16 December 2024

ELECTROMAGNETIC SURVEY CONFIRMS SIGNIFICANT CONDUCTOR AT MUNDI

HIGHLIGHTS

- **Moving loop ground electromagnetic survey (MLEM) and airborne magnetic survey (AMR) completed over the near-surface portion of the Curnamona Conductor magnetotelluric (MT) anomaly**
- **MLEM modelling confirms the presence of a conductor associated with the margin of a reversely magnetised ovoid body at drillable depth**
- **AMR survey identifies additional reversely magnetised bodies for follow-up geophysics**

Strategic Energy Resources Limited ("**SER**" or "**the Company**") is pleased to announce an exploration update covering the 100% owned Mundi Project in New South Wales located approximately 115km NNW of Broken Hill. The Mundi Project is a large-area, conceptual greenfield exploration project spanning over 1300 square kilometres of the Curnamona Province with no known basement outcrop and very limited previous exploration. The Curnamona Province is known for Broken Hill Type Pb-Zn-Ag mineralisation, but also has potential for other mineral systems including iron oxide copper-gold (IOCG). The Project area captures the shallowest portions of the crustal-scale Curnamona Conductor (CC), first reported in 2017 as part of the Curnamona Crustal broadband MT transect (CCMT)[1], which is similar to conductive anomalies seen beneath major IOGC systems deposits in the Gawler Craton[2].

Commenting on the ongoing work program at Mundi, SER Managing Director, Dr David DeTata said:

'In the last six months the team has collected several new geophysical datasets at Mundi including infill ground gravity, detailed airborne magnetics, ground EM and passive seismic tomography. These new datasets have confirmed the presence of a significant conductor at a drillable depth that is interpreted to be directly related to the modelled crustal scale MT anomaly. The conductor lies on the flank of what appears to be a reversely magnetic intrusive body, one of several bodies imaged in the new magnetic dataset. This is an exciting development in a frontier region, and we continue to work with our research partners on this project to integrate these datasets in search of a major discovery in the region.'

MOVING LOOP ELECTROMAGNETIC (MLEM) SURVEY DESIGN

Exploration at Mundi to date has focused on demonstrating that the crustal scale CC persists and extends to explorable and economically extractable depths within the project area. Iterative modelling of previous MT surveys indicated that the deep-rooted intense conductive anomaly separates into two discrete conductors at ~3km depth, with a possible synformal control[2]. The peak resistivities of the conductors were recorded as <0.1 ohm.m, which are similar to values recorded for massive sulfide orebodies. The shallowest parts of the anomalies were modelled as two ~5km x 1km, NNW- to N-oriented (approximately parallel to basement strike) features, which appear to be partially controlled by GSNSW-interpreted NE-trending Proterozoic fault structures (Figure 1). The conductors are modelled to persist to depths of <500m and potentially as shallow as 200m below surface.

[1] Kay, B., Heinson, G., Robertson, K. Thiel, S., 2019, Lithospheric architecture in the Curnamona from MT. *In* Gilmore, P.J. (compiler), 2019, Uncover Curnamona 2019: Symposium Presentations. Geological Survey of New South Wales Report GS2019/1007.
[2] See SER Announcement 9th May 2024

A MLEM survey was completed to ground truth the MT modelling and better define the shallow conductors identified. The MLEM survey captured the Western, Central and Eastern Conductors modelled from the MT survey using a base frequency of 125Hz and 200 x 200m loops with in-loop readings spaced 200m apart. Two pairs of 400m-spaced E-W lines were planned over the Western, Central and Eastern Conductors on Line A2 of the MT survey, and over the Southern Conductor on Line C (Figure 1). Initial processing of the MLEM data from the two northern lines indicated that the Western Conductor gave the strongest response so an additional third E-W line and a N-S line was collected over this conductor to better define its geometry.

