



## EXPLORATION UPDATE

### LARGE MULTI-ELEMENT SOIL ANOMALIES AT WEST MURCHISON:

- Follow up sampling at two of four soil anomalies at West Murchison Cu-Ni-PGE project confirms prominent Cu-Ni-Pd-Pt-Au hotspots
- Particularly strong Cu-Pt-Pd-Au anomaly associated with eye-like feature at the Yalgamine target
- Three distinct Ni-Cr-Cu-Pt-Pd anomalies emerging at the Whitehurst target
- Sampling still at a very broad spacing (800m x 80m, down to 400m x 80m grid), with 200m x 40m infill sampling planned over anomalies
- Assays for follow up soil sampling of the Aubrey South and Woodrarung targets expected in 4-5 weeks

### NEW GRAVITY AND MAGNETIC TARGETS AT WARRAWEENA:

- First detailed gravity survey at Warraweena project, NSW, reveals three styles of geophysical targets in completely unexplored area buried beneath cover
- Several compelling strong gravity anomalies associated with strong reversely polarised magnetic anomalies – potentially indicative of hidden intrusions
- One of these is close to the location of the most pentlandite-chalcopyrite-sphalerite enriched heavy mineral concentrate sample in Australia
- Other gravity anomalies associated with magnetic stratigraphy
- Broad, unexplained and open gravity anomaly on edge of survey
- Follow up induced polarisation (IP) survey planned for early 2025, to be followed by initial reconnaissance drilling

S2 Resources Ltd (“S2” or the “Company”) advises that results have been received for follow up soil sampling undertaken at the Yalgamine and Whitehurst soil anomalies on its 100%-owned West Murchison project in Western Australia, and for the initial detailed gravity survey recently completed at the Warraweenaa project in New South Wales, where S2 is currently earning a 70% interest.

### **West Murchison soil anomalies**

The West Murchison project was pegged following the discovery of the Julimar palladium-copper-nickel deposit, and is located close to the edge of the West Yilgarn Craton margin, which is now considered prospective for this style of mineralisation. The project area has a maximum dimension of 60km north-south and 40km east-west. Previous targeted reconnaissance soil sampling has identified four areas of anomalism (refer to S2 ASX announcement of 12 July 2024), known as Yalgamine, Whitehurst, Woodrarung and Aubrey South.

Follow up soil sampling at the Yalgamine and Whitehurst anomalies has confirmed several coincident nickel, copper, chrome, platinum, palladium and gold anomalies. These anomalies appear to be quite extensive and cohesive, which is encouraging given that the sampling density is still very broad, with the sampling grid ranging from a spacing of 800m x 80m down to 400m x 80m (see Figure 1).

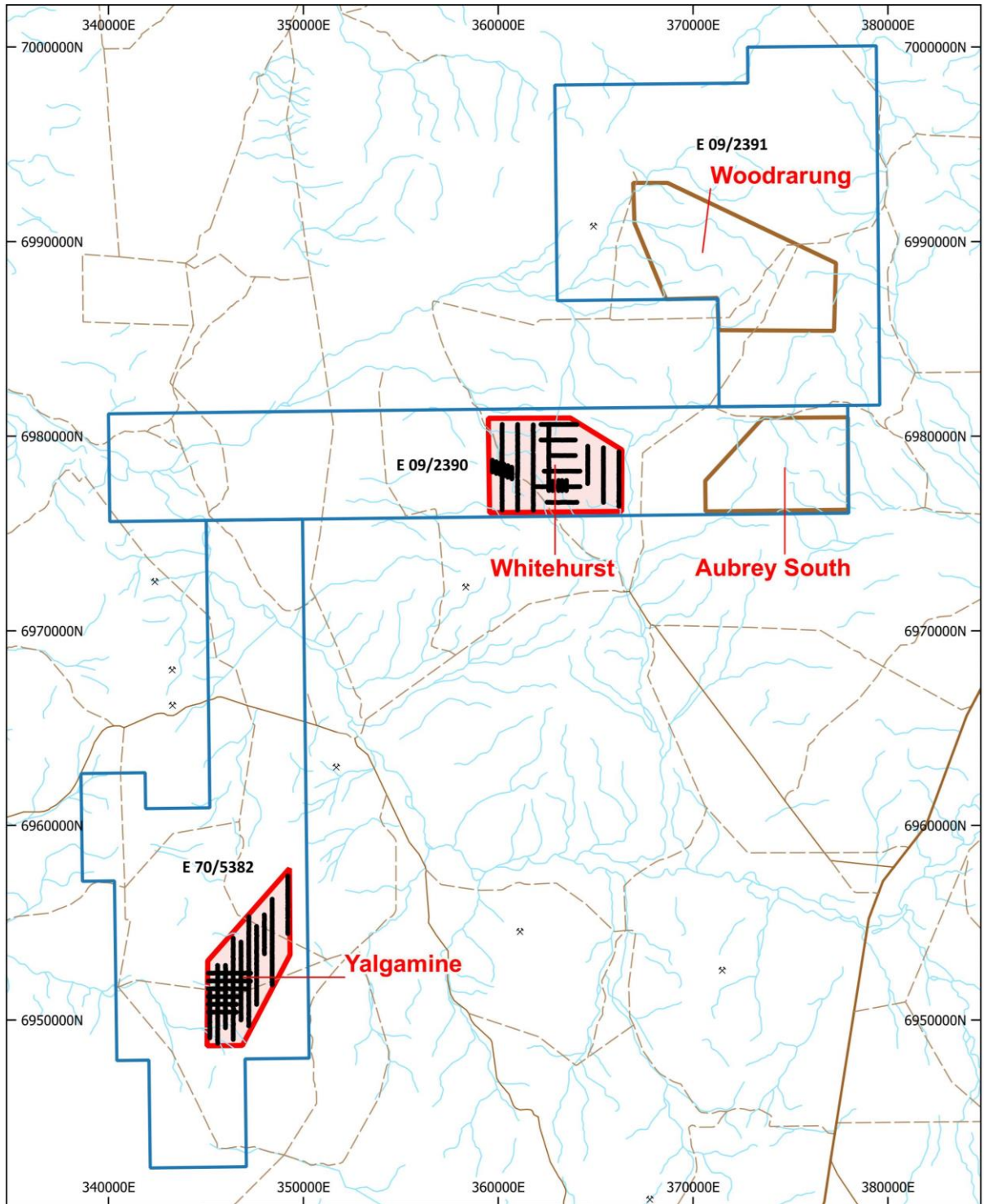
At the Yalgamine target, 400m x 80m sampling on east-west and north-south lines has defined a broad coincident nickel-chrome anomaly with a maximum dimension of 3km, containing a distinct “sweet spot” comprising coincident highly anomalous copper, platinum, palladium and gold to a maximum of 1,040ppm Cu, 24ppb Pt, 26ppb Pd and 15.5ppb Au (see Figures 2 and 3).

