Orion Minerals

ASX/JSE RELEASE: 24 June 2024

More Outstanding Hits at Okiep Copper Project, Flat Mine East – High-Grade Potential Confirmed

9.27m at 3.01% Cu and 15m at 4.80% Cu within 78m averaging 1.57% Cu

- **Assay results received for a further three diamond drill holes at Flat Mine East, building on the exceptional assays reported on 22 April 2024:**
  - **Drill hole OFMED154: 9.27m at 3.01% Cu and 15.00m at 4.80% Cu within 78.00m at 1.57% Cu, located 50m along strike from previously reported hole OFMED153 (49m at 4.89% Cu);**
  - **Drill hole OFMED153 (final assays received): increased to 49.35m at 5.05% Cu including 21.66m at 9.41% Cu; and**
  - **Drill hole OFMED155: 50.00m at 1.09% Cu including 18m at 1.44% Cu within 116.9m at 0.75% Cu.**
- **Flat Mine East, which is a virgin discovery that is blind to surface, will form a key part of Orion's early production plan for the Okiep Copper Project.**
- **The intersections achieved to date support geological and grade distribution interpretations that were incorporated in Mineral Resource modelling and estimation for the Okiep Project.**
- **Drilling of a planned eleven diamond drill holes totalling 5,800m at Flat Mine East, Flat Mine South and Flat Mine North to confirm historical drilling results, provide geotechnical information and generate material for additional confirmatory metallurgical test work, are nearing completion.**

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

"These drilling results further amplify the potential for the Flat Mines orebodies to replicate the typical nature of Okiep copper intrusive mineralisation, where zones of very high-grade mineralisation are commonly contained within large bodies of moderate grade. This clearly shows why this district has been such a prolific producer of copper for such a long period of time.

"We have been frustrated by the slow turnaround from accredited laboratories, which are overloaded with exploration samples. This is indicative of the intensity of activity in the copper exploration industry and is in itself an indicator of the challenges involved in accelerating mine development to counter the global metal supply deficit that is developing.

"We are pleased to be nearing completion of our Bankable Feasibility Studies so that we can progress to project finance and mine development on our brownfields redevelopment sites, in parallel with ongoing drilling and exploration to expand our resource base on our surrounding highly prospective mineral rights."

Orion Minerals Limited (**ASX/JSE: ORN**) (**Orion** or **Company**) is pleased to report further outstanding assay results from the confirmation diamond drilling program in the Flat Mines area at its Okiep Copper Project (**OCP**) in the Northern Cape, South Africa.

The latest results add further momentum to Orion's development strategy for the OCP, building on the initial results reported on 22 April 2024 and confirming the geology and endowment of the Flat Mines Area.

The OCP ground holdings of 641km² covers the majority of the area where a total of 105Mt is reported to have been mined in the district over the past 100 years (refer ASX/JSE release 21 May 2021). The Flat Mines area and the current drilling program fall entirely within the executed Mining Right.

Results received to date from the last three of the five planned and completed holes at Flat Mine East (**FME**) have confirmed historical information from drilling by Goldfields of South Africa in the 1990's, used in the Mineral Resource update (refer ASX/JSE release 28 August 2023) where 9.4Mt at 1.3% Cu was reported for the Flat Mines including 4.4Mt at 1.3% Cu at FME.

Flat Mines Drilling Program

A diamond drilling program commenced in the Flat Mines area of the OCP in February 2024. A total of 11 diamond core drill holes are planned at FME, Flat Mine South (**FMS**) and Flat Mine North (**FMN**) comprising a total of approximately 5,800m. This total includes a non-directional deflection for each hole.

The program was designed to confirm historical drilling information and resultant interpretations, provide geotechnical information and deliver additional material for confirmatory metallurgical test work.

The planned program comprised five holes at FME, four holes at FMS and two holes at FMN (Figures 2 and 3, Table 1). The holes were specifically designed to best cover the areas that contribute most significantly to the overall estimated Indicated Mineral Resource.

All holes include a deflection (or wedge) through the mineralisation to provide the additional material for confirmatory metallurgical test work.

Table 1: Summary table of current drilling and assay status.

Prospect	Hole ID	Drilling Status	Assay Status
Flat Mine East	OFMED151	Complete	Received
Flat Mine East	OFMED152	Complete	Received
Flat Mine East	OFMED153	Complete	Received
Flat Mine East	OFMED154	Complete	Received
Flat Mine East	OFMED155	Complete	Received
Flat Mine South	OFMSD076	Complete	Pending
Flat Mine South	OFMSD077	Complete	Pending
Flat Mine South	OFMSD078	Complete	Pending
Flat Mine South	OFMSD079	Current	Drilling
Flat Mine North	OFMND242	Complete	Pending
Flat Mine North	OFMND243	Current	Drilling

Assay results from the three remaining holes completed at FME have been received and are summarised in Table 2. One remaining sample from previously reported OFMED153 was pending analysis (refer ASX/JSE release 22 April 2024) and results from the complete intersection are included in Appendix 1.

Drill hole OFMED152 returned **44.00m at 1.22% Cu from 194.00m**, including **23.00m at 1.45% Cu from 215.00m** (Table 2). This is all within a broad zone of elevated copper of 82.00m at 0.83% Cu from 194.00m. Historical hole FME113 approximately 10m away from OFMED152 intersected 51.00m at 1.12% from 183.50m.

Drill hole OFMED154 returned **9.27m at 3.01% Cu from 185.00m** and **15.00m at 4.80% Cu from 248.00m** (Table 2). This is all within a broad zone of elevated copper of **78.00m at 1.57% Cu from 185.00m**. Historical hole FME100 approximately 5m away from ODMED154 intersected 6.50m at 4.41% Cu from 190.00m and 19.00m at 3.81% Cu from 248.00m.

Drill hole OFMED155 returned **50.00m at 1.09% Cu from 214.00m**, including **18.00m at 1.44% Cu from 252m** (Table 2). This is all within a broad zone of elevated copper of **116.90m at 0.75% Cu from 188.00m**. Historical hole FME039 approximately 20m from OFMED155 away intersected 48.56m at 0.92% from 214.00m.

Drill hole OFMED153 previously reported an intersection of 49.00m at 4.89% Cu from 231.00m to 280.00m, including 10.23m at 12.47% Cu (refer ASX/JSE release 22 April 2024). One highly mineralised sample of 0.35m length at the bottom of the intersection from 280.00m that was pending at the time of the release has subsequently reported an assay result of 28.00% Cu. Including this final sample gives an intersection of **49.35m at 5.05% Cu from 231.00m** which includes **21.66m at 9.41% Cu from 258.69m**.

