

3 December 2024

ASX Release

## SIGNIFICANT SILVER AND BASE METALS IN ROCK CHIPS AT LENNON'S FIND

### HIGHLIGHTS

- Significant gold, silver and base metal results from rock chips, validating historical work at Hammerhead and Tiger deposits.
- Highest values: Gold (5.45 g/t OLSR4), Silver (988 g/t OLSR4), Copper (4.96% OLSR4), Lead (12.07% OLSR2) and Zinc (4.44% OLSR6)
- Planning for further ground works in Q1 2025 underway, in-conjunction with application for Exploration Incentive Scheme (EIS) for co-funding of a deep diamond drill program

Orange Minerals NL (ASX: OMX) ("Orange" or "the Company") is pleased to announce that it has received significant assay results from recent rock chip sampling at the Lennon's Find project near Marble Bar in the Pilbara (Figure 2).

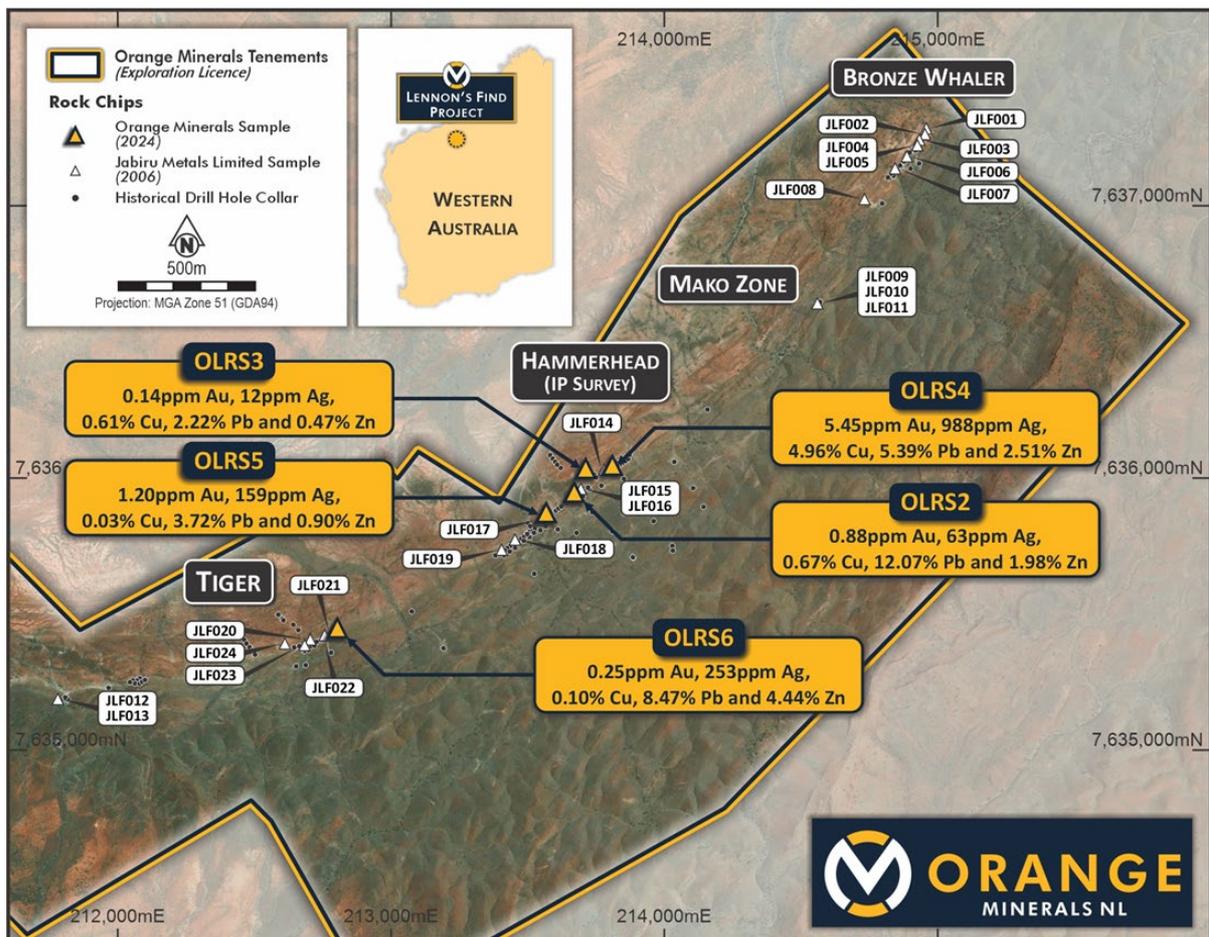


Figure 1 – OMX Rock Chip Sample Locations – M 45/368



**Rock Chip Sampling**

Five rock chip samples were collected during the recent Lenlons Find IP survey to validate samples collected by Jabiru Metals Limited in 2005 (Figure 1). Four of the samples were taken on the Hammerhead gossan and one sample from the Tiger