



Orion Minerals

ASX/JSE RELEASE: 30 April 2021

March 2021 Quarterly Activities Report

HIGHLIGHTS

- ▶ Exclusive option secured to undertake due diligence and acquire and consolidate dominant ownership of the Okiep Copper Project (OCP), a premier historic copper mining district in South Africa's Northern Cape Province (Option).
- ▶ Separate option agreement secured to acquire the entire database of the O'Okiep Copper Company, including all historical mining and exploration records over areas included in the OCP Option. Data includes exploration records and historical due diligence reviews over much of the Northern Cape Province, including Orion's own Prieska Copper-Zinc Mine and the Areachap Belt.
- ▶ Due diligence work undertaken by Orion at the OCP during the Quarter has underpinned the delivery of a maiden JORC 2012 Mineral Resource estimates for six deposits in the Flat Mines Area totalling 11.5Mt at 1.4% Cu for 159,000 tonnes of contained copper.
- ▶ Continued positive progress on funding discussions for the Prieska Copper-Zinc Project, Northern Cape, South Africa, with short-listing of contractors also underway.
- ▶ Significant shallow high-grade nickel-copper-cobalt-PGE intercept returned from diamond drilling at the Jacomynspan Nickel-Copper-Cobalt-PGE Project, confirming strong open pit potential:
 - 31.53m at 0.72% Ni, 0.34% Cu, 0.05% Co and 0.45g/t 2PGE+Au from 100.63m down-hole, including:
 - 7m at 1.55% Ni, 0.345% Cu, 0.10% Co and 0.43g/t 2PGE+Au from 106.00m down-hole.
- ▶ IGO finalises planning and logistics to commence geophysics and drilling at the highly prospective Pike Eye target, located ~10km along trend north-east of Legend Mining's (ASX: LEG) Mawson nickel deposit.
- ▶ Strongly-supported \$25 million capital raising completed to fast-track the Company's strategy of developing two significant long-term base metal production centres in South Africa's Northern Cape Province – one at Prieska and one at the OCP.

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

"The March Quarter was a transformational period for Orion Minerals with a number of a highly significant developments across our business at an extremely opportune time in the demand cycle for future-facing metals required from producers with high ESG standards, for the impending global energy transition.

"The key highlight was without a doubt, the signing of an Option Agreement over the Okiep Copper Project (OCP), providing us with a unique opportunity to acquire a dominant position in a world-class copper mining district.

"It's been a case of the right deal at the right time and in the right place for Orion, with the transaction having been warmly received by investors around the world at a time when the global pipeline for near-term production opportunities in the copper sector is almost empty.

"The OCP has strong operational synergies with our existing flagship Prieska Copper-Zinc Project and will provide an outstanding platform to develop a second base metals production hub in South Africa's Northern Cape."

"Our technical evaluation at the OCP has been facilitated and fast tracked through the signing of a separate Option Agreement to acquire an enormous exploration database that includes all historical mining and exploration records, including more than 60 years of data and more than 26,000 historical drill holes and hundreds of exploration and resource estimation reports.

"This database has already proven to be immensely valuable to Orion, underpinning the completion of maiden JORC 2012 Mineral Resource estimates for an initial six deposits at the OCP, hosting a collective 159,000 tonnes of contained copper. We have also selected and prioritised an additional 19 targets for priority evaluation and re-modelling, which we believe offer strong potential to further expand the OCP Resource base. All of the additional 19 targets have high density drill data similar to the six which have already been re-modelled, resulting in confirmation of the resources estimated by previous owners, Gold Fields.

"Despite all the excitement around the OCP transaction during the Quarter, our team remains resolutely focused on bringing the Prieska Project into production at the earliest opportunity. We are continuing engagements with Tier-1 financing groups and institutions, with good progress being made. We are confident that we will achieve a funding outcome on this world-class project in the second half of 2021.

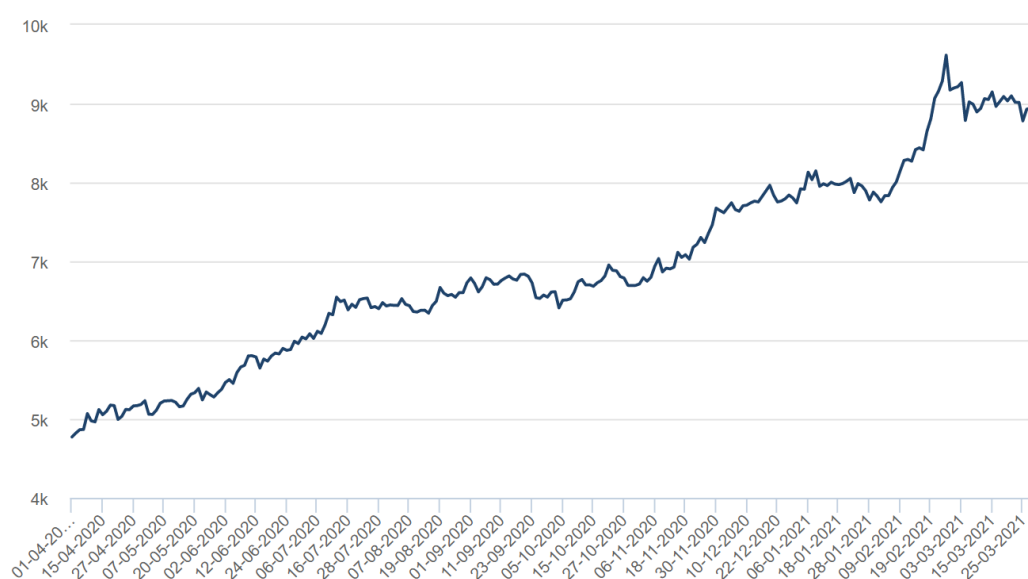
"Our ongoing exploration and development programs across the Northern Cape were underpinned by a successful \$25 million capital raising undertaken during the Quarter, with the funds raised allowing Orion to advance both the Prieska and OCP projects towards development, while also maintaining our active exploration programs across the Northern Cape. The capital raising saw strong demand from key institutional investors, with several new South African and Australian institutions joining the register alongside key European and North American investors.

"On other fronts, we also reported very positive results from our Jacomynspan Nickel-Copper-Cobalt Project, located 80km north-west of Prieska, with diamond drilling intersecting a significant shallow intercept of high-grade nickel-copper-cobalt-PGE mineralisation. We are now planning an intensive drilling program at Jacomynspan to further assess its open pit potential, with the aim of moving the project towards mining studies. We also reported very encouraging results from the Bokspuits VMS prospect – another example of the high-quality pipeline of exploration opportunities within our portfolio."

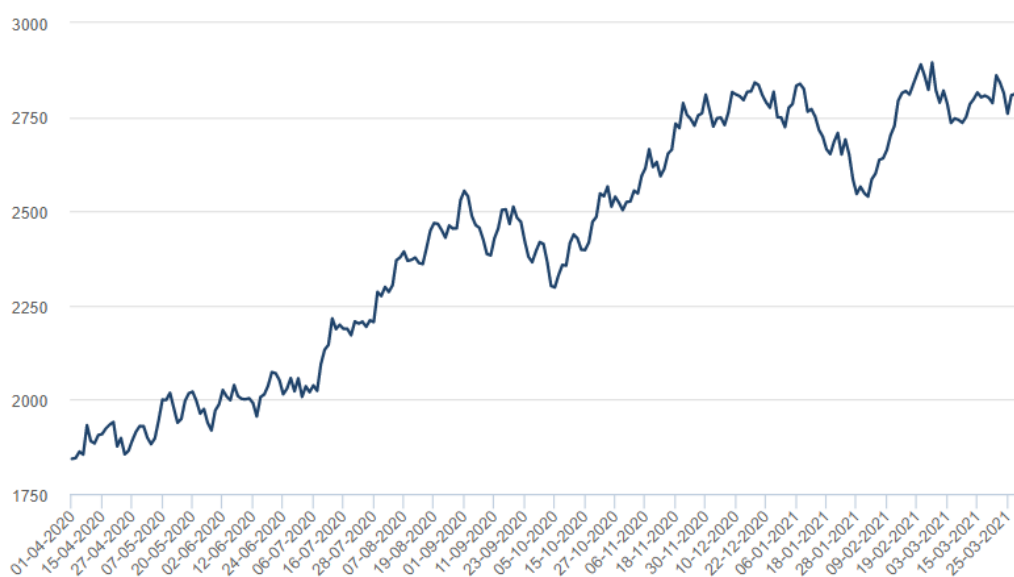
Commodity Markets

Both copper and zinc prices reached multi-year highs during the March Quarter, with the LME cash copper price moving to a new 10-year high of US\$9,550/t in late February 2021, and the London Metal Exchange's three-month copper futures contract moving above \$US9,000 per tonne.

LME COPPER HISTORICAL PRICE GRAPH



LME ZINC HISTORICAL PRICES GRAPH



Source: London Metal Exchange

Economic stimulus measures in China and increasing investment in copper-intensive electrification and green energy initiatives are both expected to support further increases in the copper price in 2021 and beyond.

Based on the impending transition to a low-carbon future, major metals producer and trader Glencore has forecast a two-fold increase in global demand for both copper and zinc by 2050.

Operations Report

Health and Safety, Environmental Management and Community Engagement

Health and Safety

No injuries were recorded during the Quarter. The hours worked for the Quarter and financial year to date are shown below:

Table 1: Hours worked at the Areachap Projects (South Africa).

Category of Work	Hours Worked	
	Quarter	Financial Year to Date
Exploration	1,584	4,796
Mine Re-Entry	384	1,344
Contractors	1,616	3,460
Total	3,584	9,600

The Lost-Time Injury Frequency Rate (**LTIFR**) per 200,000 hours worked is **0** for the 2021 calendar year.

