

Final Report

SEL 21/2022

14 September 2023 to 20 July 2026

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Summary and résumé of the exploration philosophy

Direct Lithium Pty Ltd (DLPL) is the owner and operator of Special Exploration Licence (SEL) 21/2022 a combined Category 1 (metallic minerals) and Category 6 (geothermal substances) licence of 2179 km² located in the Midlands of Tasmania. The principal goal of DLPL's work on this tenement was the location of resources suitable for geothermal power generation. Secondary goals include cascading and direct-use applications for geothermal energy as well as the extraction of economically significant metal salts from geothermal brine. Previous work in this area includes the definition of the Lemont geothermal resource (~260,000 PJ_{th} of heat within a 1019 km³ reservoir located between 3 km and 5 km depth) by KUTh Energy Limited in 2009.

This third and final report covers work completed since grant of the permit on 13 September 2023 and is the third and final report lodged for this licence. Work commenced and/or completed on the tenement included:

- *Generation of a new 3D MT model for the Lemont resource area*
- *Reprocessing and interpretation of legacy active seismic lines*
- *Reprocessing and evaluation of legacy potential field data (gravity and magnetics) including lineament analysis*
- *Structural interpretation and development of a local tectonostratigraphic model*
- *2.5D/3D modelling of legacy gravity data*
- *Reprocessing of passive seismic (ANT) data*

Work completed during the term of the permit applied new and updated data processing techniques to the considerable legacy geophysical dataset available across the tenement. The results of this work have generated new interpretations that have materially altered the existing view of granite distribution beneath all of central-east Tasmania. This work led to the identification of new geothermal targets and altered the play definition of the existing Lemont geothermal resource.

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1. INTRODUCTION

Direct Lithium Pty Ltd (DLPL) is owner and operator of the Lemont Special Exploration Licence (SEL) 21/2022. The principal target of DLPL's work at this site to date is the location of heat resources suitable for geothermal power generation.

This final report covers work completed from grant of the permit on 14 September 2023 to its surrender during 2026. It is the third and final report lodged for this tenement.

1.1 Mapping Datum and References

Unless otherwise stated all maps, plans and geographical references included in this report have been produced using GDA94 (MGA55). SEL 21/2022 extends across the South Esk (8314), St Pauls (8414), Lake Sorell (8313) and Little Swanport (8413) maps of the 1:100,000 TASMAP topographic series.

1.2 Tenement Status

DLPL is the sole holder and operator of SEL 21/2022 (**Figure 1**) granted for a period of five years to search for geothermal substances (Category Type 6) and metallic minerals and atomic substances (Category Type 1). Tenure details of SEL 21/2022 are provided in **Table 1**.

Tenement Type	SEL
Number	21/2022
Commodity	Geothermal (6), Metallic Minerals (1)
Licensee	Direct Lithium Pty Ltd
Operator	Direct Lithium Pty Ltd
Area	2179km ²
Date Granted	14 September 2023
Surrender Date	20 July 2026

Table 1: Tenure details for SEL 21/2022

1.3 Location and access

SEL 21/2022 encompasses a broad section of the Tasmanian midlands, extending northwards from Oatlands in the south to the South Esk River in the north (**Figure 1**). The majority of the tenement lies to the east of the sealed Midlands Highway, the primary access route. Secondary road access is excellent throughout the tenement with options including the Lake Leake Road and the Esk Main Road to the north as well as numerous other minor roads, farm and forestry tracks. A rural area, townships located within the tenement include Campbell Town (pop. 823) and Avoca (pop. 192) in the north, Ross (pop. 410) and Oatlands (pop. 728) in the south.

Unavailable areas (exclusions) from SEL 21/2022 include several small mining leases (quarries), private reserves, nature reserves, historical sites and a gas pipeline easement (**Figure 1**). Also

excluded from the northwest of the tenement area is a pre-existing category 1 exploration licence EL 7/2010.

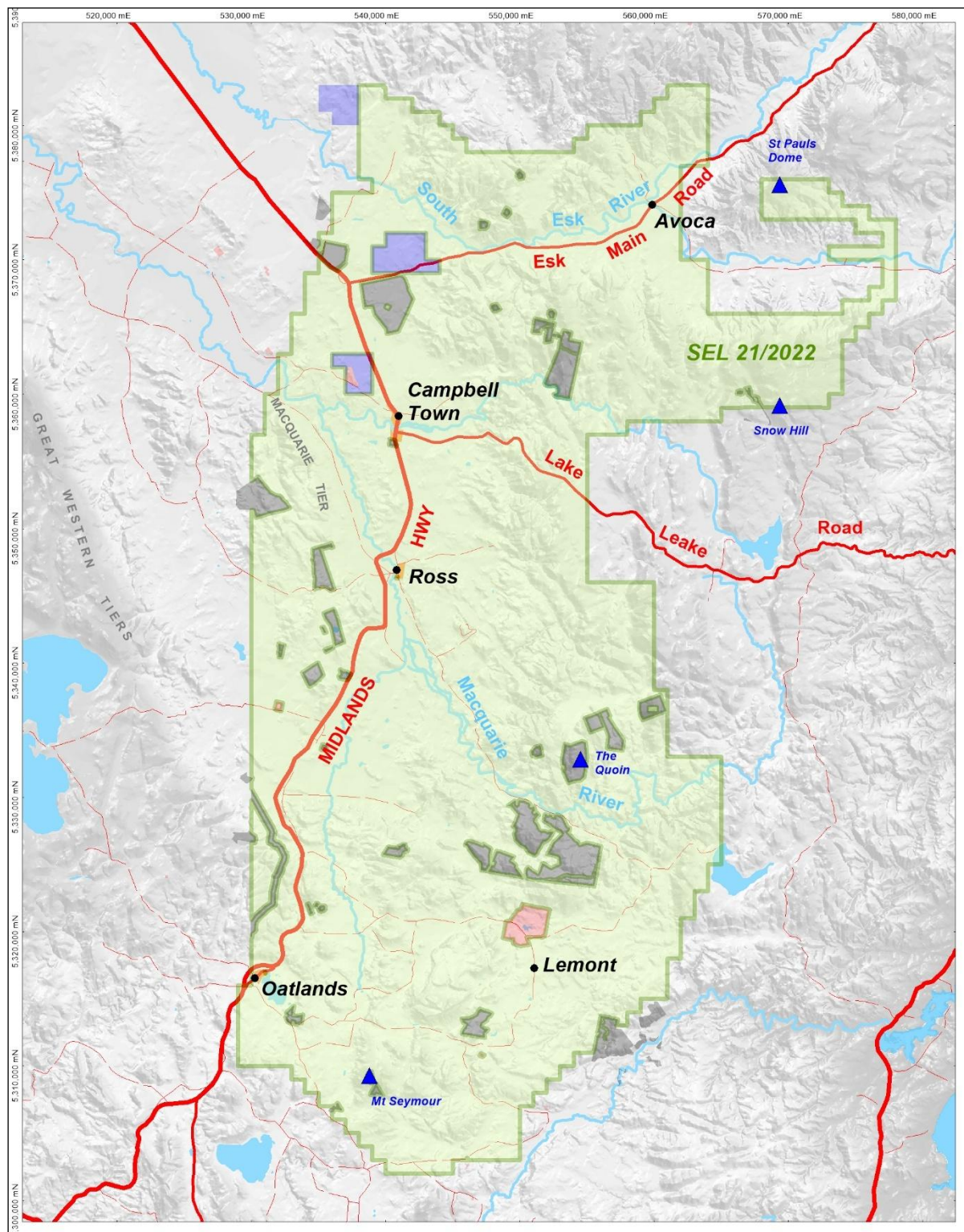


Figure 1: Location map of DLPL Geothermal Exploration Licence SEL 21/2022 (green). Mining leases are shaded red; blue shaded area is EL 7/2010. All other unavailable areas are shaded grey.

1.4 Topography, Vegetation and Land Use

The Midlands of Tasmania lie within a northwest-southeast trending graben bound to the south, west and east by dolerite ranges that include areas of significant relief in the Great Western Tiers, the eastern coastal ranges and the western Fingal Valley. By contrast, areas within the graben are characterised by a relatively low relief (undulating) terrain that are now largely developed for agricultural use. Elevations within SEL 21/2022 vary between 160 to 1010mASL; prominent peaks within the tenement include Mt Seymour (739m) and The Quoin (568m) in the south and Snow Hill (974m) and St Pauls Dome (1010m) in the north (**Figure 1**).

The majority of SEL 21/2022 lies within the Macquarie River catchment, the Macquarie and Elizabeth Rivers draining northwest off the coastal ranges towards the Tamar Valley in the north of the state. The north of the tenement area also includes a portion of the South Esk River which drains westwards from the Fingal Valley in the far northeast.

Land tenure within SEL 21/2022 is almost entirely private freehold, the majority of which is active farmland. Agriculture is dominated by dryland grazing (sheep) on improved and derived pasture although irrigated crops and (to a lesser extent) irrigated pasture are increasingly common. Areas in the east of the tenement include minor amounts of plantation timber and native forest production. Patches of remnant native vegetation, predominantly lowland grassland and dry eucalypt forest/woodlands, are observed across the tenement becoming more common in the east. Small areas of acacia woodland and rare patches of coastal heath are also present throughout along with minor amounts of wet eucalypt forest in the eastern ranges.

1.5 Geology and Geophysics

1.5.1 Surface Geology

The surface geology of SEL 21/2022 is mapped in the 1:250,000 digital geological atlas and is summarised in **Figure 2**. With the exception of a small area in the northeast of the tenement, rocks observed at surface are cover sequences no older than late-Permian in age. Cover conceals a major geological boundary that divides Tasmania into two distinct basement terranes located in the west and east of the State. Distinguished by age, lithology and deformation these two regions are ‘believed to have been juxtaposed at a NNW-trending dislocation’ inferred to coincide with the Tamar Valley region in central Tasmania (Burrett & Martin, 1989; **Figure 2**, inset). The Western Tasmania Terrane (WTT) is visible in exposures and drill intersections west of SEL 21/2022 (James, 2019) and comprises variably deformed and metamorphosed Pre-Cambrian basement (Oonah Formation and correlates), deformed Cambrian volcanics and sediments of the Dundas Trough and Mt Read Volcanic Belt and Ordovician-Silurian shelf sediments of the Wurrawina Supergroup. In contrast, basement rock exposure and drill intersections in the east and northeast comprise low-grade deep-water meta-sediments of the Panama Group, part of the broader Ordovician – Devonian Mathinna Supergroup of the Eastern Tasmanian Terrane (ETT). A sequence of turbiditic, sand and siltstone deposits, these rocks have been subject to several stages of deformation, including the widespread mid-Devonian Tabberabberan Orogeny (Cayley et al., 2002). Similarities between the deformation and depositional style of the Mathinna Supergroup and units within the Lachlan Fold Belt (LFB) of mainland Australia have led to ongoing attempts to correlate the two (Powell & Baillie, 1992; Reed, 2001; Cayley 2011). Assumed to be a faulted contact and often referred to in literature as the Tamar Fracture System (TFS), the nature of the boundary between east and west basement terranes has not yet been uniquely constrained by drilling.

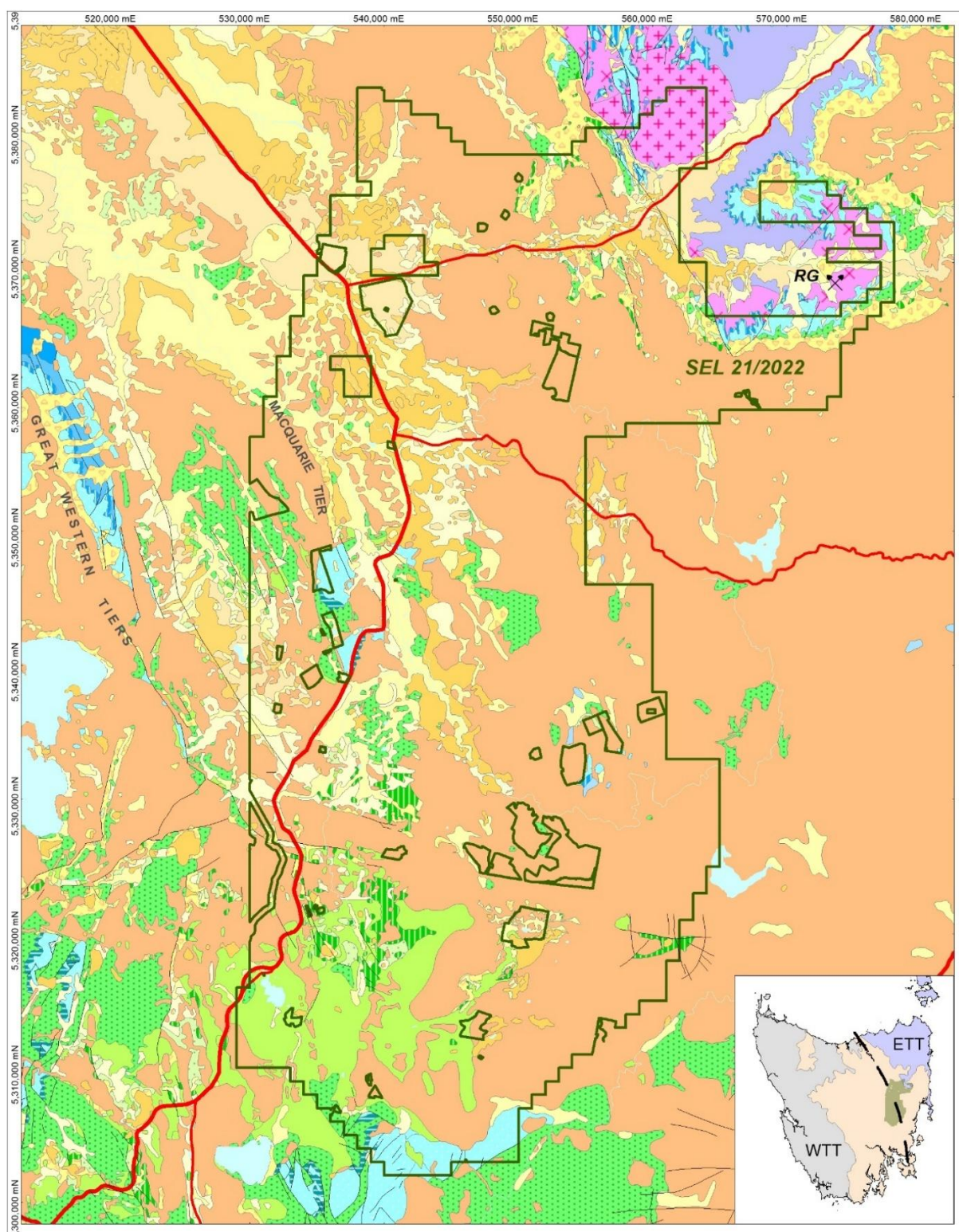


Figure 2: Surface Geology of SEL 21/2022 based on the 1:250,000 digital geology. Purple colours are Mathinna Supergroup; Pink, Granitoids; Blue/Green, Lower/Upper Parmeener Supergroup; Orange, Tasmanian Dolerite; yellow-orange Tertiary basalt and pale tan/yellow Tertiary-Quaternary sediments and alluvium. RG indicates the location of the former tin mine at Royal George. Inset bottom right: map of the state showing areas of western Tasmanian Terrane (WTT; grey) and eastern Tasmanian Terrane (ETT; purple) outcrop and the inferred terrane boundary (dashed line) beneath cover sequences (orange).

Basement rocks across Tasmania are intruded by extensive Devonian/Carboniferous-aged (Tabberabberan) granitoids. Intrusive rocks exposed at surface in northeast SEL 21/2022 comprise a series of fractionated I- and S-type alkali-feldspar granites collectively referred to as the Ben Lomond Batholith. Individual plutons recognized within this group include the Gipps Creek, Henbury and Royal George granites. Emplaced at relatively shallow depths these rocks are known to be high-heat-producing granites (HHP) and are associated with greisen and greisen-vein tin/tungsten deposits that have been exploited at several locations, including at the former Royal George mine south of Avoca (Corbett et al., 2014; Collins et al, 1981; Everard & Duffett, 2016). Where exposed at surface, granites of the Ben Lomond Batholith are observed to extend south and west beneath younger cover and may continue at depth beneath the tenement area.

Cover sequences that conceal basement rocks throughout SEL 21/2022 include flat-lying sediments of the Parmeener Supergroup. Deposited unconformably atop basement as part of the broader Permo-Triassic Tasmania Basin these rocks consist of a 'Lower' sequence of glacio-marine sediments that grade upwards into 'Upper' fluvio-lacustrine sediments. Upper Parmeener sequences include coal seams with prospects identified at Bonneys Pains in the north, Woodbury and York Plains in the south, the latter having been mined historically. Borehole intersections and active seismic data within and around the tenement have been interpreted (historically) to indicate total thickness of Parmeener sediments ranging up to ca.1km (Beardsmore, 2009).

Within SEL 21/2022 Parmeener Supergroup rocks are now largely preserved beneath extensive exposures of erosion-resistant dolerite sills. Intruded into the older sediments during the Jurassic-era initiation of Gondwana supercontinent break-up, dolerite is typically a sub-horizontal layer between 200 and 300m thick. Localised complexities, such as multiple intrusive layers and increased thicknesses around feeder zones, are also observed within this area (Beardsmore, 2009).

Overlying Tasmania Basin sediments and their intrusive rocks are late Cretaceous – Oligocene non-marine sediments of the Tamar Graben/Longford Sub-Basin. An onshore propagation of the Bass Basin and part of a broader extensional event related to the final break-up of Gondwanaland, this NNW-trending basin likely resulted from the reactivation of existing fault structures (Stacey, 2007). The location and orientation of the graben structure coincides strongly with the inferred location of the concealed basement terrane boundary (TFS; Burrett & Martin, 1989).

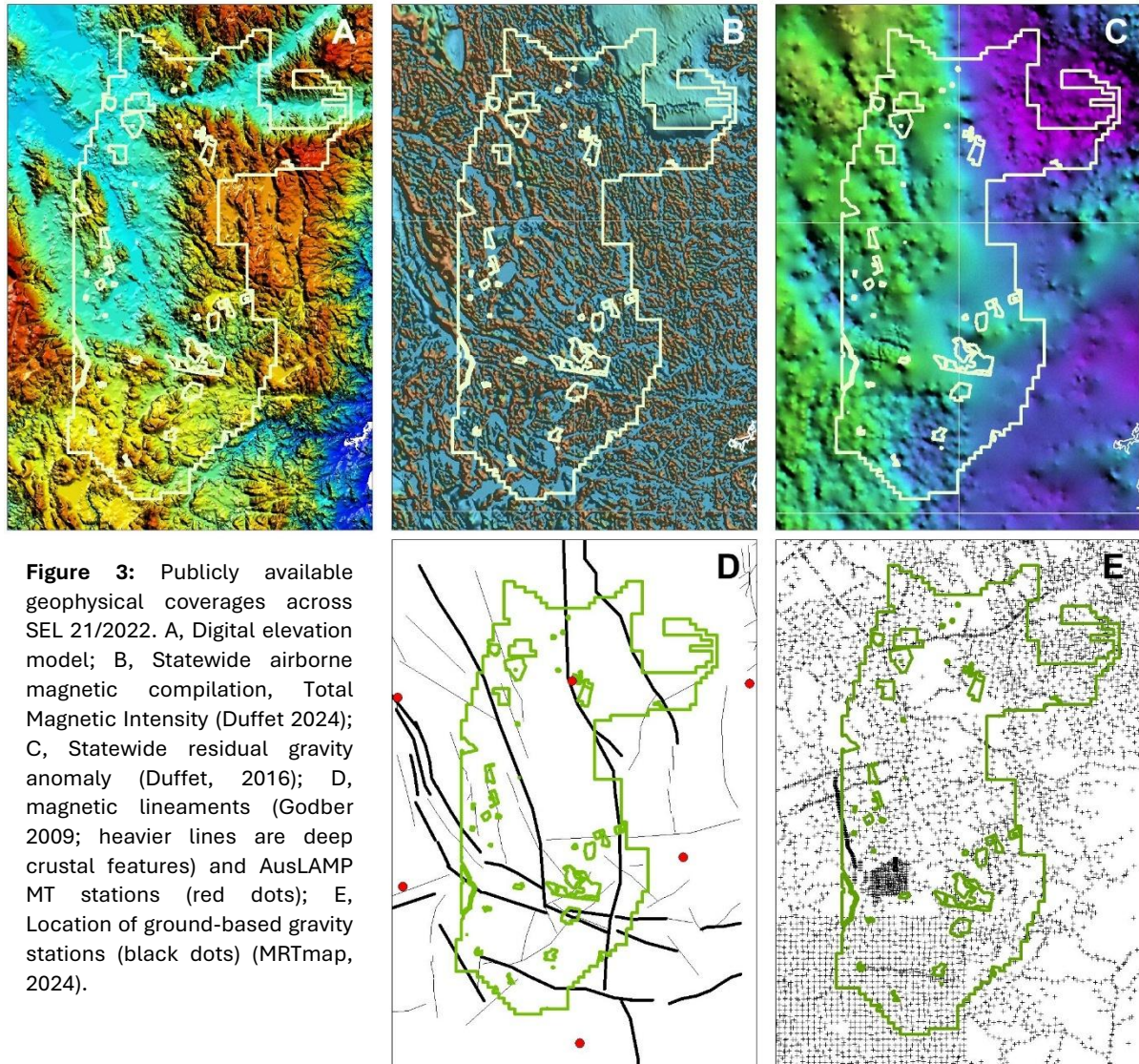
Also present within cover sequences on SEL 21/2022 are Oligocene intraplate basalt flows and eruptive centres, the latter often forming distinctive 'sugarloaf' hills. Younger deposits, including relatively minor amounts of Quaternary sediments and alluvial deposits complete the stratigraphy of this area.

