

3 July 2024
ASX ANNOUNCEMENT

# Copper identified in soil samples along strike-extensive gossans at Baratta

# **Highlights**

- Copper mineralisation identified in soil samples along four strike-extensive gossans at Baratta.
- 1,182 soil samples were collected and analysed using portable XRF in June, with pXRF results up to 2% copper.
- 77 rock chip samples were submitted for multi-element laboratory analysis along a 3.4km striking portion of the gossan, with results pending.
- Historic Baratta Copper Mine produced copper ore between 1896 and 1904 from a 1.5km long zone of workings.
- Copper anomalism and mineralisation at the surface are underlain by dense and magnetic bodies, increasing prospectivity at Baratta.
- Baratta's geological setting displays characteristics Stelar considers similar to those seen in the Central African Copper Belt, the world's second-largest copper-producing province.

**Stelar Metals Limited** (ASX:SLB) ("**Stelar Metals**" or the "**Company**") is pleased to provide an update on the initial results of the June exploration activities at the Baratta Copper Project in South Australia. Baratta is considered highly prospective for Sediment-hosted Stratabound Copper mineralisation and is analogous to the Central African Copper Belt. (CACB).

The historic Baratta Copper Mine produced copper ore between 1896 and 1904 from a 1.5 km-long zone of stratabound workings in a structure splaying off the Bibliando Thrust.

At least four mineralised horizons of quartz-haematite gossan, extends several kilometres through Stelar's tenements coincident with a recently discovered large Induced Polarisation (IP) chargeable anomaly as it approaches the Bibliando Thrust (*Figure 1*).



Sediment-hosted Stratabound Copper (SSC) deposits are the world's second most important source of copper and account for ~20% of the world's copper production. In 2024, the Central African Copper Belt (CACB), which spans the Democratic Republic of Congo and Zambia, is positioned to be the second-largest global copper producer behind Chile's large porphyry deposits. In Australia, only the Flinders Ranges and the Sturt Shelf are considered prospective for this highly prized style of copper mineralisation.

### **Surface Sampling**

In June, 1,182 soil samples were collected over the central portion of the Baratta Copper Mine area. The company's Nition XL5-plus portable XRF consistently returned highly anomalous copper values along several gossanous horizons (*Figure 1*). A selection of soil sampling traverses will be sent for confirmatory laboratory analysis.

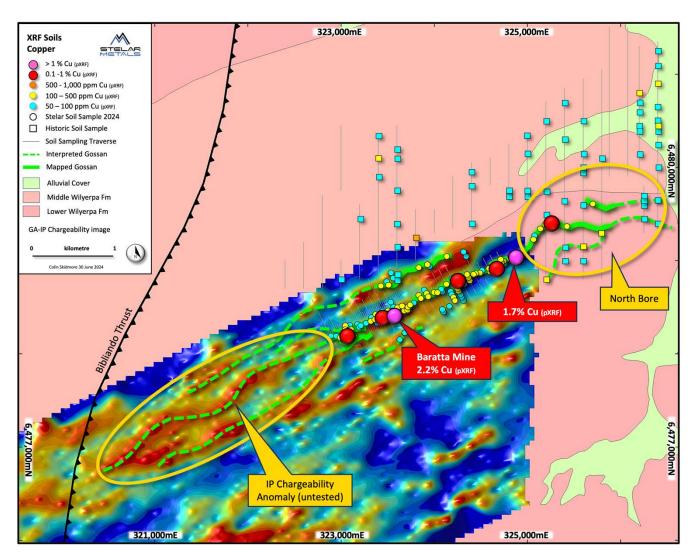


Figure 1: Thematic copper soil geochemistry (pXRF) showing mapped gossans on GA-IP chargeability imagery



During the geological mapping, 77 random grab rock chip samples were collected along a 3.4 kilometre strike length between the main historic workings and North Bore from outcrops of weathered gossan, historic mine spoil, and minor excavations. These samples have been submitted to Intertek (Adelaide) for multi-element assay.

Additional sampling will be undertaken in July along the 7-kilometre strike of the prospective Baratta Copper Area.

### **Geological Mapping**

Stelar's geologists have started detailed mapping at the historic Baratta Mine Area to understand better the structural framework and stratigraphic architecture of the northern flank of the Bibliando Dome, where gossanous horizons were historically mined for copper.

Four distinct, stratigraphically controlled, continuous, mineralised gossans have been mapped to date along a central 3.4-kilometre strike length. The Gossans and sampling are open to both East and West. Throughout the area mapped, there are abundant shallow historical excavations beyond the mined area, where there are numerous shallow shafts.

