



Orion Minerals

ASX/JSE RELEASE: 30 April 2020

Quarterly Activities Report For Period Ended 31 March 2020

HIGHLIGHTS

- **Revised business priorities in response to COVID-19 pandemic-related uncertainties around global macro-economic conditions:**
 - COVID-19-related lockdown and work protocols have been implemented, requiring staff to work from home. All non-essential field work has been deferred, with resumption to be re-assessed post the statutory lockdown periods;
 - Following Quarter end, all Directors and Executives of the Company have agreed to significantly reduce the cash component of their remuneration or fee packages;
 - Significant reduction in the number of employees and contractors;
 - Curtailment of all activities not essential for Prieska Project development and implementation of a range of prudent cost reduction initiatives;
 - Deferment of all activities related to debt finance sourcing until market conditions stabilise; and
 - Continued emphasis on completion of the Prieska Project bankable feasibility study update.
- **Prieska Project optimisation studies concluded for incorporation into an updated mine feasibility study due for completion by mid-May 2020:**
 - Water treatment and mine dewatering field trials completed, with the results demonstrating the potential to improve and de-risk the plan for re-accessing the Prieska Mine.
 - Option agreement to purchase two SAG mills secured following confirmation, through plant value engineering works, that SAG milling can further simplify the ore processing flowsheet and reduce plant capital and operating costs.
- **Prieska Project 2nd Environmental Authorisation granted:**
 - Vardocube granted Environmental Authorisation for mining over the south eastern strike extension of the Prieska orebody. This follows the grant of the Mining Right to Repli in August 2019.
- **Prieska near-mine exploration:**
 - Regional soil sampling over the Vardocube Prospecting Right completed.
- **Marydale Gold-Copper Project:**
 - Mining Right application lodged for Marydale Project, located 60km north of the Prieska Project.
- **Australia - Fraser Range, Western Australia drilling in progress:**
 - IGO Limited (ASX: IGO) plans to continue drilling on nickel-copper targets on the IGO-Orion Fraser Range Joint Venture tenements.
 - Noted reports of further success on the nearby Mawson Prospect with massive sulphide intersections reported by neighbouring company, Legend Mining Limited (ASX: LEG). Mawson, previously called Area D, is located just 16km south west of the IGO-Orion Pike prospect which forms part of the ongoing drill programs being undertaken by IGO (refer ASX release 23 April 2020).

Operations Report

Orion Minerals Limited (**Company** or **Orion**) strives to achieve a sustainable balance between intense operational effort and a strong focus on safety, health, environment and community.

COVID-19

On 24 March 2020, Orion provided an update on the Company's actions in relation to the COVID-19 pandemic. The actions taken by Orion in consideration of the current volatile and uncertain global economic and investment outlook included a re-evaluation of the process and timing of its project finance activities in relation to the development of the Prieska Project. The re-evaluation process resulted in the postponement of debt financing activities until global macro-economic and market conditions stabilise.

Following Quarter end, on 29 April 2020, the Company announced that a revised interim remuneration structure was agreed with all Directors and Executives, including Orion's Managing Director and Chief Executive Officer, Mr Errol Smart, effective from 1 May 2020. All Directors and Executives of the Company have agreed to significantly reduce the cash component of their remuneration or fee packages. Non-Executive Directors have agreed to reduce Director fees to zero, Mr Smart has agreed to a significant reduction in the cash component of his package and Executives' have agreed to reduce the cash component of their remuneration or fee packages by 20%.

The Company has also significantly reduced the number of employees and contractors and undertaken a range of prudent cost reduction initiatives, with remaining expenditure focussed on the development of the Company's Prieska Copper-Zinc Project in South Africa's Northern Cape Province (**Prieska Project**). The Company also curtailed all exploration work and activities not essential for the Prieska Project development.

With the advent of the COVID-19 pandemic, work from home protocols were pre-emptively implemented on 13 March 2020 across all workplaces, followed by full lockdown for all South African projects and operations as of 26 March 2020, in line with statutory directives. Only works essential to safeguard Company property and workforce health and safety may be undertaken at offices and work sites during the statutory lockdown period, which is scheduled to be partially lifted in a phased approach from 1 May 2020. The Company has not had any employee reported incident of COVID-19 infection.

The Company's key focus is the progression of BFS optimisation studies for the development of the Prieska Project and preparations for mine construction. The outcomes of these studies are currently being incorporated into updated operating plans which will support the updated Feasibility Study Report and determine the final finance and business case. Orion is targeting the completion of all technical and engineering work by mid-May 2020 in order to present and demonstrate the positive impact of the optimisation work.

In parallel with the completion of BFS optimisation studies, the Company is also having exploratory discussions with parties who have the potential to enhance project value through the introduction of a project-level strategic equity partner/investor in the Prieska Project.

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	12,077	39,331
Mine Re-Entry	4,187	10,497
Contractors	1,464	3,222
Total	17,728	53,050

The Lost-Time Injury Frequency Rate (**LTIFR**) per 200,000 hours worked is **0** for the 2020 calendar year.

Environmental Management

Work continued during the Quarter to secure the approvals required before the Prieska Project can undertake mining operations within the Square Kilometre Array Radio Telescope Project (**SKA**) area, in which the Mining Right areas are located.

Under the guidance of the Electromagnetic Capability (**EMC**) Committee, the permit application for unintentional emitters for the existing on-site equipment (generators and transformers) has been submitted. The permit application for intentional emitters (radios, wi-fi) will be submitted before the end of June 2020 in line with the regulatory stipulations. A plan for emission mitigation, which was a supplementary requirement by the SKA, will be developed in due course.

Further to the submissions above, work to obtain permitting for the equipment planned for use during the Prieska Project operations will be undertaken so that the permits are granted before the commencement of construction.

Community and Stakeholder Engagement

The third meeting of the Orion Siyathemba Stakeholder Engagement Forum (**OSSEF**) was held in Prieska on 23 January 2020.

Public meetings were held from 17 to 20 February 2020 in each of the towns of Prieska, Marydale, Niekerkshoop, Vanwyksvlei and Copperton. Errol Smart (Orion's CEO and Managing Director) provided an update on the progress of the Prieska Project and answered questions from community members.

The meetings were also used to introduce the 10 community representatives from the OSSEF to the broader community, as well as for the presentation of certificates to the participants who successfully completed the Orion introductory mining familiarisation short courses during 2019. Presentations were also given by Errol Smart to students at two Siyathemba high schools, to encourage an interest in the mining industry as a future career option.

The appointment of a Community Social Development (**CSD**) Trainee has been deferred until site activity for mine construction recommences. Beulah Africa, an established community development consultancy with significant mining industry experience, is fulfilling the CSD role in the interim.

The end of the Quarter coincided with the introduction of COVID-19 pandemic related lockdown restrictions in South Africa. Plans were initiated to facilitate ongoing communication and meetings with the community (through the OSSEF) and other key stakeholders by remote means during the lockdown period.

During the Quarter, Bicycles for Humanity Western Australia, donated 420 used bicycles to Orion with the shared objective of establishing a Bicycle Empowerment Centre (**BEC**) in Siyathemba. The BEC will provide a micro enterprise opportunity through the provision of bicycle mobility for targeted sections of the community (e.g. school learners, health providers). Discussions with relevant stakeholders to develop a

sustainable implementation plan have been initiated, and the project will be progressed post COVID-19 lockdown. Orion acknowledges and thanks David Tucker from Bicycles for Humanity Western Australia, for his generous work in achieving delivery of the bicycles to Orion's local community, which is very thankful for the bicycles.