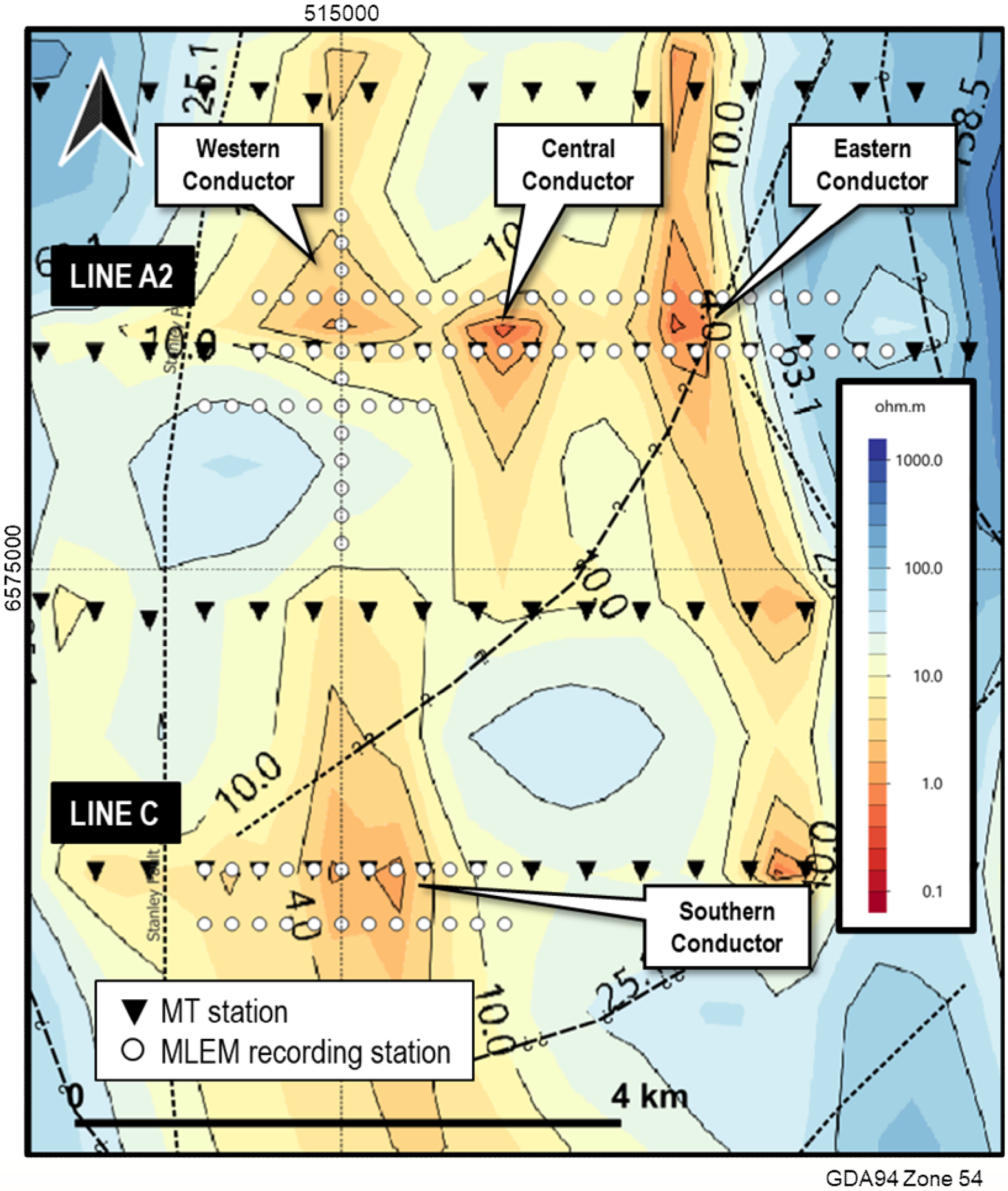

Figure 1: *Location of MLEM recording stations and previous MT stations relative to modelled target conductors on 500m MT resistivity slices. GSNSW mapped basement faults, primarily interpreted from magnetic data, are also shown.*

MOVING LOOP ELECTROMAGNETIC (MLEM) RESULTS

The MLEM survey over the northern conductors are broadly consistent with the modelled MT response, identifying three conductive bodies in locations approximately corresponding to the location of the Western, Central and Eastern Conductors from the MT survey (Figure 2).

The Western Conductor is interpreted to be a ~400m wide, 200m thick shallowly south-plunging body with a conductivity of ~1.5 S/m that remains open at depth to the south. The Eastern Conductor was only intersected by the two initial MLEM lines and is not well constrained by the data. It is weaker than the Western Conductor, with a conductivity of ~1.0 S/m. However, the MT modelling indicates that the Eastern Conductor has significant strike extent which may strengthen to the south of the area covered by the MLEM survey.