Significant widths of waste granitic material are included within the reported intersection widths, providing opportunities for upgrading of material through modern XRF ore sorting techniques to reject internal waste before milling.

On completion of the drilling program, the geological and mineralisation envelope interpretations will be reviewed and adjusted where necessary, followed by an update of the Mineral Resource Estimate including the new information. New geotechnical information will be used for input to mine design.

Planned confirmatory metallurgical test work includes comminution, flotation optimisation, tailings characterisation and XRF sorting.

All available mother holes and deflections were scanned on site by a RADOS™ XRF core scanner. The process included calibration using ICP assays for holes OFMED151, OFMED152 and OFMED153. The RADOS™ instrument scans continuously along the core, allocating a reading approximately every 1cm. These readings have been composited to 1m in order to eliminate spikes and to plot with ICP assays (Figures 4 and 5). Results showed a high correlation coefficient of 0.93.

Geotechnical logging on oriented core has been completed for all holes. Samples from the deflections have been submitted to engineering laboratories for test work, which will include point load strength tests and triaxial compressive strength tests. This data will be used for 3-D modelling to inform the stoping layouts and mine design parameters from a rock strength perspective.

Figure 1: Drilling at FME.

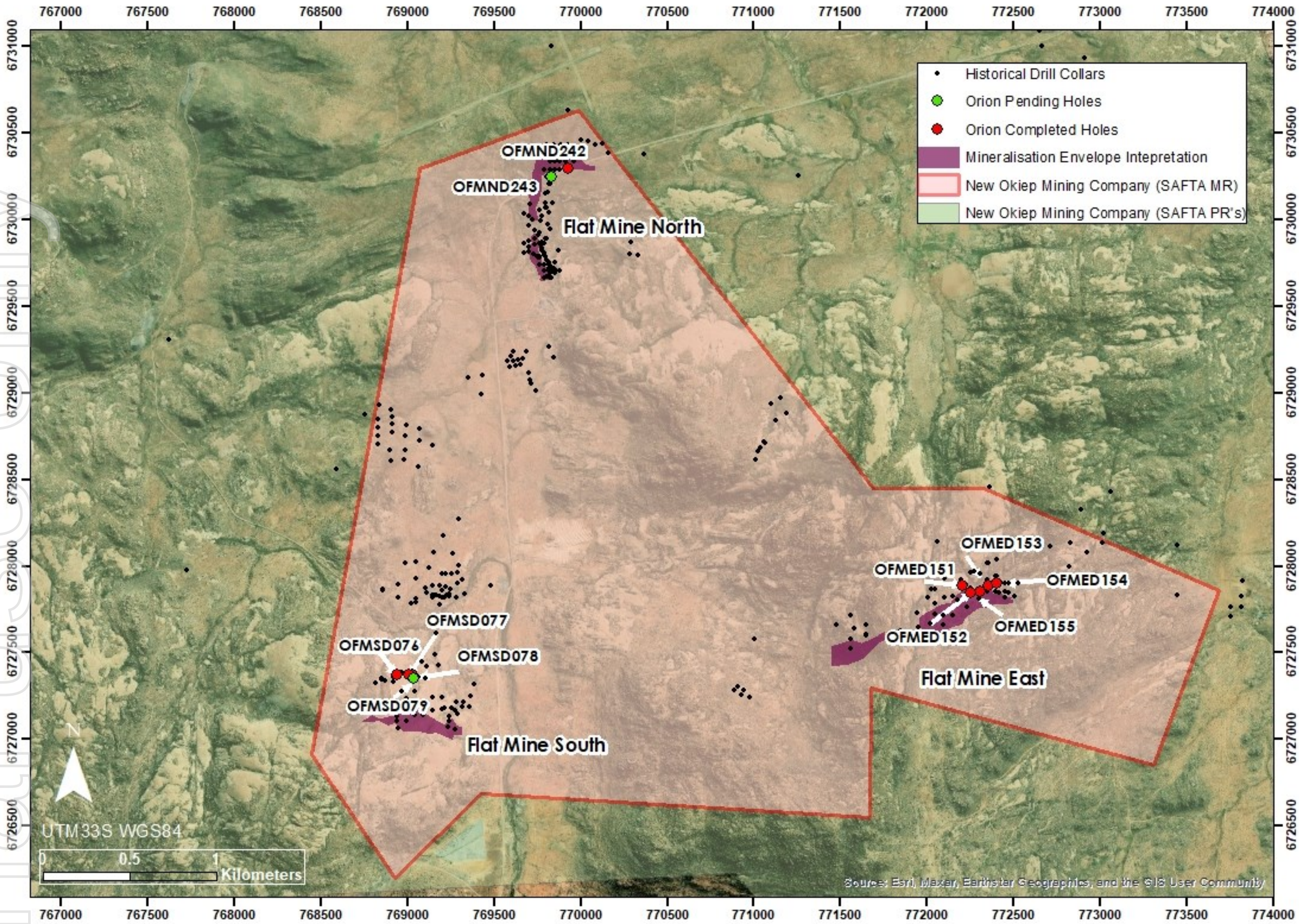

Figure 2: Plan showing historical and Orion drill holes, mineralisation envelope interpretations and extent of the Mining Right.