The Spatial Planning and Land Use Management Act application process for the proposed residential development in Prieska continued during the Quarter with the drilling of a 100m geotechnical drill hole and the completion of a bulk services engineering study.

Following the receipt of a letter of no objection from the Department of Agriculture in February 2020, the application process for the Prieska Project land use change from Unspecified Zone to Special Zone (Extractive Industry) continued, with approval received from the Siyathemba Local Municipality and invitation for public comment published. Submission to the District Municipal Planning Tribunal for final approval is anticipated in the June 2020 Quarter.

Overview

During the Quarter, Orion continued work on its highly prospective South African projects, including focusing on optimisation studies, following the completion of the Prieska Project Bankable Feasibility Study (**BFS**) in June 2019. In addition, ongoing low-key exploration activities including soil sampling on the near-mine prospects were undertaken and a Mining Right Application over the Marydale Gold-Copper Project was submitted.

In the Fraser Range (Western Australia), Orion's joint venture partner, IGO Limited (**ASX: IGO**) is currently resolving logistical challenges in preparation for the next phase of diamond drilling on highly prospective nickel-copper sulphide targets identified from geophysical surveys, mapping and geochemical sampling programs.

Exploration and Mine Development

Areachap Belt Projects (South Africa)

Prieska Copper-Zinc Project

Project Overview

The Prieska Project Feasibility Study update continues to be the focus of the Company's activities and is now at an advanced stage following the maiden Ore Reserve estimate and completion of a BFS (refer ASX release 26 June 2019). Post-BFS activities undertaken during the Quarter included completing select optimisation studies to refine the BFS and undertaking some preparatory early works in anticipation of mine construction. The requisite licences to construct and operate the mine are expected to be in place by Q3 2020, so that the project is ready for construction late 2020, subject to project funding availability. An updated BFS is due to be completed by mid-May 2020.

Prieska Project Updated Bankable Feasibility Study

Optimisation

Value engineering and optimisation studies being undertaken since the completion of the BFS are delivering positive results, with key studies now being concluded for inclusion in an updated BFS due for completion by mid-May 2020. These include:

- Value Engineering on the process plant – as reported during the Quarter, the Company secured two refurbished 3,600kw mills via an option agreement for purchase (refer ASX release 4 February 2020). Use of semi-autogenous grinding (**SAG**) milling is expected to reduce both capital expenditure and operating costs, whilst also resulting in plant layout optimisation and a reduced plant footprint area. SAG milling will allow significant operational flexibility and facilitate processing of Prieska Project ore at a rate of up to 20% above design throughput, therefore allowing capacity for future expansion.

- Follow-up pilot scale trials were completed on the use of water treatment as a supplementary method to forced evaporation, for handling water to be pumped from the underground workings. Use of a supplementary method of water treatment will enable dewatering of underground workings to be accelerated. Results from the trials have been evaluated and have assisted with refining and quantifying the chemical reagents suites, as well as specific equipment specifications to be used for the dewatering process. Outcomes will be incorporated in the updated BFS.
- Whittle Enterprise Optimisation – as outlined in the September 2019 Quarterly report, this process examined the Prieska Project's entire value chain, with special focus on underground mining and the ore processing plant throughput schedules. The enterprise optimisation workstream has required the evaluation and comparison of numerous business development scenarios, using a number of alternative mine schedules and mine stope layouts. The Whittle Enterprise findings are now being evaluated for incorporation in updated operating plans.

The updated BFS Report, incorporating all of the optimisations, is due for completion by mid-May 2020.

Process Plant Operations

During the last Quarter, a Memorandum of Understanding was concluded with Minerals Operations Executive (Pty) Ltd (**Minopex**), a process plant contract operating company based in South Africa, which has operated 46 plants globally. If appointed as the process plant contractor, Minopex has the ability to introduce skilled staff and management, with the required operating experience and procedures, to the Prieska Project, enabling a rapid production ramp-up.

Minopex will then continue running the plant, leveraging off its group level technical skills and utilising its bulk purchasing power to source the most competitive pricing for the plant's operating consumables. Details of the engagement agreement are being negotiated and once completed, the financial terms will be included in the updated operating plan.

Underground Mining Contract

In September 2019, Orion and Byrncut Offshore (Proprietary) Limited (**BOPL**) concluded a Memorandum of Agreement for an alliance agreement for underground mine development and production at the Prieska Project. BOPL is involved in mining contracting work internationally and has previously operated in South Africa. It is envisaged that BOPL will operate underground mining operations, including the supply and maintenance of the mining fleet, bringing its experience in mining training and upskilling of local employees as part of its operating model. An alliance agreement is yet to be concluded.

BOPL's associated entity, global mining engineering consulting firm, Mining Plus Pty Ltd, is assisting with evaluating the Prieska Project mine design, while also investigating alternative mine production scenarios. Appropriate elements of the findings of the Mining Plus evaluation will be incorporated in the updated BFS.

Mining Right Applications

The first of two required Mining Rights for the Prieska Project was granted on 23 August 2019 to Repli Trading No. 27 (Pty) Ltd (**Repli**), for an initial term of 24 years. Repli's Water Use Licence was expected to be approved at the end of March 2020 by the Department of Human Settlements, Water and Sanitation. This approval has been delayed due to the temporary suspension of some of the department's activities as a result of COVID-19 lockdown measures.

The second required Mining Right for the Prieska Project has been submitted by Vardocube (Pty) Ltd (**Vardocube**). The associated Vardocube Environmental Authorisation was granted during the Quarter, making way for the assessment and granting of the Mining Right, which is now expected during Q3 CY2020.

Infrastructure

Power Supply – The national power utility company, Eskom, has approved the Company's applications to obtain 15MVA of construction power and undertake a self-build upgrade to the Cuprum sub-station to avail the project of 40MVA of power required for the operational phase. It now remains for the

Company to formally accept the Eskom proposal and make the deposit payments required for the works to be formally registered as a committed project.

Water Supply – The Water Supply Agreement Term Sheet between Repli and the Siyathemba Municipality was formally accepted at a Council Meeting on 10 March 2020. This secures the water tariff applicable for the Prieska Project and will form the basis of a definitive water supply agreement.

Extension of juwi Renewable Energy Collaboration

The Memorandum of Understanding entered into by the Company with juwi Renewable Energies Pty Ltd (**juwi**) was extended to June 2020. The Company and juwi intend to collaborate 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.

Deep Sulphide Resource

Following the previous Quarter's work, re-assessment of the Inferred Mineral Resources, estimated to be 10.2Mt at 1.14% Cu and 4.08% Zn (and making up 36% of the estimated combined Indicated and Inferred Deep Sulphide Resource of 28.7Mt at 1.16%Cu and 3.77%Zn)¹, continued.

The Company's focus remains to determine the most efficient way to upgrade these resources to an Indicated Mineral Resource level of confidence. The Indicated Mineral Resource (18.5Mt at 1.17% Cu and 3.60% Zn) makes up 64% of the total resource in the current mine plan (Figure 1).

