Orion Minerals

ASX/JSE RELEASE: 25 July 2023

Prieska Crown Pillar +105 Level Mineral Resource increases to 2.3Mt @ 1.7% Cu and 1.6% Zn ahead of Trial Mining

Near-surface resource supports early production strategy with start of trial mining imminent

- **Updated Mineral Resource estimate completed for the +105m Level Crown Pillar Block at the Prieska Copper-Zinc Project in South Africa, incorporating all 2022 drilling data.**
- **Updated +105m Level Mineral Resource: 2.3Mt @ 1.7% Cu and 1.6% Zn including an Indicated Resource of 1.9Mt @ 1.82% Cu and 1.70% Zn.**
- **Significant increase in Oxide Resource, based on new and more robust interpretations.**
- **Prieska's total Mineral Resource, reported and classified in accordance with the JORC Code (2012), increases to 31Mt grading 1.2% Cu and 3.6% Zn.**

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

"Our strategy to bring the Prieska Copper-Zinc Mine back into production is now rapidly gaining momentum, with the completion of this updated Mineral Resource for the near-surface, +105 Resource Block, outlining a very attractive early mining opportunity at this fully permitted mine.

"The supergene sulphide, Indicated Resource, with a grade of 2.6% copper, is a compelling focus for our early mining strategy. This resource block is accessed from existing underground development via a short ramp, allowing trial mining to commence in the coming weeks. Ore sourced from the trial mining will be used for metallurgical optimisation tests and for the detailed design of an initial processing plant at Prieska.

"Discussions with metallurgical processing and engineering groups interested in offering processing facilities under Build-Own-Operate-Transfer arrangements are also underway.

"The trial mining phase, metallurgical process optimisation and a resultant updated Bankable Feasibility Study is fully funded with a total of ZAR370 million available from our IDC and Triple Flag funding facilities. A first draw-down call for ZAR167 million was made from this facility in the past week. Orion is now getting ready to embark on its transformation to an operating mining company!"

Orion Minerals Limited (**ASX/JSE: ORN**) (**Orion** or **Company**) is pleased to advise that it has taken another key step in its early mining strategy at the Prieska Copper-Zinc Project (**Prieska Project**) in the Northern Cape, South Africa with the completion of an updated Mineral Resource Estimate (**MRE**) for the near-surface +105 Level Crown Pillar comprising Indicated and Inferred Resources of **2.3Mt grading 1.7% Cu and 1.6% Zn** (Figure 1, Table 1).

The updated MRE for this shallow portion of the Prieska deposit represents a robust focus for the trial mining program scheduled to commence in the next few weeks. The updated MRE is based on a successful drilling program completed in 2022.

The +105 Level Crown Pillar is located in close proximity to existing underground infrastructure and can be readily accessed, allowing trial mining activities to commence immediately with all required permits and funding now in place.

This program will generate key metallurgical and other data that will assist with process plant design and also feed into an updated Bankable Feasibility Study (**BFS**) for the Early Production Strategy at Prieska.

The updated MRE for the +105 Level Crown Pillar brings the total Indicated and Inferred Mineral Resource including the Deep Sulphide Mineral Resource (refer ASX/JSE release 18 December 2018)[1] of the Prieska Project to **31Mt grading 1.2% Cu and 3.6% Zn** (Table 2).

Updated +105m Level Crown Pillar Mineral Resource

The geological wireframe and resource estimate for the +105 Level Mineral Resource have been updated to include additional drill data from the 2022 drill campaign. There has also been a review of the modelling of metallurgical zonation in all areas of the +105m Level Mineral Resource with refinements applied where appropriate (Figure 2).

Additional drilling and changes to the resource model successfully increased the total +105m Level Mineral Resource from 1.8Mt grading at 1.5% Cu and 2.0% Zn (refer ASX/JSE release 15 January 2019) to **2.3Mt grading 1.7% Cu and 1.6% Zn**, including Indicated Resources of **1.9Mt grading 1.82% Cu and 1.70% Zn** and Inferred Resources of 0.4 Mt @ 1.0% Cu and 0.8% Zn.

The +105m Level Mineral Resources shown in Table 1 are based on drilling data available for the Prieska Copper Zinc Mine (previously Repli) Mining Right NC30/5/1/2/2/10138MR. The Mineral Resources are reported in accordance with the JORC Code (2012), with supporting information provided in Appendix 1.

Table 1: Global Indicated and Inferred Mineral Resource statement for the +105m Level Resource Block of the Prieska Project.

Classification	Mineralised Zone	Tonnes	Cu (tonnes)	Cu (%)	Zn (tonnes)	Zn (%)
Indicated	HW Oxide	200,000	1,000	0.48	2,000	0.90
	Oxide	490,000	4,000	0.81	4,000	0.73
	Supergene Sulphide	1,100,000	28,000	2.58	22,000	2.06
	Hypogene	120,000	1,000	1.23	4,000	3.78
	Total	**1,900,000**	**34,000**	**1.82**	**32,000**	**1.70**
Inferred	HW Oxide	30,000	100	0.4	300	1.0
	Oxide	300,000	3,000	1.0	2,000	0.8
	Supergene Sulphide	60,000	1,000	1.4	300	0.6
	Hypogene	20,000	100	0.8	100	0.4
	Total	**400,000**	**4,000**	**1.0**	**3,000**	**0.8**
+105m Level Mineral Resource Total		**2,300,000**	**38,000**	**1.7**	**35,000**	**1.6**

Note: +105m Level Mineral Resource bottom cut-off = 0.3% Cu.
Tonnes are rounded to second significant figure, which may result in rounding errors.

[1] Mineral Resource reported in ASX release of 18 December 2018: "Landmark Resource Upgrade Sets Strong Foundation" available to the public on www.orionminerals.com.au/investors/market-news. Competent Person Orion's exploration: Mr. Errol Smart. 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 18 December 2018 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.

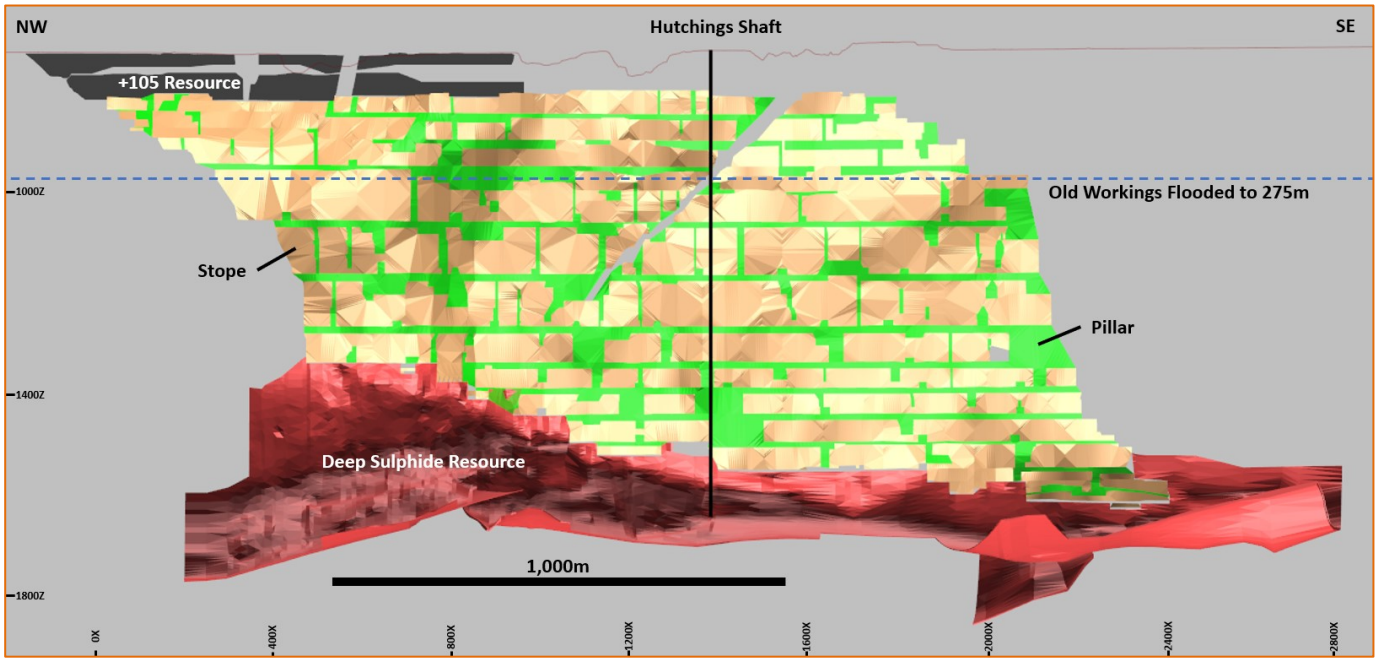


Figure 1: Longitudinal schematic section showing the historically mined area and the +105m Level Mineral Resource at the Prieska Project, with the Deep Sulphide Mineral Resource.