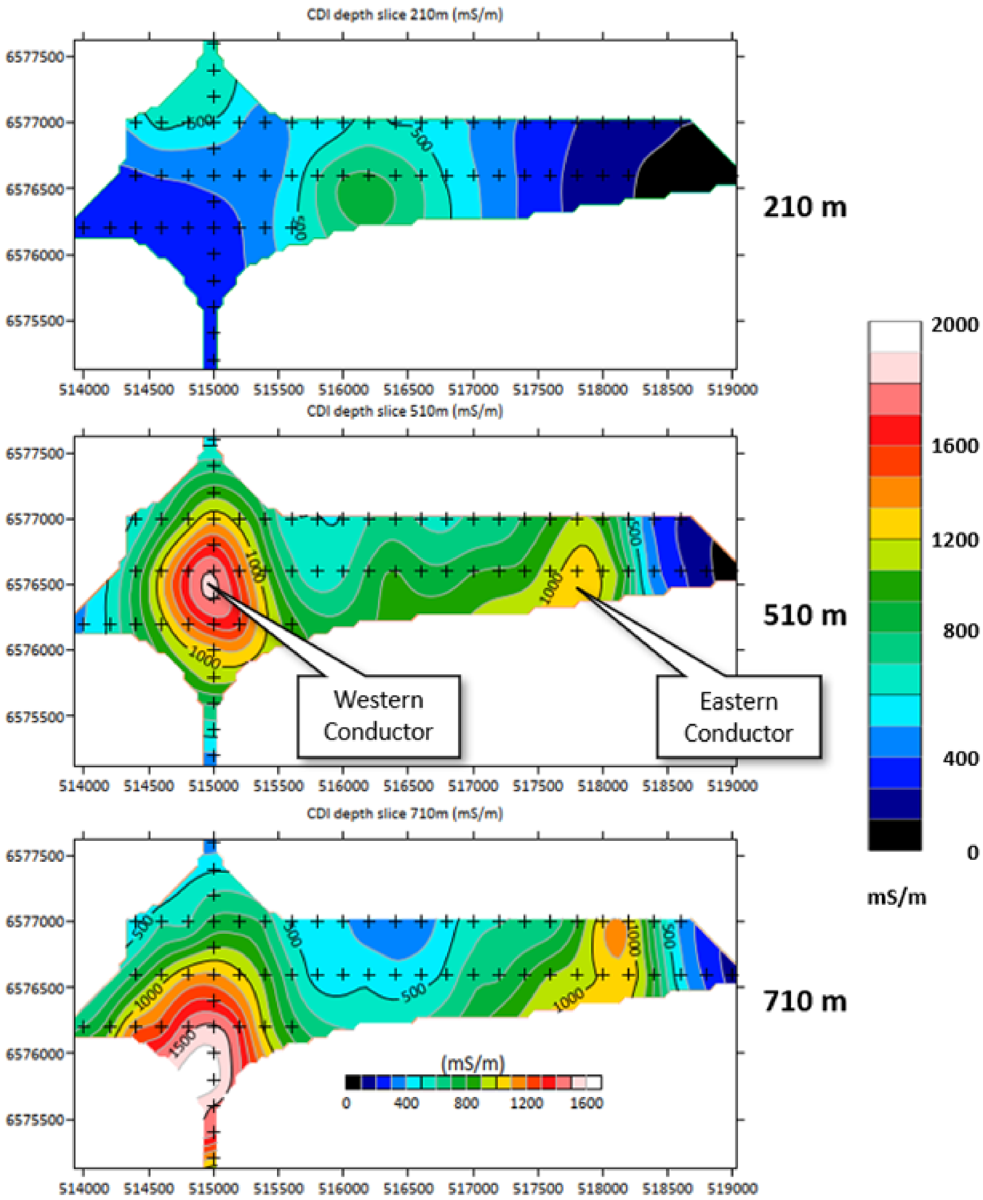

Figure 2: MLEM conductivity depth slices across the Western, Central and Southern Conductors on MT Line A2 (+ denotes MLEM survey data collection points)

AIRBORNE MAGNETIC AND RADIOMETRIC SURVEY

A detailed airborne magnetic and radiometric survey was flown over the project area to determine the relationship between the identified conductors and their associated magnetic response. The survey enhanced the understanding of the magnetic response in the area and identified multiple ovoid-shaped, reversely magnetised bodies between 0.5km and 2km in diameter (Figure 3) that are interpreted to represent igneous intrusions.