1.5.2 Geophysics

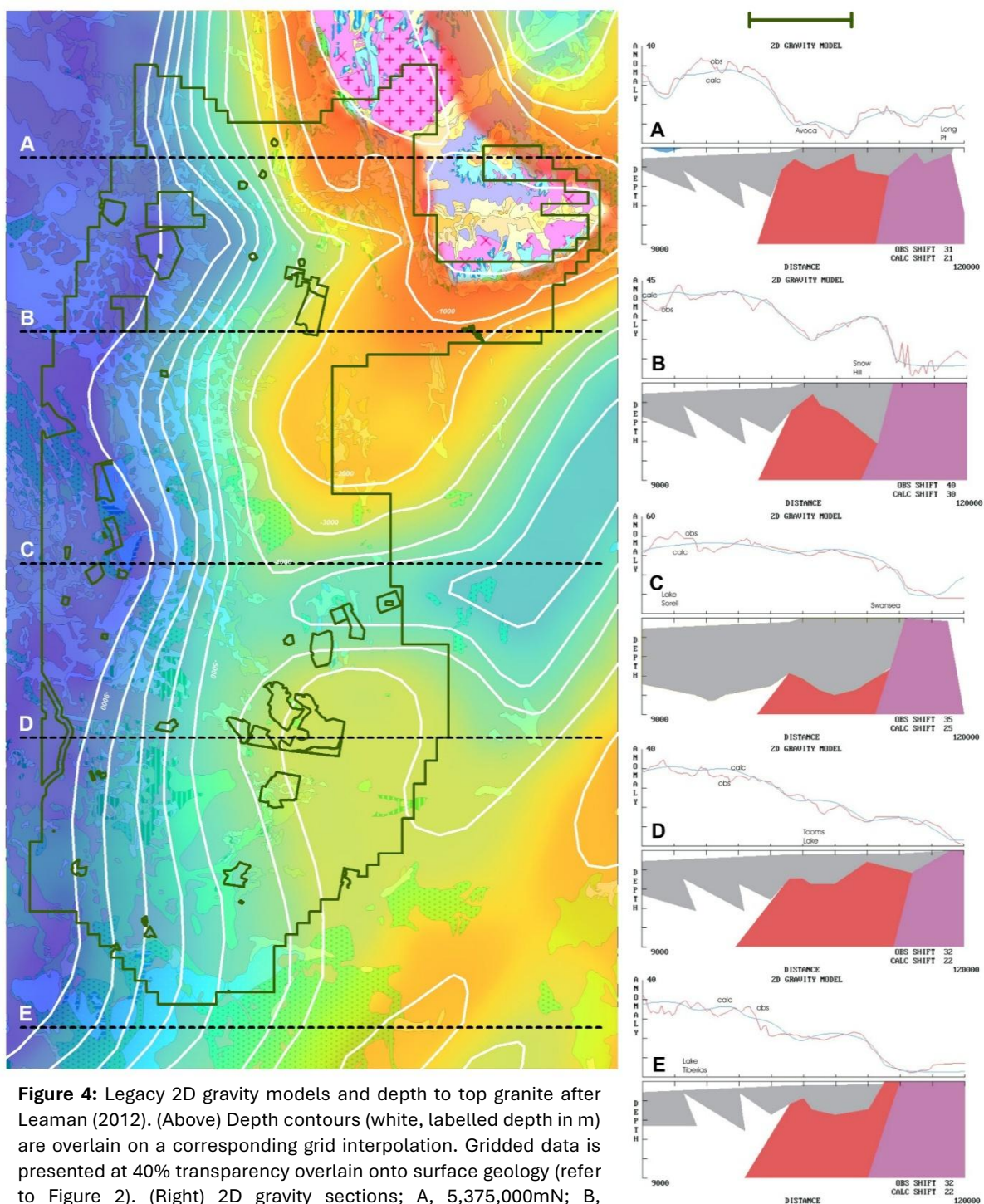
Extensive cover sequences across the Tasmanian Midlands make the availability of quality geophysical data of particular relevance for interpreting the nature and relationships of basement rocks. Gravity, magnetic and digital terrain coverages across the tenement area are excellent; comparisons of these datasets reveal distinct NNW-trending structures associated with Tertiary extension and graben formation (**Figure 3**). To the south these trends truncate against EW trending features, a pattern interpreted as the horsetail termination of normal faults caused by local contrasts in basement structure and composition (Stacey, 2007; Berry, 2019).

2D modelling of gravity data (Leaman, 2012) indicates that a low in the northeast of the tenement associated with outcropping granites of the Ben Lomond Batholith is consistent with deeply-

rooted plutons (>9 km total depth; **Figure 4**). This modelling further predicts a blind batholith extending south beyond the boundary of SEL 21/2022. The western extent of granite subcrop is a steep, north-south trending boundary bisecting the tenement - the so-called ‘granite wall’ of eastern Tasmania (Leaman, 2012; **Figure 4**).



Two onshore active seismic lines cross into the west of SEL 21/2022 but are of moderate quality, only. Previous interpretations of these lines do not provide confirmation of the ‘granite wall’ gravity model (**Figure 5**). However, they do provide insight into deeper crustal structure, suggesting a regional thin-skinned pattern of NE-dipping listric basement faults, many of which show signs of later reactivation (Cooper et al., 2009). Basement rocks are identified as Mathinna Supergroup and the listric faults are interpreted to coalesce into a regional detachment surface dipping shallowly NE between 6 - 8km. A deep, offshore seismic line (Drummond et al., 1991) extending north-south along the east coast shows a relatively non-reflective upper crust extending to depths of between 10 and 12km underlain by en-echelon blocks of more reflective basement material. Differences in basement character between northern and southern ends of the offshore line are attributed to the presence of deep oceanic crust in the north versus Proterozoic continental crust in the south. This observation is consistent with the theorized horsetail termination of the extensional fault graben of the Longford sub-basin.



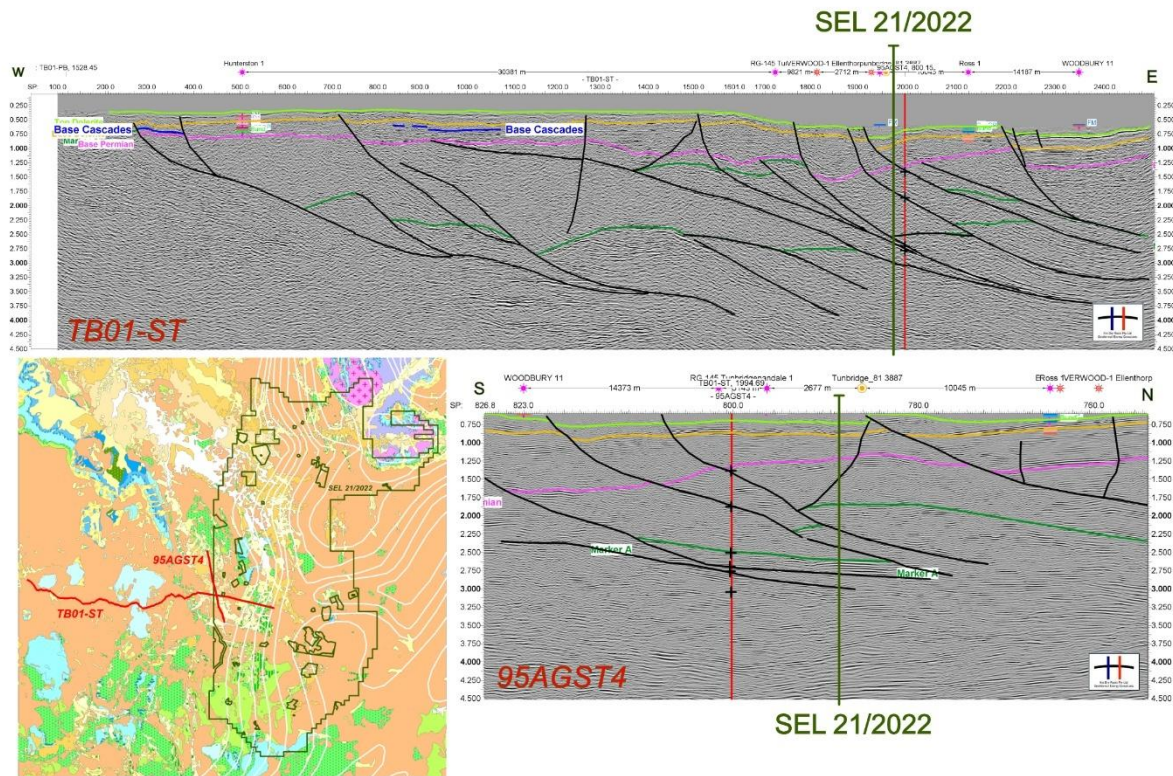


Figure 5: Previous interpretation of legacy seismic lines (amplitudes) TB01-ST (Great South Lands Minerals, 2001) and 95AGST4 (AGSO, 1995). Orthogonal to each other, line intersection is shown by a red vertical and intersection with SEL 21/2022 is a green vertical. Section vertical axis is two-way time. Interpreted fault surfaces are black lines, the pink horizontal lines are the interpreted depth of base Permian (Parameener). No conclusive evidence of granite intrusion is visible despite gravity prediction of deep-rooted plutons beneath the east of line TB01-ST (see contours, inset left).

Regional passive seismic surveys undertaken across northern Tasmania as part of the WOMBAT project image large-scale crustal architecture, including the inferred TFS. Initial three-dimensional (3D) tomographic models of teleseismic data revealed a distinct NNW-trending zone of low seismic velocity extending southwards from the Tamar Graben to the east coast, coinciding with the location of the inferred TFS (Rawlinson, et al., 2010). To the east of this feature is a region of higher wave speed and reduced Moho depth (thinner crust) that correlates with the location of the ETT. A subsequent study using Ambient Noise Tomography (ANT) mapped the low velocity zone in more detail at depths <15km describing a consistently broad (~50km wide) feature that follows a path southeast from the Tamar Graben, curving to the south in the vicinity of SEL 21/2022 (Young et al., 2011). Lithospheric models based on these data support the conclusion of Drummond et al. 1991 *i.e.* that the WTT is underlain by Proterozoic continental crust and the ETT by mafic oceanic crust. Likely part of a broader Paleozoic-era passive margin, the ETT has been shortened and accreted against the WTT by orogenic events culminating in the mid-Devonian Tabberabberan Orogeny. The nature of contact between terranes is inferred to be thin-skinned, the TFS being a ‘mid-upper crustal expression of a broad and heavily deformed transitional zone’ (Young et al., 2011).

The Tamar Graben/Longford Sub-basin has a long history of investigation using electrical resistivity techniques. Studies of magnetotelluric (MT) field data identifying a possible conductive anomaly in the Tamar Valley date back to the mid-1970’s and are summarised in Ostensen (2021). A broad zone of anomalously high electrical conductivity (low-resistivity) was identified and observed to strike southwards, parallel to the NNW trending axis of the TFS. Referred to as the Tamar Conductivity Zone or TCZ, this feature was found at depth beneath

Mesozoic cover but no direct information was available regarding the nature or detailed structure of the geology associated with it. It was concluded that ‘the most likely cause of the high conductivity anomaly was a combination of the presence of high conducting fluids and graphite in pores, cracks, and or fractured rocks’ implying that this zone hosted potential for fracture permeability (Hermanto, 1992).

In 2016 a statewide survey of long-period MT data was undertaken across Tasmania as part of the national Australian Lithospheric Architecture Magnetotelluric Project (AusLAMP). Six long-period stations were located within and around SEL 21/2022 (**Figure 3d**). Interpretation of these data included the creation of a statewide 3D regional resistivity model spanning the upper crust through to lithospheric mantle (~10 to 100km depth; Ostersen, 2021). Visible within these data is a zone of low resistivity below the Tamar Valley that is spatially consistent with the previously identified TCZ. First detected at ca.3km depth in the north, by ca.10km depth it forms an arcuate west-dipping corridor ~45km wide. Extending the length of the state this feature continues to depths of around 60km, well into the lithospheric mantle. In assessing the nature of this zone Ostersen notes a strong correlation between its location and geometry and that of the TFS as identified by Young et al. (2011). Concluding that the TCZ marks the terrane boundary between WTT and ETT, Ostersen again theorises that, at depths <10km, low resistivity is likely caused by pore-fluids in shear zones.

2. PREVIOUS EXPLORATION

2.1 Category 6 Geothermal

Early heat flow studies undertaken across Tasmania produced a small number of measurements (**Figure 6**; Jaeger & Sass, 1963; Cull, 1991). Several values spatially associated with Devonian granite were found to be anomalously high ($>90\text{mWm}^{-2}$) including at Storeys Creek immediately to the north of SEL 21/2022 and at Coles Bay, to the east. The value of 159mW/m^2 determined for Storeys Creek is particularly high and has not been independently verified, however, the likelihood of elevated heat flow associated with the Ben Lomond Batholith is supported by local heat production data which indicates average values between $5 - 11\mu\text{W/m}^3$ with extremes of up to $60\mu\text{W/m}^3$ recorded (Collins *et al.*, 1981; Everard & Duffett, 2016).

The rise of interest in non-conventional geothermal energy in the 2000’s focussed attention on exploration for heat resources in Australia. In Tasmania, KUTh Energy Ltd (KUTh), noting the spatial correlation of the TCZ, TFS and HHP Devonian granite in the east of the state, undertook a campaign to identify exploitable geothermal plays at depth. Surface heat flow estimation was undertaken via a program of shallow drilling on a $20 \times 20\text{km}$ grid across eastern Tasmania. Holes were drilled up to 250m deep with at least two successive downhole temperature logs recorded several months post-drilling. A database of rock property measurements, including thermal conductivity and heat production data acquired from core samples were combined with temperature data to construct 1D heat flow models at each site. Results from this work define an area of anomalously high heat flow in central Tasmania that was spatially associated with sub-cropping Devonian granite previously inferred by gravity modelling (**Figure 6**; Leaman 2012). Of particular interest were results $>100\text{mWm}^{-2}$ from boreholes located south along strike from the HHP Ben Lomond Batholith at Charlton (105mWm^{-2}) and Lemont (118mWm^{-2}).

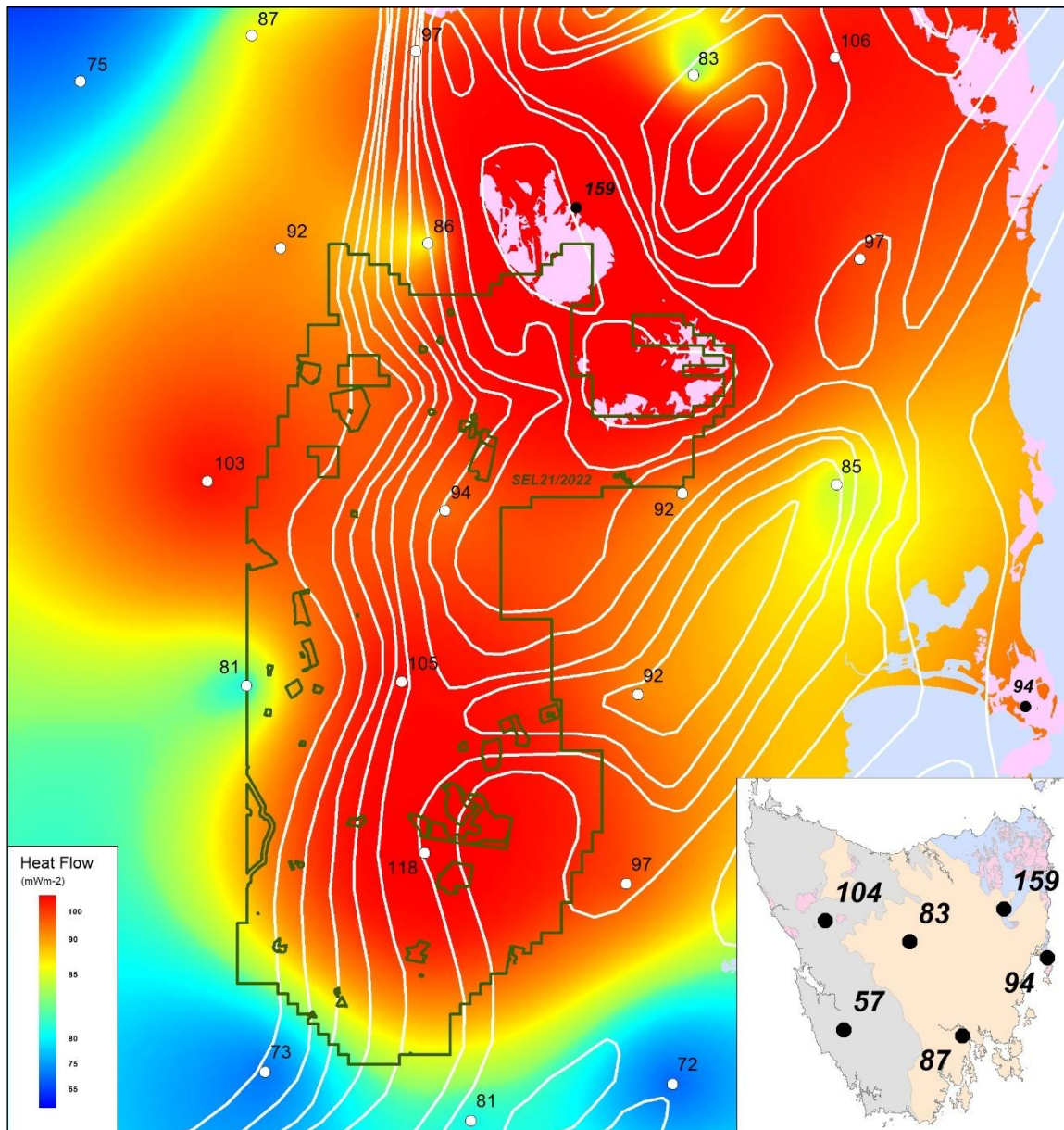


Figure 6: Legacy heat flow data points from central-eastern Tasmania superimposed upon the interpolated thermal field and the predicted depth-to-top-granite of Leaman 2012 (see also Figure 4). Black dots are pre-2000 data; white are KUTH drillholes. Granite contour interval is -1000mASL; areas of granite outcrop are shown in pink. Inset: pre-KUTH heat flow values across Tasmania superimposed upon major terrane elements (ref. Figure 2).

In 2009 KUTH commissioned Hot Dry Rocks Pty Ltd to create a 3D conductive thermal model of the Charlton - Lemont area using a combination of legacy and company acquired geological and geophysical data (Beardsmore, 2009). Heat flow inversion, constrained by surface heat flow (note: the Royal George value of Jaeger & Sass, 1963 was excluded) and temperature data were used to predict temperature increase at depth from which a stored-heat estimation was made. Initial model inversions, based on geology known and inferred from surface, drilling and 2D gravity modelling (**Figure 7a**), were unsuccessful at replicating the high heat flows recorded in the Charlton and Lemont holes. Explaining these values in the assumed conductive heat flow setting required the addition of a previously unrecognised geological unit aligned north-south along the western margin of the interpreted Devonian Granite (**Figure 7b**). Referred to as 'Unit A' this feature has no known surface projection and was postulated to be a thermally conductive body,

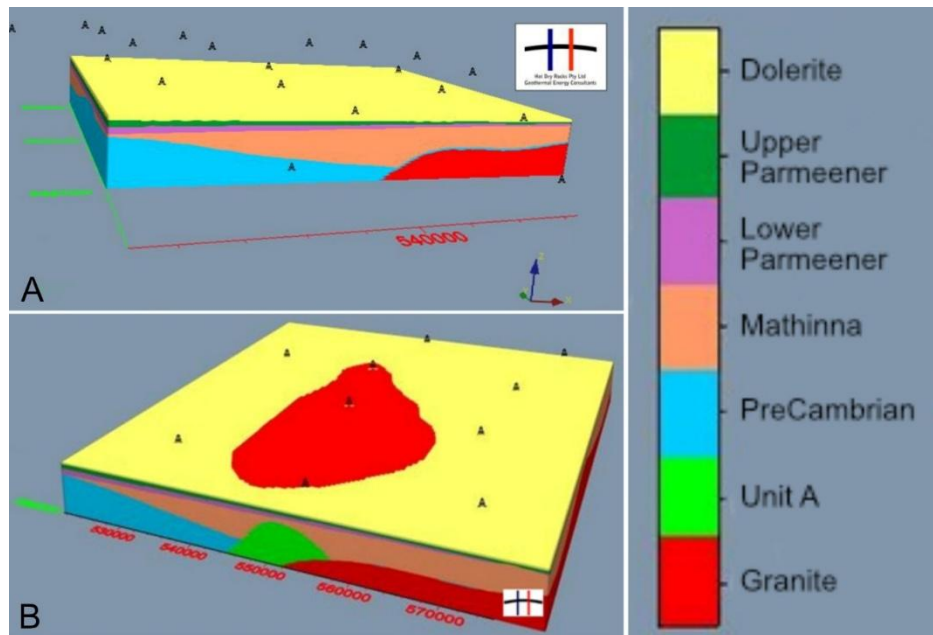


Figure 7: 3D earth models of the Charlton-Lemont area (Beardmore, 2009) showing the location of shallow heat flow constraints (boreholes); (a) initial resource model that was unable to account for anomalous heat flow; (b) subsequent resource model showing the addition of Unit A and the footprint of the resulting inferred resource area based on the 150°C isotherm at 4km depth (solid red). Refer to Figure 8 for location of the resource footprint within SEL 21/2022.

Reservoir	Stored Heat (PJ _{th})*	Volume (km ³)**	Inferred Geothermal Resource (PJ _{th})
Mathinna SG	54,260	230	54,000
Granite	26,300	108	26,000
Unit A	101,840	402	102,000
Precambrian	73,490	279	73,000
TOTAL	255,890	1019	260,000

Table 2: Estimated geothermal resource in the Charlton-Lemont geothermal play (Beardmore, 2009). Resource estimate is rounded to the nearest 1000 PJ_{th}. *Stored-heat or thermal-energy-in-place represents the amount of heat contained within a volume of rock. For the purposes of resource estimation, only that portion of the stored-heat energy which has reasonable prospects for eventual economic extraction was considered. A stored-heat estimation was made for the reservoir by assigning values of heat capacity and density to the relevant lithologies in the thermal model. The stored-heat estimate considered only that portion of energy present above a 'base' or 'rejection' temperature of 70°C. This value represents the temperature at which a low-temperature organic Rankine-cycle binary power plant rejects fluid and is therefore the limit on the amount of energy that can be drawn from the geothermal resource. **Reservoir volume was defined based upon a cut-off temperature of 150°C and a maximum depth of 5km. Cut-off temperature is the minimum economic reservoir fluid temperature for commercial energy extraction and in this instance was based upon the requirements of a low-temperature organic Rankine-cycle binary power plant. Geothermal wells now exceed 7 km in places and a correspondingly larger resource could be inferred.

either a granodiorite or basement sedimentary unit with a thermal anisotropy caused by vertical cleavage. Following refinement of the geological model, stored-heat estimation was carried out and a contained heat resource of around 260,000PJ was inferred within a 1019km³ reservoir of granite and basement sediment located between 3 to 5km depth. Temperatures of up to 200°C were predicted at 5km depth within the hottest part of the resource area. The geothermal play was considered to be an Enhanced Geothermal System (EGS) target and the heat anomaly attributed to the presence of HHP granite at depth (Beardsmore, 2009). The footprint of this resource is now fully contained within licence SEL 21/2022 (**Figure 8**). Later updates to this resource estimate relate to changes in the code under which they were reported and do not reflect any alteration to the underlying geological or geothermal interpretation (Beardsmore, 2011).

