Orion Minerals

ASX/JSE RELEASE: 11 July 2022

High copper grades from in-fill drilling of the +105 Level Crown Pillar support early production at Prieska

Outstanding shallow intercepts of up to 7.46m at 9.24% Cu within the Supergene Inferred Resource

- **Excellent results received from recently completed in-fill drilling targeting the supergene mineralisation in the shallow +105 Level Crown Pillar at the Prieska Copper-Zinc Project in South Africa.**
- **The drilling was designed to upgrade an area of Inferred Resource to the Indicated Resource classification, as part of ongoing feasibility studies on the Early Production Strategy.**
- **Significant assays received to date include 7.46m at 9.24% Cu, 0.19% Zn, 0.44g/t Au and 17.46g/t Ag in OCOU164 and 12.53m at 4.89% Cu, 0.04% Zn, 0.51g/t Au and 15.12g/t Ag in OCOU155.**
- **A total of 14 in-fill holes were completed for 917.87m of drilling.**
- **Final assay results are awaited, before a re-estimation of the resource is undertaken.**

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

"The in-fill drilling has confirmed and exceeded our expectations, returning outstanding widths and grades of high-grade copper sulphide mineralisation within the +105 Level Crown Pillar. This is a great result for our team. At face value, the grades intersected to date mostly exceed that of the average grade of the standing Inferred Resource estimate, making the early start of mining via an open pit an increasingly attractive opportunity.

Our Early Production Strategy aims to target the open pit and remnant pillars while dewatering is undertaken on Prieska Deeps. These results provide strong support for that strategy, with the higher-than-expected grades also opening up the possibility that we may be able to undertake shallow underground mining in the early phases of the development, further optimising financial returns. Work is continuing as part of the ongoing feasibility studies to determine the optimal approach."

Orion Minerals Limited (**ASX/JSE: ORN**) (**Orion** or **Company**) is pleased to advise that it has received highly encouraging initial assay results from an in-fill drilling program designed to upgrade the existing shallow Inferred Resource in the +105 Level Crown Pillar area at its flagship Prieska Copper-Zinc Project in South Africa's Northern Cape Province.

A total of fourteen in-fill holes were completed for a total of 917.87m, designed to upgrade the existing Inferred supergene Resource of 0.63Mt at 2.2% Cu and 1.8% Zn (refer ASX/JSE release 15 January 2019)[1] to the higher confidence Indicated category as part of ongoing feasibility studies on the Early Production Strategy. This supergene Inferred Resource forms part of the overall Resource of 1.76Mt at 1.5 % Cu and 2.0% Zn (refer ASX/JSE release 15 January 2019)[1] for the +105 Level Crown Pillar area.

Drilling intersected higher-than-expected copper grades in several of the holes. Once final results are received, the orebody model will be updated, and the Resource will be re-estimated. The sampling density

achieved is anticipated to allow an Indicated classification, adding to the existing Indicated Resource of 0.62Mt at 1.54% Cu and 3.05% Zn (refer ASX/JSE release 15 January 2019)[1].

+105 Level Resource In-fill Drilling Program

The drilling program was designed to in-fill an Inferred Resource area in the +105 Level Crown Pillar supergene mineralised zone to upgrade it to Indicated Resource classification.

Fourteen holes totalling 917.87m successfully intersected the mineralised zone with an additional five holes abandoned due to poor ground conditions and unacceptable core loss. Assay results have been received for thirteen of the fourteen holes, with final assays for the last intersection expected shortly.

Results received to date have confirmed the presence of enriched copper and gold mineralisation in the previously drilled supergene mineralisation which is currently classified as an Inferred Resource due to the wider-spaced drilling. The zinc grades confirm that zinc is depleted in the supergene zone.

The orebody model is currently being updated and the Resource will be re-estimated and re-classified where appropriate.

An area of geotechnical collapse into underlying mining voids was also confirmed as being confined to a small zone with less than 10% of the mineralised strike affected.

