
Orion Minerals Limited
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Orion Granted Key Water Use Licence for its Okiep Copper Project, South Africa

The pathfinder Flat Mines Project is now fully-permitted to proceed to mine development

- ▶ **The grant of the Integrated Water Use Licence (IWUL) marks the final major permitting milestone in progressing Orion's Okiep Copper Project to construction and production.**
- ▶ **The granted IWUL includes approval of the Tailings Storage Facility (TSF) design on a site located in close proximity to the proposed new processing plant.**
- ▶ **The IWUL is authorised in terms of the National Water Act, Act 36 of 1998, and is valid for 20 years.**
- ▶ **Approval for rezoning under Spatial Planning and Land Use Management Act also received.**

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

"The granting of this Integrated Water Use Licence is a fantastic milestone for Orion, as it marks the culmination of almost four years of intensive environmental studies and innovative engineering and water management planning for the Okiep Copper Project.

"The Okiep Project is located in the Nama-Khoi District, one of the most arid and water sensitive regions in South Africa. The local population is completely reliant on water supply from the Orange River that is pumped for more than 70km via an aged infrastructure that was originally developed for the mines.

"Orion's adherence to high Environmental, Social and Governance standards has been showcased with this process, which will result in a benefit to the entire community. Not only will we assist in upgrading the town sewage works to prevent continued contaminated discharge, the redevelopment of key mines in the district will not place any additional burden on the already severely constrained municipal water supply but will create important jobs and economic opportunities in an impoverished region."

Orion Minerals Ltd (**ASX/JSE: ORN**) (**Orion** or the **Company**) is pleased to advise that the Integrated Water Use Licence application has been granted by the Department of Water and Sanitation (**DWS**) to New Okiep Mining Company (Pty) Ltd at its Okiep Copper Project (**OCP**), in the Northern Cape Province of South Africa. The integrated water use licence approval (**IWULA**) is for the Flat Mines Project, for which Orion is currently finalising a Bankable Feasibility Study (**BFS**) encompassing Flat Mine North, Flat Mine East and Flat Mine South deposits (Figure 2).

Description of the "Flat Mines Project"

The Flat Mines Project is the pathfinder project in Orion's broader strategy to unlock the untapped potential of its significant mineral right holdings in the Okiep Copper District. The development of the Flat Mines Project is based on the planned exploitation of defined Mineral Resources of 9.3Mt at 1.3% Cu across three known deposits, Flat Mines North, Flat Mines East and Flat Mines South, all of which are

located within the Mining Right (NC10150MR), executed in December 2022 (refer ASX/JSE release 28 August 2023).

A BFS on the Flat Mines Project is scheduled for completion in Q4 CY2024. The BFS is being prepared with a baseline target to process 780ktpa of run-of-mine material over a 12-year life-of-mine, while continuing to drill several known mineral deposits within a 7.5km radius (refer ASX/JSE release 3 May 2021) as part of an incremental growth strategy.

The granting of the IWULA is a crucial component of the BFS as this is a critical path permitting requirement for the commencement of construction and mining. This follows the receipt of approval by the Nama Khoi Local Municipality for the rezoning for mining activities of the relevant area of the Mining Right, in accordance with the Spatial Planning and Land Use Management Act (**SPLUMA**). With the grant of the IWULA and the SPLUMA approval in place, the Flat Mines Project is now fully permitted to proceed to construction following completion of the BFS and the subsequent securing of project funding.

The layout in Figure 1 below shows the planned mining development infrastructure for which all water uses required by the operations have been authorised. The mining activities for this phase of the Flat Mines development are concentrated in a relatively small geographic area, with the deposits initially earmarked for mining all located within 2km haulage distance of the central concentrator plant.

