Annual Exploration Technical Report
Period 25/11/2020 to 24/11/2021
EL6437, Torrens Project

Tenement	EL6437
Tenement Holder	Strikeline Resources Pty Ltd
Operator	Taruga Minerals Ltd / Strikeline Resources Pty Ltd
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Date of Report	16/01/2022

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Summary

The Torrens joint venture project covers 818km^2 along the eastern limit of the Gawler Craton in a similar structural setting as the nearby Olympic Dam and Carrapateena deposits. EL6437 is operated by Taruga Minerals Ltd with the License Holder – Strikeline Resources Pty Ltd being a wholly controlled subsidiary. This report outlines exploration undertaken during the period 25/11/2020 – 24/11/2021.

During the licence period Strikeline Resources carried out data validation and geophysical data reprocessing including available gravity and airborne magnetics data. Figure 4 shows the regions of reprocessed geophysical data. Initial access and anomaly reconnaissance on existing tracks was also conducted over part of the licence area during a field visit during early March 2021. During this program a number of rock samples were collected and analysed confirming surface copper mineralisation within the licence area.

The Torrens Project is prospective potential for IOCG-style mineralisation associated with intrusive breccias hosted in Marinoan Metasediments overlying the Gawler Craton Archean Basement. The Torrens project shoulders the Taruga Minerals Flinders Project at the contact of the Adelaide Geosyncline and Gawler Craton plate boundaries where the G2 and G8 structural corridors intersect, increasing the likelihood of fluid flow along structures with a deep connectivity to basement.

Keywords

IOCG, Breccia, Diapir, Sediment Hosted, Pb-Zn-Ag style, Flinders Ranges, Torrens

Introduction

This report outlines exploration activities undertaken on EL 6437 during the period 25th November 2020 to 24th November 2021. EL6437 (Torrens Project) outlined in Figure 1 was operated by Taruga Minerals Ltd under an option agreement with the License Holder – Strikeline Resources Pty Ltd which was exercised 14th May 2021. Strikeline Resources Pty Ltd is now a fully owned subsidiary of Taruga Minerals Limited. The license was granted for a period of 2 years. The Torrens Project covers 818km^2 along the eastern limit of the Gawler Craton, at the intersection of the prospective G2 and G8 structural corridors (Figure 2).

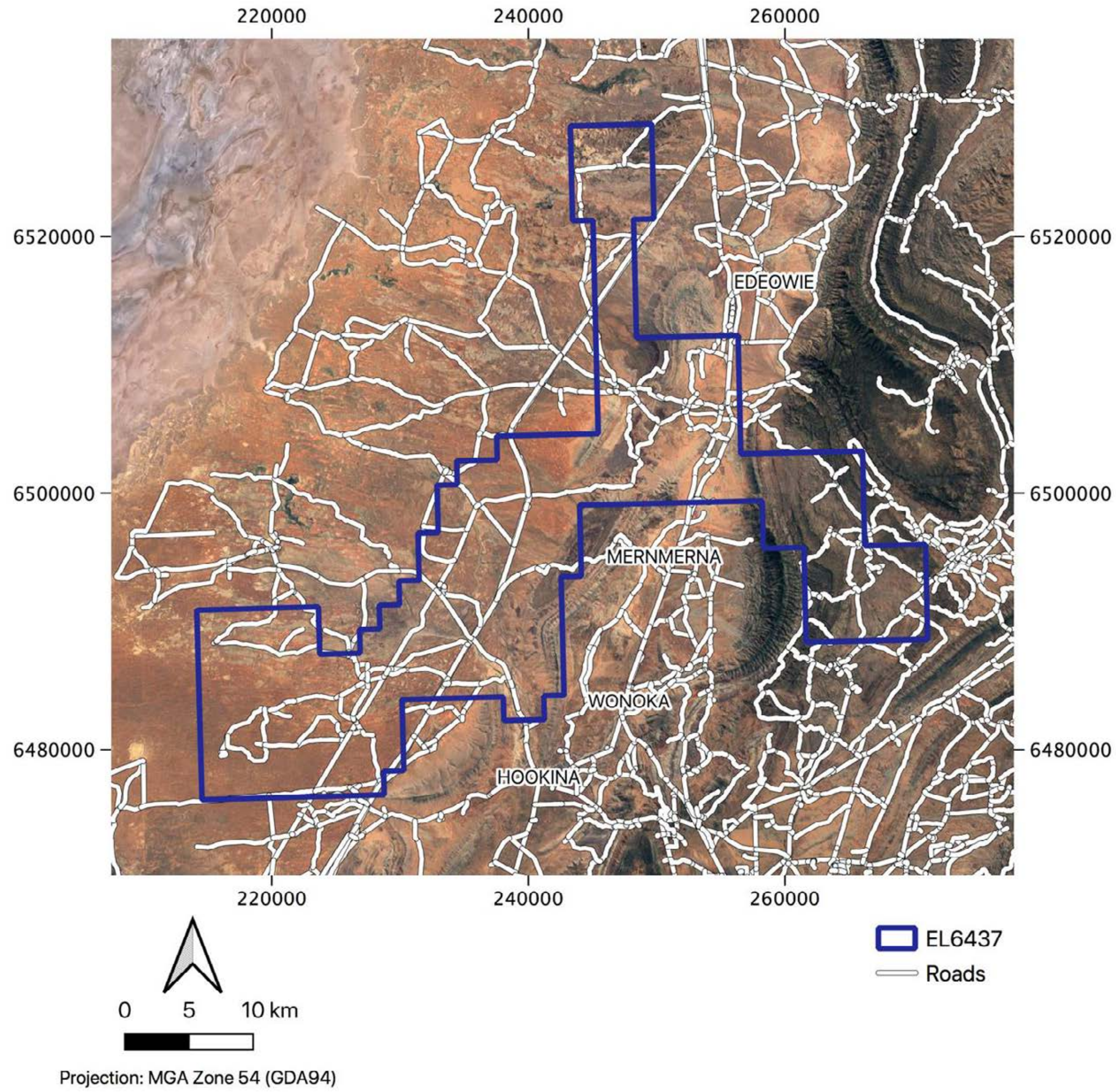

Figure 1: EL6437 Location with Government Roads and nearby localities.

Location and Access

The Torrens Project is located in the Flinders Ranges of South Australia, approximately 140 kilometres north-west of Port Augusta and 30kilometres north of Hawker. The tenement can be accessed from the Orroroo-Hawker Road or the Port Augusta-Quorn-Hawker Road. Within EL6437 access is via unsealed pastoral tracks and roads. The project is located primarily on the 1:250,000 Parachilna Map Sheet (SH5413), with a small Western portion of the tenement on the east of the Torrens Map Sheet (SH5316).