deposit. Twenty-four samples were collected by Jabiru Metals Limited in 2005, over a strike length of 4km along the Lenlons Find main zone. The highest assay results from the Orange Minerals sample were gold (**5.45** g/t OLSR4), silver (**988** g/t OLSR4), copper (**4.96%** OLSR4), lead (**12.07%** OLSR2) and zinc (**4.44%** OLSR6). These results correlated well with high grade values in the Jabiru Metals samples. Jabiru Metals assays are reproduced in Appendix 1 and Orange Minerals samples in Table 1. For historical drillhole collars and results see Laconia Resources Limited ASX announcements (9 March 2011, 3 October 2011 and 12 October 2011).

Sample No.	Deposit	East_GDA94	North_GDA94	Ri	Au_ppm	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm
OLRS2	Hammerhead	213670	7635947	339	0.88	63	6691	<b>120706</b>	<b>19751</b>
OLRS3	Hammerhead	213712	7636034	338	0.14	12	6134	<b>22237</b>	4663
OLRS4	Hammerhead	213810	7636046	343	<b>5.45</b>	<b>988</b>	<b>49619</b>	<b>53898</b>	<b>25128</b>
OLRS5	Hammerhead	213568	7635872	342	<b>1.20</b>	<b>159</b>	341	<b>37167</b>	9024
OLRS6	Tiger	212803	7635448	349	0.25	<b>253</b>	950	<b>84661</b>	<b>44367</b>