Alongside their heat flow work, KUTh undertook a series of regional broadband MT data acquisitions across the TFS to test its potential as a fractured geothermal play. Initial reconnaissance (2D lines) detected a conductive zone aligned with the known TCZ and extending south into the area of anomalous heat flow at Lemont (Goh and Holgate, 2009). Further MT data acquisition across the resource enabled 3D modelling, the results of which indicated strongly conductive zones that were aligned with both NNW and ~EW Tertiary fault trends and magnetic lineaments (**Figure 8**; Soyer & Battaglini, 2010). Two planar EW striking structures were modelled beneath the Lemont resource area, a shallowly north-dipping anomaly in the north and a moderately south-dipping anomaly in the south. Vertical sections through these features defined an inverted V-shape, the apogee of which was projected to lie beneath the Lemont bore hole (surface heat flow 118mWm⁻²). The spatial coincidence of fracture trends, electrically-conductive MT anomalies and anomalously high heat flow led to re-interpretation of the Lemont anomaly as a fracture-permeable hot rock play in which advection was driven by heat evolved from local HHP granites (Holgate, 2011). This view was further reinforced by subsequent geo-mechanical modelling (Mortimer, 2010).

Following acquisition of the state-wide AusLAMP MT survey in 2016, Ostensen (2021) re-modelled the KUTh broadband MT database, incorporating the long-period data. 3D models constructed across the area previously modelled by Soyer & Battaglini (2010) produced broadly compatible results. A series of electrically conductive anomalies were detected below 1km that intensified and broadened with depth, linking together below 3.7km to form an arcuate corridor of low resistivity curving south-east across the survey area. However, differences to previous model versions were also apparent; Ostensen's models showed more detailed resistivity structure with a stronger vertical exaggeration, lateral shifts and more extreme resistivity values compared to the earlier work. Subsequent review of the available MT data and models on behalf of DLPL by Vox Geophysics Pty Ltd (Vox) indicated that issues existed with both models (Selway, 2024a). Preliminary 3D model reprocessing was undertaken as part of this work and it was concluded that a new, updated model was warranted.

In 2021 a collaborative project between the Institute of Mine Seismology (IMS), MRT and DLPL undertook regional passive seismic data acquisition across the Tasmanian Midlands. The purpose of the survey, as detailed in Hill et al., (2024) was to further evaluate the geothermal potential of the Lemont area by mapping crustal velocities (V_s) using ambient noise tomography (ANT). When used in combination with MT data, ANT provides a powerful method for independently constraining the likely nature of low-resistivity anomalies as fluid-filled fractures should also be characterised by low V_s . A network of 144 portable 5Hz geophones were deployed across the Midlands over a four-day period (**Figure 9**). Results of this work included two versions of ANT model, the first an undocumented, probably incomplete, version produced in 2021, the

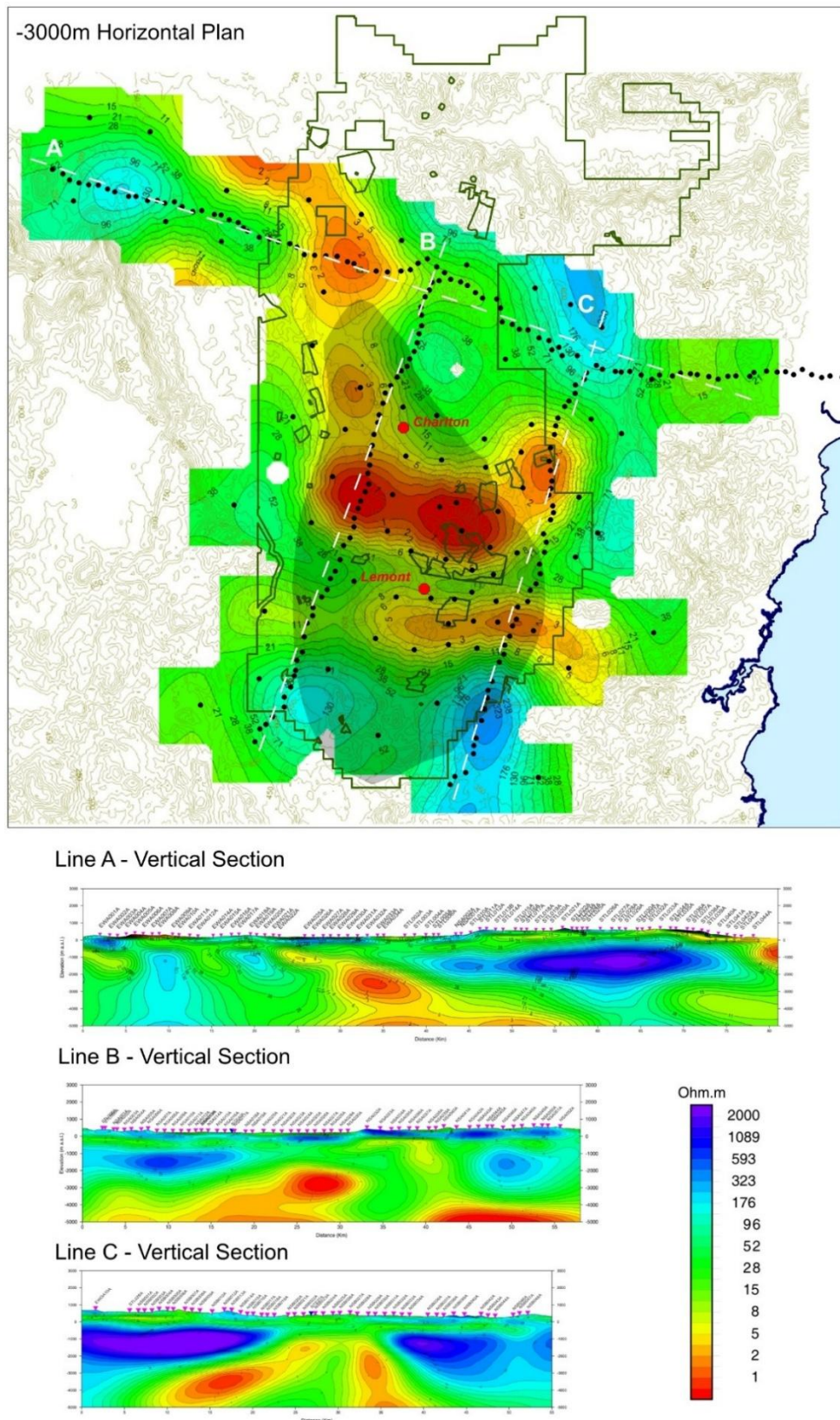


Figure 8: 3D MT model results from KUTH southern midlands broadband MT data (Soyer & Battaglini, 2010). Model results shown include the -3000m slice (top) with outline of SEL 21/2022 (green), MT data locations (black dots), Charlton and Lemont drill holes (red dots) and inferred resource outline (shaded area). The locations of vertical section lines (bottom) are shown on the plan as dashed white lines labelled A, B and C. Vertical exaggeration of section lines is 2:1.

second that of Hill et al., 2024. The latter authors, comparing their results to the MT models of Soyer & Battaglini (2010) and Ostersen (2021) concluded that some correlation between low-velocity and low-resistivity zones exists, most particularly in the north-west of the modelled area. However, comparisons between the two ANT versions reveal significant differences, including strikingly different depth extents (**Figure 9**). A better understanding of the discrepancies between these models is required to support further interpretation of their geological and geophysical significance to this area.

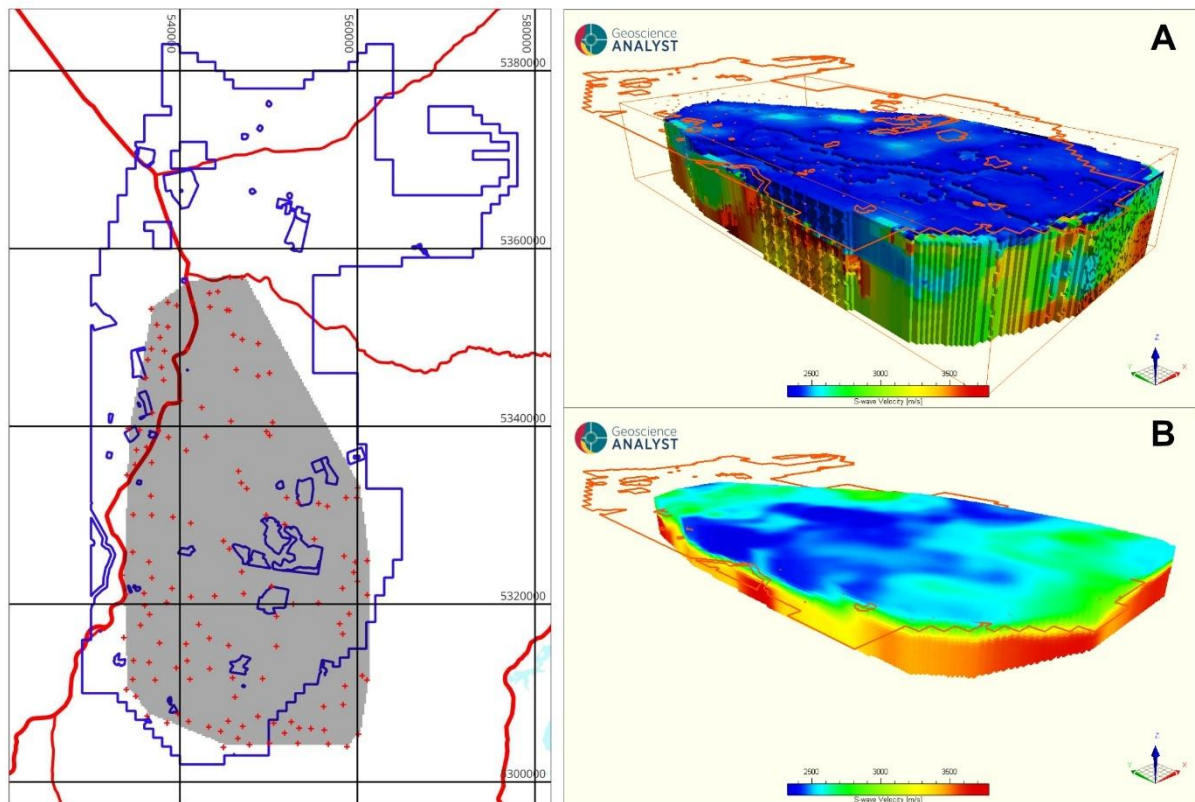


Figure 9: 2021 Lemont passive seismic acquisition. Left, plan view, location of geophones (red dots) within the silhouette of the ANT model area (grey). Right, top, view from SW of the undocumented 2021 ANT model; bottom, the same view of the 2024 ANT model of Hill et al. 2024. Both models are absolute V_s , colour scale as shown.

2.2 Category 1 Minerals

The potential for fracture permeable systems of warm/hot geothermal fluids circulating within and adjacent to fractionated granites of (or akin to) the Ben Lomond Batholith raises the possibility of economically significant fluid chemistry, particularly lithium salts. Global average upper crustal concentration of lithium is estimated to be around 35 ppm; lithium concentrations derived from rock samples within the Ben Lomond granites are elevated above this (**Figure 10**). Several historic lithium prospects are recorded associated with zinnwaldite in greisen tin/tungsten mineralisation in the Gipps Creek/Storeys Creek area (**Figure 10**) and recent analyses of rock samples from these sites has detected significant lithium mineralisation (including one value over 9000 ppm (2% Li_2O) (TinOne, 20 July 2023, <https://tinone.ca/>). Mobilisation of lithium ions from granites into circulating groundwater systems has been widely observed and high lithium concentrations (ca. 200 mg/L) are known from a number of active geothermal sites worldwide (e.g United Downs, Cornwall, UK; Upper Rhine Graben, Germany;

Salton Sea, California, USA). A range of direct extraction technologies are available to concentrate lithium salts from water and these can be applied to geothermal brines. Temperatures required for lithium enrichment are not as high as those required for geothermal power generation implying targets may be encountered at relatively shallow depths including at locations closer to granite outcrop in the north of the tenement area.

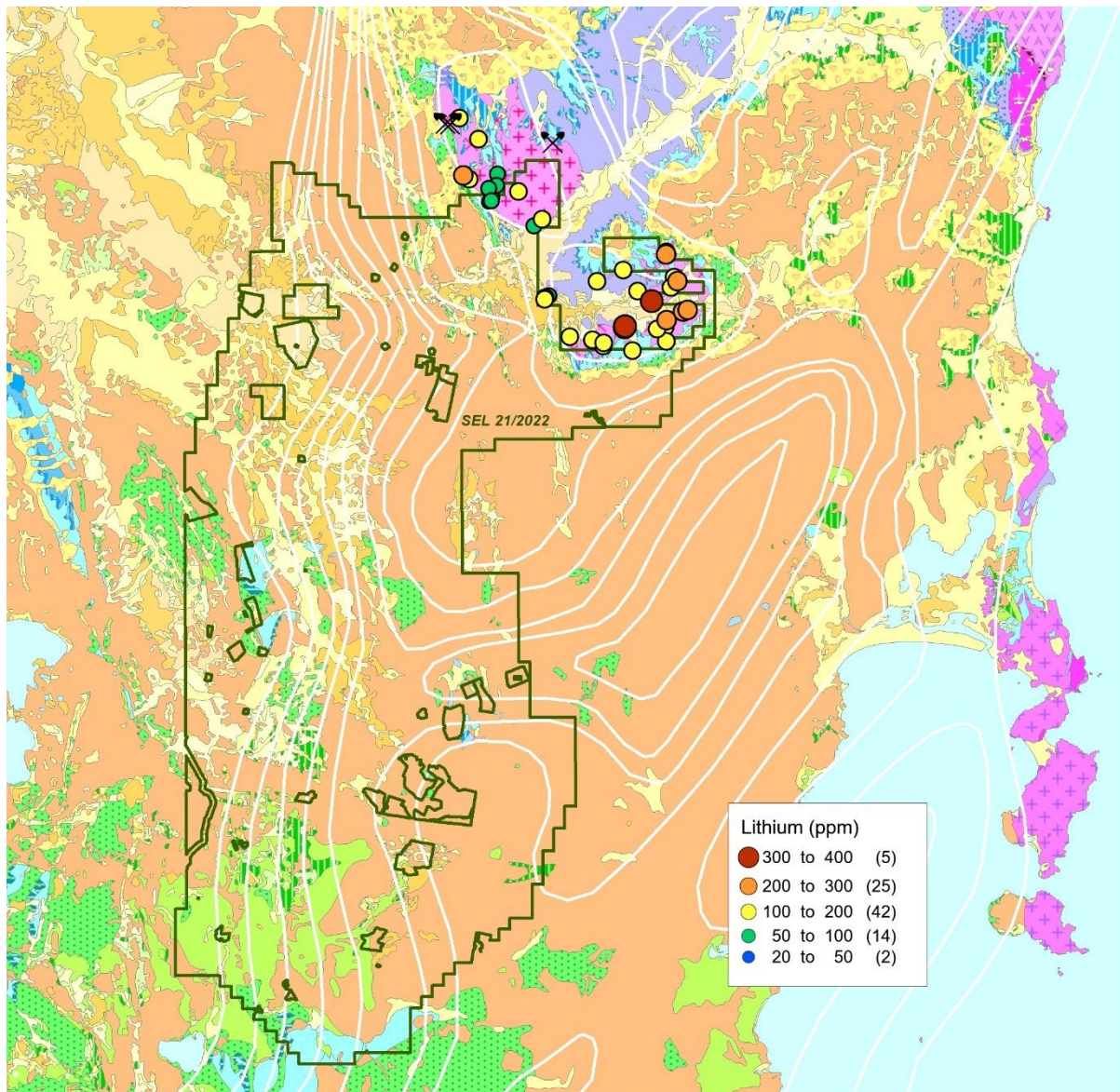


Figure 10: Rock geochemistry data from the Ben Lomond Batholith derived from the MRT Samples and Geochemistry Database (MRT, 2024). Lithium values in ppm, as shown. Mine symbols indicate the location of historically known lithium mineralisation. Depth-to-granite contours (interval -1000mASL) extrapolated after the regional 2D gravity modelling of Leaman (2012) are shown in white down to -9000mASL.

3. SUMMARY OF EXPLORATION

Work completed on SEL 21/2022 during its term comprised new 3D MT modelling, new assessments of legacy potential field data, reprocessing of both active and passive legacy seismic data, structural interpretation and development of a local tectonostratigraphic model as well as 2.5D and 3D modelling of the gravity field. The relative locations of all work undertaken are mapped in **Figure 11**.

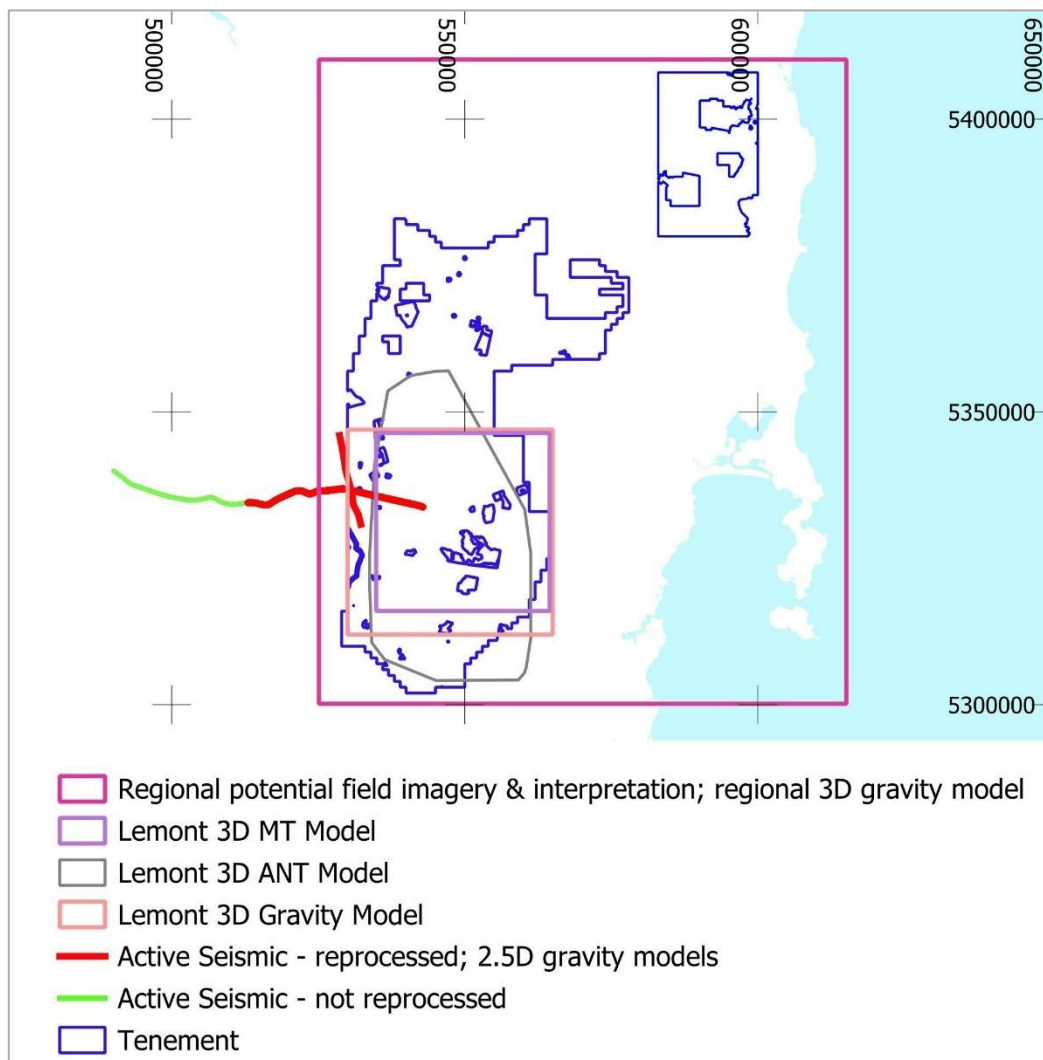


Figure 11: Location of 2025 work programs undertaken across SEL 21/2022. Tenement shown in top right is EL 13/2021.

3.1 Lemont 3D MT modelling

Following on from the work of Selway (2024a) a new, updated MT model of the Lemont area was undertaken by Vox. A suite of four 3D MT inversions were created for a subset of 88 KUTH broadband MT stations within a 35km x 35km area defined as the Lemont MT Area of Interest (AOI) (**Figure 11**; Selway, 2024b). Models utilised a finer mesh than previous versions with a core of cells 500m x 500m x 15m; topography was included in all cases. All four diagonal and off-diagonal elements of the MT impedance tensor and two elements of the tipper tensor were inverted over a range of frequencies from 0.05 to 320Hz. Four model iterations were produced to investigate the effects of the magnitude of the homogenous starting half-space and covariance (smoothing) on results (**Table 3**).