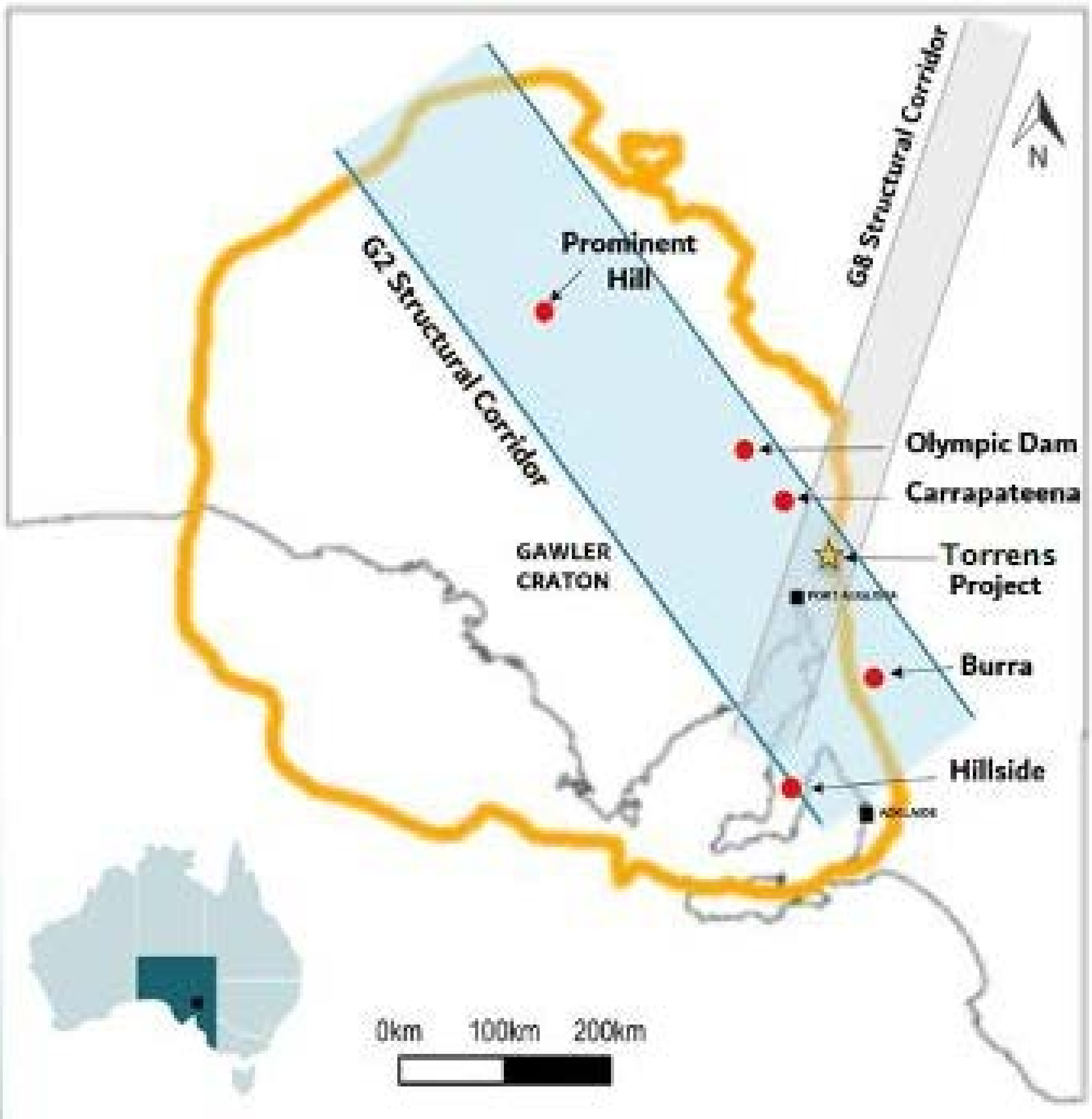

Figure 2: Regional Location of Torrens Project EL6437 in comparison to other IOCG Deposits

Geology

EL6437 is in the southern portion of the Flinders Ranges, along the eastern limit of the Gawler Craton, at the intersection of the G2 and G8 Structural Corridors. The geology of the project area (Figure 3) comprises east dipping, folded north to north-easterly trending sedimentary rocks of the Proterozoic to Lower Cambrian Burra, Umberatana, Wilpena, Pound and Hawker Groups. Throughout the project area, the intrusive Moralana Diapir outcrops and it interpreted by others as a carbonate brecciated diapir. IOCG-style mineralisation is considered to have been controlled by these structures. The Western portion of the tenement lies under considerable transported Quaternary cover.

Open-Source historical exploration reports available from the S.A. Government Portal were extensively researched and digitised to gain valuable geological insights. Historical drill hole logging, magnetic and gravity surveys, geological maps and surface geochemical sampling programs (rock chip, streams and soils) from multiple historical exploration programs were all included for use with GIS programs and creation of 2D shapefiles and digital data formats to use in modelling, analysis and interpretation.

Historical drilling throughout the Torrens Project is very minimal and notable holes near prospective areas failed to intersect what Strikeline Resources consider to be the prospective regions. Drilling by Havilah Resources NL returned a fragment of pyritic sandstone at end of hole (EOH 314m) which assayed 0.24 g/t Au & 364ppm Cu. This anomalous result at end of hole is encouraging as like another drillhole by Salisbury Resources Limited they failed to intersect at depth likely geophysical targets initially generated from the reinterpreted gravity and magnetic data processed by Strikeline Resources. Planned geophysical programs will redefine these targets through validation and infill data with inverse modelling whilst the large areas with sparse data or no data will have new data physically collected, modelled, and interpreted to provide an invaluable insight into an area that has never been explored in any detail.