This is particularly interesting because it coincides with the margin of an oval eye-like feature in the magnetic data, which is interpreted to represent an intrusion, and the level of anomalism and the sampling density is comparable to that initially defined over the Nova nickel-copper deposit, discovered by the S2 team as Sirius Resources in 2012 (refer to Sirius Resources ASX announcement of 22 March 2011).

At the Whitehurst target, variable spaced sampling on east-west and north-south lines has identified three distinct multi-element anomalies, each measuring between 500m and 1,000m long and comprising coincident elevated nickel, copper, chrome, platinum, palladium and gold (see Figures 4 and 5).

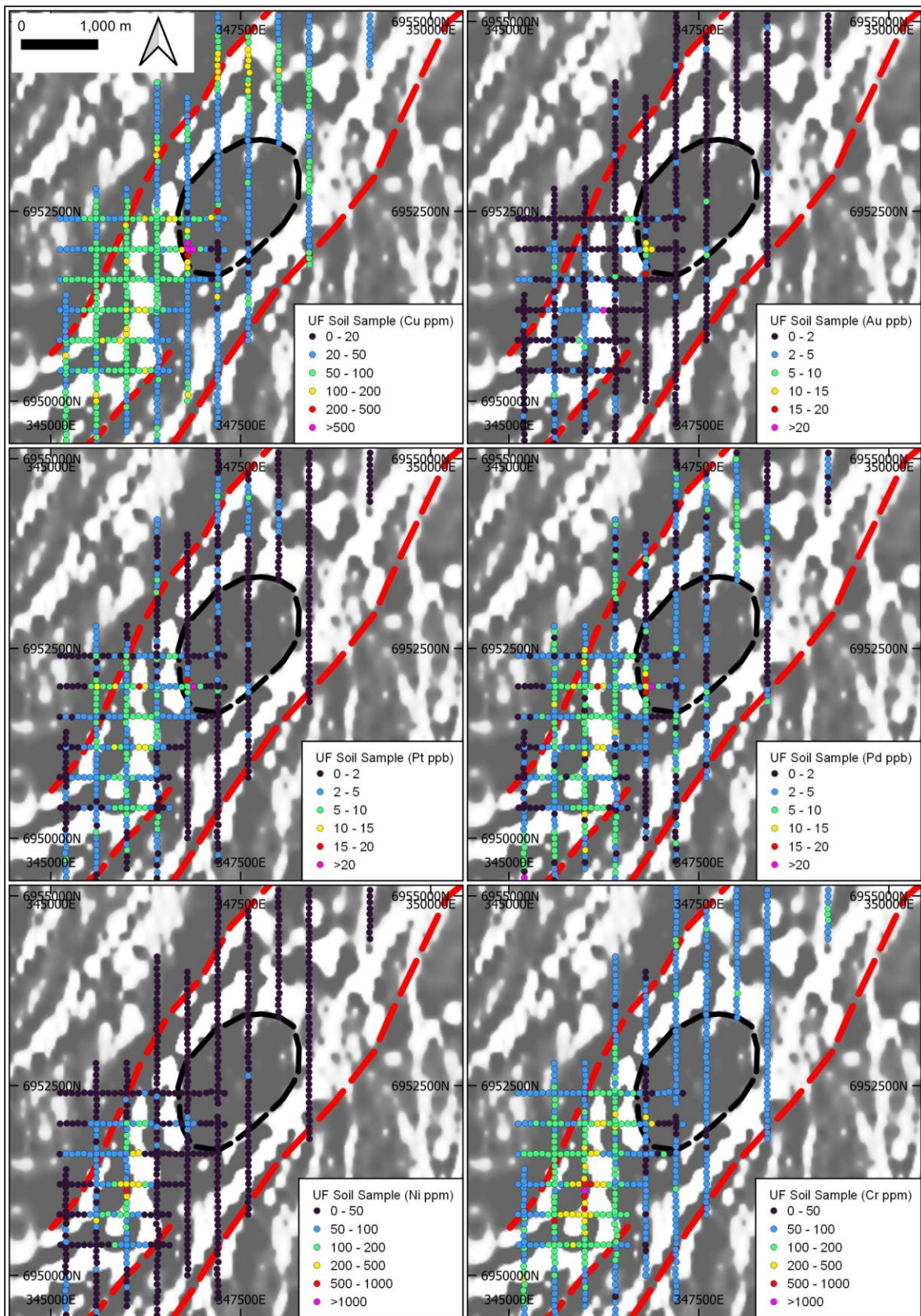
Follow up 200m x 40m infill sampling has also been completed at the Aubrey South and Woodrarung targets (refer to S2 ASX announcement of 12 July 2024), and assays from this are expected in 4-5 week’s time.

Targeted 200m x 40m infill soil sampling to further resolve the anomalies at Yalgamine and Whitehurst is currently planned for the new year, to be followed by regolith/landform mapping and reconnaissance aircore drilling to gain a better understanding of their source and the geological setting.