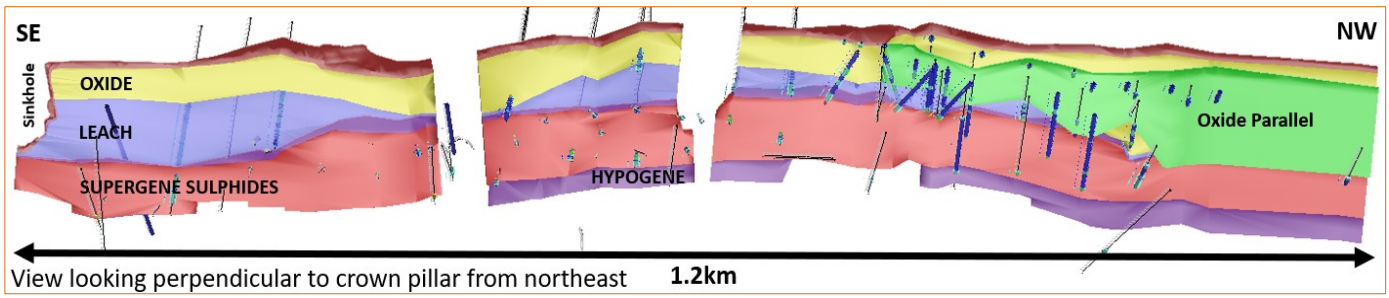


Figure 2: View showing the +105m Level Mineral Resource with the Supergene Sulphide Zone in red, the Hypogene Sulphide Zone in purple, the main Oxide Zone in yellow and the HW Oxide Zone in green. The area between the main Oxide and Supergene Sulphide zones is a leached (clay) zone (blue) with insignificant Cu and Zn values and is excluded from the Mineral Resource. Brown represents the interpreted overburden.

Since the previous +105m Level Mineral Resource (refer ASX/JSE release 15 January 2019), 14 holes comprising 918m were successfully drilled to intersect supergene sulphide mineralisation (refer ASX/JSE release 11 July 2022). A further five holes were drilled and abandoned due to poor ground conditions and unacceptable core loss.

In compliance with ASX Listing Rule 5.8.1, the following sections present a summary of all information material to understanding the reported Mineral Resource estimates:

Geology & Geological Interpretation

The Prieska Cu-Zn Deposit is a volcanogenic massive sulphide (**VMS**) deposit which is situated in the southernmost exposures of the north-northwest trending Kakamas Terrain, which forms part of the Mid-Proterozoic Namaqualand Metamorphic Complex. The deposit is hosted by the Copperton Formation of the Areachap Group.

The structural sequence at the mine consists of a footwall Smouspan Gneiss Member, Prieska Copper Mines Assemblage, which hosts the sulphide mineralisation, and the hangingwall Vogelstruisbult Gneiss Member.

The +105m Level Resource occurs above the upper limit of the historically mined Prieska Cu-Zn Deposit at approximately 105m depth below surface, up to surface. It has a strike length of approximately 1km and thicknesses vary between 1.5m and 23m.

The +105m Level Resource Block comprises six defined zones (Figure 2).

- Haematite-goethite-quartz oxide zone (gossan) from surface to approximately 33m.
- Clay (kaolinite)/leach zone developed in places below 33m.
- Chalcocite dominant supergene sulphide zone between approximately 42m and 70m.
- Mixed supergene-hypogene sulphide zone between approximately 70m and 90m below surface. This has a relatively sharp contact with the underlying hypogene massive sulphides.
- Hypogene sulphide zone consisting of the unaltered, fresh massive sulphides.
- A separate zone of elevated Cu and Zn values in the oxides (where there is adequate drilling information) in the hangingwall to the main +105m Level crown pillar is present in the northwest of the deposit for approximately 300m strike. The zone converges with the main zone towards the southeast.

Four zones have been defined for inclusion as part of the +105m Level Mineral Resource and these are referred to as the HW Oxide Zone, the Oxide Zone, the Supergene Sulphide Zone and the Hypogene Zone.

Estimation Methodology

The wireframe of the +105m Level Block was constructed for Mineral Resource estimation utilising Cu% values greater than or equal to 0.3% and Zn% values greater than or equal to 0.6%. Surfaces were created to subdivide the mineralised zone into the various domains.

Samples were composited to 1m. The exceptionally high assay values for all variables were capped to selected thresholds using the Parker methodology. A block model with cells of 40m X by 40m Y by 5m Z was used for the +105m Level Block with a sub-cell size of 1m x 1m x 1m.

Data from the Oxide and HW Oxide zones were analysed together. Data from the Supergene Sulphide and Hypogene zones were analysed together with an interpreted 'soft boundary'. These groupings together with the Leach Zone were analysed independently to ensure that the plane for estimation had an optimal orientation. Following a spatial analysis, the composite data was used to estimate the block grades using ordinary kriging (**OK**).

For the oxide domain, neighbourhood analysis resulted in an optimum search neighbourhood of 100m x 4m for local block estimation, corresponding to the variogram range. The second and third pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii increased to 200m / 7m and 400m / 20m respectively. 51% of blocks were estimated by the first pass local block estimation.

For the supergene sulphide and hypogene domain, neighbourhood analysis resulted in an optimum search neighbourhood of 100m x 7.2m for local block estimation, corresponding to the variogram range. The second and third pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii increased to 200m / 7m and 400m / 20m respectively. 80% of blocks were estimated by the first pass.

Bulk densities (t/m^3) were determined using the water displacement method. Due to poor rock quality the density data in the Oxide Zone was sparse, with only 48 samples available. There are 203 density measurements in the Supergene Sulphide Zone. The entire sample (normally 1m length) was measured, or where the formation was highly fractured, a shorter length was measured.

Local block estimates of density were produced using ordinary kriging in areas of close-spaced sampling. A second pass with longer search radii was utilised and the remaining blocks were populated using grid filling.

Datamine™ was utilised to create a block model and measure individual block volumes within each zone and these data were imported into Isatis™ for further geostatistical analysis.

The HW Oxide, Oxide, Supergene Sulphide and Hypogene zones are reported separately in the Mineral Resource statement. The clay/leach zone is all below the 0.3% Cu cut off.

Resource Classification

The geology of the two zones making up the +105m Level Mineral Resource is relatively uncomplicated, and the key issues relate to the delineation of the domain boundaries (not geology).

The Oxide Zone is classified as both Inferred and Indicated Mineral Resources. The geological model is defined to a reasonable level and there is sufficiently accurate data to produce local block estimates using ordinary kriging, albeit there is a limited number of samples in some areas, especially in the southeast where surface drilling access was restricted by the presence of sinkholes. There is a high level of uncertainty associated with the zonal estimation of density due to a low number of samples as well as possible inaccuracies associated with core loss. Two collapse zones (related to collapse in the sinkhole) have been interpreted up-dip based on drilling information from the Supergene Sulphide zone.

The Supergene Sulphide and Hypogene Zones are predominantly classified in the Indicated category with some small areas in the Inferred category. The geological model is defined to a reasonable level and there is sufficiently accurate data coverage to produce local block estimates using ordinary kriging. In parts of the Supergene Sulphide Zone there are sufficient data for reasonably accurate local block estimates of grade (~80% of blocks populated by 1st pass kriging). Local block estimation for density with reasonable accuracy was possible. The kriging performance parameters, e.g. slope of regression, together with an assessment of the areas of blocks that were populated by 1st pass kriging, were utilised to make a distinction between the Indicated and Inferred classifications.

The results conform to the view of the Competent Person.

Changes in +105m Level Mineral Resources

Given the changes in the interpretation of mineralised domains, a direct comparison of updated and previous (2019) resource figures is difficult. However, the total tonnes (Indicated and Inferred classification categories) are 2.3M which is an increase from 1.8M tonnes in 2019. The Cu tonnes have increased from 27,000t in 2019 to 38,000t and the Zn tonnes have slightly increased by 300t.

The increase in overall tonnes can be largely attributed to the extension of the interpreted crown pillar mineralised zone towards the southeast to where it intersects the sidewall of a sinkhole. The more comprehensive interpretation of the mineralised zone in the hangingwall to the main crown pillar mineralisation also contributes significantly to this increase in tonnage (and to that of the oxide tonnage). The changes in the interpretation of the bottom of the oxide zone (particularly in the northwest) had a significant positive impact on the oxide tonnage.

The increase in Cu tonnes can be largely attributed to higher grades in the southeast of the supergene sulphide zone from the 2022 drilling, the extended interpretation of the crown pillar mineralisation to the southeast, and the changes in the interpretation of the bottom of the oxides.

Metallurgy

Ore extracted from the +105 mineralised zone was previously treated using froth flotation metallurgical process by Prieska Copper Mine. Mixed oxide, supergene and hypogene sulphide ore was successfully treated by froth flotation to produce separate copper and zinc concentrates during the 1980's[2].

Limited flotation test work was carried out on the oxide mineralisation however, results were unsuccessful. The oxide mineralisation has a reasonable prospect for eventual economic extraction as it occurs close to the surface and treatment of this type of ore by means of leaching is well-known in the industry.

Plans are underway for additional drilling of oxides in 2023 Q3, to collect a more representative sample for further metallurgical test work.

[2] Broekman B.R. and Penman D.W. The Prieska Experience: Flotation Developments in Copper-Zinc Separation. The Journal of South African Institute of Mining Metallurgy, volume 91, no. 8, Aug 1991, pp 257-265.