The Company continues to manage the risks from the COVID-19 pandemic in the workplace in line with mandatory and industry guidelines. As of March 2021, the South African Government moved the country to Alert Level 1. No cases of infection with the SARS-Coronavirus 2 have been reported amongst any Company employees or contractors to date. Working from home, social distancing, periodic screening

and testing for possible infection are the measures being used to reduce the risk for workplace transmission of the virus.

Community and Stakeholder Engagement

In collaboration with fellow members of the Siyathemba CSI Collaboration Forum (Mulilo Trust, Alkantpan, Copperton Wind Farm, Garob Wind Farm and GWK), Orion actively engaged with the District Department of Health and the Local Municipality to help establish the Bill Pickard Hospital Pharmacy in Prieska as a COVID-19 vaccination centre. The facility is required to have refrigeration capacity, shelving and digital infrastructure before it is accredited as a COVID-19 vaccination centre.

COVID-19 vaccination centres are eligible to be part of the Government's national vaccination program to administer COVID-19 vaccines for benefit of health workers and the community at large. In the absence of this intervention, the only accredited vaccination centre within the Pixley Ka Seme District is located in De Aar, 180km from Prieska.

Orion has procured a specialised medical vaccine fridge/freezer for the hospital. Delivery and installation at the hospital pharmacy is anticipated by mid-April 2021, in time for the rollout of the COVID vaccination program to the broader community.

During the Quarter, Orion also progressed the implementation of the Bicycles for Humanity (**B4H**) initiative after the COVID lockdown delays of 2020. Arrangements were finalised for the transport of the container of 420 bicycles donated by B4H (located in Western Australia) from Durban Port for delivery in Siyathemba in early April 2021. The Department of Roads and Public Works has kindly allowed the bicycles to be stored in their warehouse in Prieska (Figure 1), from where an initial batch will be assembled and distributed. In phase one, the Bicycling Empowerment Network (**BEN**) will provide basic mechanical and assembly training for a number of potential bicycle workshop entrepreneurs.

BEN is a South African public benefit organisation that partners with B4H to provide access to opportunities through the use of bicycles – giving hope and a step-up to those who need it most. A portion of the bicycles will be distributed to worthy causes.

In phase two, Orion aims to facilitate at least three entrepreneurs to set up their own bicycle workshops (Bicycle Empowerment Centres) in each of Prieska, Marydale and Niekerkshoop.

These community-based entrepreneurial businesses will create affordable and accessible mobility for beneficiaries such as scholars and health workers.



Figure 1: Bicycles for Humanity, in preparation for assembly and delivery.

Throughout the Quarter, Orion continued to actively engage with community stakeholders through the established Stakeholder Engagement Forum and in direct community meetings and, in particular, to address questions related to future employment and contracting opportunities.

Orion's objective is to prepare the local communities through training and development to fulfil as many of the future roles required by Prieska Copper-Zinc Mine (**PCZM**) as possible. The Social and Labour Plan commitments to Human Resource Development (**HRD**) and Skills Development total ZAR42.7 million over five years from project commencement. These HRD programs are proposed to include Adult Basic Education & Training (ABET), Foundational Learning Competence (FLT), learnerships, bursaries, internships and portable skills training, primarily focused on community members.

During the Quarter, the Company initiated planning of interviews and occupational assessment battery tests for attendees of the 'introduction to mining courses' run during 2019 and 2020, to identify individuals with the potential to be trained as 'operators' and 'artisans'.

These broad categories of job roles make up approximately one-third of the proposed PCZM workforce at the operational stage. This intervention is planned to commence during May 2021.

The Company intends to ensure that local businesses and entrepreneurs participate meaningfully in the development of the PCZM development. Planning has commenced for a comprehensive Enterprise and Supplier Development (ESD) Program. This will include a detailed survey of the capabilities of these companies and the selection of a number of high-potential enterprises whose goods and/or services are aligned with the requirements of PCZM, for business development support.

Drawing from the more than 140 Siyathemba businesses that have indicated their interest in future opportunities by registering on the Supply Chain Network (SCNet) portal, the local enterprise development program will aim at assisting Siyathemba businesses develop appropriate capabilities and commercial competitiveness, empowering them with increased opportunity to participate during the construction of the mine and beyond into the production phase.

Prieska Mine Development and Exploration

Prieska Copper-Zinc Project Overview

The Prieska Project continues to be the primary focus of the Company's activities and is now in the financing and pre-development stage following the completion of an updated Bankable Feasibility Study (**BFS**) in the June 2020 Quarter (refer ASX release 26 May 2020). Updates to Environmental Permitting are being finalised and progress continues on selection of the EPCM contractor. Preliminary site works have taken place in readiness for construction.

Following the positive outcomes of the updated BFS, Orion is progressing financing negotiations with a number of tier-1 institutions. Orion intends to fund the development of the Prieska Project through a combination of debt and equity, with the potential for streaming financing to reduce the equity contribution also being evaluated.

Prieska Activities Post Updated Bankable Feasibility Study

Environmental Management

Water Use Licence – During the Quarter, Environmental Licencing updates have been advanced where changes and amendments are required to the approved Water Use Licence. Consultation with the DWSHS has defined the process to be followed, which Orion is now finalising.

Square Kilometre Array – The Prieska Project is located within the Square Kilometre Array Radio Telescope Project (**SKA**) area, in which special licencing is required to undertake mining operations. The permit application deadline has been extended a second time by the Department of Science and Innovation to December 2021. Study work from Orion's EMC (Electromagnetic Capability) team is continuing on this permitting process.

EPCM Contract

Four companies were short-listed from the bids received in 2020 and have been notified of their selection. A site visit which was delayed due to Covid-19 will take place in April 2021. Detailed negotiations with the four companies will then continue with the selection of the preferred company expected to be determined late in the June Quarter.

Project Execution Preparations

Rehabilitation was finished on the safety flood control berms around the edge of the Project area (a condition of the Water Use Licence) and clean-up work was completed around the main shaft area in preparation for the start of construction, as shown in Figure 2 below.



Figure 2: Hutchings shaft area after surface area clean-up.

Process Plant Operations

Discussions are continuing with Minerals Operations Executive (Pty) Ltd (**Minopex**) with respect to contract operations of the processing plant. In addition to the main contract, Minopex have put forward proposals for the plant's Operational Readiness process and a detailed program for plant commissioning. These proposals are being negotiated for expected signature later in CY2021.

Underground Mining Contract

Orion is preparing to re-engage the market regarding an underground mining contract. An external consulting company has been selected to assist Orion in preparing a Project-wide automation strategy and this is expected to be completed by the September Quarter. Following this, negotiations with mining contractors will re-commence based on an agreed mining automation strategy.

Infrastructure

Power Supply – All design work is in place and final Eskom payments have been made for the 15 MVA power infrastructure required for the construction phase of the Project. Eskom granted Orion a six-month extension for payment of the Connection Charge fee for the 40 MVA power to July 2021. The step-up to 40MVA is required at the end of year two in the construction phase.

Water Supply – The Siyathemba Municipality has given formal approval for the Water Supply Agreement for the Project and a signed document is expected during the June Quarter. Following internal legal review of the Alkantpan Water Pipeline Agreement by Armscor, execution is also anticipated by the June Quarter.

Extension of juwi Renewable Energy Collaboration

The Memorandum of Understanding entered into by the Company with juwi Renewable Energies Pty Ltd (**juwi**) was further extended to September 2021.

Orion intends to collaborate with juwi on establishing a hybrid wind and solar renewable energy facility that will supply 52% of the Prieska Project's power requirements. The extension provides the parties the opportunity to explore additional funding options currently under consideration.

Prieska Copper-Zinc Mine Permitting

The PCZM is fully-permitted as a result of the following key milestones:

- Mining Right granted to PCZM (formerly Repli) in September 2019;
- Mining Right granted to Vardocube in August 2020;
- Environmental Financial Provision in place fully capitalised;
- Environmental approval notices received for both PCZM and Vardocube; and
- Water Use Licence granted in August 2020.

Near-Mine Exploration

The near-mine projects are those projects within prospecting rights held by PCZM (**Dooniespan**), Vardocube and Bartotrax (Pty) Limited (**Bartotrax**). Volcanogenic Massive Sulphide (**VMS**) deposits worldwide tend to occur in clusters and, apart from the giant Prieska Deposit, five smaller deposits have previously been discovered on the near-mine project areas.

These include Annex, explored by Anglovaal between 1969 and 1981; Ayoba discovered by Orion in 2018, the PK1, PK3 and PK6 deposits on Dooniespan (**Kielder Prospects**) explored by Newmont South Africa (**Newmont**) between 1976 and 1979 and the Ayoba mineralisation recently discovered by Orion (Figure 3).

During the Quarter, the Company continued a high-impact, prospect-testing drilling campaign across the Near-mine and Regional projects to aid prioritising the pipeline projects supporting the potential to expand or extend the Prieska Project.

For the Near-Mine areas, drilling was undertaken at the K3 and K6 prospects within the Kielder Project, located 15km north-west of the planned PCZM (Figure 3). The drilling program was designed to test outcropping VMS-style mineralisation, where historical shallow drilling by Newmont SA in the 1970s returned results of up to 4.8m @ 0.46% Cu, 6.18% Zn and 15g/t Ag. A total of 57 samples were submitted to ALS laboratory.

Mineralisation similar to that at the Prieska Project was intersected at less than 200m from surface at both K3 and K6.

Orion's holes were designed to verify the historical Newmont results, as well as providing drill core for mineralisation characterisation purposes and to provide a platform for follow-up down-hole geophysics.