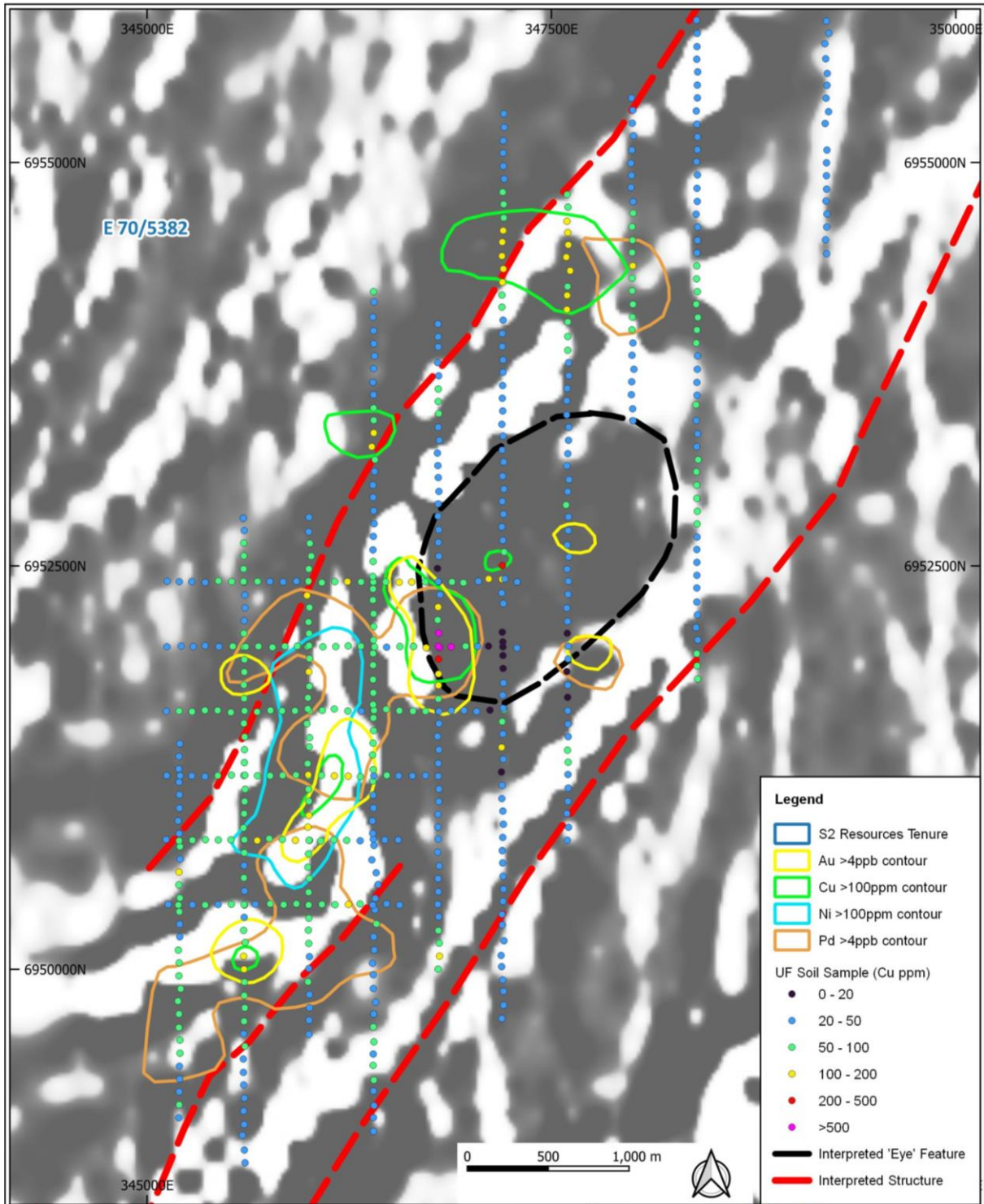
**Figure 1.** West Murchison project area showing location of follow up soil sampling (red) and areas where follow up soil sampling has been completed with assays still awaited (brown).

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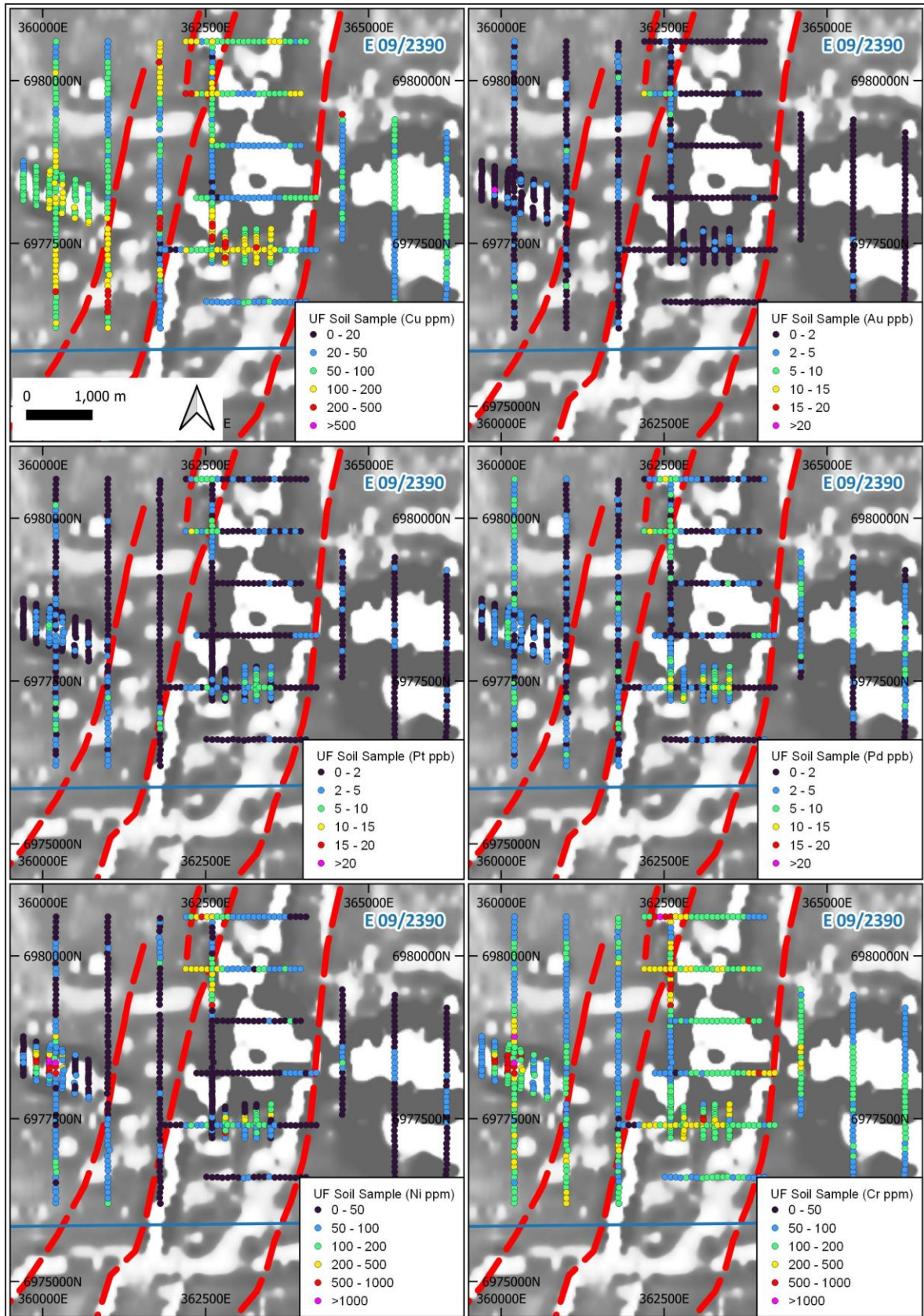
**Figure 2.** Yalgamine target follow up soil sampling, showing broad coincident nickel-chrome anomaly with strong coincident copper-platinum-palladium-gold anomaly on margin of eye-like magnetic feature.