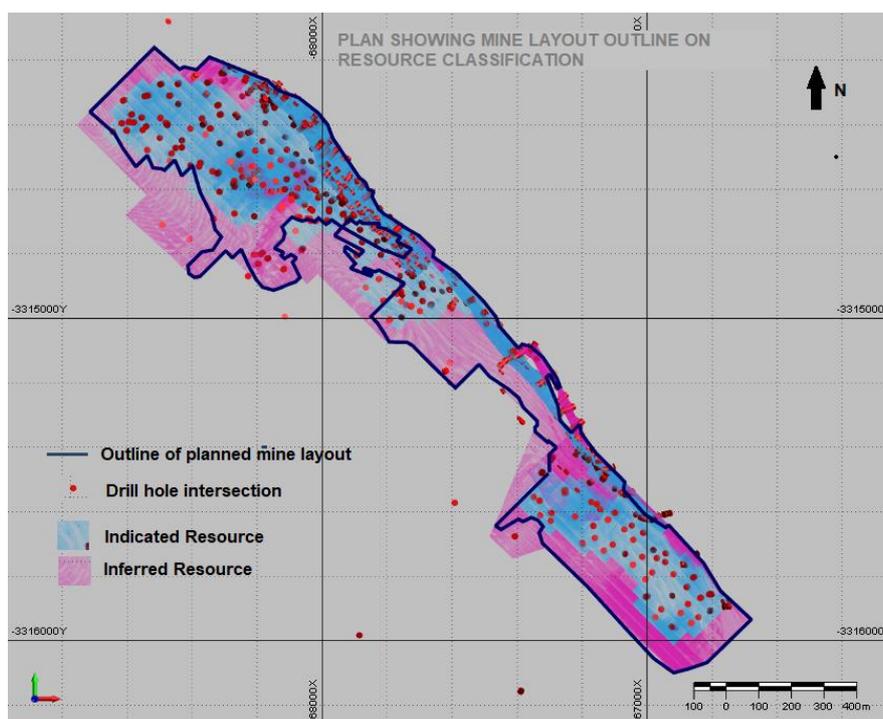


Figure 1: Plan of the Deep Sulphide Mineral Resource showing the Inferred Resources included in the current mine plan.

¹ Mineral Resources reported in ASX release of 15 January 2019: "Prieska Total Resource Exceeds 30Mt @ 3.7% Zn and 1.2% Cu. Following Updated Open Pit Resource" available to the public on www.orionminerals.com.au/investors/market-news. Competent Person: Orion's Mineral Resource: Mr. Sean Duggan. Orion confirms it is not aware of any new information or data that materially affects the information included above. For the Mineral Resources, the company confirms that all material assumptions and technical parameters underpinning the estimates in the ASX release of 15 January 2019 continue to apply and have not materially changed. Orion confirms that the form and context in which the Competent Person's findings are presented here have not materially changed.

The underground drill plan designed to convert the Inferred Deep Sulphide Mineral Resources included in the mine plan to Indicated Mineral Resources was revised during this Quarter to include the North West Section of the Mine. Resource drilling of the North West Section was previously included in the Grade Control Drill Program.

The underground drilling program will consist of 120 drill holes to upgrade all Inferred Mineral Resources in the current mine plan to Indicated status (Figure 2). A total of 22,406m has been planned with a minimum planned hole depth of 65m and a maximum hole depth of 360m. Drilling will be scheduled in accordance with the mine schedule. The final mine schedule is expected to be completed by early May 2020.

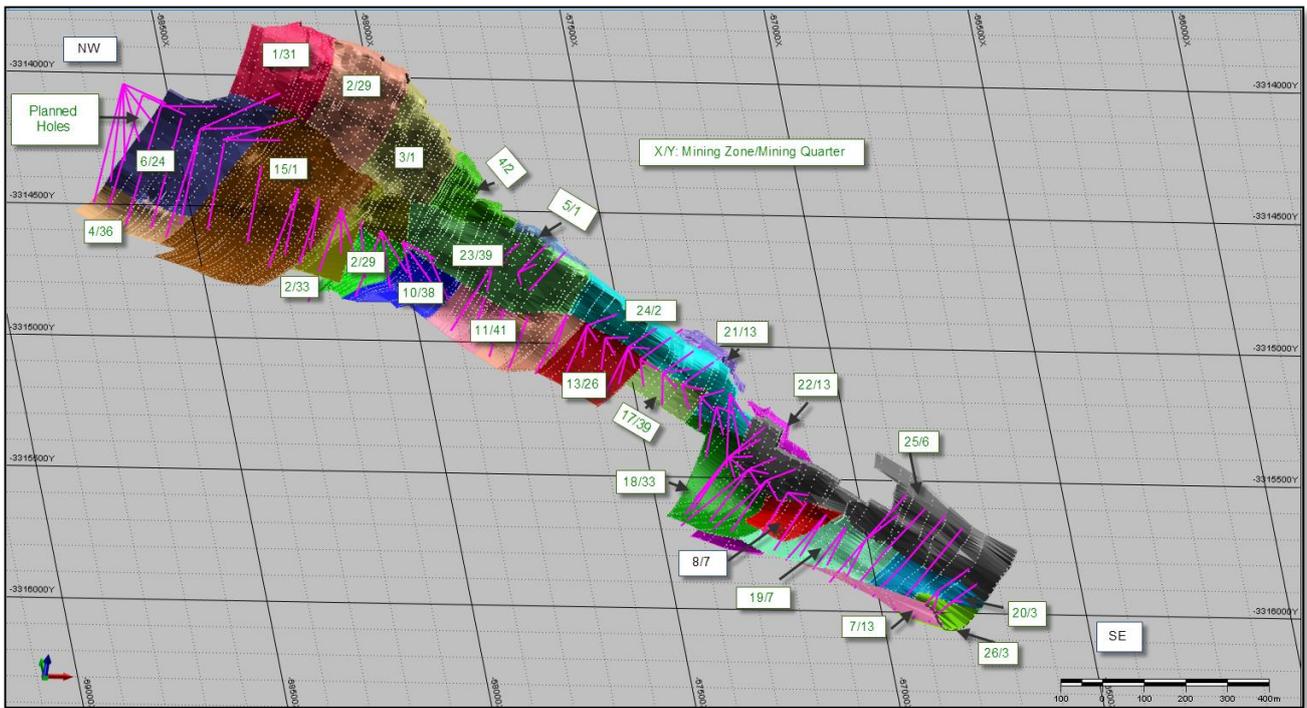


Figure 2: Oblique view of the Deep Sulphide Resource showing the planned drill layout on the preliminary mine schedule.

Near-Mine Projects

The near-mine projects are those projects within prospecting rights held by Repli (Doonies Pan area), 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; three deposits on Doonies Pan (Kielder Prospects) explored by Newmont South Africa between 1976 and 1979 and referred to as the PK1, PK3 and PK6 Deposits and the Ayoba mineralisation recently discovered by Orion (Figure 3).