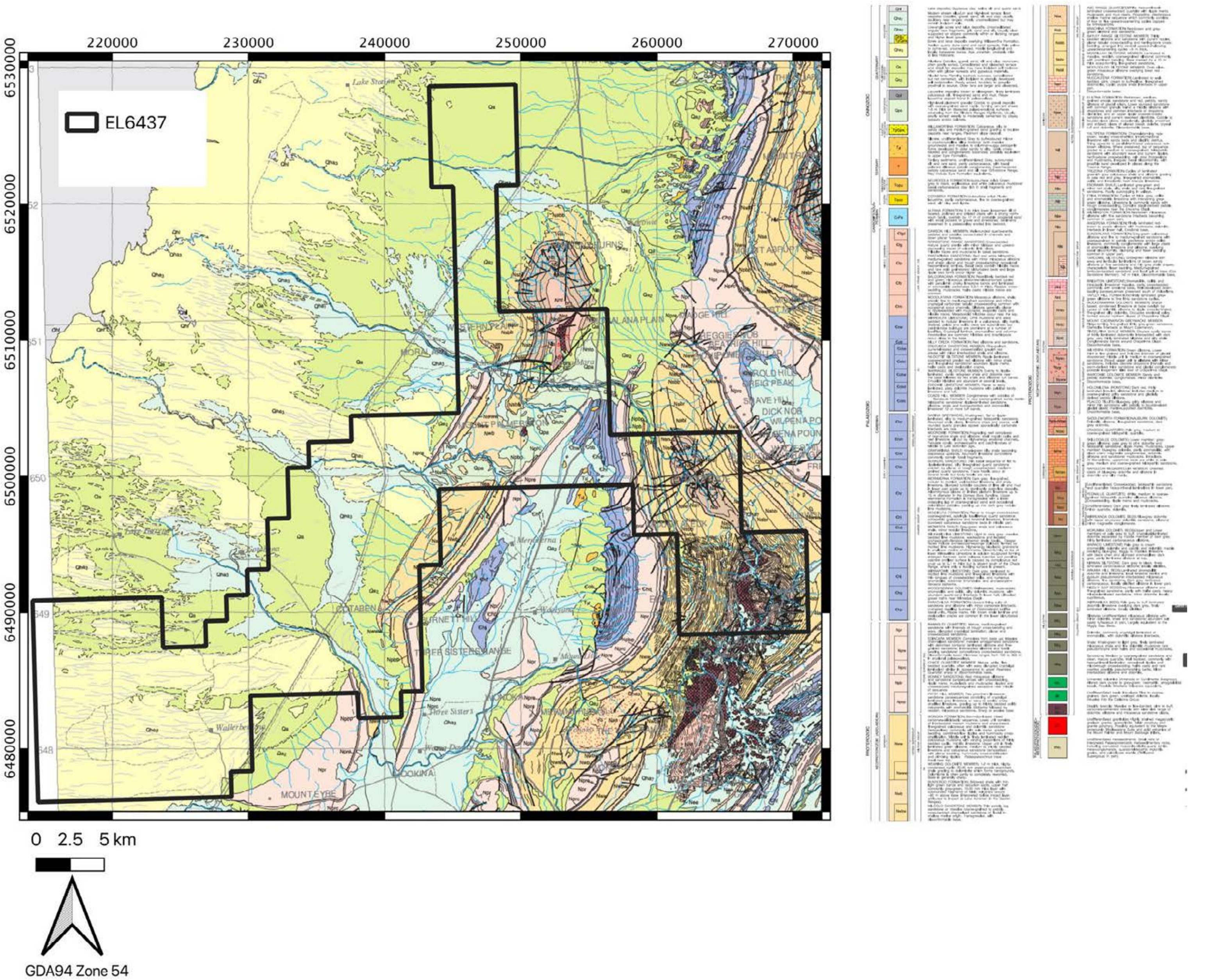

Figure 3: 250K Geology over EL6437

Historical Exploration

Desertstone N.L.
Desertstone were exploring in magnetic diapiric bodies and kimberlite targets. 25 drill holes totalling 2992m failed to return any indications for kimberlites. Brecciated mafic volcanics were encountered at the Pollux Prospect at depth with encouraging Cu results (7m@0.18% Cu). Encouraging drill intersects for Cu-Au were not followed up due to the project focus on diamonds.

Rock Chip assays from the historic copper mine shaft at the Moralana Diapir returned 1.44% & 2.2% Cu. Surface sampling in nearby outcropping Moralana Diapir extended the strike length of mineralisation to 300m NW of the historic mine shaft with one sample returning high grade Cu at 8.67%.

Salisbury Resources Limited
Previously identified weakly to moderately magnetic bullseye targets (T8, T9 and T10) by Desertstone N.L. were reviewed by Jim Allender and Salisbury Resources Limited and considered high priority gold and base metal targets given they are located within a structurally complex setting. A single drill hole (ET-1) for 372.3m did not intersect the magnetic body at depth. Daishat Surveys undertook a gravity survey of the area in 2009 and it revealed a large amplitude (8mgal) positive gravity complex adjacent the major F9 structure to the East, striking NE-SW over a 14km distance.

Havilah Resources NL
Bunyeroo Well is a 3km X 3km magnetic anomaly considered by Havilah Resources NL to be a high priority target for base metals and Au. Anomalous Cu and Zn were reported in the soil grid over the Bunyeroo Well magnetic anomaly. Two drill holes (PAR-1 and PAR-2) for a total of 747m tested the anomaly. A single 5cm pyritic sandstone fragment returned from drill hole PAR-1 returned significant results, including 0.24g/t Au and 364ppm Cu at 314m depth (EOH).

Mara Pty Ltd
Performed geophysical modelling showing roughly linear, steeply dipping, N-S dyke-like features extending 10-13km and 1-3km wide

Exploration Rationale

Strikeline Resources is testing the potential for IOCG-style mineralisation associated with intrusive breccias hosted in Marinoan Metasediments overlying the Gawler Craton Archean Basement. The Torrens project shoulders the Flinders Project at the contact of the Adelaide Geosyncline and Gawler Craton plate boundaries where the G2 and G8 structural corridors intersect, increasing the likelihood of fluid flow along structures with a deep connectivity to basement. The Torrens Project displays a striking similarity to the Companies Flinders Project and assessment of available historical and reprocessed exploration data within the Torrens Project area as well as initial reconnaissance has revealed the potential for a larger IOCG-style system at work, this includes:

- Anomalous LREE's and PGE's.
- The presence of hematite altered mafic breccia and carbonate breccias.
- Copper-enrichment observed at surface and confirmed at depth in historical drilling.
- Sizeable magnetic and gravity targets with the potential to host IOCG-style deposits.
- Structurally complex regions with a potential link to basement.

Geophysics

Strikeline Resources has been consistently pursuing innovative techniques to enhance the viability and usefulness of historical geophysical surveys. Inversion modelling of historic open-source gravity and magnetic data has been carried out on behalf of Strikeline Resources. Geophysical inversion refers to the mathematical and statistical techniques dealing with observed geophysical properties such as gravity, magnetics and electrical conductivity to derive an understanding about the subsurface without digging or drilling. Measurements were gathered and data was amassed before inversion processing was carried out. The results were a set of models characterising how the relevant physical property is distributed in the ground. These models have characteristics determined by the inversion method used, by the original raw data and by prior knowledge and experience.

For the Torrens Project the publicly available airborne magnetic and gravity data was reprocessed by geophysical inversion and numerical modelling processes over areas seen in Figure 4 whilst key areas of gravity data are outlined in Figure 7. Figure 5 shows the same areas of data with preliminary 2D magnetic images. Specialised computing software was used to produce the modelled files. The original input datasets and constrains for magnetics were taken from the SARIG 1995 SA006 400m spaced data set. RTP and VIAS were computed, Figure 6 shows the N-2 area with ASVI modelled. Other modelled outputs include RTP, VIAS and VRMI. The areas where gravity data was modelled is shown in Figure 8 with TMI as the background and Figure 9 with the regional GSSA bouguer gravity 1VD background. The resultant modelling for the areas of available gravity data is shown in Figure 10 and Figure 11. For all models the Geoscience Australia sourced 1 sec SRTM Digital Elevation Model (DEM) was used topographically. The resultant models for an area are used in conjunction with each other where possible and alongside available geological information to highlight targets of potential mineralised interest requiring field evaluation and further investigation.

This report highlights the areas of magnetic and gravity data that was available for processing and a selection of the geophysical modelling (Inversion) of some anomalous regions. The available areas of magnetic data are outlined in Figure 4 The modelling method and Mginv3D is a program to perform a voxel-based inversion of gravity and magnetic data. The inversion process starts with a finite three-dimensional volume containing the area of interest. It divides it into a regular 3d mesh of voxels draped under the topography of the site. Each voxel (or cell) in the volume has a geophysical property associated with it such as density for gravity data and magnetic data susceptibility. Suppose each cell in the model is assigned a specific property value. In that case, the model's response at a given set of observation points is referred to as the forward model and is a relatively straightforward operation to perform. The reverse task of taking known observations and determining the distribution of values that match the observed data is the inverse problem and is a non-trivial task. It is non-trivial because the system of equations to determine the cell values from the observed data is generally large and over-determined and does not have a unique solution. The first step in finding a solution of the inverse problem is a simple one of converting it to a least-squares problem. The aim is to find a distribution of property values for which the difference between the forward model and the observed values is minimised in a least-squares sense. This method is well-studied, and many algorithms are available for finding a solution which minimises the mismatch between the predicted and observed data. One deficiency of the simple least-squares formulation is that the solution is non-unique. But for geophysical problems, the greater difficulty is that the solutions which yield the smallest misfits are likely to be extremely non-geological. To counteract this behaviour of the simple least-squares solution, the misfit minimisation is augmented by adding terms that promote smoothness in the cell parameters' spatial variation in each of the three dimensions. The resulting formulation is known as regularised least squares. When applied to the inverse problem, it yields a feasible model that minimises the misfit while also being as smooth as possible. Such models are still not unique but provide a solution which matches the observed data and is also geologically reasonable.