At the surface, the gossans, which comprise quartz, haematite, chalcocite, malachite, azurite, siderite, and ankerite, occur in reduced dark grey-green metasiltstones and dolomitic mudstones. Individual gossans have been mapped up to five metres thick.

The Wilyerpa Formation at Baratta is a package of sedimentary rocks comprising cyclical beds of sandstones, siltstones, mudstones and shales./. Better gossan development occurs in the less permeable mudstones. Located on the northern flank of the Bibliando Dome, the stratigraphy dips moderately to the north.

Numerous locally significant faults have been recognised, but their relationship to the main Bibliando Thrust and mineralisation requires further work, which is planned for July.

### **TECHNICAL DISCUSSION**

### **Sediment-hosted Stratabound Copper Deposits**

Large-scale SSC deposits form during the dewatering and metamorphism of intracratonic failed rift basins. Hot saline basin brines scavenge copper from oxidised redbed sedimentary rocks. When mixed with reduced brines at the interface with confining cap rocks such as impermeable dolomitic units, copper mineralisation is deposited as laterally extensive sheet-like tabular bodies in organic and reduced stratigraphic horizons.

Copper mineralisation, typically dominated by chalcocite that transitions into zoned bornite and chalcopyrite, comprises fine-grained cement and replacements with lesser veinlets. Typical ore bodies are laterally extensive relative to the deposit thickness, extending over many kilometres of strike with only 3-30 metres of thickness.



### **Comparisons of Baratta to the Central African Copper Belt**

Stelar's Baratta Project in the Flinders Ranges shares many similarities to the Central African Copper Belt yet has seen minimal historical exploration.

	Central African Copper Belt <sup>1</sup>	Baratta Copper Project
Geological Setting	Katanga Intercratonic Basin     NeoProterozoic (880-600 Ma)	<ul><li>Adelaidean Intercratonic Basin</li><li>NeoProtereozoic (717-660 Ma)</li></ul>
Host Stratigraphy	Lower Roan Group	Lower Umberatana Group (LUG)
Host Lithology	Black shales; Dark-grey & green (reduced) siltstones; dolomitic and carbonaceous sediments; fluvial sandstones; redbed sandstones (oxidised).	Dark-grey & green (reduced) siltstones; sandstones; and mudstones; with carbonaceous and dolomitic interbeds.  Underlying and overlying oxidised redbeds
Deformation & Metamorphism	<ul> <li>Lufilian Orogen (600-490 Ma)</li> <li>Complex folding and thrusting</li> <li>Amphibolite-Greenschist Facies</li> </ul>	<ul> <li>Delamerian Orogeny (520-490 Ma)</li> <li>Complex folding and thrusting</li> <li>Amphibolite-Greenschist Facies</li> </ul>
Evaporites & Salt Tectonics	Underlying evaporite beds and diapiric breccias	Evaporite beds in underlying Callana Group and extensive diapirism
Structure	<ul> <li>Northern flank of Luima Dome</li> <li>Proximity to high-angle structures and late-stage strike-slip faults</li> </ul>	<ul> <li>Northern flank of Bibliando Basement Dome</li> <li>Proximal to a major thrust and late- stage strike-slip faults</li> </ul>
Mineralisation	<ul> <li>Stratabound and locally stratiform</li> <li>Typically, chalcocite dominated with zoned Bornite, and Chalcopyrite</li> <li>Zoned: py-cpy-bn-cho-haem</li> <li>Fine grained disseminations of copper (cements, replacement with minor veinlets)</li> </ul>	Stratabound and locally stratiform     Fine grained disseminations of chalcocite and copper carbonates with haematite alteration (weathered outcrop only)
Deposit Morphology	Sheet-like: Laterally extensive relative to deposit thickness (typically, 3-5km strike lengths & 3-30m thick)	Sheet-like: Laterally extensive relative to deposit thickness (3-7km strikelength & currenly mapped 1-10m thick)
Grade	Typically average ~2 to 2.6% Cu	Unknown but historic records indicate production of hand-picked high-grade oxide ores (~1,000t at 30% Cu)

<sup>&</sup>lt;sup>1</sup> Source: Sediment-Hosted Stratabound Copper Deposit Model - USGS Scientific Investigation Report 2010-5070-J



### **Baratta Geological Setting**

Stelar's Baratta tenement is located in the northern part of the Nackara Arc within the Adelaide Rift Complex. It incorporates diapiric Callanna Group sediments intruding Lower Umberatana Group sediments, including Tapley Hill and Wilyerpa Formations, between a large elongate domal anticline to the west and the Bibliando Dome to the east. Significant copper mineralisation has been reported at Wyacca, about 15km west of the Baratta tenements (*Figure 2*).