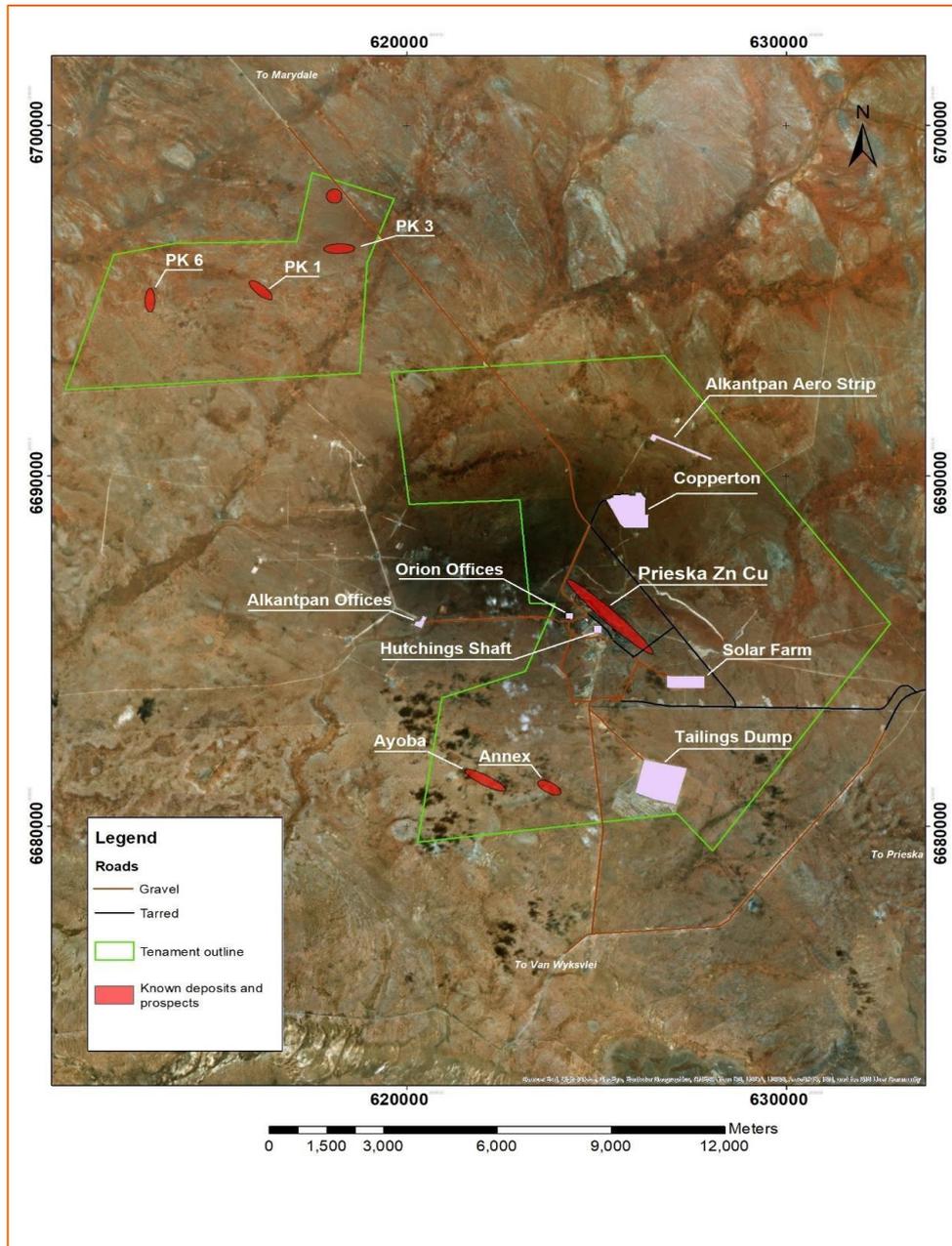


Figure 3: Surface plan showing the prospecting rights over and adjacent to the Prieska Project, and the location of the Annex, Kielder (PK1, PK3 and PK6) deposits and Ayoba Prospect.

Several Airborne Electro Magnetic or SkyTEM™ (**AEM**) anomalies were identified for follow-up work (refer ASX release 25 February 2019).

Soil Sampling

With soil sampling over known AEM anomalies completed in the latter half of 2019, soil sampling for the Quarter focussed on regional coverage of the Vardocube Prospecting license. During the Quarter, 2,640 soil samples were collected, bringing the total number of samples taken on the Near Mine Project to 8705. The samples were screened to -80 micron and analysed using a handheld XRF analyser. Based on the XRF results, samples over selected areas will be submitted to ALS Laboratory in Johannesburg, and results will be reported once received from the lab and reviewed by Orion. The results will be incorporated in the prioritisation of the AEM anomalies prior to ground time domain electromagnetic surveys and diamond drilling.

Regional Exploration (South Africa)

Overview of Regional Activity

The Company maintains 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.

VMS deposits almost always occur in clusters or “districts” associated with volcanic spreading centres, with four such centres having been identified in the Areachap Belt. In addition to the Near Mine Project, the Company is also prospecting for VMS deposits on the Masiqhame Prospecting Right (Figure 4). The Kantiempaan and Bokspuits Zinc-Copper Deposits are the two most prominent known VMS deposits on the Masiqhame Prospecting Right.

Similarly, world-class intrusive nickel deposits also tend to also occur in clusters both on prospect and regional scale in orogenic belts along geological plate margins similar to the Areachap setting. Within these intrusive centres, a small number of the intrusions tend to host the best mineralisation depending upon the intrusion magma-flow dynamics and timing of magmatic sulphide immiscibility and transport. Several mafic intrusive bodies with nickel and associated metals are located on the Namaqua Disawell Prospecting Rights (Figure 4).

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), Ntaka Hill (Tanzania), Akelikongo (Uganda), and Limoeiro (Brazil). Conduit style mineralisation is currently the top priority global target for magmatic Ni-Cu-PGE sulphide exploration.

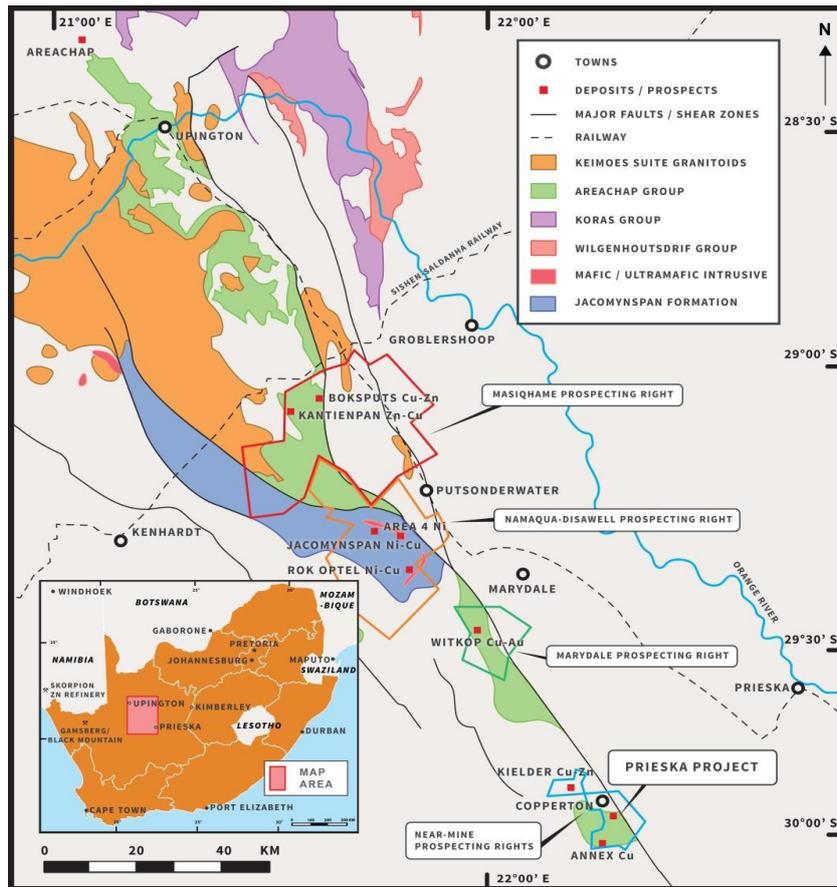


Figure 4: Regional geology map of the Areachap Belt showing prospecting rights held by, or currently under option to, the Company, and noted mineral occurrences as per published data from South African Council for Geoscience.