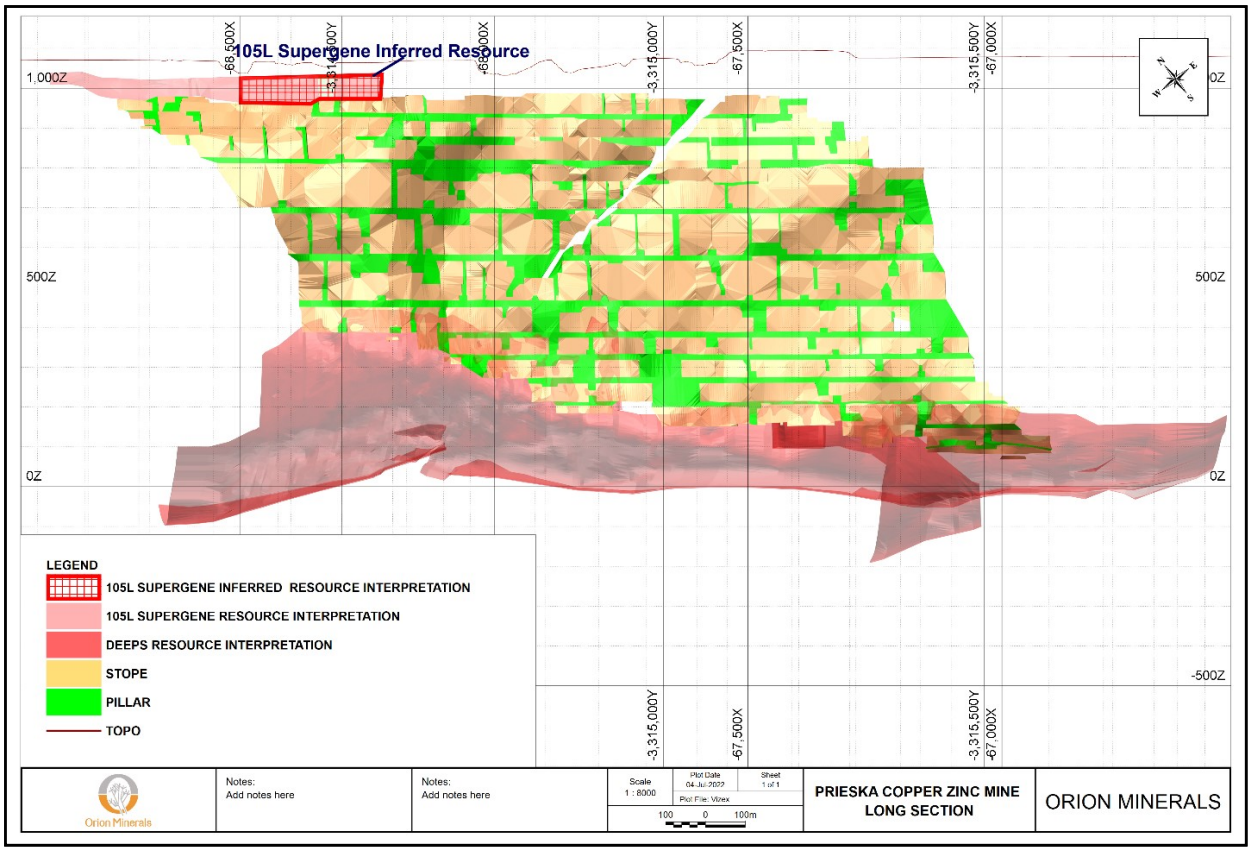


Figure 1: Long section through the PCZM showing the location of the +105 Level Crown Pillar supergene Inferred Resource area.

[1] Mineral Resource reported in ASX release of 15 January 2019: "Prieska Total Mineral Resource Exceeds 30Mt @ 3.7% Zn and 1.2% Cu Following Updated Open Pit Resource" available to the public on www.orionminerals.com.au/investors/asx-jse-announcements. 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 15 January 2019 continue to apply and have not materially changed. Orion confirms that the form and context in which the Competent Person's findings are presented here have not materially changed.