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**Figure 3.** Yalgamine target soil anomaly summary plan showing extensive (3km long) multi-element anomaly with strongest coincident copper-platinum-palladium-gold anomalism on margin of eye-like magnetic feature.

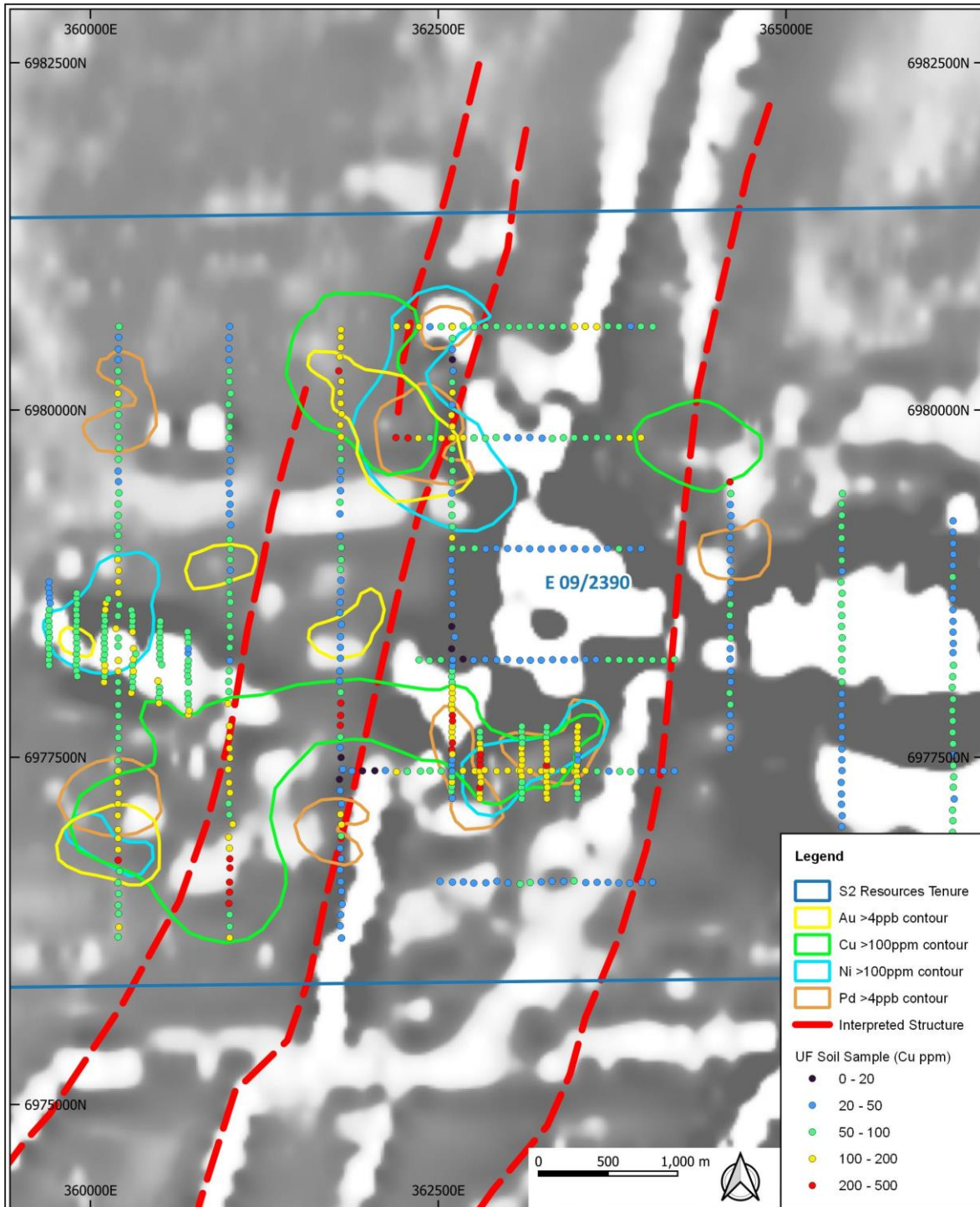
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**Figure 4.** Whitehurst target follow up soil sampling, showing three distinct coincident nickel-chrome-copper-platinum-palladium sub-anomalies, each 500m-1,000m long.

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**Figure 5.** Whitehurst target soil anomaly summary plan, showing three distinct coincident nickel-chrome-copper-platinum-palladium sub-anomalies, each 500m-1,000m long.

## Warraweena gravity survey results

The Warraweena project comprises Exploration Licence EL9269, into which S2 is earning a 70% interest from Oxley Resources, and two large exploration licences held 100% by S2 (refer to S2 ASX announcement of 4 December 2023). The first phase of work, comprising a detailed gravity survey, has been completed over the core area of interest which covers 55km of strike extent and 10-20km across strike, primarily on the Oxley ground. The gravity data was acquired on a 800m x 400m grid to provide significantly better resolution than the previous regional dataset. The purpose of this was to be able to define specific point source gravity anomalies and to relate these to the existing magnetic data (see Figure 6).

The new gravity survey, when combined with the magnetic data, has identified three distinct target styles (see Figure 7), which are all concealed beneath cover, untested, and unexplained, as follows:

**Several strong distinct bullseye gravity highs coincident with strong reversely polarised bullseye magnetic features** in the Oxley ground. Although the magnetic anomalies appear as magnetic lows, they are actually strongly magnetic reversely polarised anomalies, which appear as deep magnetic lows punching through the stratigraphy. These are interpreted as intrusions which are either relatively mafic or dense, or closer to surface. As such, these represent a variety of potential target styles, including magmatic nickel-copper sulphide-bearing intrusions, porphyry copper-gold intrusions or iron-oxide copper-gold (IOCG) diatremes.

