particular bornite has been an issue at the Okiep Copper Project historically and flash flotation was introduced to remove the copper liberated in the milling circuit and reduce overgrinding of the softer copper minerals. METC also selected flash flotation in the flotation design. The mill cyclone underflow is directed to the flash flotation unit and the underflow from the flash flotation will report to the mill feed, closing the milling circuit. Flash flotation concentrate will be transferred by gravity to either the recleaner cells for re-floating or to the final concentrate depending on concentrate grades.

The final tails stream from the process is pumped to the tails thickener where it is thickened to approximately 55% solids to recover water before being pumped to the tailings dam. The final concentrate is delivered to the concentrate thickener prior to filtration.

Process Control and Sampling

A PLC Controlled SCADA system will be installed to control the plant from a central control room. Automatic and manual samplers, depending on the requirement, are planned to collect samples from the rougher and cleaner concentrate streams and the cleaner and recliner tails to allow for good metallurgical control. Automatic samplers are also planned to collect samples for metal accounting and plant control purposes. No allowance has been made for online analysis at this stage although this could be added at a later stage.

Final concentrate is expected to be loaded onto trucks for dispatch and auger samplers are designed to measure the concentrate grades on the trucks for quality control and for payment purposes while a weigh bridge will measure the concentrate mass dispatched.

A diagram showing the layout of the process plant which is located adjacent to the FMN is shown overleaf.

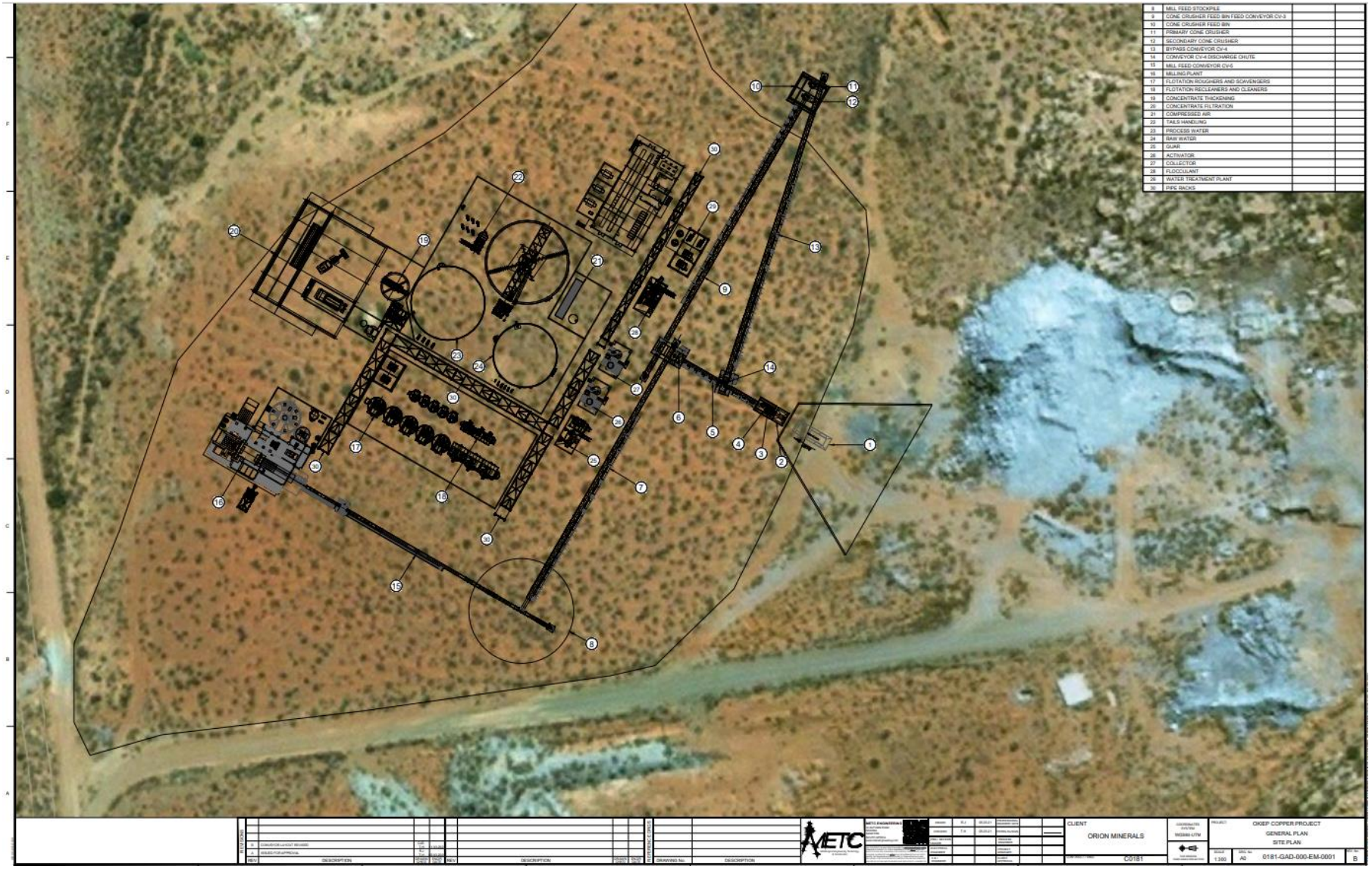


Figure 16: Processing plant layout.

Plant Water Balance

The water balance estimates that raw water make-up required for the plant equates to 0.74m^3 of water (68m^3/h) per tonne treated while there is no return water from TSF during the ramp-up phase. Once at steady state and the return water is flowing at a consistent rate, the raw water requirement will reduce to 0.47m^3 of water per tonne treated (42m^3/h). This assumes that 35% of water in the tailings stream is recycled back to the plant from the TSF (25m^3/h). Raw water for the plant will be sourced from either the Nababeep North Mine Shaft (NMS) or Municipal water.

Tailings Storage Facility (TSF)

Overview

The TSF has been planned in a partly previously disturbed area near the process plant at FMN. The TSF is designed to contain approximately 7.5 million tonnes of material over the planned 12-year operating life. A stormwater dam and a return water dam (RWD) will be constructed as part of the facility. The TSF will be a based on the upstream spigotted expansion method following the construction of a starter wall. The return water from the TSF will be pumped into the RWD via a floating pontoon arrangement.

Waste Classification

As part of the SAFTA PFS, Digby Wells (Pty) Ltd undertook a waste classification and assessment study of the tailings material as required by the Regulations regarding the Planning and Management of Residue Stockpiles and Residue Deposits (2015). This was done in accordance with the Waste Classification and Management Regulations, 2013 and the related Norms and Standards for Assessment of Waste for Disposal to Landfill, 2013.

Through this process, Digby Wells determined that the tailings material classifies as a Type 3 waste. Based on the Norms and Standards for Disposal of Waste to Landfill 2013, a Type 3 waste must be disposed of to a facility with a Class C liner design. One TSF design is therefore based on a Class C liner which is shown below.

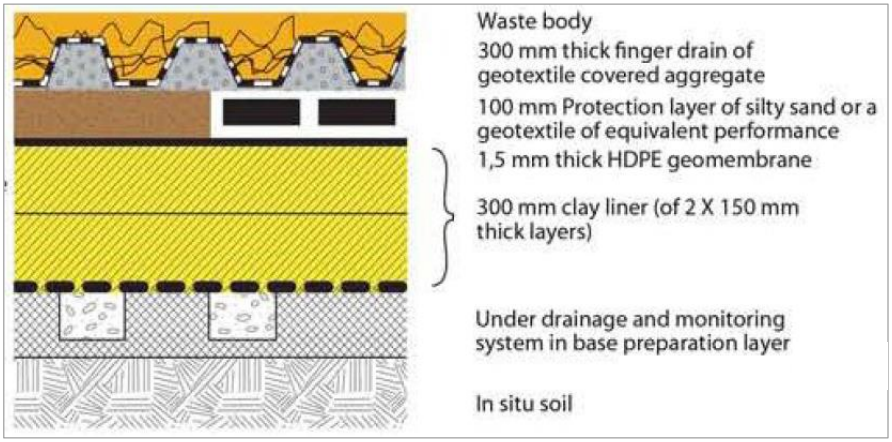


Figure 17: Class C liner.

In September 2018, an amendment to the Regulations regarding the Planning and Management of Residue Stockpiles and Residue Deposits (2015) was promulgated. In this amendment there is no longer a prescription for liner requirements for residue deposits. The liner requirements are to be determined through a risk analysis, which is based among other factors on the classification of the waste. As the tailings to be produced from the Flat Mines Project area deposits are relatively benign, an alternative design to using a Class C liner is possible and has been modelled.

Design Criteria
The following parameters have been used as the TSF design criteria:

- Design life of the facility: 12 years
- Processed Ore: Copper
- Processing plant production rate: 60,000 dry tpm nominal
- Tailings deposition rate: 57,900 dry tpm (based on a mass pull of 3.5%) nominal
- TSF capacity 7.2mt of dry tailings
- Particle SG of Tailings product: 2.7
- In-Situ void ratio: 1
- Placed dry density of Tailings: 1.4 t/m^3
- Particle size distribution of product: 75% passing 106µm
- Safe Rate of Rise (RoR): 2.5m/annum
- A-Pan to lake evaporation depth factor: 0.75
- Minimum freeboard: 1m

General Engineering Infrastructure

Overview
Surface infrastructure for the Project takes the form of external power and water supply to the Project, internal supply to the five mine locations, the process plant and the TSF, general buildings and access and haul roads. A map of the proposed layout is depicted overleaf.