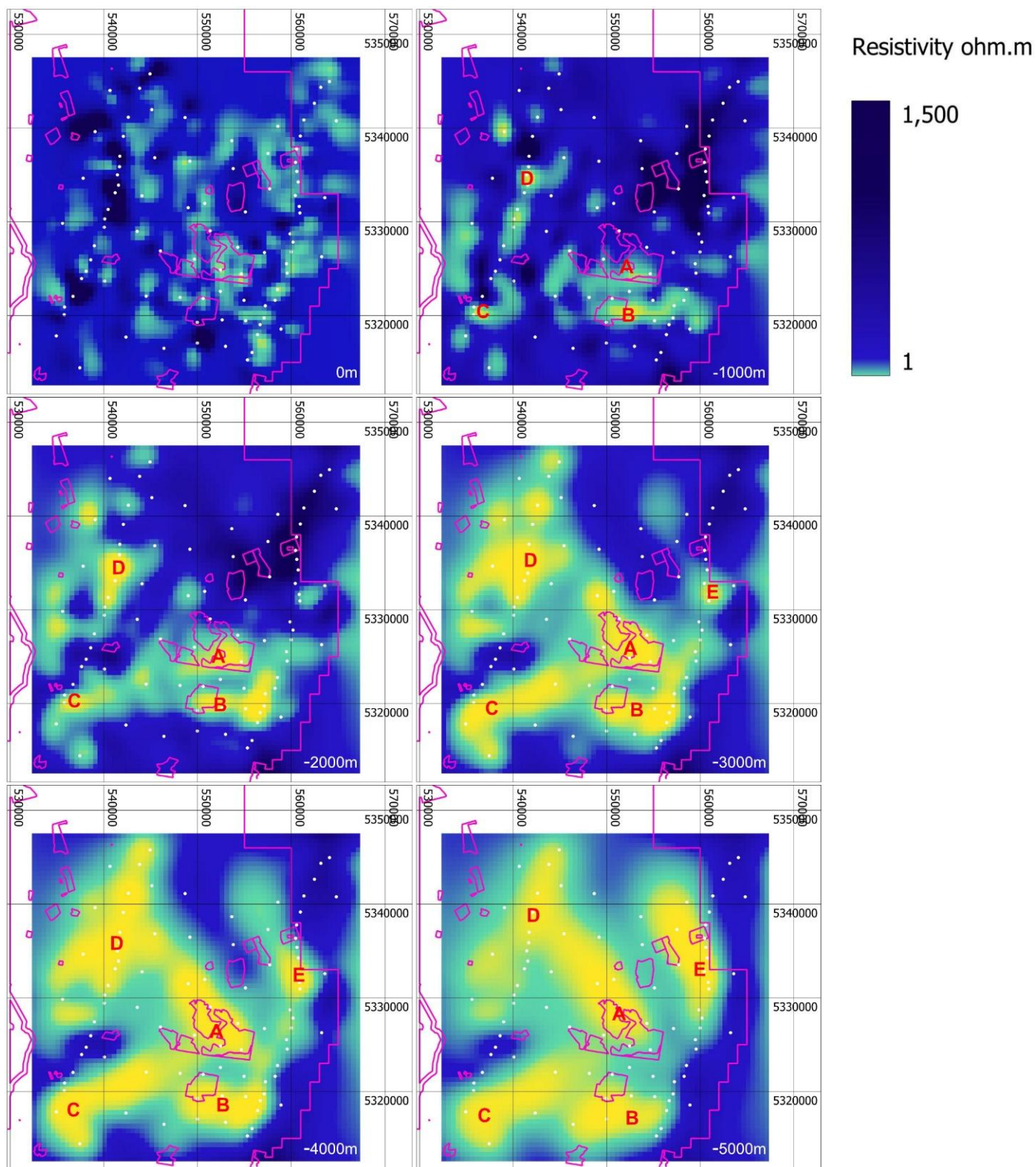


Figure 12: Horizontal depth slices through the preferred Lemont 3D MT model. Depth in mASL as shown in lower right corner. White dots are MT station locations; pink lines are boundaries of SEL 21/2022. Identified conductive anomalies are labelled A – E.

Model	Starting Space (Ω m)	Covariance
-------	------------------------------	------------

1	100	0.2
2	100	0.3
3	1000	0.2
4	1000	0.3

Table 3: Key parameter variations in Lemont 3D MT models, Selway, 2024b (see Appendix 1 of the 2025 Annual Report for further detail)

Comparison of model results allow discrimination of five robust conductive (low-resistivity) features labelled A – E that are apparent in all versions. Insight into the uncertainty of modelled features is provided via the range of resistivities able to satisfy the data across the model variants. Overall, model 2 (100Ωm/0.3) is preferred; a series of horizontal slices through this model are provided in **Figure 12**. Low resistivity features A – E are broadly similar to those previously defined by Soyer & Battaglini (2010), the smaller cell size and reduced smoothing of the new model delivering a more detailed image. 3D isosurfaces generated from new models (**Figure 13**) will be utilised in forward drill targeting programs. Further details of modelling and all final 3D model files were provided in Appendix 1 of the 2025 Annual Report for SEL21/2022.

3.2 Regional Potential Field Imagery and Interpretation

Assessment of available potential field data (gravity and magnetics) concluded that recent data acquisitions, updated gravity corrections and improved imaging options justified reprocessing and Mitre Geophysics Pty Ltd (Mitre) were commissioned to undertake this work. To enable interpretation across areas not previously considered by Godber (2009) a broad AOI was nominated that included the full extent of both SEL 21/2022 and Fingal Energy Pty Ltd's EL 13/2021 (**Figure 11**). Details of work undertaken, including grids, image and shapefile results, are documented in Direen and Perez (2025) and were provided in Appendix 2 of the 2025 Annual Report for SEL21/2022. In summary:

3.2.1 Magnetics work flow

- The existing 2024 statewide merged magnetic grid was used as a base layer. Two additional survey grids from recent surveys were identified and merged (stitched) into this layer to create an updated magnetic coverage across the AOI (final resolution is 40m).
- The final merged grid was transformed from Total Magnetic Intensity (TMI) to Reduced to Pole (RTP) (**Figure 14**).
- A series of grids (.ers), located images (.geoTIFF) and shapefiles were produced using a range of filters including vertical derivatives (1VD), horizontal gradient of upward continuation ('worms') and magnetic contour maps.

3.2.2 Gravity work flow

- Gravity data processing utilised 9177 corrected data points supplied by Mineral Resources Tasmania (MRT). Gridded data included the Bouguer Anomaly (incorporating new high resolution DTM-based terrain corrections), Free Air Anomaly (FAA) and Complete (Spherical Cap) Bouguer Anomaly (CBA). CBA data are terrain corrected using a detailed 25m DTM of the state, reduced at a density of 2.67g/cm³ and then isostatically corrected using Geoscience Australia's continental isostatic model (Duffett, 2016). These data replace the older long-wavelength geological model (MANTLE09) corrections previously applied by Leaman (2012).
- Gravity data points were gridded using minimum curvature at a 250m cell size. The completed CBA gravity merge is shown in **Figure 14**.
- A series of grids (.ers), located images (.geoTIFF) and shapefiles were produced using a range of filters including vertical derivatives (1VD) and horizontal gradient of upward continuation ('worms').

Magnetic and gravity data coverages created were combined with the results of active seismic reprocessing to develop a new structural interpretation of the AOI. Results of this work are detailed in Section 3.5.

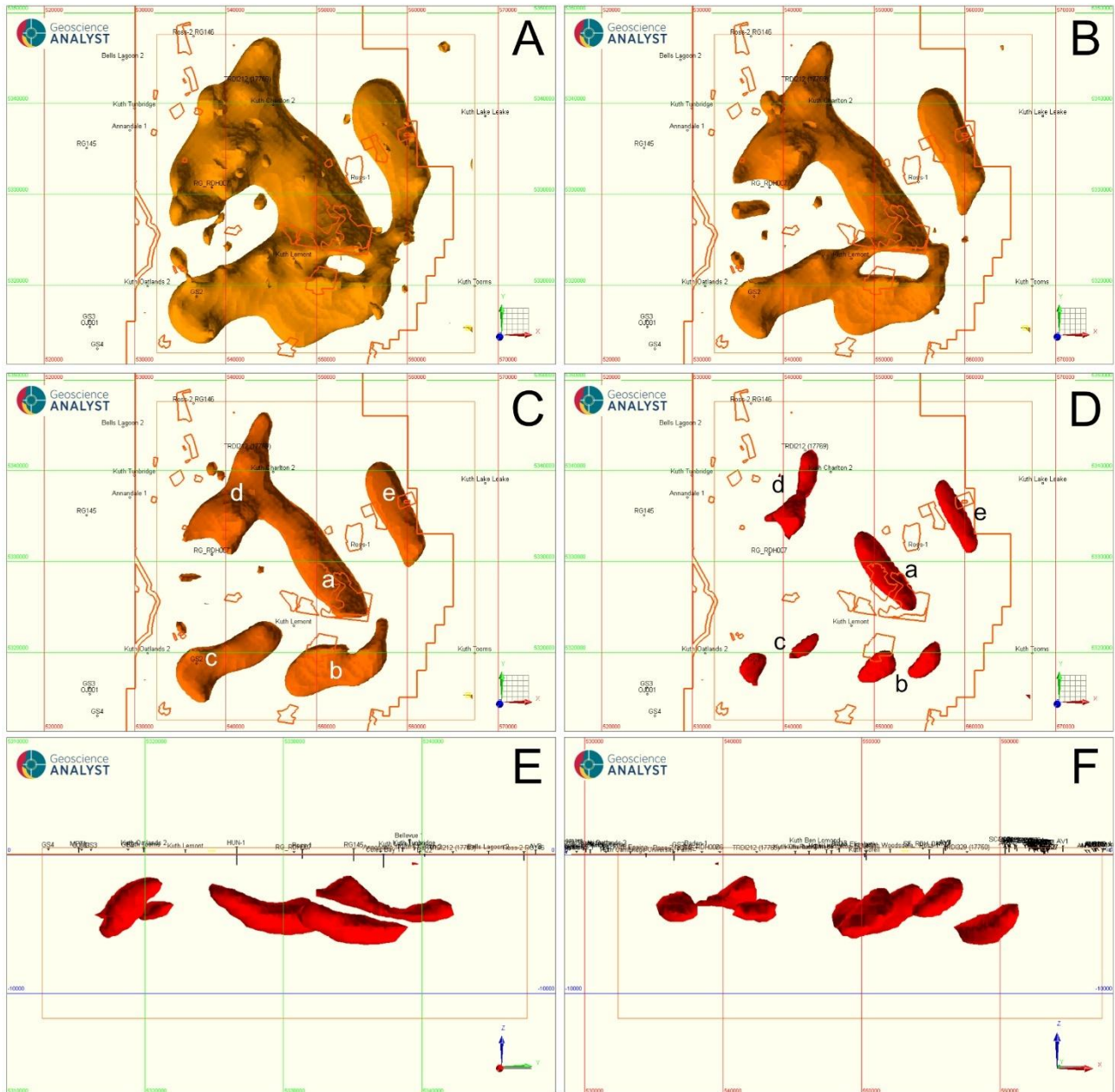


Figure 13: Low resistivity isosurfaces from the preferred Lemont 3D MT model (Model 2). A – D, view from above; A is 10 Ohm.m surface, B is 5 Ohm.m, C 3 Ohm.m and D 1 Ohm.m. E is 1 Ohm.m view from West; F is 1 Ohm.m view from South. Anomalies in C and D are identified/labelled a – e as per Figure 12.

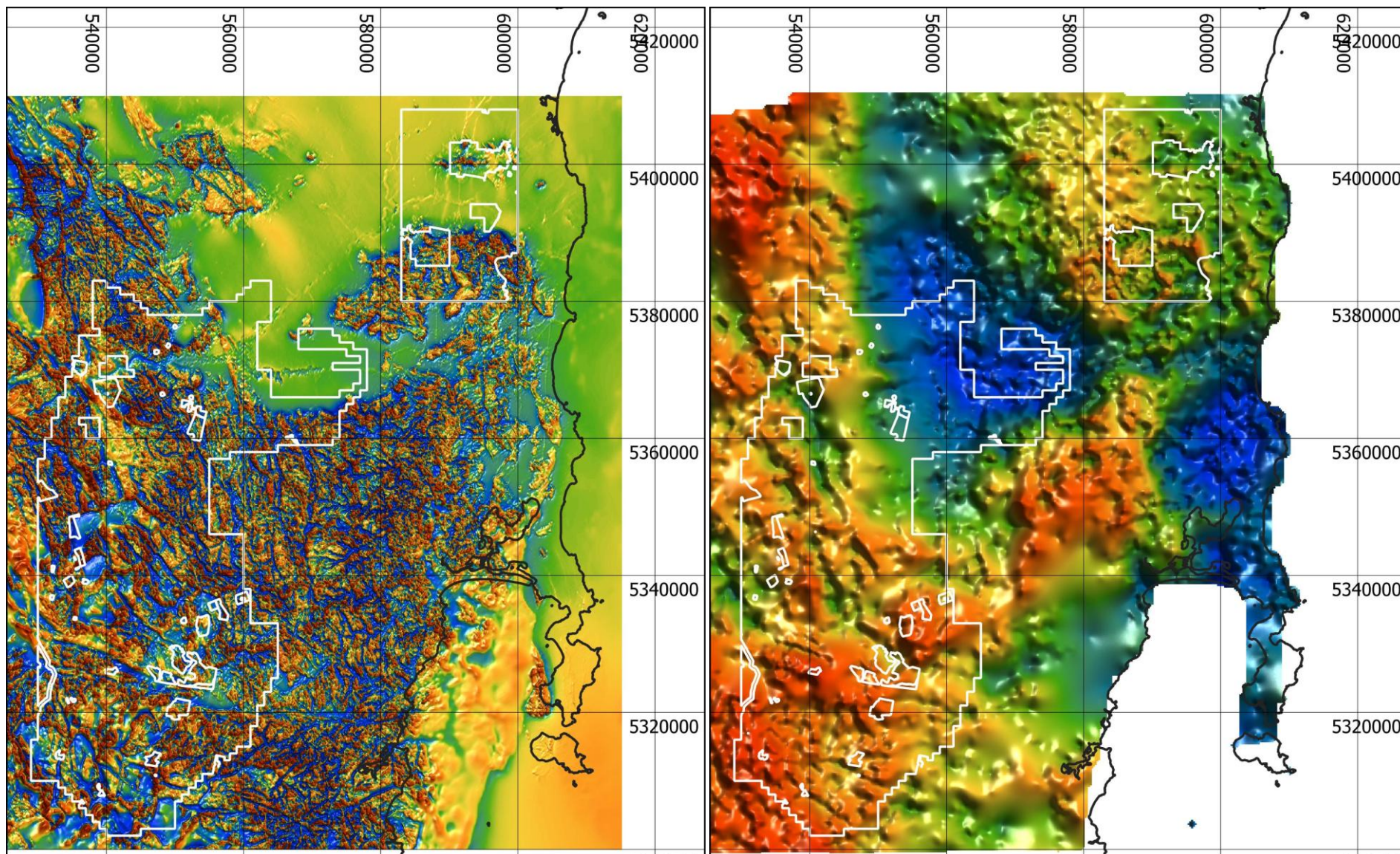


Figure 14: Potential field imagery for SEL21/2022; RTP TMI magnetics (L) and CBA gravity image (R). White polygons are tenement outlines for SEL 21/2022 and EL13/2021.

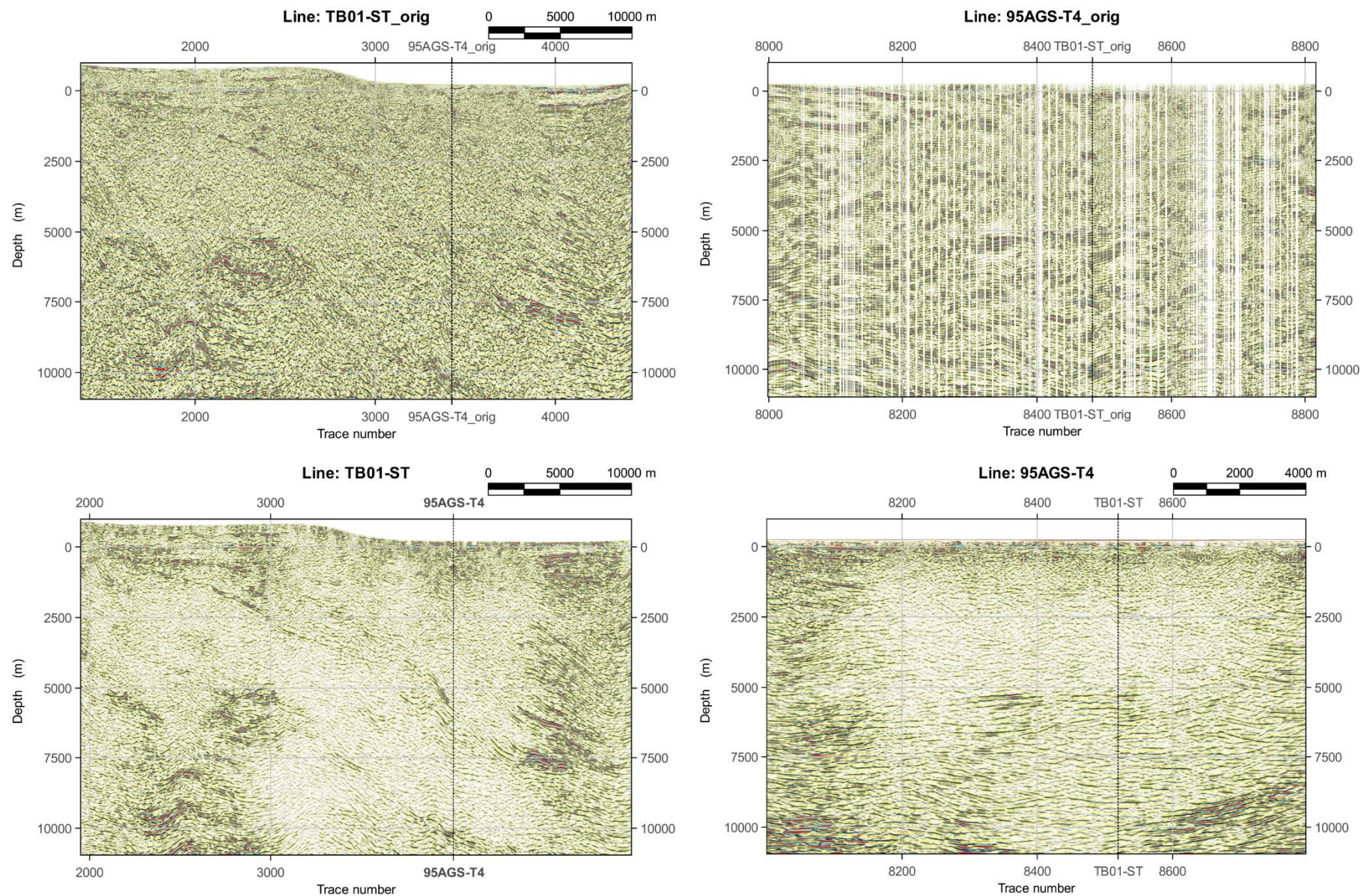


Figure 15: 2D projections of active seismic reprocessing results compared to original data, SEL 21/2022. Left, east-west line TB01-ST original (top) and reprocessed (bottom). Right, north-south line 95AGS-T4 original (top) and reprocessed (bottom). Note both surveys were acquired as crooked-lines and are best interpreted when projected in 3D space.

3.3 Active Seismic Line Reprocessing

Overlapping geophysical techniques applied to the Lemont area by KUTh resulted in the development of a geological model based largely upon surface data combined with gravity interpretations. Subsequent application of *in situ* thermal data to this model indicated discrepancies which required the addition of previously unrecognised geology to resolve (Section 2.1; **Figure 7**). Ground-truthing of geophysical data at depth is clearly required, however, the expense and risk of drilling is significant and active seismic acquisition has been mooted as an alternative. More spatially extensive than drilling, this technique is also costly and careful appraisal of its efficacy is warranted. Past applications of onshore seismic acquisition in Tasmania have enjoyed only limited success with issues often attributed to the presence of a near-surface high-velocity layer of Jurassic Dolerite. A limited amount of legacy data is located in the west of SEL 21/2022 and previous attempts to re-interpret these have produced mixed results (Cooper et al., 2009). Expert advice on these data suggested that issues in the original processing stream may account for reduced image resolution, particularly at greater depths within the legacy sections. It was determined that a program of data reprocessing, using modern techniques and expertise would assist to better understand the applicability of this technique in onshore Tasmania.

Two seismic lines located in the west of SEL 21/2022 were selected for reprocessing (**Figure 11**). The east-west Line TB01-ST was acquired using a Vibroseis array in 2001 as part of a broader onshore petroleum exploration program. Around 30km west from the eastern end of this line was reprocessed; this section intersects areas within both the Lemont 3D MT and 3D ANT model coverages before extending west out of the tenement area. Perpendicular to TB01-ST and running parallel to the western boundary of SEL 21/2022 is an older line, 95AGS-T4, acquired using an explosive source in 1995 as part of an onshore government survey. This line was reprocessed in full (ca. 15km).

Reprocessing was undertaken by Internode Seismic Pty Ltd. Details of the processing stream are provided in Internode Seismic (2025) and were included in Appendix 3 of the 2025 Annual Report for SEL21/2022 alongside SEG-Y files of original and reprocessed images, interval velocity models and refraction inversion velocities for both lines. Comparison of original and reprocessed data are provided as 2D projections in **Figure 15**; significant improvements in resolution are clearly apparent for both shallow and deep line sections. Geological interpretation of reprocessed seismic lines was undertaken by Mitre and is described in the next section.

3.4 Regional Structural Interpretation and Tectonostratigraphy

Updated potential field data (gravity and magnetics) combined with the successful reprocessing of active seismic lines enabled integration of independent geophysical datasets to support the development of a regional tectonostratigraphic interpretation. This work was undertaken by Mitre and is detailed in Direen (2025a); results of this work were provided in Appendix 4 of the 2025 Annual Report for SEL21/2022.

A detailed literature review was done to develop a tectonostratigraphy for eastern Tasmania. Six significant events were identified and are summarised in **Figure 16** (a larger stratigraphic diagram was provided as an Excel file in Appendix 4 of the 2025 Annual Report for SEL21/2022). A long history of fault generation and reactivation is suggested beginning with E-W compression in the Devonian Tabberabberan Orogeny. Faults created during this period are potentially reactivated by events in the late Carboniferous (rifting), Jurassic (dolerite intrusion and rifting), Cretaceous (Tasman Sea rifting) and Palaeocene (compression).