Table 1 – Lenlons Find Rock Chip assays

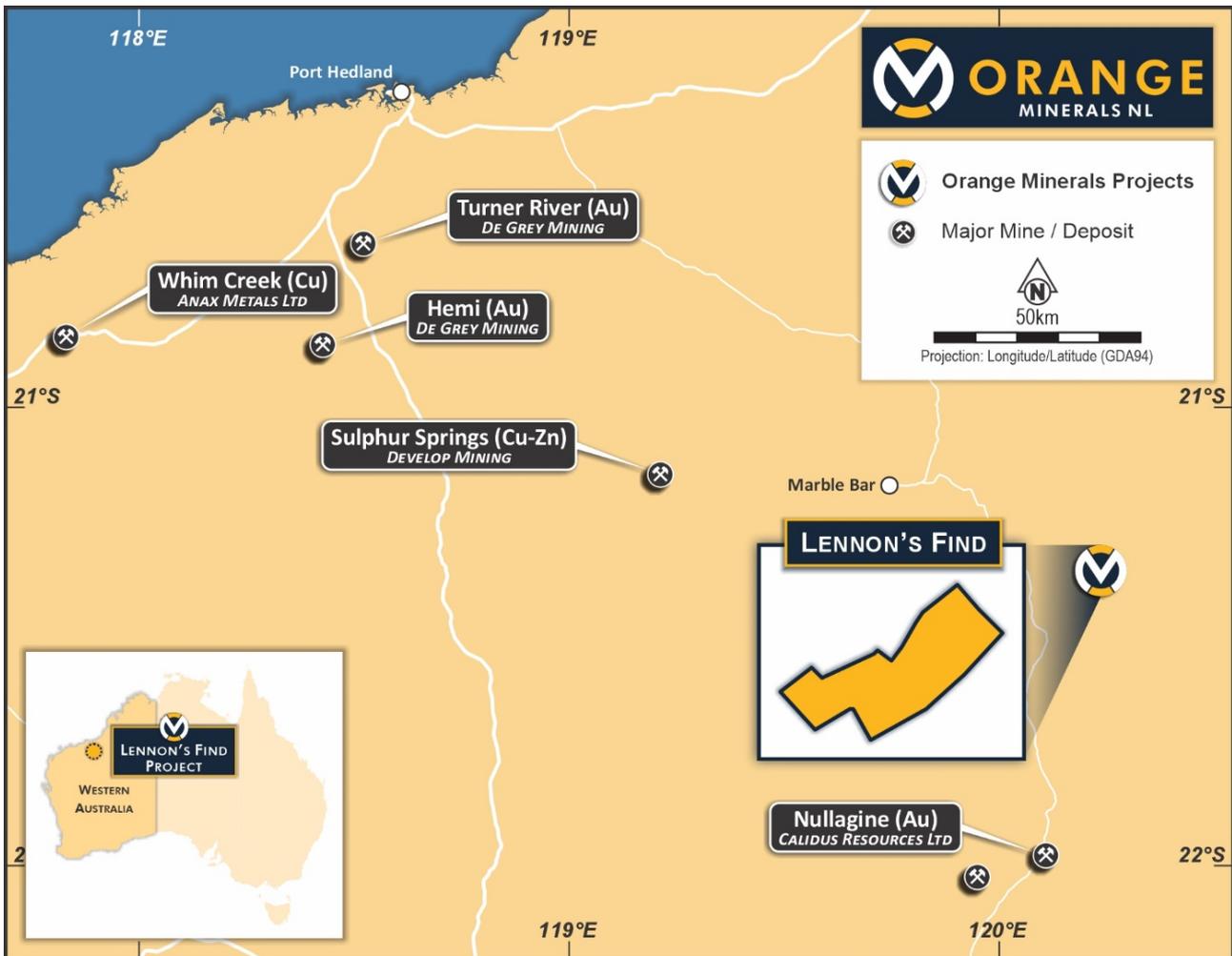


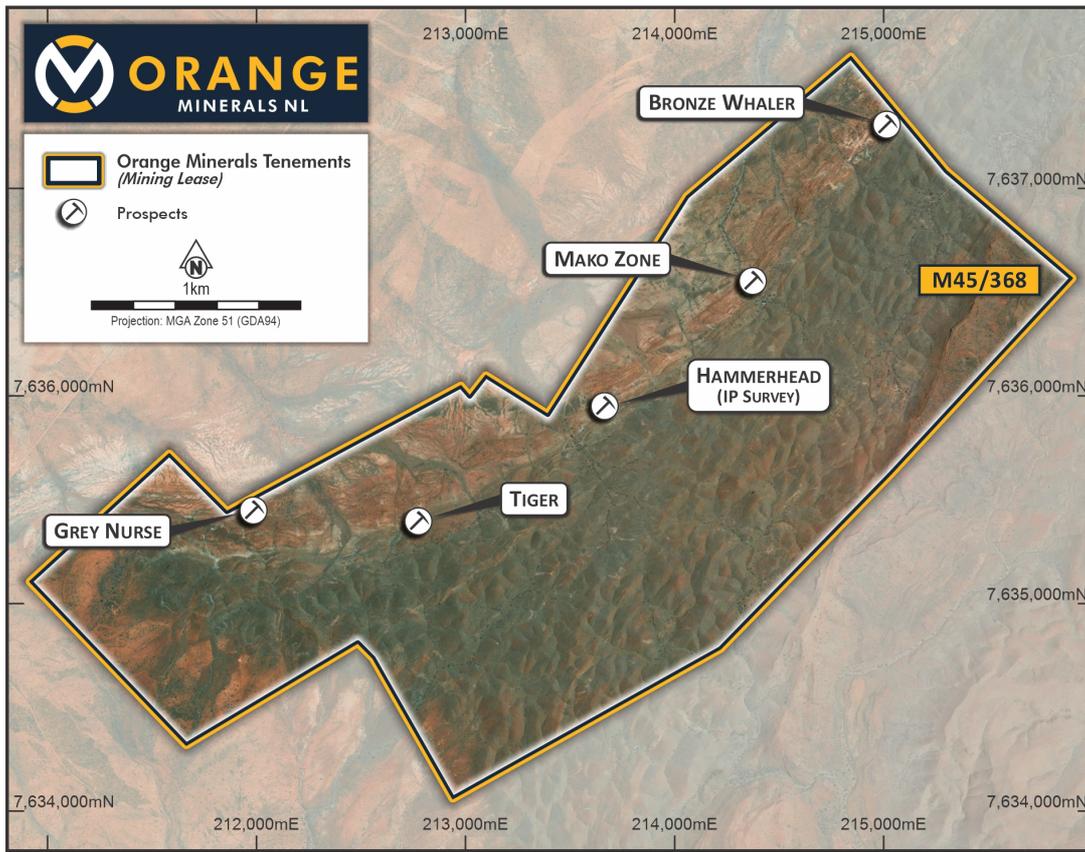
Figure 2: – Lenlons Find Location Map



**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. 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 3-** 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 (Figure 4). 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 3).





**Figure 4-** Hammerhead gossan – M 48/368

### **Future Work**

Orange Minerals will follow up the initial program with more extensive sampling along the full 4km of the Lennon's Find main zone, with the focus on infilling gaps in the historical rock chip sampling locations. OMX will also be making an application to the WA governments 2025 Exploration Incentive Scheme (EIS) for co-funding of a deep diamond drill program at Lennon's Find.

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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 NSW Lachlan Fold Belt (LFB), WA 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.

## For further information, please contact: Chris Michael

**A:** Level 2, 7 Havelock Street West Perth, WA 6005  
**W:** [www.orangeminerals.com.au](http://www.orangeminerals.com.au)  
**E:** [contact@orangeminerals.com.au](mailto:contact@orangeminerals.com.au)  
**T:** +61 (08) 6102 2039

## 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: Jabiru Metals Limited Assays (2005)

Samp_Id	East_GDA94	North_GDA94	RI	Au_ppm	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm
