ASX Announcement

4 December 2023





COMPELLING NEW GREENFIELDS MULTI-TARGET EXPLORATION PROJECT AT WARRAWEENA, NSW

Key Points

- S2 to earn a 70% interest in the Warraweena project in New South Wales from private company Oxley Resources
- Area identified as an outstanding target by S2 on the basis of regional gravity, magnetic and hydrogeochemical anomalies
- Area also contains the most anomalous combined nickel, copper and zinc heavy mineral concentrate sample in Australia in the recently published government heavy mineral concentrate survey of Australia
- The project augments S2's portfolio of quality projects and fits with its ongoing strategy of maintaining a diversified pipeline of opportunities by identifying and exploring potentially high impact underexplored targets

S2 Resources Ltd ("S2" or the "Company") advises that it has reached agreement with private company Oxley Resources Limited ("Oxley") to earn a 70% interest in the Warraweena project, which comprises Exploration Licence EL9269, covering an area of 932 square kilometres extending 75 kilometres northeast from Bourke in northern New South Wales.

EL9269 was pegged by Oxley in 2021 using public domain geological and geophysical data together with limited drilling information from previous explorers which suggests that the basement rocks display calc-alkaline to shoshonitic volcanic arc affinities, similar to the rocks of the Macquarie Arc¹, which host the giant Cadia and North Parkes copper-gold porphyry deposits to the south. The project is also considered prospective for Cobar basin-style massive zinc and lead sulphide-style mineralisation.

S2 recently identified the area as an attractive target based on the presence of coincident distinct, unexplained gravity and magnetic anomalies (see Figures 1 and 2), concealed beneath the transported cover of the upper Darling River drainage catchment.



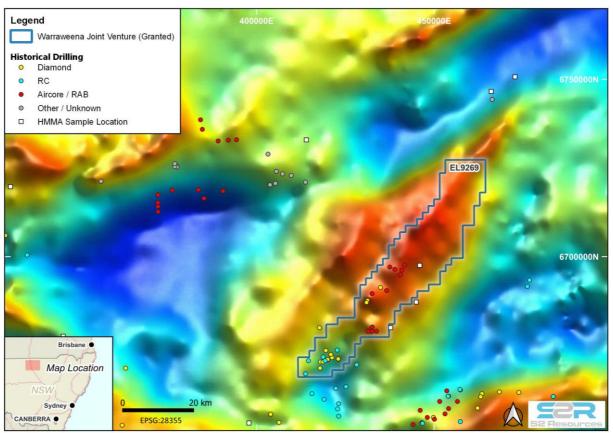


Figure 1. Gravity map showing pronounced 50km long dense ridge hidden beneath the transported cover of the upper Darling River drainage catchment, showing outline of EL9269 and location of limited previous (and in many cases ineffective) drilling.

Limited previous drilling that has penetrated the cover into basement has also identified mafic and possible ultramafic rocks associated with these anomalies.

Groundwater samples collected within the catchment as part of the Geoscience Australia (GA) Australian Groundwater Hydrochemistry Data survey² are also anomalous in nickel.

The area also stands out as being strongly anomalous in the recent Australia-wide Heavy Mineral Map of Australia (HMMA) survey publicly released by Geoscience Australia and Curtin University on 12th October 2023³ which maps the occurrence and abundance of heavy minerals in sediments collected from various drainage catchments across the country. Intriguingly, the sample from this catchment contains the highest number of pentlandite (nickel sulphide) grains recorded in any of the 1,315 samples collected in the Australia-wide survey (actually ten times more than the next highest sample), and also the second highest concentration of chalcopyrite (copper sulphide) and sphalerite (zinc sulphide) in all samples in this survey, making this the most nickel-copper-zinc sulphide anomalous sample of the entire Australian dataset (see Figures 3 and 4).



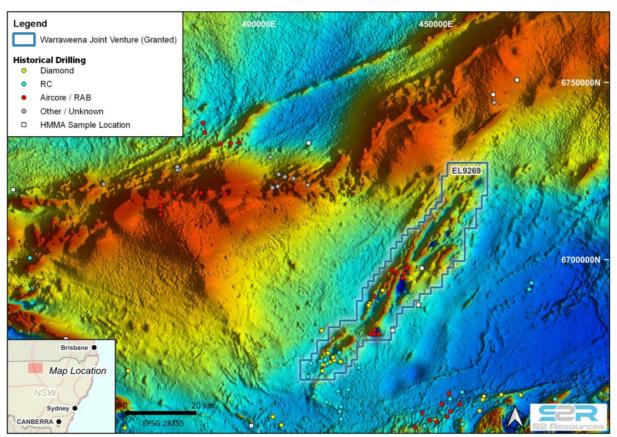


Figure 2. Magnetic map showing numerous discrete magnetic bodies hidden beneath the transported cover of the upper Darling River drainage catchment, showing outline of EL9269 and location of limited previous (and in many cases ineffective) drilling.