Cut-off Grades & Mining Methods

The +105m Level Mineral Resource is reported above a 0.3% Cu cut off. This corresponds with the wireframe modelling and is similar to that used in many open cast mining deposits worldwide. Whilst previously open pit mining was evaluated for the deposit (refer ASX/JSE release 26 May 2020), underground mining for the +105 Level Resource is now being considered as an optimisation alternative, with underground trial mining to commence in coming weeks (Figures 3 and 4).

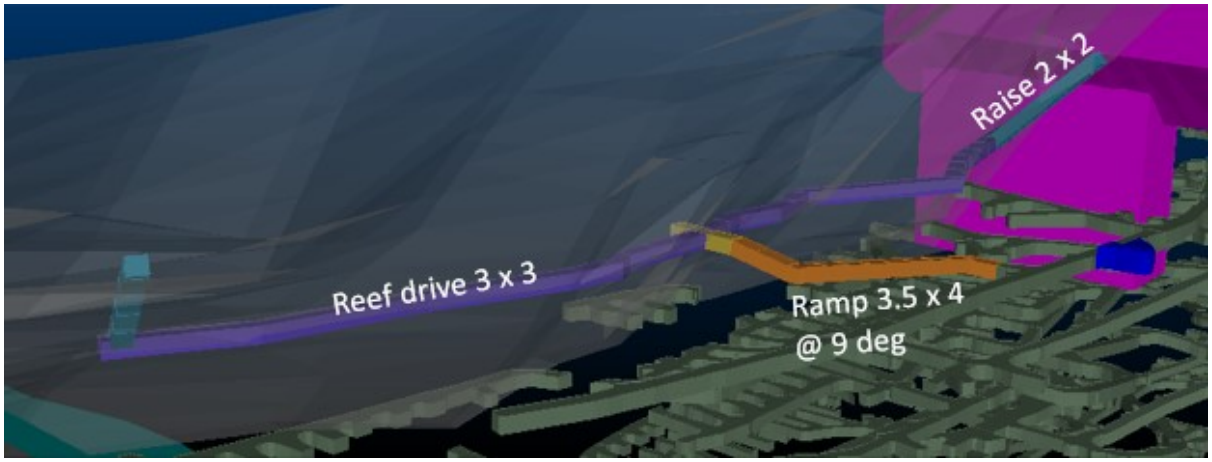


Figure 3: Access ramp, reef drives and raises in +105 trial Mining Project.

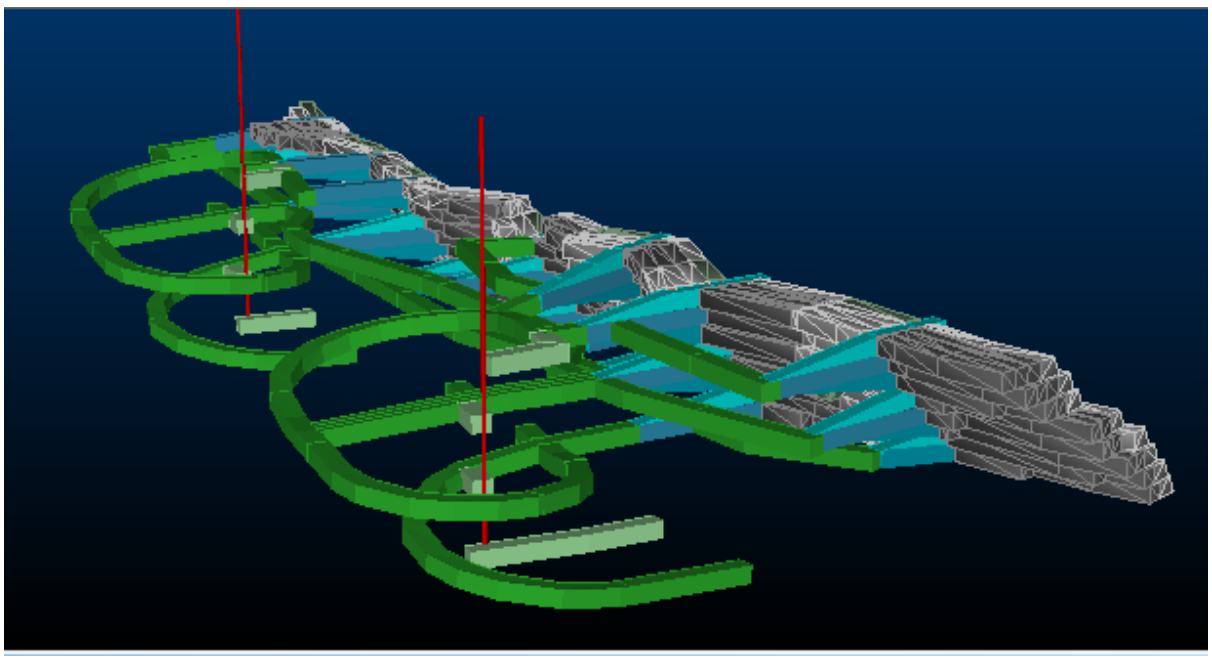


Figure 4: Conceptual Layout of +105 Resource Drift & Fill Mining.

Future Work

An infill drilling program of approximately 1,700m on the Oxide Resource to provide a further upgrade in confidence and additional metallurgical information is planned for Q3, 2023 (Figure 5). However, this is not critical to the current early mining BFS studies. Apart from this infill drilling of the Oxide Resource, no additional drilling is planned, for mining of sulphide ore, before the completion of the updated BFS in late 2023. Grade control drilling on a closely spaced grid will be executed during the operational phase of mining.

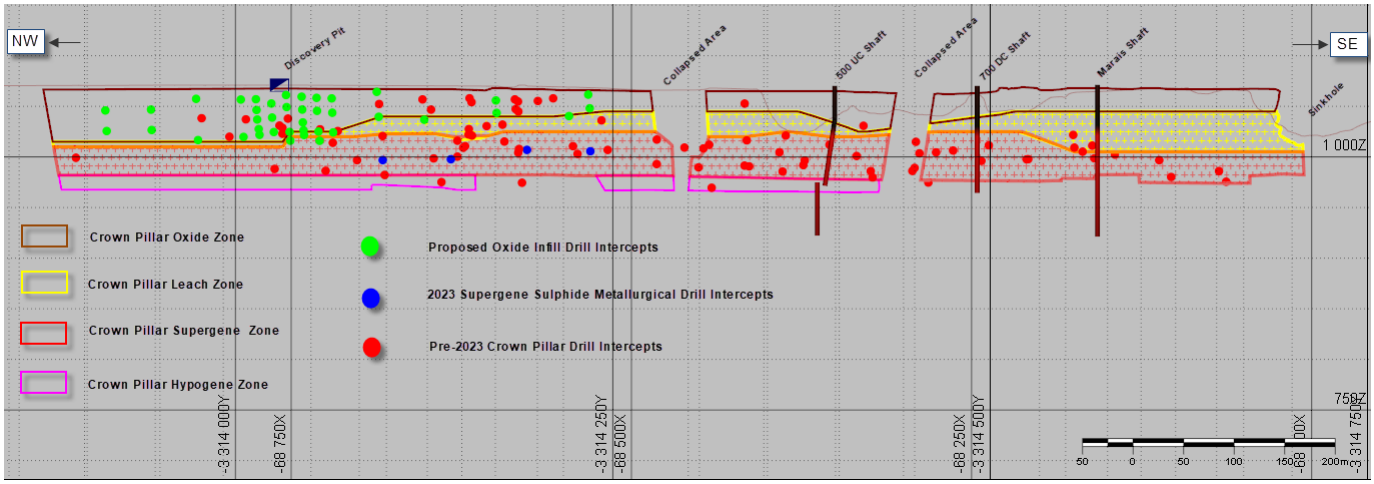


Figure 5: Longitudinal Section of the Crown Pillar +105 Level Mineral Resource area with existing drill hole coverage and planned Oxide Infill drill intercepts.

Total Prieska Project Mineral Resource

The Deep Sulphide Mineral Resource of the Prieska Deposit, which was announced in December 2018 (refer ASX/JSE release 18 December 2018), combined with the +105m Level Mineral Resource is summarised in Table 2 below.

Table 2: Global Mineral Resource for the combined +105m Level and Deep Sulphide Mineral Resources of the Prieska Project.

Resource	Classification	Tonnes	Cu (tonnes)	Cu (%)	Zn (tonnes)	Zn (%)
Deep Sulphide Resource	Indicated	19,000,000	220,000	1.17	670,000	3.60
	Inferred	10,000,000	120,000	1.1	420,000	4.1
+ 105m Level Resource	Indicated	1,900,000	34,000	1.82	32,000	1.70
	Inferred	400,000	4,000	1.0	3,000	0.8
Total	**Indicated**	**20,000,000**	**250,000**	**1.23**	**700,000**	**3.43**
Total	**Inferred**	**11,000,000**	**120,000**	**1.1**	**420,000**	**4.0**
Grand Total		**31,000,000**	**370,000**	**1.2**	**1,100,000**	**3.6**

Notes: Deep Sulphide Resource bottom cut-off = 4% Equivalent Zn; +105m Level Mineral Resource bottom cut-off = 0.3% Cu.
Tonnes are rounded to second significant figure, which may result in rounding errors.

As part of the updated BFS, Orion now looks forward to the completion of detailed scheduling and mine design for the +105m Level as part of the Early Production Scenario (refer ASX/JSE release 20 January 2022).