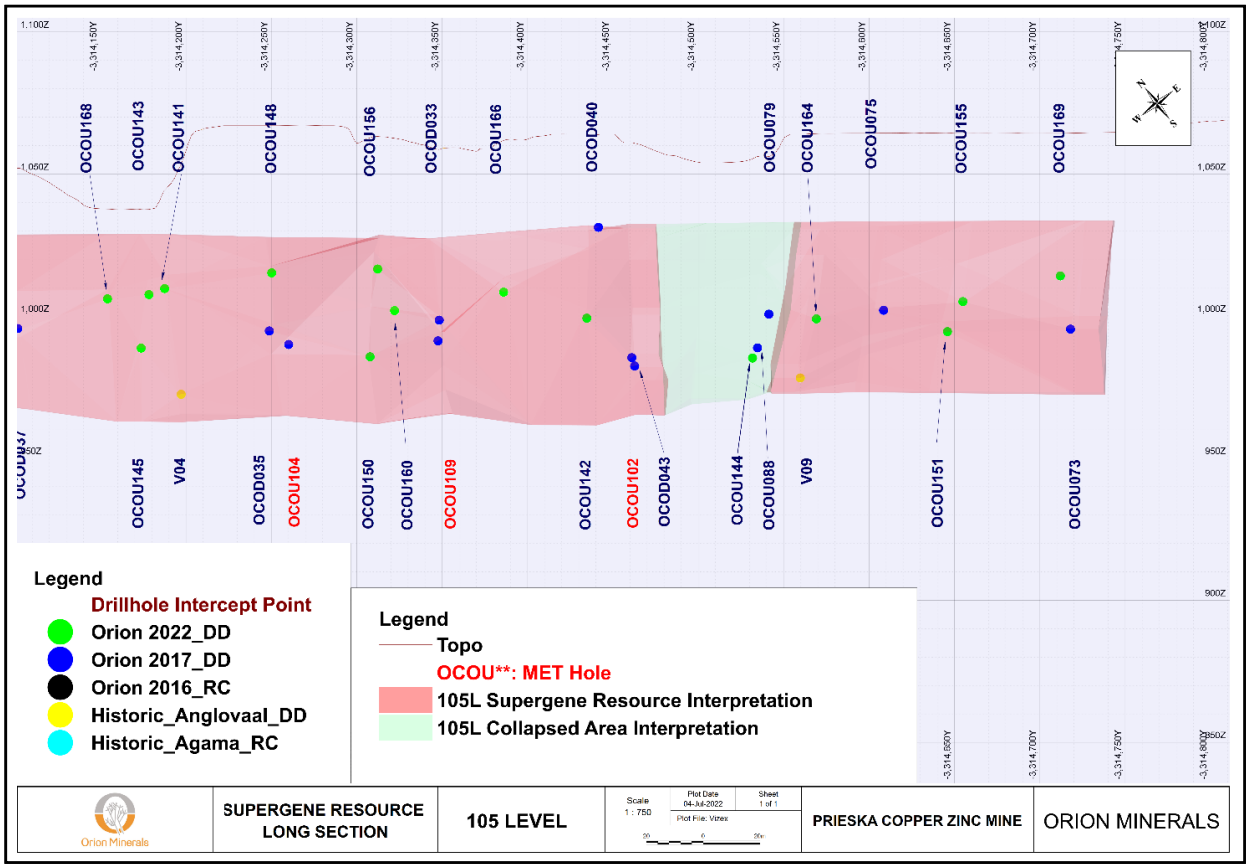


Figure 2: Long section through the +105 Level Crown Pillar supergene Resource showing 2022 drilled area and historical drilling intercepts.