S2's Executive Chairman Mark Bennett said "the very unusual combination of unexplained hidden gravity and magnetic anomalies combined with evidence of Macquarie Arc-like calc-alkaline rocks in limited drilling, nickel in groundwater, and a startlingly high concentration (and unusual combination) of nickel, copper and zinc sulphide minerals in a heavy mineral concentrate directly above them make this a compelling exploration target. It would be easy to dismiss such a strongly anomalous single heavy mineral concentrate sample as being spurious, but such a situation is also very reminiscent of the single anomalous laterite sample collected by the Geological Survey of Western Australia (the "GSWA anomaly") that was one of the clues that led to the discovery of the Nova-Bollinger deposit in the Fraser Range. At this stage it would be premature to attempt to second guess the style and range of deposit styles that might be associated with this cocktail of features, but the empirical evidence is too compelling to ignore. We look forward to working with Oxley to answer these questions."

"The acquisition of this project is part of S2's ongoing process of maintaining a diversified pipeline of opportunities by identifying and exploring potentially high impact targets in underexplored areas. These are usually underexplored because they are unconventional plays or not in well understood areas, but many of the more significant discoveries are those that are the first in a particular area, or the first of a particular style" he said.



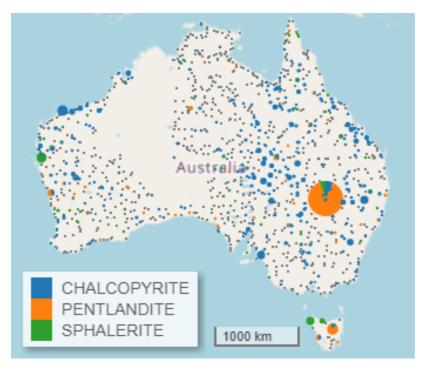


Figure 3. Recently published Heavy Mineral Map of Australia (HMMA) showing the concentration of pentlandite, chalcopyrite and sphalerite in all 1,315 samples collected across Australia. The bubble sizes represent abundance of these minerals in each sample, and the pie slices depict the relative abundance of each of these minerals in each sample. The sample collected in the target drainage catchment contains far more pentlandite than any other sample in Australia and the second highest abundance of chalcopyrite and sphalerite in all of the samples collected across Australia (screenshot from the Geoscience Australia **HMMA** website).

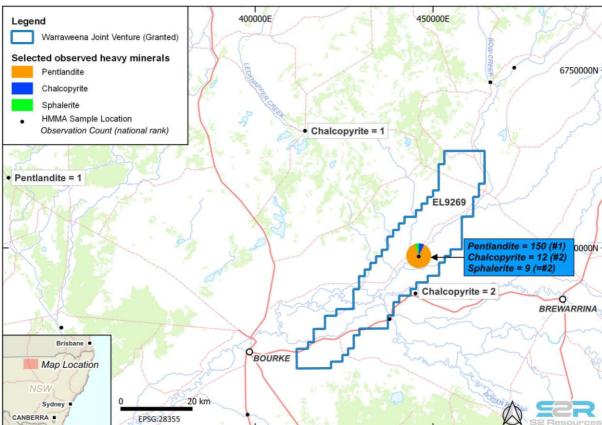


Figure 4. Zoomed in view of the HMMA, showing the anomalous sample in the drainage catchment over the target, its location within EL9269, and adjacent samples for contrast. The number of mineral grains in each sample is shown, and the overall ranking of these in the Australia-wide dataset is also shown for the key sample.



Earn-in terms

The key terms of the earn-in phase of the agreement are as follows:

- S2 to issue Oxley with 590,000 ordinary shares on signing, representing a consideration of approximately A\$100,000 at a deemed price of A\$0.17 per share
- S2 to spend A\$2.7 million by end July 2027 to earn a 70% participating interest
- This includes a minimum expenditure of A\$350,000 by end December 2024 before withdrawal, itself including a minimum expenditure of A\$270,000 by end July 2024
- At least A\$750,000 of the overall earn-in spend to be spent on drilling

At the earn-in point:

- A joint venture will be formed with S2 having a 70% participating interest and Oxley having a 30% participating interest
- Oxley will have a one-time choice to retain its 30% participating interest or to convert this to a 15% carried interest
- In the circumstance of a 30% participating interest, Oxley must contribute or dilute
- Should Oxley's interest drop below 10%, its interest will revert to a 2% net smelter return (NSR) royalty
- S2 can buy down half of this royalty (ie, 1%) for A\$1.5 million
- In the circumstance of a carried interest, S2 will have an 85% interest and Oxley' 15% interest will be funded by S2 up to the commencement of commercial production
- Oxley will repay this carried amount from 80% of the production revenue attributable to its 15% interest in a mining operation

References

- Refer to: Volcanic arc-type rocks beneath cover 35km to northeast of Bourke, by G.R. Burton, K.A. Dadd & N.M. Vickery, in Quarterly Notes of the Geological Survey of New South Wales, January 2008
- Refer to: Commonwealth of Australia (Geoscience Australia) Australian Groundwater Hydrochemistry Data Collection program, 2021. See https://pid.geoscience.gov.au/dataset/ga/144638
- 3. Heavy Mineral Map of Australia (HMMA) is a joint initiative by Geoscience Australia and Curtin University, as part of the Commonwealth government "Exploring for the future" program. See https://dx.doi.org/10.26186/148916

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 for details on past exploration results.

