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Orion initiates Regional Exploration on the Areachap Belt, Northern Cape, South Africa

- **A 962km² high power SkyTEM airborne EM survey set to commence on 26 November 2017.**
- **EM Survey to investigate area containing 98km's combined strike of outcropping, highly prospective, volcanogenic palaeo sea floor on Orion's Prospecting Permit areas.**
- **The stratigraphic horizon being flown is highly prospective for Volcanogenic Massive Sulphide Deposits.**
- **Numerous zinc-copper volcanogenic massive sulphide occurrences have historically been identified in the survey area.**
- **The target area has not been subjected to modern geophysics and exploration since the 1980's.**

Orion Minerals NL (**ASX/JSE: ORN**) (**Orion** or the **Company**) is pleased to announce that following the very successful initiation of the Mineral Resource drill out, currently underway at the Prieska Zinc-Copper (**Prieska**) Project, the Company intends expanding its activities to begin testing the highly prospective palaeo sea floor located within its Northern Cape tenements which are known to host numerous Zn – Cu rich massive sulphide mineral occurrences.

The belt was the focus of only a short lived exploration boom in the 1970's and early 1980's (following the discovery of the Prieska Volcanogenic Massive Sulphide (**VMS**) deposit by Anglovaal in 1968), during which, many large exploration companies such as Anglo American, Newmont and Anglovaal were successful in identifying several additional VMS and Ni-Cu occurrences. However, only a few of these VMS occurrences were investigated in detail or below a depth of 300m below surface.

Following archive data reviews, Orion's exploration team believes that the exceptional exploration upside within the Company's Northern Cape tenements, combined with the large, advanced stage Prieska Project, positions the Company for rapid growth.

During Orion's first phase of ground electromagnetic (**EM**) and follow up drilling on the Kantienpan Prospect (refer Figure 1) during 2016 (refer ASX releases 4 October 2016, 7 December 2016, 14 December 2016 and 25 January 2017), the Company demonstrated the potential for success of the application of modern EM as a key tool for targeting VMS mineralisation. Modern EM methods have advanced a great deal since the last systematic exploration took place in the Northern Cape belt and Orion stands to benefit from its research and development of exploration techniques applicable for massive sulphides undertaken in the Fraser Range belt in Western Australia during 2013-2014.

Orion's exploration work at the Prieska Project and records of past production, confirm that the Prieska VMS deposit is an exceptionally large VMS body. Elsewhere in the world this style of deposit is characterised by clusters of sulphide lenses called VMS districts. Deposit models for VMS districts support the view that where one large deposit is identified in a mineral district such as the Prieska deposit, other large VMS deposits should be found the same district[1].

Details of planned SkyTEM survey

Orion has contracted SkyTEM, a leading airborne electromagnetic (**AEM**) survey company headquartered in Denmark, which offer state-of-the-art helicopter borne transient electromagnetic (**TEM**) and magnetic acquisition system to fly an extensive (6,025 line km) TEM survey covering large portions of the Company's Masiqhame and Disawell JV Project areas located in the Northern Cape (refer Figure 1).