Project Background

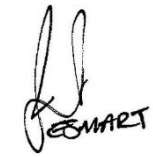
The Prieska Project is located in the Northern Cape Province of South Africa, approximately 290km south-west of the city of Kimberley. The project area encompasses the historical Prieska Copper Mine (**PCM**). PCM was profitably operated by Anglovaal as an underground copper and zinc mine, exploiting the Copperton deposit between 1971 and 1991, processing on average 3Mt per year to produce 1.01Mt of zinc and 0.42Mt of copper in concentrates (refer ASX/JSE releases 15 November 2017 and 26 May 2020). Run-of-mine ore was treated by froth flotation to produce separate concentrates of copper and zinc.

Orion is now investigating the establishment of new mining operations targeting the extraction of the remaining copper-zinc mineralisation at the Prieska VMS deposit.

Orion has delineated a Mineral Resource for the +105m Level and Deep Sulphide Mineral Resources, classified by a Competent Person and reported in accordance with the JORC Code (2012), amounting to 31Mt grading 1.2% Cu and 3.6% Zn of which, 20Mt grading 1.23% Cu and 3.43% Zn is classified in the Indicated category.

Trial mining and metallurgical optimisation work are underway, with a revised bankable feasibility study scheduled for completion in late 2023.

For and on behalf of the Board.



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Competent Person's Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Paul Matthews (Pr.Sci.Nat.), a Competent Person who is a member of the South African Council for Natural Scientific Professionals, a Recognised Professional Organisation (**RPO**). Mr Matthews is a full-time employee of Orion. Mr Matthews 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 Matthews consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mr Sean Duggan, a Competent Person who is a Director and Principal Analyst at Z Star Mineral Resource Consultants (Pty) Ltd. Mr Duggan (Pr.Sci.Nat) is registered with the South African Council for Natural Scientific Professionals (Registration No. 400035/01), an RPO. Mr Duggan 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 Duggan consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Reference to Previous Reports

The Deep Sulphide Mineral Resource was reported in ASX/JSE Release of 18 December 2018: "Landmark Resource Upgrade Sets Strong Foundation for Development of Prieska Zinc-Copper Project" available to the public on https://orionminerals.com.au/download/25/market-news-2018/2902/landmark-resource-upgrade-at-prieska-zinc-copper-project-2.pdf. Competent Person: Mr. Sean Duggan. Orion confirms it is not aware of any new information or data that materially affects the information related to the Deep Sulphide Mineral Resource included in the original market announcement. Orion confirms that all material assumptions and technical parameters underpinning the Deep Sulphide Mineral Resource in the ASX/JSE Release of 18 December 2018 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 been materially modified from the original market announcement.

Disclaimer

This release may include forward-looking statements. Such forward-looking statements may include, among other things, statements regarding targets, estimates and assumptions in respect of metal production and prices, operating costs and results, capital expenditures, mineral reserves and mineral resources and anticipated grades and recovery rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements inherently involve subjective judgement and analysis and are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Orion. Such forward-looking statements are based on numerous assumptions regarding the Orion's present and future business strategies and the political and economic environment in which the Orion will operate in the future, which are not

guarantees or predictions of future performance. Actual results and developments may vary materially from those that may be contemplated or implied by forward-looking statements in this release.

Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All information in respect of Exploration Results and other technical information should be read in conjunction with Competent Person Statements in this release (where applicable). To the maximum extent permitted by law, Orion and any of its related bodies corporate and affiliates and their officers, employees, agents, associates and advisers:

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Appendix 1 - Drill hole collar and intersection information from +105 Level Block drill program at Prieska Copper-Zinc Project

Table 3: Collar table of 2022 PCZM +105 Level Crown Pillar resource drilling

Hole ID	Lo23 WGS84			Azimuth	Dip	Length	Hole Type	Company	Comment
	Easting	Northing	Elevation						
COC01	-68818.28	-3314095.36	1070.81	0.00	-90.00	73.41	Surface DD	Repli	
COC02	-68795.21	-3314074.15	1070.99	0.00	-90.00	72.80	Surface DD	Repli	
COC03	-68853.22	-3314060.15	1070.83	0.00	-90.00	71.86	Surface DD	Repli	
COC04	-68741.24	-3314162.28	1070.75	0.00	-90.00	63.70	Surface DD	Repli	
COC05	-68719.32	-3314141.02	1070.78	0.00	-90.00	107.86	Surface DD	Repli	
COC06	-68702.87	-3314251.15	1069.83	0.00	-90.00	55.50	Surface DD	Repli	
COC07	-68690.75	-3314233.74	1070.19	0.00	-90.00	70.92	Surface DD	Repli	
COC08	-68727.13	-3314218.22	1070.39	0.00	-90.00	61.30	Surface DD	Repli	
COC09	-68702.60	-3314194.88	1070.56	0.00	-90.00	89.50	Surface DD	Repli	
COC10	-68768.74	-3314119.22	1070.71	0.00	-90.00	72.90	Surface DD	Repli	
COC11	-68784.23	-3314143.78	1070.53	0.00	-90.00	45.67	Surface DD	Repli	
OCOD032	-68524.45	-3314513.33	1067.68	53.50	-35.70	58.86	Surface DD	Orion	No Assays, used for geological modelling only
OCOD033	-68524.43	-3314513.40	1066.62	48.90	-22.31	186.14	Surface DD	Orion	
OCOD034	-68555.24	-3314485.35	1067.62	49.30	-22.00	82.88	Surface DD	Orion	No Assays, used for geological modelling only
OCOD035	-68557.88	-3314484.86	1067.65	35.00	-17.00	184.68	Surface DD	Orion	
OCOD036	-68660.11	-3314387.84	1067.71	46.73	-24.23	149.25	Surface DD	Orion	
OCOD037	-68627.57	-3314423.73	1067.19	44.50	-23.20	157.69	Surface DD	Orion	
OCOD038	-68627.57	-3314423.73	1067.19	45.00	-19.10	141.21	Surface DD	Orion	
OCOD039	-68683.31	-3314217.11	1070.27	0.00	-90.00	84.27	Surface DD	Orion	No Assays, used for geological modelling only
OCOD040	-68464.43	-3314547.58	1067.53	46.00	-15.56	149.41	Surface DD	Orion	
OCOD041	-68466.11	-3314549.27	1067.64	49.60	-23.70	119.79	Surface DD	Orion	No Assays, used for geological modelling only
OCOD042	-68660.21	-3314387.01	1067.64	45.00	-16.12	111.78	Surface DD	Orion	
OCOD043	-68466.99	-3314550.24	1067.61	46.55	-29.63	202.33	Surface DD	Orion	
OCOD044	-68547.71	-3314477.66	1067.95	45.00	-10.30	94.58	Surface DD	Orion	
OCOD047	-68182.77	-3314677.71	1071.03	45.20	-28.70	177.84	Surface DD	Orion	
OCOD050	-68252.90	-3314634.73	1069.50	45.00	-30.00	122.01	Surface DD	Orion	
OCOD055	-68225.43	-3314661.09	1070.76	45.00	-30.00	185.00	Surface DD	Orion	No Assays, used for geological modelling only
OCOD077	-68642.90	-3314255.63	1070.00	2.80	-88.90	90.93	Surface DD	Orion	No Assays, used for geological modelling only
OCOD095	-68643.22	-3314287.96	1069.00	111.00	-60.00	111.90	Surface DD	Orion	No Assays, used for geological modelling only
OCOD095A	-68641.34	-3314288.40	1069.00	110.71	-60.61	30.40	Surface DD	Orion	No Assays, used for geological modelling only