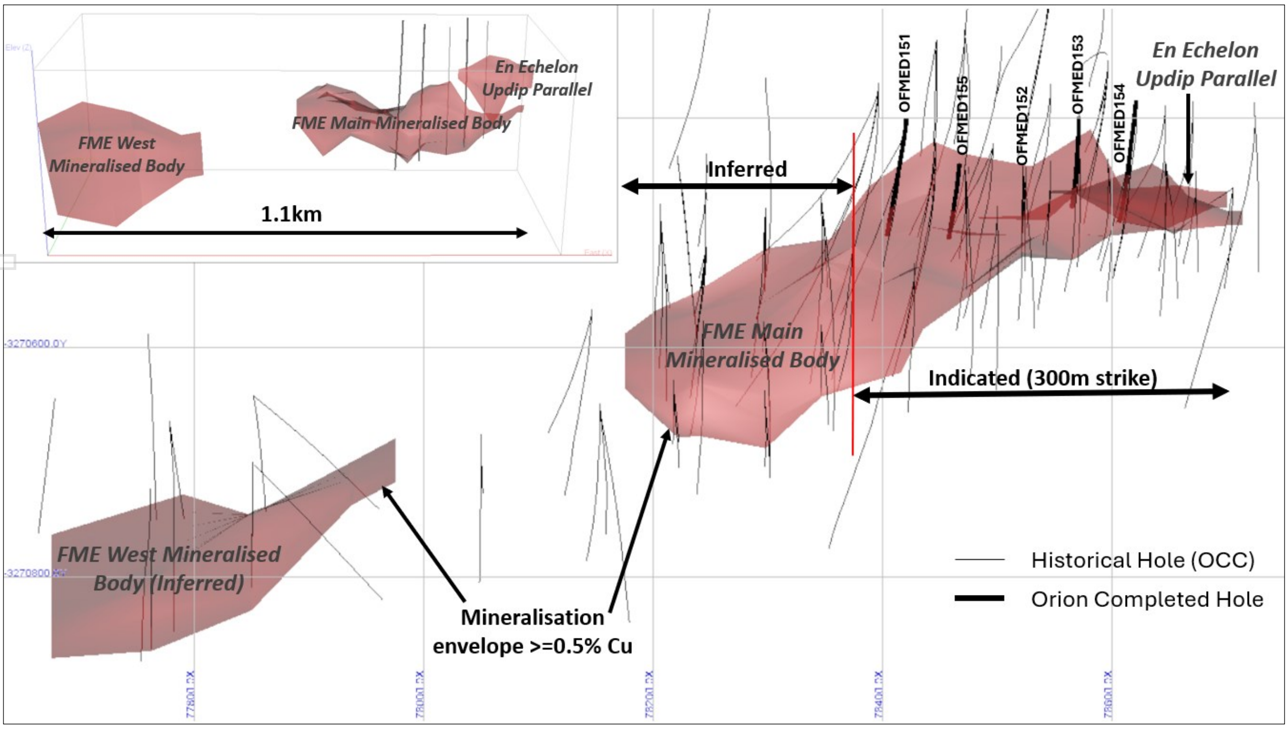

Figure 3: Plan view of FME, with sectional view inset, showing historical and Orion drill holes and mineralisation envelope interpretations.

Assay Results

Results received are summarised in Table 2 below. Further results from drilling at FMN and FMS are pending.

Table 2: Summary table of drill results to date for FME prospect (a minimum cut-off of 0.7% Cu with maximum 3m internal waste allowed). Intersections and inclusions with grades mostly above 1% Cu are tabulated. The data was not capped. Note widths are drill widths.

Hole ID	Mineralisation				
	Notes	From (m)	To (m)	Interval (m)	% Cu
OFMED151		**260.00**	**285.22**	**25.22**	**0.97**
	Including	275.00	285.22	10.22	1.35
OFMED152		194.00	202.00	8.00	1.59
		215.00	238.00	23.00	1.45
OFMED153		**231.00**	**280.35**	**49.35**	**5.05**
	Including	231.00	250.00	19.00	2.14
	Including	253.84	256.25	2.41	1.82
	Including	258.69	280.35	21.66	9.41
	Including	258.69	266.78	8.09	8.18
	Including	269.77	280.35	10.58	12.99
OFMED154		185.00	194.27	9.27	3.01
		248.00	263.00	15.00	4.80
OFMED155		214.00	235.00	21.00	1.12
		246.00	264.00	18.00	1.44

Table 3: Comparison of % Cu grades and widths for OFMED152, OFMED154, OFMED155 and nearest neighbour historical Goldfield's drilled holes FME133, FME100 and FME039.

Orion Hole					Historical Hole					Intersection Separation Distance (m)
Hole ID	From (m)	To (m)	Intersection Width (m)	% Cu	Hole ID	From (m)	To (m)	Intersection Width (m)	% Cu	
OFMED152	194.00	238.00	44.00	1.22	FME113	183.50	234.50	51.00	1.12	10.00
OFMED154	185.00	194.27	9.27	3.01	FME100	190.00	196.50	6.50	4.41	5.00
	248.00	263.00	15.00	4.8		248.00	267.00	19.00	3.81	5.00
OFMED155	214.00	264.00	50.00	1.09	FME039	214.00	262.56	48.56	0.92	20.00

RADOS™ XRF scan results of holes OFMED0151, OFMED152 and OFMED153 plotted with ALS ICP assay results are shown in Figures 4 and 5. At the time of scanning, core for OFMED154 and OFMED155 was not available.