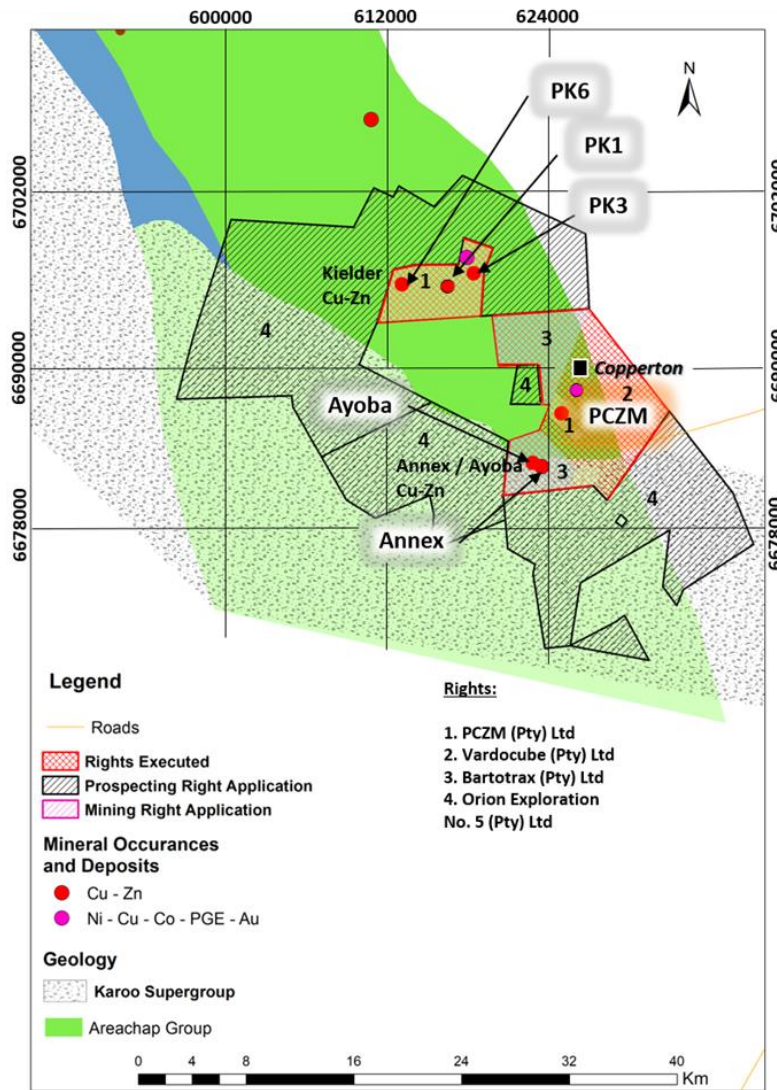


Figure 3: Surface plan showing the prospecting rights over and adjacent to the Prieska Project and the location of the Annex, Kielder (PK1, PK3 and PK6) deposits and Ayoba Prospect.

Regional Exploration

Surrounding the Near-Mine Exploration Project, the Company holds a substantial and prospective land holding in the Areachap Belt (Figure 4). The Areachap Belt is analogous to other Proterozoic mobile belts hosting major VMS and magmatic Ni-Cu-Co-PGE deposits.

In addition to the Near Mine VMS Project, the Company is also prospecting for VMS deposits on the Masiqhame Prospecting Right (Figure 4). The Kantienpan and Bokspuits Copper-Zinc Deposits are the two most prominent known VMS deposits on the Masiqhame Prospecting Right.

Similarly, world-class intrusive nickel deposits also tend to occur in clusters both on prospect and regional scale in orogenic belts along geological plate margins similar to the Areachap setting. Several mafic intrusive bodies with nickel and associated metals are located on the Namaqua Disawell Prospecting Rights. The setting of mineralisation has been confirmed to be analogous to other orogenic-hosted, deep-seated magma conduit complexes such as Kabanga (Tanzania), Nova (Australia), Akelikongo (Uganda), and Limoeiro (Brazil). Conduit-style mineralisation is currently the top priority global target for magmatic Ni-Cu-PGE sulphide exploration.

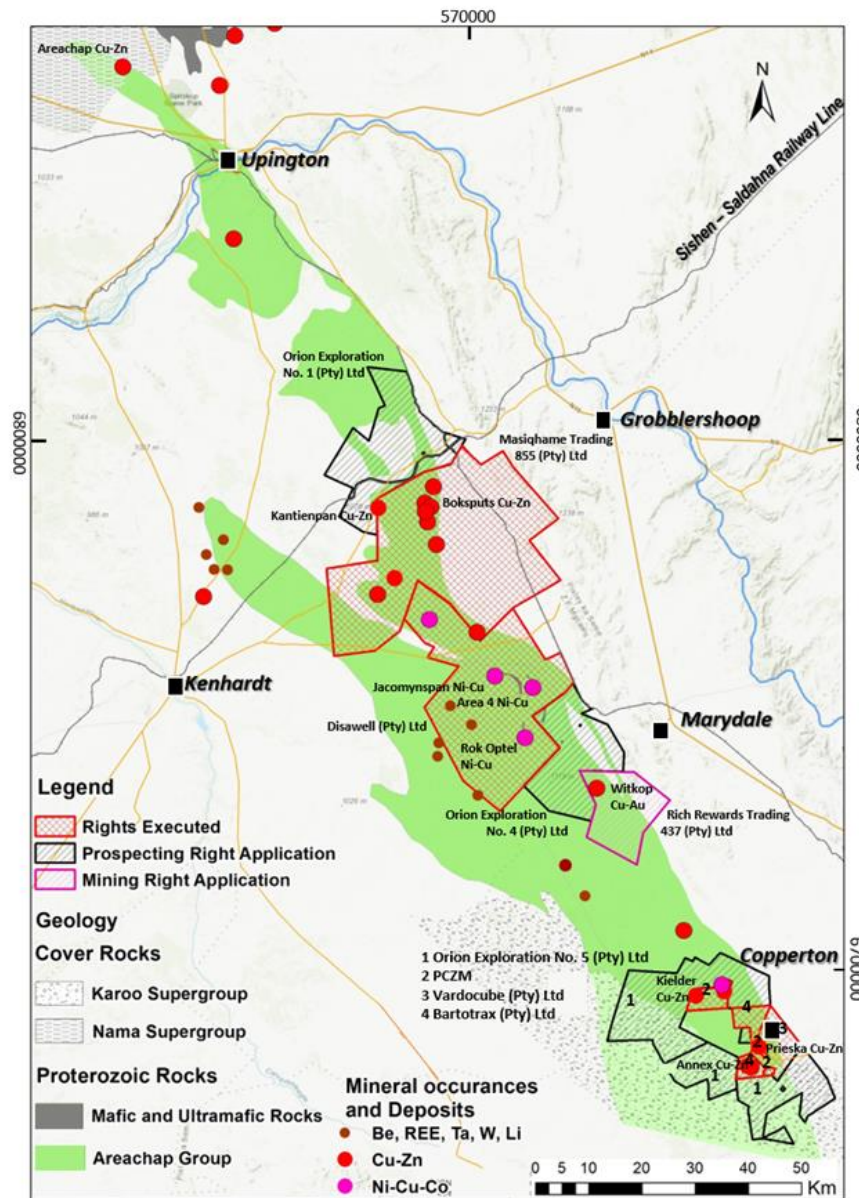


Figure 4: Regional geology map of the Areachap Belt showing prospecting rights held and under application by the Company and noted mineral occurrences as per published data from South African Council for Geoscience.

During the Quarter, assay results were reported from a drilling campaign completed in the December 2020 Quarter, focused on four regional prospects - Jacomynspan, Area-4, Bokspuits and Kantienpan.

This drilling program intersected significant zones of shallow copper, zinc and nickel-copper-PGE mineralisation across all key prospects tested, confirming the under-explored nature of the Areachap Province and the substantial opportunity for a major discovery, both in the near-mine environment around the fully permitted Prieska Project, and the broader region.

At the Jacomynspan nickel-copper deposit, 68km north-west of Prieska, drilling in late 2020 intersected three shallow zones of net textured sulphides with a best intercept in hole OJPD054 of 6.03m at 0.60% Ni, 0.31% Cu, 0.19g/t Pd, 0.21g/t Pt and 0.20g/t Au from 145.36m, including 1.10m at 1.23% Ni and 0.69% Cu from 146.35m.

Following the encouraging results reported in hole OJPD054, Orion undertook a second diamond drill hole at Jacomynspan, OJPD055, which returned a significant high-grade massive sulphide intercept. The

shallow intercept has substantially upgraded the prospectivity of the project and highlights the opportunity for a near-term resource drill-out targeting the upper portions of the deposit.

Diamond drill hole OJPD055 intersected a broad zone of strong mineralisation comprising:

- **31.53m from 100.63m at 0.72% Ni, 0.34% Cu, 0.05% Co and 0.45g/t 2PGE+Au from 100.63m down-hole**, including a higher-grade zone of:
- **7.00m from 106.00m at 1.55% Ni, 0.35% Cu, 0.10% Co and 0.43g/t 2PGE+Au from 106.00m down-hole**.

The mineralisation is hosted by the Jacomynspan Intrusive, an ultramafic body striking roughly east-west for more than 3km with a thickness of up to 70m and dipping 80 degrees south. Jacomynspan currently hosts a Mineral Resource of 6.8Mt at 0.57% Ni, 0.33% Cu, 0.03% Co, 0.19g/t Pt, 0.12g/t Pd, 0.07g/t Au (refer ASX release 20 October 2020). The Jacomynspan Project is located some 80km north-west of Orion's flagship Prieska Project on the Namaqua and Disawell prospecting rights in the Areachap Belt, South Africa.