Hole ID	Lo23 WGS84			Azimuth	Dip	Length	Hole Type	Company	Comment
	Easting	Northing	Elevation						
OCOD097	-68516.78	-3314187.81	1067.00	179.22	-29.29	82.70	Surface DD	Orion	No Assays, used for geological modelling only
OCOD097A	-68516.70	-3314191.04	1067.00	179.91	-30.50	95.40	Surface DD	Orion	No Assays, used for geological modelling only
OCOD098	-68258.01	-3314227.05	1068.87	222.43	-29.98	164.03	Surface DD	Orion	No Assays, used for geological modelling only
OCOD099	-67994.49	-3314360.18	1069.51	223.63	-30.33	163.80	Surface DD	Orion	No Assays, used for geological modelling only
OCOD106	-68667.34	-3314277.26	1069.46	273.43	-89.17	33.47	Surface DD	Orion	No Assays, used for geological modelling only
OCOD106A	-68665.51	-3314278.91	1069.44	77.46	-89.96	45.47	Surface DD	Orion	No Assays, used for geological modelling only
OCOD108	-68665.51	-3314278.91	1069.44	224.13	-60.48	35.32	Surface DD	Orion	No Assays, used for geological modelling only
OCOD138	-68680.07	-3314183.21	1070.11	264.91	-89.35	112.34	Surface DD	Orion	
OCOR012A	-68869.19	-3314038.21	1070.77	225.00	-60.00	39.00	Surface RC	Orion	
OCOR013A	-68839.45	-3314070.67	1070.97	225.00	-60.00	42.00	Surface RC	Orion	
OCOR014	-68808.98	-3314098.95	1070.83	225.00	-60.00	42.00	Surface RC	Orion	
OCOR015	-68748.62	-3314086.26	1070.82	0.00	-90.00	108.00	Surface RC	Orion	
OCOR016	-68694.12	-3314188.77	1070.60	154.60	-59.73	108.00	Surface RC	Orion	
OCOR017	-68675.70	-3314223.39	1070.22	145.00	-60.00	77.00	Surface RC	Orion	
OCOR018	-68687.06	-3314229.29	1070.20	0.00	-90.00	70.00	Surface RC	Orion	
OCOR019	-68682.01	-3314228.61	1070.15	0.00	-90.00	53.00	Surface RC	Orion	
OCOR020	-68735.58	-3314215.60	1070.31	225.00	-60.00	38.00	Surface RC	Orion	
OCOR021	-68756.68	-3314175.07	1070.51	225.00	-60.00	49.00	Surface RC	Orion	
OCOR022	-68714.45	-3314261.59	1069.70	225.00	-60.00	39.00	Surface RC	Orion	
OCOR023	-68692.07	-3314218.24	1070.35	0.00	-90.00	85.00	Surface RC	Orion	
OCOR024	-68678.43	-3314246.38	1068.03	0.00	-90.00	48.00	Surface RC	Orion	
OCOR025	-68654.38	-3314295.35	1069.34	0.00	-90.00	49.00	Surface RC	Orion	
OCOR026	-68659.05	-3314269.84	1069.50	330.00	-68.00	68.00	Surface RC	Orion	
OCOR027	-68640.98	-3314285.78	1069.29	111.00	-60.00	110.00	Surface RC	Orion	
OCOR028	-68644.41	-3314307.39	1069.20	225.00	-60.00	43.00	Surface RC	Orion	
OCOR029	-68669.86	-3314279.15	1069.46	225.00	-60.00	46.00	Surface RC	Orion	
OCOR030	-68745.18	-3314128.85	1070.83	0.00	-90.00	103.00	Surface RC	Orion	
OCOR031	-68783.93	-3314119.14	1070.66	225.00	-60.00	80.00	Surface RC	Orion	
OCOU071	-68087.90	-3314599.77	973.80	48.60	19.50	49.15	UG DD	Orion	No Assays, used for geological modelling only
OCOU073	-68248.55	-3314550.07	974.27	55.50	25.00	62.33	UG DD	Orion	
OCOU075	-68255.66	-3314545.84	973.70	344.80	27.40	85.63	UG DD	Orion	
OCOU076	-68185.07	-3314600.28	972.94	39.70	27.20	68.15	UG DD	Orion	
OCOU078	-68055.87	-3314635.99	973.22	45.30	28.70	42.72	UG DD	Orion	No Assays, used for geological modelling only

Hole ID	Lo23 WGS84			Azimuth	Dip	Length	Hole Type	Company	Comment
	Easting	Northing	Elevation						
OCOU079	-68329.89	-3314509.89	973.34	33.40	32.50	64.10	UG DD	Orion	No Assays, used for geological modelling only
OCOU086	-68247.28	-3314551.54	974.36	55.00	25.00	69.92	UG DD	Orion	No Assays, used for geological modelling only
OCOU088	-68329.59	-3314509.67	973.82	30.00	15.00	60.89	UG DD	Orion	No Assays, used for geological modelling only
OCOU100	-68184.98	-3314599.43	973.25	21.74	40.00	75.26	UG DD	Orion	No Assays, used for geological modelling only
OCOU102	-68371.48	-3314488.23	972.81	31.97	13.16	67.93	UG DD	Orion	No Assays, used for geological modelling only
OCOU104	-68445.36	-3314444.07	974.95	355.01	14.15	82.56	UG DD	Orion	No Assays, used for geological modelling only
OCOU109	-68437.99	-3314448.41	975.09	41.46	16.96	70.00	UG DD	Orion	No Assays, used for geological modelling only
OCOU112	-68202.04	-3314619.10	972.70	37.78	34.31	90.52	UG DD	Orion	No Assays, used for geological modelling only
V01	-68795.85	-3314074.21	1071.58	221.19	-55.00	60.96	Surface DD	Anglovaal	
V02	-68623.34	-3314231.79	1070.36	220.50	-60.00	121.92	Surface DD	Anglovaal	
V03	-68758.95	-3314020.57	1071.31	220.59	-60.00	121.92	Surface DD	Anglovaal	
V04	-68434.65	-3314306.16	1069.39	220.50	-60.00	134.30	Surface DD	Anglovaal	
V05	-68290.49	-3314453.39	1069.78	225.75	-60.00	108.51	Surface DD	Anglovaal	No Assays, used for geological modelling only
V06A	-67988.44	-3314571.63	1069.39	220.50	-60.00	134.70	Surface DD	Anglovaal	
V09	-68242.93	-3314413.77	1070.09	220.50	-60.00	126.50	Surface DD	Anglovaal	
V10	-68577.31	-3314184.24	1070.21	220.50	-60.00	139.60	Surface DD	Anglovaal	
V11	-68021.94	-3314600.89	1069.30	180.00	-90.00	199.34	Surface DD	Anglovaal	
V12	-68052.42	-3314631.68	1069.60	223.31	-60.00	302.97	Surface DD	Anglovaal	No Assays, used for geological modelling only
V13	-68721.49	-3313971.80	1071.19	190.19	-60.00	182.88	Surface DD	Anglovaal	
V14	-68908.34	-3313902.92	1071.28	229.96	-60.00	178.31	Surface DD	Anglovaal	
OCOU141	-68523.15	-3314406.88	976.74	38.00	38.66	57.60	UG DD	Orion	
OCOU142	-68388.06	-3314476.31	974.17	37.00	33.71	71.51	UG DD	Orion	
OCOU143	-68523.27	-3314406.65	976.71	30.00	36.35	59.39	UG DD	Orion	
OCOU144	-68334.77	-3314505.10	972.76	35.00	9.69	67.74	UG DD	Orion	
OCOU145	-68522.87	-3314405.66	975.53	30.00	11.81	74.56	UG DD	Orion	
OCOU147	-68336.01	-3314506.50	974.00	20.00	42.28	46.89	UG DD	Orion	
OCOU148	-68482.39	-3314426.90	976.26	27.00	48.69	66.87	UG DD	Orion	
OCOU150	-68442.01	-3314446.95	973.63	21.00	10.78	54.50	UG DD	Orion	
OCOU151	-68262.72	-3314543.47	972.89	25.00	19.90	70.67	UG DD	Orion	
OCOU155	-68263.19	-3314544.65	973.70	25.00	44.97	63.02	UG DD	Orion	
OCOU156	-68442.75	-3314447.78	975.44	21.00	48.34	67.70	UG DD	Orion	
OCOU157	-68350.08	-3314498.24	973.99	32.00	31.51	52.10	UG DD	Orion	

Hole ID	Lo23 WGS84			Azimuth	Dip	Length	Hole Type	Company	Comment
	Easting	Northing	Elevation						
OCOU160	-68442.16	-3314447.19	974.85	14.00	33.00	62.09	UG DD	Orion	
OCOU163	-68418.39	-3314461.48	974.96	24.00	50.00	42.30	UG DD	Orion	
OCOU164	-68309.04	-3314520.31	974.07	25.00	35.35	75.00	UG DD	Orion	
OCOU166	-68417.84	-3314461.77	974.87	45.00	49.58	66.31	UG DD	Orion	
OCOU167	-68249.13	-3314550.51	973.81	55.00	50.00	39.56	UG DD	Orion	
OCOU168	-68545.95	-3314393.13	977.01	40.00	32.94	65.93	UG DD	Orion	
OCOU169	-68248.55	-3314550.07	974.00	58.00	56.71	42.88	UG DD	Orion	No Assays, used for geological modelling only

Appendix 2: The following table is provided in accordance with the JORC Code (2012) requirements for the reporting of Mineral Resources for the Prieska +105m Level Block

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Drilling and sampling for the +105 Block has been undertaken during several distinct periods since the discovery of mineralisation. These are pre-mine exploration (1968-1971) surface diamond drill holes by Anglovaal Ltd (also known as the Anglovaal Group, "Anglovaal"), surface diamond drilling by Repli Investments No 27 (Pty) Ltd (Repli) in 2012, and surface and underground drilling and reverse circulation (RC) drilling by Orion (2017 to present). A total of 102 holes were drilled comprising 9,104m. Collar details for these holes are included as Table 1 in Appendix 1. • 12 surface diamond holes totalling 1,812m were drilled by Anglovaal. • 11 surface diamond holes totalling 785m were drilled by Repli in 2012. • 27 surface diamond holes totalling 3,173m were drilled by Orion in 2017. • 20 RC holes totalling 1,297m were drilled by Orion in 2017. • 13 underground diamond holes totalling 889m were drilled by Orion in 2017. • 19 underground diamond holes totalling 1,147m were drilled by Orion in 2022. Orion acquired Repli in March 2017 and with the similar methodology utilised in the drilling and sampling processes by both companies, Repli and Orion commentary has in the most part been combined. Anglovaal: • For diamond drilling carried out by Anglovaal between 1968 and 1971, there is limited information available on sampling techniques for core. However, with exploration and resource management being carried out under the supervision of Anglovaal, it is considered by the Competent Person that there would be procedures in place to industry best practice standard at that time. This is based on the Competent Persons knowledge of exploration carried out by Anglovaal and discussions with personnel employed by Anglovaal. • The exploration and resource management were under the professional supervision of Dr Danie Krige an internationally recognised expert of the time who published peer reviewed papers based on the sampling data.