JLF001	215095	7637445	314	0.01	1	28	49	142
JLF002	215091	7637424	314	0.19	23	110	2002	369
JLF003	215071	7637398	320	0.71	61	143	30839	91
JLF004	215063	7637384	315	0.77	97	914	75000	406
JLF005	215063	7637384	315	0.25	46	232	4567	70
JLF006	215024	7637343	314	0.71	68	11436	46396	726
JLF007	214981	7637298	309	0.06	5	382	4185	339
JLF008	214870	7637186	337	0.01	1	117	461	131
JLF009	214697	7636802	338	0.04	4	182	1527	8612
JLF010	214697	7636802	339	0.25	52	386	17673	42755
JLF011	214697	7636802	340	0.26	46	319	15729	56725
JLF012	211918	7635349	341	0.03	8	115	2111	11530
JLF013	211918	7635349	342	0.78	350	4850	73436	65613
JLF014	213917	7636192	345	0.06	8	193	607	287
JLF015	213831	7636121	342	0.71	154	11070	84633	15134
JLF016	213831	7636121	335	1.78	43	7967	73778	7033
JLF017	213678	7636005	344	0.04	2	2098	15133	225000
JLF018	213590	7635934	337	2.42	266	67339	4431	12064
JLF019	213541	7635897	336	0.68	148	38788	4845	141717
JLF020	212841	7635567	337	0.06	15	1066	225	6703
JLF021	212920	7635595	353	0.76	91	660	4810	1713
JLF022	212894	7635583	350	2.11	750	14763	78133	136044
JLF023	212820	7635547	333	1.96	48	4724	88582	4658
JLF024	212748	7635552	346	1.20	99	291	3638	1858



