

16 October 2024

ASX Release

EXPLORATION UPDATE LENNON'S FIND PROJECT

HIGHLIGHTS

- Induced Polarisation (IP) surveying was completed at the Lennon's Find Project in September 2024 with results recently received.
- The new IP survey at Hammerhead confirmed and further refined the strong chargeability anomaly from the 2018 survey.
- The IP survey results at Tiger SE defined shallow chargeable responses that may represent untested base metal mineralisation in the footwall of the deposit.
- A drill hole has been proposed to test the deep chargeability model at Hammerhead.
- Shallow drill holes are proposed to test the anomalies at Tiger SE
- Detailed drill programme planning in progress.

Orange Minerals NL (ASX: OMX) ("Orange" or "the Company") is pleased to announce that it has received very positive results from the recent geophysical IP survey at the Lennon's Find project near Marble Bar in the Pilbara.

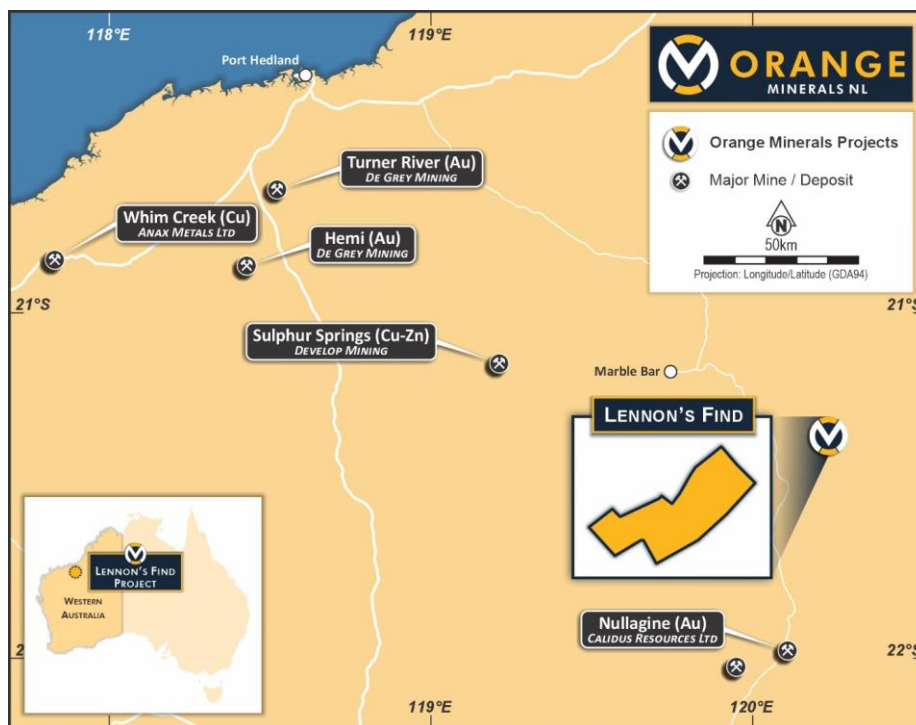


Figure 1 – Location Map of Lennon's Find Project

IP Survey method

The induced polarisation survey was carried out over the project by Khumsup Pty Ltd, who also completed the previous survey in 2018. The aim of the survey was to extend the previous IP work and to better define the deeper chargeability anomaly at the Hammerhead deposit, plus identify any anomalous chargeability responses at the Tiger deposit that could be targeted with follow up drilling.

The IP surveys were conducted on northwest – southeast traverses using the local coordinate system and nomenclature previously defined by Khumsup at Hammerhead. For the Offset Pole-Dipole survey at Hammerhead the transmitter line was located in-between the receiver lines located 200m away. Final electrode locations were mostly in line with the proposed locations, however small variations were required on the northernmost Hammerhead line due to access.

The new Hammerhead data was combined with the previous 2018 data and new 2D and 3D inversions were completed. The updated inversions confirmed and further refined the chargeability anomaly from the 2018 survey closing off the anomaly to the southeast. The Tiger SE IP results did define moderate shallow chargeable responses that may represent untested base metal mineralisation.