Criteria	JORC Code explanation	Commentary
		The sampling was successful in defining a resource estimate which was used as the basis of successful mine development and operation over a 20-year period. • Drilling of the original surface exploration holes was carried out 200 – 250m line spacing. • Surface drill exploration samples were all sent to Anglovaal Research Laboratory at Rand Leases Mine and underground drill samples to the mine laboratory for analyses. • No records on the sampling methodology. • Although no formal QA/QC samples were inserted at the time by the geologists on the exploration site or the mine the Anglovaal Research Laboratory developed their own standards, certified by other commercial laboratories and those were used internally in the laboratory. Duplicate samples were also inserted to check for repeatability. Repli and Orion: • Samples submitted for analysis to Genalysis South Africa (Pty) Ltd (Genalysis) (Repli) and ALS Chemex Pty Ltd (ALS) (Orion) are pulverised in its entirety and split to obtain a 0.2g sample for digestion and analysis. • Drilling was carried out on approximately 30m spaced lines along strike and at approximately 50m intervals. There were however holes drilled in between these lines. Underground holes, where possible, were spaced at 50m lines. • Diamond core is cut at the core yard and half core taken as the sample. • In friable ore where core splitting was not possible half of the broken friable material was sampled using a spoon and scraper. • Diamond core is sampled on 1m intervals where possible, sample lengths are adjusted to ensure samples do not cross geological boundaries or other features. • RC samples were collected at 1m intervals via a cyclone and collected in polyweave bags. Each sample was split via a 3 tier splitter, followed by a single splitter to produce two samples of approximately 2.5kg each (an "original" and a "duplicate"). • Sampling is undertaken under the supervision of a qualified geologist and intervals were selected on the basis of mineralogy, textures and concentrations of specific minor minerals. A hand held Niton XRF instrument is used as guide during sampling. • Quality control samples were inserted under the direct supervision of a geologist at pre-determined points within the sampling stream.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Anglovaal: • Records for core size are not available. • No records on core orientation Repli and Orion: • Diamond drilling from surface is with a NQ core size using a triple tube core barrel to improve core recovery in soft formations. • In the near surface weathered zone HQ core was drilled. • Core is not orientated. • RC holes have been drilled using a 140mm diameter RC hammer bit. • Pre 2022 underground diamond drilling in the mineralised zone was drilled using a TBW coring bit and a double tube core barrel and BX size reverse flush in the country rock. • 2022 underground diamond drilling was NQ size using a triple tube core barrel to improve core recovery in soft formations.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	Anglovaal: • All mineralised intersections were done with core drilling. • Core recoveries are documented on the assay sheets. Core recoveries were measured for each "run". • In most holes recoveries were generally good through the mineralisation. Repli and Orion: • Core stick-ups reflecting the depth of the diamond drill hole are recorded at the rig at the end of each core run. • A block with the depth of the hole written on it is placed in the core box at the end of each run. • At the core yard, the length of core in the core box is measured for each run. The measured length of core is divided by the stick-up measured at the rig to determine the percentage core recovery. Secondly, the measured length is subtracted from the length of the run as recorded from the stick-up to determine the core lost. • During surface drilling a triple tube core barrel is used to minimise the core loss in soft formations. • In underground holes a TBW bit was used to optimise core recovery when drilling in the mineralised zone as opposed to reverse flush drilling in the footwall rocks. • Core loss was significant in some instances in the soft weathered formations (oxides, supergene sulphide ore and clay zones). • Analysis of data show that there is no relationship between core loss and

Criteria	JORC Code explanation	Commentary
		grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Anglovaal: • All relevant intersections holes have been logged and all of this information is available. Repli and Orion: • RC drill chips were logged on 1m intervals using visual inspection of washed drill chips. • Core of the entire hole length was geologically logged and recorded on standardised log sheets by qualified geologists. • All intersections were logged. • Qualitative logging of colour, grainsize, weathering, structural fabric, lithology, alteration type and mineralogy was carried out. • After logging the information was entered into digital templates at the project office. • The Orion drilled core was all (entire drill hole) photographed and saved in a dedicated folder.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Anglovaal: • Details of sub-sampling techniques not available • No QAQC samples submitted with the exploration samples Repli and Orion: • RC chip samples were split via a 3-tier splitter, followed by a single splitter to produce two samples of approximately 2.5kg each (an "original" and a "duplicate"). • When wet, the chip samples were allowed to dry before it was split and sampled. • With core samples, the entire sample length was cut, and one half sampled. • In friable ore where core splitting was not possible half of the broken friable material was sampled using a spoon and scraper. • Core samples were dry. • Three laboratories were used: the drilling campaign by Repli used Genalysis and the two campaigns by Orion used ALS. Both laboratories have SANAS accreditation. However, Genalysis only have accreditation for Au and Pb. SGS Laboratory was used as the referee laboratory. • Samples submitted to the primary laboratories were dried and crushed to 70% < 2mm and then pulverised to 85% < 75 microns. • Quality control samples were inserted (> 8% insertion rate) under the

Criteria	JORC Code explanation	Commentary
		direct supervision of a geologist at pre-determined points within the sampling stream. Blanks were inserted at the beginning and end of each batch as well as within the mineralised zone of each drill hole. CRM was inserted to correspond more or less with low, medium or high grade mineralised zones. • ALS has their own internal QA/QC protocols which include CRM's (5%), blanks (2.5%) and duplicates (2.5%). • Due to the poor quality of the core and difficulty to cut half core into quarter core only a few field duplicates could be taken. • Pulp duplicates for repeatability checks were submitted to SGS as referee laboratory.

Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*
	• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*
		Anglovaal:
		• Surface drill exploration samples were all sent to Anglovaal Research Laboratory at Rand Leases Mine.
		• Atomic Adsorption method was used with a Nitric-bromide digest.
		• Although no formal QA/QC samples were inserted with the drill samples of the exploration holes the Anglovaal Research Laboratory developed their own standards, certified by other commercial laboratories and those were used internally in the laboratory. Duplicate samples were also inserted to check for repeatability.
		Repli and Orion:
		• Three laboratories were used to analyse samples. Repli used Genalysis and Orion used ALS with SGS Laboratory used as the referee laboratory.
		• Analyses were done using acid digestion and the inductively coupled plasma and optical emission spectroscopy ("ICP-OES") methodology. Acid digestions were as follows:
		  • Initially ALS used a three-acid digest, but changed to an aqua-regia digest in November 2017.
		  • Genalysis used a four-acid digest.
		  • SGS an aqua-regia digest
		• Quality control samples were inserted, under the direct supervision of a geologist, at pre-determined points within the sampling stream. Sample results of the duplicates and CRMs were examined on a regular basis by the responsible geologist and any discrepancy taken up with the laboratories.
		• CRM samples show excellent accuracy and precision and duplicate samples show acceptable precision with no obvious bias. Blank samples indicate no contamination, within the pre-determined thresholds, during the sample preparation process.

Criteria	JORC Code explanation	Commentary
		• External laboratory checks between ALS and SGS were done by submission of duplicate samples. These show excellent accuracy and precision, except for the Au as can be expected with the very low levels.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Anglovaal: • No records available Repli and Orion: • The drilling and sampling of each drilling campaign was supervised by experienced geologists. • Core recovery, density data, sampling data and geological logs are documented in the core yard onto standard paper templates provided by the company. • Data entry from the primary hard copies is done on excel spreadsheets by the geologists logging the core. The data is then imported in to an Access database by the geologist responsible for the database. Validation of the data is done during importing into the Access database by running queries, and when the resource geologist imports the data into to the modelling software. • No twinning of holes has been done. • No adjustments have been made to the assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Anglovaal: • All surface collars were surveyed by qualified surveyors using a theodolite. • The historic mine survey data is in the old national Lo 23 Clarke 1880 coordinate system. • Downhole surveys were carried out for the holes. Methodology of the downhole surveys is not recorded on the available hardcopy information but plans and sections are meticulously plotted and signed off by a certified surveyor. • Both Eastman and Sperry Sun instruments were used in the downhole surveys. • All hole positions have been converted to Lo23 WGS84 coordinates. Repli and Orion: • Drill hole collar positions were laid out using a handheld GPS. • After completion of the drilling all collars were surveyed by a qualified surveyor using a Trimble R8 differential GPS. • Downhole surveys of Orion diamond drill holes were completed using a