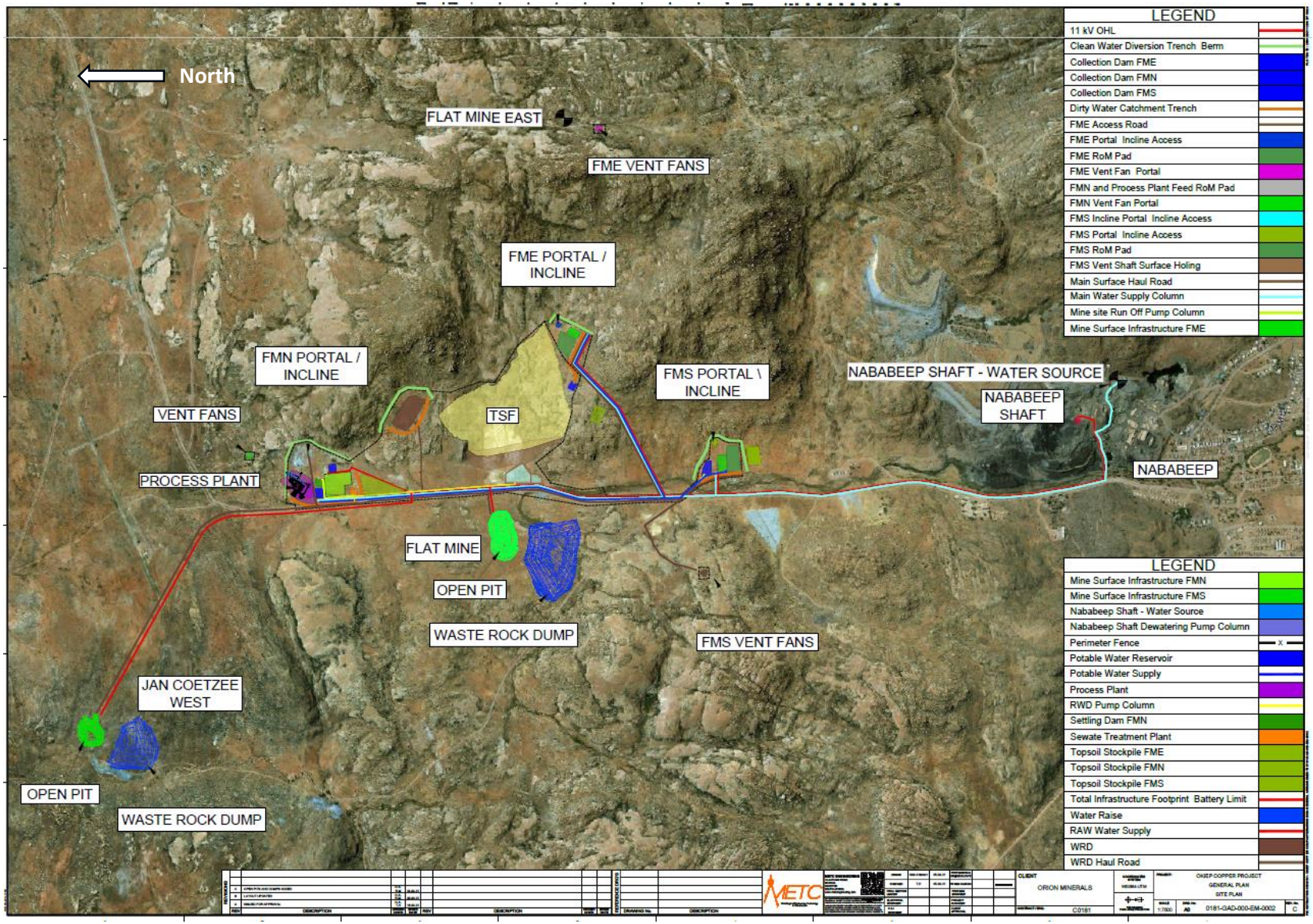


Figure 18: Project site general layout.

Where still relevant, infrastructure designs from the SAFTA PFS were retained for this Study otherwise updated and new designs were compiled by METC who carried out the general infrastructure scope of the Study.

Water Supply

Water is planned to be sourced from the historical Nababeep North Mine Shaft (**NMS**) which will not be part of the new planned mining activities. As part of the SAFTA PFS, SRK Consulting carried out pumping tests and determined that 1,363m³/day can be abstracted with no effect on the water table (May 2019). Based on this predicted supply and accounting for the various uses, the follow table shows that there is spare capacity of 203m³/day at steady state conditions.

Water Supply and Uses	m³/day
North Mine Shaft supply	**1,363**
At steady state	
Process Plant consumption with 35% return water from	1,032
Potable water requirement	48
Mining and dust suppression water	80
All uses	**1,160**
Spare capacity from NMS	203
During plant ramp-up	
Process Plant at full capacity with no return water from	1,632
Additional water required during plant ramp-up	269

Table 14: Project water supply and uses.

Any shortfalls in water can be managed by drawing water from the FMN 5,000m³ capacity collection dam which is supplied via a settlement dam from the FMN decline dewatering and from other alternative sources. These sources can be augmented from an existing Government owned water pipe-line from the Orange River which currently supplies the Okiep area and the local Nama Khoi Municipal water supply. This pipeline traverses the mining area within 3000m of the planned extraction plant.

Power Supply

The forecast load required for the facility was derived from the SAFTA PFS information and compared to similar operations for benchmarking.

A similar sized mineral processing facility has a demand of ≈4.5 MW for the processing plant. An additional 0.23 MW has been allowed for the TSF requirements. As the bench marked facility had an open cast mining operation, the mining load of 4.87 MW was derived from the SAFTA PFS. The total operating load is therefore estimated at 9.60 MW and 10.0 MVA (pf = 0.96) as indicated in the table below.

Area	Power Demand for 60ktpm	
	MW	MVA
Plant & TSF	4.73	4.93
Mining	4.87	5.07
Total	**9.60**	**10.00**

Table 15: Project power demand.

Power can be supplied via the local municipal grid or directly from the national electricity supplier, Eskom. The municipal power supply tariff is approximately 20% higher than that from Eskom. For this reason, it was decided to cater for power supplied from Eskom although this requires a new 23km 66 kV power-line from the nearest Eskom sub-station to FMN.

Incoming power is expected to be received at 11 kV to an 11 kV Main Consumer Substation located at FMN, Power supply to mining facilities would be from the 11 kV reticulation network as required. Low voltage distribution at 525V would be derived from distribution transformers for the supply to Motor Control Centres (MCC's).

Environment, Health, Safety and Community

The health and safety systems already in place for Orion's Prieska Project would be modified and updated to meet the requirements of the Okiep Project. These systems are guided by Orion's commitment to maintain best practices for occupational health and safety management at its operations, as well as complying with all regulatory prescriptions. Health and safety matters for mining operations in South Africa are regulated in terms of the Mine Health and Safety Act 1996 (MHS Act).

The key elements of the safety and health management system to be put in place include:

- Risk management and planning – to ensure risks are identified and a plan formulated to manage them;
- Mandatory Codes of Practices, to provide guidance on health and safety policies and procedures;
- Management personnel – to implement, maintain and improve the management systems;
- Training and documentation – to ensure all personnel know how to work safely;
- Emergency preparedness – to handle unplanned events and limit their adverse effects; and
- Measuring and reporting Systems – to ensure the systems are affective and the well-being of all personnel is being achieved.

Environmental Management

A baseline environmental audit was undertaken as part of the due diligence to assess the Project for acquisition.

The audit established that:

- The key environmental permissions to undertake exploration and mining activities in the Flat Mines Project area have either been obtained or are already under application. Hence:
    - crucial specialist studies, such as hydrological, biodiversity and heritage impact assessments have been done precluding the existence of threatened ecosystems, protected areas and that would prevent mining from taking place; and
    - financial provisioning for mine closure is in place.
- The impact of historical mining activity on proposed mining and exploration activity is minimal since the responsibility to rehabilitate and maintain all historical surface mine residue stockpiles within the mining and prospecting right areas remains the obligation of the O'Okiep Copper Company;
- There are no protected areas within the mining and prospecting right areas.
- Additional permitting or amendments to the current environmental permits required before the activities planned in the Scoping Study can be undertaken are manageable and can be obtained within 14 months, consisting of:
    - environmental permitting for the proposed new 25km 66kV overhead power-line;
    - authorisation to expand the TSF from the 4.5 Mt storage capacity previously applied for to the 7.2Mt capacity in the Scoping Study; and
    - authorisations to append open pit mining at Jan Coetzee and Flat Mine (Nababeep) into the environmental authorisation application currently being assessed.

The Project is planned to aim for an eventual carbon neutral footprint for all metals being produced from the venture. A 'Carbon Neutral Roadmap' will be developed that aims to reduce the Scope 1 and 2 emissions intensity to zero (0 tCO2e/t Cu) over the LoM. The increased use of renewable energy sources, purchasing zero carbon electricity, the increase use of battery-electric vehicles and preferentially supplying concentrates to customers with recognised emissions reduction targets will be investigated as part of the roadmap.

Community Engagement

As part of the SAFTA Mining Right Application currently being processed, a Social and Labour Plan (**SLP**) was submitted to the authorities in which commitments relating to Human Resources Development (**HRD**) and Local Economic Development (**LED**) were stated as a condition of being granted permission to mine. The HRD and LED activities target providing education and training to members of the local community and supporting small

businesses in the Project's vicinity. The activities committed to will cost AUD0.63 million (ZAR7 million), to be spent over 5 years.

Orion views the SLP as a dynamic document that will continually be revised as the Project develops and has already had preliminary discussions with the local municipality to understand the current needs of the local community.

Operating Costs

The operating cost estimates were compiled from various sources including:

- the SAFTA PFS;
- contractor quotes; and
- benchmark numbers supplied by Study contributors.

Labour and fuel costs are included within each discipline.

The total operating costs for the combined underground and open pit mining activities amount to ZAR880/tonne treated, which is summarised in the table below.

Operating Costs Open Pit & Underground	ZAR/RoM t	AUD/RoM t
Mining	488	43.9
Ore Processing	228	20.5
General Surface	18	1.6
Conc Transport Charges	39	3.5
General & Admin	14	1.3
Environmental	0.5	0.04
Off-mine Costs	0.9	0.1
Royalties (Government)	70	6.3
Sustaining Capex	21	1.9
Total	**880**	**79.1**

Table 16: Operating Expenditure to an estimation accuracy of ± 25%.

Underground mining costs were estimated by A&B Global. The costs were obtained from benchmarked numbers and compared to contractor-supplied rates from the local area. The average mining development rate was estimated at ZAR35,000/metre, assuming a contractor mining model, whereby the contractor will supply the mining fleet. The stoping costs were estimated per mining method and applied to the respective tonnes per method from the production schedule. The underground mining costs also includes the grade control drilling program. Labour and fuel costs were included.

Open pit costs were based on written contractor rates for drill & blast and load & haul, as of March 2021. The services and utilities costs were estimated by the mining team conducting the Scoping Study. The drill and blast costs include a 5% allowance for pre-split drilling. The load and haul costs are based on a rate of ZAR51.50/tonne at surface, with a depth premium of 5% increase per 10m additional pit depth. Based on the average stripping ratio of the two open pits of 5.7:1, the direct open pit mining cost per tonne treated equates to ZAR486/tonne.

In addition to the direct mining costs, mobilisation and de-mobilisation costs of ZAR1.9 million for the underground mining contractor and ZAR1.6 million for open pit contractor were assumed.

