

ASX/JSE RELEASE: 2 September 2019

Orion to take controlling interest in regional exploration package following key regulatory consent

Orion to increase stake in Prospecting Right Holder Masiqhame to 50% with right to increase to 73%

- Masiqhame, which holds the Prospecting Rights over a highly prospective 980km² tenement package ~80km north of the Prieska Copper-Zinc Project, receives ministerial consent for the transfer of a controlling interest to Orion.
- Orion to be issued an additional 1% of Masiqhame shares, bringing its holding to 50% with management control with the opportunity to earn up to an additional 23% to take its holding to 73%.
- The increase in ownership and control of Masiqhame further strengthens Orion's pipeline of base metal exploration assets in the Areachap Belt, surrounding its flagship Prieska Project.

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

"Obtaining Ministerial consent for the transfer of a controlling interest in the Prospecting Right Holder, Masiqhame, to Orion, is a key step which gives us management control and the opportunity to increase our ownership in this highly prospective northern exploration package to 73%.

Orion's strategy is to develop a pipeline of VMS exploration opportunities across the highly prospective Areachap belt to complement our flagship Prieska Copper-Zinc Project, where we intend to establish a new processing facility and infrastructure. VMS deposits generally occur in clusters and we believe the exploration upside in the broader belt is significant.

In 2018, we identified a number of high-priority VMS targets on the Masiqhame Prospecting Right and we are looking forward to progressing exploration of these promising targets as part of our broader growth strategy in the Areachap Province."

Orion Minerals Limited (ASX/JSE: ORN) (Orion or the Company) is pleased to announce that it will move to a controlling interest in a key regional exploration tenement package located ~80km north of its flagship Prieska Copper-Zinc Project in South Africa's Northern Cape Province (Prieska Project), following a restructure of the Prospecting Right Holder, Masiqhame Trading 855 Pty Ltd (Masiqhame).

Masiqhame, which is a privately owned South African company in which Orion currently holds a 49% stake, has received Ministerial consent to transfer a controlling interest in the company to Orion. Masiqhame is a Prospecting Right holder to Orion in terms of Section 11 of the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA).

As a result of the receipt of Section 11 consent from South Africa's Department of Mineral Resources and Energy, Masiqhame will issue an additional 1% of its shares to Orion, resulting in Orion holding 50% of the total Masiqhame shares. Under the earn-in agreement between the parties, Orion has the opportunity to earn in an additional 23% of the shares to bring its holding to a total of 73% by completing a feasibility study on any mineral project on the property. Orion's exploration spend up to 31 July 2019 on the tenements amounted to ZAR16 million (~\$1.6 million).

Masiqhame holds a Prospecting Right over a highly prospective area of almost 980 km², located approximately 80km north of the Prieska Project. The Masiqhame Prospecting Right is located in easily accessible flat-lying countryside and is well situated with regional grid power and rail lines within 10km of the site. A good all-weather dirt road passes within 800m of the Kantienpan deposit, located on the Masiqhame Prospecting Right.

Orion entered into a binding earn-in agreement with Masiqhame in September 2016, with the agreement amended in March 2018 to allow Orion to commence exploration activities, including drilling. The Company is currently focusing on Volcanogenic Massive Sulphide (VMS) style mineralisation on Masiqhame and, during 2018, completed a regional aeromagnetic and electromagnetic (SkyTEMTM) survey and fixed-loop time domain ground electro-magnetic surveys (FLTDEM) over the Prospecting Right in order to prioritise VMS copper-zinc drill targets.

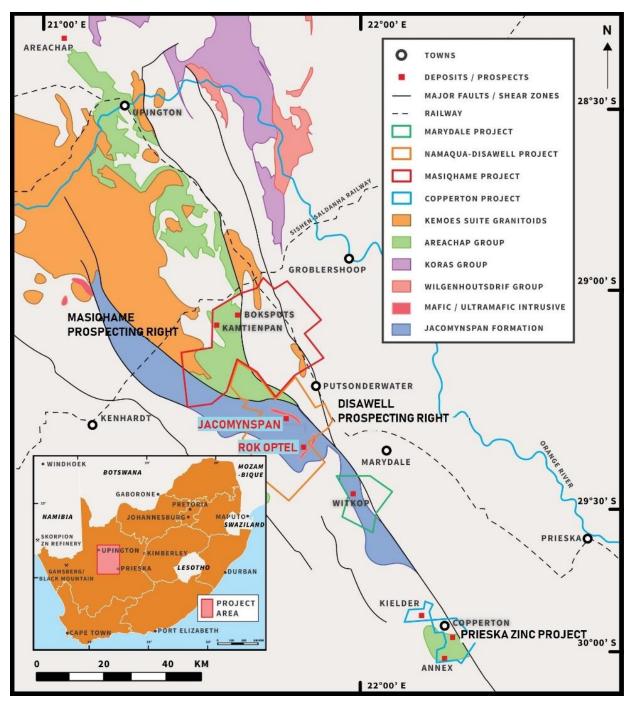


Figure 1: Locality Map showing the Prospecting Rights held by Orion overlain on the regional geology of the Areachap Belt.