Namaqua Disawell Project Area

Overview

The Jacomynspan Deposit (Figure 4) was discovered by Anglo American Prospecting Services (**AAPS**) in 1971. Resource-definition drilling was carried out to a depth of 900m over 1.3km strike distance by AAPS, with disseminated nickel-sulphide mineralisation having been intersected with widths varying between 30 to 70m (refer ASX release 14 July 2016). Within the disseminated Ni-sulphide mineralisation, zones of semi massive sulphide mineralisation with higher grades do occur as reflected in drill hole PC24, drilled by Anglo American Prospecting Services in 1971.

This hole intersected 18m at 1.01% Ni, 0.41% Cu, 0.06% Co from 570.33m down hole depth². Two other Ni-Cu deposits, Area 4 and Rok Optel, were investigated during the 1970s by AAPS, Newmont, Phelps Dodge and Hoch Metals. Subsequent and prior to the Company obtaining the prospecting and mining rights, various companies including Anglovaal, Glencor, Gold Fields and Namaqua Nickel explored the area. The Company conducted AEM surveys over the Prospecting Right (refer ASX release 1 February 2018), ground electromagnetic surveys (refer ASX release 3 July 2018) and drilled four diamond drill holes at Rok Optel (refer ASX release 24 October 2018).

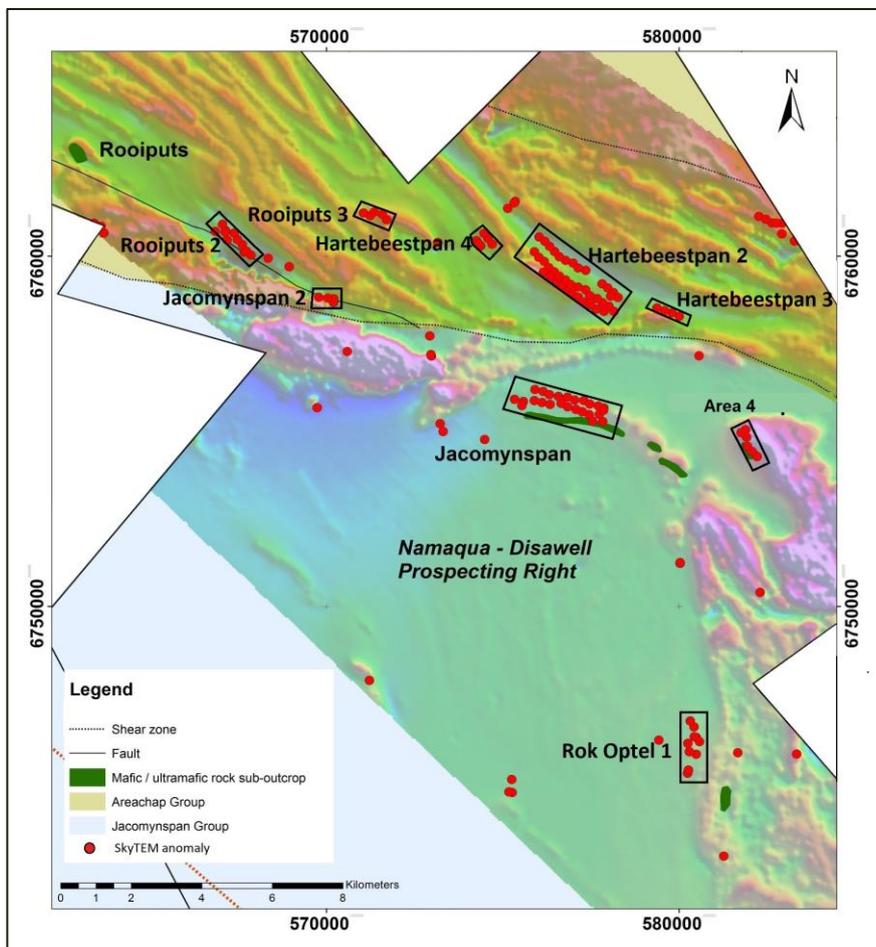


Figure 5: Map showing prospects and AEM anomalies overlain on a total field aeromagnetic image on the Disawell Prospecting Right.

² Originally reported in ASX release of 14 July 2016: "Orion Expands South African Portfolio after Securing Advanced and Highly Prospective Nickel-Copper Project" available to the public on www.orionminerals.com.au/investors/market-news. Competent Person: Mr. Errol Smart. Orion confirms it is not aware of any new information or data that materially affects the information included above. Orion confirms that the form and context in which the Competent Person's findings are presented here have not been materially modified.

Contiguous to the north of the Namaqua-Disawell Project, this project is defined in terms of the Masiqhame tenement holding and includes the Kantienpan and Bokspits Zn-Cu VMS deposits (Figure 4).

With its known VMS deposits, numerous Cu-Zn mineral occurrences and regional geological setting, the area offers potential for new VMS Cu-Zn and magmatic Ni-sulphide discoveries. It is common for VMS districts to have small Cu-Zn deposits clustering close to a large deposit where on the Masiqhame Prospecting Right, the larger deposit is still to be discovered.

During the Quarter, the Company did not carry out any exploration activity on the Namaqua Disawell Project.

Marydale Gold-Copper Project (Witkop)

In addition to the Prieska Project, the Company has exploration rights over the Marydale Gold-Copper Project located 60km north of the Prieska Project.

Preliminary work on evaluating the potential for small scale or exploratory gold mining on the Witkop gold project was completed during the Quarter and a Mining Right Application over the Prospecting Right was launched. The work is being undertaken in collaboration with Orion's BEE Partner Black Star Pty Ltd and its subsidiary Gariep Mining (**Gariep**), who has extensive small-scale mining experience and owns an extensive surface and underground mining fleet of equipment. Orion is evaluating a potential joint venture mining opportunity with Gariep for the project.

The following work was completed during the Quarter:

- Modelling of mineralisation and resource estimation in the area of best gold mineralisation as defined by drilling and trenching (refer ASX release 17 August 2016);
- First phase metallurgical test work;
- Preliminary pit design, mining and production schedules;
- Mine Works Program;
- An application for Environmental Authorisation and a Social and Labour Plan were prepared and submitted to the Department of Mineral Resources; and
- Submission of the Mining Right Application.

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.

Drill results from five diamond drill holes drilled by IGO were reported during the Quarter. Diamond drilling on Ni-Cu targets intersected mafic-ultramafic bodies intrusive into carbonate graphite bearing metasedimentary successions on both the North West Passage and tenement E28/2367 (Figures 6 and 7) (refer ASX release 3 February 2020).

Tenement E28/2367 (IGO 70% - Orion 30% free carried) has become the focus of increased attention after the recent discovery of a Ni-Cu-Co massive Sulphide deposit 16km to the southwest on neighbouring tenement E28/2189 held by Legend Mining Ltd (ASX: LEG).

IGO is currently resolving logistical challenges regarding infrastructure and drill water access. Once these have been resolved, drill testing of ground electromagnetic (EM), down-hole EM and gravity targets will resume on this highly prospective set of targets.

Tenement E28/2367

Three holes were drilled at tenement E28/2367 (Figures 7 and 8) (Table 2). Drill hole 19AFDD1008 drilled on Hook 1 intersected gabbro-norite zones 6m to 57m thick that are intercalated with locally graphitic metasedimentary rocks containing sulphide stringers and semi-massive sulphide veins up to 10cm thick³ (Figures 7 and 9). A down-hole EM survey identified a strong conductive response beyond the end of hole. Hole 19AFDD008 will be deepened by 180m to test the down hole EM conductor.