Processing plant working costs were compiled by METC from first principles including labour, reagent prices based on estimated consumption rates per tonne treated and milling and crushing consumables, based on planned wear rates based on the estimated ore hardness. The steady state unit cost has been estimated at ZAR228 per tonne treated.

Concentrate handling and transport costs equates to ZAR39/tonne RoM treated. The estimate is derived from USD32.82/tonne of concentrate for overland truck transport and USD21.88/tonne of concentrate for shipping in containers, a total of USD54.70/tonne of concentrate or ZAR939/tonne of concentrate. The trucking costs has been taken from the SAFTA PFS while the shipping cost was taken from Orion's Prieska Project's BFS costs and is to a smelter in China. Both costs have been escalated into 2021 terms.

Capital Expenditure and Project Program

Capital Expenditure

The estimated capital budget has been prepared to an estimation accuracy of ±25% and according to work packages reflecting how the Project construction is intended to be controlled. Contingency has been estimated at 15% of the underlying Capex items. The total capital cost to construct the mine is estimated to be ZAR595 million (AUD53 million) as summarised below.

Capex Summary	ZAR ('000)	AUD ('000)
Processing Plant	221,110	19,866
Tailings Storage Facility	61,343	5,511
Eskom Powerline	60,973	5,478
EPCM	46,067	4,139
Surface Infrastructure	45,304	4,070
Flat Mines Surface Ventilation	25,174	2,262
Flat Mines Underground Infrastructure	21,806	1,959
Surface Electrical infrastructure	13,288	1,194
Access Roads and Haul roads	5,965	536
Open Pit Power Supply & Surface Reticulation	5,627	506
Geological Capex	5,300	476
Miscellaneous Capex	3,250	292
Environmental rehabilitation	2,500	225
Sub-total	**517,706**	**46,515**
Contingency - 15%	77,656	6,977
Total CAPEX	**595,362**	**53,492**

Table 17: Capital Expenditure estimate to an estimation accuracy of ± 25%.

Peak funding required is ZAR663 million (AUD58 million). The capex is spread over the 12-year LoM as FME, FMS and the Jan Coetzee open pit are developed in the middle to later years. The environmental rehabilitation capex is incurred in Year 14, at the end of the Project's currently planned life.

The capital estimate was compiled by the various engineering consultants employed by Orion who participated in the Study. The following companies contributed to the capital estimate:

- A&B Global Mining – Underground and open pit mining;
- METC – Processing plant and general engineering;
- METC – Bulk power and bulk water infrastructure;
- Gariep Mining – Processing plant equipment;
- Epoch Resources – Tailings storage facility; and
- ABS Africa – Environmental rehabilitation.

The above consultants compiled capital estimates from historical and-or benchmarked costs and quotations and applied factorised estimating principals where appropriate.

Project Program

The Okiep Project entails re-establishing existing underground mining operations at Flat Mine North along with new open pits (Flat Mine North, and Jan Coetzee West) and underground operations (at Flat Mine East and

South) as well as new infrastructure and a process plant to support a steady state production profile of 60-65ktpm for approximately 12 years. Some infrastructure remains intact, such as Flat Mine North decline which assist with the project start-up. All the remaining infrastructure will be built as new facilities.

Feasibility Study Phase

Based on approval from the Orion Board to proceed with the Okiep Copper Project Scoping Study, the next phase is to undertake a Feasibility Study and assuming a successful economic outcome, proceed to a funding and construction phase. The deliverables and key activities are outlined as follows:

- completion of exploration drilling program to ensure alignment with Feasibility Study requirements;
- completion of a Feasibility Study document to meet the needs of fund raising and project execution;
- progressing and completing key regulatory permitting applications;
- confirming requirements for long-lead procurement items; and
- selecting an EPCM/EPC contractor for the execution phase.

Execution Phase

The execution team would consist of various Orion staff at a corporate level with the additional of technical staff as part of a dedicated Owner's Team. An EPCM team would manage the day to day running of the Project including detailed design, procurement and construction activities. A proposed Project team is outlined in the organogram below.

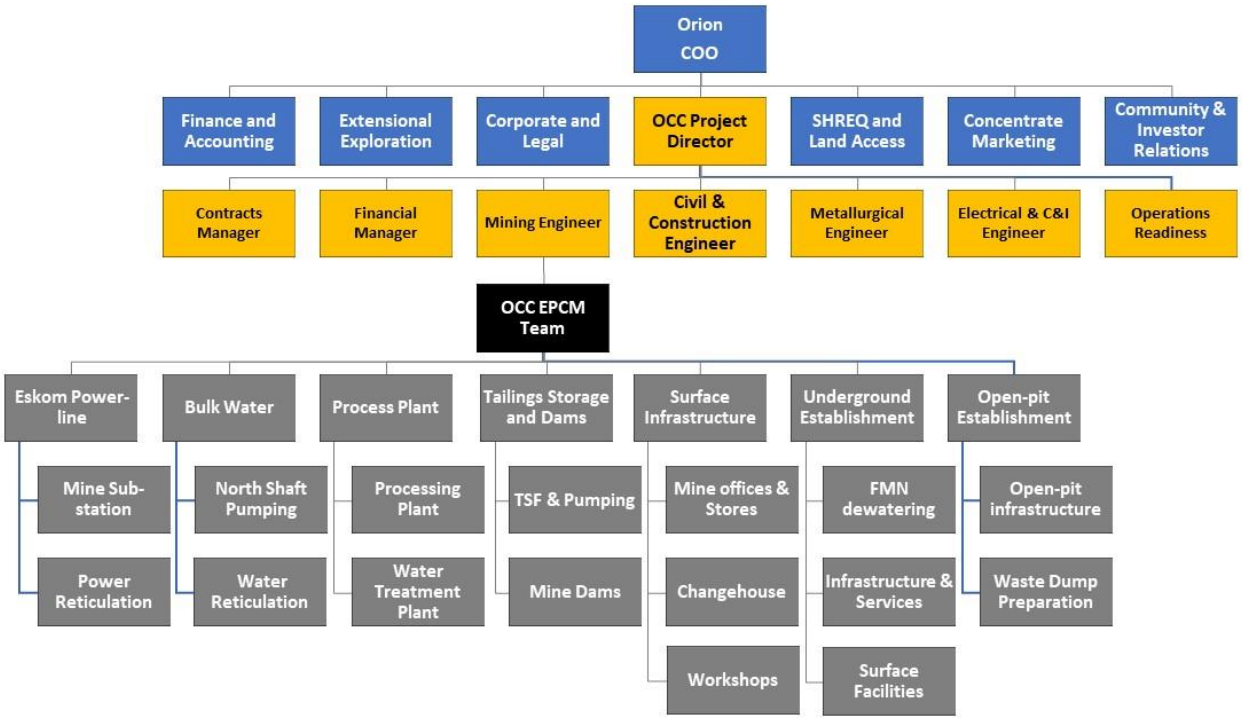


Figure 19: Project execution team structure.

Construction Schedule

Assuming that the remaining regulatory permits are approved, the Company's internal approvals are completed and the project is fully-funded then project implementation will take 16 months to first production. A high-level schedule summary is presented in the following figure which shows activities up to when the 65ktpm production levels would be reached.

Activity	Duration (months/weeks)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Infrastructure	57.3																
Project FEED	2.4																
Procurement - early contracts	2.0																
Permanent Bulk Power Infrastructure	6.0																
Permanent Bulk Water Infrastructure	5.0																
Surface infrastructure	9.0																
TSF design and construction	13.0																
Process plant design and construction	14.3																
Process Plant Cold commissioning	1.5																
Process Plant Hot commissioning	1.5																
Flat Mine - Open Pit	43.0																
Flat Mine North - UG	49.0																

Figure 20: Project Execution Schedule.

Market Analysis and Sales

The Copper Market

Copper metal is extensively used in many applications, mainly electrical cables and motors, piping, construction and in many metal alloys. Copper is also widely used in the heating and air conditioning industries due to its high heat conductivity. The global copper metal market is in the region of 24Mt per annum. Copper prices fell from USD8,920 per tonne in 2011 to USD6,000 per tonne by 2019. Thereafter, prices fell further as the COVID-19 shock hit world markets. Since April 2020, the price has climbed substantially, peaking at over USD9,000/tonne at the time of writing (see below).

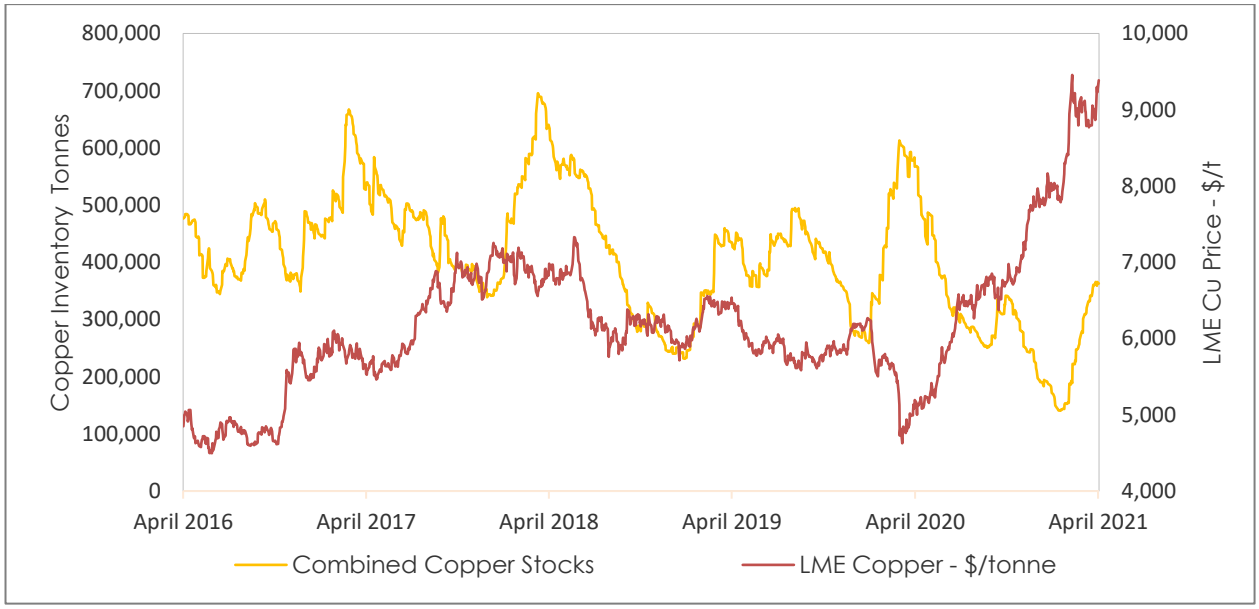


Figure 21: Copper stocks and price.