A new, more detailed, potential field lineament analysis was undertaken across the regional AOI previously defined for the compilation of these data (**Figure 11**). Interpreted features are derived largely from shallow depth within dolerite intrusions and are therefore of Cretaceous age, or younger. Three main fracture groups are identified (**Figure 17**):

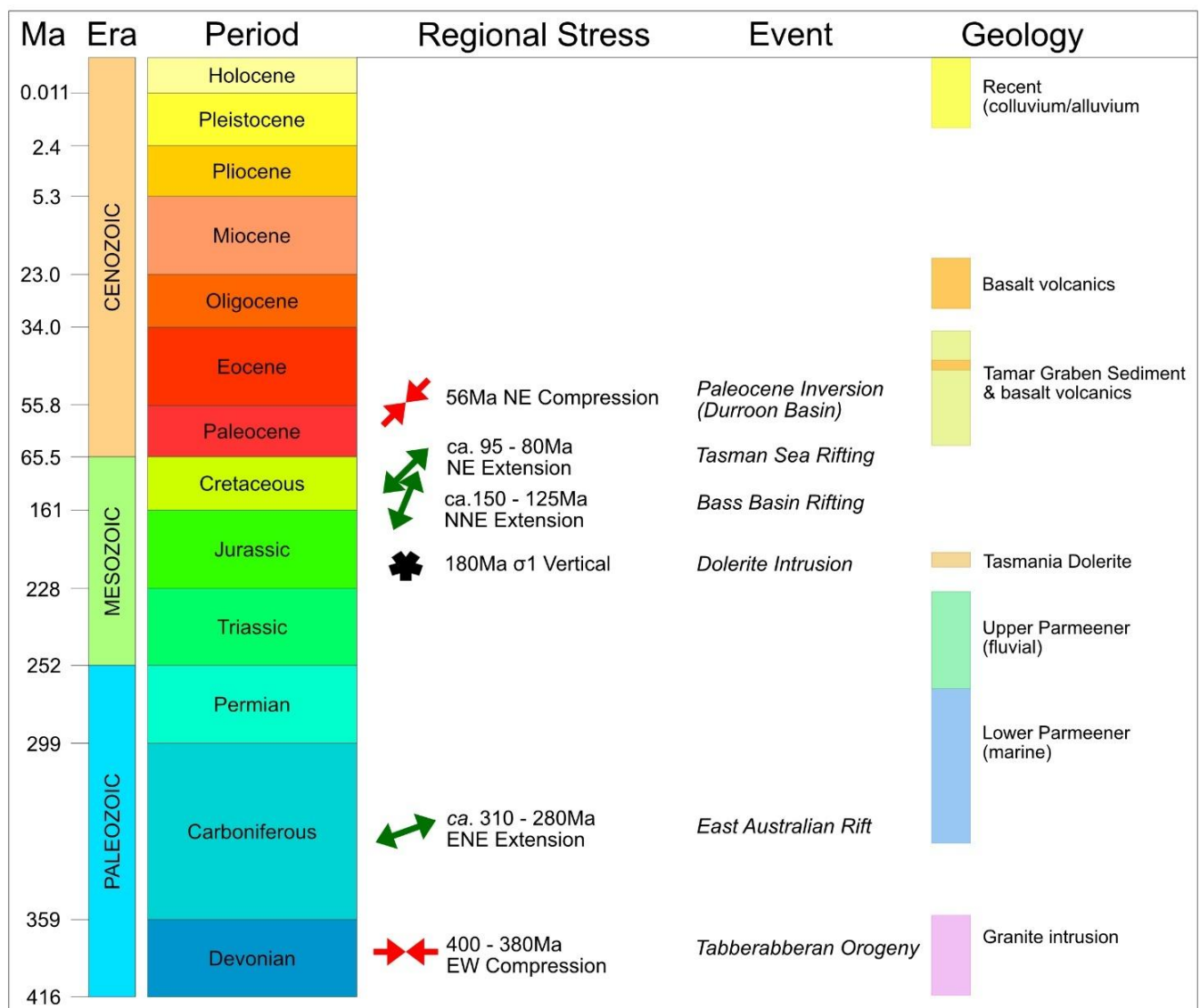


Figure 16: Summary of Eastern Tasmanian tectonostratigraphic events from the Devonian to present day.

1. NNW-trending, steeply-dipping, strike-slip, braided faults (probably Tertiary-aged but likely linked to deeper Tabberabberan structures)
2. EW-trending, shallow-dipping, curvilinear faults (likely of Late Jurassic age)
3. NE-trending strike-slip (transfer?) faults (likely to be related to the opening of the Tasman Sea)

Comparison of mapped lineament orientations with past regional stress fields supports kinematic analysis and the definition of regional fracture families. Detailed mapping of predicted fracture evolution over time is outlined in Direen (2025a) and summarised in **Figure 18**. Note that in this instance the present-day regional stress field (0Ma) has been estimated as NW-SE compression based on the current Australian Stress Map (Rajabi et al., 2017). This value differs slightly from *in situ* stress data derived from focal mechanism studies undertaken on Midlands events by McCue (2010) which suggest an E-W orientation for σ_1 . In the face of such discrepancies, further investigation/augmentation of local stress-field data is desirable.

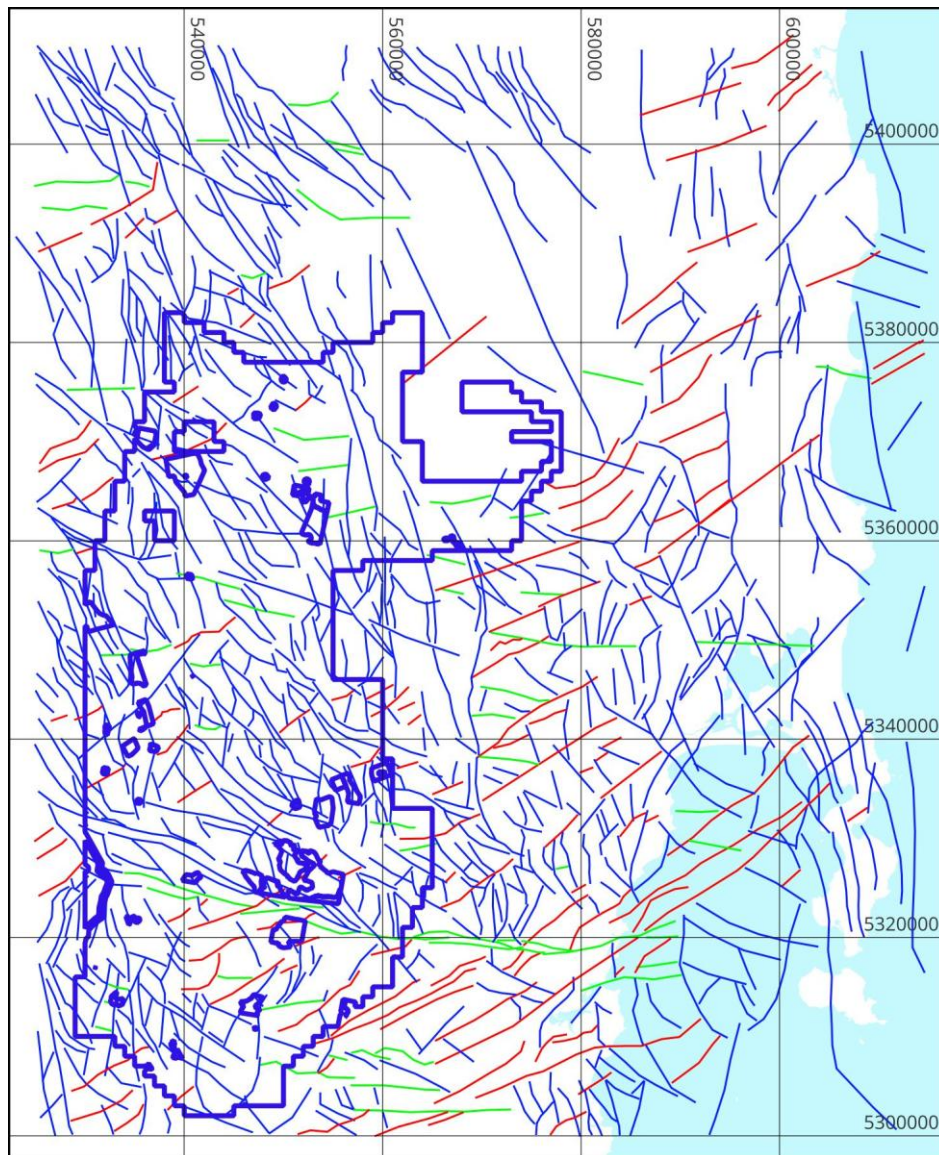


Figure 17: Lineament analysis of regional potential field data across SEL 21/222. Blue lineaments are Group 1 features, probably Tertiary in age but reflecting older Tabberabberan structural trends. These trends are predicted to have been reactivated multiple times since the Devonian. Green lineaments are Group 2 ca. EW features likely formed during Late Jurassic extension. Red lineaments are Group 3 NE-trending transfer-faults attributed to events related to the Late Cretaceous opening of the Tasman Sea.

Interpretation of active seismic line data extends this work to depths of 10km, providing important insight into the upper crustal architecture and fracture relationships beneath SEL 21/222. Structural relations are clearest on the EW line TB01-ST (**Figure 19**) with line 95AGS-4 (**Figure 20**) a useful means of corroborating interpretation. Consistent with previous interpretations, the structural grain is dominated by large, shallow, probably northeast-dipping basement faults. In the west of the TB01-ST section a region of deep, strongly-folded reflectors are interpreted as Precambrian Tyennan or equivalent basement, the eastern margin of which is marked by a broad, bland, apparently east-dipping zone, possibly a major shear. Overlying these rocks in the east are a series of apparently east-dipping thrust sheets, similar in seismic character to the Tyennan but assigned as allochthonous units, potentially equivalent to those exposed north along strike in the Badger Head Block (BHB). Cambrian ultramafic rocks known from the BHB are not uniquely observed but may be present at depth in the section at the base of BHB-equivalent units.

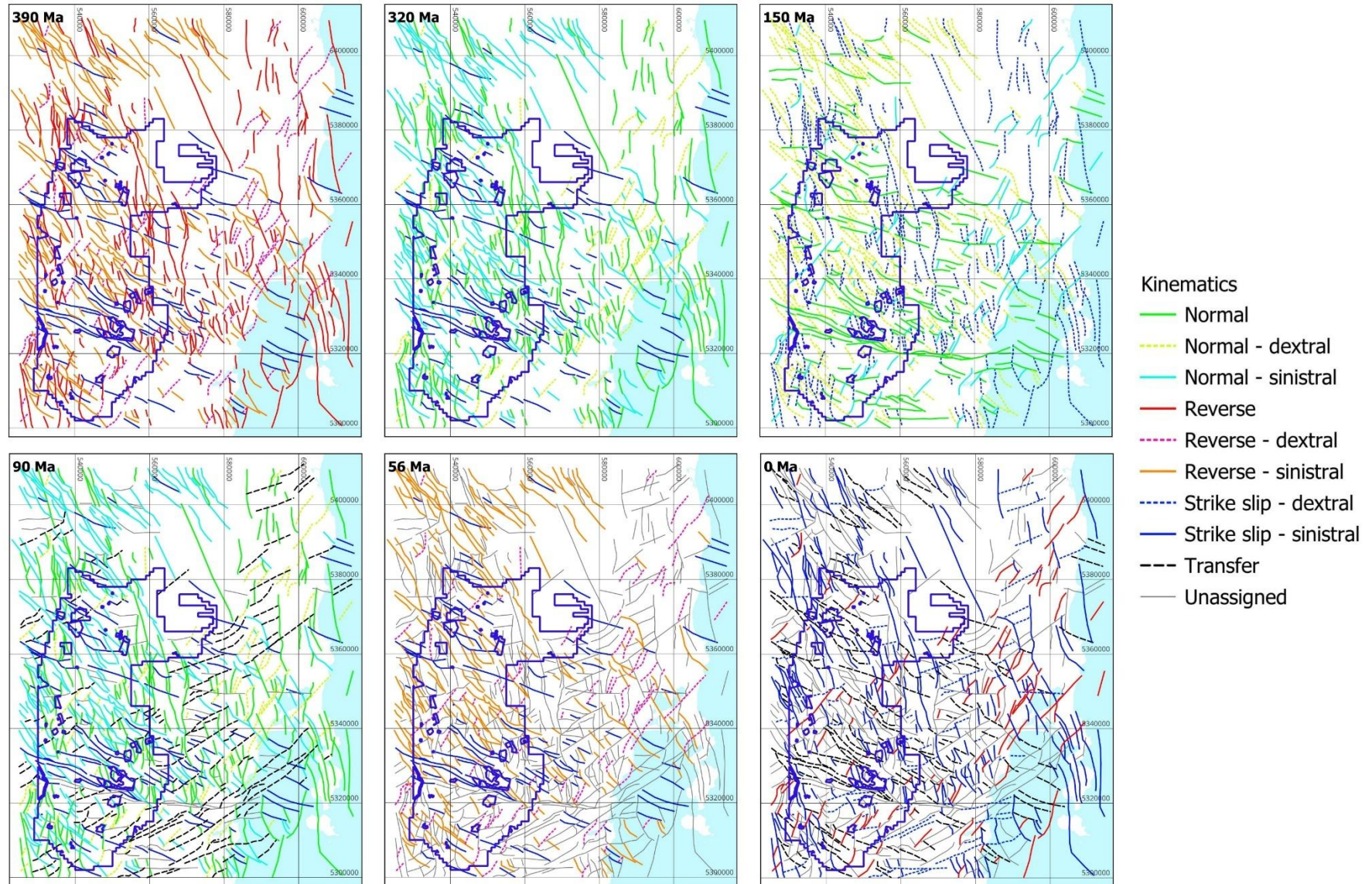


Figure 18: Kinematic analysis of lineaments mapped from potential field data using regional stress field estimation from the Devonian to the present (Figure 16). Note the present-day stress field used here (NW-SE compression) is based on the estimation of Rajabi et al. (2017) and differs from earthquake focal mechanism solutions determined in the Midland for KUTh Energy which suggest E-W compression (McCue, 2010).

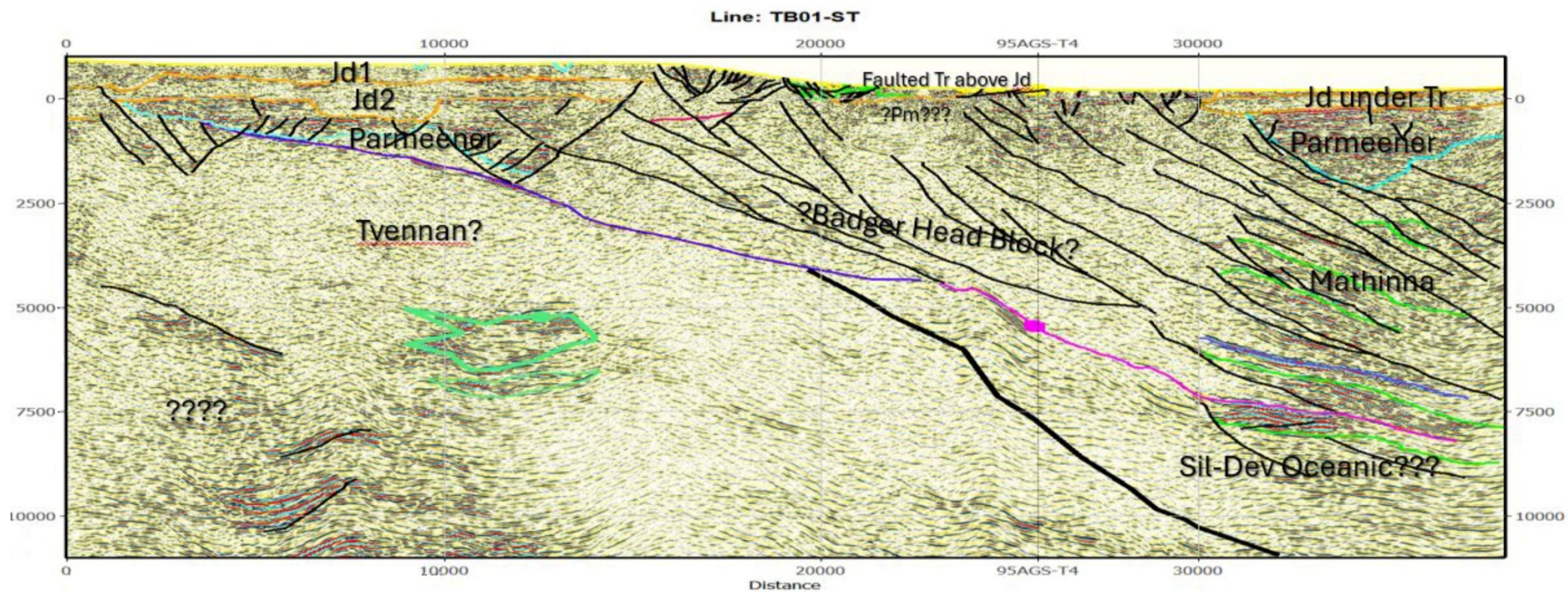


Figure 19: Mitre interpretation of reprocessed seismic line TB01-ST. Vertical scale is depth (m); distance horizontal (m). V:H is 1:1.

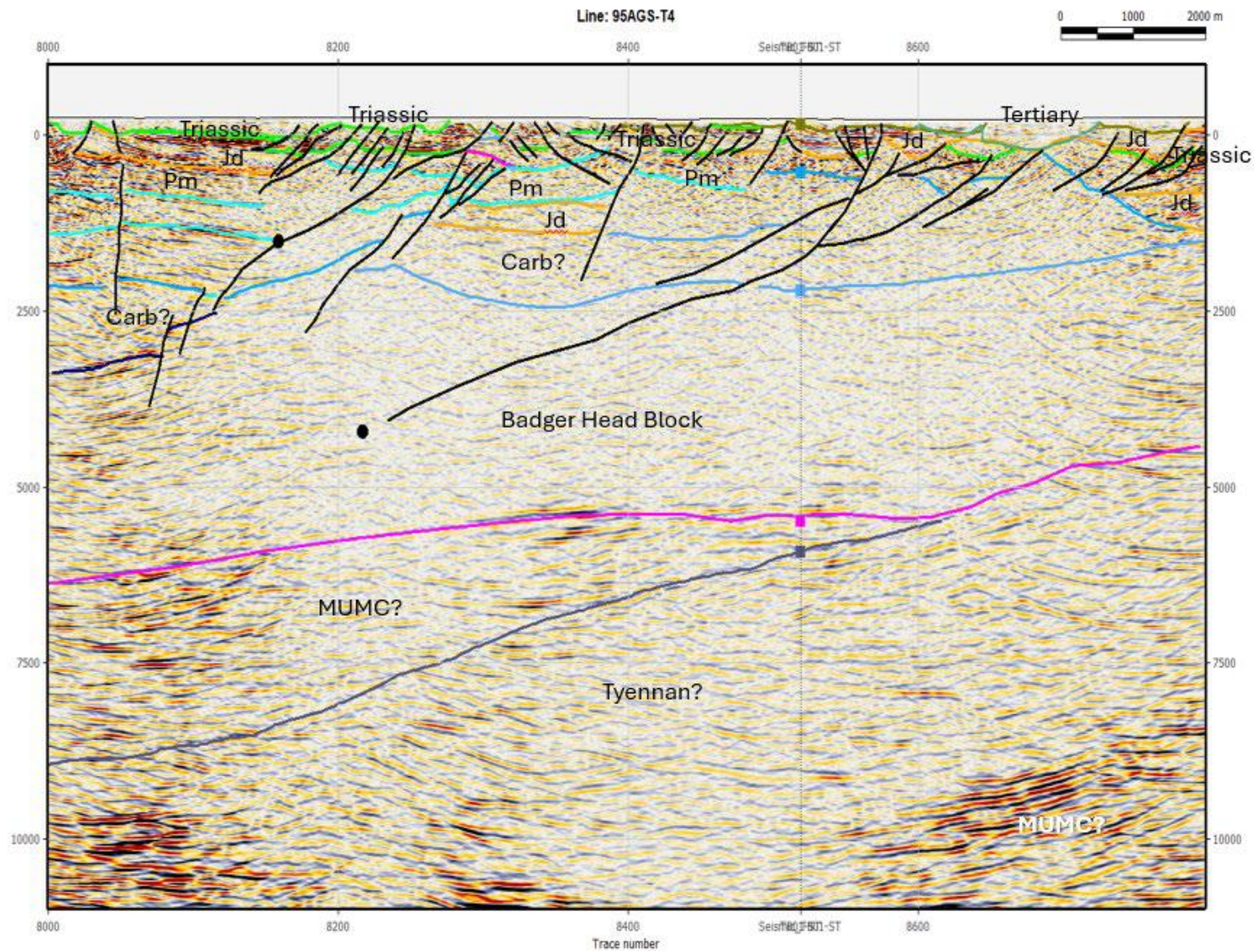


Figure 20: Mitre interpretation of reprocessed seismic line 95AGS-T4. Vertical scale is depth; horizontal scale as shown. V:H is 1:1.

Basement units at the far eastern end of line TB01-ST are interpreted to form an east-dipping imbricate thrust stack and are assigned as deep-water Paleozoic Mathinna Supergroup units. Further west, these sheets appear to interleave with less reflective units, possibly shelf sediments of the Wurrulina Supergroup. Comprising up to nine individual sheets the Mathinna thrust stack represents significant crustal shortening, in this case attributed to the Devonian Tabberabberan event. Significant in its absence on line TB01-ST is any evidence within basement for the predicted deeply-rooted, spatially extensive granite pluton of Leaman (2012; **Figure 4**). Several patches of bland or poorly developed reflectors are present within the section, possibly small intrusive bodies or tectonised zones. However, none of these features extend to depth or assume a geometry consistent with the intersection of TB01-ST and the predicted east-coast 'granite-wall' (**Figure 5**).

Cover sequences of sub-horizontal Parmeener Supergroup units are clearly apparent on both section lines along with a thin veneer of Tertiary sediment. Greater resolution on the newly reprocessed lines reveals that the Mesozoic sediments were deposited in fault-controlled half grabens. Sections of Parmeener are observed to be thicker than previously recognised, reaching up to 2.5km in areas of greatest accumulation. Such areas are characterised by thick, non-continuous accumulations of what are likely to be Carboniferous glacial sediment (**Figure 19**).