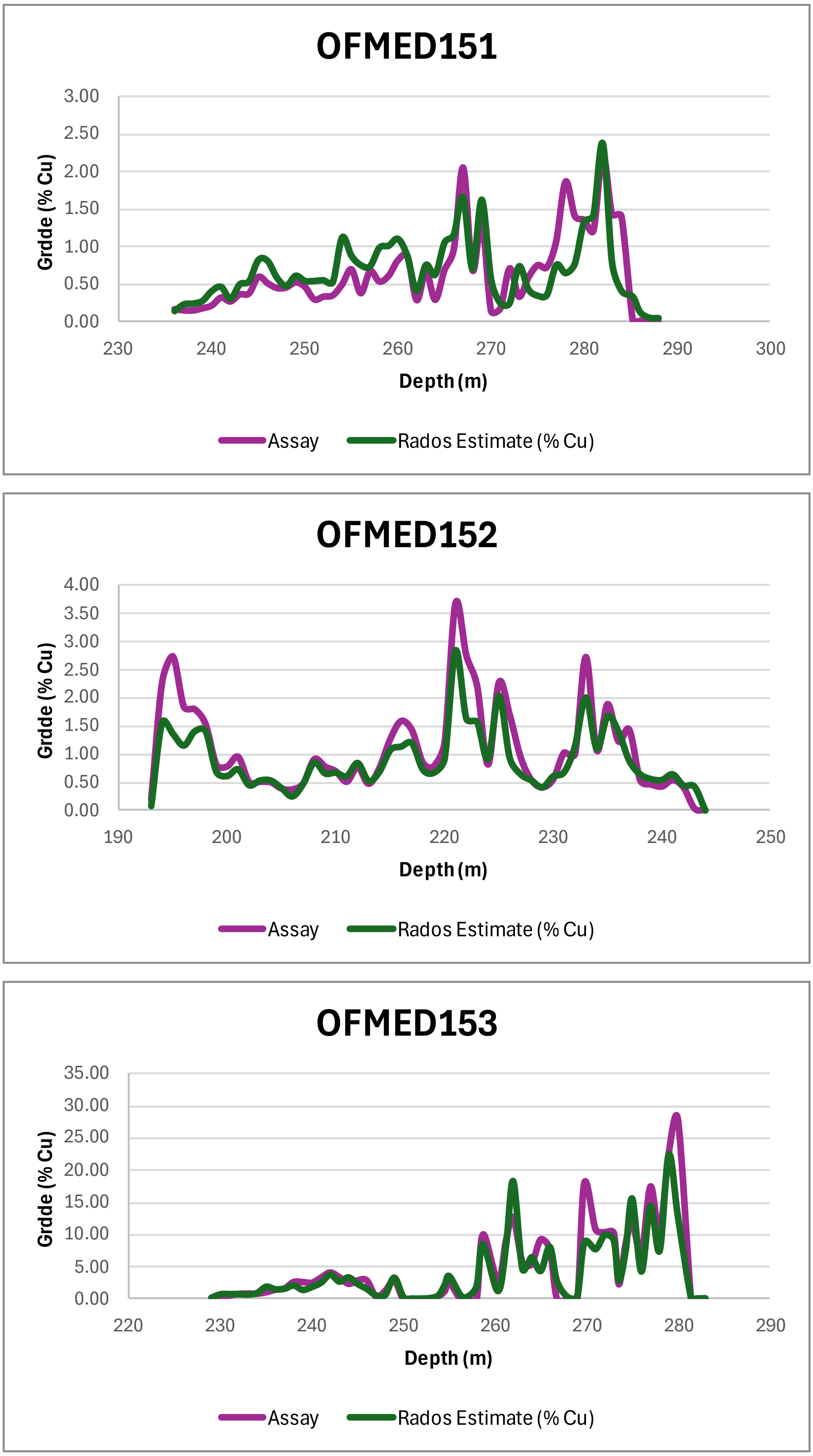

Figure 4: RADOS™ XRF scan readings versus ICP assay results for OFMED151, OFMED152 and OFMED153.

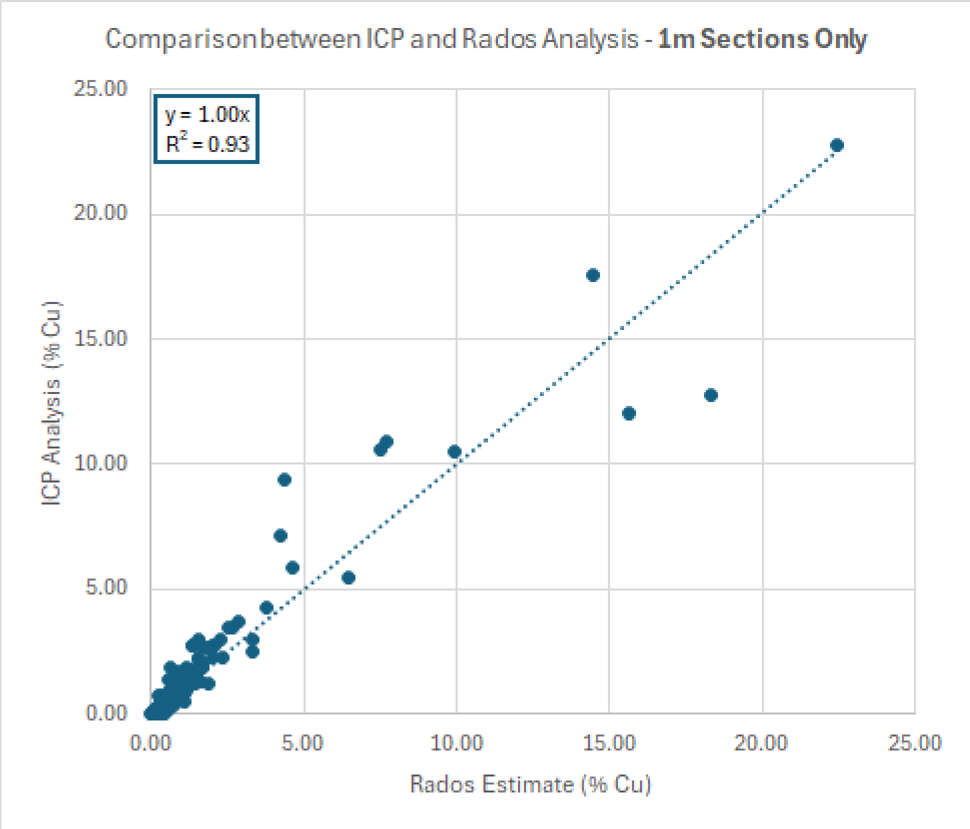

Figure 5: ICP assay results plotted against RADOS™ XRF scan readings for OFMED151, OFMED152 and OFMED153.

The RADOS™ scans show very promising ability for the scanner to accurately recognise waste xenoliths within high or low grade mineralised intrusives. This is anticipated to facilitate the ability to sort and reject the waste that is anticipated to be included in bulk mining methods that allow for optimum ore extraction at reduced cost, before sorting of blasted and crushed ore to produce a pre-concentrate, before milling and flotation. Significant benefits are anticipated for capital and operating costs of the milling and concentrator plants.

The sorted ore pre-concentrate is anticipated to yield significant benefits of reduced energy, water, reagent consumptions and reduced tailings storage requirements. These all combine to minimise the environmental impact for copper production.

For and on behalf of the Board.

Errol Smart
Managing Director and CEO

ENQUIRIES

Investors
Errol Smart – Managing Director & CEO
Denis Waddell – Chairman
T: +61 (0) 3 8080 7170
E: info@orionminerals.com.au

Media
Nicholas Read
Read Corporate, Australia
T: +61 (0) 419 929 046
E: nicholas@readcorporate.com.au

JSE Sponsor
Monique Martinez
Merchantec Capital
T: +27 (0) 11 325 6363
E: monique.martinez@merchantec.com

Competent Persons 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.

Reference to Previous Report

Exploration results from drilling at Flat Mines Area were reported in ASX/JSE release of 22 April 2024: "Spectacular High-Grade Copper Intercept at Okiep Project", available to the public on http://www.orionminerals.com.au/investors/asx-jse-announcements/. Orion confirms that it is not aware of any new information or data that materially affects the form or context in which the exploration results and supporting information were presented in the original ASX/JSE release.

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:

- disclaim any obligations or undertaking to release any updates or revisions to the information to reflect any change in expectations or assumptions;
- do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this release, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and
- disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

Appendix 1: Drill hole collar information and assay results from drill program at Flat Mine East

Table 4: Drill hole collar information for FME prospect. Coordinates in WGS84 Hartebeesthoek 94 LO17

Hole ID	Easting	Northing	RL	Azimuth	Dip	Depth (m)
OFMED151	78,421	-3,270,401	971	180	-73	346.99
OFMED152	78,525	-3,270,443	966	180	-78	295.97
OFMED153	78,571	-3,270,399	978	180	-75	301.03
OFMED154	78,621	-3,270,385	968	184	-70	275.90
OFMED155	78,467	-3,270,440	973	184	-78	316.67

Table 5: OFMED152 Drill assay results.