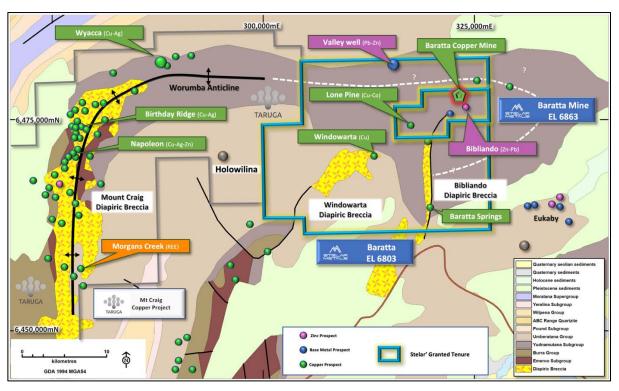


Figure 2: Regional geological setting of the Baratta Project showing major prospects

### **Next Steps**

Surface sampling and geological mapping will continue in July, extending the mapped gossans to the west over the large GA-IP chargeable anomaly and east towards North Bore (Figure 1). Further sampling is also planned to the north of the current survey area over the recently discovered gossan repeats.

Assay results from the first round of rock chip sampling are expected late July.

Future work will also focus on the Bibliando Thrust, where several recorded mineral occurrences are located, and the elongated Bibliando Diapir in the south of EL 6863.

The Company continues to monitor the Native Title situation and will lodge applications for drilling at Baratta when the Adynamuthana Traditional Owners come out of Administration.



# THIS ANNOUNCEMENT HAS BEEN APPROVED FOR RELEASE BY THE BOARD OF STELAR METALS LIMITED

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### **ABOUT STELAR METALS**

Stelar Metals' experienced and successful exploration and development team is targeting the discovery and production of critical minerals, with increasing global demand to enable the world to achieve net zero emissions.

Stelar's Trident Lithium Project is located near mining, industrial, transport and green power infrastructure at Broken Hill in NSW. The Trident Lithium Project extends over the 20km strike length of the Euriowie Tin Pegmatite Field and is highly prospective for hard rock lithium mineralisation. Mapped LCT-type pegmatites vary in size but can be up to 100 metres wide and extend in outcrop for over 1 kilometre in length. Trident was one of Australia's first lithium and tin mining provinces, highlighting both the fertility and large scale of Stelar's lithium-rich pegmatite system.

Stelar's Baratta Copper Project, located in South Australia, is hosted within the Adelaidean rocks of the Flinders Ranges. The Project is considered highly prospective for sediment-hosted copper mineralisation, akin to the Central African Copper Belt. The historic Baratta Copper Mine produced copper ore between 1896 and 1904 from a 1.5 km-long zone of strata-bound workings in a structure splaying off the Bibliando Thrust. Stelar is conducting exploration activities in a 7-kilometre corridor of copper mineralisation and geophysical targets that have been overlooked by previous explorers.

### **EXPLORATION RESULTS**

The information in this announcement related to Exploration Results is based on information compiled by Mr Colin Skidmore, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Skidmore is a full-time employee of Stelar Metals Ltd. Mr. Skidmore has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities 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 (the JORC Code (2012)). Mr. Skidmore consents to including matters in this announcement based on his information in the form and context in which it appears.



This announcement includes information related to Exploration Results prepared and first disclosed under the JORC Code (2012) and extracted from the Company's initial public offering prospectus, which was released on the ASX on 16 March 2022. A copy of this prospectus is available from the ASX Announcements page of the Company's website: https://stelarmetals.com.au/.

The Company confirms that it is unaware of any new information or data that materially affects the information in the relevant market announcement. Where the information relates to Exploration Results, the Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the original market announcement.



# JORC Code, 2012 Edition – Table: Baratta Copper Project

### **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Stelar Metals collected soil and rock chip samples on the Baratta Project from 2022. Company standard QAQC in sequence sampling protocols were applied fort all sampling including: Field Duplicates 1:15 samples, Certified Reference Standards 1:20 samples, Certified Blanks 1:50 samples</li> <li>Stelar's Soil Sampling: 100-250 grams of soil were collected from 10-20cm depth. Samples were not sieved but coarse fractions were discarded. Metadata was recorded for each site.</li> <li>Stelar's rock chip sampling: random grab specimen samples were selected by the geologist for analysis. Typically, samples were 500-1000 grams with metadata recorded for each sample.</li> <li>Panda Mining Pty Ltd undertook several soil and rockchip sampling programs on the Baratta Project between 2008 and 2012 which are reported in Open File ENV11760. Panda collected soil samples from 5-10cm depth which was sieved to -2mm fraction. Panda collected random-grab rockchip samples over the Bibliando Diapir by Panda in 2012.</li> <li>Panda Mining commissioned Anhui Fuxin Geology and Mining Pty Ltd to collect Intermediate Gradient Array Induced Polarisation (GIP) in April 2014. 314-line kilometres of IP data was collected on 200m line spacings with 40m station spacing using 3 receivers</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	No drilling reported
Drill sample	Method of recording and assessing core and chip sample	No drilling reported
recovery	<ul> <li>recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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>	
Logging	<ul> <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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	No drilling reported
Sub-sampling techniques and sample preparation	<ul> <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.</li> <li>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</li> </ul>	<ul> <li>Soil and rock chip sampling only</li> <li>The sample size and medium is considered appropriate for the purpose of outlining surface geochemical anomalies</li> </ul>