Sub-horizontal dolerite intrusions <500m thick are evident on both lines, typically occurring within the shallower section of Parmeener sediments. Sill geometry is complicated by subsequent faulting and tectonic dismemberment. Features of interest include what appears to be a feeder visible at the far eastern end of TB01-ST. This cone-shaped structure is best imaged by the velocity model (**Figure 21**) and is associated with a set of steeply-dipping faults.

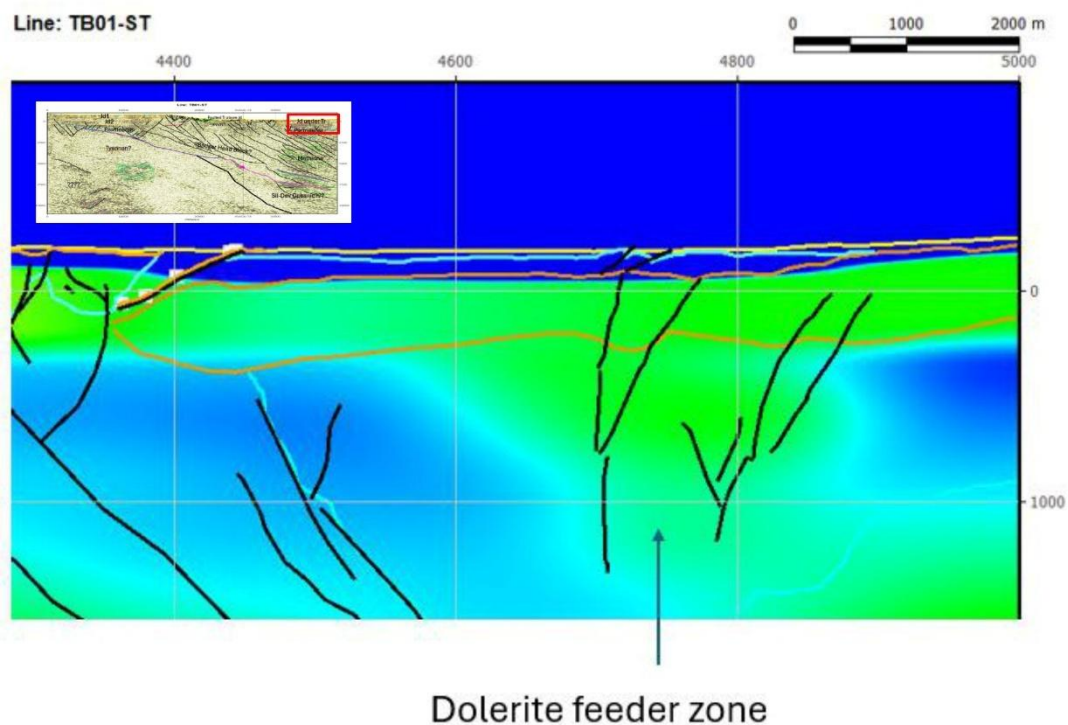


Figure 21: Sub-section of TB01-ST velocity model showing shallow dolerite sill with feeder zone and associated faults.

Comparison of the potential field lineament analysis, active seismic data and updated 3D MT models produce several interesting insights. As previously observed with earlier iterations of the MT data, there is a general alignment between the trend of defined conductive (low resistivity) anomalies and that of

potential field lineaments (**Figure 22**). MT anomalies A and E clearly align along NW trends consistent with long-lived structures interpreted to have originated during the Tabberabberan. The 1 ohm.m isosurface of anomalies C and B are relatively blob-shaped, perhaps reflecting the geometry of fracture intersection. When expanded to 3 ohm.m (**Figure 13**) the isosurface for these features take on an ENE-WSW geometry that aligns with strike-slip fault structures attributed to the opening of the Tasman Sea. Striking NE-SW Anomaly D alone lies oblique to the potential field trends defined above it, although this orientation is present elsewhere as a subordinate trend within the Tabberabberan structural pattern (**Figure 18**). Fortunately, feature D is also bisected by the line TB01-ST, the only defined MT anomaly sampled by the active seismic data. When projected onto the seismic section it is clear that the anomaly aligns closely with the base of a half-graben of Lower Parmeener sediment (**Figure 23**), presumably the site of what appears to be a west-dipping Permo-Carboniferous normal fault.

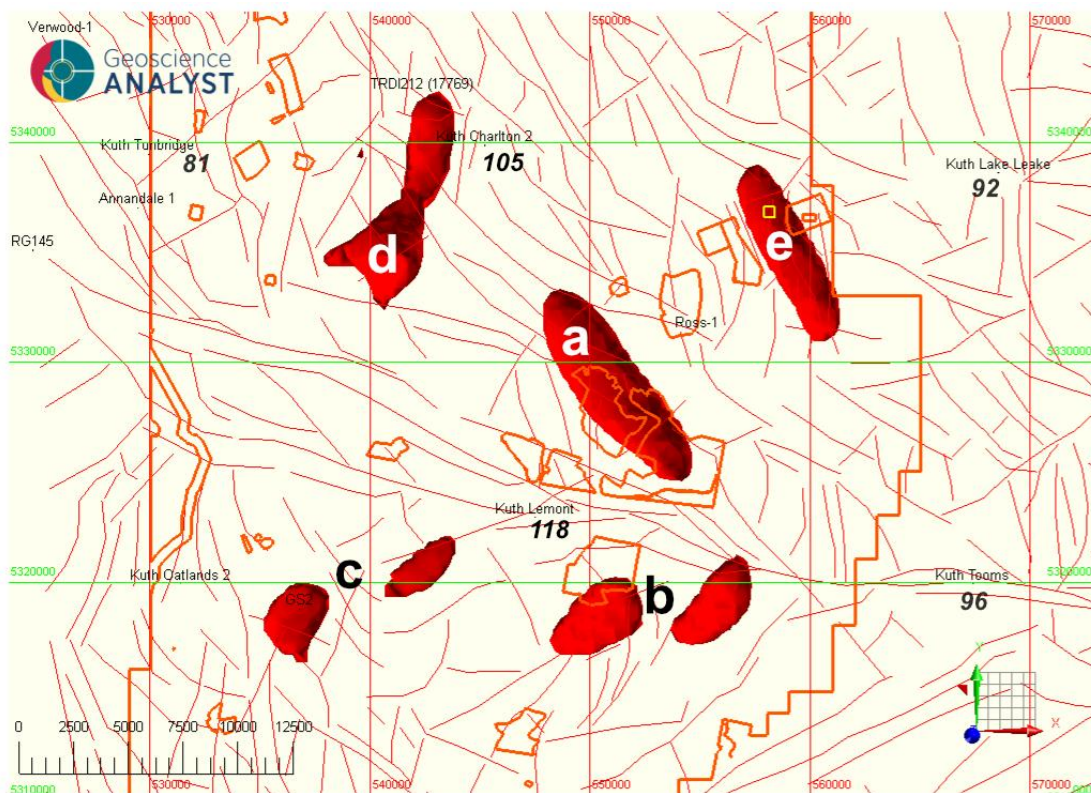


Figure 22: Plan view of Lemont 3D MT 1 Ohm.m isosurfaces (red) overlain by potential field lineaments and borehole collars. Numbers are surface heat flow measured at KUTH holes (mWm^{-2}).

3.5 Gravity Modelling

The newly reprocessed active seismic data provide no obvious corroboration for the distribution of granite bodies beneath SEL 21/2022 as predicted by Leaman (2012). The existence of HHP granite at depth beneath Lemont is integral to the geothermal play and Leaman's predictions form a major component of the 3D heat flow model used to define the resource. Gravity data utilised by Leaman (2012) rely upon a long-wavelength correction that is essentially subjective, based on a conceptualised geological model. Statewide gravity data have since been updated to utilise a more objective correction for Moho effects based on Geoscience Australia's continental isostatic model (Duffet, 2016). Given the importance of granite prediction to the Lemont play it was determined to undertake new gravity modelling of this area.

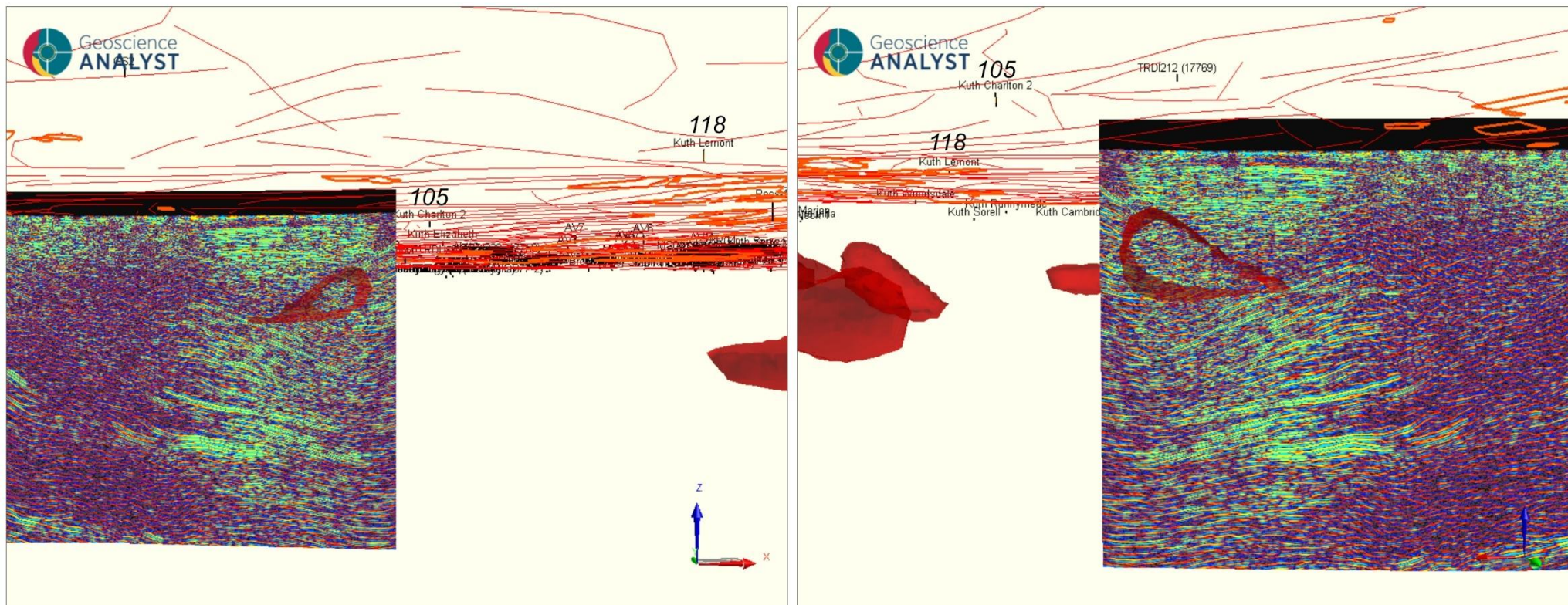


Figure 23: Lemont 3D MT 1 Ohm.m isosurface anomaly D (red) intersected by active seismic line TB01-ST. Left, viewed from the south; Right, viewed from the north. Anomaly D lies at the far eastern end of the seismic line. Location of significant surface heat flow measurements are as shown; heat flow values are mWm^{-2} .

3.5.1 3D Gravity Models

In notes accompanying his work Leaman (2012) repeatedly records what he interprets as 3D effects influencing 2D models of granite bodies along the east coast of Tasmania. New 3D gravity modelling will test both the effects of updated long-wavelength corrections whilst also investigating what differences might be obtained from application of modern inversion to these data.

3D inversion modelling of available gravity data was undertaken across both the regional AOI and a more localised AOI at Lemont, as outlined in **Figure 11**. Modelling was undertaken by Mitre using the software package MGInv3D (Paine, 2002). Data used were the Complete Spherical Cap Bouguer Anomaly reduced to 2.67g/cm³ obtained from MRT as described in Section 3.2. The upper model boundary was defined by a topographic surface derived from the Shuttle Radar Tomography Mission (SRTM) 30m topographic grid (Geoscience Australia, 2009).

The construction of both regional and local models are detailed in Direen and Campbell (2025) and results were provided in Appendix 5 of the 2025 Annual Report for SEL21/2022. Four models are reported:

Model	AOI	Gravity Data	Constrained	Mesh xyz (m)	Max Depth (km)	Starting density (g/cm ³)
1	Regional	Gridded, 1km upward continued	N	1000 x 1000 x 500	10	2.67
2	Regional	Gridded	Y	1000 x 1000 x 500	10	see below
3	Lemont	Gridded	N	350 x 350 x 175m	10	2.67
4	Lemont	Point	N	350 x 350 x 175m	10	2.67

Table 4: 3D gravity model parameters

Control applied in Model 2 utilised surface geology to constrain the inversion in areas of granite outcrop. To achieve this the topographic surface was merged with geological data, creating a surface granite layer beneath which cells were continued to a depth of 200m. This layer was merged into the uniform starting mesh previously used for Model 1; areas of defined granite within the layer were constrained to starting densities between 2.60 – 2.62g/cm³.

In all cases model results are found to be reasonably consistent, with variations caused by differing levels of noise (**Figure 24**). The regional models performed best with Model 1 displaying the best fit between the inverted and observed field. Inversions produced on the more local scale at Lemont were characterised by significant noise, Model 4 being the worst affected.

Viewed in plan form, negative anomalies consistent with granite ($\leq 2.65\text{g/cm}^3$) predicted by these models describe a pattern that is materially different to that of Leaman (2012). The singular, large batholith underlying eastern Tasmania, and the ‘granite wall’ at its western boundary do not appear. Instead, granites are isolated features, with bodies ranging in size from batholiths to relatively small plutons, often separated by significant distances. The largest body defined is the Ben Lomond Batholith in the north of the tenement area; other significant bodies to the east coincide with known outcrops at Bicheno, Coles Bay-Hazards and Schouten Island. To the south of Ben Lomond, including across most of SEL 21/2022 granite bodies are reduced to small, isolated plutons typically <80km² in area.

The differences between generations of gravity modelling become even more apparent when results are viewed in 3D (**Figure 25**). Deep-rooted batholiths like those predicted by Leaman are now rare, limited only to the largest bodies, mentioned above. Plutons within the vicinity of Lemont are smaller and typically extend only to depths between 5 – 7km. A clear alignment of granite bodies with

interpreted structural trends is consistent with these bodies now interpreted as older, pre-tectonic Devonian granites limited at depth by Tabberabberan detachment surfaces.

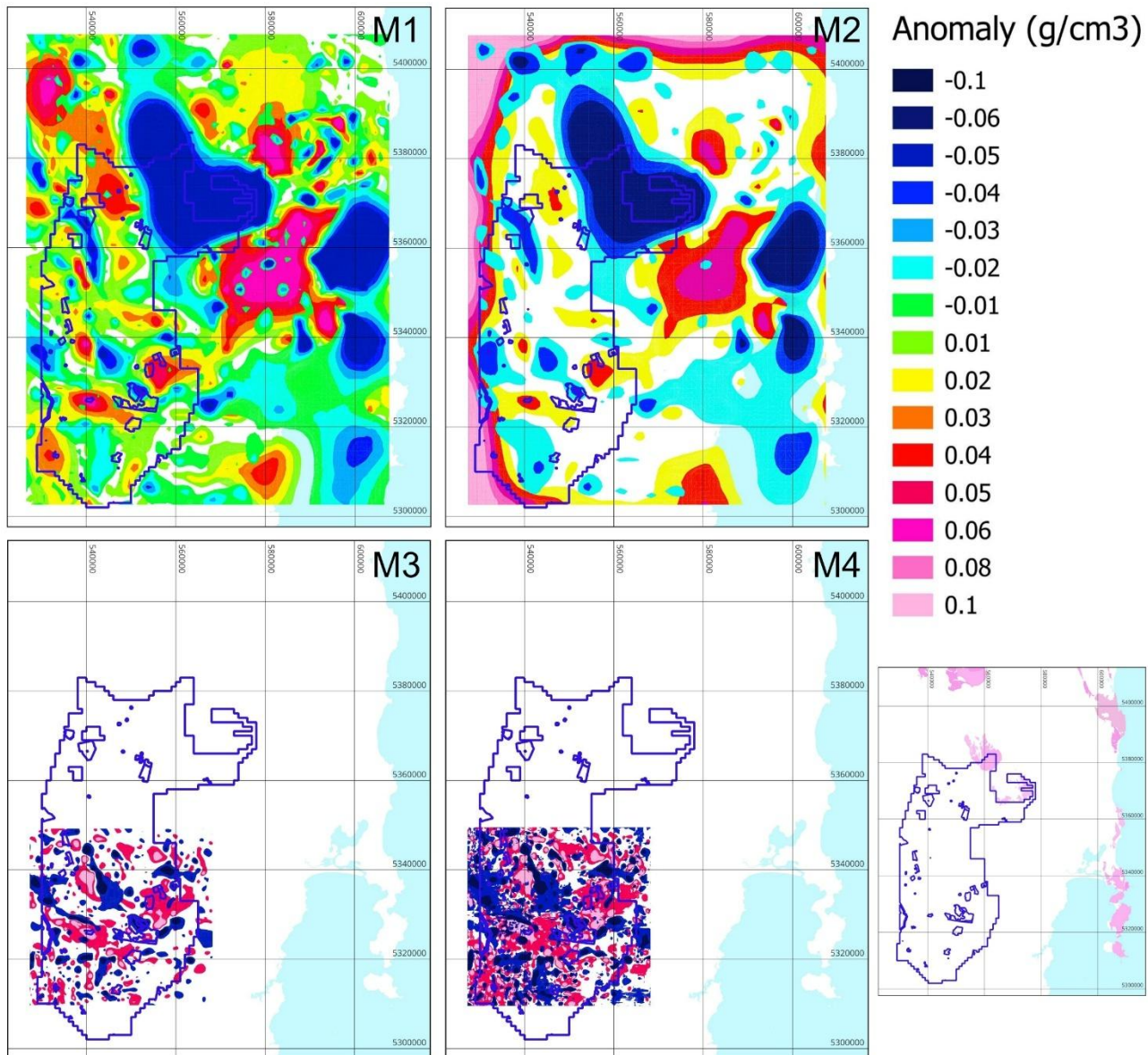


Figure 24: Plan view of 3D gravity model isosurfaces. Regional models M1, M2 (top) and local Lemont models M3 and M4 (bottom). Anomaly scale as shown; anomalies are determined relative to the model starting space 2.67g/cm³. Inset: location of granitoid outcrop across the modelled area.

Significant granites within the boundaries of SEL 21/2022 are identified in **Figure 25**. In the north of the tenement the Ben Lomond batholith is mapped as a deeply rooted, very low-density body (ca. 2.6g/cm³) consistent with its known chemistry (i.e. a fractionated, high-heat producing granite; **Figure 26**). Modelling suggests that a large portion of the batholith lies undercover at Avoca within SEL 21/2022, west and south of known outcrop. As a HHP granite, known to be rich in lithium, this body represents a prime target for both geothermal and mineral exploration.

Further south around Lemont, granite is reduced to a set of isolated plutons herein referred to as the Campbell Town, Blackman River, Macquarie River and Snaky Creek Granites. Predicted to be ca. 2.63g/cm³, the densities of these bodies are consistent with less-fractionated rocks that are likely to exhibit moderate heat production (**Figure 26**). This prediction aligns with Hong et al. (2017) who note that all pre-tectonic granites recognised to date in eastern Tasmania are, at most, weakly fractionated.

It is important to note that relatively high densities observed in local granodiorites imply that 3D gravity inversion will not be able to adequately test for the presence of all crystalline rock bodies beneath SEL

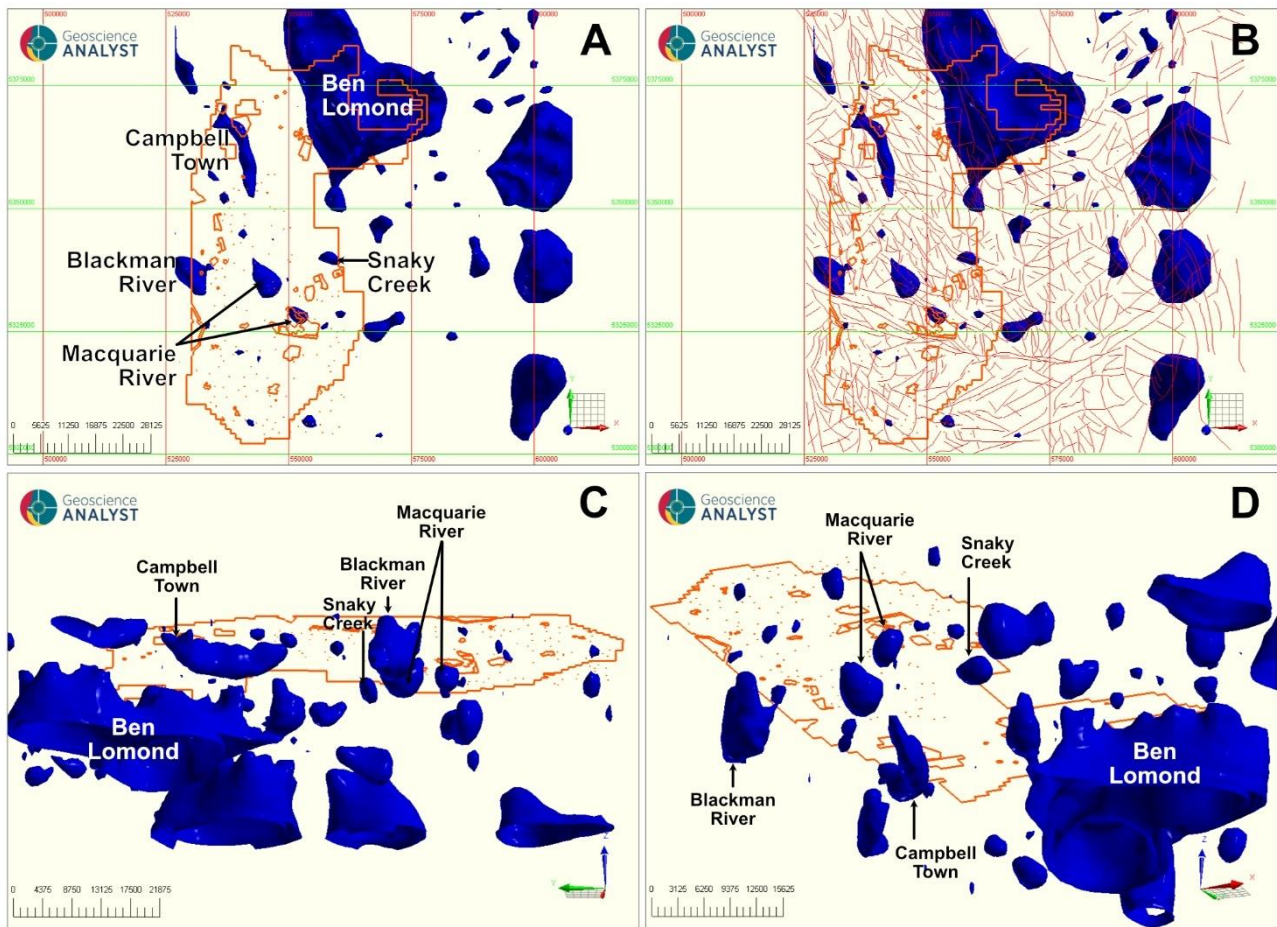


Figure 25: 3D visualisations of granite bodies modelled beneath SEL 21/2022. Isosurface visualised is -0.03 from Model 1 (Regional, unconstrained). A, plan view from above, with granite bodies referred to in the text identified. B, view from above with interpreted lineaments superimposed. C, view from below, west, granite bodies as labelled. D, view from below, SE, granite bodies as labelled.