IP Survey results

The observed Hammerhead chargeability and resistivity display observable responses in the extension zone which supports the presence of a deep anomaly (Figure 2). The responses appear stronger, returning higher chargeability (to 19mV/V and lower resistivity (140 Ohm) within the extension zone. This may be due to better signal levels between surveys or a change of basement geology to the southeast of the project.

The observed Tiger SE chargeability and resistivity display elevated chargeability (to 15mV/V) and low resistivity (265 Ohm) in the northeast half of the line (Figure 3). These responses likely reflect a moderately chargeable and weakly conductive zone possibly associated with either disseminated sulphides or a sulphidic sedimentary unit.

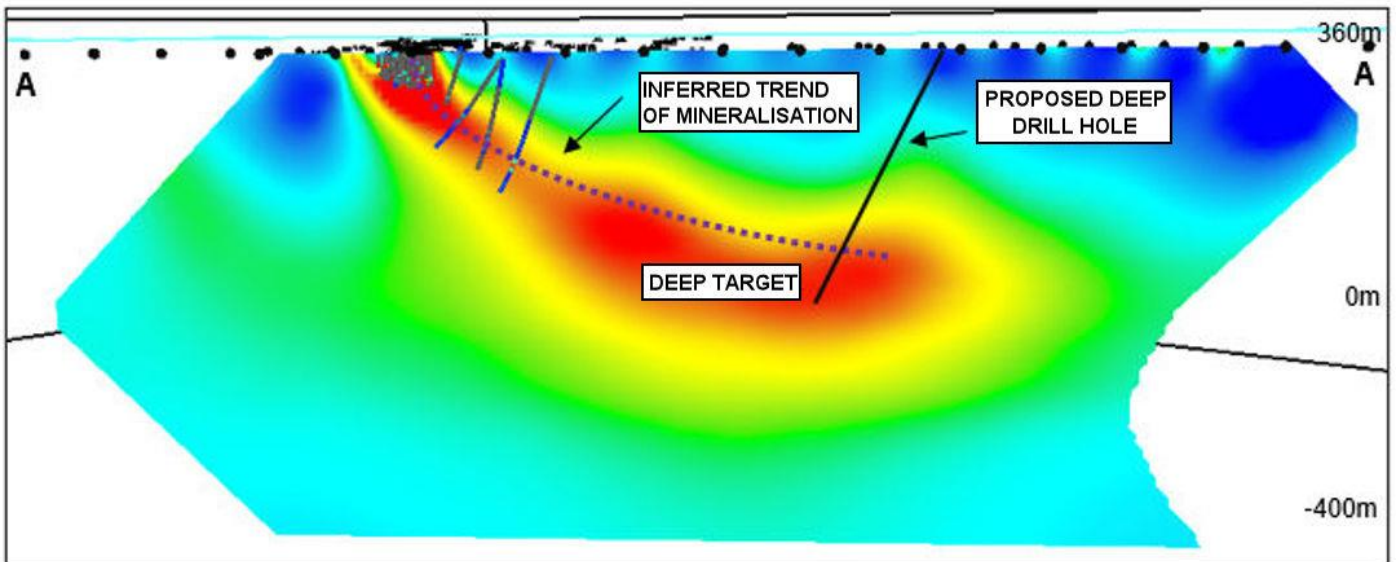


Figure 2 - Hammerhead A-A section view of chargeability inversion with drill traces highlighting Zn grade in hotter colours – looking NE