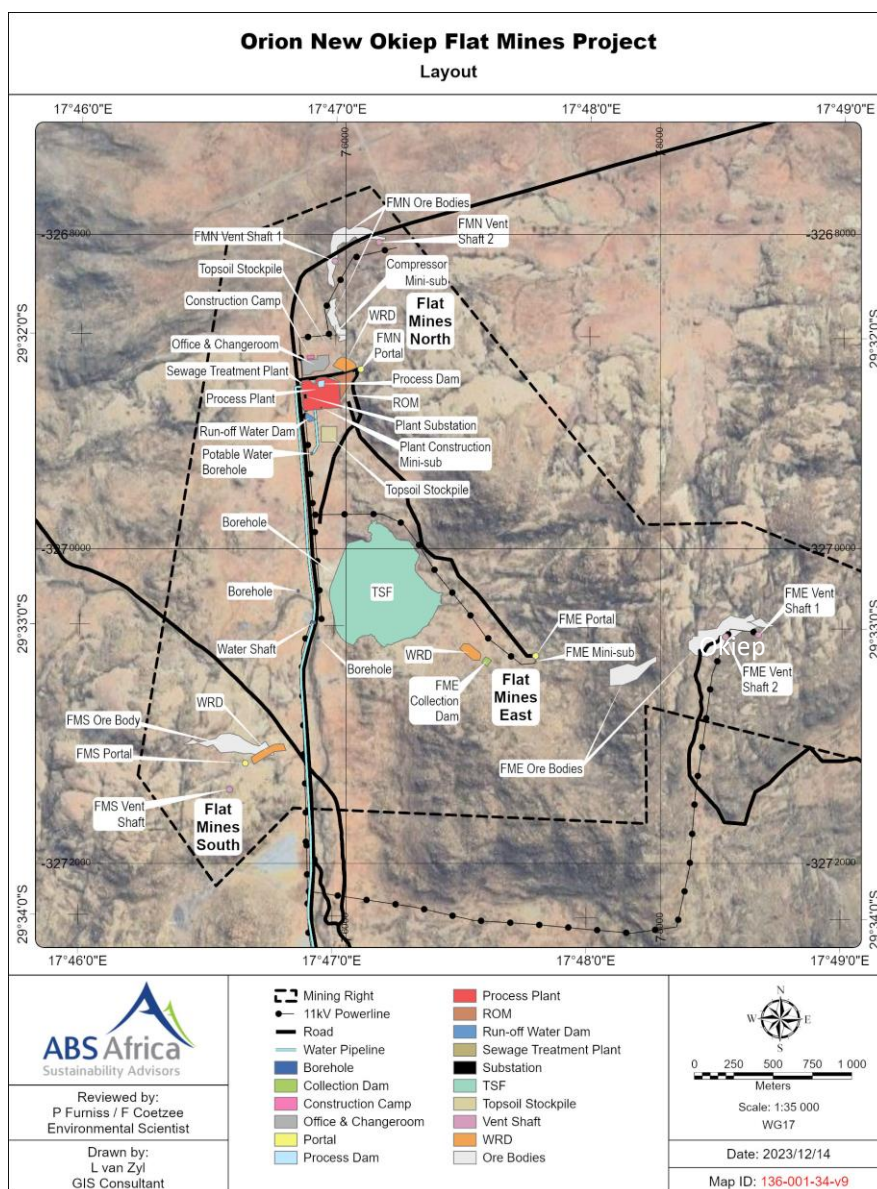


Figure 1: Layout of the Flat Mines Project.

Orion plans to employ proven mining and processing methods in the form of bulk-mechanised-mining, crushing, milling and flotation for the recovery of a copper concentrate for sale. As part of this development strategy, Orion plans to utilise ore-sorting, a modern x-ray-refraction (XRF) sensing process, to discard waste rock before milling and flotation in order to minimise the generation of tailings material, resulting in savings in energy and water consumption.

Flat Mines is surrounded by several high priority prospects currently being investigated by Orion and is encircled by two high-priority, recently granted, prospecting rights (refer ASX/JSE release 8 August 2024). The processing plant developed for the Flat Mines area is intended to evolve into a central concentrator plant for OCP. Any mineralisation identified within the new prospecting rights is expected to have lower barriers for economic development given their close proximity to the proposed Flat Mines and central concentrator plant. An existing road network linking the deposits to the plant site as shown below.