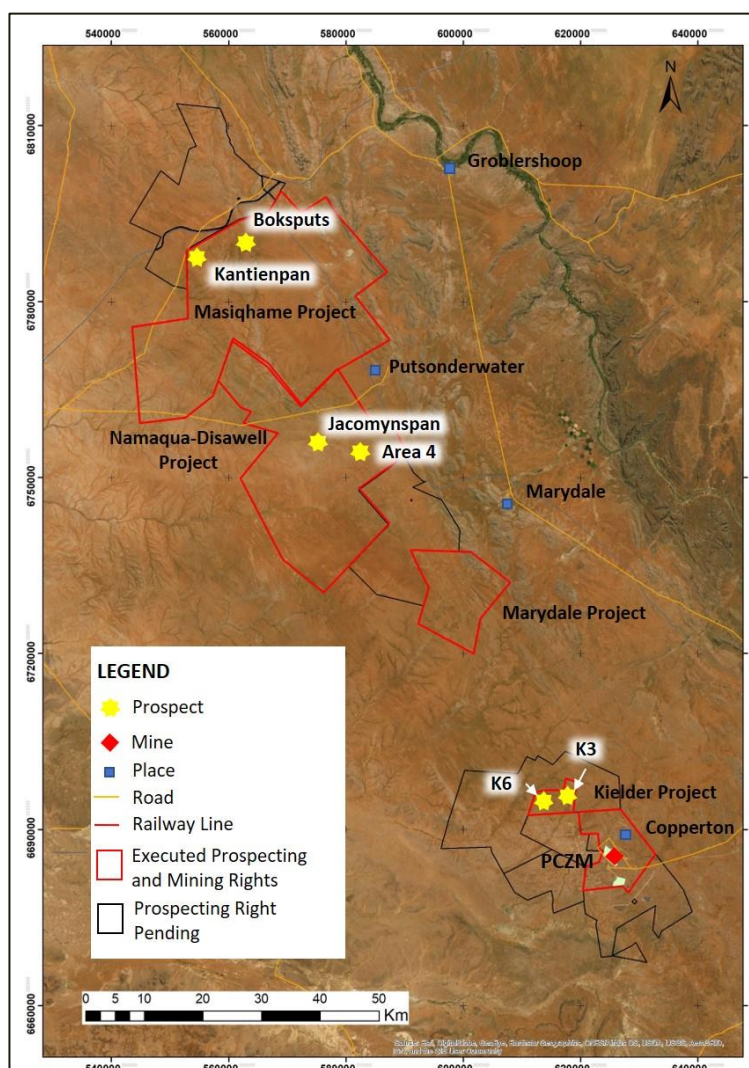


Figure 5: Locality map showing the prospects drilled during the 2020 / 2021 drilling campaign on the Areachap Belt.

Orion is currently investigating the potential to exploit the shallow parts of the Jacomynspan deposit through open pit mining. Significantly, the high-grade mineralisation intersected in OJPD055 occurs just 85m below surface, highlighting the need to drill-out the upper 200m of the deposit over the interpreted strike length of over 3km (see Figure 6, which is a cross-section along Section Line 5 in Figure 7).

Figure 7 shows the drilling completed by various companies along the 3km of strike length of the Jacomynspan Intrusive. Drilling was concentrated on the deeper parts of the deposit and very few holes intersected the deposit above 150m vertical depth, as historical exploration was undertaken with a mindset focused on underground mining.

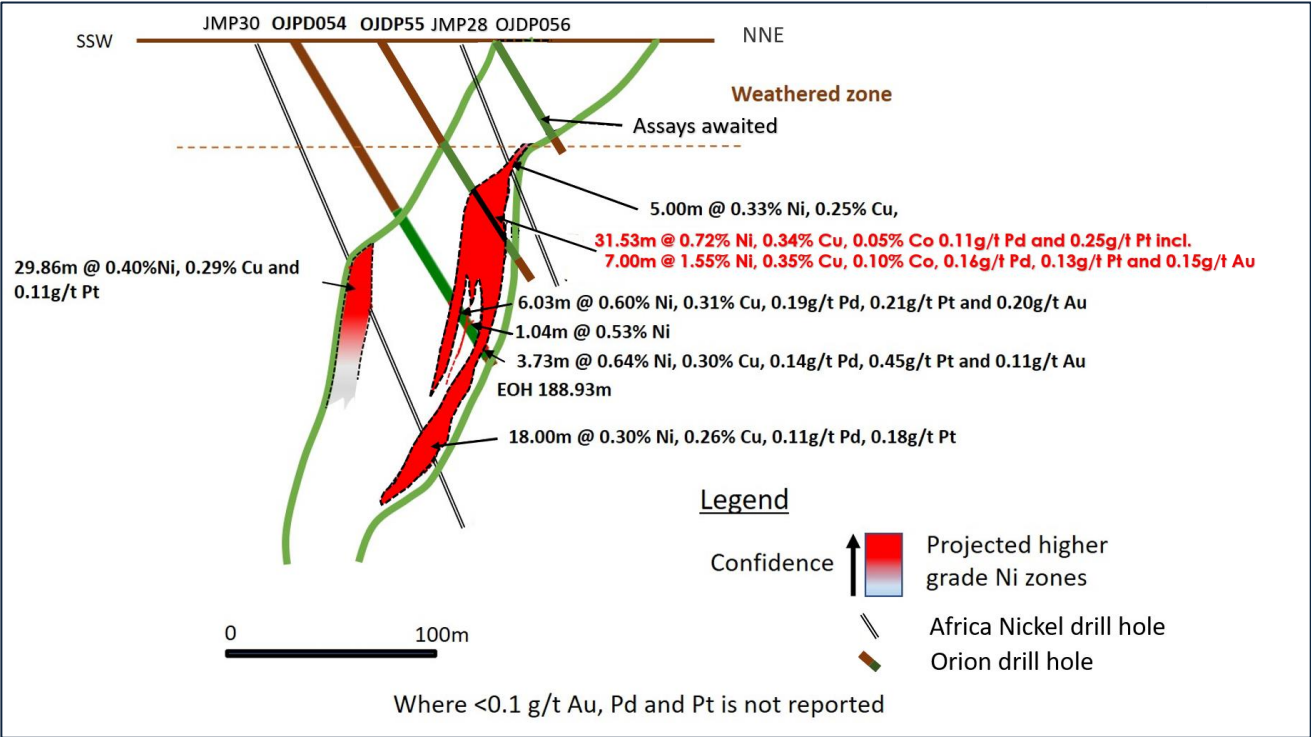


Figure 6: Geological cross-section along Section 5 showing the higher nickel grades close to surface.

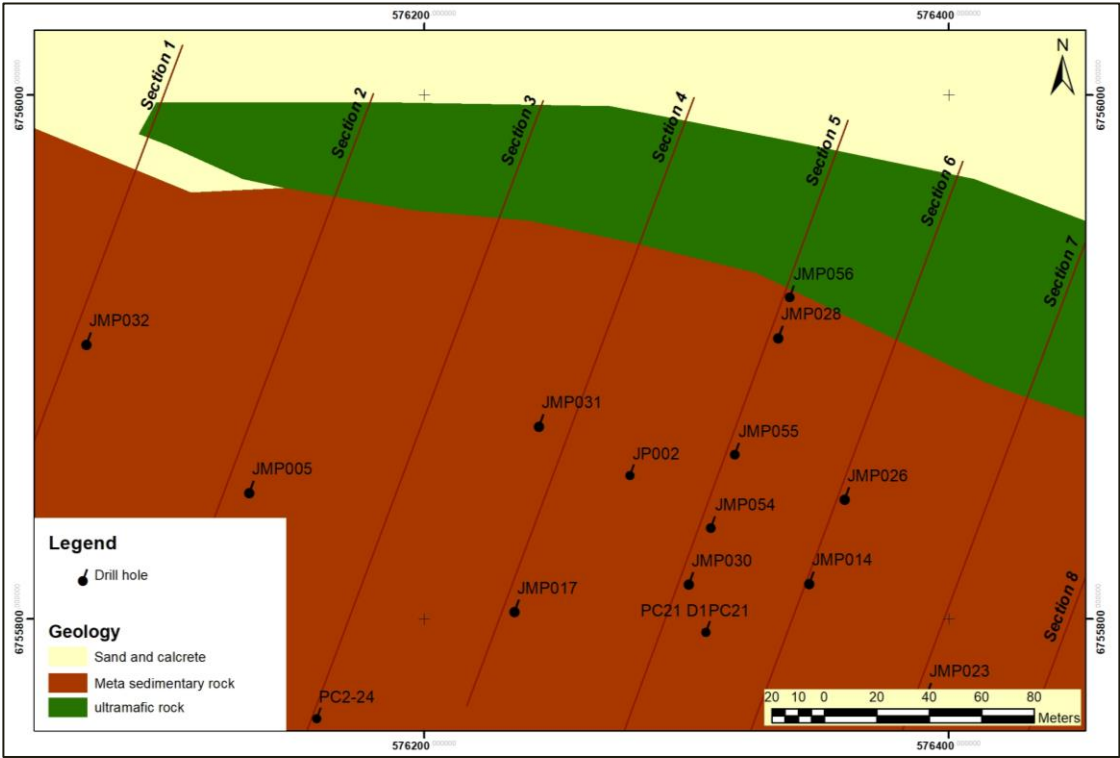


Figure 7: Map showing drill holes and section lines in the vicinity of OJPD055.