Competent Persons statement

Information in this report that relates to Exploration Results from Victoria is based on information compiled by Rohan Worland, who is an employee and equity holder of the Company. Mr Worland is a member of the Australian Institute of Geoscientists (AIG) 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 Worland consents to the inclusion in this report of the matters based on information in the form and context in which it appears. Information in this report that relates to Exploration Results from Western Australia, New South Wales and Finland 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.

SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	All results are historical in nature. No sampling by S2 has been conducted on the tenements



Criteria	JORC Code explanation	Commentary
	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	All results are historical in nature. No sampling by S2 has been conducted on the tenements
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	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.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	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.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	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.
	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.	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.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	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.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	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.
	The total length and percentage of the relevant intersections logged	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.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	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.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	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.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	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.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	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.
	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.	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
	Whether sample sizes are appropriate to the grain size of the material being sampled.	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.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	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.
	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.	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.
	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.	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.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No assaying of samples has been conducted on the tenements
	The use of twinned holes.	No drilling by S2 has been conducted on the tenements.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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.
	Discuss any adjustment to assay data.	No adjustments to the assay data have been carried out by S2. drilling or sampling has been conducted by S2 on the tenements.
Location of data points	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.	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.
	Specification of the grid system used.	The grid system used by S2 is GDA94 (MGA), zone 54. Historical results have been reported in various grid formats and these have been converted to a standard grid system in QGIS.
	Quality and adequacy of topographic control.	Elevation data for all data is determined by a digital elevation model derived from public domain SRTM 10m Elevation grids
Data spacing and distribution	Data spacing for reporting of Exploration Results.	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.
	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.	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.
	Whether sample compositing has been applied.	No sample compositing has been applied by S2
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	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
	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.	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
Sample security	The measures taken to ensure sample security.	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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted by S2 at this stage.

SECTION 2: REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Warraweena Joint Venture comprises one exploration licences (see list below), covering approximately 932 square kilometres and extending approximately 80km in a NE-SW orientation. The tenements is held in the name of Oxley Resources Ltd and is subject to Earn-in Joint Venture with S2 Resources Ltd (terms outlined in text of this announcement). TENID TENSTATUS HOLDER EL 9269 LIVE OXLEY RESOURCES LIMITED 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. The covers the upper reaches of the Darling River catchment system, including the Darling, Bogan, Little Bogan and Culgoa Rivers. Pastoral leases (Western Land Leases "WWL") cover the majority of the project area.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Exploration Licence is currently maintained in "good standing". The current term is due to expire on the 23 August 2024, with further extension of terms ("EoT") available. There is currently no reason to expect the NSW department Mining, Exploration and Geoscience (MEG) department to refuse an EoT. Prior to accessing the ground S2 is required to obtain signed land access agreements with the landowners.



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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). Between 1979 – 1984, Preusssag 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. 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 its other projects in NSW. Thomson Resources explored the area between 2008 and 2016. Work included a detailed aeromagnetic survey as well as aircore and RC drilling, Thomson relinquished the project after all attempts to drill through the cover were unsuccessful.
Geology	Deposit type, geological setting and style of mineralisation.	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. 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. 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. EL9269 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. 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. A variety of mineralisation styles could be present with in the project area, including: • porphyry copper-gold style mineralisation • Cobar-basin style, pyrhottite rich (Zn-Pb) massive sulphide mineralisation • Magmatic nickel-copper sulphide bodies The presence of mafic-ultramafic rocks with empirical evidence of nickel +/-copper indicates the project could be prospectiv



Criteria	JORC Code explanation	Commentary
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	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.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	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.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	N/a - no drilling results are considered material or being reported.
Diagram	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.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Any historical results considered significant are to be reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	A Geoscience Australia has completed an Australia wide Heavy Mineral Concentrate dataset (HMMA), released in late 2023³ has been a valuable tool, leading S2 into the project area. The CSIRO hydrogeochemical compilation has provided support to the results of HMMA with anomalous nickel in groundwater present within the same catchment area.



Criteria	JORC Code explanation	Commentary
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	S2 intends to compile all available historical dataset prior to commencing on-ground exploration. Initial exploration is anticipated to include infill Heavy Mineral Concentrate sampling to expand on the Geoscience Australia's HMMA dataset, as well as electrical geophysical (Electromagnetic and/or Induced Polarisation) techniques.