**APPENDIX 2: Table 1.0**

**Section 1: Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
<p><b>Sampling Techniques</b></p>	<ul style="list-style-type: none"> <li>• <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 downhole gamma sondes or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are material to the public report.</i></li> <li>• <i>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></li> </ul>	<p>Any drillhole collar locations referred to in Figure 4 are historic and have previously been reported in Laconia Resources ASX announcements (9 March 2011, 3 October 2011 and 12 October 2011).</p> <p><b>OMX Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <li>• A representative sample was collected from exposed outcrops and weathered areas by a company geologist. It is important to note that these samples may not reflect the potential mineral grade at greater depths.</li> <li>• A 1 – 3kg sampled was bagged from each sample location.</li> <li>• Samples were collected from the Hammerhead and Tiger main zone gossans.</li> <li>• Field observations were recorded at each sample point</li> <li>• Photos were taken of all sample locations</li> </ul> <p><b>Jabiru Metals Limited Rock Chip Sampling</b></p> <ul style="list-style-type: none"> <li>• Jabiru Metals collected 24 samples along the Lennon’s Find main zone.</li> <li>• 1 – 5kg samples collected by company geologist</li> <li>• Field observations recorded</li> <li>• Rock chip samples were not used to support previous Mineral Resource Estimations</li> </ul>
<p><b>Drilling Techniques</b></p>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• No new drilling in this report</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Drill Sample Recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and accessing core and chip sample recoveries and results accessed. Measures taken to maximise sample recovery and ensure the 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.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling in this report</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Field observations were recorded at each sample point.</li> </ul>
<b>Sub Sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>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.</li> <li>Quality control procedures adopted for all sub sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate / second half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p><b>OMX Rock Chip Samples</b></p> <ul style="list-style-type: none"> <li>All samples were dried and coarse crushed (nominal 6mm)</li> <li>Samples were pulverized (nominal 85% passing 75 um).</li> </ul> <p><b>Jabiru Rock Chip Samples</b></p> <ul style="list-style-type: none"> <li>Samples were dried, crushed and pulverized (90% passing 75um).</li> </ul> <p>Sample sizes are appropriate for the grain size of the material being sampled.</p>



Criteria	• JORC Code Explanation	• Commentary
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <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></li> </ul>	<p><b>OMX Rock Chip Assaying</b></p> <ul style="list-style-type: none"> <li>• Samples sent to the accredited SGS Perth Laboratory.</li> <li>• Samples were assayed for gold by Fire Assay (GO_FAP50V10) – 50g sample charge and MP-AES finish.</li> <li>• Multi element, 4 acid digest (GEICP40Q20) and ICP-OES finish for 11 elements (Ag, As, Ba, Bi, Co, Cu, Mo, Pb, Sb, W and Zn).</li> <li>• Over range (GO_ICP41Q100) for Ag, Cu, Pb and Zn</li> <li>• Over range (GO_ICP43B500) for Ag.</li> </ul> <p><b>Jabiru Rock Chip Samples</b></p> <ul style="list-style-type: none"> <li>• Samples assayed at Genalysis Perth</li> <li>• Gold by Fire Assay – 50g sample charge</li> <li>• Multi element, 4 acid digest and OES finish for 18 elements (Ag, As, Ba, Bi, Cd, Co, Cu, Fe, Mo, Ni, Pb, S, Sb, Sn, Sr, Te, W and Zn)</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No verification will be undertaken for these initial samples that will not be used in any resource estimates. The samples were to check the validity of historical sampling.</li> <li>• SGS conducted repeat assaying and included laboratory standard checks</li> </ul>
<p><b>Location of data points</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used. Quality and accuracy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples were located using a Garmin GPS using MGA94 Zone 51 coordinates.</li> <li>• The accuracy is considered sufficient for an early exploration sampling program.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No new drilling in this report.</li> </ul>



Criteria	• JORC Code Explanation	• Commentary
<b><i>Orientation of data in relation to geological structure</i></b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No new drilling in this report.</li> </ul>
<b><i>Sample security</i></b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were securely packed in a polyweave bag and sealed with a cable tie to mitigate contamination or unapproved handling.</li> </ul>
<b><i>Audits or reviews</i></b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews have been conducted to date.</li> </ul>



**Section 2: Reporting of Exploration Results**

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

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Lennon’s Find includes a Mining Lease (M 45/368).</li> <li>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).</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> </ul>
	<ul style="list-style-type: none"> <li>Deposit type, geological setting, and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Easting and northing of the drill hole</li> <li>Elevation or RL of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling in this report.</li> <li>The OMX rock chip data has been tabulated in Table 1 in the report and the historical Jabiru Metals Limited data is reproduced in Appendix 1.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling results have been reported</li> <li>No aggregation methods applied.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration results.</li> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling in this report</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Maps and images are included within the body of text.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All relevant and material exploration data for the target area has been discussed, reported or referenced.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Orange Minerals will follow up the initial program with more extensive sampling along the full 4km of the Lennon’s Find main zone. Particular focus will be on infilling gaps in the historical rock chip sampling program.</li> </ul>