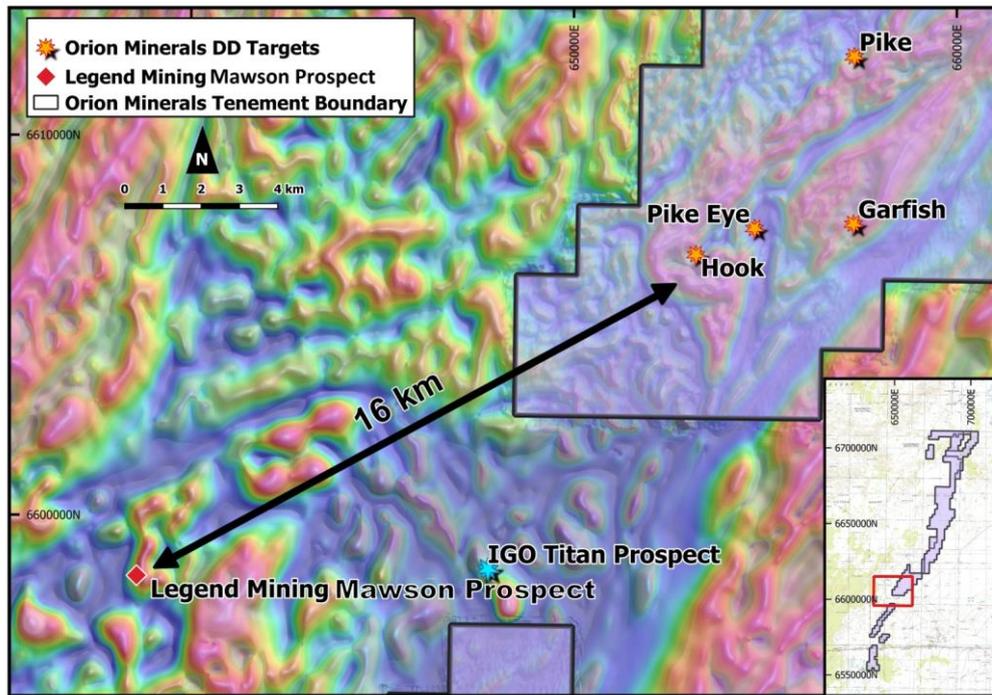


Figure 6: IGO-Orion Fraser Range Joint Venture Tenements showing regional aeromagnetic image and locality of the Hook and Pike Prospects, relative to nearby Legend Mining Mawson Prospect.

The Hook 1 prospect lies 16 km north east of Legend Mining's Mawson Prospect, previously known as Area D (Figure 6). At the end of the Quarter, Legend Mining (ASX: LEG) reported further success at Mawson when hole RKDD008 intersected three massive sulphide zones (refer LEG ASX release 31 March 2020). Following Quarter end, Legend Mining confirmed the Mawson Prospect as one of the most significant new discoveries in the Fraser Range since Nova-Bollinger, with high-grade massive sulphide intercepts of up to 12.8m at 2.76% Ni and 1.36% Cu from 234.9m reported in diamond hole RKDD008 (refer LEG ASX release 21 April 2020). The Mawson intrusive is reported to be hosted by graphitic sediments similar to those reported at Pike and Hook.

Holes 19AFDD1009 and 19AFDD1010, drilled respectively on Pike 4 and Hook 2, both intersected gabbro-norite and meta-gabbro-norite intrusive into metasedimentary rocks with the gabbro-norite in 19AFD009 displaying minor pyrrhotite and chalcopyrite².

³ Originally reported in ASX release of 3 February 2020: "Encouraging drilling results received from the IGO-ORN Joint Venture Tenements – Fraser Range, Australia" available to the public on www.orionminerals.com.au/investors/market-news. Competent Person: Mr. Errol Smart. Orion confirms it is not aware of any new information or data that materially affects the information included above. Orion confirms that the form and context in which the Competent Person's findings are presented here have not been materially modified.

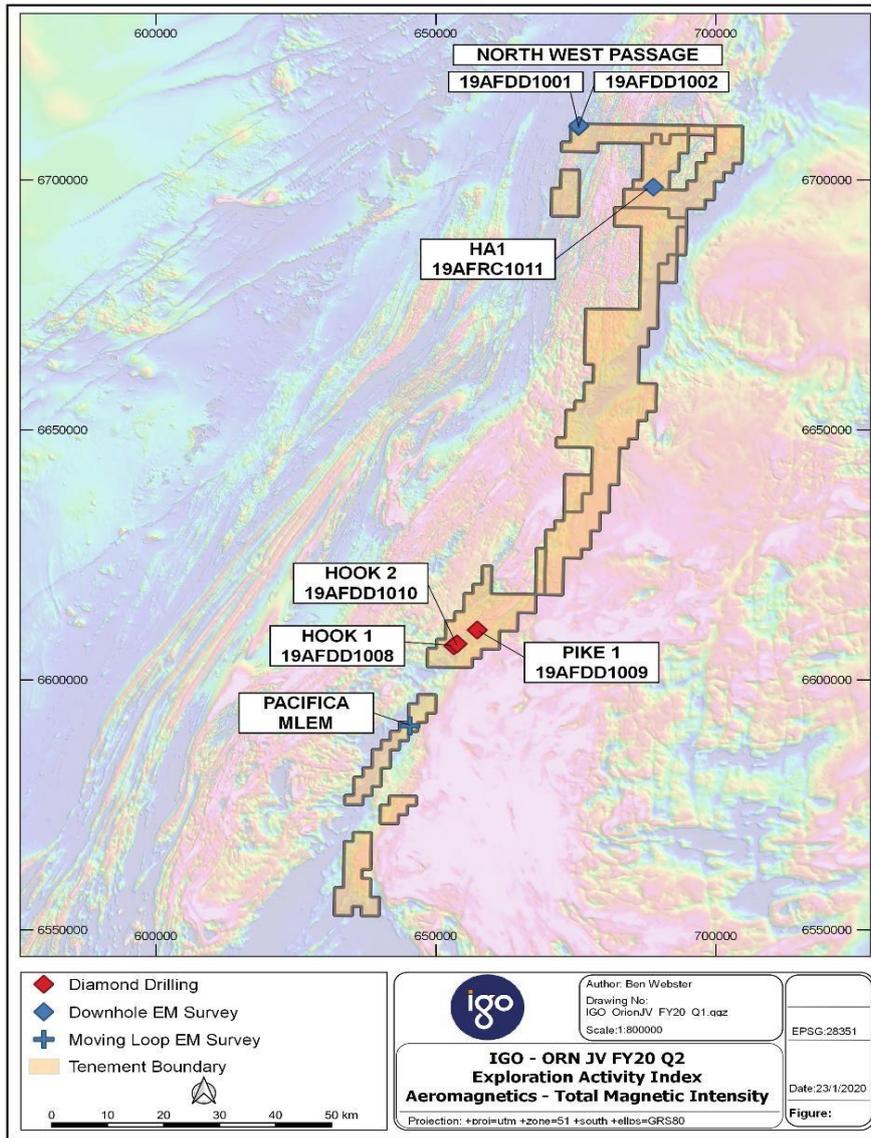


Figure 7: Map showing IGO-Orion Fraser Range JV Tenements, prospects and drill holes.