Two VMS deposits, Kantienpan and Boksputs, as well as several other copper-zinc occurrences are known to exist on Masiqhame and a high-powered FLTDEM survey conducted on Kantienpan by the Company in 2016 detected previously unknown conductors below and along strike from known mineralisation.

Drill testing of the conductors yielded encouraging results, intersecting massive sulphides (refer ASX release 29 September 2016). These results highlighted the potential to unlock new discoveries by utilising modern geophysical methods in the Areachap Belt. The mineralisation at the Kantienpan Deposit remains open both along strike and at depth.

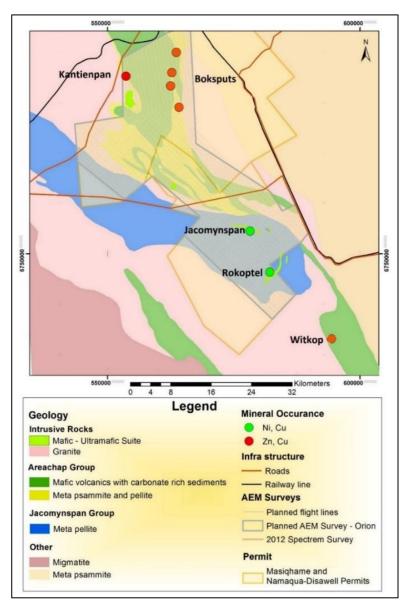


Figure 2: Map showing the area covered by the Kantienpan and Boksputs Deposits on Masiqhame and the coverage of the SkyTEM[™] survey over Masiqhame and Namaqua-Disawell.

The airborne magnetic data obtained with the SkyTEM[™] surveys is superior to any regional airborne magnetic data previously available over the Prospecting Right and allowed for more detailed regional geological interpretations and targeting (Figure 3).

Five FLTDEM surveys have been completed over selected SkyTEM™ anomalies. Two of the conductors in the Boksputs VMS camp offer compelling drill targets (refer ASX release 24 September 2018). Identification and prioritising of prospects continues.

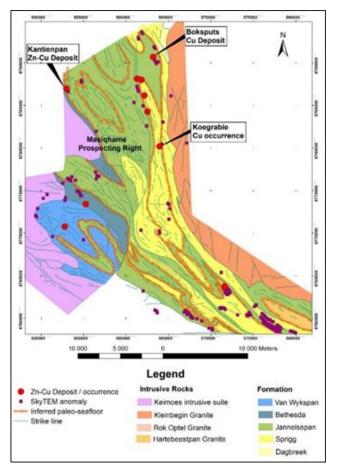


Figure 3: Solid geological map of the Masiqhame Prospecting Right showing the inferred paleo-seafloor, known copper-zinc deposits and occurrences and SkyTEM[™] anomalies.

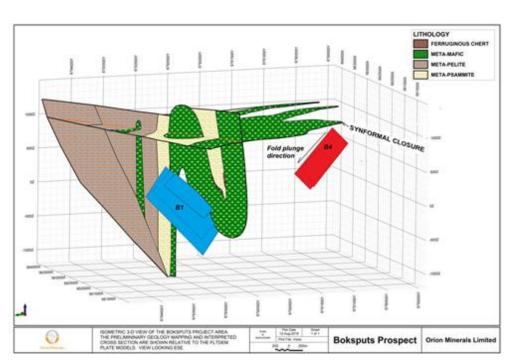


Figure 4: Three-dimensional view looking south-east and showing the stratigraphic and structural setting of the B1 and B4 conductors on Boksputs Prospect.

Orion believes that the integration of geochemical and geophysical methods may quickly enable new targets to be identified within the Masiqhame Prospecting Right, which overlies a highly prospective VMS horizon extending over more than 30km of strike.

This horizon contains numerous published occurrences of copper-zinc mineralisation associated with massive sulphides.

Errol Smart Managing Director and CEO

ENQUIRIES

Investors	Media		JSE Sponsor
Errol Smart – Managing Director & CEO	Nicholas Read	Barnaby Hayward	Rick Irving
Denis Waddell – Chairman	Read Corporate, Australia	Tavistock, UK	Merchantec Capital
T: +61 (0) 3 8080 7170	T: +61 (0) 419 929 046	T: +44 (0) 787 955 1355	T: +27 (0) 11 325 6363
E: info@orionminerals.com.au	E: <u>nicholas@readcorporate.com.au</u>	E: <u>orion@tavistock.co.uk</u>	E: <u>rick@merchantec.co.za</u>
Suite 617, 530 Little Collins Street			

Melbourne, VIC, 3000

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