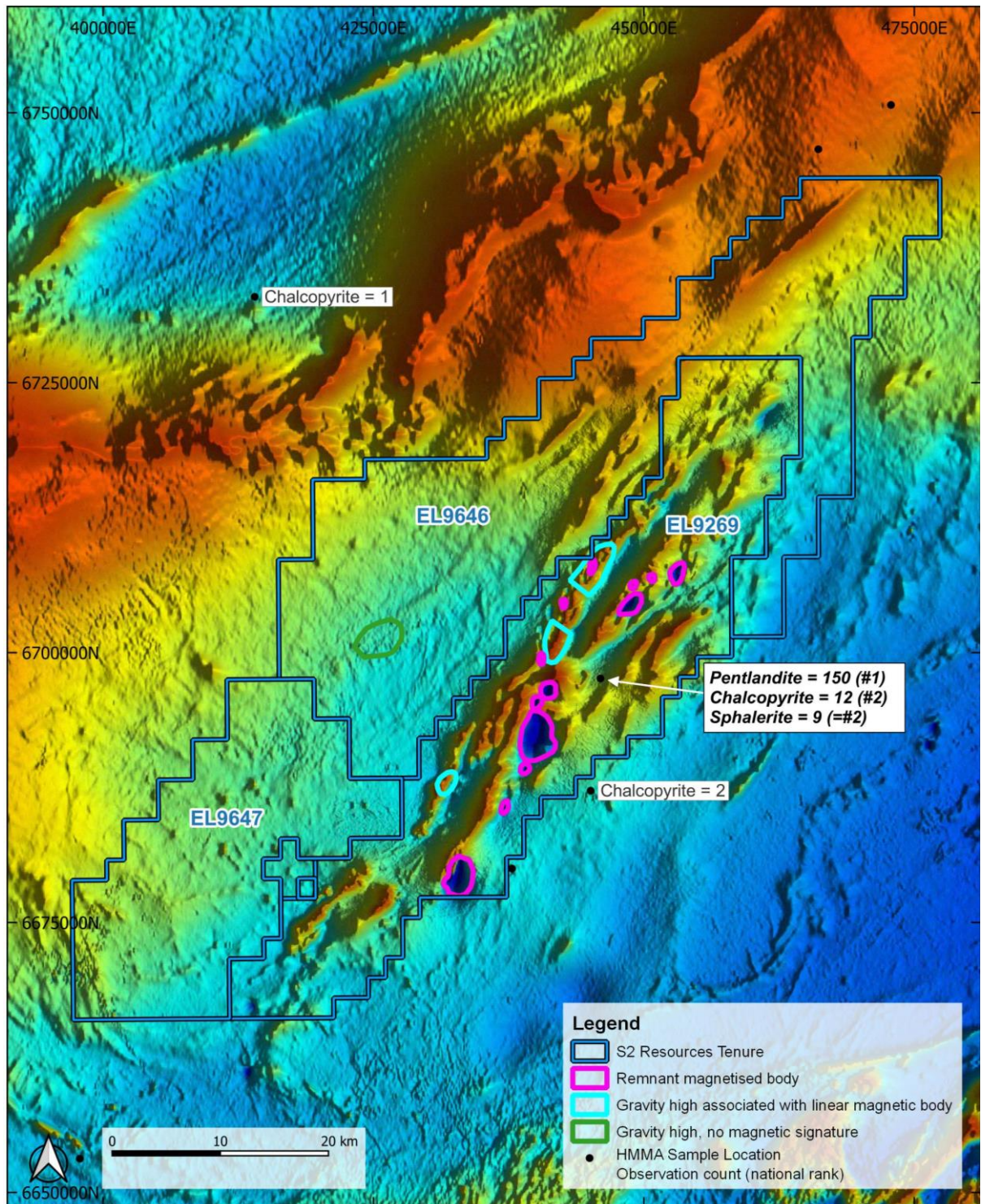
**Strong distinct gravity highs situated on magnetic trends** in the Oxley ground. These appear to be discrete non-stratigraphic gravity highs, within more continuous magnetic stratigraphy, and may be locally isolated dense bodies. As such, these could represent potential nickel-copper sulphide bearing mafic-ultramafic sills or volcanogenic hosted massive sulphide (VHMS)-style base metal targets.

**An unexplained broad gravity high with no associated magnetic stratigraphy**, on the edge of the survey area within 100% S2 ground. Comparison with the regional data suggests this may represent the edge of a discrete large gravity high. The survey needs to be extended to cover this