The Study has used real price long term forecasts from S&P Global. These numbers are shown in the table below.

Standard & Poor Forecast	Unit	2022	2023	2024	2025	2026	2027	Long Term
March 2021 - Cu	USD/lb	3.44	3.29	3.20	3.37	3.56	3.59	3.38
March 2021 - Cu	USD/tonne	7593	7262	7064	7425	7844	7918	7452
March 2021 – Au	USD/oz	1889	1776	1645	1553	1572	1522	1631
March 2021 - Ag	USD/oz	24.26	22.65	20.58	19.50	---	---	21.88
Exchange Rates	USD:ZAR	17.16	17.47	17.45	17.27	17.27	17.38	17.31

Table 18: Metal price forecasts.

Concentrate Customers

Historically, the concentrates produced from the Okiep Copper Project were regarded as clean with low levels of impurities. Current assay results have indicated that this is likely to be the case going forward. Orion therefore does not foresee any restrictions on where the concentrates can be sold.

The only copper smelter in South Africa is at the Phalaborwa Mine in the northern-most province of South Africa, which is owned by Phalaborwa Mining Company and 1,780 km from the Project site. From recent discussions with Phalaborwa, the smelter has spare capacity. This option will be investigated further in the next round of studies.

Due to Chinese expansion, global growth in primary smelting capacity has out-paced increases in copper concentrate production over recent years. The Company anticipates selling at least part of its production into the Asian market in which there are a multitude of potential buyers.

Concentrate Loading and Transport

Orion envisages that a combination of road and rail from the mine site will be used to transport the concentrates to port. The Port of Saldahna is the preferred destination while other ports remain available if required. Road transport to Bitterfontein (195 km from the mine) and rail to Saldanha (a further 290 km) is the option which minimises road transport. Alternatively, road all the way to Saldanha (486 km) is an option if rail turns out not to be feasible. The logistical aspects of the project will be investigated in more detail in further Project studies.

Financial Evaluation

The evaluated phase of the Project has undiscounted pre-tax cashflows of approximately ZAR4.61 billion or AUD413 million pre-tax (ZAR3.24 billion or AUD291 million post-tax) and), a pre-tax Net Present Value (**NPV**) of approximately ZAR1.90 billion or AUD170 million (ZAR1.27 billion or AUD114 million post-tax), using non-inflation-adjusted estimates and a discount rate of 10%. The Internal Rate of Return (**IRR**) is approximately 44% pre-tax (37% post-tax). The NPV is based on long-term forecast metal prices from S&P Global of USD7,593/tonne for copper, USD24/oz for silver and USD1,889/oz for gold for the first year of valuation. Peak funding requirements amount to ZAR643 million or AUD58 million including a 15% contingency allowance on the Capex estimate. Payback is planned to occur approximately 3 years from the start of construction.

AISCs over the duration of the plan would be approximately AUD6,904/t (USD4,478/t) copper metal sold. The realised metal price (net of smelter charges) is estimated to be approximately AUD11,473/t (USD7,441/t) copper metal sold, yielding in the order of a 40% all-in-sustaining margin. The overall operating break-even grade is estimated at 0.83% copper, well below the diluted grade of 1.29% copper, applied in the production schedule to establish the production target.. During and beyond this initial phase, it is anticipated that possible mine-life expansions and extensions would be underpinned by a combination of Mineral Resources not yet incorporated into the mining plan, as well as new discoveries which will require additional investment for the exploration effort. Significant potential for nearby satellite deposits has been identified.

The production plan is estimated on the steady-state processing of 65ktpm of mineralised material. Once steady-state production would be reached, variations in cash-flow are expected to be due primarily to variations in head-grade. The main Project metrics are shown in the following table. Note that valuation is performed in ZAR, and figures presented in AUD is converted at the rate of ZAR11.13 : 1AUD

Parameter	Unit	Total	Capex Yr 1	FY 1	FY 2	FY 3	FY 4	FY 5	FY 6	FY 7
ROM Tonnage (Processed)	tonnes	9,010,829		463,450	780,000	780,000	780,001	780,000	780,000	780,000
Plant Feed Grade - Cu	%	1.3%	0.00%	0.60%	1.13%	1.31%	1.30%	1.15%	1.12%	1.98%
Plant Recovery - Cu	%	87.4%	0.0%	55.6%	86.6%	88.4%	87.6%	86.2%	85.8%	91.0%
Concentrate Sold - Cu	tonnes	386,787		15,877	30,694	33,961	33,756	31,004	30,472	45,835
Metal Contained - Cu	tonnes	102,329		3,497	7,631	9,068	8,979	7,768	7,534	14,294
Revenue (Post-NSR)	ZAR '000	13,066,950	-	413,072	913,898	1,138,755	1,162,180	996,843	928,256	1,607,787
Selling & Realisation Charges	ZAR '000	-	-	-438	-656	-656	-656	-656	-656	-656
Net Revenue	**ZAR '000**	**13,066,950**	**-**	**412,634**	**913,241**	**1,138,098**	**1,161,524**	**996,186**	**927,599**	**1,607,130**
Mining, Development, Services Cost	ZAR '000	-4,557,646	-4,090	-351,550	-462,078	-446,489	-490,902	-423,890	-282,367	-339,495
Processing Cost	ZAR '000	-1,903,205	-	-105,447	-162,671	-162,671	-162,671	-162,671	-162,671	-162,671
General Surface, Admin, Environmental and Off-mine Costs	ZAR '000	-230,375	-4,610	-11,658	-18,656	-16,697	-20,927	-18,081	-18,302	-18,365
Royalties (Govt.)	ZAR '000	-628,905	-	-2,065	-4,569	-5,694	-50,692	-46,032	-53,557	-112,545
Cash Operating Costs	**ZAR '000**	**-7,320,130**	**-8,701**	**-470,720**	**-647,975**	**-631,551**	**-725,191**	**-650,673**	**-516,897**	**-633,076**
Cash Operating Profit	**ZAR '000**	**5,746,820**	**-8,701**	**-58,086**	**265,267**	**506,548**	**436,332**	**345,513**	**410,702**	**974,054**
Project Capital	ZAR '000	-595,362	-366,432	-173,545	-1,725	-1,725	-4,599	-7,986	-11,068	-
Sustaining Capital	ZAR '000	-188,326	-	-21,361	-40,182	-28,762	-19,756	-14,788	-13,605	-12,471
Net Cash Flow Pre-Tax	**ZAR '000**	**4,607,835**	**-375,132**	**-267,514**	**195,268**	**445,135**	**381,174**	**294,375**	**358,181**	**919,609**
Income Tax	ZAR '000	1,367,017	-	-	-	-	67,161	91,910	111,169	278,682
Net Cash Flow After Tax	**ZAR '000**	**3,240,818**	**-375,132**	**-267,514**	**195,268**	**377,974**	**289,265**	**183,206**	**79,500**	**853,521**

Parameter	Unit	Total	FY 8	FY 9	FY 10	FY 11	FY 12	FY 13	FY 14
ROM Tonnage (Processed)	tonnes	9,010,829	780,000	780,000	780,000	780,000	746,577	802	
Plant Feed Grade - Cu	%	1.3%	1.11%	1.20%	1.00%	1.66%	1.41%	0.06%	0.00%
Plant Recovery - Cu	%	87.4%	86.3%	86.7%	84.8%	90.5%	89.2%	6.5%	0.0%
Concentrate Sold - Cu	tonnes	386,787	30,414	31,949	28,434	40,097	34,271	23	
Metal Contained - Cu	tonnes	102,329	7,508	8,184	6,638	11,767	9,455	4	
Revenue (Post-NSR)	ZAR '000	13,066,950	862,033	1,076,026	959,797	1,678,993	1,328,719	592	-
Selling & Realisation Charges	ZAR '000		-656	-656	-656	-656	-656	-55	-
Net Revenue	**ZAR '000**	**13,066,950**	**861,377**	**1,075,369**	**959,140**	**1,678,337**	**1,328,063**	**538**	**-**
Mining, Development, Services Cost	ZAR '000	-4,557,646	-395,914	-411,833	-342,628	-280,477	-321,750	-4,182	-
Processing Cost	ZAR '000	-1,903,205	-162,671	-162,671	-162,671	-162,671	-160,898	-10,150	-
General Surface, Admin, Environmental and Off-mine Costs	ZAR '000	-230,375	-22,020	-22,204	-20,232	-18,102	-18,102	-2,318	-100
Royalties (Govt.)	ZAR '000	-628,905	-34,627	-57,261	-51,320	-117,530	-93,010	-3	-
Cash Operating Costs	**ZAR '000**	**-7,320,130**	**-615,232**	**-653,970**	**-576,851**	**-578,780**	**-593,760**	**-16,653**	**-100**
Cash Operating Profit	**ZAR '000**	**5,746,820**	**246,144**	**421,399**	**382,290**	**1,099,557**	**734,302**	**-16,115**	**-100**
Project Capital	ZAR '000	-595,362	-118	-6,259	-8,813	-10,217	-	-2,875	-
Sustaining Capital	ZAR '000	-188,326	-8,461	-6,126	-6,765	-7,460	-8,046	-542	-
Net Cash Flow Pre-Tax	**ZAR '000**	**4,607,835**	**210,144**	**380,483**	**341,749**	**1,046,909**	**696,950**	**-19,498**	**-**
Income Tax	ZAR '000	1,367,017	66,088	118,191	106,129	314,398	213,289	-	-
Net Cash Flow After Tax	**ZAR '000**	**3,240,818**	**91,953**	**274,355**	**27,350**	**833,620**	**696,950**	**-19,498**	**-100**

Table 19: Production profile and expected cash flows.

The NPV estimate is most sensitive to the copper grade, followed by the copper price USD : ZAR exchange rate and copper recovery, as shown in Figure 2. The main production and financial metrics for the Project are shown in Table 1.

Copper contributes 93.7% of the net revenue (after allowing for concentrate logistics, treatment costs and refining charges), followed by gold credits that contributes 4.9%, and the balance being silver credits.

Risk Assessment

The ten headline risks identified for the Project, were ranked according to a likelihood and consequence measures, with the resulting risk rating out of 25 plotted below.