The modelling performed did not involve any geological data and hence was entirely unconstrained. The results do, in general, fit with the current surface mapping. Additional data areas require further assessment and will involve all accessible vintage geological, drilling, and geochemical data sets and new data to be acquired. Geophysical modelling of any type suffers from the problem of non-uniqueness. In other words, the geophysical model result may be acceptable mathematically but may be incorrect geologically. By constraining the model with further geological observations, a better fit may be obtainable. The constrained models can be used with more confidence to plan further exploration programs such as deeper drilling programs. This modelling exercise demonstrates areas of significant interest and highlight those areas that will benefit from more work.

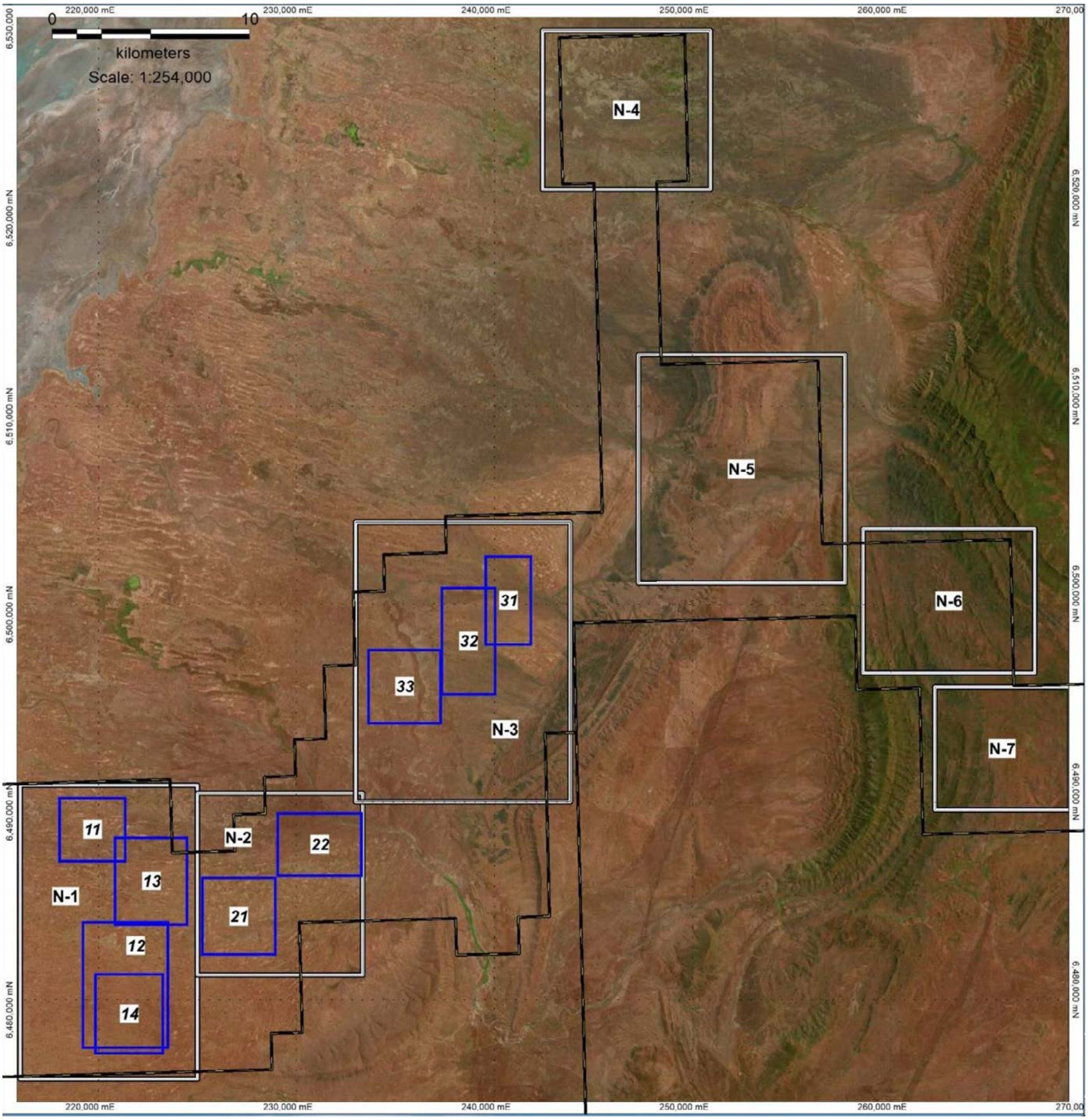

Figure 4: Regions over EL6437 in which Historical Aeromagnetic Data was modelled

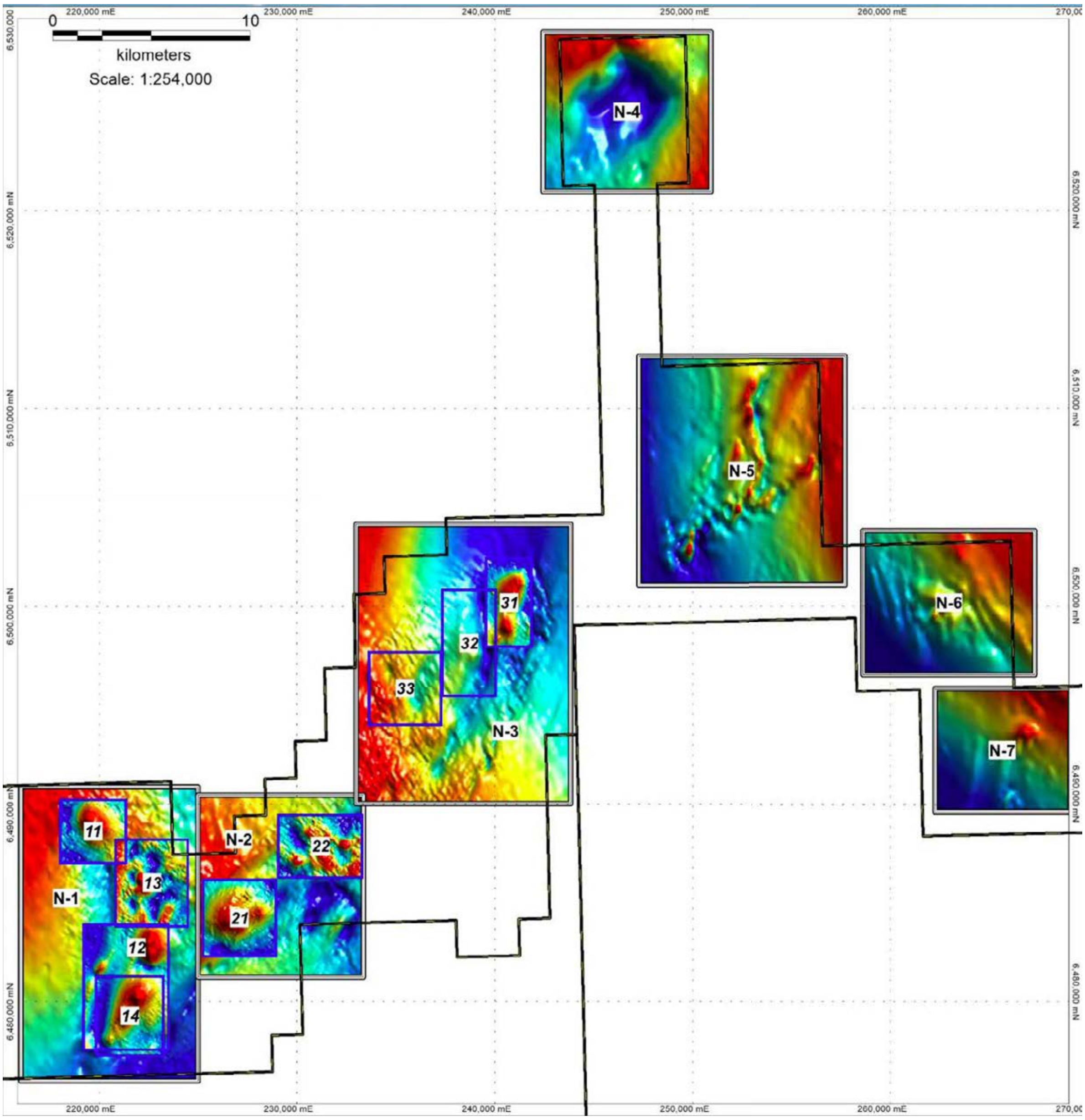

Figure 5: Location Map of Modelled Areas with Various Individual Semi-Regional Magnetic Lines