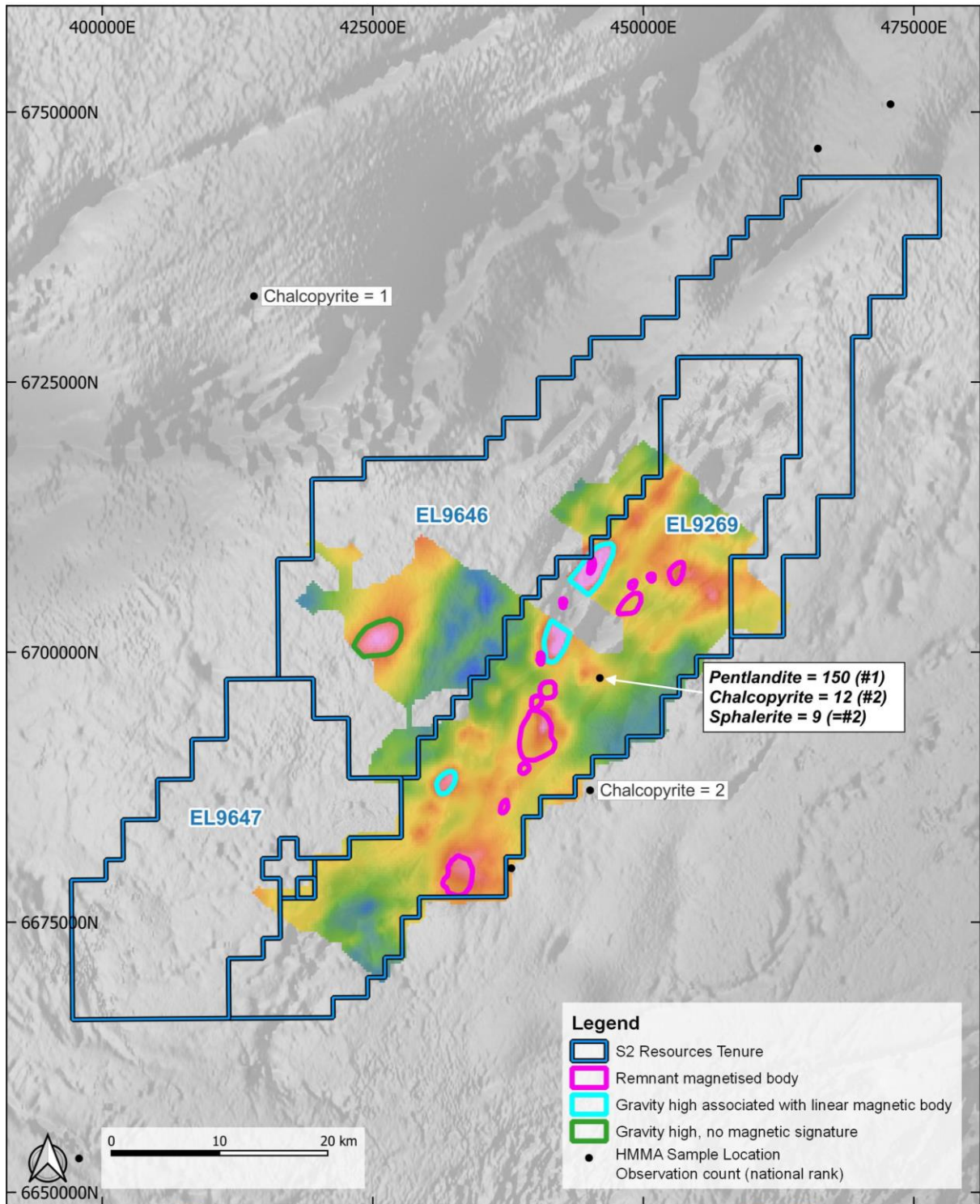
It is worth noting that some of these targets occur in close proximity to the location of the highly anomalous heavy mineral concentrate sample identified in an Australia-wide survey published by Geoscience Australia and Curtin University on 12 October 2023. This sample is the most pentlandite, chalcopyrite and sphalerite enriched sample in the entire Australian survey (refer to S2 ASX announcement of 4 December 2023).

A follow up induced polarisation (IP) and resistivity geophysical survey over selected targets is planned for early 2025, with initial reconnaissance drilling scheduled for Q2 2025. The IP/resistivity survey is designed to better define the geometry of potential intrusive bodies at depth, characterise any potential alteration zones, and identify potential disseminated sulphide systems, characteristic of the mineralisation styles being targeted.





**Figure 6.** Warraweena magnetic map, showing unexplained magnetic stratigraphy and strong reversely polarised magnetic bullseyes which appear as deep lows (magenta circles) punching through the magnetic stratigraphy. Three gravity highs associated with magnetic stratigraphy are shown as aqua coloured polygons, and the unexplained gravity high not associated with any magnetic response (green circle). The location of the strongly pentlandite-chalcopyrite-sphalerite heavy mineral concentrate sample is also shown, with numbers referring to grain counts in the sample.



**Figure 7.** New Warraweena gravity data (colour) overlaying magnetics (greyscale), showing three styles of gravity/magnetic targets. Note the coincidence of several gravity highs with strong reversely polarised magnetic bullseyes (deep mag lows, shown as magenta circles). Also shown is the location of three gravity highs associated with magnetic stratigraphy (aqua polygons) and the unexplained gravity high not associated with any magnetic response (green circle). The location of the strongly pentlandite-chalcopyrite-sphalerite heavy mineral concentrate sample is also shown.

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*This announcement has been provided to the ASX under the authorisation of the S2 Board.*

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Past Exploration results reported in this announcement have been previously prepared and disclosed by S2 Resources Ltd in accordance with JORC 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in these market announcements. The Company confirms that the form and content in which the Competent Person's findings are presented here have not been materially modified from the original market announcement. Refer to [www.s2resources.com.au](http://www.s2resources.com.au) for details on past exploration results.

**Competent Persons statement**

Information in this report that relates to Exploration Results is based on information compiled by John Bartlett, who is an employee and equity holder of the Company. Mr Bartlett is a member of the Australian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience of relevance to the style of mineralization and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bartlett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The following Tables are provided to ensure compliance with the JORC code (2012) edition requirements for the reporting of exploration results.

**SECTION 1: SAMPLING TECHNIQUES AND DATA - WEST MURCHISON**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i>	Soil samples were collected by digging a hole to a nominal depth of between 20-30 centimetres and collecting approximately 200 grams of material, sieved to a -2mm, from the bottom of the hole
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	Sampling and QAQC procedures are carried out using S2 protocols as per industry best practice.

Criteria	JORC Code explanation	Commentary
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</i>	Samples were submitted to Labwest in Malaga for analysis for multi-element suite using the Ultrafine soil analysis
<b>Drilling techniques</b>	<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 oriented and if so, by what method, etc).</i>	No new drilling is reported in this announcement.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	No new drilling is reported in this announcement
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	No new drilling is reported in this announcement
	<i>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.</i>	No new drilling is reported in this announcement
<b>Logging</b>	<i>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.</i>	No new drilling is reported in this announcement
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	No new drilling is reported in this announcement
	<i>The total length and percentage of the relevant intersections logged</i>	No new drilling is reported in this announcement
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core drilling has been undertaken on the project area
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No new non-core drill samples are reported in this announcement
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Full QAQC system in place to determine accuracy and precision of assays
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Sample collection sites were selected to avoid areas of obvious disturbance as well as to avoid creek lines. All sample equipment was clean and dry brushed between sites to avoid contamination.
	<i>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.</i>	No compositing has been undertaken
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size is considered appropriate.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests  q	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The ultrafine soil technique uses an initial 50g subset, which the laboratory uses to extract a sub 2 micron fraction, which is then analysed using an aqua regia digest. The method is considered a partial digest, and is an appropriate method for soil samples.
	<i>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.</i>	No geophysical tools were used to determine any element concentrations.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Full QAQC system in place including Certified Standards and blanks of appropriate matrix and levels.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Significant soil anomalies have been identified by the project geologist and have been verified by the exploration manager.
	<i>The use of twinned holes.</i>	No twin holes have been completed
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary sampling data is collected in a set of standard Excel templates. The information is managed by S2's database manager for validation and compilation into S2's central database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments to any assay data have been undertaken
Location of data points	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Drill hole collar locations were recorded using handheld Garmin GPS. Elevation values were in AHD RL and values recorded within the database. Expected accuracy is + or – 5 m for easting, northing and 10m for elevation coordinates.
	<i>Specification of the grid system used.</i>	The grid system is GDA94 (MGA), zone 50.
	<i>Quality and adequacy of topographic control.</i>	Elevation data for the soil data has been derived directly from the Garmin handheld GPS and is considered adequate given the preliminary nature of the exploration activities.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Soil sampling has been carried out on a nominal 400 metre x 80 metre (Yalgamine) or 800 metre x 80 metre (Whitehurst) grid pattern, orientated either N-S or E-W, to follow up earlier N-S oriented sampling
	<i>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.</i>	The sampling to date is inadequate to establish geological and grade continuity for the purposes of Mineral Resource estimation
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied
Orientation of data in relation to geological structure	<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>	The sampling is preliminary in nature and is currently not possible to assess whether sampling is unbiased
	<i>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.</i>	Not applicable (see comments above)
Sample security	<i>The measures taken to ensure sample security.</i>	Samples were collected and bagged up on site and transported directly to the independent laboratory in Perth by S2 personnel