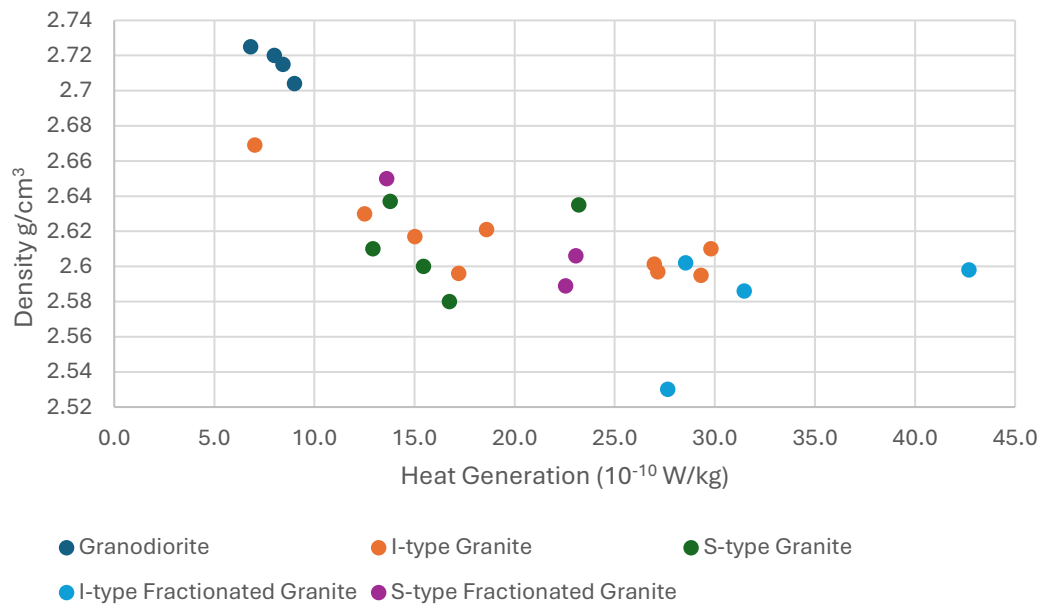


Figure 26: Density versus heat production for Tasmanian Devonian-Carboniferous granitoids. Density data from Lawrence (2023); heat production data from Everard and Duffett (2016).

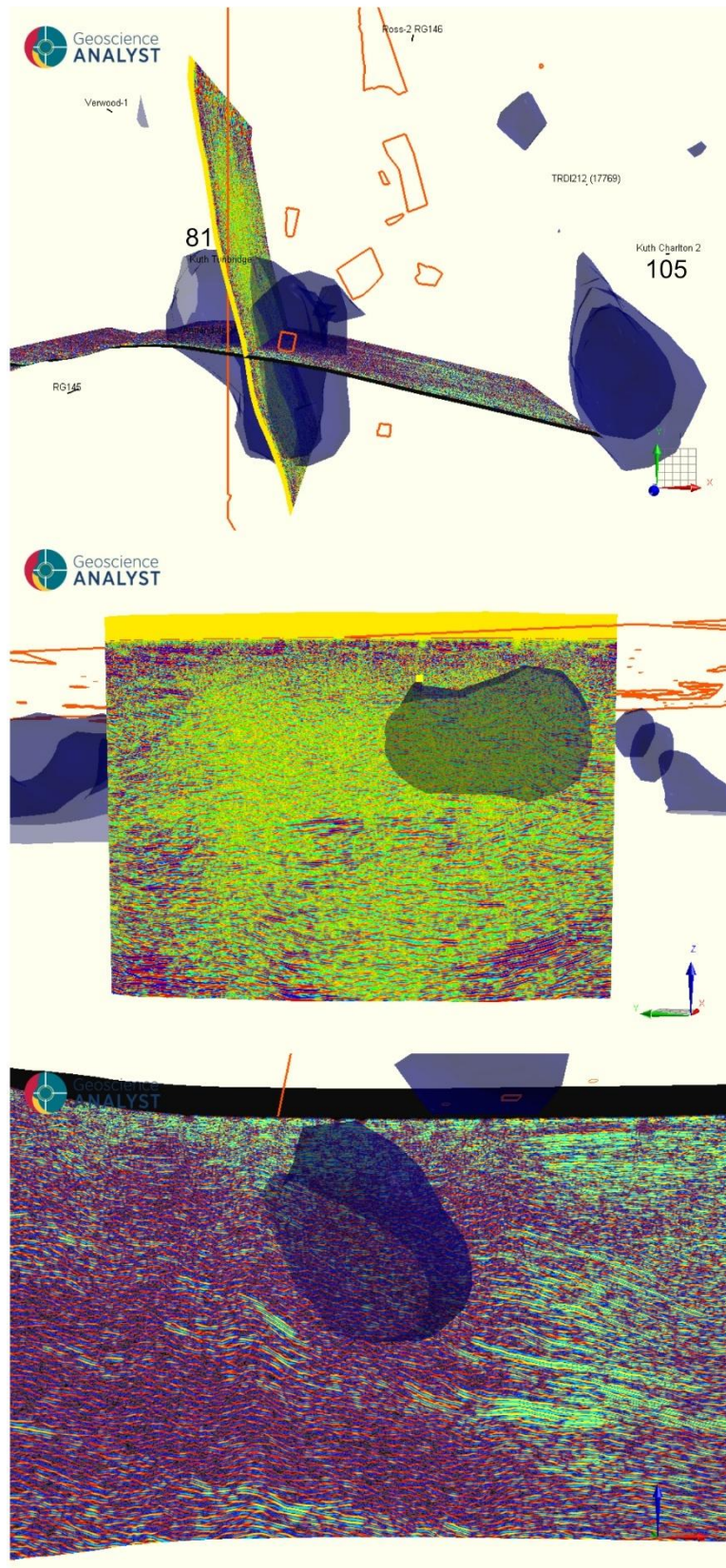


Figure 27: Intersection of low-density bodies predicted by 3D gravity modelling with active seismic line data. Top, plan view of intersection between TB01-ST, 95AGS-T4 and the inferred Blackman River Granite. Orange lines are boundaries of

SEL21/2022, numbers are heat flow values (mWm^{-2}) determined from KUTH boreholes (named). Granite isosurfaces are M1 (unconstrained, regional) -0.03 (transparent) and M2 (constrained, regional) -0.04 (solid). Centre image is a view west to 95AGS-T4; granite surface is M2 -0.04. Bottom image is a view north to TB01-ST; granite surface is M2 -0.04.

21/2022. Spatial patterns of granitic complexes exposed in north-east Tasmania suggest a reasonable likelihood for additional granodioritic intrusive bodies beneath the tenement (Everard and Duffett, 2016).

Comparison of 3D gravity modelling results with the available geophysical datasets reveal a number of notable observations. The reprocessed active seismic lines intersect within the body identified as the Blackmans River Granite while the eastern end of line TB01-ST falls just short of the northern Macquarie River Granite (**Figure 27**). When viewed along 95AGS-T4 the inferred Blackmans River granite coincides with a relatively bland area, mid-section. On line TBST-01 it appears as an east-dipping mass located within a relatively bland patch of discontinuous east-dipping reflectors that lie west of what is interpreted to be an imbricated thrust stack of Mathinna supergroup. The base of the low-density body lies above a break within a set of strong, east-dipping reflectors; the top appears to align with an east-dipping reflector. Collectively these observations are consistent with the interpretation of this feature as a pre-tectonic Devonian granite.

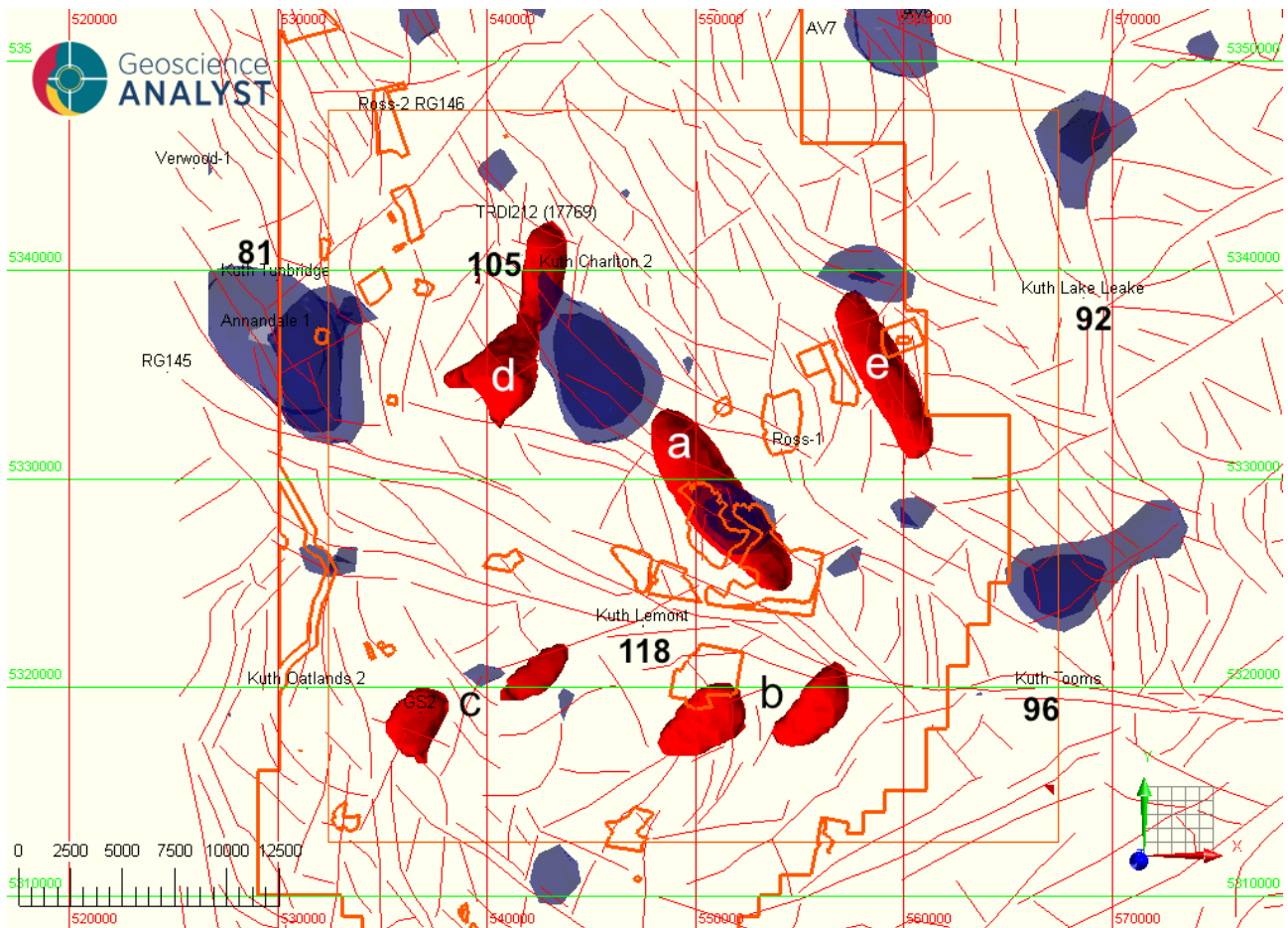


Figure 28: Comparison of 1 Ohm.m isosurfaces from 3D MT modelling (red) with -0.03 isosurfaces from M1 (regional, unconstrained) (transparent blue) and -0.04 isosurfaces from M2 (regional, constrained) (opaque blue) 3D gravity models. The network of thin red lines at surface are lineaments interpreted from potential field data (Section 3.4). Also shown are the location of significant drill collars. Numbers are surface heat flow measurements (mWm^{-2}) from KUTH drillholes.

Comparison of low-density gravity isosurfaces to the 1ohm.m MT anomalies identified in Section 3.1 indicates mixed levels of spatial correlation between the two (**Figure 28**). The Macquarie River Granites align with MT anomalies D and A which appear to wrap around and below the low-density bodies. To the

east the Snaky Creek Granite aligns in plan with MT anomaly E, however, there is a significant vertical separation (ca. 2km) between the two. To the south, MT anomalies C and B (east and west of the Lemont 118mWm⁻² heat flow) do not appear to be spatially associated with significant granite intrusion.

The results of new 3D gravity modelling suggest a clear break with previous predictions of granite distribution beneath eastern Tasmania. High heat flows at Lemont are no longer associated with deeply-rooted, spatially-extensive granite. If these differences in granite distribution, which result from changes made to the long-wavelength correction of gravity data, are accepted, then a full reassessment of the Lemont play is required. This is a significant result that warrants further testing to confirm.

3.5.2 2.5D Gravity Modelling

The spatial coincidence between inferred Blackman River Granite and active seismic lines provide an ideal test location for the 3D gravity modelling interpretation. To achieve this, a program of 2.5D gravity modelling was devised to assess how (or if) the generations of granite prediction fit with geology interpreted from seismic sections. This work, which will also serve to test the seismic interpretation, was undertaken by Mitre and had three objectives:

1. to compare geological models along seismic line TB01-ST using granite distributions derived from Leaman (2012) and newly completed 3D gravity modelling.
2. to test the best fit 2.5D model from TB01-ST against line 95AGS-T4
3. to use results derived from part (1) and (2) to extend 2.5D modelling east from the end of TB01ST to predict a geology section to stratigraphic hole Ross 1 (The Quoin).

Results of this work are detailed in Direen (2025b) and were provided in Appendix 5 of the 2025 Annual Report for SEL21/2022.

2.5D gravity modelling was undertaken in Tensor Research ModelVision v18.0. Initial modelling work was completed along line TB01-ST, the crooked-line geometry split into three E-W model sections to enable accurate modelling. A fourth E-W model projects east of the TB01-ST to hole Ross 1 and a fifth section runs N-S along seismic line 95AGS-T4 (**Figure 29**).

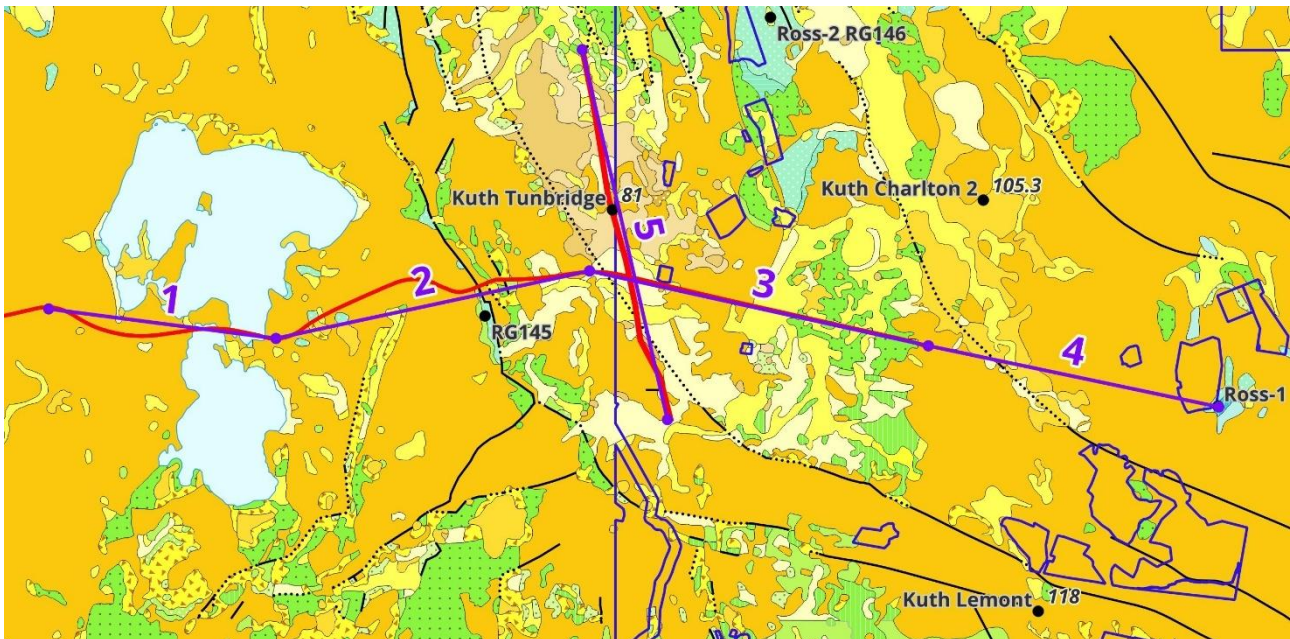


Figure 29: Plan map showing location of 2.5D gravity section lines (purple, numbered) relative to seismic lines (red) and drill collar locations with surface heat flow values (mWm⁻²), where measured. Background is 1:250,000 digital geology.

Density data inputs were sourced from Leaman (2012) to allow a reasonable basis for comparison between new and old results. However, it quickly became apparent that modelling at this scale required greater detail within several units, most particularly the Lower Parmeener group. Where needed, additional rock property data were derived from measured values reported in literature, as noted in Direen (2025b). Models were trialled along section lines 1 – 3 (TB01-ST) with several conclusions drawn:

- The thicknesses of Lower Parmeener units are often significant (up to 2.5km). Density values applied for this group vary from 2.54 – 2.69g/cm³, the higher end corresponding to limestones and/or Carboniferous Tillite.
- Dolerite varies in density from 2.7 – 2.98g/cm³ across the sections. Lower values are assigned in faulted zones and/or near surface and are interpreted to represent faulted and/or weathered rock.
- Rock units previously interpreted as clastic lithologies of the Badger Head Block ($\bar{x}$ = 2.67g/cm³) are now assigned to the denser Port Sorell Formation ($\bar{x}$ = 2.7; range applied 2.7 – 2.82g/cm³).

Comparison of the ‘Leaman granite’ model (2.62g/cm³) with the Blackman River Granite (2.63g/cm³) modelled by 3D inversion are possible in section 3 of line TB01-ST. Both granite models can be fitted to the data with reasonable adjustments to the geological section. It is noted, however, that omission of the Leaman granite (deep batholith) from its model creates an error that lies within model accuracy limits (0.4mGal) whereas removal of the Blackman River Granite creates a greater misfit (0.5-1mGal). These observations are mirrored by results on Line 5 (95AGS-T4) where models of Blackman River Granite returned errors of ca. 1mGal when the granite was removed. The consistency observed between the two interlocking models, combined with the lack of accord between the Leaman granite prediction and the active seismic data supports adoption of the newer gravity model.

Significant trial and error were required to produce final versions of the 2.5D modelled section lines and series of model iterations, options and issues are discussed in Direen (2025b). Final model results for all section lines are shown in **Figure 30**. Together, models 1 - 3 and 5 largely confirm the previous seismic interpretations with basement terranes defined by large, shallow, probably northeast-dipping west-directed thrusts. Tyennan Basement in the far west is overthrust by allochthonous units, now assigned as a higher density, highly-sheared melange akin to the Port Sorell Formation. Further to the east this unit is in turn overthrust by a high-density body labelled Anderson Creek Metamorphic Ultramafic Complex (ACMUC) but noted as potentially being a complex mix of units (c.f. ACMUC, Port Sorell Formation, Badger Head Formation and/or Gordon Limestone) forming part of an imbricated thrust complex that interfingers with Mathinna Supergroup to the east. The Blackman River Granite is an east-dipping lozenge derived from the -0.04 3D gravity isosurface (M2) and intruded into the Port Sorell Formation.

Cover sequences are also largely as predicted in seismic interpretations with an extensive blanket of Lower Parmeener sediment varying in thickness up to 2.5km overlain by thin, discontinuous sequences of upper Parmeener and/or younger Tertiary or Quaternary sediment. Dolerite intrusion is present across the section, mostly as relatively thin (ca. 300 – 500m) but often highly disrupted sheets. A double thickness of dolerite previously predicted at the west end of line TB01-ST has now been reduced to a single sill above a thick accumulation of Lower Parmeener (**Section 1; Figure 30**).

Extrapolation of modelled results east of TB01-ST to Ross 1 (The Quoin) is shown in Section 4. Here basement sequences are simplified to a uniform layer of Mathinna units intruded by the post-tectonic northern Macquarie River Granite. Of particular interest on this section are large dolerite intrusions – laccoliths - modelled at the eastern end of the line. Reaching depths and thicknesses of up to 3km these bodies are unique across the E-W section lines. While surprising, the detection of thick dolerite intrusion at this location matches spatially with large resistive anomalies (>500 Ohm.m) previously observed in 3D MT modelling (**Figure 31**). The successful identification of these bodies, which under

past interpretations were too shallow to be Leaman granites and too thick for dolerite intrusion, is a major result that lends further significant support to the new gravity models.