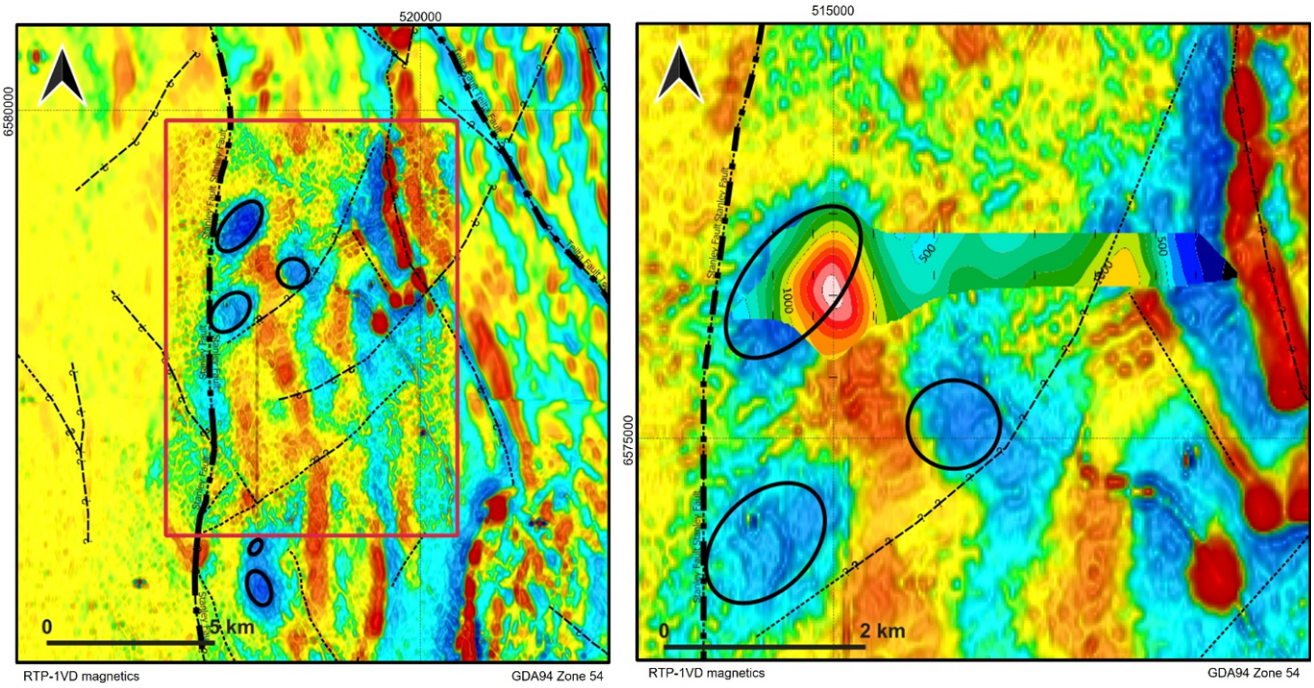

Figure 3: Left: Newly acquired RTP 1VD magnetics image (red box) merged with regional data indicating multiple reversely magnetised bodies (black ellipsoids) and *Right: The 510m depth slice of the MLEM survey over the RTP 1VD Magnetics*

RELATIONSHIP BETWEEN WESTERN CONDUCTOR AND MAGNETIC INTRUSION

A series of magnetic inversions were completed to investigate the relationship between the Western Conductor and the nearby ovoid-shaped reversely magnetised body ("the Ovoid"), which is interpreted as igneous intrusion, likely to be Meso- to Neoproterozoic in age. The inversion modelling indicates that the top of the Ovoid is at a depth of ~500m below the current surface, with an estimated reversely magnetic susceptibility of greater than 300 x 10^{-5} SI. When combined with the MLEM interpretation, this suggests that Western Conductor wraps around the southern portion of the Ovoid (Figure 4).