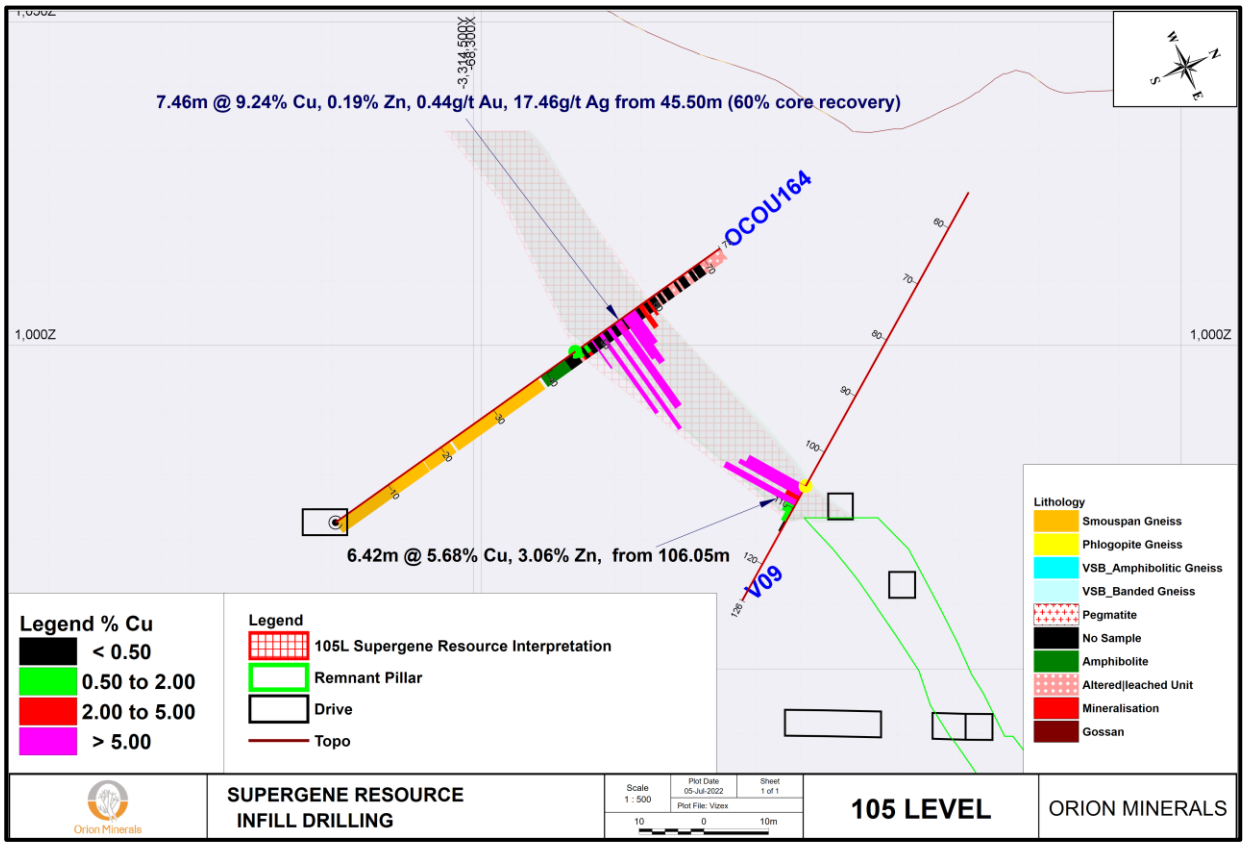


Figure 3: Cross section showing drill holes OCOU164 and V09 intercepts.