Hole ID	From (m)	To (m)	% Cu
OFMED152	187.00	188.00	0.16
OFMED152	188.00	189.00	0.06
OFMED152	189.00	190.00	0.06
OFMED152	190.00	191.00	0.11
OFMED152	191.00	192.00	0.11
OFMED152	192.00	193.00	0.16
OFMED152	193.00	194.00	0.20
OFMED152	194.00	195.00	2.27
OFMED152	195.00	196.00	2.73
OFMED152	196.00	197.00	1.84
OFMED152	197.00	198.00	1.80
OFMED152	198.00	199.00	1.53
OFMED152	199.00	200.00	0.81
OFMED152	200.00	201.00	0.78
OFMED152	201.00	202.00	0.95
OFMED152	202.00	203.00	0.51
OFMED152	203.00	204.00	0.51
OFMED152	204.00	205.00	0.50
OFMED152	205.00	206.00	0.39
OFMED152	206.00	207.00	0.37
OFMED152	207.00	208.00	0.48
OFMED152	208.00	209.00	0.91
OFMED152	209.00	210.00	0.78
OFMED152	210.00	211.00	0.69
OFMED152	211.00	212.00	0.51
OFMED152	212.00	213.00	0.77
OFMED152	213.00	214.00	0.47
OFMED152	214.00	215.00	0.75
OFMED152	215.00	216.00	1.27
OFMED152	216.00	217.00	1.59
OFMED152	217.00	218.00	1.42
OFMED152	218.00	219.00	0.85

Hole ID	From (m)	To (m)	% Cu
OFMED152	219.00	220.00	0.78
OFMED152	220.00	221.00	1.21
OFMED152	221.00	222.00	3.67
OFMED152	222.00	223.00	2.75
OFMED152	223.00	224.00	2.20
OFMED152	224.00	225.00	0.82
OFMED152	225.00	226.00	2.27
OFMED152	226.00	227.00	1.69
OFMED152	227.00	228.00	0.94
OFMED152	228.00	229.00	0.54
OFMED152	229.00	230.00	0.41
OFMED152	230.00	231.00	0.55
OFMED152	231.00	232.00	1.03
OFMED152	232.00	233.00	1.00
OFMED152	233.00	234.00	2.72
OFMED152	234.00	235.00	1.07
OFMED152	235.00	236.00	1.89
OFMED152	236.00	237.00	1.23
OFMED152	237.00	238.00	1.43
OFMED152	238.00	239.00	0.53
OFMED152	239.00	240.00	0.46
OFMED152	240.00	241.00	0.42
OFMED152	241.00	242.00	0.54
OFMED152	242.00	243.00	0.41
OFMED152	243.00	244.00	0.03
OFMED152	244.00	245.00	0.01
OFMED152	245.00	246.00	0.00
OFMED152	246.00	247.00	0.00
OFMED152	247.00	248.00	0.11
OFMED152	248.00	249.00	0.02
OFMED152	249.00	250.00	0.02
OFMED152	250.00	250.54	0.01
OFMED152	250.54	251.00	0.01
OFMED152	251.00	252.00	0.00
OFMED152	252.00	253.00	0.00
OFMED152	253.00	253.97	0.65
OFMED152	253.97	254.84	0.79
OFMED152	254.84	255.41	0.06
OFMED152	255.41	256.00	0.17
OFMED152	256.00	257.00	0.93
OFMED152	257.00	258.00	0.56
OFMED152	258.00	259.00	0.70
OFMED152	259.00	260.00	0.74
OFMED152	260.00	261.00	0.87
OFMED152	261.00	262.00	0.21
OFMED152	262.00	263.00	0.32
OFMED152	263.00	264.00	0.53

Hole ID	From (m)	To (m)	% Cu
OFMED152	264.00	265.00	0.25
OFMED152	265.00	266.00	0.29
OFMED152	266.00	267.00	0.87
OFMED152	267.00	268.00	0.53
OFMED152	268.00	269.00	0.35
OFMED152	269.00	270.00	0.21
OFMED152	270.00	271.00	0.19
OFMED152	271.00	272.00	0.67
OFMED152	272.00	273.00	0.55
OFMED152	273.00	274.00	0.55
OFMED152	274.00	275.00	0.39
OFMED152	275.00	276.00	1.13
OFMED152	276.00	277.00	0.18
OFMED152	277.00	278.00	0.04
OFMED152	278.00	279.00	0.15
OFMED152	279.00	280.00	1.10
OFMED152	280.00	281.00	0.35
OFMED152	281.00	282.00	0.32
OFMED152	282.00	283.00	0.00
OFMED152	283.00	284.00	0.01
OFMED152	284.00	285.00	0.08
OFMED152	285.00	286.00	0.12
OFMED152	286.00	287.00	0.09
OFMED152	287.00	288.00	0.01

Table 6: OFMED153 Drill assay results not previously reported.

Hole ID	From (m)	To (m)	% Cu
OFMED153	280.00	280.35	28.00
OFMED153	281.44	282.00	0.05
OFMED153	282.00	283.00	0.03
OFMED153	283.00	284.00	0.01

Table 7: OFMED154 Drill assay results.

Hole ID	From (m)	To (m)	% Cu
OFMED154	182.00	183.00	0.01
OFMED154	183.00	184.00	0.39
OFMED154	184.00	185.00	0.02
OFMED154	185.00	186.00	0.84
OFMED154	186.00	187.00	0.41
OFMED154	187.00	187.84	1.17
OFMED154	187.84	189.00	11.85
OFMED154	189.00	189.70	6.48
OFMED154	189.70	190.32	4.52
OFMED154	190.32	191.00	0.06