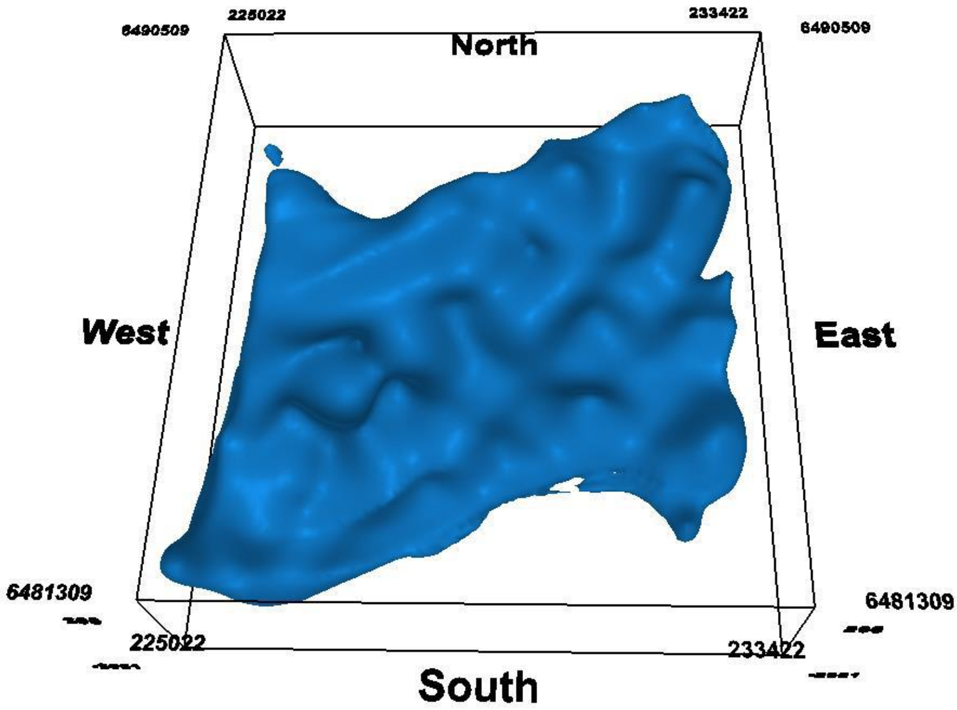

Figure 6: Magnetic modelling of N-2 Area showing 3D modelled ASVI magnetics

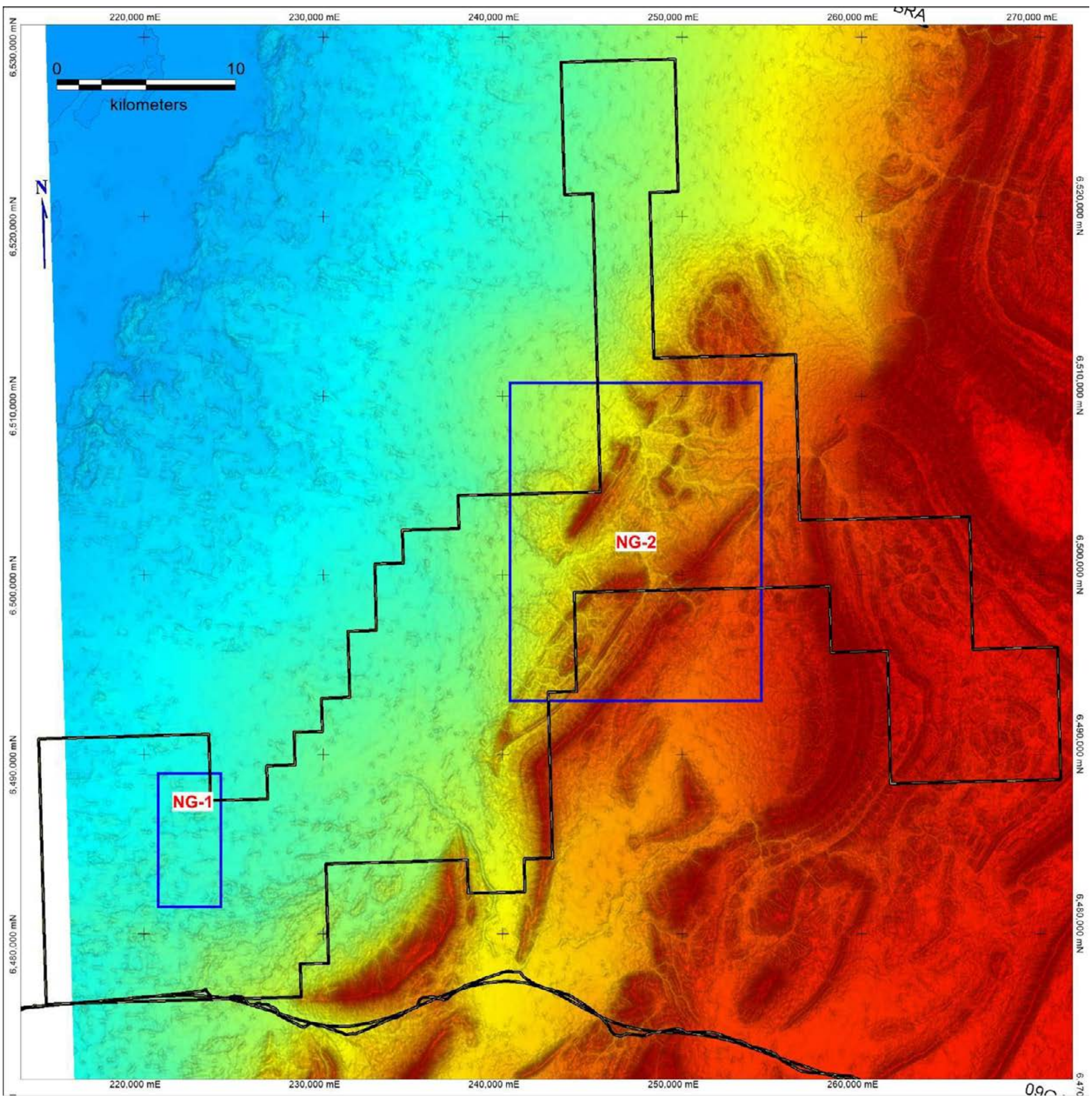

Figure 7: Location of the majority of gravity data available and subsequently key modelled areas NG-1 and NG-2 with DTM as the background image.