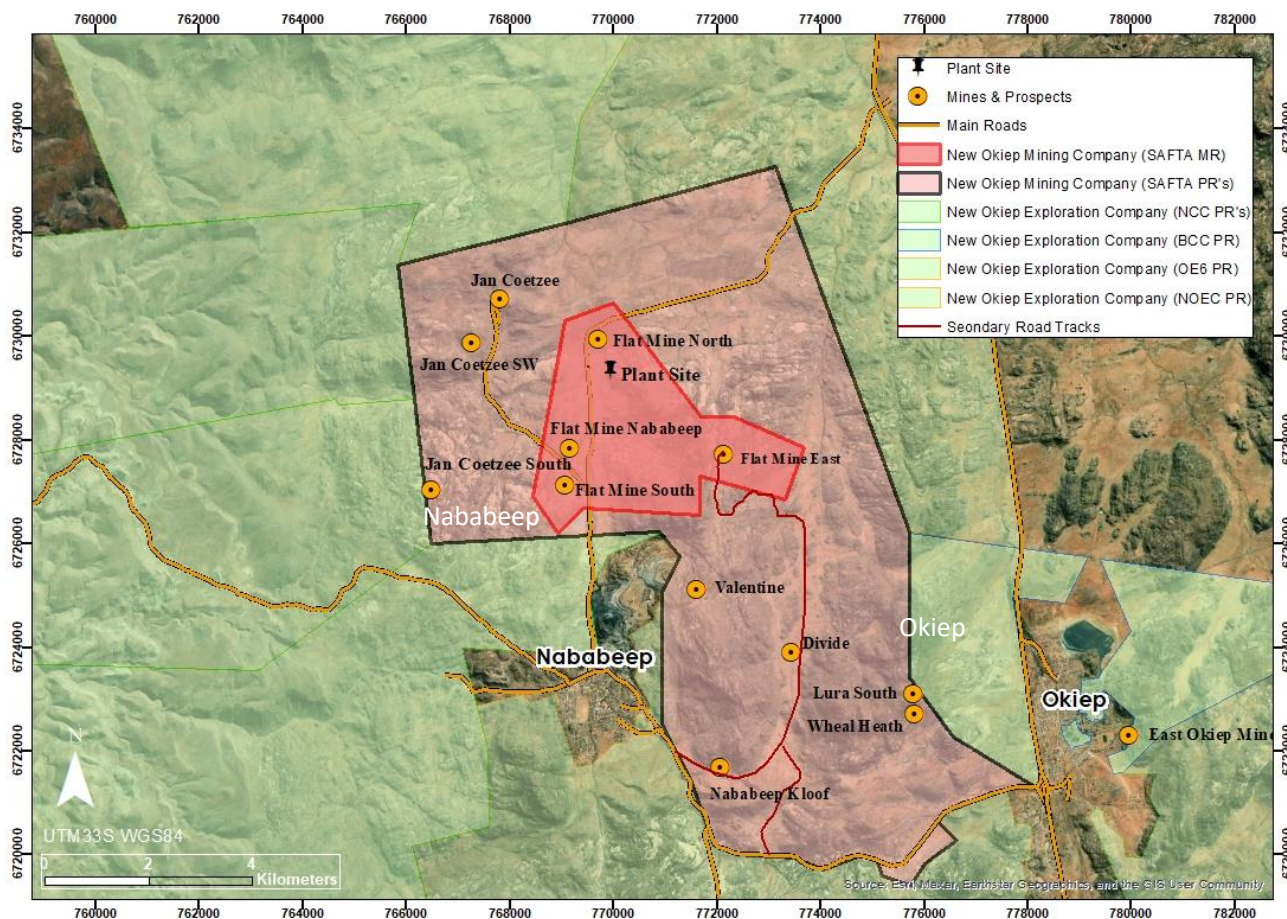


Figure 2: Proximity of historical mines & current JORC Mineral Resources to the planned central concentrator.

The Water Use Licence

Orion submitted the Integrated Water Use Licence Application to the South African Department of Water and Sanitation in September 2023, following 18 months of specialist investigations and studies. These studies include baseline surface and ground-water studies, geo-hydrological studies, drilling of 14 monitoring holes, geochemical studies on waste streams and the detailed design of the semi-lined tailings storage facility (TSF).

The Integrated Water Use Studies and subsequent engagement with authorities have been particularly protracted due to the high sensitivity to responsible water usage in this arid environment.

The water use activities applied for include the abstraction of water from various sources for use in the operations and for the responsible disposal of waste rock and tailings. It also includes any activity that may impact on surface or underground water resources.

The water uses authorised extend to numerous crossings of water courses by roads and powerlines, as well as storm-water-diversion and water management infrastructure.

In the baseline surface water study, the water in the Nababeep stream was found to be polluted by effluent discharged from the Nababeep Municipal Wastewater works (**NWW**). This has been an ongoing challenge for more than 20 years.

Orion has elected to source process water make-up from the NWW as the primary source of bulk water supply to the processing plant. Orion has committed to assist the Nama Khoi Municipality to upgrade and manage the NWW operations to ensure that the discharge water quality meets required standards. The Flat Mines Project plans to use recycled- and limited ground-water sources and would not further burden the current potable water supply to the district, sourced from the Orange River via very aged infrastructure. This supply is currently under severe pressure for supply to domestic consumers.

Orion elected to locate the TSF on an area covered by prior mining operations (in the 1950's) for the evaporation of excess process water (paddies). Ground water studies by Orion indicated that ground water quality downstream of the proposed TSF site is already impacted by these paddies.

Following the construction and commencement of TSF operations, Orion will remediate the existing impacts, resulting in a steady overall improvement in ground water quality downstream of the TSF.

Overall, the Flat Mines operations are expected to result in a net improvement of surface and ground water quality in the mining area and demonstrates the benefits that mining can bring for remote communities and environment.

TSF Design Approved

The design and use of a partially-lined TSF, necessary for the storage of flotation tailings from the processing plant after the recovery of copper in a sulphide concentrate, is approved in terms of the IWULA.

The available sites for TSF construction are limited by the terrain in the area and required innovative design to meet the stringent environmental requirements of the DWS applicable to long-term waste disposal sites.