Hole ID	From (m)	To (m)	% Cu
OFMED154	191.00	192.00	0.51
OFMED154	192.00	193.00	2.04
OFMED154	193.00	194.27	1.61
OFMED154	194.27	195.00	0.07
OFMED154	195.00	196.00	0.03
OFMED154	196.00	197.00	0.02
OFMED154	197.00	197.70	0.04
OFMED154	197.70	199.00	0.30
OFMED154	199.00	200.00	0.04
OFMED154	200.00	201.00	0.00
OFMED154	201.00	202.00	0.00
OFMED154	202.00	203.00	0.00
OFMED154	203.00	204.00	0.01
OFMED154	204.00	205.00	0.01
OFMED154	205.00	206.00	1.77
OFMED154	206.00	207.00	0.04
OFMED154	207.00	208.00	0.00
OFMED154	208.00	208.86	0.48
OFMED154	208.86	210.00	2.75
OFMED154	210.00	211.00	0.55
OFMED154	211.00	212.00	0.38
OFMED154	212.00	213.00	0.40
OFMED154	213.00	214.00	0.24
OFMED154	214.00	215.00	0.09
OFMED154	215.00	216.00	0.09
OFMED154	216.00	217.00	0.35
OFMED154	217.00	218.00	0.18
OFMED154	218.00	219.00	0.30
OFMED154	219.00	220.00	0.29
OFMED154	220.00	221.00	0.27
OFMED154	221.00	222.00	0.32
OFMED154	222.00	223.00	0.29
OFMED154	223.00	224.00	0.43
OFMED154	224.00	225.00	0.38
OFMED154	225.00	226.00	0.56
OFMED154	226.00	227.00	1.30
OFMED154	227.00	228.00	0.66
OFMED154	228.00	229.00	0.52
OFMED154	229.00	230.00	0.41
OFMED154	230.00	231.00	0.53
OFMED154	231.00	232.00	0.38
OFMED154	232.00	233.00	0.24
OFMED154	233.00	234.00	0.31
OFMED154	234.00	235.00	0.31
OFMED154	235.00	236.00	0.38
OFMED154	236.00	237.00	0.40
OFMED154	237.00	238.00	0.37

Hole ID	From (m)	To (m)	% Cu
OFMED154	238.00	239.00	0.43
OFMED154	239.00	240.00	0.50
OFMED154	240.00	241.00	0.74
OFMED154	241.00	242.00	0.50
OFMED154	242.00	243.00	0.59
OFMED154	243.00	244.00	0.44
OFMED154	244.00	245.00	0.43
OFMED154	245.00	246.00	0.55
OFMED154	246.00	247.00	0.59
OFMED154	247.00	248.00	0.66
OFMED154	248.00	249.00	5.70
OFMED154	249.00	250.00	5.13
OFMED154	250.00	251.00	7.50
OFMED154	251.00	252.00	6.26
OFMED154	252.00	253.00	7.17
OFMED154	253.00	254.00	4.16
OFMED154	254.00	255.00	10.15
OFMED154	255.00	256.00	2.37
OFMED154	256.00	257.00	2.02
OFMED154	257.00	258.00	2.02
OFMED154	258.00	259.00	2.33
OFMED154	259.00	260.00	5.85
OFMED154	260.00	261.00	3.94
OFMED154	261.00	262.00	5.29
OFMED154	262.00	263.00	2.13
OFMED154	263.00	264.00	0.02
OFMED154	264.00	265.00	0.05
OFMED154	265.00	266.00	0.01
OFMED154	266.00	267.00	0.08

Table 8: OFMED155 Drill assay results.

Hole ID	From (m)	To (m)	% Cu
OFMED155	188.00	189.00	0.97
OFMED155	189.00	190.00	0.62
OFMED155	190.00	191.00	0.56
OFMED155	191.00	192.00	0.63
OFMED155	192.00	193.00	0.49
OFMED155	193.00	194.00	0.26
OFMED155	194.00	195.00	0.41
OFMED155	195.00	196.00	0.34
OFMED155	196.00	197.00	0.54
OFMED155	197.00	198.00	0.91
OFMED155	198.00	199.00	0.85
OFMED155	199.00	200.00	0.89
OFMED155	200.00	201.00	1.57
OFMED155	201.00	202.00	0.64

Hole ID	From (m)	To (m)	% Cu
OFMED155	202.00	203.00	0.53
OFMED155	203.00	204.00	0.30
OFMED155	204.00	205.00	0.38
OFMED155	205.00	206.00	0.46
OFMED155	206.00	207.00	0.31
OFMED155	207.00	208.00	0.47
OFMED155	208.00	209.00	0.49
OFMED155	209.00	210.00	0.46
OFMED155	210.00	211.00	0.46
OFMED155	211.00	212.00	0.50
OFMED155	212.00	213.00	0.45
OFMED155	213.00	214.00	0.61
OFMED155	214.00	215.00	1.04
OFMED155	215.00	216.00	0.88
OFMED155	216.00	217.00	0.92
OFMED155	217.00	218.00	1.28
OFMED155	218.00	219.00	1.38
OFMED155	219.00	220.00	1.78
OFMED155	220.00	221.00	1.39
OFMED155	221.00	222.00	1.19
OFMED155	222.00	223.00	1.97
OFMED155	223.00	224.00	1.54
OFMED155	224.00	225.00	1.64
OFMED155	225.00	226.00	0.47
OFMED155	226.00	227.00	0.55
OFMED155	227.00	228.00	0.74
OFMED155	228.00	229.00	0.76
OFMED155	229.00	230.00	1.07
OFMED155	230.00	231.00	1.12
OFMED155	231.00	232.00	0.75
OFMED155	232.00	233.00	0.85
OFMED155	233.00	234.00	0.67
OFMED155	234.00	235.00	1.46
OFMED155	235.00	236.00	0.70
OFMED155	236.00	237.00	0.63
OFMED155	237.00	238.00	0.35
OFMED155	238.00	239.00	0.33
OFMED155	239.00	240.00	0.54
OFMED155	240.00	241.00	0.49
OFMED155	241.00	242.00	0.38
OFMED155	242.00	243.00	0.51
OFMED155	243.00	244.00	0.04
OFMED155	244.00	245.00	0.31
OFMED155	245.00	246.00	0.65
OFMED155	246.00	247.00	0.96
OFMED155	247.00	248.00	1.44
OFMED155	248.00	249.00	0.43