Criteria	JORC Code explanation	Commentary
	representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Stelar's soil samples were analysed in-house using a Niton XL5-plus portable XRF. Stelar regularly recalibrates its pXRF.</li> <li>Panda's soil samples were analysed using an Olympus Innov-X portable XRF. Open file reports do not detail any additional information.</li> <li>Panda's Rock chip samples were submitted to the ALS Laboratory in Adelaide for multi-element assay:         <ul> <li>Job No AD12176602: used methods ICP61 / AA25</li> <li>Job No AD12150104 (samples 10555, 10561, 10566, 10593 and 10598) used MEICP43 / ME-MS61R / ME-MS81 methods</li> </ul> </li> <li>There is no record of any QAQC sampling such as duplicates or CRMs.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No independent or alternative verifications are available</li> <li>No adjustments have been made to any assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Stelar's sampling used a handheld Garmin GPSMAP 66i GPS with &lt;2m horizontal accuracy.</li> <li>No information is given in the Open File reports regarding location for historic sampling aside from they used a GDA1994 MGA 54 projection. It is assumed a handheld GPS was used with an accuracy of ~5m</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	Historic geophysical, soil and rock-chip sampling only being reported.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	No sampling bias of this kind is suspected.
Sample security	The measures taken to ensure sample security.	Stelar Metals retained possession of all samples until they are hand-delivered to an external laboratory by a member of Stelar's staff.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Stelar has not yet undertaken any external reviews.</li> <li>There is no evidence of audits in the open file reports for historic sampling.</li> </ul>



# **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

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Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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 licence to operate in the area.</li> </ul>	<ul> <li>Currently the Baratta Project is held as EL 6803 and EL 6863 by Resource Holdings No 1 Pty Ltd which is a wholly owned subsidiary of Stelar Metals limited.</li> <li>The historical project comprised EL 3946 which was replaced by EL 5187 which were held by Panda Metals Pty Ltd between 2007 and 2016.</li> <li>There are no joint ventures</li> <li>The tenure falls within the Adnyamathanha People No 1 determination (Stage 1 and Stage 2) SCD2009/003 and SCD2014/001.</li> <li>Retention Status has been granted for the Baratta Project as currently the Adnyamathanha People are in administration and cannot negotiate a NMTA.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>An overview of historical exploration is included in the ITAR included in Stelar Metal's prospectus. Previous exploration was conducted by:</li> <li>Petrocarb Exploration (1971-1972),</li> <li>Samin Ltd (1973-1975),</li> <li>WMC Ltd (1977-1978)</li> <li>BHP Minerals (1982-1983)</li> <li>Minotaur Gold (1996-2001)</li> <li>Panda Mining (2007/2017)</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Stelar's exploration models include:</li> <li>Sediment-hosted Stratabound Copper</li> <li>Beltana-Kipushi style copper / base metals</li> <li>Ionic Absorption Clay REE</li> </ul>
Drill hole Information	<ul> <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:         <ul> <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> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	No drilling reported
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No data aggregation has been applied</li> <li>No resource evaluation has been undertaken</li> <li>Metal equivalent values are not reported.</li> </ul>
Relationship between mineralisation	<ul> <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 angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are</li> </ul>	<ul> <li>Geophysical, Soil and Rockchip sampling only reported</li> </ul>



Criteria	JORC Code explanation	Commentary
widths and intercept lengths	reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	<ul> <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 drill hole collar locations and appropriate sectional views.</li> </ul>	Refer to figures in the text of the ASX announcement
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.	All known relevant soil rockchip sample sites are illustrated on the attached figures
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.	Description of the work completed, and the results is included in the historical reports, and an overview of this work is provided in this document
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>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> <li>Stelar Metals is planning surface sampling and mapping at Baratta and will design drill programs based on prioritized targets. Stelar is keen to execute a NTMA with the the Adnyamathanha People once they come out of administration to enable drilling.</li> </ul>