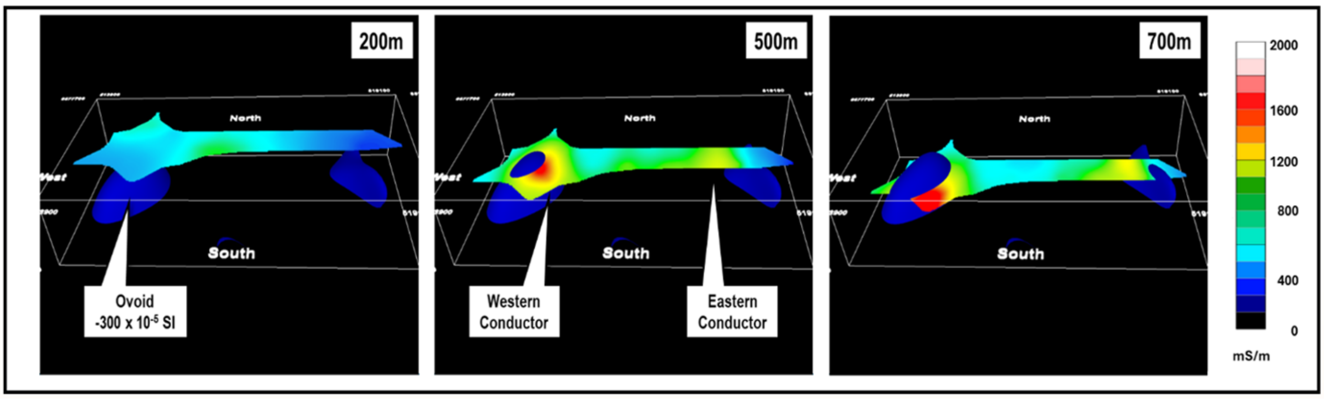

Figure 4: 3D perspective view looking north showing MLEM conductivity depth slices for MT Line A2 relative to the modelled reversely magnetised ovoid.

FUTURE WORK

Exploration undertaken to date has confirmed a relationship between the Western Conductor and the ovoid-shaped reversely magnetised body with inversion modelling indicating the top of the conductive body occurs ~500m below the surface. The identification of this newly defined conductor, which is mapped in both MT modelling and MLEM data, is highly encouraging given the conductor is associated with a reversely magnetic intrusion. This is believed to be a new and unexplained relationship within the Curnamona Province and whilst there are numerous geological settings which could result in this relationship that include non-mineralised settings, intrusion related mineralised systems may also produce a similar response and therefore further exploration is warranted. Work is now underway to identify analogues in the Curnamona Province that share similar geophysical signatures to guide further exploration. Furthermore, given the project area contains multiple look-alike reversely magnetised bodies, future work will include additional ground EM and detailed drone magnetics over these prospects to model their depth and conductivity prior to target ranking and a future drill program.

The information in this report that relates to Exploration Results is based on information compiled by Mr Stuart Rechner BSc (Geology) MAIG MAusIMM, a Member of the Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Rechner is a Director and shareholder of Strategic Energy Resources Ltd. Mr Rechner has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Rechner consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

This announcement is authorised by the Strategic Energy Resources Limited Board.