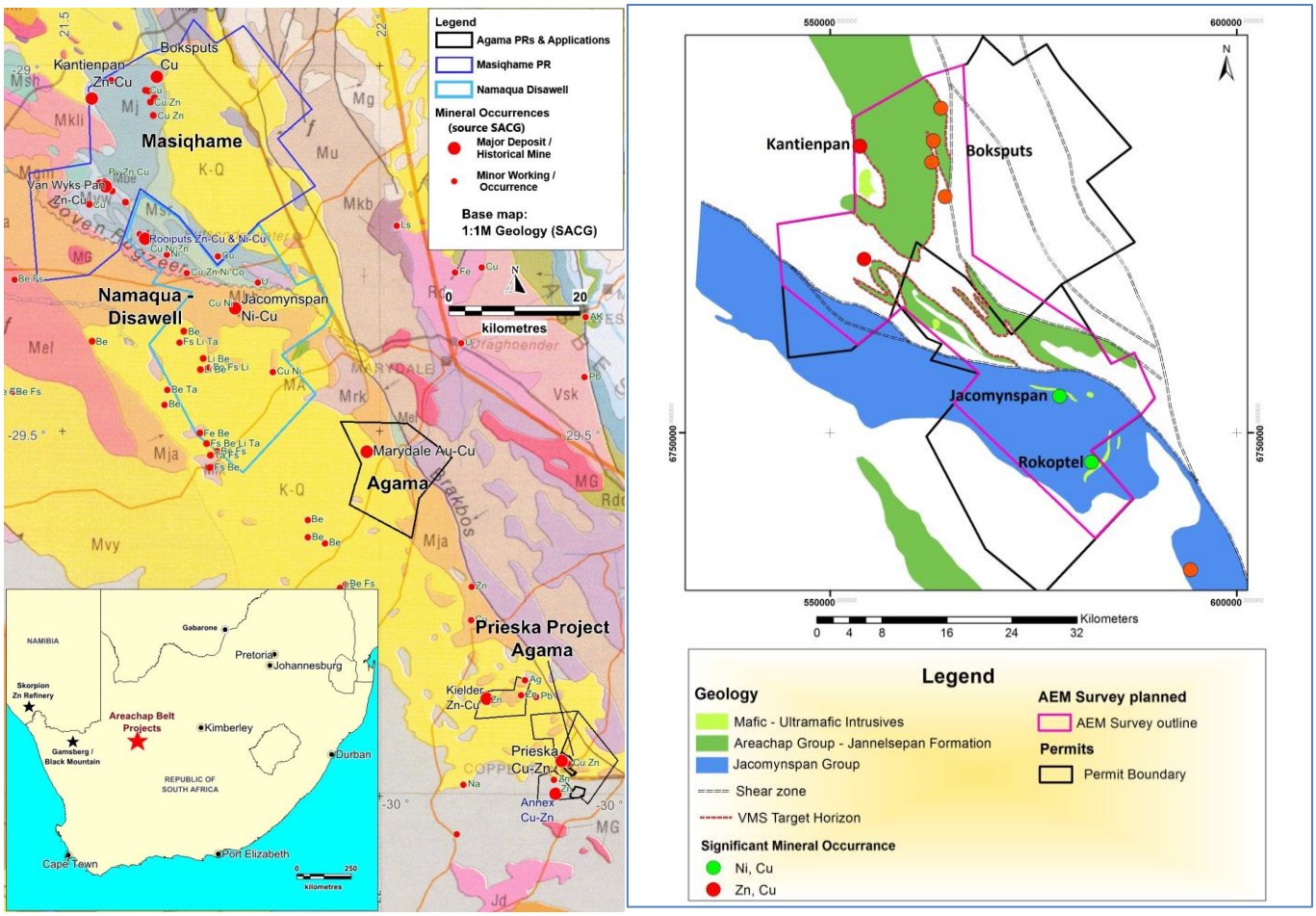


Figure 1: Locality plan for the proposed 962km² SkyTEM (AEM) survey area. The contact with the geological unit indicated in green on the right hand diagram represents the priority target area.

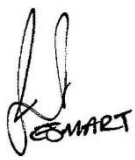
The helicopter TEM survey will be flown with the highly innovative – SkyTEM312 high power technology for deep target imaging. This high power system, with a peak moment up to 1,000,000 NIA, is optimised to provide an exceptional depth of investigation due to the high moment mode with high current and low base frequency of 12.5 Hz. This breakthrough technology is aerodynamically superior to any TEM system on the market and will help to contribute to the Company's exploration success. The survey is scheduled to commence on 26 November 2017.

1. Reference: Galley, A.G., Hannington, M.D., and Jonasson, I.R., 2007, Volcanogenic sulphide deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit –Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No.5, p. 141 – 161.

Figure 2: The SkyTEM technology during survey operation (not on Orion projects).

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

"Orion has a rare opportunity to enhance the value of its Northern Cape projects by simultaneously progressing advanced and early stage projects. The Company's primary focus is to continue resource delineation drilling at the advanced Prieska Project, followed by drill testing of known nearby mineralisation. In addition, we have decided to undertake target generation activity to identity high priority drill targets for follow-up, with the objective of new discoveries becoming satellite operations to a potential Prieska Project production centre at Copperton"



Errol Smart
Managing Director and CEO

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The information in this report that relates to Orion's Exploration Results at the Prieska Project complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**) and has been compiled and assessed under the supervision of Mr Errol Smart, Orion Minerals Managing Director. Mr Smart (PrSciNat) is registered with the South African Council for Natural Scientific Professionals, a Recognised Overseas Professional Organisation (ROPO) for JORC purposes and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Smart consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. The Exploration Results are based on standard industry practises for drilling, logging, sampling, assay methods.

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