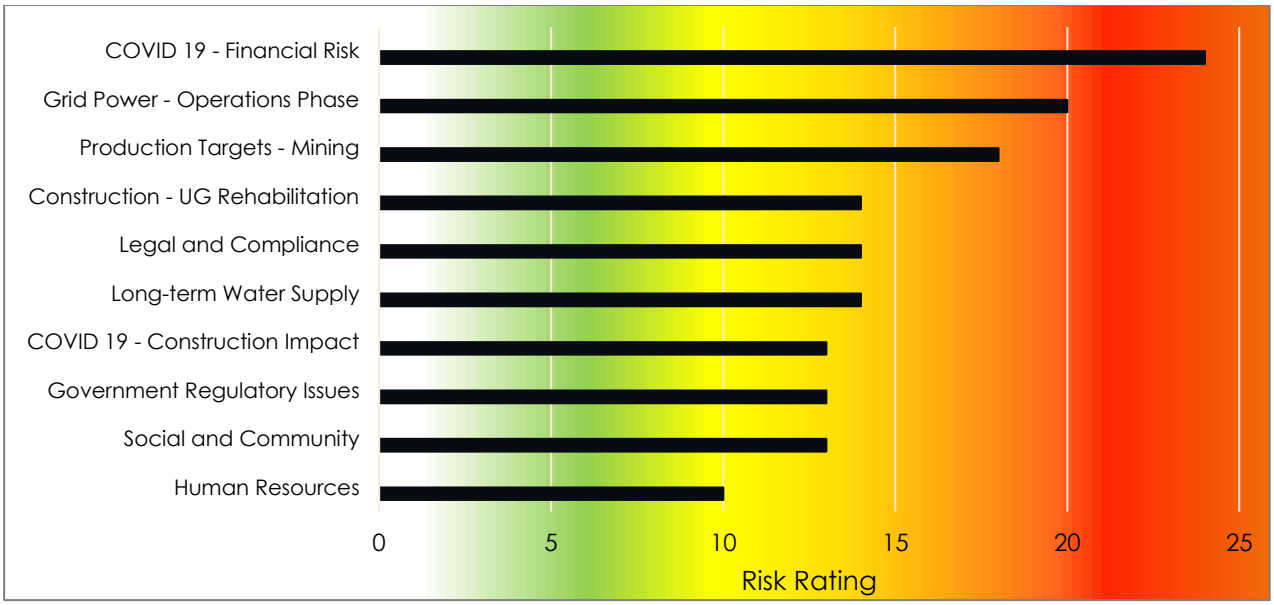
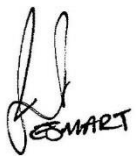


Figure 22: Headline risks.

For and on behalf of the Board.



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Competent Person's Statements

The Mineral Resources for Nababeep, Jan Coetzee and Nababeep Kloof mines were extracted from the ASX/JSE report entitled "Additional Mineral Resource Estimate for the Okiep Copper Prospect, Flat Mines" created on 29 March 2021 and available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. The Competent Person for these Mineral Resources is Dr Deon Vermaakt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

The Mineral Resources for FMN, FMS and FME were extracted from the ASX/JSE report entitled "Orion reports maiden JORC Mineral Resource for the Okiep Copper Complex, Flat Mines" created on 10 February 2021 and available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. The Competent Person for these Mineral Resources is Dr Dion Brandt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

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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- disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

JORC (2012) Table 1: Section 4 Estimation and Reporting of Ore Reserves modified for a Scoping Study which includes an approximate Production Target and/or Forecast Financial Information (as advised in the ASX Scoping Study Interim Guidelines). No Ore Reserves are being reported.

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

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
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. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• No Ore Reserves are reported. • The preliminary production target is based on the Mineral Resources for the Okiep Project classified and reported in accordance with JORC Code 2012 in ASX release 10 February 2021. • The Mineral Resource comprises 8.9Mt at 1.37% Cu, containing 122,000 tonnes copper; consisting of a Measured Resource of 3,505,000 tonnes at 1.41% Cu, an Indicated Resource of 5,001,000 tonnes at 1.38% Cu and an Inferred Resource of 401,000 tonnes at 0.84% Cu. The total Mineral Resource is tabulated in the body of the announcement.[7] • Whether the Mineral Resources are reported inclusive or exclusive of the Ore Reserves is not applicable as no Ore Resources are reported.	• No Ore Reserves are reported. • The preliminary production target is based on the Mineral Resources for the Okiep Project classified and reported in accordance with JORC Code 2012 in ASX release 29 March 2021.[8] • The Inferred Mineral Resources estimated for the Flat Mine (Nababeep), Jan Coetzee Mine and Nababeep Kloof Mine deposits, total 2.5 million tonnes grading 1.4% copper for 35,000 tonnes of contained copper. • The Mineral Resource Estimate for Nababeep Kloof Mine is excluded from the preliminary production target for this announcement. • Whether the Mineral Resources are reported inclusive or exclusive of the Ore Reserves is not applicable as no Ore Resources are reported.

7 Mineral Resource reported in ASX/JSE release of 10 February 2021: "Orion reports maiden JORC Mineral Resource for the Okiep Copper Prospect, Flat Mines" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Mineral Resource: Dr Dion Brandt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

8 Mineral Resource reported in ASX/JSE release of 29 March 2021: "Additional Mineral Resource Estimate for the Okiep Copper Prospect, Flat Mines" available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Competent Person Mineral Resource: Dr Dion Brandt. Orion confirms it is not aware of any new information or data that materially affects the information included above. The company confirms that all material assumptions and technical parameters underpinning the estimates in the original release 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.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Not applicable as no Ore Reserve stated.	• Not applicable as no Ore Reserve stated.
Study status	• The type and level of study to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that the material Modifying Factors have been considered.	• Pre-feasibility and feasibility studies are planned but have not been completed; accordingly, an Ore Reserve is not being classified and reported. • A Scoping Study Technical Report has been completed at a low level of confidence relative to a Feasibility Study. The Scoping Study has been prepared to an accuracy level of ± 25% using Measured, Indicated and Inferred Mineral Resources; appropriate mine planning and modifying factors have been applied commensurate to a Scoping Study level of accuracy and are deemed to have reasonable prospects of being technically achievable and economically viable.	• Pre-feasibility and feasibility studies are planned but have not been completed; accordingly, an Ore Reserve is not being classified and reported. • A Scoping Study Technical Report has been completed at a low level of confidence relative to a Feasibility Study. The Scoping Study has been prepared to an accuracy level of ± 25% using Measured, Indicated and Inferred Mineral Resources; appropriate mine planning and modifying factors have been applied commensurate to a Scoping Study level of accuracy and are deemed to have reasonable prospects of being technically achievable and economically viable.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	**Break-even grade calculations** The Scoping Study operating costs were applied to the financial model to determine break-even grades for the underground mining scenario. Very similar break-even grades for the two mining methods resulted. These numbers are discussed in detail in the announcement.	**Break-even grade calculations** • The Scoping Study operating costs were applied to the financial model to determine break-even grades for the open-pit mining scenario. The stripping ratio of the two open-pits average 5.7:1, resulting in the open-pit costs being very similar to the underground costs and very similar break-even grades for the two mining methods. These numbers are discussed in detail in the announcement.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
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). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made, and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The way Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• No Ore Reserves are reported. • The Scoping Study used DatamineTM and an MSO as detailed in the body of the report. Deductions were made for material excluded by the MSO, geological and pillars losses and a mining extraction factor. Dilution is included during the MSO process. The Mineral Resource conversion factors are listed below: • Dilution and recovery factors were applied to the Mineral Resource tonnages to determine the potential RoM tonnes and grade. The modifying factors used for underground mine planning are shown in the body of the report. The modifying factors, preliminary designs and schedules were applied to the Mineral Resources classified and released in February 2021 for the FMN, FMS and FME mines). <u>Material assumptions regarding timeframe for development and production:</u> • It is assumed that the that the necessary licences and permits are granted by the authorities and that funding is procured. • The mine model scenario for the Scoping Study can be summarised as the establishment of underground operations to extract Measured, Indicated and Inferred Mineral Resource from underground to an approximate depth of 610 metres accessed via existing and planned underground declines. • Mining Method: Tunnel development is planned to be with trackless equipment loading blasted rock into trucks to be hauled to surface via declines. Production mining will be from Vertical Crater Retreat, Long-hole stoping and Bord and Pillar methods depending on the geometry of the deposits. Also using trackless equipment. • Tunnel dimensions designed at 5.5m x 4.5m high for main ramps, haulages and draw-point drives and 6 m x 4 m for ore drill drives	• No Ore Reserves are reported. • Pit optimisation was not performed at this concept study level, the ultimate pit shells were determined by estimating the optimal depth based on the specified slope criteria. Pit-shell optimisations will be performed during the next study phase to improve the economics of the open pit operations. Production scheduling was performed using the Datamine™ Enhanced Production Scheduler (**EPS**). The key mine design parameters used to develop the conceptual pit designs are tabled below. <u>Material assumptions regarding the timeframe for development and production:</u> • It is assumed licensing and permitting is in place, funding is procured and the planned mining sequence is completed to this point following which the open-pits will commence. • <u>Mining Method</u>: Conventional open-pit mining will be carried out by a mining contractor. • <u>Geotechnical:</u> A geotechnical assessment report is planned in order to plan the open pit designs in more detail • <u>Existing Infrastructure</u>: Only basic roads are in place for the two open-pit mines. • <u>Additional Infrastructure</u>: Power (lighting) and water reticulation is needed to be installed for the two open-pit mines.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
		• Geotechnical: Further geotechnical studies are recommended for the next phase of technical studies. Infrastructure Requirements for the chosen mining methods: o Existing Infrastructure: FMN has an existing decline down to 180 m below surface. o Additional Infrastructural Requirements for the chosen mining methods: FME, FMS will require new decline development and stope development before production starts. All ug mines will require new ventilation fans and additional vent raises into the ug workings. Surface water storage dams will be required for the three underground mines.	
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical testwork undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale testwork and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by	• The design of the processing plant allows for treatment of underground and open-pit material. • Metallurgical Process: conventional, crushing, grinding and froth flotation processing is proposed for the mined material which is designed to produce saleable concentrates of Cu with the potential for Ag and Au as by-products. • Appropriateness: appropriate for the type of material anticipated from the mining operation. • Tested Technology: The processing technology used for this Project is commonly used in industry and was successfully used during the previous operations. Historical plant performance figures indicated that 85 to 94% of the copper was recovered into a concentrate grading between 20% and 36% Cu, depending on the copper head grade and mineral composition. The copper ore minerals were predominantly disseminated chalcopyrite and bornite with some chalcocite in the deeper portions of the orebody. Overall grades were relatively consistent, between 1 – 2% copper. Processing for the planned Okiep Copper Project is expected to treat very similar mineralisation. • Metallurgical Test Work: The SAFTA PFS reported testwork results on FMN material, the main elements being the Cu and Au (at 2.18 ppm or g/t). It was recognised during the	• The design of the processing plant allows for treatment of underground and open-pit material. • Metallurgical Process: conventional, crushing, grinding and froth flotation processing is proposed for the mined material which is designed to produce saleable concentrates of Cu with the potential for Ag and Au as by-products. • Appropriateness: appropriate for the type of material anticipated from the mining operation. • Tested Technology: The processing technology used for this Project is commonly used in industry and was successfully used during the previous operations. Historical plant performance figures indicated that 85 to 94% of the copper was recovered into a concentrate grading between 20% and 36% Cu, depending on the copper head grade and mineral composition. The copper ore minerals were predominantly disseminated chalcopyrite and bornite with some chalcocite in the deeper portions of the orebody. Overall grades were relatively consistent, between 1 – 2% copper. Processing for the planned Okiep Copper Project is expected to treat very similar mineralisation.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
	a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	SAFTA PFS and by later work carried out by METC that the above sample cannot be considered fully representative of the mineralised material and that future metallurgical test work with more representative sample will be required during subsequent plant studies. Given that the geology in the area is similar from one deposit to another, historical information from the previous operations at Okiep Copper Mines provide a reasonable basis for selecting a design Bond work index. METC took historical information on the mill sizes with their energy consumption and plant throughput to back calculate the Bond work index of the ball mills to be 15.5kWh/t. This was used for the required energy consumption for this study. In the next phases of project additional test work will be carried out to confirm this estimate. • Assumptions or allowances made for deleterious elements: The following table shows the assay results from concentrate analysis carried out during the SAFTA PFS on FMN material, the main elements being the Cu and Au (at 2.18 ppm or g/t). Any deleterious elements are in low concentrations and the concentrate is described as "very clean". Recovery Factors: Historical plant performance figures indicated that 85 to 94% of the copper was recovered into a concentrate grading between 20 and 36% Cu, depending on the copper head grade and mineral composition. For the purpose of the Scoping Study an average plant recovery of 87.4% has been used. The Cu NSR is based on: • a Cu payability of 96.0% • Cu TC/RCs of US$68.14 per tonne of concentrate and US$0.68 per lb of Cu metal in the concentrate • A Ag payability of 91.8% and a Ag refining cost of US$1.88 per tonne of concentrate • A Au payability of 1.75 g/t of concentrate and a Au refining costs of US$0.23/t of concentrate • A combined Cl and F penalty of US$0.75/t of concentrate. • The above inputs result in an NSR of 96.9%	• Metallurgical Test Work: The SAFTA PFS reported testwork results on FMN material, the main elements being the Cu and Au (at 2.18 ppm or g/t). It was recognised during the SAFTA PFS and by later work carried out by METC that the above sample cannot be considered fully representative of the mineralised material and that future metallurgical test work with more representative sample will be required during subsequent plant studies. Given that the geology in the area is similar from one deposit to another, historical information from the previous operations at Okiep Copper Mines provide a reasonable basis for selecting a design Bond work index. METC took historical information on the mill sizes with their energy consumption and plant throughput to back calculate the Bond work index of the ball mills to be 15.5kWh/t. This was used for the required energy consumption for this study. In the next phases of project additional test work will be carried out to confirm this estimate. • Assumptions or allowances made for deleterious elements: The following table shows the assay results from concentrate analysis carried out during the SAFTA PFS on FMN material, the main elements being the Cu and Au (at 2.18 ppm or g/t). Any deleterious elements are in low concentrations and the concentrate is described as "very clean". • Recovery Factors: Historical plant performance figures indicated that 85 to 94% of the copper was recovered into a concentrate grading between 20 and 36% Cu, depending on the copper head grade and mineral composition. For the purpose of the Scoping Study an average plant recovery of 87.4% has been used. The Cu NSR is based on: • a Cu payability of 96.0%