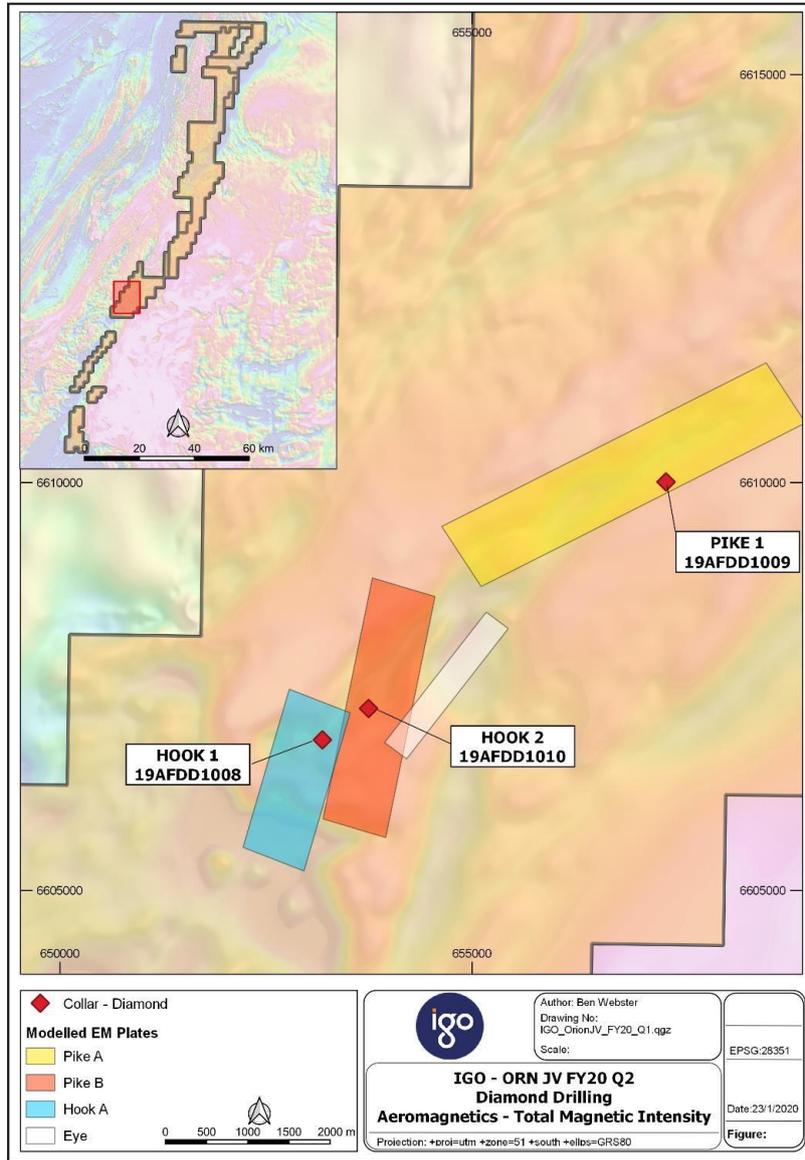


Figure 8: Plan view of the Pike 1, Hook 1 and 2 prospects with diamond drill holes drilled and targeted conductors plotted on airborne magnetics.

Table 2: Details of diamond drilling carried out by IGO on Tenement E28/2367.

Hole ID	Easting	Northing	Dip	Azimuth	Target Depth	EOH	Start Date	End Date	Prospect
19AFDD1008	653185	6606845	-75	135	280m	465.4m	9/10/2019	21/10/2019	Hook 1
19AFDD1009	657350	6610010	-75	150	330m	334.1m	27/10/2019	5/11/2019	Pike 1
19AFDD1010	653745	6607230	-75	135	200m	238.5m	6/11/2019	10/11/2019	Hook 2



Figure 9: Semi-massive to massive pyrrhotite-pyrite vein at 331m down hole depth in drill hole 19AFDD1008 drilled on the Hook 1 prospect³.

Proposed Drilling

IGO initially plans to drill a further 2,560m in six holes, including extending hole 19AFDD1008 to test a strong off-hole conductor detected below the current end-of-hole depth. Holes are also planned to test further EM targets at Hook, Pike Eye and Pike (refer Figure 10). At Garfish, a gravity anomaly will be drilled to test for a mafic – ultramafic intrusive.

In addition to follow-up diamond drilling, an extensive air-core drilling program is planned to map the surrounding bedrock geology which lies under a thick cover of unconsolidated surface material.

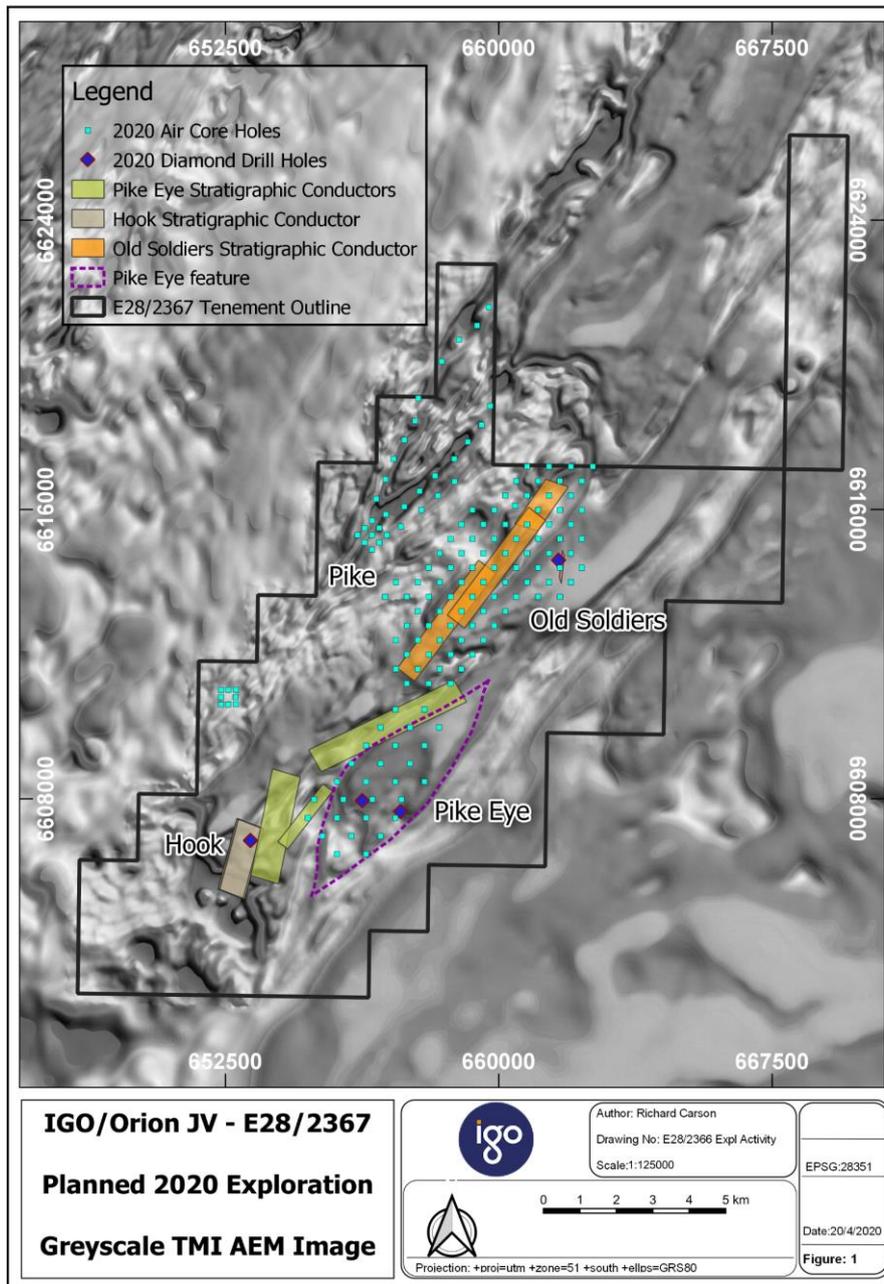


Figure 10: Planned Diamond and air-core drilling on E28/2367.