Criteria	JORC Code explanation	Commentary
		North-Seeking Gyro instrument. Repli diamond drill holes were surveyed downhole using a Reflex EZ Track multi-shot survey instrument. • No downhole surveys were done in the RC holes. • All survey data is in the WGS84 ellipsoid in the WG23 Zone with the Hartebeeshoek 1994 Datum. The coordinates are also supplied in Clarke 1880 and in UTM WGS84 Zone 34 (Southern Hemisphere).
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Anglovaal: • Holes were drilled on 200 - 250 m spacing. Repli and Orion: • Drilling was carried out on approximately 30m spaced lines along strike and at approximately 50m intervals. There were, however, a few holes drilled in between these lines. Underground holes, where possible, were spaced at 50m lines. • Variography studies were carried out on the historic data set to determine the drill spacing for Mineral Resource estimates. • No sample compositing has been applied before assaying.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Where access allows, drilling is oriented perpendicular, or at a maximum achievable angle to, the attitude of the mineralisation. • Due to the presence of sinkholes, access was restricted over half of the strike length and drilling had to be executed from the footwall side of the mineralised horizon, which resulted in sub-optimal angles of intersection. The orientations of these holes are, however not considered of significance to the resource estimation by the Competent Person. • No sampling bias is anticipated as a result of hole orientations.
Sample security	• *The measures taken to ensure sample security.*	Anglovaal: • No details of sample security available. However, during the mining operations the site was fenced and gated with security personnel employed as part of the staff. Repli and Orion: • Access to drill sites are limited to responsible persons, close supervision of the unloading of the core tube and transportation of core to the core yards (Repli's in Kimberley and Orion's on site). Both core yards are enclosed by a security fence, the access gate of which were locked at all times when personnel were not on the premises. • Sample shipments were controlled by the geologists and / or technicians. In the case of the Repli samples geologists and technicians

Criteria	JORC Code explanation	Commentary
		were responsible for the transportation of samples to the Genalysis laboratory in Johannesburg. Orion samples were sent with a courier service to the ALS laboratory in Johannesburg. Sample shipments were accompanied with appropriate sign off documentation to ensure all samples were received in good order. • The chain of custody was managed by the individual Companies. Samples were stored on site in a secure locked building and then freighted directly to the laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Anglovaal: • No records available. Repli and Orion: • SRK reviewed a previous Mineral Resource statement document in November 2017. • Their main concern was the water displacement method with lacquer spray used to determine the relative density of the oxide and supergene sulphide mineralisation. • A total of 33% of the samples lying within the wireframe used for the estimation of the supergene sulphide mineralisation were re-done for relative density using the wax relative density method. These results show excellent precision and no obvious bias when comparing with the original relative densities. • Core from the +105 Block holes and storage facilities has been visually examined by the Competent Person. Discussions have taken place with Repli on the conduct of the drilling programme, sampling techniques and handling of data and the Competent Person is satisfied that work was carried out to JORC 2012 standards.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Mining Right is held by Prieska Copper Zinc Mine (Pty) Ltd (**PCZM**) (formerly Repli Trading No. 27 (Pty) Ltd), which is a wholly owned subsidiary of Orion. Orion effectively holds a 70% interest in the project. • The Mining Right covers the complete known strike of the +105 Level Resource. • +105 Level Resource is located on Portion 26 of the farm Vogelstruis-Bult 104.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Anglovaal exploration resulted in the delineation and development of a large mine. • Drilling in 2012 of the north-western section of the +105 Block was carried out by Repli (Orion acquired Repli in March 2017).
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Copperton deposit is a Volcanogenic Massive Sulphide (VMS) deposit which is situated in the southernmost exposures of the north-northwest trending Kakamas Terrain, which forms part of the Mid-Proterozoic Namaqualand Metamorphic Complex. • The deposit is hosted by the Copperton Formation of the Areachap Group. The Areachap Group, also hosts several other but smaller VMS deposits such as the Areachap, Boks Puts, Kantien Pan, Kielder, and Annex Vogelstruisbult deposits. • The structural sequence at the mine consists of a footwall Smouspan Gneiss Member, Prieska Copper Mines Assemblage (PCMA), which hosts the sulphide mineralisation, and the hangingwall Vogelstruisbult Gneiss Member. • The historically mined section of the deposit is confined to a tabular, stratabound horizon in the northern limb of a refolded recumbent synform, the axis of which plunges at approximately 5° to the south-east. • The mineralised zone outcrop has a strike of 2.400m, is oxidised and / or affected by leached and supergene enrichment to a depth of approximately 100m and crops out as a well-developed gossan. It has a dip of between 55° and 80° to the northeast at surface and a strike of 130° to the north. Current drilling indicates that the Deep Sulphides has a strike length of at least 2860m at depth. • The thickness of the mineralised zone exceeds 30m in places but averages between 7m and 9m. The mineralised zone persists to a depth of 1,100m (as deep as 1,228m in one section) after which it is upturned due to the folding. • The Deep Sulphide Mineral Resource area located below the historical

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		mined area, comprises the steep down dip continuity ("steep limb and hinge zone") and from where it upturns to its subsequent synformal structure ("trough zone"). • The morphology of the mineralised horizon in the eastern limb is well mapped out by drilling and historic mining while the western limb up dip extent is poorly tested and mapped. • The +105 Block area comprises the oxide/supergene sulphide/ mixed zone (and a zone of remnant primary sulphides) situated from above the upper limit of mining at approximately 100m depth below surface, up to surface. This zone of oxide and supergene sulphide mineralisation has a strike length of approximately 1,000m.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Anglovaal: • A summary of the Anglovaal drill hole collar is included in Table 3. Repli and Orion: • All drilling information is available and has been compiled digitally. • A summary of the drill hole collar information related to the current +105 Level Mineral Resource reporting is given in Table 3.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Anglovaal: • Individual intersections were weighted by sample width. • No truncations have been applied. • All grade and density information are incorporated in the Orion database. Repli and Orion: • All drilling information is available and has been compiled digitally. • All intersections > 1m and >0.3% copper or > 0.6% zinc were quoted in public reporting. • No truncations have been applied. • No metal equivalent values were considered.
Relationship between mineralisation	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle*	• All intersection widths quoted are down hole widths. • Most holes intersected the mineralisation perpendicular or at high angle to the attitude of the mineralisation.

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widths and intercept lengths	*is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• The geometry of the mineralisation is complex and true widths can be obtained from the three-dimensional wireframe created of the mineralisation.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate diagrams (cross section and long section) are shown in Figures 1 and 2.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All drilling information is available and has been compiled digitally.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Hardcopy plans are available for a range of other exploration data. This includes mine survey plans, geological maps, airborne magnetic, ground magnetic, electromagnetic, gravity and induced polarisation information. All available exploration data has been viewed by the Competent Person. • The Prieska Mine operated from 1972 to 1991 and is reported to have milled a total of 45.68 Mt of ore at a grade of 1.11% copper and 2.62% zinc, recovering 0.43 Mt of copper and 1.01 Mt of zinc. Detailed production and metallurgical results are available for the life of the mine. • In addition, 1.76 Mt of pyrite concentrates and 8,403 t of lead concentrates as well as amounts of silver and gold were recovered. • Copper and zinc recoveries averaged 84.9% and 84.3% respectively during the life of the mine. • Comprehensive geotechnical work was completed as part of a Bankable Feasibility Study (**BFS**) and the data is available. • Metallurgical test work as part of a BFS update is in progress. All data to date is available.
Further work	1. *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* 2. *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No additional drilling is planned. • Metallurgical test work is underway as part of a BFS update. • Once project is approved grade control drilling will be executed and areas of uncertainty will be covered by this drilling.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Drill hole and sample data are stored by Orion in a robust Geobank™ database. • Validation includes the following: o Ensuring that all drill holes have appropriate XYZ coordinates. o Comparing the maximum depth of the hole against the final depth indicated in the collar file. o Comparing the final depth in the survey file against final depth in the collar file. o Comparing the final depths of all geology, assay, core recovery against the final depth in the collar file. o Checking for duplicate drill holes. o Checking that each depth interval has a main lithology. o Checking that all fields that were set up as mandatory fields contain entries. o The core recoveries were checked for unrealistic percentages. o Density results are checked for unrealistic values. • Additional validation was undertaken when the drill hole data was imported into the Geovia GEMS™ modelling software. The data was checked for duplicates, gaps, overlaps, impossible intervals in down-hole sequence for assay, collar coordinates, geology data and survey data. The drill holes were also visually checked in plan and section in GEMS. • Additional validation was also undertaken when the data was imported into Datamine™ and then when the de-surveyed data was imported to Isatis™ for the EDA and the estimation.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Z Star Mineral Resource Consultants (Pty) Ltd were requested by Orion Services South Africa (Pty) Ltd to update an Mineral Resource estimate and classification for the +105m Level deposit. They visited the site in October 2017 and February 2018. The visits included a review of the drilling and sampling operations, discussion on the geology and associated mineralisation, review of the planned drill holes and examination of the assay data and a high level spatial analysis.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.*	• The +105m Level resource model comprises six defined geological zones. These are: o Haematite-goethite-quartz oxide zone (gossan) from surface to approximately 33m; o Clay (kaolinite)/leach zone developed in places below 33m; o Chalcocite dominant supergene sulphide zone between