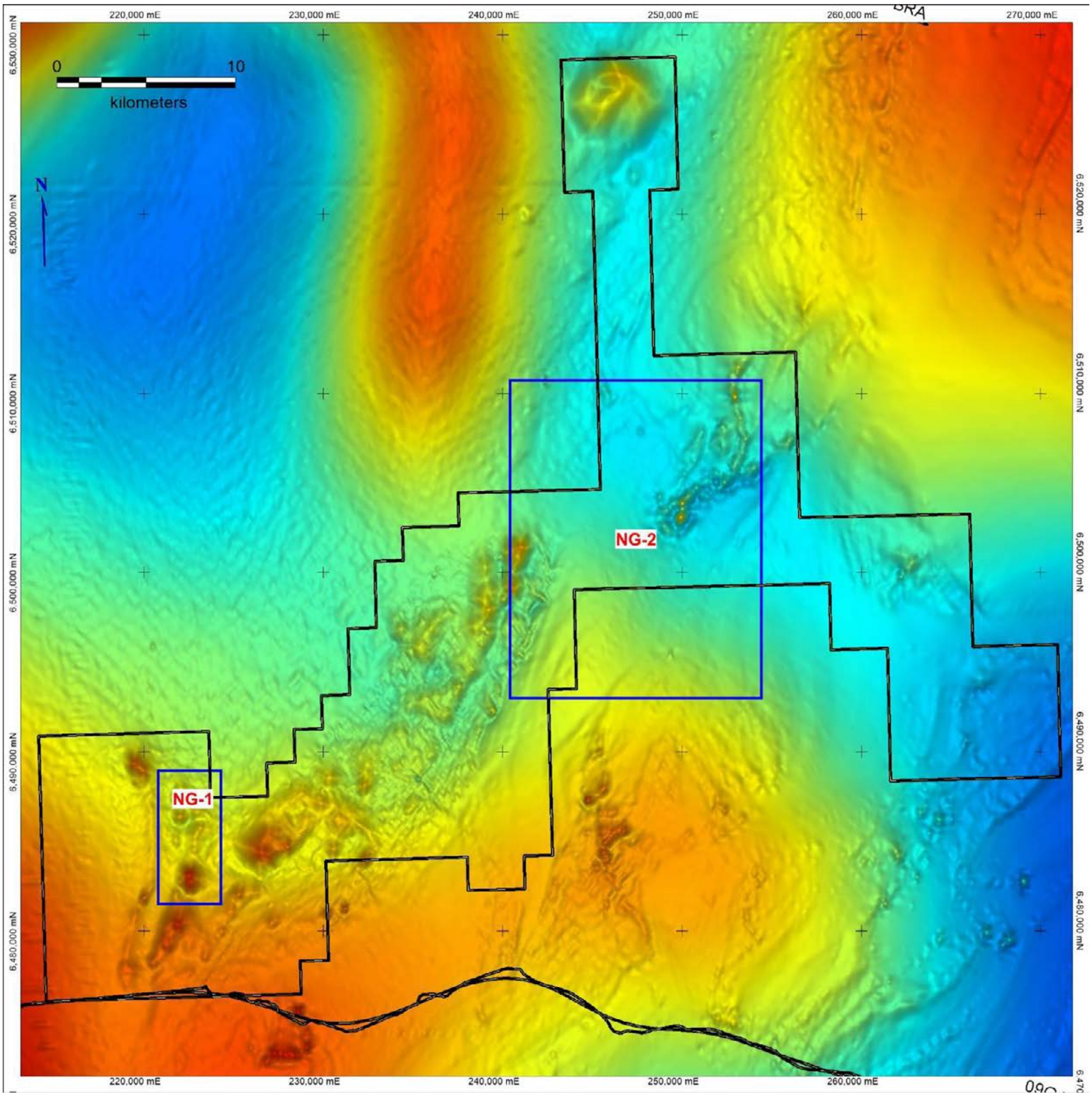

Figure 8: Location of NG-1 an NG-2 modelled areas with TMI as the background image.

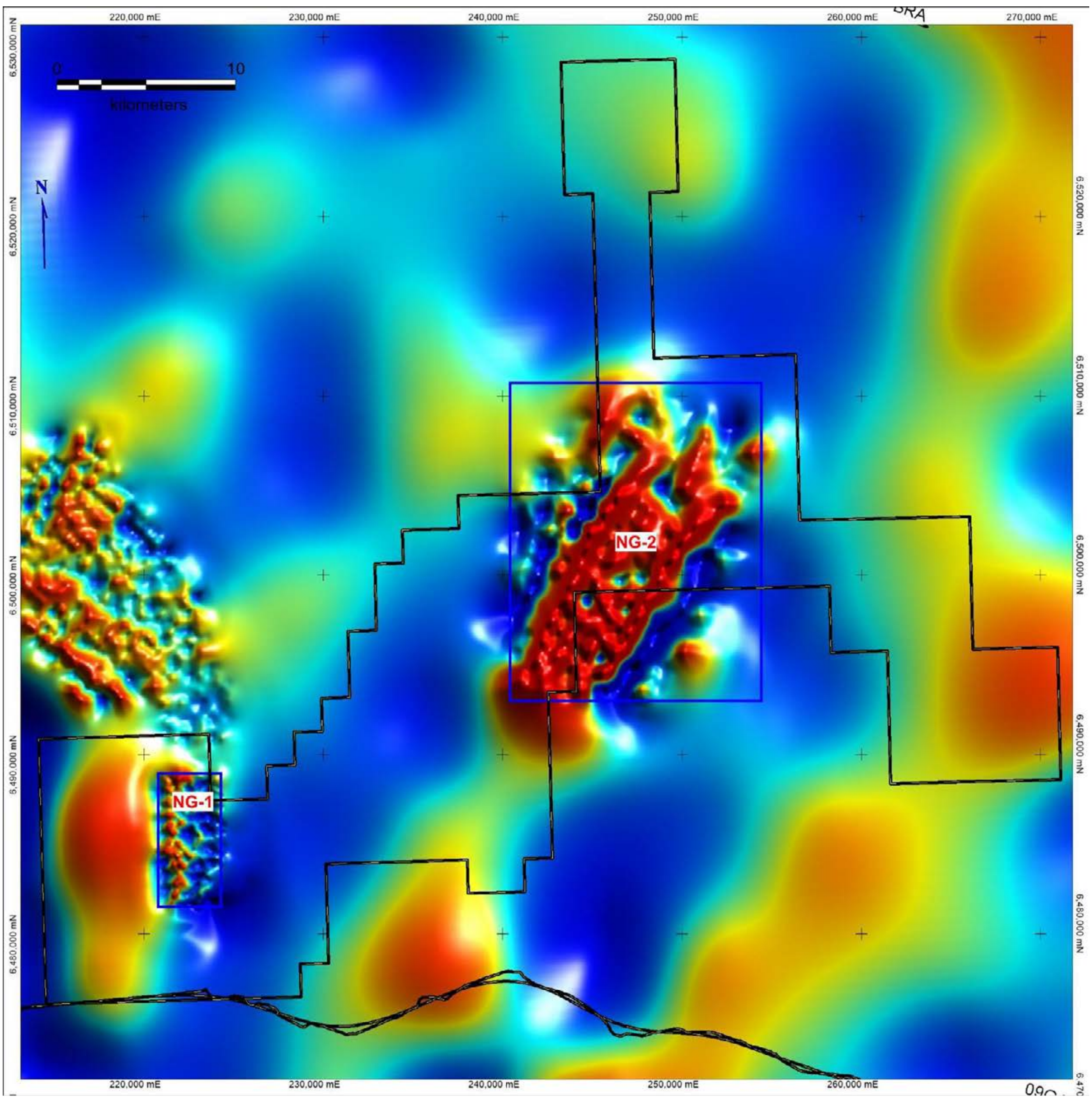

Figure 9: Location of NG-1 an NG-2 modelled areas with Regional GSSA Bouguer Gravity 1VD as the background image.