The TSF embankment will be constructed using development rock waste and ore-sorter discard rock, hence all tailings and waste rock are planned to be stored in a single location.

A detailed hydrogeological study indicates that, over time, the ground water quality downstream of the facility is expected to improve compared to current water quality values, which have been impaired to some extent by prior mining activities in the area.

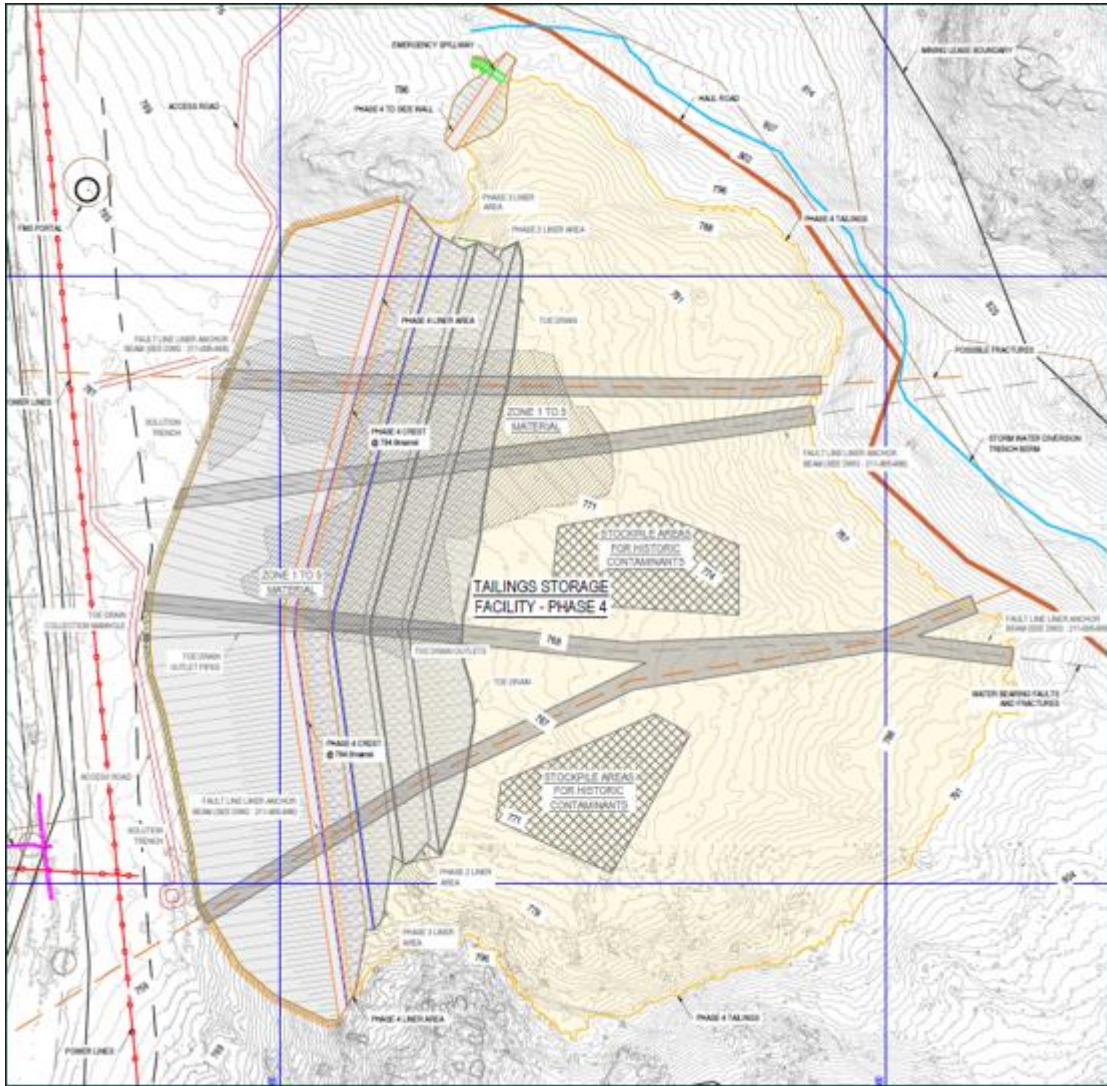


Figure 3: General arrangement of ultimate TSF footprint.

For and on behalf of the Board.

Errol Smart
Managing Director and CEO

29 August 2024

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Reference to Previous Report

Mineral Resource reported in accordance with the JORC Code (2012) in ASX release of 28 August 2023: "Orion upgrades Mineral Resources at Okiep Copper Project" available to the public on <http://www.orionminerals.com.au/investors/asx-jseannouncements/>. Competent Person Mineral Resource: Mr Sean Duggan. 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.

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