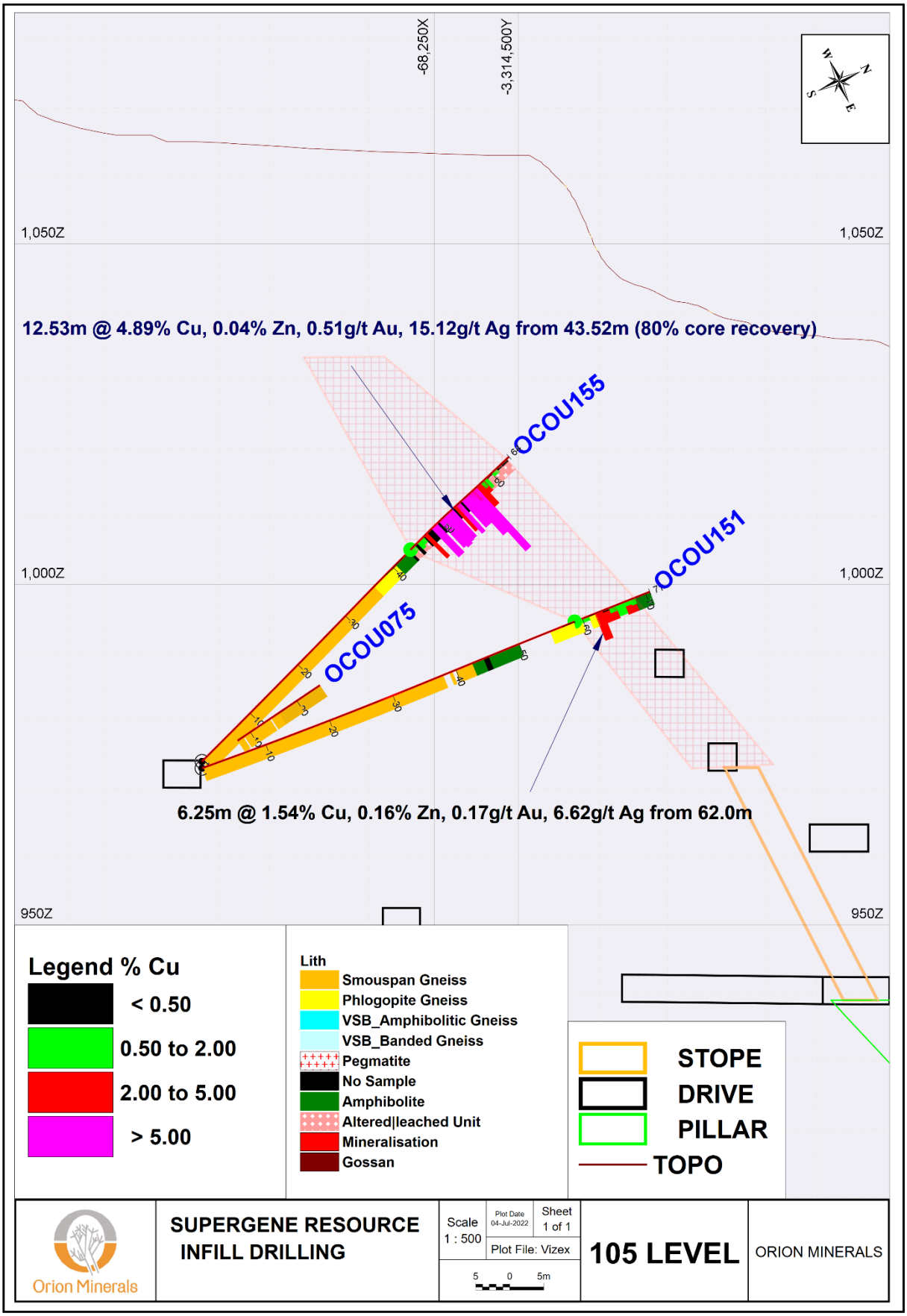


Figure 4: Cross section showing drill holes OCOU151 and OCOU155 intercepts.

Results

In-fill drill holes have returned high-grade copper intersections including:

- 7.46m at 9.24% Cu, 0.19% Zn, 0.44g/t Au, 17.46g/t Ag from 45.50m in OCOU164.
- 12.53m at 4.89% Cu, 0.04% Zn, 0.51g/t Au, 15.12g/t Ag from 43.52m in OCOU155.
- 6.05m at 5.52% Cu, 1.83% Zn, 0.26g/t Au, 17.18g/t Ag from 45.00m in OCOU142.
- 6.25m at 1.54% Cu, 0.16% Zn, 0.17g/t Au, 6.62g/t Ag from 62.00m in OCOU151.
- 3.10m at 2.10% Cu, 0.81% Zn, 0.25g/t Au, 6.76g/t Ag from 51.00m in OCOU148.
- 3.40m at 6.91% Cu, 0.07% Zn, 0.21g/t Au, 4.84g/t Ag from 58.00m in OCOU156.

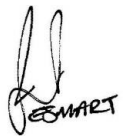
All results are summarised in Table 1 below.

Table 1: Summary table of all PCZM +105 Level Crown Pillar supergene Resource assay results to date for 2022 drilling program. (a minimum cut-off of 0.3 Cu% and 0.4% Zn with maximum 3m internal waste allowed). No capping of data.

Hole ID	Depth (m)		Intersection width (m)	Cu %	Zn %	Au g/t	Ag g/t
	From	To					
OCOU141	50.65	57.60	6.65	1.88	0.24	0.21	7.28
OCOU142	45.00	51.40	6.05	5.52	1.83	0.26	17.18
OCOU143	46.60	47.60	1.00	0.81	1.01	0.18	13.00
OCOU143	49.50	53.00	3.50	0.29	0.34	0.17	3.86
OCOU144	48.54	50.50	1.96	1.23	0.10	0.06	1.49
OCOU145	56.90	62.00	5.10	1.00	2.28	0.14	7.80
OCOU148	51.00	54.10	3.10	2.10	0.81	0.25	6.76
OCOU150	51.50	53.65	2.15	1.62	4.53	0.26	8.84
OCOU151	62.00	68.25	6.25	1.54	0.16	0.17	6.62
OCOU155	43.52	59.02	12.53	4.89	0.04	0.51	15.12
OCOU156	58.00	64.55	3.40	6.91	0.07	0.21	4.84
OCOU160	51.00	54.50	3.50	0.09	0.93	0.06	0.50
OCOU164	45.50	59.40	7.46	9.24	0.19	0.44	17.46
OCOU166	46.10	53.00	4.55	3.21	0.45	0.11	2.80