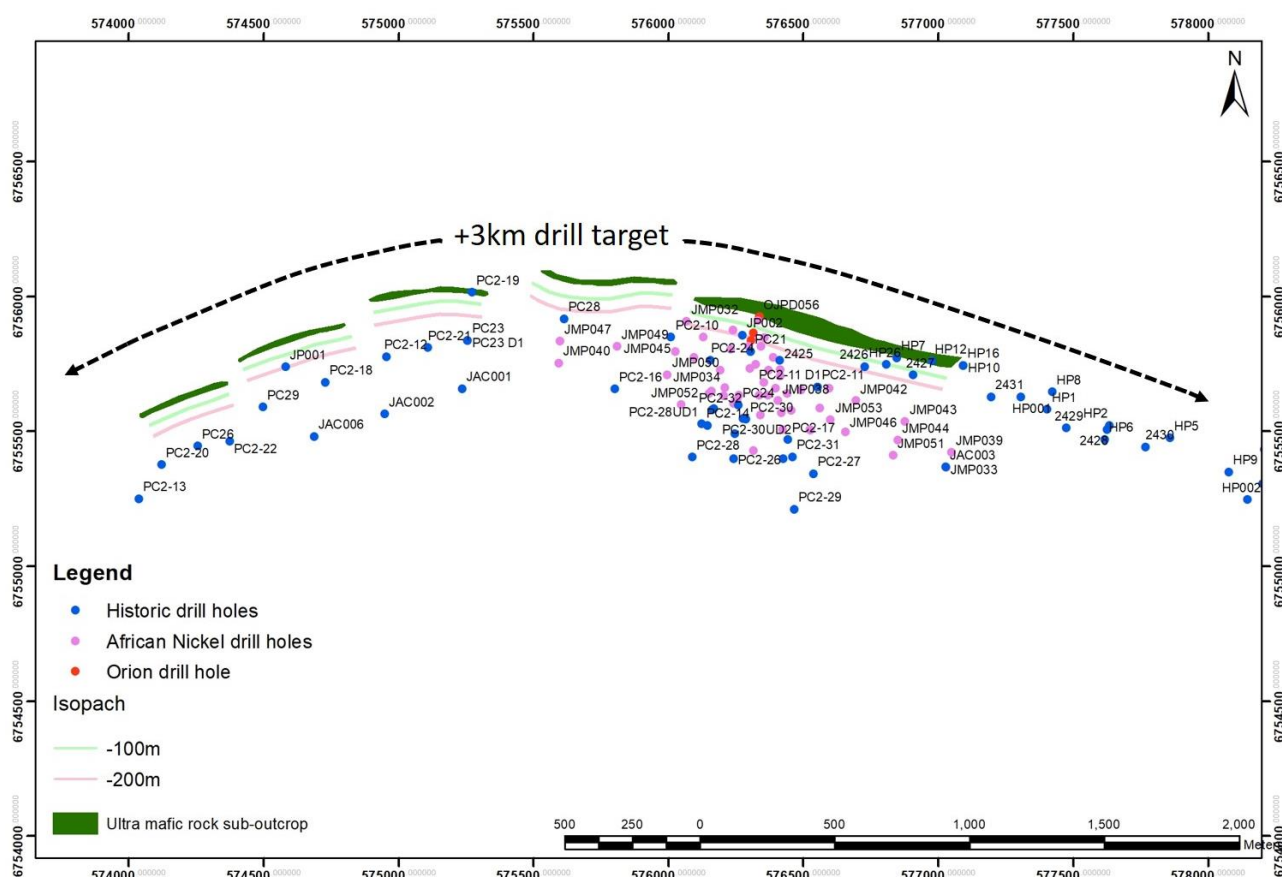


Figure 8: Map showing ultramafic sub-outcrops of the Jacomynspan Intrusive and drilling by various exploration companies.

The lack of shallow drilling at Jacomynspan leaves Orion with a significant opportunity to explore at shallow depth, above the historical drill intercepts and known nickel-copper-cobalt mineralisation at depth.

Work is currently underway to plan an extensive resource drill-out targeting the upper 200m of the deposit, with a view to establishing a JORC Mineral Resource as the foundation for economic studies. This work is being progressed in parallel with metallurgical test work.

Alongside Jacomynspan, another key focus for Orion will be the greenfields Bokspuits Project, located 125km north-west of Prieska, where a deep diamond drill hole completed in late 2020 intersected numerous zones of VMS copper mineralisation across multiple horizons, with initial assays including 5m at 1.09% Cu and 0.13g/t Au from 393.00m and 1m at 2.25% Cu and 0.32g/t Au from 498.45m.

Marydale Gold-Copper Project (Witkop)

No exploration was carried out on the Marydale Gold-Copper Project during the Quarter.

Regional Collaboration Potential

The base metals' prospectivity of the Northern Cape Province, in general, continues to be of strategic importance to the Company's activities.

The activities of other explorers and mine developers in the region may offer the potential for collaboration in many areas, such as, sharing of support infrastructure, logistics, labour sending areas, community and social responsibility initiatives, technical data and operational experiences to mutual benefit. The Company continued to actively investigate the progress of various mineral development projects in the region and assessing for potential areas for collaboration.

Okiep Copper Project Acquisition

Option Agreement

During the Quarter, Orion entered into an agreement giving it exclusive rights and a clear pathway to acquire and consolidate a significant interest in an extensive copper mining complex, the Okiep Copper Project (**OCP**), located approximately 570km north of Cape Town in the Northern Cape Province of South Africa (Figure 9).

Under the agreement, Orion has an exclusive option to undertake due diligence and acquire a 56.25% interest in Southern African Tantalum Mining (Pty) Ltd (**SAFTA**) – alongside Industrial Development Corporation of South Africa Limited (**IDC**) with 43.75%, 100% of Nababeep Copper Company (Pty) Ltd (**NCC**) and 100% of Bulletrap Copper Company (Pty) Ltd (**BCC**).

These entities, hold the mineral rights to the majority of the large historical mines of the Okiep Copper Company, which historically produced more than 2Mt of copper metal from a significant copper-producing district in the Northern Cape Province, ~570km north of Cape Town.

The OCP includes several unmined, drilled copper deposits – some with outcropping mineralisation and many with underground mine access declines and shafts in place. The current owners have completed resource estimates and a scoping-level Feasibility Study that Orion will subject to due-diligence scrutiny until 31 July 2021.

Based on its initial investigations and based on the Sellers' estimates, Orion believes there is an opportunity to restore mining at OCP to historical production levels when it was operated by Newmont, establishing a second base metal production hub that could supplement production of copper and zinc concentrates from Orion's flagship Prieska Project, located 450km east of OCP.

The total acquisition cost assuming the option is exercised, payable in stages at various milestones through a combination of cash and Orion Shares (subject to any necessary Orion shareholder approvals), amounts to an aggregate total of ~\$7.5 million of initial purchase consideration, with possible deferred consideration of an additional ~\$8.5 million, subject to future exploration success.

The deferred consideration is payable on successful definition of JORC compliant Mineral Resources above cut-off grades ranging from 1%-1.2% Cu in addition to a baseline of 8.9Mt.

Full details of the Option Agreement over the OCP were provided in the Company's ASX/JSE release dated 2 February 2021 and additional information is included in the Corporate section of this Report.

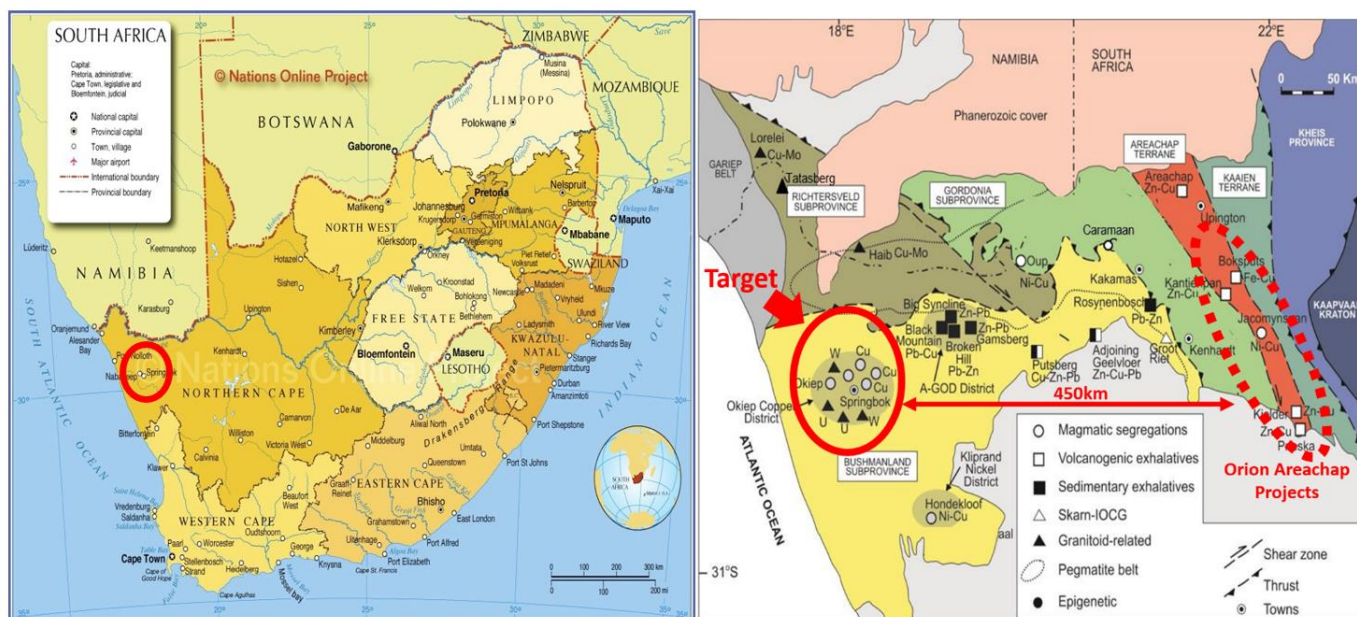


Figure 9: Location of the Okiep Copper Complex in relation to Orion's existing Areachap projects.