Hole ID	From (m)	To (m)	% Cu
OFMED155	249.00	250.00	0.96
OFMED155	250.00	251.00	1.06
OFMED155	251.00	252.00	0.16
OFMED155	252.00	253.00	1.29
OFMED155	253.00	254.00	3.85
OFMED155	254.00	255.00	2.40
OFMED155	255.00	256.00	1.84
OFMED155	256.00	257.00	1.39
OFMED155	257.00	258.00	1.17
OFMED155	258.00	259.00	1.88
OFMED155	259.00	260.00	2.93
OFMED155	260.00	261.00	0.88
OFMED155	261.00	262.00	0.41
OFMED155	262.00	263.00	1.96
OFMED155	263.00	264.00	1.00
OFMED155	264.00	265.00	0.59
OFMED155	265.00	266.00	0.41
OFMED155	266.00	267.00	0.90
OFMED155	267.00	268.00	0.33
OFMED155	268.00	269.00	0.31
OFMED155	269.00	270.00	0.66
OFMED155	270.00	270.91	1.40
OFMED155	270.91	272.00	0.12
OFMED155	272.00	273.00	0.08
OFMED155	273.00	274.00	0.37
OFMED155	274.00	275.00	0.32
OFMED155	275.00	275.52	0.14
OFMED155	275.52	276.52	0.49
OFMED155	276.52	277.00	0.05
OFMED155	277.00	278.00	0.03
OFMED155	278.00	279.00	0.01
OFMED155	279.00	280.00	0.01
OFMED155	280.00	281.00	0.04
OFMED155	281.00	281.64	0.03
OFMED155	281.64	282.28	0.05
OFMED155	282.28	283.52	0.63
OFMED155	283.52	284.26	0.12
OFMED155	284.26	285.26	0.18
OFMED155	285.26	286.26	0.30
OFMED155	286.26	287.26	0.79
OFMED155	287.26	288.11	1.30
OFMED155	288.11	289.00	0.16
OFMED155	289.00	290.00	0.40
OFMED155	290.00	291.00	0.06
OFMED155	291.00	292.00	0.63
OFMED155	292.00	293.00	0.26
OFMED155	293.00	294.00	0.29

Hole ID	From (m)	To (m)	% Cu
OFMED155	294.00	295.00	0.65
OFMED155	295.00	296.00	0.12
OFMED155	296.00	297.00	0.18
OFMED155	297.00	298.00	0.41
OFMED155	298.00	299.00	0.53
OFMED155	299.00	300.00	0.37
OFMED155	300.00	301.00	0.86
OFMED155	301.00	302.00	0.38
OFMED155	302.00	303.00	1.21
OFMED155	303.00	304.00	1.28
OFMED155	304.00	304.90	0.89
OFMED155	304.90	306.00	0.04
OFMED155	306.00	307.00	0.11
OFMED155	307.00	308.00	0.02
OFMED155	308.00	309.00	0.01
OFMED155	309.00	310.00	0.02

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

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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Sampling was carried out using industry standard procedures. NQ-size diamond drill cores were longitudinally split in half using a diamond core cutting machine. • HQ core size was only drilled in the upper weathered portion and no HQ core was sampled. • One-metre sample length was taken in most cases. Sample lengths were varied to honour geological and mineralisation boundaries, with a maximum sample size of 1.27m and a minimum sample size of 46cm. • Areas of sampling were selected based on visual observations and readings from a handheld Niton XL3t 500 XRF instrument (standard analytical range >25 elements from S to U with additional elements Mg, Al, Si and P via helium purge).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• Diamond core drilling was undertaken. • HQ and NQ size core was drilled using a standard tube. HQ core size was only drilled in the upper weathered portion of approximately 6m. No Cu mineralisation was visually identified in the HQ core and no HQ core was sampled. • Core was oriented using a Reflex ACT III™.

Criteria	JORC Code explanation	Commentary
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.*	• Core 'stick-ups' reflecting the depth of the 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 subtracted from the length of the run as recorded from the stick-up measured at the rig to determine the core loss. • Core recovery was found to be very good (>98%) within the mineralised zone. • Ground conditions below the weathered zone were very good. • No obvious relationship exists between sample recovery and grade. • No core/sample loss or gain which could result in sample bias.
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 by qualified geologists. • The core was logged to a level of detail that is sufficient to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Geological logging was qualitative and was carried out using a standard sheet with a set of standard logging codes to describe lithology, structure and mineralisation. The logging sheet allows for free-form description to note any unusual features. • Geological logs were captured electronically. • All cores were photographed before and after sampling. • Three diamond holes, totalling 888.54m core were logged. Of this, approximately 368m are ultramafic/mafic lithologies primarily hosting the Cu mineralisation. • Geotechnical logging was completed on oriented core from deflections off the mother hole. The data collected per drill run consisted of core recovery, length of core greater than ten centimetres, longest piece, fracture count, alpha and beta angles for all joint types and lithological contacts, joint infill types and their strength as well as nature of joint surface. • Geotechnical samples have been submitted to Rocklabs for test work including point load test, uniaxial compressive strength test (UCS), triaxial compression test (TCS), base friction angle test (BFA), uniaxial tensile strength (UTS), point load test (PLT), shear test on joints and density test.

Criteria	JORC Code explanation	Commentary
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.*	• NQ core was cut, and half core was taken as sample with quarter core for duplicates. • HQ core size was only drilled in the upper weathered portion and no HQ core was sampled. • Sample preparation was undertaken at ALS Laboratory Johannesburg (**ALS**), an ISO accredited laboratory, and is considered appropriate. ALS utilises industry best practice for sample preparation for analysis involving drying of samples, weighing samples, crushing to <2mm if required. Crushed samples are riffle-split and a 250g portion pulverised with +85% passing through 75 microns. • Crushing and pulverising QC tests were applied by ALS and found acceptable. • Quarter core field duplicates were taken for 11 samples. • All sample sizes are deemed appropriate.
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 (ie lack of bias) and precision have been established.*	• Samples submitted to ALS were analysed for base metals and gold. • All samples were analysed by an appropriate high-grade aqua regia ICP-AES method, ALS code ME-ICP41a. • Samples where assays returned >5% Cu were re-assayed by aqua regia digestion and ICP-AES method, ALS code MEOG-46. • Samples were assayed for gold by fire assay and AAS, ALS code AU-AA25 method. • Orion inserted CRMs every 10th sample. A total of thirty CRMs were inserted. CRMs were alternated throughout the sample stream and where possible matched to the sample material being analysed. • Three CRMs were used. AMIS0399 (1.014 %Cu), AMIS0809 (2.97 %Cu) and AMIS088 (0.3 %Cu). • All thirty CRMs returned acceptable results within two Standard Deviations of the CRM average. • Chip blanks are inserted at the beginning of each batch and after any sample that may be considered high grade. A total of seventeen blanks were used. Acceptable results were returned indicating no contamination. • The laboratory conducts their own checks which are also monitored. The accuracy and precision of the geochemical data reported on has deemed to be acceptable. • No external laboratory checks have been carried out at this stage.