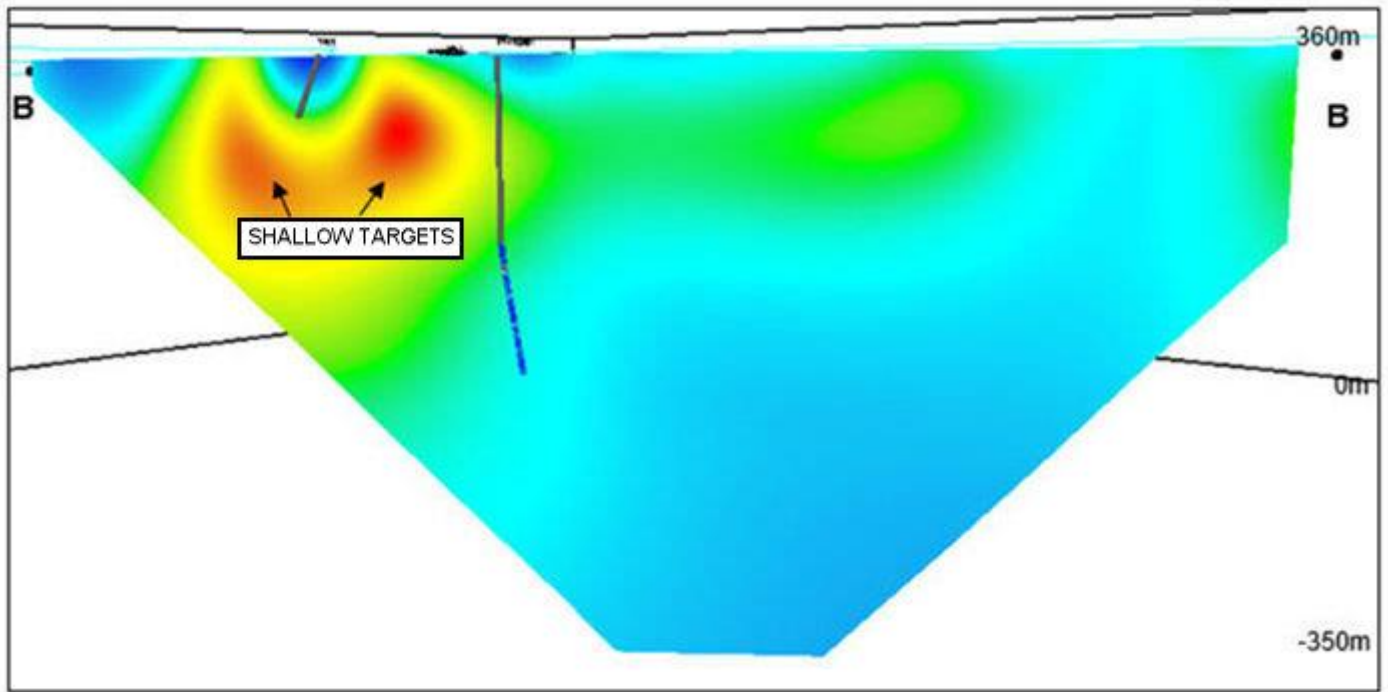


Figure 3 - Tiger SE B-B section view of chargeability inversion with drill traces highlighting Zn grade in hotter colours – looking NE

The IP survey results suggest a highly promising target zone with considerable potential for mineralization at both the Hammerhead and Tiger SE deposits.

Future Work

Based on the results of the IP survey, Orange Minerals is proposing a diamond drill program to test the deep chargeability anomaly at Hammerhead and test the potential for parallel zones in the footwall of the Tiger SE deposit. The drilling will test the Hammerhead target approximately 350m below surface.

Background Lennon’s Find

In August 2023 a binding term sheet was entered into with Musketeer Mining Ltd, to acquire up to a 75% share in the Lennon’s Find Polymetallic Project 75km south-east of Marble Bar in the Pilbara region, WA (Figure 1). Lennon’s Find includes a Mining Lease with an Inferred Mineral Resource of 1.55 Mt at 5.9% zinc, 0.2% Cu, 1.6% Pb, 0.28 g/t Au, and 84g/t Ag (Optiro 2019).

Orange can earn 51% of the Lennon’s Find Project (M45/368) by spending A\$500,000 by 31 March 2026 (which included an upfront payment of A\$200,000). Orange may earn up to 75% of the Lennon’s Find Project by spending an additional A\$500,000 (A\$1.0 million in total) by 31 March 2028.