Database and Premises Acquisition

Following the execution of the Option Agreement over the OCP outlined above, Orion signed a second agreement securing the right to acquire the freehold title to the partially furnished original O'Okiep Copper Mines head office and data archives housing detailed records of more than 60 years of high intensity and high-quality mining and exploration work undertaken across most of the Northern Cape region of South Africa.

The proposed acquisition represents a significant step forward for Orion, positioning it to fast-track its evaluation, feasibility and exploration activities across the OCP.

The option also includes the work undertaken by an Australian company to scan and digitise a significant proportion of the exploration and drilling records and produce preliminary digital models to evaluate selected targets. The cost of acquisition of data relating to OCP, which amounts to half of the data acquisition price, is deductible from the OCP acquisition price announced on 2 February 2021.

In addition to the OCP, the data includes exploration records and historical due diligence reviews over much of the Northern Cape Province, including Orion's own PCZM and the Areachap Belt, undertaken by Newmont and Goldfields through the O'Okiep Copper Company.

Consolidating these datasets and records with current Prospecting Rights and Mining Rights that are subject to the OCP option agreement unlocks enormous value and positions Orion to fast-track exploration and feasibility studies on a number of high-priority targets.

Additional information is included in the Corporate Section of this Report.

JORC 2012 Resource Estimates

Since signing the Option Agreement over the OCP in February 2021, due diligence work undertaken by Orion has defined Mineral Resource estimates for six deposits within the Flat Mines Area.

The six deposits are Flat Mine North, Flat Mine East, Flat Mine South, Flat Mine (Nababeep), Jan Coetzee Mine and Nababeep Kloof Mine, with a project-wide Mineral Resource Estimate at the OCP now totalling 11.5 million tonnes grading 1.4% copper for 159,000 tonnes of contained copper (Figure 10).

Mine / Prospect	Measured			Indicated			Inferred		
	Mt	% Cu	† Cu	Mt	% Cu	† Cu	Mt	% Cu	† 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	0.800	1.11	8,900	-	-	-
Flat Mine North	0.339	1.27	4,300	0.970	1.50	14,500	-	-	-
Flat Mine South	-	-	-	3.321	1.41	45,600	0.4	0.8	3,000
Total	3.505	1.41	49,300	5.001	1.38	69,000	3.0	1.3	38,000

*Numbers may not add up due to rounding in accordance with the JORC code guidance. Resources are reported at a 0.7% Cu cut-off grade.

The Mineral Resource estimations are based on historical drilling data and were estimated by a Competent Person and classified in accordance with the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code 2012) with supporting information provided in the Company's ASX/JSE releases dated 10 February 2021 and 29 March 2021.

Other exploration and mining drill targets and historical mines are currently being modelled, with the potential to deliver further growth in the OCP Mineral Resource.

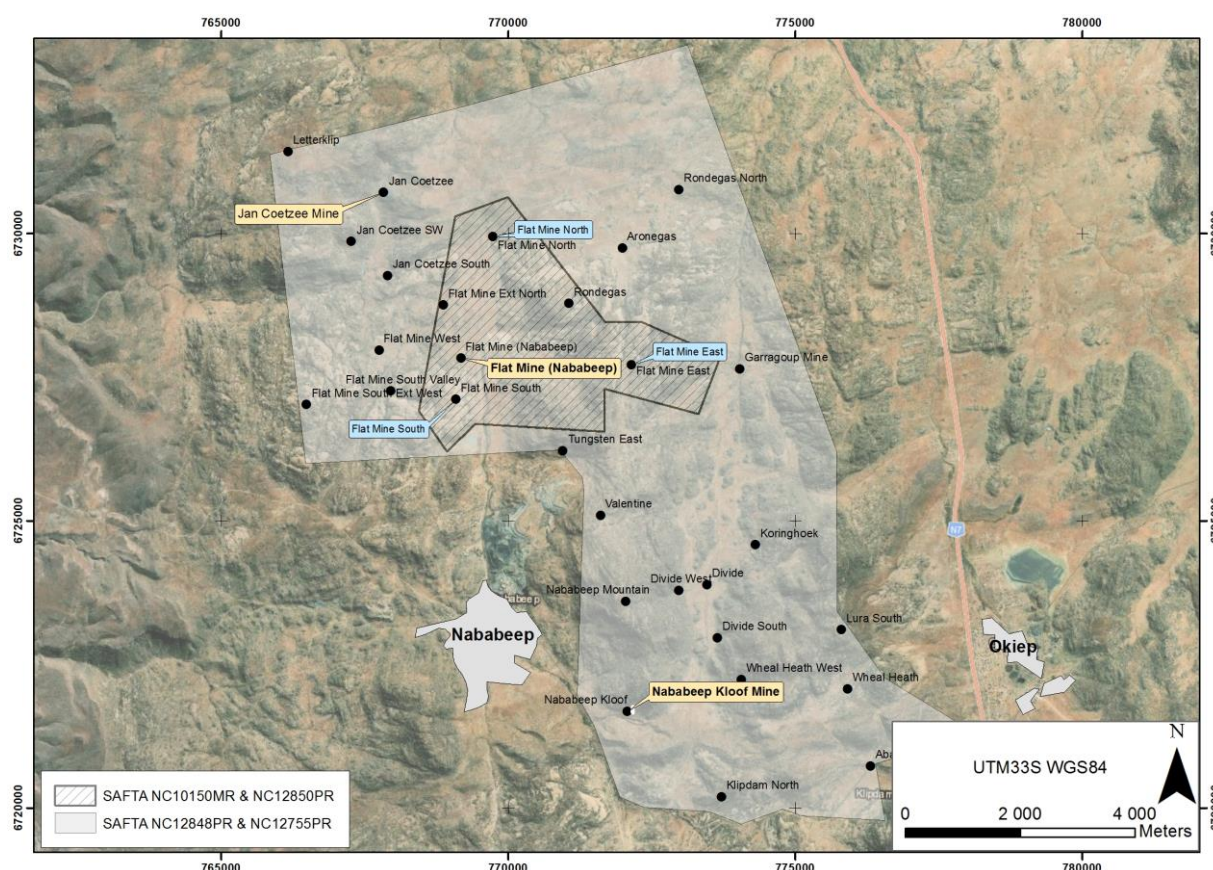


Figure 10: SAFTA/Orion prospecting and mining rights showing location of Mineral Resources (blue labels reported on 10 February 2021 and orange labels reported on 29 March 2021).

Australian Projects

Fraser Range – Nickel-Copper Projects (Western Australia)

Orion maintains a sizeable tenement package in the Fraser Range Province of Western Australia in joint venture with IGO Limited (ASX: IGO) (refer ASX release 10 March 2017). Under the terms of the joint venture, IGO is responsible for all exploration on the tenements and provides regular updates to Orion on activities and results.

Importantly, Orion maintains an exposure to the ongoing exploration and development of the Fraser Range Project without additional financial commitment, given that Orion is free-carried through to the first pre-feasibility study on any of the tenements.

During the Quarter, IGO undertook further desktop reviews of work completed to date and finalised planning and preparation of the 2021 field season work. The work planned to be undertaken includes:

- Diamond drilling;
- Air-core drilling; and
- Moving loop electromagnetic surveys.

Essential to exploration at Pike Eye is a dependable water supply. An agreement was signed between the owners of Kanandah Station and IGO for the use of water that will support the track improvements and maintenance, while also allowing the long-awaited follow-up drilling at Hook and Pike Prospects to commence.

On 28 April 2021, Legend Mining Limited (ASX: LEG) announced further promising nickel-bearing massive sulphide intersections in diamond holes at the Mawson deposit, located approximately 10km south-west along trend of the Orion-IGO Pike Eye target (Figure 11).

The latest Mawson intersection confirms the trend of the Mawson discovery toward Pike Eye.

IGO had previously intersected similar host geology to Mawson at Hook, including mafic intrusive hosted sulphide mineralisation, together with a strong off-hole conductor (18,000 Siemens) identified in diamond drill hole 19AFDD1008 (refer ASX release 3 February 2020). Follow-up drilling has been frustrated for an extended time due to logistics issues that have now been resolved.

IGO has informed Orion that they will shortly commence follow-up drilling and geophysics at Hook and at Pike Eye.