The updated Mineral Resource estimates will be used for open-pit optimisation and updated Reserve estimation. The open pit, originally planned for mining after completion of the deeps underground mining, is now being evaluated for early mining, concurrent with the dewatering of the deeps.

For and on behalf of the Board.



Errol Smart
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ENQUIRIES

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Competent Persons Statement

The information in this report that relates to Orion's Exploration Results at the Prieska Copper Zinc Mine Project is reported in accordance 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 Paul Matthews, Orion Minerals Mineral Resource Manager, a Competent Person who is a Professional Natural Scientist (Pr.Sci.Nat.) registered with the South African Council for Natural Scientific Professionals, a Recognised Professional Organisation (RPO). Mr Matthews, as Orion Minerals Mineral Resource Manager, is a full-time employee of the company. Mr Matthews confirms there is no potential for a conflict of interest in acting as the Competent Person. 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 (Pr.Sci.Nat) consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

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. Actual results and developments may vary materially from those expressed in this release. Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. Orion makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release. 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 drill program at Prieska Copper-Zinc Project

Table 2: Collar table of 2022 PCZM +105 Level Crown Pillar supergene Resource drilling.

Hole ID	LO23 WGS84			Dip	Azimuth	Depth	Comments
	Easting	Northing	Elevation				
OCOU141	-68,523.15	-3,314,406.88	976.74	38.60	28.00	57.60	Collar Survey
OCOU142	-68,388.06	-3,314,476.31	974.17	33.70	37.00	71.51	Collar Survey
OCOU143	-68,523.27	-3,314,406.65	976.70	36.35	30.00	59.39	Collar Survey
OCOU144	-68,334.77	-3,314,505.10	972.76	9.69	35.00	67.74	Collar Survey
OCOU145	-68,522.87	-3,314,405.66	975.53	11.81	30.00	74.56	Collar Survey
OCOU147	-68,336.01	-3,314,506.50	974.00	42.28	20.00	46.89	Abandoned, no intercept
OCOU148	-68,482.39	-3,314,426.90	976.26	48.60	27.00	65.00	Collar Survey
OCOU150	-68,443.69	-3,314,443.91	974.00	10.78	21.00	54.50	Provisional coordinate only, pending collar survey
OCOU151	-68,263.82	-3,314,542.40	973.00	19.90	25.00	70.67	Provisional coordinate only, pending collar survey
OCOU155	-68,263.82	-3,314,542.40	974.00	44.97	25.00	63.02	Provisional coordinate only, pending collar survey
OCOU156	-68,443.69	-3,314,443.91	974.00	48.34	21.00	67.70	Provisional coordinate only, pending collar survey
OCOU157	-68,350.19	-3,314,498.30	974.00	32.00	32.00	52.10	Abandoned, no intercept
OCOU160	-68,443.69	-3,314,443.91	974.00	33.00	32.00	62.09	Provisional coordinate only, pending collar survey
OCOU163	-68,418.46	-3,314,461.10	974.00	50.00	24.00	42.30	Abandoned, no intercept
OCOU164	-68,309.27	-3,314,519.43	972.62	40.00	25.00	75.00	Provisional coordinate only, pending collar survey
OCOU166	-68,418.46	-3,314,461.10	974.00	50.00	45.00	66.31	Provisional coordinate only, pending collar survey
OCOU167	-68,248.55	-3,314,550.07	974.00	47.00	55.00	39.56	Abandoned, no intercept
OCOU168	-68,543.00	-3,314,396.00	976.60	32.90	40.00	62.78	Provisional coordinate only, pending collar survey
OCOU169	-68,248.55	-3,314,550.07	974.00	53.00	58.00	42.88	Abandoned, no intercept

Appendix 2: The following tables are provided in accordance with the JORC Code (2012) requirements for the reporting of Exploration Results from the Prieska Copper Zinc Mine.