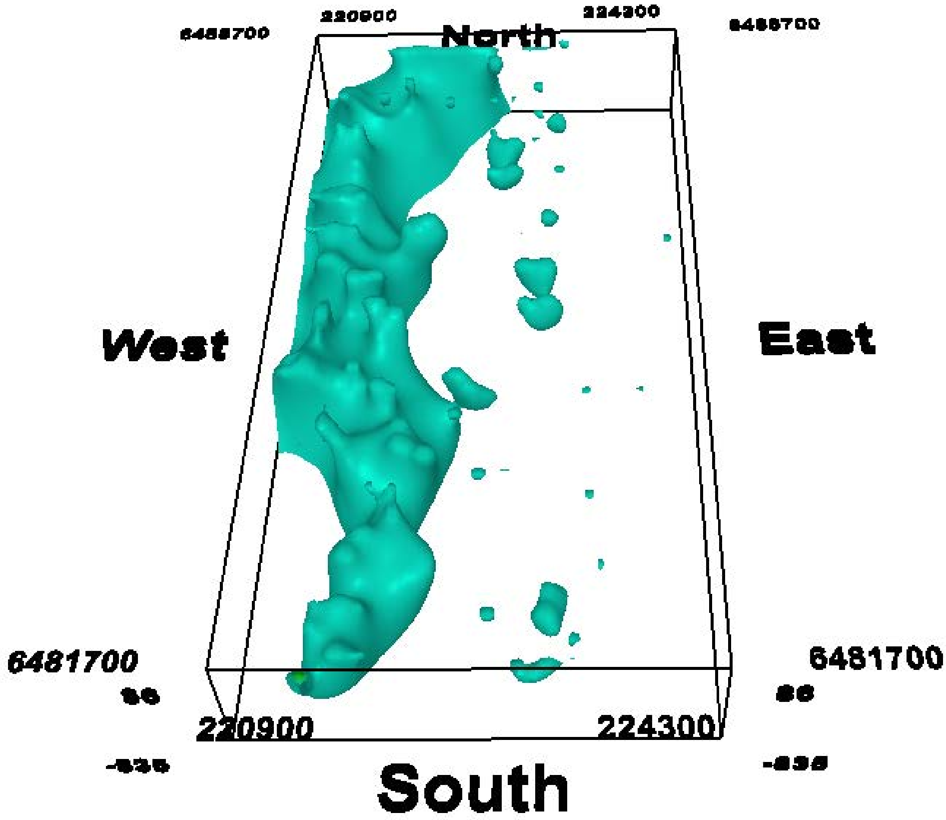

Figure 10: Modelled Area NG-1 with view of 3D modelled gravity data from South looking down from top.

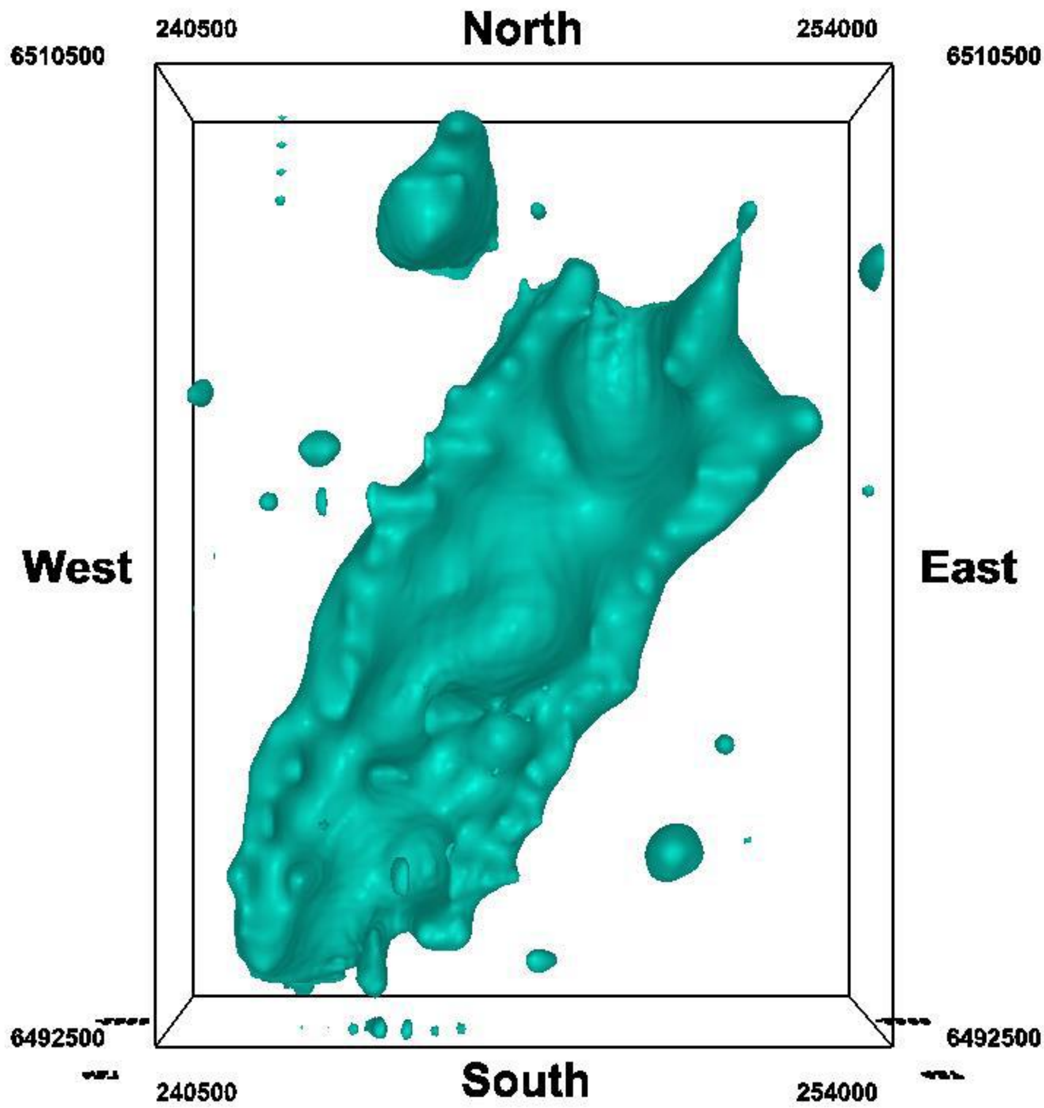

Figure 11: Modelled Area NG-2 with view of 3D modelled gravity data from top looking down.