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About Strategic Energy Resources
Strategic Energy Resources is a specialised undercover mineral explorer and project generator focused on the discovery of world class Copper deposits in the Greenfield frontiers of Australia. SER is actively exploring the undercover extensions of the world-class Mt Isa Province in northwest Queensland as part of a Joint Venture with Fortescue at Canobie, and at our Isa North Project. In New South Wales exploration is underway at out South Cobar Project, Mundi and West Koonenberry projects which are located north of Broken Hill.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Not applicable – this announcement concerns geophysical surveys.
Drilling techniques	Not applicable – no drilling undertaken.
Drill sample recovery	Not applicable – no drilling undertaken.
Logging	Not applicable – no drilling undertaken.
Sub-sampling techniques and sample preparation	Not applicable – no drilling undertaken.
Quality of assay data and laboratory tests (Equipment used)	The MLEM survey was undertaken by GEM Geophysics. The survey was conducted using a SMARTem24 receiver with a HT Jessy Deep Squid sensor to measure the 3 components of the B-field response. A high-power transmitter was used to transmit current of approximately 80A through the transmitter loop. The base frequency was 125Hz using 200 x 200m loops with in-loop readings spaced 100m apart. The Airborne Magnetic and Radiometric (AMR) survey was conducted by Thompson Airborne Geophysical Surveys (Thomson) using a Cessna 210 fixed wing single engine aircraft with fixed stinger attachment. A Cesium vapour magnetometer instrument was used operating at 20Hz (0.05 sec sampling rate) with a resolution of 0.001nT. A RSI model RS-500 spectrometer was used to collect radiometric data using 2 x 16.8L detector packs operating at 2Hz (0.5 sec) sampling rate in 256 channels. A Novatel 14 channel precision differential capable GPS system was used operating at 2Hz (0.5 sec recording rate).
Verification of sampling and assaying	Not applicable – no drilling undertaken.
Location of data points	Coordinates were recorded using instrumental GPS in GDA 1994, MGA Zone 54.
Data spacing and distribution	MLEM Survey: 200m x 200m transmitter loop was used, with a 200m station spacing, location of lines is displayed on Figure 1 AMR Survey: E-W traverses spaced 100m with 1,000m tie lines, survey height 45m.
Orientation of data in relation to geological structure	Two E/W traverses designed to cross the N/S striking geological structures across the shallowest portion of the previously MT modelled conductive anomaly.
Sample security	Not applicable – no sampling undertaken.
Audits or reviews	Data was reviewed by the contractors (MLEM - GEM Geophysics: Thomson Aviation - AMR) as well as by SER's embedded contract geophysicist who verified the data quality.

JORC Code, 2012 Edition – Table 1
Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	Work undertaken on two active exploration licences EL9388 and EL9362 which form part of the Mundi Project. Both tenements are held 100% by Strategic Energy Resources Limited. Location: Mundi (115km NNW of Broken Hill). Tenements in good standing with no known impediments.
Exploration done by other parties	The Mundi Project has limited previous exploration activity. SER has identified eleven Group 11 (uranium) and fifteen Group 1 exploration licences have been held over all or part of EL9388 and EL9362 since 1970. The Group 1 explorers have targeted a variety of commodities including iron ore, intrusion-related gold, Broken Hill Style and Mississippi Valley Style lead-zinc, and copper-gold mineralisation. There are only three drillholes that intersect basement within the 712 km^2 area covered by EL9388 and EL9362, and only three surface geochemical samples (rock chips) are held in the GSNSW geochemical database. SER's initial MT survey, executed in September-October 2023 was following up on crustal-scale conductivity anomaly, initially identified by the Geoscience Australia led Australian Lithospheric Architecture Magnetotelluric Project (AusLAMP - https://www.ga.gov.au/about/projects/resources/auslamp). This conductive anomaly, known as the Curnamona Conductor (CC), was further resolved by the Curnamona Crustal Magnetotelluric Transect (CCMT), an ~2km spaced, 56 station, ~east-west oriented broadband MT survey targeted at the anomaly defined by AusLAMP (Kay et al., 2022).
Geology (Target deposit type)	The project covers part of the northern portion of the Palaeo- to Neoproterozoic Curnamona Province, which straddles the border between NSW and SA. Basement geology within the proposed EL is entirely obscured by Mesozoic and Cenozoic cover, but is interpreted by GSNSW (Colquhoun et al., 2021) to comprise metasedimentary rocks of the Palaeoproterozoic Willyama Supergroup, unconformably overlain by and faulted against Neoproterozoic sedimentary and volcanic rocks, which correlate with Adelaidean sequences in South Australia. The area is cut by prominent N- to NNW-trending structures, as exemplified by the Stanley and Teilta Faults. As a result of the lack of basement exposure within EL9362 and EL9388, there are no recorded metallic mineral occurrences within the title area. The Curnamona Province has recognised potential for both Iron Oxide Copper Gold (IOCG) and Broken Hill Type Pb-Zn-Ag mineralisation, SER considers that EL9362 and EL9388 are potentially prospective for both these styles of mineralisation.
Drill hole Information	Not applicable – no drilling undertaken.
Data aggregation methods	Not applicable – no drilling undertaken.
Relationship between mineralisation widths and intercept lengths	Not applicable – no drilling undertaken.
Diagrams	The reported images display results from the MT survey data modelling.
Balanced reporting	Not applicable – no drilling undertaken.

Other substantive exploration data	All relevant finalised exploration data has been included. Further details of geophysical data interpretation will be provided in due course.
Further work	Further work is outlined under “Next Steps”