Criteria	JORC Code explanation	Commentary
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.*	• Orion's exploration geologist personally supervised the drilling and sampling along with a team of experienced geologists. • Due to the high degrees of deviation in both dip and azimuth of the historical holes, twin holes were not planned. However, with the high density of historical drilling in some areas, some Orion drilled holes will intersect mineralisation in relative proximity to historical intersections. • Considering the irregular nature of the intrusive related mineralisation, it can be noted that the intersections in the three Orion holes broadly correlate with the historical drilling. • The intersection in OFMED152 is approximately 10m from an intersection in historical hole FME113. The intersection in OFMED154 is approximately 5m from an intersection in historical hole FME100. The intersection in OFMED155 is approximately 20m from an intersection in historical hole FME039. Grades and widths in these intersections are comparable. • The CP has reviewed the raw laboratory data and confirmed the calculation of the significant intersections. • No adjustments have been made to the assay data. • Core from OFMED151, OFMED152 and OFMED153 was scanned by a RADOS™ XRF core scanning unit. Results from continuous scanning were reported at 1cm intervals. A correlation coefficient of 0.93 was achieved from plotting RADOS™ XRF readings against ICP assay results (Figures 4 and 5).
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.*	• Collar positions of the Flat Mine East prospect holes were located using a hand-held Garmin GPS. • On completion drill collars are capped and labelled and will be surveyed by a qualified surveyor. • The local South African Lo17 WGS84 (Hartebeesthoek 94) grid system is used. • All the Flat Mine East holes were surveyed down-hole. A north seeking Reflex SPRINTIQ gyro tool was used for the down-hole surveys.
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.*	• Holes were drilled along 50m spaced drill lines. • Due to the irregular intrusive nature of the mineralisation, the historical drill spacing was kept relatively tight. • The spacing for Orion holes was designed to confirm historical information, provide geotechnical information, and provide additional samples for confirmatory metallurgical test work. The drill spacing is

Criteria	JORC Code explanation	Commentary
		considered sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation and classifications. • No samples were composited.
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.*	• To achieve unbiased sampling, drilling is oriented as close as practically possible to perpendicular, or at a maximum achievable angle, to the attitude of the mineralisation. Drill holes were inclined between -70° to -78° degrees. • No sampling bias is anticipated as a result of drill hole orientations.
Sample security	• *The measures taken to ensure sample security.*	• Chain of custody is managed by the Company. 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 to date.

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 mineral rights to the properties are vested in the State and the Minerals and Petroleum Development Act, 2002, (MPRDA) regulates the exploration and mining industry in South Africa. • A mining right, NC30/5/1/2/2/10150MR (**Mining Right**), in accordance with section 23 of the MPRDA; was granted to Southern African Tantalum Mining (Pty) Ltd (**SAFTA**) to mine for a period of fifteen years on 28 July 2022 and executed on 14 December 2022. On receipt of Permission to cede from the Minister, the Mining Right was ceded to an Orion subsidiary, New Okiep Mining Company (Pty) Ltd (**NOMC**) on 11 December 2023. • The right is for copper and tungsten ore for a portion of portion 3, a portion of portion 13, a portion of portion 14 and a portion of portion 21 of the farm Nababeep No 134 situated within the administrative district of Namaqualand. The total area measures 1,214Ha in extent. • A prospecting right, NC30/5/1/1/2/12850PR (**Prospecting Right**), for the same area was granted to SAFTA on 27 June 2023 in accordance with section 17 of the MPRDA for 3 years for 26 additional minerals including

Criteria	JORC Code explanation	Commentary
		gold and silver. An application for permission to cede to NOMC has been submitted to the authorities. • The area was mined historically for copper.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous explorers in the region includes Newmont, Gold Fields of SA and SAFTA. Exploration was focussed on Cu.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenements are located over the Central and Western parts of the Okiep Copper District. The style of mineralisation is mafic hosted orogenic Cu-mineralisation. • Copper mineralisation is primarily associated with irregular, elongated and steeply dipping Koperberg Suite mafic intrusives. • The Koperberg Suite intrusives are mainly restricted to so-called "Steep Structures" of extensive strike lengths and steeply dipping to the north. • The Koperberg Suite consists of anorthosite, diorite and norite intermediate to mafic rock types. • Mineralisation usually occurs as blebs to disseminated Cu mineral assemblages bornite > chalcopyrite > chalcocite and less pyrite and pyrrhotite. • The more mafic and magnetite-rich lithologies generally host the bulk of and higher-grade mineralisation. • The OCD has a long exploration and mining history, and the geology is well known and understood.
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.*	• Refer to Table 4 in Appendix 1 for collar details of drill holes reported.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.*	• A minimum 0.7% Cu cut-off was used to calculate intercepts. • Allowance was made for 3m internal waste. • A cut-off of 1.0% Cu was used for the higher-grade inclusions. • Weighted grades were calculated as follows: %Cu X sample length(m) • The CP is of the opinion that the above aggregation methods are acceptable for this type of deposit. • No metal equivalents are reported. • No capping of assay results was required.
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 (eg 'down hole length, true width not known').*	• Drilling is generally oriented perpendicular, or at a maximum achievable angle to, the attitude of the mineralisation. • Generally, drill hole inclinations ranged between -70° to -78° while the mineralisation is expected to dip close to 70°. • Only down holes lengths are reported.
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, plots and tables. • Drilling data was incorporated and monitored in Micromine™ software together with interpretation models based on the available historical drill data.
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.*	• 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 exploration works. • A high-resolution drone magnetic survey was carried-out and will assist in future planning of additional drill holes. • Drone (DJI 600M Pro) magnetics were done at 30m AGL and 50m line spacing. • Historical detailed surface mapping is interpreted and utilised during drill hole planning. • Where possible, bulk density measurements were made over the full length of each individual sample of split core. Where not possible due to incompetent (crushed or broken) core, a minimum of 80% of the (half-core) sample was used. The bulk density is determined by measuring and subtracting the wet weight from the dry weight using an electronic scale. Care is taken to clean and zero the scale between each weighing.

Criteria	JORC Code explanation	Commentary
		The intact sample portion is first weighed in air and the weight recorded. The sample is then weighed, while completely submerged in clean water within a measuring container. The mass of container and water are deducted for net submerged weight and volume displacement read on measuring container. The sample is then removed and placed back into the core tray in the correct position and orientation. The procedure is repeated for each geological sample interval. The data were recorded in the bulk density Data Sheet. The bulk density is calculated for each sample using the formula: $BD = \frac{\text{weight of sample}}{\text{(weight of sample in air – weight of the sample in water)}}$
Further work	• *The nature and scale of planned further work (eg 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.*	• Historic resource confirmatory Drilling is continuing on Flat Mine South and Flat Mine North prospects. • Further surface geophysical surveys may inter alia include ground, drone and/or airborne EM, gravity and radiometrics.