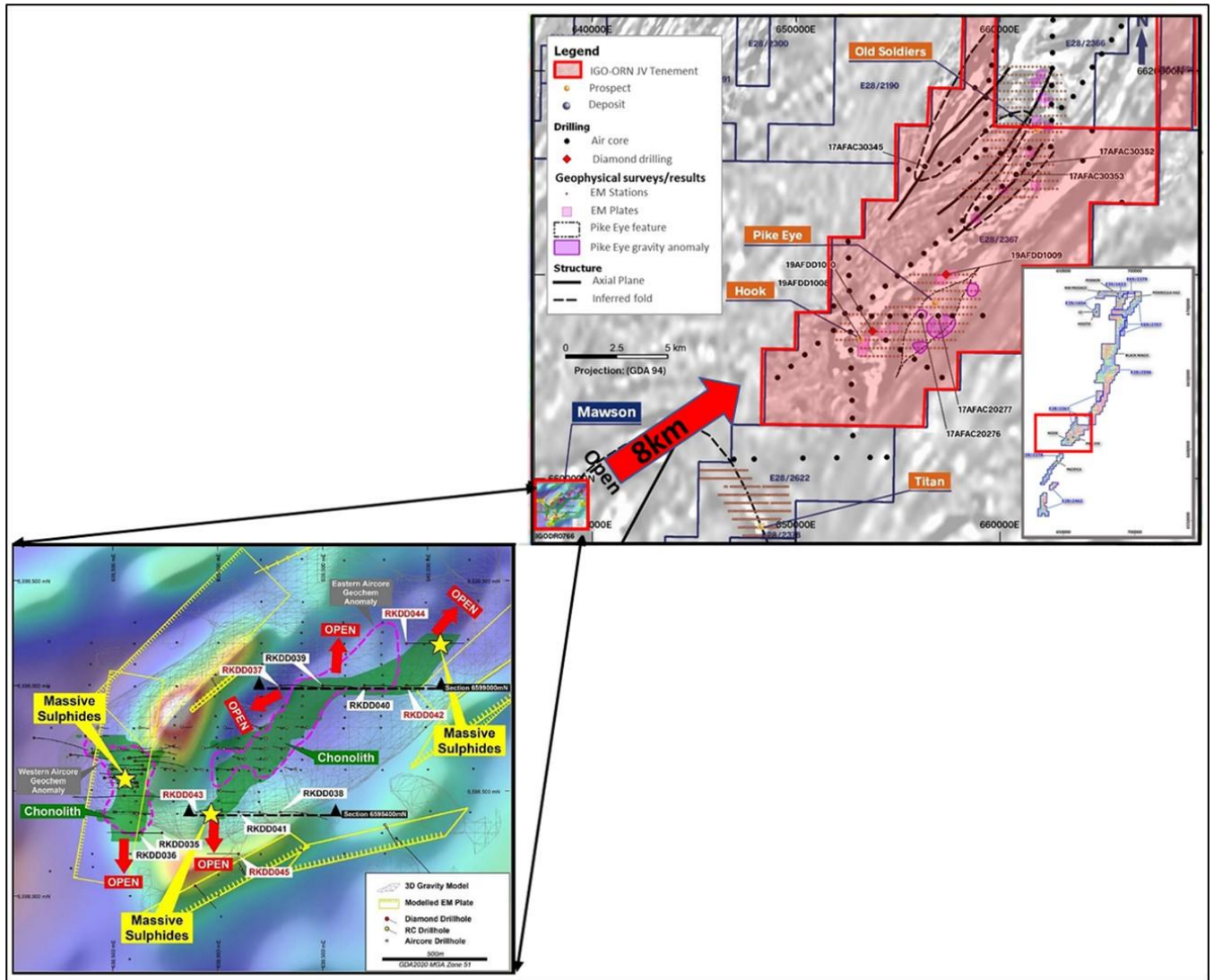


Figure 11: ORN-IGO JV prospects on E28/2367 with Legend Mining Mawson deposit shown relative to area.

Walhalla Gold and Polymetals Project (Victoria)

While the Walhalla-Woods Point District is best known for gold mining, high-grade copper-nickel and PGE mineralisation also occurs within the belt. Both the gold and copper-nickel-PGE mineralisation within this district are hosted within dykes from the Woods Point Dyke Swarm (WPDS), a series of ultramafic to felsic dykes occurring over a 75km long north-south belt.

No field or exploration work was carried out on the Victoria Project during the Quarter. During the Quarter, the Company continued to progress its licence applications over prospective areas of Walhalla.

Corporate

Cash and Finance

Cash on hand at the end of the Quarter was \$17.39 million. Payments made to related parties and their associates during the Quarter was \$246k and relates to Director fees and consulting fees, as listed in Section 6 of the Company's Quarterly Cash Flow Report (Appendix 5B).

Following Quarter end, on 19 April 2021, Orion received \$7.4 million in cash, resulting from receipt of funds from investors for Tranche 2 commitments of the \$25 million capital raising, announced by Orion on 25 February 2021 (see Capital Raising details below).

Capital Raising

Orion undertook a strongly supported \$25 million capital raising during the Quarter to fast-track its strategy of developing two significant long-term base metal production centres in South Africa's Northern Cape Province.

The landmark capital raising, which was strongly supported by leading Australian and global institutions, high net worth and strategic investors, will give it the capability to:

- Progress its development-ready Prieska Project to a Final Investment Decision in the second half of 2021, undertake early-works and secure a comprehensive project funding package;
- Undertake resource evaluation and exploration activities at the OCP, complete the potential acquisition of this advanced copper development asset and progress it rapidly towards a near-term production scenario; and
- Progress a significant exploration effort, both at the OCP and across numerous recently defined near-mine and regional exploration targets across the Areachap Province of the Northern Cape.

The Placement was strongly supported by Australian and international institutional investors, including a number of South African institutional investors. The proceeds of the Placement will significantly strengthen Orion's balance sheet, allowing it advance both the Prieska and OCP assets while also progressing a multi-pronged exploration campaign across the Northern Cape Province.

The capital raising, which is being conducted via a two-tranche placement to sophisticated and professional investors, comprises ~694.4 million shares at an issue price of \$0.036 per fully paid ordinary share **(Share) (Placement)**.

The Placement occurred in two stages, being:

- Tranche 1 – 490 million Shares, using the Company's 15% placement capacity under ASX Listing Rule 7.1, which was completed in March 2021 and raised \$17.6 million (before costs); and
- Tranche 2 – 204 million Shares to raise \$7.4 million (before costs), including \$2 million from Orion non-executive Director Tom Borman, (subject to shareholder approval, obtained at a general meeting of Orion shareholders held on 15 April 2021). Following Quarter end, on 19 April 2021, Orion issued 204 million Shares, at an issue price of \$0.036 per Share to raise \$7.4 million, resulting from receipt of funds from investors for Tranche 2 commitments and finalising the capital raising.

Petra Capital Pty Limited and Jett Capital Advisors, LLC acted as joint lead managers and joint bookrunners to the capital raising and have been supported in South Africa by Webb Street Capital.

In addition to the capital raising, following Quarter end, on 19 April 2021, Orion issued 1 million Shares at an issue price of \$0.036 per Share (being the same issue price as Shares issued under the capital raising) to Orion's non-executive Director, Mr Godfrey Gomwe, to raise \$36,000.

Okiep Copper Project Option Agreement

As outlined above, Orion has been granted an exclusive right to undertake a due diligence investigation in relation to the OCP mineral interests, which are held by SAFTA, NCC and BCC **(Target Entities) (Exclusivity Undertaking)** and an exclusive option to acquire all of the shares in, and shareholder claims against, SAFTA, NCC and BCC (excluding those shares in and claims against SAFTA held by the Industrial Development Corporation of South Africa Limited **(IDC) (Option)**).

The key terms of the agreement are:

- **Exclusivity Undertaking**
 - The Target Entities and their respective shareholders (excluding the IDC) (Selling Shareholders) have granted Orion the exclusive right to carry out due diligence

investigation in relation to the Target Entities, their business, status and their respective mineral projects (**Mineral Projects**);

- In consideration for the Exclusivity Undertaking, Orion will make periodic cash payments to the Selling Shareholders of up to ZAR1.8 million (~\$157k) (**Exclusivity Payments**) during the Exclusivity Period, which ends on 31 July 2021. Orion is entitled at any time to withdraw and it will then not be obliged to make any further Exclusivity Payments and the Option and the Exclusivity Undertaking will lapse; and
- During the Exclusivity Period, Orion undertakes to spend up to ZAR5 million (~\$435k) in carrying out the due diligence Investigation, which may include engineering and geological investigations such as geophysical surveys, exploration drilling and resource and reserve estimation.
- Orion will engage with IDC regarding its shareholder rights enshrined in SAFTA memorandum of incorporation in order for the transaction to proceed.
- **Option to Purchase**
 - The Selling Shareholders have granted Orion the exclusive option to acquire all of the issued shares in the Target Entities held by the Selling Shareholders (**Sale Shares**) and all of the claims which the Selling Shareholders may have against the Target Entities (**Sale Claims**) (collectively, the **Sale Equity**);
 - Orion is entitled to exercise the Option in relation to the Target Entities at any time during the Exclusivity Period; and
 - As noted above, IDC will retain an initial 43.75% interest in SAFTA.
- **Option Exercise Price**
 - The purchase price payable by Orion to the Selling Shareholders for the sale of the Sale Equity following Orion's exercise of the Option (**Option Exercise Price**) is as follows:
 - ZAR24.1 million (~\$2.1 million) cash; and
 - ZAR62.0 million (~\$5.4 million) Orion Shares (**Consideration Shares**).
 - The aggregate of the Exclusivity Payments made to the Selling Shareholders will be deducted from the cash portion of the Option Exercise Price; and
 - The issue price of the Consideration Shares will be equal to the 30-day volume weighted average price (**VWAP**) of the Orion Shares traded on the Australian Securities Exchange (**ASX**) and the Johannesburg Stock Exchange (**JSE**) in the period immediately prior to the date on which the Suspensive Conditions have been fulfilled and/or waived.
- **Suspensive Conditions to the Sale**
 - The Sale will be subject to the fulfilment (or, where possible, waiver) of various suspensive conditions on or before the second anniversary of the date that Orion exercises the Option.
- **Deferred Payment**
 - In addition to the Option Exercise Price, the Selling Shareholders will be entitled to a conditional deferred payment of up to ZAR98.3 million (~\$8.5 million) (**Agterskot**);
 - The Agterskot will be calculated on the basis of the number of tonnes of Mineral Resources published by Orion in relation the Mineral Projects in compliance with the JORC Code in addition to the initial baseline of 8.9Mt;
 - The Agterskot will be settled by way of Orion issuing Shares to each Selling Shareholder in the Target Entity concerned (**Agterskot Shares**) where:
 - the relevant number of Agterskot Shares will be issued twice-annually within 30 days after the publication by Orion of each of its half-year results and its full year results, in each case in relation to the Mineral Resources identified and reported in

relation to each Mineral Project since the last half-year or full-year results publication (as the case may be); and

- the issue price of the Agterskot Shares will be equal to the 30-day VWAP of the Orion Shares traded on the ASX and the JSE in the period immediately prior to the publication date of the relevant half-year or full-year results (as the case may be).