Criteria	JORC Code explanation	Commentary
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been conducted at this stage.

## SECTION 2: REPORTING OF EXPLORATION RESULTS – WEST MURCHISON

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	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 West Murchison Project comprises three exploration licenses, located southwest of Murchison in Western Australia. The ELs are E09/2390, E09/2391 and E70/5392. The ELs are 100% owned by Southern Star Exploration Pty Ltd, a 100% owned subsidiary of S2 Resources. The tenements are located wholly within (WC2004/010) Wajarri Yamatji #1 Native Title claim (partially determined) and partially within (WC1996/093) Mullewa Wadjari Community Native Title claim
	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.	No known impediments to obtaining a licence to operate in the area. All of the Exploration Licences are granted and a heritage agreement has been finalised with the native title claim group (Wajarri Yamatji #1).
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	The Tenements have had no published or open file exploration work for magmatic nickel/ copper or orogenic gold style mineralisation. WMC undertook limited rock chip sampling in 1977 to assess the potential for chromite mineralisation of outcropping ultramafic within the project area.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The project is located on the southwest margin of the Narryer Gneiss Terrain, a poly-deformed complex of granitic and interleaved Archean greenstone (mafic, felsic and sedimentary lithologies) accreted to the northwest margin of the Yilgarn Craton. The target mineralisation style is magmatic nickel-copper-PGE sulphide mineralisation hosted in or associated with mafic-ultramafic intrusions.
<b>Drill hole Information</b>	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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) 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>	All significant drilling results have been previously reported (ASX quarterly report dated 28 April 2022)
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Drilling results have been reported using either 0.3% copper or 0.3% nickel lower cut-off. All significant results have been length weight averaged.
	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.	Internal intervals have been reported using either 0.5% or 1.0% for either copper or nickel

Criteria	JORC Code explanation	Commentary
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been used.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The geometry of mineralisation has yet to be adequately establish, as such only down-hole lengths have been quoted
<b>Diagram</b>	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 Figures in body of text.
<b>Balanced reporting</b>	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results considered significant are reported.
<b>Other substantive exploration data</b>	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.	Surface soil geochemical sampling has been completed over selected areas.  MLEM electromagnetic surveys have been carried out over the Woodraring and Whitehurst target areas. Heliborne SkyTEM electromagnetic surveys have been carried out over Aubrey East and Yalgamine target areas.  Limited diamond drilling has been undertaken over the Woodraring and Whitehurst target areas.
<b>Further work</b>	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	Targeted infill soil sampling (200m x 40m) is planned at Whitehurst and Yalgamine.  Once results of all soil sampling has been received, reconnaissance aircore / RC drilling to be completed over selected targets.

## SECTION 1: SAMPLING TECHNIQUES AND DATA – WARRAWEENA

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>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.</i>	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	All results are historical in nature. No sampling by S2 has been conducted on the tenements

Criteria	JORC Code explanation	Commentary
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</i>	All results are historical in nature. No sampling by S2 has been conducted on the tenements
<b>Drilling techniques</b>	<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 oriented and if so, by what method, etc).</i>	No drilling by S2 has been conducted on the tenements. Historical drilling (AC, RC & Diamond) has been conducted across the project area, the verification and validation of these data sets is ongoing.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>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.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
<b>Logging</b>	<i>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.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>The total length and percentage of the relevant intersections logged</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>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.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.



Criteria	JORC Code explanation	Commentary
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>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.</i>	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No assaying of samples has been conducted on the tenements
	<i>The use of twinned holes.</i>	No drilling by S2 has been conducted on the tenements.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	<i>Discuss any adjustment to assay data.</i>	No adjustments to the assay data have been carried out by S2. drilling or sampling has been conducted by S2 on the tenements.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing. Only selected historical drill sites have been verified in the field by S2.
	<i>Specification of the grid system used.</i>	The grid system used by S2 is GDA94 (MGA), zone 55. Historical results have been reported in various grid formats and these have been converted to a standard grid system in QGIS.
	<i>Quality and adequacy of topographic control.</i>	Elevation data for all data is determined by a digital elevation model derived from public domain SRTM 10m Elevation grids
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	No drilling or sampling has been conducted by S2 on the tenements. Historical drilling and sampling have been carried out on various grid spacings as well as isolated, ad hoc manner.
	<i>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.</i>	No assaying of samples has been conducted by S2 on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied by S2
<b>Orientation of data in relation to geological structure</b>	<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>	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	All drilling and sampling on the project is historical in nature and S2 is currently unable to verify what (if any measures) have been taken.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been conducted by S2 at this stage.