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.*	• Sampling was carried out under supervision of the Project Geologist and using industry standard procedures. • Diamond core was cut at the core yard and half core taken as the sample. • In friable mineralised zones where core splitting was not possible, half of the broken friable material was sampled using a spoon and scraper. In three holes all of the friable core, i.e., full core, was sampled. • Diamond core was sampled at 1m intervals where possible, sample lengths were adjusted to ensure samples do not cross geological boundaries or other features and adjusted where core loss was encountered. • Sampling was undertaken under the supervision of a qualified geologist and intervals were selected based on mineralogy, textures and concentrations of specific minor minerals. A handheld Niton XL2 XRF Analyser instrument was used to assist with determining areas for sampling. • Quality control samples were inserted in accordance with SOPs and under the direct supervision of a geologist at pre-determined points within the sampling stream. • 20cm-length samples were selected for bulk density determination based on lithological variation for all mineralised zones sampled. The wax method with water immersion was used to determine bulk density in friable or oxidised zones whilst for solid core the standard water immersion method was used.
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.).*	• All underground drilling was diamond core with NQ core size using a triple tube core barrel to improve core recovery in soft formations. • Core is not orientated. • Continuous core drilling method was utilised.
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*	• Depth blocks were inserted by the driller and the geologist regularly cross checked depths by counting the number of rods. • A block with the depth of the hole written on it was placed in the core box at the end of each run. • At the core yard, the length of core in the core box was measured for

Criteria	JORC Code explanation	Commentary
	whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	each run. The measured length of core was divided by drilled depth to determine the percentage core recovery. Secondly, the measured length was subtracted from the length of the run to determine the core lost. • A triple tube core barrel was used to minimise the core loss within the mineralised zone and hanging wall formations. • Core loss was significant in some instances in the soft weathered or friable formations (oxides, breccia zones, supergene ore and clay zones). All core loss was recorded. The average core recovery within the supergene ore zone was 83%. • No significant relationship exists between sample recovery and 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.*	• 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 core for the entire drill hole length was photographed and saved in a dedicated folder on the server.
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.*	• One metre sample lengths were taken in most cases with exception where there was core loss leading to a return of less than 1m on successive 1.5m runs. In the latter case the maximum of returned core was sampled. • With competent 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. In the case of friable core in three of the holes, all sample (full core) was sent to the laboratory as it was considered that too much bias may be introduced by scooping. • Core samples were generally dry except for a few runs in friable zones. • One laboratory ALS Chemex PTY LTD (**ALS**) was used for this drill campaign. ALS has SANAS accreditation. • Samples submitted were dried and crushed to 70% < 2mm and then pulverised to 85% < 75 microns. • Coarse Blanks were inserted at the beginning and end of each batch. • Due to the poor quality of the core and difficulty to cut half core into

Criteria	JORC Code explanation	Commentary
		quarter core only a few (six) field duplicates could be taken. • The Competent Person considers this number of duplicates adequate considering the condition of the sample and the scale of the drill programme. • The six duplicate samples showed excellent accuracy and precision for Cu and Zn.
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.*	• Samples submitted to ALS were analysed for base metals, Au and Ag. Analysis was by the Inductively Coupled Plasma and Optical Emission Spectroscopy (**ICP-OES**) methodology, using aqua regia digest. These are appropriate analysing techniques for base metals. • Quality control samples were inserted, under the direct supervision of a geologist, at pre-determined points within the sampling stream. • A total of total of 43 CRMs and 19 Blanks were inserted. Two CRMs were used. OREAS624 (3.09%Cu, 2.4% Zn) and OREAS622 (0.484% Cu, 10.01% Zn). All check samples returned acceptable results within two Standard Deviations of the CRM average.
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.*	• The drilling and sampling 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 was done on Excel spreadsheets by the geologists logging the core. The data was then imported into an Access database by the geologist responsible for the database. Validation of the data was done during importing into the Access database by running queries, and when importing the data into to 3D 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.*	• Underground drill hole collar positions were laid out by a qualified surveyor using a Trimble VX Total Station unit. • After completion of drilling, five collars were resurveyed by a qualified surveyor using a Trimble VX Total Station unit. Fourteen drill hole collars are scheduled to be resurveyed. • Downhole surveys of the diamond drill holes were completed using a Reflex EZ Gyro TM (north-seeking gyro instrument). • 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).