Surface Geochemistry

Rock Chip Samples

During March 2021 initial access and anomaly reconnaissance was conducted over part of the Torrens Project. During this reconnaissance program 5 rock samples were collected and analysed confirming surface copper mineralisation within the licence area. Anomalous rocks predominantly included iron breccias including magnetite. Table 1 summarises rock type and promising results including sample TR003 with 3.7% copper and 1.4 ppm silver within a carbonate breccia. Additionally sample TR004 magnetite with 356 ppm cobalt and 900 ppm copper. The full geochemical results are included in the appendices attached to this report. Coordinates for sample locations were taken with a Garmin inReach Explorer+ GPS. Selective rock chip samples were collected with the aim of obtaining representation of the anomaly being visited. Samples were analysed at Bureau Veritas, Adelaide for broad suite multi-element analysis. Gold and PGE analysis was by Fire Assay ICP-AES. Trace element was by LA-ICP-MS, and major element analysis was by XRF. Analyte detection limits are in Appendix 1 – Table 2. Rock chip samples were field logged with the assistance of historical mapping and samples reviewed for petrology using a 10x loupe.

Sample ID	**Magnetic Susceptibility**	**Description**	**Ag ppm**	**Co ppm**	**Cu%**	**Fe%**
TR001	0.15	Dolomitised mineralised breccia with micaceous iron oxide	0.1	21	0.03	3.3
TR002	0.08	Fe-altered breccia	1.6	36	0.04	4.1
TR003	0.02	Mineralised carbonate breccia with minor hematite clasts	1.4	19	3.7	1.2
TR004	251	Mineralised Magnetite	0.1	356	0.90	55.5
TR005	34	Magnetite, highly Fe-altered breccia	0.6	13	0.12	32.9

Table 1: Surface rock sample summary

Conclusion and Recommendations

Initial field observations and the number of shallow easily accessible and promising geophysical targets identified supports further field work and investigation.

From a small number of samples, the initial analytical results and field observations including 3.7% copper and 1.4 ppm silver within a carbonate breccia and magnetite with 356 ppm cobalt and 900 ppm copper is highly encouraging.

Coupled with the results of inversion modelling of available gravity and magnetic data at the Torrens project there is a number of near surface, sizeable geophysical targets that warrant further field assessment of the potential with queries to try and understand such as:

- Determining background thresholds and anomalism of metals (including Cu, Au, Ag, U, Mo, Co, As, Zn),
- Establishing a temporal association between mineralisation and potential intrusives,
- Structural geology and setting and identification of significant structures that may have played a key role in facilitating mineralisation,
- Identification of alteration styles present,
- Constraining geophysical targets.

Future exploration activities could include:

- Wide-spaced first pass ground truthing and surface sampling programs (soils, streams, rock chipping). Identifying areas of note from historical and reprocessed data and allows in-situ observations to be made of lithology, structure and potential mineralisation.
- Wide-spaced first pass tenement wide gravity survey and infill gravity surveys. Crucial to the Torrens program is the collection of new data to fill large areas of unknown effectively greenfield ground. Where historical data is available this data can be reprocessed and refined with additional infill data. 3D inversion modelling to accompany magnetic and gravity data.
- Shallow RC drilling at most prospective targets as established by surface sampling geochemistry results and geophysical data. Shallow drilling allows for a larger area to be covered and for geochemical vectoring to be applied to prioritise deeper targets.
- Follow-up geophysical surveys and deeper diamond drilling based on preliminary shallow drilling program. Dependent on initial drill results downhole geophysics can be implemented or additional closer spaced data collected with results of modelling applied to an increased accuracy in drilling deeper targets.
- Further downhole IP surveys to identify and vector into potential deposits using all available magnetic and gravity data including 3D inversion modelling and available data analysis techniques from industry experts.
- Geochemical analysis and modelling of downhole and surficial geochemistry to vector to source and accompany downhole geophysical data is an ongoing process continually feeding back into modelling and target prioritisation.

References

Jeffrey, R.G., Desertstone NL. Annual Report for Exploration Licence EL1956 Lake Torrens, South Australia for the Period 27th July 1996 to 26th July 1997. *Open File envelope (ENV) 9094*

Johnson, G., Desertstone NL. Annual Report for Exploration Licences EL1956 and EL2660 Lake Torrens, South Australia for the Period 27th July 1995 to 26th July 1996. *Open File Envelope (ENV) 9094*

Appendix: Geochemistry Analysis Detection Limits

Table 2: Bureau Veritas Analyte Summary Table with Detection Limits

Table 1: Bureau Veritas Analyte Summary Table with Detection Limits							
Analyte	**Description**	**Method**	**Lower Detection Limit**	**Units**	Samples sorted and dried. Primary preparation by crushing the whole sample. Whole sample then pulverised in a vibrating disc pulveriser.		
ROBTGA	Loss on Ignition	LOI1000	0.01	%			
Analyte	**Description**	**Element**	**Lower Detection Limit**	**Units**			
FA003	40gm Fire Assay	AU1	1	ppb			
		AU2	1	ppb			
		Pt	1	ppb			
		Pd	1	ppb			
Analyte	**Description**	**Element**	**Lower Detection Limit**	**Units**	**Element**	**Lower Detection Limit**	**Units**
XRF202	X-Ray Fluorescence Spectrometry ¬† on oven dry (105'C) sample	SiO2	0.01	%	Ba	0.001	%
		Al2O3	0.01	%	V	0.001	%
		CaO	0.01	%	Zr	0.001	%
		Fe2O3	0.01	%	Cu	0.001	%
		K2O	0.001	%	Ni	0.001	%
		MgO	0.01	%	Co	0.001	%
		Na2O	0.01	%	Pb	0.001	%
		P XRF	0.001	%	Zn	0.001	%
		S XRF	0.001	%	As	10	ppm
		TiO2	0.01	%	Cl	0.001	%
		MnO	0.01	%	Sr	0.001	%
		Cr	0.001	%	Sn	0.001	%
Analyte	**Description**	**Element**	**Lower Detection Limit**	**Units**	**Element**	**Lower Detection Limit**	**Units**
LA101	Laser Ablation Inductively Coupled Plasma Mass Spectrometry	Ag_LA	0.1	ppm	Ni_LA	2	ppm
		As_LA	0.2	ppm	Pb_LA	1	ppm
		Ba_LA	0.5	ppm	Pr_LA	0.01	ppm
		Be_LA	0.2	ppm	Rb_LA	0.05	ppm
		Bi_LA	0.02	ppm	Re_LA	0.01	ppm
		Cd_LA	0.1	ppm	Sb_LA	0.1	ppm
		Ce_LA	0.02	ppm	Sc_LA	0.1	ppm
		Co_LA	0.1	ppm	Se_LA	5	ppm
		Cr_LA	1	ppm	Sm_LA	0.01	ppm
		Cs_LA	0.01	ppm	Sn_LA	0.2	ppm
		Cu_LA	2	ppm	Sr_LA	0.1	ppm
		Dy_LA	0.01	ppm	Ta_LA	0.01	ppm
		Er_LA	0.01	ppm	Tb_LA	0.01	ppm
		Eu_LA	0.01	ppm	Te_LA	0.2	ppm
		Ga_LA	0.1	ppm	Th_LA	0.01	ppm
		Gd_LA	0.01	ppm	Tl_LA	0.2	ppm
		Ge_LA	0.05	ppm	Tm_LA	0.01	ppm
		Hf_LA	0.01	ppm	U_LA	0.01	ppm
		Ho_LA	0.01	ppm	V_LA	0.1	ppm
		In_LA	0.05	ppm	W_LA	0.5	ppm
		La_LA	0.01	ppm	Y_LA	0.02	ppm
		Lu_LA	0.01	ppm	Yb_LA	0.01	ppm
		Mn_LA	1	ppm	Zn_LA	5	ppm
		Mo_LA	0.2	ppm	Zr_LA	0.5	ppm
		Nb_LA	0.01	ppm	Ti_LA	1	ppm
		Nd_LA	0.01	ppm			