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	• *The factors affecting continuity both of grade and geology.*	approximately 42m and 70m; and o Mixed supergene sulphide zone between approximately 70m and 90m below surface. This has a relatively sharp contact with the fresh underlying massive sulphides. o Hypogene zone is the fresh underlying massive sulphides. o A separate zone of elevated Cu and Zn values in the oxides (where there is adequate drilling information) in the hangingwall (**HW**) to the main +105m Level crown pillar is present in the northwest of the deposit or approximately 300m strike where the zone converges with the main zone towards the southeast. • All of the above six zones apart from the second (clay/leach zone), are considered as being suitable for inclusion as part of the Mineral Resource. The Oxide and HW Oxide are referred to as the Oxide Zone. The Supergene Sulphide, Mixed and Hypogene zones are collectively referred to as the Supergene Sulphide & Hypogene Zone. • The boundaries of the mineralisation are relatively sharp irrespective of the geology. A wireframe of the combined +105 Level crown pillar mineralisation was created by interpretation of the Cu and Zn values along 47 sections across the deposit. The wireframe was constructed utilising Cu values greater than or equal to 0.3% and Zn values greater than or equal to 0.6%. Where possible both values were utilised during modelling, but greater emphasis was placed on the copper values as the zinc was leached out towards surface. In places, this resulted in the inclusion of mineralised areas based only on high Cu values. • In the NW part of the deposit, mineralisation occurs in two lenses, the main crown pillar mineralisation and a HW zone. It is unclear whether this HW zone is stacked mineralisation formed during deposition or a structural duplication due to thrusting or isoclinal folding and will be investigated with detailed grade control drilling in the operational phase. The upper lens does not seem to have depth extent and is part of the oxide zone. It merges with the main crown pillar mineralisation towards the southeast. • Surfaces representing the bottoms of the Oxide Zone, the Leach Zone and the Supergene Sulphide Zone were interpreted and modelled from drillhole data. A bottom of overburden was created 3m below the topographic surface. A surface was created to represent the upper limit of underground stoping. • Geological data and conclusions reached are based on observations in drill core. • The Oxide and Supergene Sulphide & Hypogene zones are treated separately in the resource estimation.

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Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The strike length of the +105 Level Crown Pillar mineralisation is approximately 1km from the northwest to where the zone intersects the sinkholes in the southeast. The depths below surface to the upper limits are 3m and to the lower limits from 100m to 120m below surface. • Thickness of the mineralised zone varies from 1.5m to 23m.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Density weighting is standard practice for VMS deposits. However, in the Oxide and Supergene Sulphide & Hypogene zones the density measurements do not correlate well with the assay values and density weighting was therefore not included. The poor correlation is probably due to the friable nature of the core. • The distribution of composites for each of the variables (Cu, Zn, and density) were assessed and a decision was taken to utilise the Parker methodology for capping outliers. The process involved capping the relevant outliers for each variable to a chosen threshold. • Five Cu and two Zn assays were capped in the Oxide Zone. Capping was applied to seven Cu assays and four Zn assays in the Supergene Sulphide & Hypogene Zone. • Datamine™ was utilised to create a block model and measure individual block volumes within each zone and these data were imported into Isatis™ for further analysis. • The Oxide and Supergene Sulphide & Hypogene zones were analysed independently to ensure that the plane for estimation had an optimal orientation. • Variograms for all variables were created from the laboratory assay capped composites only and modelled in two directions, downhole (along the drill hole) and omni-directionally on the plane of the mineralisation. Assessment of the variogram models was preferentially focused on the Cu and Zn spatial structure. • No mining production took place above the 105 level of the mine. • No assumptions have been made regarding the recovery of by-products. • No deleterious elements or non-grade variables were estimated. • A block model was created to allow estimation into 40m x 40m x 5m blocks with sub-cells of 1m x 1m x 1m. • Ordinary kriging (**OK**) was undertaken on all variables on a 40m x 40m x 5m block scale, utilising the capped composite input datasets and the modelled variograms. Estimation runs on two different neighbourhoods were utilised for all variables and the first estimation run in each case has smaller searches (equivalent to the variogram ranges), particularly in the Z direction. This ensures that the variography and therefore the nature of

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		the mineralisation is honoured and ensures that negative weights are minimised. The neighbourhood of the second kriging run was expanded to allow population of most of the remaining blocks. The 2nd pass kriging run failed to populate all the blocks in the Oxide and Supergene Sulphide & Hypogene Zones, particularly in areas where the peripheral dip of the deposit was different to the best fit plane. A decision was taken to utilise the "grid filling" option in IsatisTM using a moving average interpolator. • For the Oxide domain, neighbourhood analysis resulted in an optimum search neighbourhood of 100m x 4m for local block estimation by OK, corresponding to the variogram range. The second and third pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii increased to 200m / 7m and 400m / 20m respectively. 51% of blocks were estimated by the first pass. • For the Supergene Sulphide & Hypogene domain, neighbourhood analysis resulted in an optimum search neighbourhood of 100m x 7.2m for local block estimation by OK, corresponding to the variogram range. The second and third pass estimates were calculated from the pass 1 OK estimates using a moving average technique with the search radii increased to 200m / 7m and 400m / 20m respectively. 80% of blocks were estimated by the first pass. • The kriging performance parameters, e.g. slope of regression, together with an assessment of the areas of blocks that were populated by 1st pass kriging, were utilised to make a distinction between the Indicated and Inferred classifications. • No assumptions were made regarding selective mining methods. • The Oxide and Supergene Sulphide & Hypogene zones are reported independently in the Mineral Resource statement.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• No moisture content was calculated, and the core was naturally dried when logged and sampled. The estimated tonnages are therefore based on a natural basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource is reported above a cut-off of 0.3% Cu which corresponds with the wireframe modelling. • The cut-off is based on historical data from the Prieska Mine and a dataset of parameters from similar operations in the region.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Options of using open cast mining methods with 10m benches and underground mining methods are currently under consideration. • The major risk is mining between sinkholes and above the partly collapsed crown pillar of the underground mined-out stopes. • Whittle pit optimisation study and detail pit design, as part of a Bankable Feasibility Study has been completed. Underground mine design is in progress.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical test work indicated that a separate copper and zinc concentrate of the supergene sulphide mineralisation is achievable. • Ore extracted from the +105 mineralised zone was previously treated using froth flotation metallurgical process by Prieska Copper Mine. Mixed oxide, supergene and hypogene sulphide ore was successfully treated by froth flotation to produce separate copper and zinc concentrates during the 1980's[2]. • Test work of the oxide mineralisation however was limited but unsuccessful. The oxide mineralisation has a reasonable prospect for eventual economic extraction as it occurs close to the surface and treatment of this type of ore by means of leaching is well known in the industry.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The +105 Level Resource is on the environmental footprint of the historical Prieska Copper Mine site. Environmental impact assessment studies form part of the on-going BFS.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones*	• Due to the poor core recoveries, the density data in the Oxide Zone is sparse with only 48 samples available. There are 203 density measurements in the Supergene Sulphide & Hypogene Zone. • Bulk densities were determined using the water displacement method. A representative sample of full core at 15cm length was collected per metre length, taking cognisance of the change in lithology. • A total of 33% of the samples lying within the wireframe used for the

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	within the deposit. • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	estimation of the Supergene Sulphide mineralisation were re-done for relative density using the wax relative density method. These results show excellent precision and no obvious bias when comparing with the original relative densities. • No moisture content was determined. • Core is mostly weathered in the Oxide Zone with obvious core loss. The representative samples selected for density measurement were sprayed with a clear lacquer spray and allowed to dry prior to being weighed. • The bulk density in the Oxide Zone was estimated using OK. • The density in the Supergene Sulphide & Hypogene Zone was estimated using OK.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors, i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.* • *Whether the result appropriately reflects the Competent Person(s)' view of the deposit.*	• The geology of the zones making up the +105m Level Mineral Resource is relatively uncomplicated, and the key issues relate to the delineation of the domain boundaries (not geology). The assay data used for estimation is reliable and has been acquired with good governance associated with all processes. The variables were estimated using independent variogram models and OK. • Oxide Zone: Inferred and Indicated Mineral Resource - the geological model is defined to a reasonable level and there is sufficiently accurate data to produce local block estimates using OK, albeit there is a limited number of samples in some areas, especially in the southeast where surface drilling access was restricted by the presence of sinkholes. There is a high level of uncertainty associated with the zonal estimation of density due to a low number of samples (and a possible bias in the methodology) as well as possible inaccuracies associated with core loss. Two collapse zones (related to collapse in the sinkhole) have been interpreted up-dip based on drilling information from the Supergene Sulphide zone. • Supergene Sulphide & Hypogene Zone: Inferred and Indicated Mineral Resources - the geological model is defined to a reasonable level and there is sufficiently accurate data coverage to produce local block estimates using OK. In parts of the Supergene Sulphide Zone there are sufficient data for reasonably accurate local block estimates of grade (~80% of volume populated by 1st Pass kriging). The low number of density samples is a concern but local block estimation with reasonable accuracy was possible. The kriging performance parameters, e.g. slope of regression, together with an assessment of the areas of blocks that were populated by 1st pass kriging, were utilised to make a distinction between the Indicated and Inferred levels of confidence. • The results conform to the view of the Competent Person.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• To date the Mineral Resource estimate has only been reviewed internally by Orion.
Discussion of relative accuracy/confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Final estimates for all variables in both zones were validated by comparing the mean composite grades to the mean estimate grades. The data for Cu and Zn with the 1st Pass and final estimates are within 5% of the composites mean for the Supergene Sulphide & Hypogene Zone and the Oxide Zone. • Composite and estimated final grade and density distributions were compared to ensure that the block estimates represent the original data distribution. These were found to be reasonably compatible. • Swathe Trend plots were created in the Y, X and Z directions and all the estimates followed the trend of the composite data. • All estimates were studied graphically and compared to the composite data in three-dimensional space and they compared reasonably well, given the high variability of the sample data. • No production data is available.