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
			• Cu TC/RCs of US$68.14 per tonne of concentrate and US$0.68 per lb of Cu metal in the concentrate • A Ag payability of 91.8% and a Ag refining cost of US$1.88 per tonne of concentrate • A Au payability of 1.75 g/t of concentrate and a Au refining costs of US$0.23/t of concentrate • A combined Cl and F penalty of US$0.75/t of concentrate. The above inputs result in an NSR of 96.9%
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.	• The previous mine owner, O'Okiep Copper Mining Company retained the environmental liabilities associated with the old mining structures, waste and tailings dumps. • The SAFTA Mining Right application was submitted on 4 October 2018 together with the Environmental Authorisation application (**EAA**) and Waste Management Licence (**WML**) application, in terms of the NEMAct, 1998, and processing by the authorities runs concurrent to the Mining Right application. The Integrated Water Use License (I**WUL**) application process was recently reactivated. Specialist studies to inform the Environmental Impact Report (**EIR**), Environmental Impact Assessment (**EIA**) and Environmental Management Programme (**EMPr**), WML and WUL were part of the Environmental Authorisation (**EA**) application process and are completed. The EA process also integrates the concerns raised during the Public Participation Process and incorporates mitigation measures for issues raised by affected parties. • The SAFTA Prospecting Right application was submitted to the authorities on 9 October 2020 together with an EA application in terms of the NEMAct, 1998, which runs concurrent to the Prospecting Right application. • The estimate agreed with the Department of Minerals and Energy (**DMRE**) for the Financial Provision is currently ZAR1 million and this has been provided to the DMRE in the form of a Centriq Financial Guarantee. Rehabilitation and closure costs of the proposed mine are anticipated to be re-	• The previous mine owner, O'Okiep Copper Mining Company retained the environmental liabilities associated with the old mining structures, waste and tailings dumps. • The SAFTA Mining Right application was submitted on 4 October 2018 together with the Environmental Authorisation application (**EAA**) and Waste Management Licence (**WML**) application, in terms of the NEMAct, 1998, and processing by the authorities runs concurrent to the Mining Right application. The Integrated Water Use License (I**WUL**) application process was recently reactivated. Specialist studies to inform the Environmental Impact Report (**EIR**), Environmental Impact Assessment (**EIA**) and Environmental Management Programme (**EMPr**), WML and WUL were part of the Environmental Authorisation (**EA**) application process and are completed. The EA process also integrates the concerns raised during the Public Participation Process and incorporates mitigation measures for issues raised by affected parties. • The SAFTA Prospecting Right application was submitted to the authorities on 9 October 2020 together with an EA application in terms of the NEMAct, 1998, which runs concurrent to the Prospecting Right application. • The estimate agreed with the Department of Minerals and Energy (**DMRE**) for the Financial Provision is

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
		estimated by specialists in terms of the EIA in the next phase of technical studies.	currently ZAR1 million and this has been provided to the DMRE in the form of a Centriq Financial Guarantee. Rehabilitation and closure costs of the proposed mine are anticipated to be re-estimated by specialists in terms of the EIA in the next phase of technical studies • Once granted, the current existing environmental permissions, will require MPRDA Section 102 applications together with Environmental Authorisation modifications to acquire formal authorisations for the planned addition of open pit mining.
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.	• The combined area for the SAFTA mining right and prospecting right applications upon which the mine and mine infrastructure is planned, is approximately 8,300 hectares in extent. • Surface Rights: The area has a history of over 150 years mining legacy and in many areas, mining predates surface ownership. Current land surface and servitudes are held by private entities (which predominantly use the area for sheep grazing) and an area was donated to the local Namaqualand Municipality by O'Okiep Copper Mines. A few municipal 'tenants' reside in this area. • According to SAFTA no written access agreements have been concluded. Orion is investigating access agreements as part of the due diligence process. • In addition, once awarded, the holder of a prospecting and mining right is entitled to carry out the relevant operations for the winning of minerals in terms of Section 54 of the MPRDAct, 2002. As part of the application process, Land Claims are investigated and none were found however Orion is conducting an independent investigation. The Company has used reasonable endeavours to confirm that land is therefore available for the building of new or use of any existing infrastructure.	• The infrastructure described in the central column will also serve the open-pit mines. In addition, the two open-pit mines will have water storage dams installed to handle any water required to be pumped from the pits.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
		• Zoning: Once the mining right is granted, the mining area will be required to be rezoned in terms of the SPLUMA Regulations. Infrastructure Requirements: • Power: Incoming power will be taken at 11 kV from the nearest Eskom sub-station via a new 23 km line to an 11 kV Main consumer sub-station with a 15 MVA transformer located at FMN. From this point, power will be reticulated throughout the OCC Complex as required with 11 kV reticulation. Low voltage distribution, at 525V, would be derived from distribution transformers at each of the mining, plant and TSF locations. • Water: The Nababeep North Mine Shaft has been identified as a water source. Water abstraction tests undertaken for the PFS by SRK Consulting at the NMS indicate that 1,363 m^3 per day can be safely abstracted with no effect on the water table. Under steady state conditions, the OCC Project will require 1160 m^3/day of water. • Pumping: All underground mines will have new pumping systems installed to handle mining water which will be pumped to surface and stored in 6,000m^3 storage dams. • Roads and access: An access road is in use currently to FMN, Flat Mine Open pit and Jan Coetzee open-pit. Where required these roads will be upgraded. New access roads will be required for FME and FMS. Costs have also been allowed for security and access control at the relevant points. • Buildings: Existing mine buildings and stores will be used for the planned OCC Project. A degree of upgrading and modernising will be required. Power is already supplied to these buildings through the Municipal supply.	