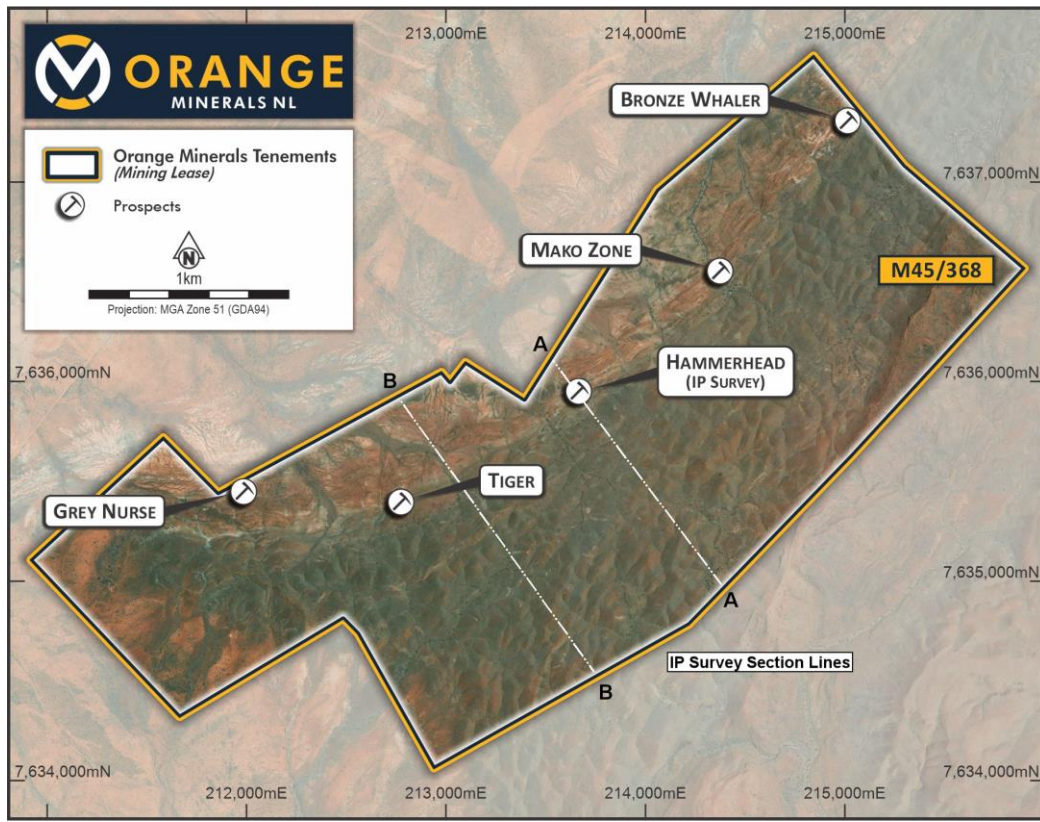


Figure 4 - Lennon's Find Mining Lease M 45/368

Geological Setting

The Lennon's Find project is located in the Archean Marble Bar greenstone belt on the SE boundary of the Mount Edgar Batholith. The greenstone rocks are comprised of felsic schists of the Duffer Formation overlain by the Apex Basalt, and both formations are part of the Warrawoona Group. The package dips to the SE beneath, or faulted against, rocks of the Fortescue Group. The Duffer Formation is comprised of three laterally persistent units: a basal quartzo – feldspathic schist (Unit 1), meta sedimentary rocks, mostly psammites and pelites (Unit 2) and an upper quartz – muscovite schist (Unit 3). All the known base metal sulphide deposits occur within the upper part of the Duffer Formation.

Base metal mineralisation at Lennon's Find is considered to be VMS style and has been mapped over a strike of 4.5km as discontinuous gossans and disseminated sulphide zones. The base metal mineralisation is predominantly Zn – Pb – Cu – Ag – Au, with significant amounts of barite, and occurs as stratiform, lenticular bodies. Five deposits have been identified being Grey Nurse, Tiger, Hammerhead, Mako and Bronze Whaler (Figure 2).