Criteria	JORC Code explanation	Commentary
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.*	• Drilling was carried out on approximately 45m spaced lines along strike. There were, however, a few holes drilled in between these lines where it was considered necessary. • The drill data spacing is considered sufficient for the objective of classifying an Indicated Resource. • 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 allowed, drilling was oriented perpendicular, or at a maximum achievable angle to the attitude of the mineralisation. • Drilling was executed from the 105 Level footwall drive. All holes were inclined upwards. • No sampling bias is anticipated as a result of hole orientations.
Sample security	• *The measures taken to ensure sample security.*	• Access to drill sites was limited to responsible persons, with close supervision of the unloading of the core tube and transportation of core to the core yards. The core yard is enclosed by a security fence, the access gate of which is always locked when personnel are not on the premises. • Sample shipments are controlled by the geologists. Samples are sent with a trackable 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 Orion personnel. 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.*	• No audits or reviews have been carried out in reference to this resource infill drilling campaign.

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**), which is a wholly owned subsidiary of Orion. Orion effectively holds a 70.00% 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.*	• Drilling in 2012 of the north-western section of the +105 Level resource was carried out by the previous owners of Prieska Copper Zinc Mine (formerly Repli Trading No 27 (Pty) Ltd) (Orion acquired the subsidiary 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, Boksputs, 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 hanging wall Vogelstruisbult Gneiss Member. • The historically mined section of the deposit is confined to a tabular, stratabound horizon in the north-eastern limb of an overturned, south-west verging synform, the axis of which plunges at approximately 5° to the south-east. • On surface the mineralised zone has a strike of 2,400m, was oxidised and affected by leaching and supergene enrichment to a depth of approximately 100m. It has a dip of between 55° and 80° to the northeast at surface and a strike of 130° to the north. The width of the mineralised zone exceeds 35m in places but averages between 7m and 9m. The mineralised zone persists to a depth of 1,100m (as deep as 1,200m in one section) after which it is upturned in a synformal closure. • The +105 Level resource area comprises the oxide/supergene/mixed zones (and a zone of remnant primary sulphides) situated from above

Criteria	JORC Code explanation	Commentary
		the upper limit of mining at approximately 100m depth below surface, up to surface. This zone of oxide and supergene mineralisation has a strike length of 867m.

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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *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.*
		• All drilling information is available and has been compiled digitally.
		• A summary of the drill hole collar information is given in Table 2 in the Appendix.

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.*	• All drilling information is available and has been compiled digitally. • All intersections >1m and >0.3% copper or >0.4% zinc were quoted in public reporting. • No truncations have been applied. • No metal equivalent values were applied. • Weighted grades were calculated as follows; %Cu x sample length x Bulk Density. • No capping of assay results was carried out.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle 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').*	• All intersection widths quoted are down hole widths and not corrected for true width. • Most holes intersected the mineralisation perpendicular or at a high angle to the attitude of the mineralisation. • Generally, drill hole inclination ranged between +9° to +53° while the mineralisation is expected to dip close to 48°.
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.*	• Refer to body of the announcement for plans, sections and tables. • Drilling data and progress was monitored in Micromine and modelled in 3D incorporating historical and current drill data.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades*	• All drilling information is available and has been compiled digitally. • Drill hole results for assays received to date (average grade per

Criteria	JORC Code explanation	Commentary
	and/or widths should be practiced to avoid misleading reporting of Exploration Results.	intersection) are summarised in Table 1. • In the Competent Person's opinion, the Exploration Results reported in this announcement have been reported in a balanced manner.
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.*	• The Company's previous ASX releases have detailed information pertaining to the past drilling by third parties and Orion within the Supergene mineralisation and associated resource estimation carried out. • Hardcopy maps are available for a range of other exploration data. This includes mine survey plans, geological maps, airborne magnetics, ground magnetics, electromagnetics, gravity and induced polarisation. • The Prieska Copper 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.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *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 scheduled as soon as all assays have been received. • Update of geological model will be finalised on receipt of final assay results. • Re-estimation work will commence on update of geological model with re-classification of resources under the JORC Code, 2012 guidelines.