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products. • The source of exchange rates used in the study. • Derivation of transport charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	Capital Cost (Capex) Assumptions: • Capex: The estimated capital budget has been prepared to an estimation accuracy of ±25% and according to work packages reflecting how the Project construction is intended to be controlled. Contingency has been estimated at 15% of the underlying Capex items. The total capital cost to construct the mine is estimated to be ZAR595 million (AUD54 million) • Construction Schedule – Assuming that the remaining regulatory permits are approved (14 months), the Company's internal approvals are completed (2 months) and funding is sourced following the completion of a successful Bankable Feasibility Study and infill drilling campaign (10 months), project implementation will commence in month 13 with detailed engineering design. On-site activities are expected to commence 4 months later in month 17 (critical to which is the conclusion of the permitting processes) and will continue until month 28 when the processing plant C4 commissioning starts by receiving ROM ore. Currently certain critical permitting processes, and procurement streams necessary to allows the bankable feasibility study to commence as planned are underway. • LoM - approximately 12 years when Inferred Mineral Resources are incorporated. • Target accuracy of ±25%. • The base currency is the South African Rand (**ZAR**) and an exchange rate has been fixed at ZAR17.2 : USD1, ZAR11.1. Source of Capex estimated costs: • The estimate is base dated to April 2021. • Process Plant: Second-hand equipment was priced for the plant and factors were used to determine, earthworks, civils,	Capital Cost (Capex) Assumptions: • Capex: The estimated capital budget has been prepared to an estimation accuracy of ±25% and according to work packages reflecting how the Project construction is intended to be controlled. Contingency has been estimated at 15% of the underlying Capex items. The total capital cost to construct the mine is estimated to be ZAR595 million (AUD54 million) • Construction Schedule – Assuming that the remaining regulatory permits are approved (14 months), the Company's internal approvals are completed (2 months) and funding is sourced following the completion of a successful Bankable Feasibility Study and infill drilling campaign (10 months), project implementation will commence in month 13 with detailed engineering design. On-site activities are expected to commence 4 months later in month 17 (critical to which is the conclusion of the permitting processes) and will continue until month 28 when the processing plant C4 commissioning starts by receiving ROM ore. Currently certain critical permitting processes, and procurement streams necessary to allows the bankable feasibility study to commence as planned are underway. • LoM - approximately 12 years when Inferred Mineral Resources are incorporated. • Target accuracy of ±25%. • The base currency is the South African Rand (**ZAR**) and an exchange rate has been fixed at ZAR17.2 : USD1, ZAR11.1 Source of Capex estimated costs: • The estimate is base dated to April 2021. • Process Plant: Second-hand equipment was priced for the plant and factors were used to determine, earthworks, civils, electrical C&I, piping and steelwork.

		electrical C&I, piping and steelwork. These factors are highlighted in the Scoping Study report. • Surface Infrastructure: Road access, security, water and power reticulation were priced from the SAFTA PFS. • Underground Mining: Surface ventilation fans and water and power reticulation were priced from the SAFTA PFS. • EPCM costs: These have been factored based on the underlying capital costs for the plant and mining. Opex Costs: A summary of the total estimated operating cost for the underground and open pit mining is detailed in the body of the report. • The operating cost estimates were compiled from various sources, including: o The SAFTA PFS undertaken by Minxcon; o contractor quotes; o benchmark numbers supplied by study contributors; and o labour and fuel costs are included within each discipline. • Underground mining costs were estimated by A&B Global. The costs were obtained from benchmarked numbers and compared to contractor-supplied rates from the local area. The average mining development rate was estimated at ZAR35,000/metre, assuming a contractor mining model, whereby the contractor will supply the mining fleet. The stoping costs were estimated per mining method and applied to the respective tonnes per method from the production schedule. The underground mining costs also includes the grade control drilling program. Labour and fuel costs were included. • In addition to the direct mining costs, mobilisation and de-mobilisation costs of ZAR1.9 million for the underground mining contractor and ZAR1.6 million for open pit contractor were assumed. • Processing plant working costs were compiled by METC from first principles including labour, reagent prices based on estimated consumption rates per tonne treated and milling and crushing consumables, based on planned wear rates based on the estimated ore hardness. The steady state unit cost has been estimated at ZAR228 per tonne treated. • General and Admin: These costs were taken from the SAFTA PFS	These factors are highlighted in the Scoping Study report. • Surface Infrastructure: Road access, security, water and power reticulation were priced from the SAFTA PFS • Underground Mining: Surface ventilation fans and water and power reticulation were priced from the SAFTA PFS • EPCM costs: These have been factored based on the underlying capital costs for the plant and mining. Opex Costs: A summary of the total estimated operating cost for the underground and open pit mining is detailed in the body of the report. • The operating cost estimates were compiled from various sources, including: o The SAFTA PFS undertaken by Minxcon; o contractor quotes; o benchmark numbers supplied by study contributors; and o labour and fuel costs are included within each discipline. • Open pit costs were based on written contractor rates for drill & blast and load & haul, as of March 2021. The services and utilities costs were estimated by the mining team conducting the Scoping Study. The drill and blast costs include a 5% allowance for pre-split drilling. The load and haul costs are based on a rate of ZAR51.50/tonne at surface, with a depth premium of 5% increase per 10 metre additional pit depth. Based on the average stripping ratio of the two open-pits of 5.7:1, the direct open-pit mining cost per tonne treated equates to ZAR486/tonne. • In addition to the direct mining costs, mobilisation and de-mobilisation costs of ZAR1.9 million for the underground mining contractor and ZAR1.6 million for open pit contractor were assumed. • Processing plant working costs were compiled by METC from first principles including labour, reagent prices based on estimated consumption rates per tonne treated and milling and crushing consumables, based on planned wear rates based on the

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Off-mine Costs: These costs were taken from the SAFTA PFS
The base currency see ‘revenue’ below
Commodity price assumptions and source: see ‘revenue’ below.
Transport charges: Costs have been assumed at US$32.80 and US$21.90 per tonne of concentrate for road and shipping respectively
Penalties and allowances for deleterious elements: refer to the NSR estimate detailed in this release.
Government Royalties: the royalties were set at the formula for “unrefined minerals”, in terms of the Royalties Act, 2010, linked to the MPRDA, 2002. Where Y = 0.5 + EBIT/(gross sales of unrefined minerals) x 9] x 100 {maximum Y is 7.0%}.

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<tr><td>Revenue factors</td><td>

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.
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Mining modifying factors were applied to Mineral Resources grades as covered in the document.
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<tr><td>Market assessment</td><td>• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.
• A customer and competitor analysis along with the identification of likely market windows for the product.
• Price and volume forecasts and the basis for these forecasts.</td><td>• Copper contributes 93.7% of the net revenue (after allowing for concentrate logistics, treatment costs and refining charges), followed by gold credits that contributes 4.9%.

Demand, supply and stock situation for copper:
• Historically the concentrates produced from the Okiep Copper Project were regarded as clean with few and low levels of impurities. Current assay results have indicated that this will be the case going forward. It can be concluded that the low level of impurities in the concentrates will generate strong demand as smelters require clean concentrates to blend down impurities with those of lower quality. Orion therefore does not foresee any restrictions on where the concentrates can be sold.

Customer Analysis:
• The only copper smelter in South Africa is at the Phalaborwa Mine in the northern-most province of South Africa, which is owned by Phalaborwa Mining Company. This is 1,780 km from the Project site. From recent discussions with Phalaborwa, the smelter has spare capacity. This option will be investigated further in the next round of studies.
• The Scoping Study caters for road transport and shipping to a smelter in China. A high-level competitor analysis is planned at the Feasibility Study stage.</td><td>• Copper contributes 93.7% of the net revenue (after allowing for concentrate logistics, treatment costs and refining charges), followed by gold credits that contributes 4.9%.

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Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• The sensitivity analysis provides a range of outcomes for the Project when the key parameters are varied from their base-case values. The sensitivity outcome is displayed in the figure shown in the body of the announcement. The Proof of Concept Phase NPV estimate is most sensitive to the Copper grade, followed by the Copper price USD:ZAR exchange rate and Copper recovery.	• The sensitivity analysis provides a range of outcomes for the Project when the key parameters are varied from their base-case values. The sensitivity outcome is displayed in the figure shown in the body of the announcement. The Proof of Concept Phase NPV estimate is most sensitive to the Copper grade, followed by the Copper price USD:ZAR exchange rate and Copper recovery.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Surface Use: Currently, in the due diligence phase, the Company currently has no written agreements with surface users. • Social Responsibility: • This aspect is guided by the Mining Charter and regulated by the Social and Labour Plan (**SLP**) which was compiled and submitted as part of the SAFTA Mining Right application. The SLP is currently being evaluated by the South African regulatory authorities. • As part of the due diligence process, the Company has initiated a relationship with the Nama Khoi Local Municipality and Namaqualand District Municipality. • The Company views the SLP as being a dynamic document that will continue to be revised as the Project develops and the needs and understanding of the local community change.	• Surface Use: Currently, in the due diligence phase, the Company currently has no written agreements with surface users. • Social Responsibility: • This aspect is guided by the Mining Charter and regulated by the Social and Labour Plan (**SLP**) which was compiled and submitted as part of the SAFTA Mining Right application. The SLP is currently being evaluated by the South African regulatory authorities. • As part of the due diligence process, the Company has initiated a relationship with the Nama Khoi Local Municipality and Namaqualand District Municipality. The Company views the SLP as being a dynamic document that will continue to be revised as the Project develops and the needs and understanding of the local community change.
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserve; Any identified material naturally occurring risks.; The status of material legal agreements and marketing agreements. The status of governmental agreements and approval	• No Ore Reserves are reported. • Identified material natural occurring risks: the Company is currently aware of none. A due diligence process is in progress. • Status of material legal agreements: all Company material agreements are current and active. Option to acquire Okiep Project and Project-related data	• No Ore Reserves are reported. • Identified material natural occurring risks: the Company is currently aware of none. A due diligence process is in progress. • Status of material legal agreements: all Company material agreements are current and active. Option to acquire Okiep Project and Project-related data

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	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.	• On 2 February 2021, Orion announced9 that it had signed an exclusive option to undertake due diligence to acquire the following: o a 56.25% interest in SAFTA – alongside the Industrial Development Corporation of South Africa Limited (IDC) who hold 43.75%; o 100% of NCC; and o 100% of BCC, (together herein being referred to as the 'Okiep Copper Project' or 'Okiep Project'). • Under the terms of the agreement, Orion was granted an exclusivity period extending to the 31st of July 2021, during which time Orion could exercise an exclusive option to acquire the Okiep Project. • On 15 February 2021 Orion announced that it had also secured an option to acquire the furnished head office and database from the O'Okiep Copper Company Proprietary Limited, O'Okiep Australia Pty Ltd and N7 Transport CC (together the 'Data Vendors'). The database includes all historical mining and exploration records over much of the Okiep Project area. The database also includes Okiep exploration records and historical due diligence reviews undertaken by Newmont and Goldfields, over much of the Northern Cape Province, including Orion's Prieska Copper-Zinc Mine and the Areachap Belt. This information would be important to the exploration, mineral resources definition and mine feasibility studies planned for the Project. • Status of material marketing agreements: no signed agreements are in place. Government Agreements:	• On 2 February 2021, Orion announced10 that it had signed an exclusive option to undertake due diligence to acquire the following: o a 56.25% interest in SAFTA – alongside the Industrial Development Corporation of South Africa Limited (IDC) who hold 43.75%; o 100% of NCC; and o 100% of BCC, (together herein being referred to as the 'Okiep Copper Project' or 'Okiep Project'). • Under the terms of the agreement, Orion was granted an exclusivity period extending to the 31st of July 2021, during which time Orion could exercise an exclusive option to acquire the Okiep Project. • On 15 February 2021 Orion announced that it had also secured an option to acquire the furnished head office and database from the O'Okiep Copper Company Proprietary Limited, O'Okiep Australia Pty Ltd and N7 Transport CC (together the 'Data Vendors'). The database includes all historical mining and exploration records over much of the Okiep Project area. The database also includes O'Okiep exploration records and historical due diligence reviews undertaken by Newmont and Goldfields, over much of the Northern Cape Province, including Orion's Prieska Copper-Zinc Mine and the Areachap Belt. This information would be important to the exploration, mineral resources definition and mine feasibility studies planned for the Project. • Status of material marketing agreements: no signed agreements are in place.