Completion of Shortfall placement

The Company advises the issue of 2,666,666 New Shares following the completion of the Shortfall Offer in relation to the Company's recently completed Share Purchase Plan.

An Appendix 2A will be lodged following release of this announcement in relation to the application for quotation of the abovementioned securities.

Non-Executive Director, Chris Michael, will subscribe for 1,666,668 New Shares under the Shortfall Offer subject to shareholder approval at the Company's Annual General Meeting.



This ASX announcement has been authorised for release by the Board of Orange Minerals NL.

-ENDS-

About Orange Minerals NL

Orange Resources NL is an exploration company listed on the ASX (ASX: OMX) with Australian-based projects in the Lachlan Fold Belt (LFB) of NSW and Eastern Gold Fields and Pilbara in WA, all world-class mineral provinces. The LFB of NSW hosts major mines including Cadia/Ridgeway, North Parkes and Lake Cowal and the tenements in the Eastern Goldfields of WA are close to the Daisy Milano gold mine and Black Cat Resources Majestic Project. The Orange Minerals exploration team plan to rapidly explore its tenement packages with aggressive exploration programmes at its key properties. The company is currently focussing on the Calarie & Wisemans Creek gold/base metal Projects in NSW, the Majestic/Kurnalpi gold, the Lennon's Find Base Metal and the Mulga Rocks Uranium/Critical Minerals Projects in WA.

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Competent Persons Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Phil Shields, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Shields is an employee of Orange Minerals NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Shields consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Statement

This release includes forward – looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and are based on current assumptions. Should one or more of the uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs or opinions should change.



APPENDIX 1: Table 1.0

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
<p>Sampling Techniques</p>	<ul style="list-style-type: none"> • <i>Nature and quality of sampling (e.g., cut channels, random chips or specific specialized 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.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are material to the public report. In cases where ‘industry standard’ work has been this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverized to produce a 30g 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.</i> 	<p>IP Equipment</p> <ul style="list-style-type: none"> • The equipment used included a GDD TX-II 9kVA Transmitter and a GDD Rx-II 16 channel IP receiver. • Receiving electrodes were standard non polarizing porous pots and transmitter electrodes were horizontal aluminium foil. <p>Pole – Dipole (PDIP) Array</p> <ul style="list-style-type: none"> • Offset Pole Dipole (Hammerhead) and Pole – Dipole (Tiger SE) • Rx Dipole Spacing: 100m • Tx Dipole Spacing: 100m • Base Frequency: 0.125Hz (2 second pulse) • Chargeability Integration: 500 – 1000ms • Typical Current: 2.5 – 4.5 A • Max Current: 5.2 A • Min Current: 2.1 A • Survey was conducted on northwest – southeast traverses using the local coordinate system • For the offset pole – dipole survey at Hammerhead, the transmitter line is located in – between the receiver lines located 200m away. • Final electrode locations were mostly in-line with the proposed locations, however small variations were required on northern most Hammerhead line due to access. • The survey resulted in 264 data points. • Two receiver lines and one transmitter line were used at Hammerhead • One transmitter / receiver line was used at Tiger SE.
<p>Drilling Techniques</p>	<ul style="list-style-type: none"> • <i>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 orientated and if so, by what method, etc.).</i> 	<ul style="list-style-type: none"> • No new drilling in this report



Criteria	JORC Code Explanation	Commentary
Drilling Sampling Recovery	<ul style="list-style-type: none"> Method of recording and accessing core and chip sample recoveries and results accessed. 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. 	<ul style="list-style-type: none"> No new drilling in this report
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No new drilling in this report
Sampling Techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g., cut channels, random chips or specific specialized 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. 	<ul style="list-style-type: none"> No new drilling in this report



Criteria	JORC Code Explanation	Commentary
<p>Sub Sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>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.</i> • <i>Quality control procedures adopted for all sub sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate / second half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • No new drilling in this report
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation, etc.</i> 	<ul style="list-style-type: none"> • Refer to Sampling Techniques above for survey specifications • Field QAQC was completed by Khumsup Pty Ltd staff. Post survey, further QAQC and data processing was undertaken by Core Geophysics.
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> 	<ul style="list-style-type: none"> • No further drilling was conducted in this report.