North West Passage

Two diamond drill holes were drilled by IGO to test EM plates representing massive sulphide Ni-Cu targets (Figure 11). Details of the holes are summarised in Table 3.

Hole 19AFDD1001 intersected mafic-ultramafic intrusive rocks intercalated with carbonate and graphitic meta-sediments. Ultramafic rocks intersected from 160m to 215m, returned maximum values of 2350ppm Ni, 2350ppm Cr and 28% MgO³. The intrusive contains visible sulphides with massive and semi massive pyrrhotite - pyrite stringers injected into both ultramafic rock and its host rocks (Figure 12). A zone intersected from 267m to 278m, consists of peridotite and is devoid of sulphides. Maximum values include 2130ppm Ni, 2380 ppm Cr and 34% Cr³. Multiphase ultramafic assemblages intrusive into carbonatitic and graphitic sub-units are considered to be highly prospective for magmatic nickel-copper mineralisation within the Fraser Range.

Hole 19AFDD1002 intersected three mafic-ultramafic intrusive bodies between 99.75m and the end of the hole at 409m. A total of 139 core samples were submitted for analysis. Interpretation of the geochemical results is in progress.

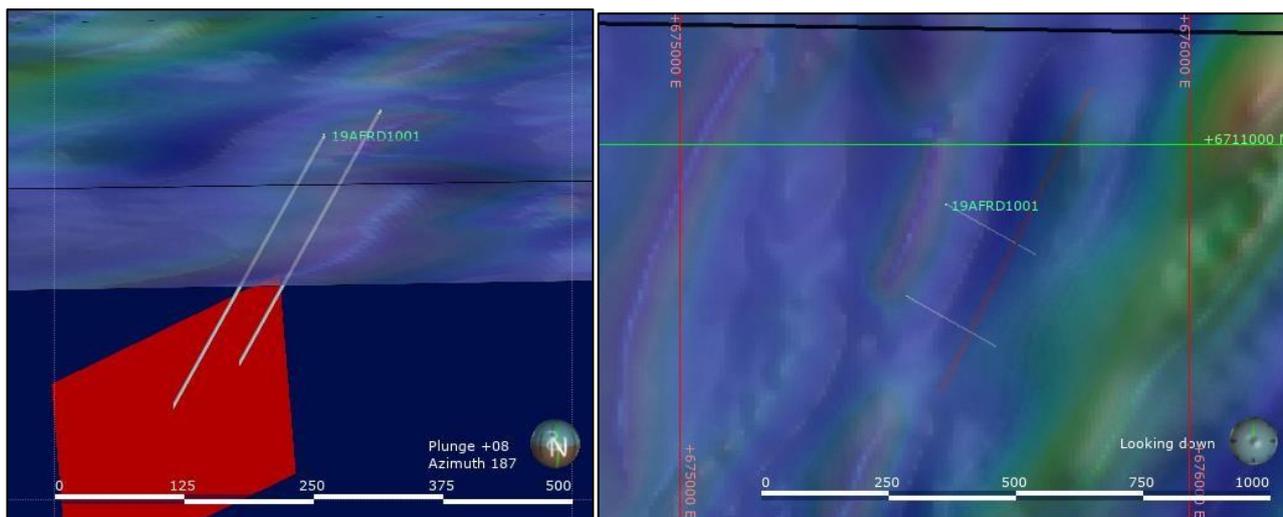


Figure 11: Completed collars and drill traces of drill holes 19AFDD1001 and 19AFDD1002 (looking from the south) with targeted EM plate in red on the left and in plan view over merged tilt derivative and Total Magnetic image (north is up).

Table 3: Details of diamond drilling carried out on the North West Passage.

Hole ID	Easting	Northing	RL	Dip	Azimuth	Target (m)	EOH (m)	Start Date	End Date
19AFDD1001	675523	6710882	287	-60	120	300	348.3	27/07/2019	02/08/2019
19AFDD1002	675443	6710697	286	-70	120	320	409.0	03/08/2019	08/08/2019



Figure 12: Semi massive pyrite-pyrrhotite vein intersected in hole 19AFDD1001 from 188.3-188.8m. The yellow circle indicates a chalcopyrite grain³.

Tenement Table

Tenement	Project	Ownership Interest	Change in Quarter	Joint Venture Partner
South Africa				
NC30/5/1/1/2/10445PR	PCM	70.00%	---	---
NC30/5/1/2/2/10244PR	Marydale	70.00%	---	---
NC30/5/1/1/2/11841PR	Vardocube	70.00%	---	---
NC30/5/1/1/2/11850PR	Bartotrax	70.00%	---	---
NC30/5/1/1/2/10138MR	Prieska	70.00%	---	---
NC30/5/1/1/2/11840PR	Donnies Pan	70.00%	---	---
NC30/5/1/1/2/10032MR	Namaqua-Disawell	18.50%	---	Namaqua Nickel Mining (Pty) Ltd
NC30/5/1/1/2/10938PR	Namaqua-Disawell	18.50%	---	Disawell (Pty) Ltd
NC30/5/1/1/2/11010PR	Namaqua-Disawell	18.50%	---	Disawell (Pty) Ltd
NC30/5/1/1/2/12292PR	Masiqhame	49.00%	---	Masiqhame 855 (Pty) Ltd
Western Australia				
E28/2367	Fraser Range	30%	---	IGO Limited

Tenement	Project	Ownership Interest	Change in Quarter	Joint Venture Partner
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

Corporate

Cash and Finance

Cash on hand at the end of the Quarter was \$1.2M. Payments made to related parties and their associates during the Quarter was \$0.186M and relates to Director fees and consulting fees, as listed in Section 6 of the Company's Quarterly Cash Flow Report (Appendix 5B).

Tembo Capital Convertible Loan Facility

On 24 January 2020, Orion announced that Tembo Capital Mining Fund II LP (**Tembo Capital**) has continued its support of Orion through an extension to the term of the \$3.6M Loan Facility from 25 January 2020 to 25 June 2020.

In January 2019, Orion announced that a \$3.6M unsecured convertible loan facility had been agreed with Tembo Capital (**Loan Facility**). Under the terms of the Loan Facility, Tembo Capital may elect for repayment of the balance of the Loan Facility (including capitalised interest and fees) (**Outstanding Amount**) to be satisfied by the issue of fully paid ordinary shares (**Shares**) by the Company to Tembo Capital at a deemed issue price of \$0.026 per Share (subject to receipt of Shareholder approval if applicable). The Outstanding Amount must be repaid by 25 June 2020 (previously 25 January 2020), or if Tembo Capital elects to receive Shares in repayment of the Outstanding Amount in lieu of payment in cash, the date on which the Shares are to be issued to Tembo Capital (or such later date as may be agreed between Tembo Capital and Orion) (refer ASX release 25 January 2019). As at 31 March 2020, the balance of the Loan Facility was \$4.45M (including capitalised interest and fees).

Interim Financial Report – December 2019

Orion recorded a loss for the half year ended 31 December 2019 of \$5.16M, including exploration expenditure incurred of \$1.06M which, under Orion's deferred exploration, evaluation and development policy, did not qualify to be capitalised and was expensed. Orion focused strongly on exploration within its Areachap Belt projects in South Africa. Expenditure of \$3.58M in exploration activities was incurred during the half year.

This Quarterly Report is authorised by the Board.