## SECTION 2: REPORTING OF EXPLORATION RESULTS – WARRAWEENA

Criteria	JORC Code explanation	Commentary												
<b>Mineral tenement and land tenure status</b>	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.	<p>The Warraweena project consists of three exploration licences, listed below.</p> <table border="1"> <thead> <tr> <th>TENID</th> <th>STATUS</th> <th>HOLDER</th> </tr> </thead> <tbody> <tr> <td>EL 9269</td> <td>LIVE</td> <td>OXLEY RESOURCES LIMITED</td> </tr> <tr> <td>EL 9646</td> <td>LIVE</td> <td>DARK STAR EXPLORATION PTY LTD</td> </tr> <tr> <td>EL 9647</td> <td>LIVE</td> <td>DARK STAR EXPLORATION PTY LTD</td> </tr> </tbody> </table> <p>Tenement EL9269 is held by Oxley Resources Ltd and is subject to Earn-in Joint Venture whereby Dark Star Exploration Pty Ltd (100% S2 subsidiary) can earn up to 70% of the tenement. The tenement covers approximately 932 square kilometres, extending approximately 80km in a NE-SW orientation.</p> <p>EL9646 and EL 9647 are 100% owned by Dark Star Exploration Pty Ltd, covering an additional 1670 square kilometres.</p> <p>The southern boundary of the project is located approximately 15km east of Bourke, with the Kamilaroi Highway passing through the southern portion of the tenement and the W Culgoa and Twin River Roads providing access to the central and northern portions of the tenement.</p> <p>The covers the upper reaches of the Darling River catchment system, including the Darling, Bogan, Little Bogan and Culgoa Rivers.</p> <p>Pastoral leases (Western Land Leases “WWL”) cover the majority of the project area.</p>	TENID	STATUS	HOLDER	EL 9269	LIVE	OXLEY RESOURCES LIMITED	EL 9646	LIVE	DARK STAR EXPLORATION PTY LTD	EL 9647	LIVE	DARK STAR EXPLORATION PTY LTD
	TENID	STATUS	HOLDER											
EL 9269	LIVE	OXLEY RESOURCES LIMITED												
EL 9646	LIVE	DARK STAR EXPLORATION PTY LTD												
EL 9647	LIVE	DARK STAR EXPLORATION PTY LTD												
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.	<p>The Exploration Licences are all currently maintained in “good standing”.</p> <p>Prior to accessing the ground S2 is required to obtain signed land access agreements with the landowners.</p>													

Criteria	JORC Code explanation	Commentary
<p><b>Exploration done by other parties</b></p>	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>The earliest recorded mineral exploration within the project area was by Mid-Eastern Oil N.L. in the mid 1960's, targeted due to the similarities to the Cobar district. Work included an aeromagnetic survey and completion of a single diamond drill hole (334.9 metres).</p> <p>Between 1979 – 1984, Preussag Australia Pty Ltd and North Broken Hill explored the southern portion of the project area for skarn related tin mineralisation. Work included magnetic and gravity surveys as well as diamond drilling.</p> <p>Newcrest Mining Ltd completed the most extensive exploration activities within the project area, with work including 7 aircore holes (failed to intersect basement) and 3 mud-rotary-diamond drillholes. Newcrest relinquished the project as the project rated below it's other projects in NSW.</p> <p>Thompson Resources explored the area between 2008 and 2016. Work included detailed aeromagnetic survey as well as aircore and RC drilling, Thompson relinquished the project after all attempts to drill through the cover were unsuccessful.</p>
<p><b>Geology</b></p>	<p>Deposit type, geological setting and style of mineralisation.</p>	<p>The project is located adjacent the southern margin of the Thomson Fold Belt (TFB). The TFB is a major geological province (almost entirely under cover) from southeast Queensland to north-western NSW. The TFB forms part of the Tasmanides, a collage of four orogenic belts including the Lachlan Fold Belt formed as a result of the interaction of the Australian craton (part of Gondwana) with the proto-Pacific plate over the period 550 to 210 million years ago.</p> <p>The TFB was previously thought to be a distinct geological province based primarily on its general east-west trend in NSW (compared with the mainly northerly trends of the adjoining Lachlan and Delamerian Fold Belts). Recent work suggests that the TFB is, in fact, an extension of the Lachlan Fold Belt and that the difference in trends merely reflects a bend in the ancient volcanic arc.</p> <p>The majority of the TFB is covered by flat-lying Mesozoic sediments of the Great Artesian (Eromanga) Basin with only the southeast margin of the TFB exposed in NSW. This cover has limited exploration drilling into the basement rock below. EL 9269 covers a northeast-trending belt of magnetic rocks called the "Warraweena Volcanics", interpreted to have been formed within avolcanic calc-alkaline island arc, analogous to the Macquarie Arc to the south. This setting is prospective for porphyry copper-gold style mineralisation.</p> <p>The Devonian Cobar Basin is interpreted to extend north undercover into the project area and in the southern EL, several magnetic 'low' features believed to be magnetised (remanently) intrusive bodies or pyrrhotite-rich sulphide bodies i.e., similar to ore deposits of the Cobar Basin.</p> <p>A variety of mineralisation styles could be present with in the project area, including:</p> <ul style="list-style-type: none"> <li>• porphyry copper-gold style mineralisation</li> <li>• Cobar-basin style, pyrrhotite rich (Zn-Pb) massive sulphide mineralisation</li> <li>• Magmatic nickel-copper sulphide body</li> </ul> <p>The presence of mafic-ultramafic rocks with empirical evidence of nickel +/-copper indicates the project could be prospective for nickel sulphide mineralisation.</p>

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Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	All drilling within the project area is historical in nature, and no drill holes are considered material at this point. Compilation and validation of the historical datasets is ongoing.
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	N/a - no drilling results are considered material or being reported.
	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.	N/a - no drilling results are considered material or being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	N/a - no drilling results are considered material or being reported.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	N/a - no drilling results are considered material or being reported.
<b>Diagram</b>	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 Figures in body of text.
<b>Balanced reporting</b>	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.	Any historical results considered significant are to be reported.
<b>Other substantive exploration data</b>	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.	<p>A gravity survey was completed by Atlas Geophysics and Fender Geophysics with stations collected on 200 metre and 400 metre sample station spacing on lines 800m and 1600m apart. Survey lines were orientated in a NE-SW direction, orthogonal to the regional geology.</p> <p>A Geoscience Australia has completed an Australia wide Heavy Mineral Concentrate dataset (HMMA), released in late 2023<sup>3</sup> has been a valuable tool, leading S2 into the project area.</p> <p>The CSIRO hydrogeochemical compilation has provided support to the results of HMMA with anomalous nickel in groundwater present within the same catchment area.</p>

Criteria	JORC Code explanation	Commentary
<b>Further work</b>	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	Planned follow-up exploration includes IP/resistivity survey over selected targets with follow-up reconnaissance drilling.

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