Criteria	JORC Code Explanation	Commentary
Location of data points	<ul style="list-style-type: none"> 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 accuracy of topographic control. 	<ul style="list-style-type: none"> The transmitter and receiver sites were positioned with a Garmin Etrex10 GPS (+/- 3m accuracy) Grid system is MGA94 Zone 51 Surface RL data for sites is collected using GPS and rectified by high resolution publicly available digital elevation data.
Data spacing and distribution	<ul style="list-style-type: none"> 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 classification applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> The survey spacing is considered adequate for an orientation IP survey. No new drilling in this report.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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 structure is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> The IP lines were orientated northwest – southeast which were perpendicular to geological strike.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security 	<ul style="list-style-type: none"> No new samples reported
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No additional audits or reviews have been conducted to date.



Section 2: Reporting of Exploration Results

(Criteria listed in the previous section also apply to this section)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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 license to operate in the area. 	<ul style="list-style-type: none"> In August 2023, a binding term sheet was entered into with Musketeer Mining Ltd, to acquire up to a 75% share in the Lennon’s Find Polymetallic Project 75km southeast of Marble Bar in the Pilbara region, WA. Lennon’s Find includes a Mining Lease (M 45/368). Orange Minerals can earn 51% of the Lennon’s Find project by spending A\$500,000 by 31 March 2026 (which included an upfront payment of A\$200,000). Orange Minerals may earn up to 75% of the Lennon’s Find project by spending an additional A\$500,000 (A\$1M in total by 31 March 2028).
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> M 45/368 has been the subject of previous exploration by numerous companies, including Cominco Exploration (1969), Serem Australia (1976-77), Centenary International Mining (1984 – 1988), Gascoyne Gold Mines (1995), Jabiru Metals (2007) and Musketeer Mining (current).
	<ul style="list-style-type: none"> Deposit type, geological setting, and style of mineralisation. 	<ul style="list-style-type: none"> The Lennon’s Find deposits consist of stratiform, lenticular sulphide bodies hosted by the Duffer Formation. The Duffer Formation is characterized by basal quartzo-feldspathic schist, overlain by clastic metasedimentary rocks, in turn overlain by quartz-muscovite schist. The formation hosts five mineralised zones, occurring at two stratigraphic levels 10 – 60m beneath the contact with the overlying Apex Basalt. An upper horizon within the quartz muscovite schist, located 10m to 20m of the contact, is intensely mineralised and contains the Bronze Whaler, Hammerhead and Tiger deposits. The mineralisation generally consists of sphalerite, chalcopyrite and galena with associated barite and pyrite. The mineralisation style combined with features such as vertical metal zoning, texture, and its stratiform mode suggests the deposits are volcanogenic (VMS) origin.
Drill hole information	<ul style="list-style-type: none"> 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 Elevation or RL of the drill hole collar Dip and azimuth of the hole Down hole length and interception depth Hole length 	<ul style="list-style-type: none"> No new drilling in this report.



Criteria	JORC Code Explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <i>In reporting Exploration results, weighting averaging techniques, maximum and / or minimum grade truncations and cut off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths are reported, there should be stated, and some typical examples.</i> 	<ul style="list-style-type: none"> No new assay results in this report
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration results.</i> <i>If the geometry of the mineralisation with respect to the drill hole 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).</i> 	<ul style="list-style-type: none"> No new drilling in this report
Diagrams	<ul style="list-style-type: none"> <i>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 the drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> Refer to figures in this report
Balanced reporting	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> The report is balanced, and all material information has been disclosed.
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g., tests for lateral 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.</i> 	<ul style="list-style-type: none"> Orange Minerals will follow up the IP survey with diamond drilling to test the deep chargeability anomaly at Hammerhead and the near surface potential footwall anomalies at Tiger SE.