- **Post-Closing Expenditure Commitment**

- Orion will, within a period of 12 months after the Closing Date of each Target Entity, incur aggregate exploration expenditure of at least ZAR12.0 million (~\$1.0 million) in exploring the Mineral Projects and in seeking to satisfy the Mineral Resource requirements on the basis of which the Agterskot will become payable to the Selling Shareholders.

The agreement otherwise contains such undertakings, warranties and terms and conditions as would be standard and customary to include in transactions of this nature.

Full details regarding the agreement are included in the Company's ASX/JSE release dated 2 February 2021.

Additional information is included in the Okiep Copper Project Acquisition section of this Report.

Option Agreement to Acquire OCC Database

As outlined above, Orion has secured an Option Agreement to acquire the entire furnished head office and database of the O'Okiep Copper Company.

The key terms of the Option are:

- **Exclusivity Undertaking and Option**

- SAFTA, NCC and BCC (collectively, **Project Companies**) each hold various mineral rights (or applications for mineral rights) granted or applied for in terms of the Mineral and Petroleum Resources Development Act, 2002 (**Mineral Rights**) in relation to the historical copper mining region known as the Okiep Copper Complex (**OCC**). As announced on 2 February 2021 the Project Companies have granted exclusive rights to Orion to undertake due diligence in respect of the Mineral Rights and acquire shares in the Project Companies (excluding the shares held by Industrial Development Corporation of South Africa Limited (**IDC**) in SAFTA).
- Separately, O'Okiep (Okiep) Copper Company Proprietary Limited, O'Okiep Australia Pty Ltd (**OCC Australia**), N7 Transport CC (**N7 Transport**) (**Vendors**) own, or have an interest in certain historical mine data, files, maps, reports and records in relation to the area within, and in the vicinity of, the Mineral Rights, as well as certain analyses and modelling of such information (**Mining and Exploration Data**). N7 Transport owns the premises in which hard copies of the Mining and Exploration Data is stored, including the land, buildings, residential accommodation and the contents thereof (**Premises**) (**Mining and Exploration Data and Premises** together referred to as **Sale Assets**).
- The Vendors have granted Orion:
 - the exclusive right to review the Mining and Exploration Data and utilise the Premises; and
 - an exclusive option to purchase the Sale Assets (**Option**),from 12 February 2021 until 31 July 2021 (**Exclusivity Period**).
- The Vendors also undertake that, for the duration of the Exclusivity Period, they will engage exclusively with Orion and will not solicit, entertain or consider any proposal or discussion, or enter into any agreement, which would be the same as or substantially similar to the Option (or any acquisition contemplated in terms of the Option).
- In consideration for the Vendors granting the Option to Orion as set out above, in March 2021 the Company issued 1.88 million Shares at an issue price of \$0.046 per Share to OCC Australia, equal

in value to ZAR1.0 million (**Option Fee**) (**Option Consideration Shares**).

- Orion may exercise the Option on any date until 31 July 2021 (the date on which Orion exercises the Option, being the **Option Exercise Date**).

- Option Exercise**

- The aggregate purchase price payable by Orion to the Vendors for the Sale Assets following Orion's exercise of the Option (**Option Exercise Price**) is as follows:

Target Entity	Option Exercise Price		Total
	Cash	Cash or Shares ¹	
Stage 1:			
Mining and Exploration Data	ZAR3.5M	ZAR2.5M	ZAR6.0M
Premises	ZAR0.5M	---	ZAR0.5M
Sub-total	ZAR4.0M	ZAR2.5M	ZAR6.5M
Stage 2:			
Mining and Exploration Data	---	ZAR18.0M	ZAR18.0M
Premises	ZAR0.5M	---	ZAR0.5M
Sub-total	ZAR0.5M	ZAR18.0M	ZAR18.5M
Total	ZAR4.5M	ZAR20.5M	ZAR25.0M

¹. Orion may at its election, settle the Option Exercise Price in cash or Shares (refer below).

- The Option Exercise Price will be settled as follows:
 - Stage 1 Cash: Payable within 5 business days following the Option Exercise Date.
 - Stage 1 Shares: Where Orion elects to settle the Option Exercise Price in Shares, the Shares will be issued within 30 days following the Option Exercise Date as follows:
 - the Share issue price of the Option Exercise Price will be equal to the 30 trading-day volume weighted average price of the Orion Shares (in AUD) traded on the JSE and the ASX in the period immediately prior to the Option Exercise Date; and
 - the Option Exercise Price shall be converted from ZAR into AUD using an exchange rate equal to the average ZAR / AUD exchange rate in the 30 trading-day period immediately prior to the Option Exercise Date.
 - Stage 2 Cash: Payable on or before 12 February 2022.
 - Stage 2 Shares: Where Orion elects to settle the Option Exercise Price in Shares, the Shares will be issued on or before 12 February 2022 on the same terms as those Shares issued by Orion in Stage 1, above.
- The Option Exercise Price payable in respect of the Mining and Exploration Data shall be reduced by the Option Fee, and the Option Exercise Price payable in respect of the Premises shall be adjusted to account for certain expenses, rates, taxes and levies incurred up to the date of registration of the transfer.
- On exercise of the Option, the Exclusivity Period shall be automatically extended to the earlier of 12 February 2022, or the date on which ownership of the Sale Assets transfer to Orion (or its nominee).
- The agreement otherwise contains such undertakings, warranties and terms and conditions as would be standard and customary to include in transactions of this nature.

Additional information is included in the Okiep Copper Project Acquisition section of this Report.

Anglo American sefa Mining Fund – Loan

On 2 November 2015, Prieska Copper Zinc Mine (Pty) Ltd (**Prieska**) (formerly Repli), (a 70% owned subsidiary of Orion) and Anglo American sefa Mining Fund (**AASMF**) entered into a ZAR14.25 million loan agreement for the further exploration and development of the Prieska Project (**Loan**). The key terms of the Loan are set out in Section 7 of the Company's Quarterly Cash Flow Report (Appendix 5B).

Convertible Loan Facility

In January 2019, Orion announced that a \$3.6 million unsecured convertible loan facility had been agreed with Tembo Capital (**Convertible Loan Facility**). The key terms of the Convertible Loan Facility are set out in Section 7 of the Company's Quarterly Cash Flow Report (Appendix 5B).

Under the terms of the Convertible Loan Facility, Tembo Capital may elect for repayment of the balance of the Convertible Loan Facility (including capitalised interest and fees) (**Outstanding Amount**) to be satisfied by the issue of Shares by the Company to Tembo Capital at a deemed issue price of \$0.026 per Share (subject to shareholder and Foreign Investment Review Board (**FIRB**) approvals).

In accordance with the terms of the Convertible Loan, Tembo Capital elected to receive repayment of the Outstanding Amount by the issue of Shares (Loan Conversion Shares) (subject to shareholder approval and FIRB approval).

Following Quarter end, Orion obtained shareholder approval at a general meeting of Orion shareholders held on 15 April 2021 for the issue of up to \$5.0 million in Shares (being 191.6 million Shares at a deemed issue price of \$0.026 per Share) in settlement of the Outstanding Amount. Tembo expects to obtain FIRB approval shortly.

As at 31 March 2021, the balance of the Convertible Loan Facility was \$4.96 million (including capitalised interest and fees).

General Meeting

Following Quarter end, a General Meeting of shareholders of the Company was held on 15 April 2021, with all resolutions put to shareholders passed by a poll.

Tenement Table

Tenement	Project	Ownership Interest	Change in Quarter	Joint Venture Partner
South Africa				
NC30/5/1/1/2/11850PR	Bartotrax	100%	---	---
NC30/5/1/2/2/10138MR	Prieska Copper-Zinc Mine	70%	---	---
NC30/5/1/2/2/10146MR	Prieska Copper-Zinc Mine	70%	---	---
NC30/5/1/1/2/11840PR	Doonies Pan	70%	---	---
NC30/5/1/2/2/10032MR	Namaqua-Disawell	25%	---	Namaqua Nickel Mining (Pty) Ltd
NC30/5/1/1/2/12216PR	Namaqua-Disawell	25%	Granted	Namaqua Nickel Mining (Pty) Ltd
NC30/5/1/1/2/10938PR	Namaqua-Disawell	25%	---	Disawell (Pty) Ltd
NC30/5/1/1/2/11010PR	Namaqua-Disawell	25%	---	Disawell (Pty) Ltd
NC30/5/1/1/2/008162PR	Masiqhame	50%	---	Masiqhame 855 (Pty) Ltd
Western Australia				
E28/2367	Fraser Range	30%	---	IGO Limited
E28/2378	Fraser Range	30%	---	IGO Limited
E28/2462	Fraser Range	30%	---	IGO Limited
E28/2596	Fraser Range	30%	---	IGO Limited
E39/1653	Fraser Range	35%	---	IGO Limited & Geological Resources Pty Ltd
E39/1654	Fraser Range	10%	---	IGO Limited & NBX Pty Ltd
E69/2379	Fraser Range	10%	---	IGO Limited & Ponton Minerals Pty Ltd
E69/2380	Fraser Range	10%	---	IGO Limited & Ponton Minerals Pty Ltd
E69/2707	Fraser Range	10%	---	IGO Limited & Ponton Minerals Pty Ltd

This Quarterly Report is authorised by the Board.