[9] Refer ASX-JSE release 2 February 2021.

[10] Refer ASX-JSE release 2 February 2021.

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		• Tenement Status: Mineral tenure in South Africa is regulated by the MPRDA, 2002, with the environmental aspects regulated by NEMA, 1998, both managed under the authority of the DMRE. The Project mineral tenure or tenement holding comprises a set of contiguous mining and prospecting right applications covering the Flat Mine Project area: the SAFTA Mining Right application and the SAFTA Prospecting Right application. The primary tenement licenses and applications are detailed below: • SAFTA Mining Right Application Mining Right application: NC30/5/1/2/2/10150MR. The SAFTA Mining Right application was submitted to the DMRE on 4 October 2018, in terms of Section 22 of the MPRDA, 2002, over part of the previous SAFTA prospecting right areas for copper, and tungsten in respect of 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; administrative District of Namaqualand, Northern Cape Province for requested initial period of 15 years which may be renewed for up to 30 years at a time. The mining right application was submitted together with the pre-requisite EA and WML) and includes the proposed Mining Works Program and SLP. The WUL application process has recently been reactivated. • Orion is currently undertaking a due diligence on the proposed purchase of the SAFTA assets. SAFTA effectively holds a 100% interest in the Right, with a 43% holding by the IDC. If the option to purchase is effected, it is proposed that Orion will effectively hold 70% of the granted mining right and will require a 20% BEE ownership (IDC), 5% community trust and 5% employee trust in compliance with Mining Charter, 2018 guidelines and existing legislation. An organogram is shown in the body of the ASX/JSE release. • SAFTA Prospecting Right Application. Prospecting Right: NC30/5/1/1/2/12755PR. The SAFTA Prospecting Right Application, in terms of Section 16 of the MPRDA, 2002 was submitted to the DMRE, for the remaining	Government Agreements: • Tenement Status: Mineral tenure in South Africa is regulated by the MPRDA, 2002, with the environmental aspects regulated by NEMA, 1998, both managed under the authority of the DMRE. The Project mineral tenure or tenement holding comprises a set of contiguous mining and prospecting right applications covering the Flat Mine Project area: the SAFTA Mining Right application and the SAFTA Prospecting Right application. The primary tenement licenses and applications are detailed below: • SAFTA Mining Right Application Mining Right application: NC30/5/1/2/2/10150MR. The SAFTA Mining Right application was submitted to the DMRE on 4 October 2018, in terms of Section 22 of the MPRDA, 2002, over part of the previous SAFTA prospecting right areas for copper, and tungsten in respect of 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; administrative District of Namaqualand, Northern Cape Province for requested initial period of 15 years which may be renewed for up to 30 years at a time. The mining right application was submitted together with the pre-requisite EA and WML) and includes the proposed Mining Works Program and SLP. The WUL application process has recently been reactivated. • Orion is currently undertaking a due diligence on the proposed purchase of the SAFTA assets. SAFTA effectively holds a 100% interest in the Right, with a 43% holding by the IDC. If the option to purchase is effected, it is proposed that Orion will effectively hold 70% of the granted mining right and will require a 20% BEE ownership (IDC), 5% community trust and 5% employee trust in compliance with Mining Charter, 2018 guidelines and existing legislation. An organogram is shown in the body of the ASX/JSE release.

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		part of the previous prospecting right area for copper and tungsten in respect of portion 10, a portion of portion 13, a portion of portion 14 , portion 15, portion 16 and a portion of portion 21 of the farm Nababeep No. 134 and plot 206 of Okiep Township; administrative District of Namaqualand, Northern Cape Province for requested initial period of 5 years which may be renewed for up to 3 years. The application was submitted to the authorities, together with the pre-requisite EA application, on 9 October 2020. The application includes the proposed Prospecting Work Program. The application is in process at the DMRE. • Orion is currently undertaking a due diligence on the proposed purchase of the SAFTA assets. SAFTA effectively holds a 100% interest in the Right, with a 43% holding by the IDC. If the option to purchase is effected, it is proposed that Orion could effectively hold 70-80% of the granted mining right as the Mining Charter, 2018 does not require BEE at the prospecting stage. An organogram is shown in the body of the ASX/JSE release. • Tenure Compliance: Not applicable. • According to the documentation for the mining right application from 2019, there are there are no land claims on any of the properties covered by the prospecting rights however as part of the due diligence, Orion has independently approached the Department of Land Restitution and Reform and is awaiting updated detailed information. This affects the surface ownership and not the tenement status. • The application process for the Okiep Project land use change from Unspecified Zone to Special Zone (Extractive Industry) will be submitted once a mining right is granted, with approval required from the Nama Khoi and Namaqualand Municipalities. • Status of government and statutory approvals: Orion knows of no reason why all necessary government approvals	• SAFTA Prospecting Right Application. Prospecting Right: NC30/5/1/1/2/12755PR. The SAFTA Prospecting Right Application, in terms of Section 16 of the MPRDA, 2002 was submitted to the DMRE, for the remaining part of the previous prospecting right area for copper and tungsten in respect of portion 10, a portion of portion 13, a portion of portion 14 , portion 15, portion 16 and a portion of portion 21 of the farm Nababeep No. 134 and plot 206 of Okiep Township; administrative District of Namaqualand, Northern Cape Province for requested initial period of 5 years which may be renewed for up to 3 years. The application was submitted to the authorities, together with the pre-requisite EA application, on 9 October 2020. The application includes the proposed Prospecting Work Program. The application is in process at the DMRE. • Orion is currently undertaking a due diligence on the proposed purchase of the SAFTA assets. SAFTA effectively holds a 100% interest in the Right, with a 43% holding by the IDC. If the option to purchase is effected, it is proposed that Orion could effectively hold 70-80% of the granted mining right as the Mining Charter, 2018 does not require BEE at the prospecting stage. An organogram is shown in the body of the ASX/JSE release. • Tenure Compliance: Not applicable. • According to the documentation for the mining right application from 2019, there are there are no land claims on any of the properties covered by the prospecting rights however as part of the due diligence, Orion has independently approached the Department of Land Restitution and Reform and is awaiting updated detailed information. This affects the surface ownership and not the tenement status.

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		shouldn't be received within the timeframes anticipated in the Scoping Study. • At this Scoping Study stage, MOU's and material agreements with service providers such as ESKOM and the municipalities for water and electricity are still in process of negotiation and are all pending the results of the Orion options to purchase the Okiep Project. • Unresolved matters with 3rd parties which would materially affect the results of the Feasibility stage – the project is still at the Scoping Study stage.	• The application process for the Okiep Project land use change from Unspecified Zone to Special Zone (Extractive Industry) will be submitted once a mining right is granted, with approval required from the Nama Khoi and Namaqualand Municipalities. • Status of government and statutory approvals: Orion knows of no reason why all necessary government approvals shouldn't be received within the timeframes anticipated in the Scoping Study. • At this Scoping Study stage, MOU's and material agreements with service providers such as ESKOM and the municipalities for water and electricity are still in process of negotiation and are all pending the results of the Orion options to purchase the Okiep Project. • Unresolved matters with 3rd parties which would materially affect the results of the Feasibility stage – the project is still at the Scoping Study stage.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• No Ore Reserves are reported. • Section 4 of JORC Table 1 is being completed as part of the Scoping Study requirement to disclose a conceptual Production Target estimate linked to forecast financial information.	• No Ore Reserves are reported. • Section 4 of JORC Table 1 is being completed as part of the Scoping Study requirement to disclose a conceptual Production Target estimate linked to forecast financial information.

Criteria	JORC Code explanation	Commentary – Underground: FMN, FMS and FME	Commentary – Open Pit: Flat Mine (Nababeep) and Jan Coetzee
Audits or reviews	• The results of any audits or reviews of the Ore Reserve estimates.	• No audits or reviews of the Scoping Study have been undertaken.	No audits or reviews of the Scoping Study have been undertaken.
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 would affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have material impact on Ore Reserve viability. It is recognised	• No Ore Reserves are reported. • The level of accuracy for the Scoping Study Technical Report is ± 25%. • The level of confidence for the preliminary estimates used in the conceptual production schedule is too low to classify and report Ore Reserves. • For the combined underground and open pit operations, a 33% Measured, 46% Indicated and 21% Inferred Mineral Resource estimate was used for the purposes of the Scoping Study. The Company is confident in using the Inferred Mineral Resource to guide the Scoping Study process as it has considered that this Mineral Resource is a continuation of a historically-mined deposit and a large amount of historical operational data remains on site - which lends confidence to the assumption made that the Mineral Resource has the potential to be economically mined. • Mining studies in preparation for a Pre-feasibility Study and/or Feasibility Study are planned, depending on the results of the Option to Purchase Agreement for the Okiep Project. • A sensitivity analysis has been included in the Scoping Study and is included in the "economic" section above. • The data compares very favourably with historical production records for the O'Okiep Copper Company which operated between circa 1940 and 2003 on the Okiep Project.	• No Ore Reserves are reported. • The level of accuracy for the Scoping Study Technical Report is ± 25%. • The level of confidence for the preliminary estimates used in the conceptual production schedule is too low to classify and report Ore Reserves. • For the combined underground and open pit operations, a 33% Measured, 46% Indicated and 21% Inferred Mineral Resource estimate was used for the purposes of the Scoping Study. The Company is confident in using the Inferred Mineral Resource to guide the Scoping Study process as it has considered that this Mineral Resource is a continuation of a historically-mined deposit and a large amount of historical operational data remains on site - which lends confidence to the assumption made that the Mineral Resource has the potential to be economically mined. • Mining studies in preparation for a Pre-feasibility Study and/or Feasibility Study are planned depending on the results of the Option to Purchase Agreement for the Okiep Project. • A sensitivity analysis has been included in the Scoping Study and is included in the "economic" section above. • The data compares very favourably with historical production records for the O'Okiep Copper

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	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.		Company which operated between circa 1940 and 2003 on the Okiep Project.