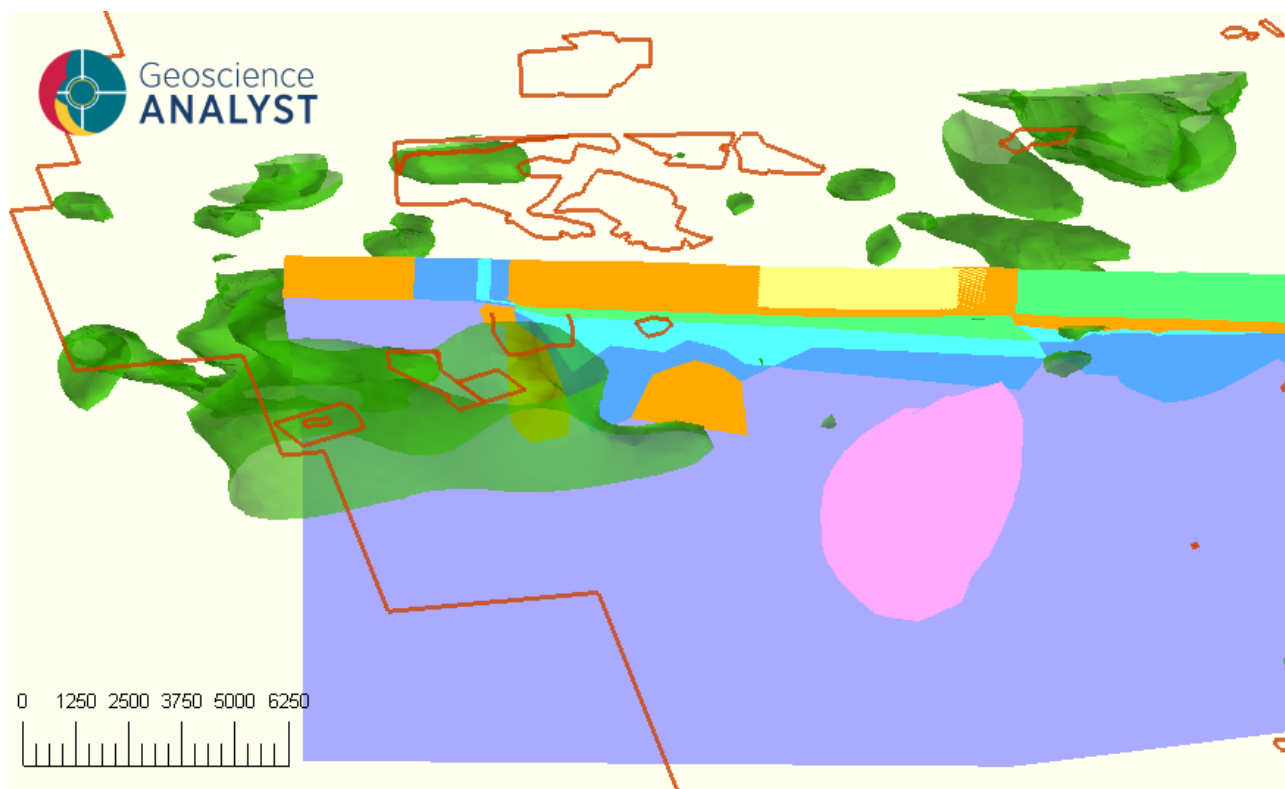


Figure 31: Lemont 3D MT model isosurface (green; 500 Ohm.m) clipped N and S and intersected with the 2.5D gravity model, Section 4. View from the north, see Figure 29 for section location. Unit colours as per 1:250000 geology map.

3.6 Lemont Passive Seismic (ANT) Reprocessing

The large-scale passive seismic survey conducted at Lemont in 2021 provides an excellent opportunity to further cross-correlate local geophysical data, most particularly for areas remote to the available legacy active seismic lines. An initial comparison of the 2021 and 2024 Lemont ANT models is detailed in Selway (2024b) in which both versions are related to the newly developed 3D MT models. Some correlation between conductive bodies is observed across all models, most notably at conductive zone D in the NW of the AOI. In other areas, such as conductive zone B in the south, results are more equivocal, a corresponding zone of low velocity being evident in the 2021 model but not the 2024. It was concluded that a better understanding of the ANT models was required to facilitate further comparison of these data. To achieve this DLPL approached the IMS to commission a report that would provide clarification and further documentation for the Lemont ANT models. The results of this work are detailed in Hill et al., 2025 and were provided in Appendix 6 of the 2025 Annual Report for SEL21/2022.

Assessments of the 2021 and 2024 models indicate:

- the 2021 ANT model is an incomplete work-in-progress produced using group velocities and an initial half-space based on results from the MT model of Soyer & Battaglini (2010). This model is poorly constrained in depth and almost certainly suffers from issues of circular logic. It has been removed from further consideration.
- the 2024 ANT model is a complete model produced using phase velocities and based on a layered but otherwise uniform starting half-space. This model version does not incorporate topographic data.

In the course of this work the IMS produced another new, reprocessed version of the ANT, referred to herein as the 2025 model. Broadly similar to the 2024 version (using phase velocity and a layered but

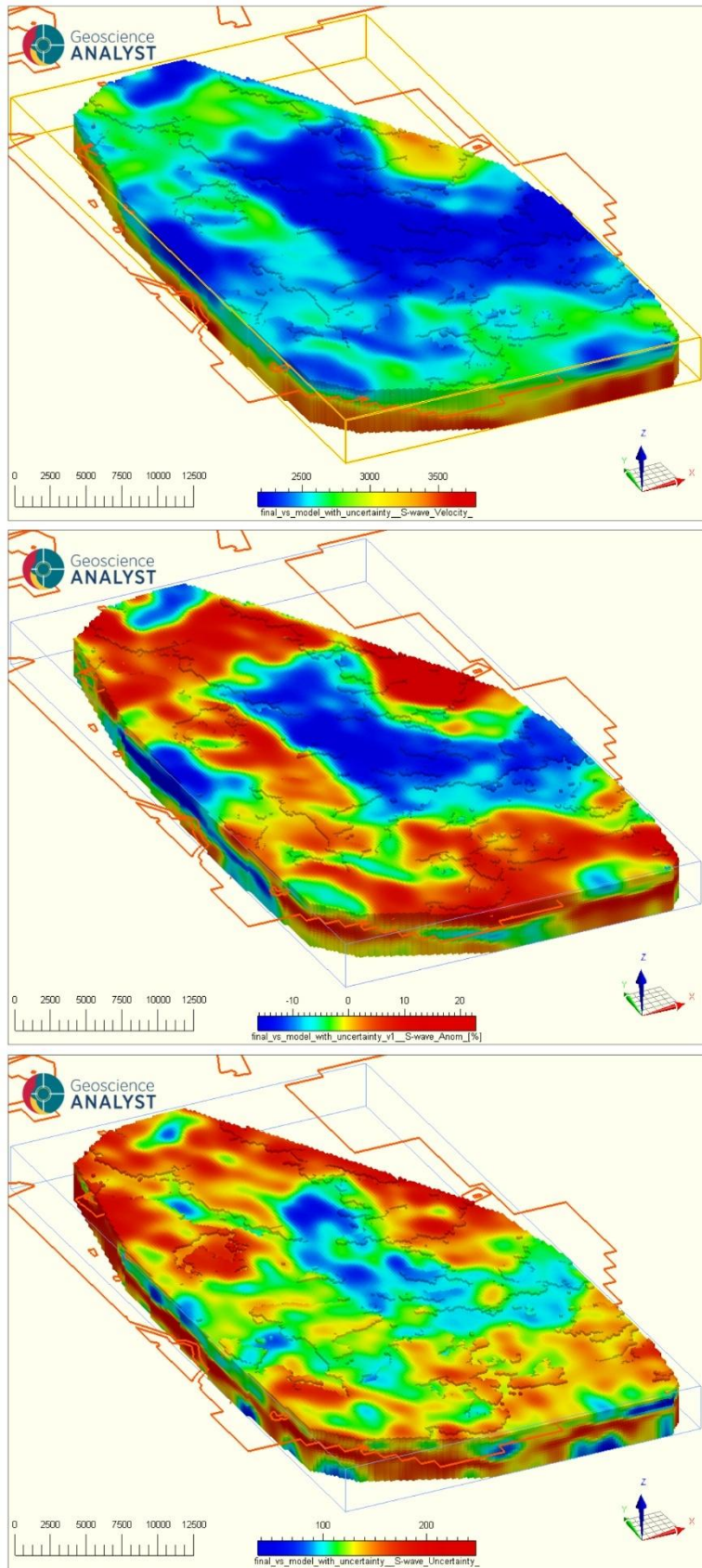


Figure 32: 2025 Lemont ANT model. Top, Absolute V_s ; centre, % V_s anomaly (calculated per cell as the % difference from the average for all cells at equivalent depth); bottom, V_s uncertainty.

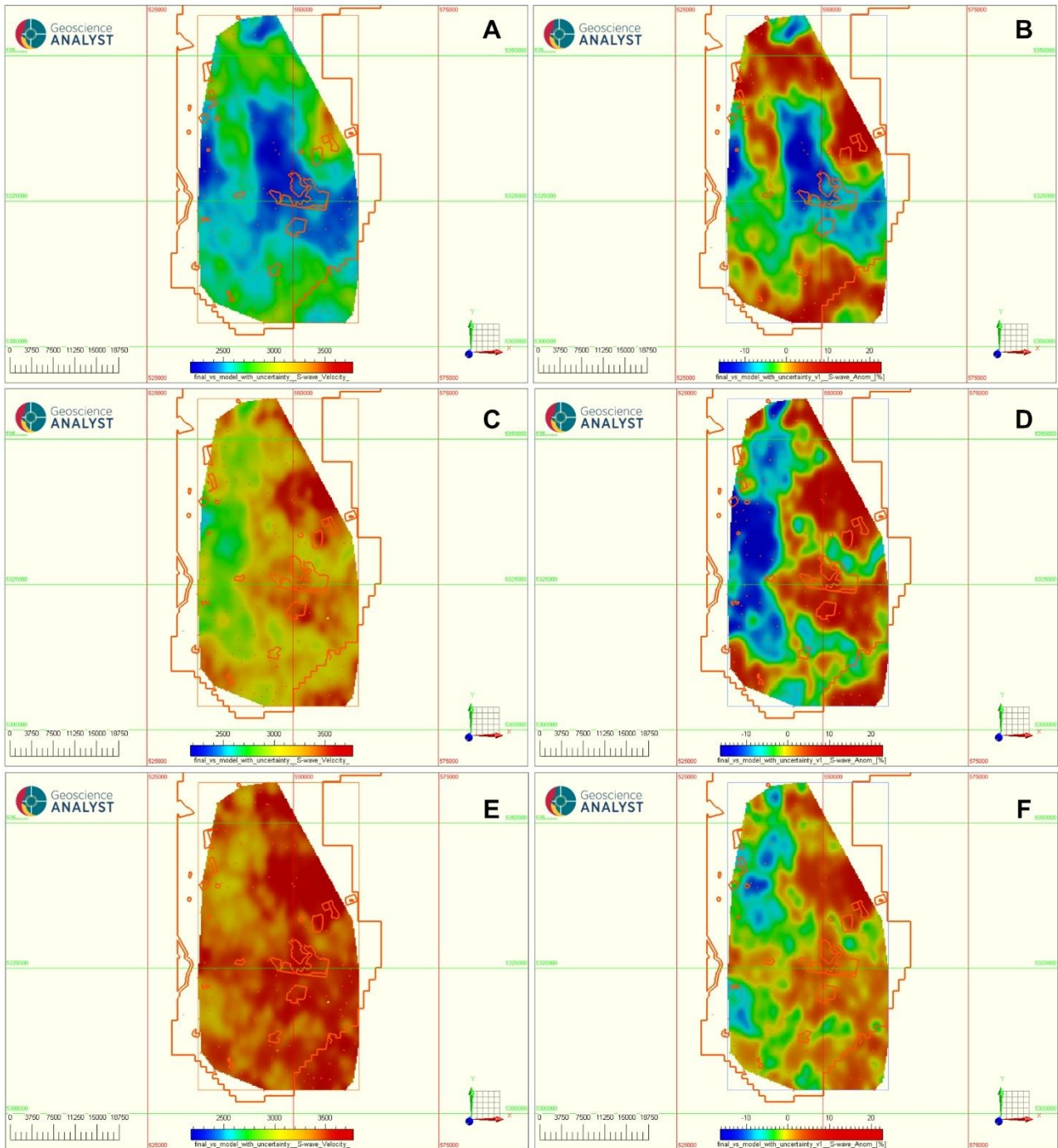


Figure 33: 2025 Lemont ANT model slices. A, C, E are Vs slices at 500m, 1500m and 2500m respectively. B, D, F are %Vs anomaly also at 500m, 1500m and 2500m respectively.

otherwise uniform half-space), the new model has been improved by the addition of topographic data and a complimentary 3D uncertainty analysis (**Figure 32**). It is better constrained in depth than previous versions (reaching a max depth of 3km BSL) and will be the only ANT to be considered going forward. UBC and ascii.xyz versions of this model as absolute V_s , % V_s anomaly and model uncertainty were included in Appendix 6 of the 2025 Annual Report for SEL21/2022.

Analysis of the 2025 ANT model indicates NNW-striking areas of generally high V_s in the north east of the model, similarly-striking regions of low V_s in the northwest and southern model areas that are characterised by more complex relations (**Figure 33**). A small but significant area of overlap between the 2025 ANT and the reprocessed seismic line TB01-ST (**Figure 11**) enables direct comparison of both

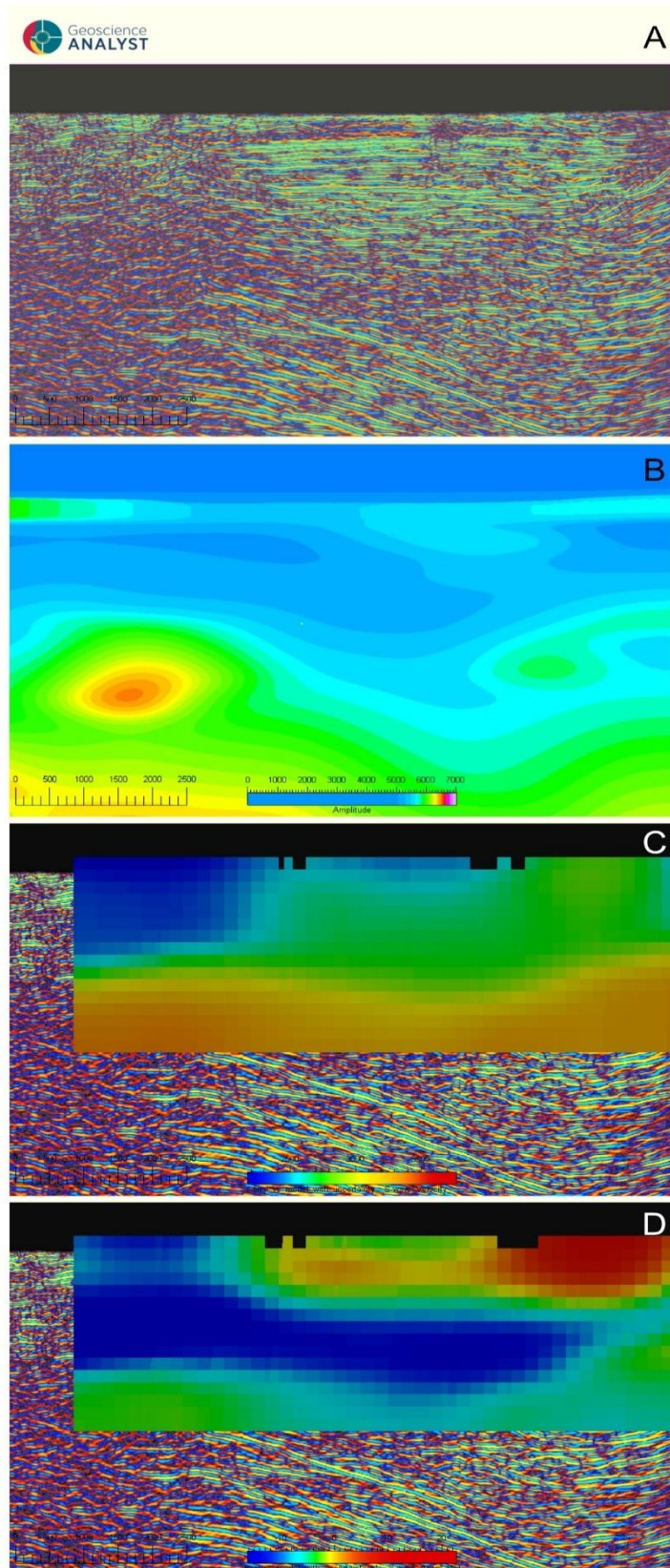


Figure 34: Intersection of 2025 Lemont ANT model and active seismic line TB01-ST. A, seismic line section (see Figure 11 for plan location of overlap); B, interval velocity model (V_p) from active seismic; C, Absolute V_s from ANT; D, % V_s anomaly from ANT.

absolute and % difference shear wave velocity models to active seismic data (**Figure 34**). The limited-depth ANT samples only the upper 3km of the section which is interpreted to comprise a v-shaped (fault-bound) trough of Parmeener sediment ca. 2.5km thick overlying Palaeozoic basement rock. Dolerite intrusion is observed within the uppermost Parmeener sediment. In this instance, all velocity models (V_p , V_s and $\%V_s$) display excellent correlation, the Parmeener units clearly visible as a v-shaped region of low velocity above faster basement rocks. The faster dolerite intrusion is also visible, most clearly within the $\%V_s$ image.

Ground-truthing the ANT with active seismic data provides reassurance of the reliability of this technique and supports the possibility of extrapolating these data to further interpret geology. It is interesting to note, however, that prior to the interpretation of TB01-ST Parmeener thicknesses of >1km were not recognised in this area. Whilst this feature is clearly visible as a distinct low-velocity zone it is doubtful that it would have been interpreted as Parmeener in the absence of the active seismic data. It is clear that ANT is best interpreted in conjunction with independent cross-correlation and/or ground-truthing data.

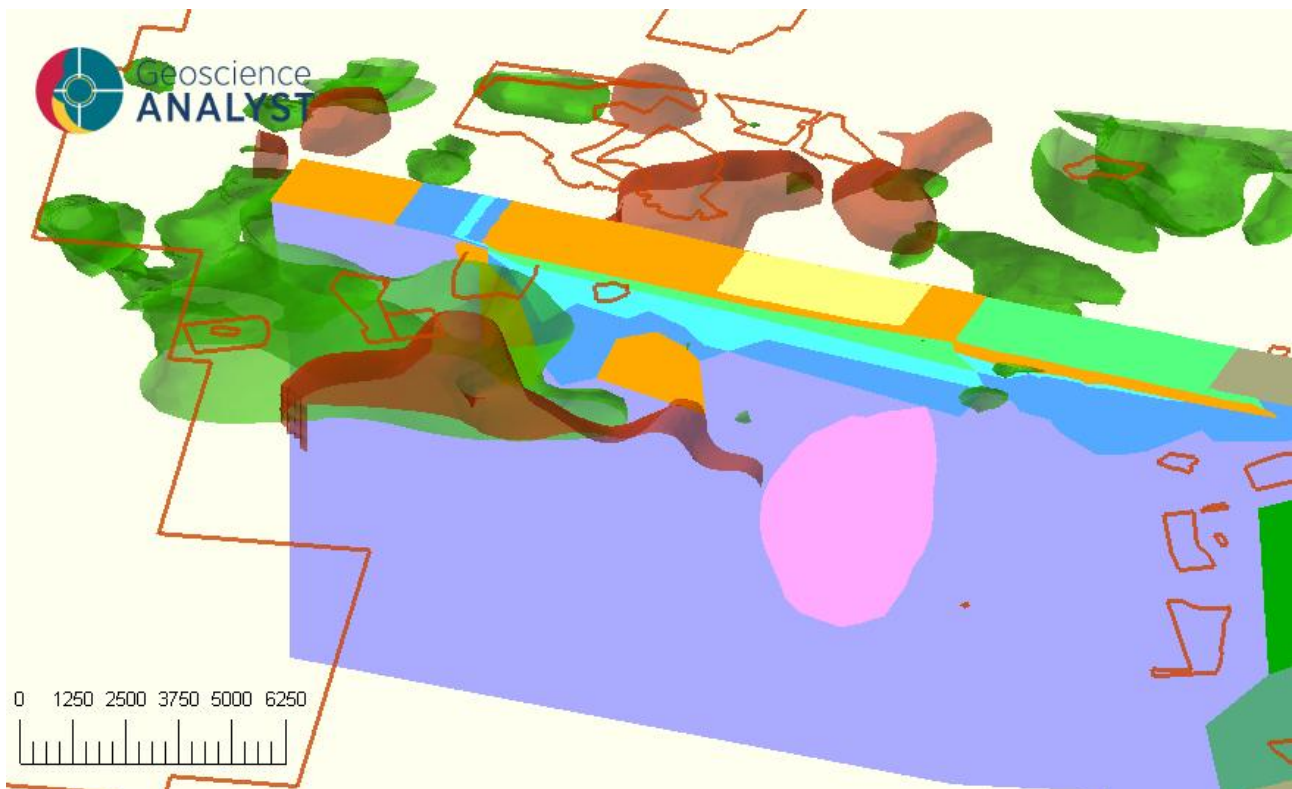


Figure 35: Lemont 3D MT model isosurface (green; 500 Ohm.m) and Lemont ANT V_s isosurface (orange; 3550m/s) clipped N and S and intersected with the 2.5D gravity model, Section 4. View from the north, see Figure 29 for section location. Unit colours as per 1:250000 geology map.

Comparisons of ANT results with seismic, gravity and MT data provide further insight into the geology of the Lemont area. The comparison with active seismic data suggests that the ANT is reflecting lithological variations (**Figure 34**) with areas of low velocity along the west of the model corresponding to thick accumulations of Lower Parmeener sediments. Likewise, higher velocity areas (>3550m/s) in the northwest correspond well with resistive bodies identified in 3D MT and characterised as significant dolerite intrusions by 2.5D gravity modelling (**Figure 35**). Comparison of ANT sections with Section 4 of the 2.5D gravity modelling show excellent correlation with base Upper Parmeener mapped to ca. 2200m/s, top basement at ca. 2800m/s and dolerite bodies clearly visible as positive $\%V_s$ anomaly (**Figure 36**).

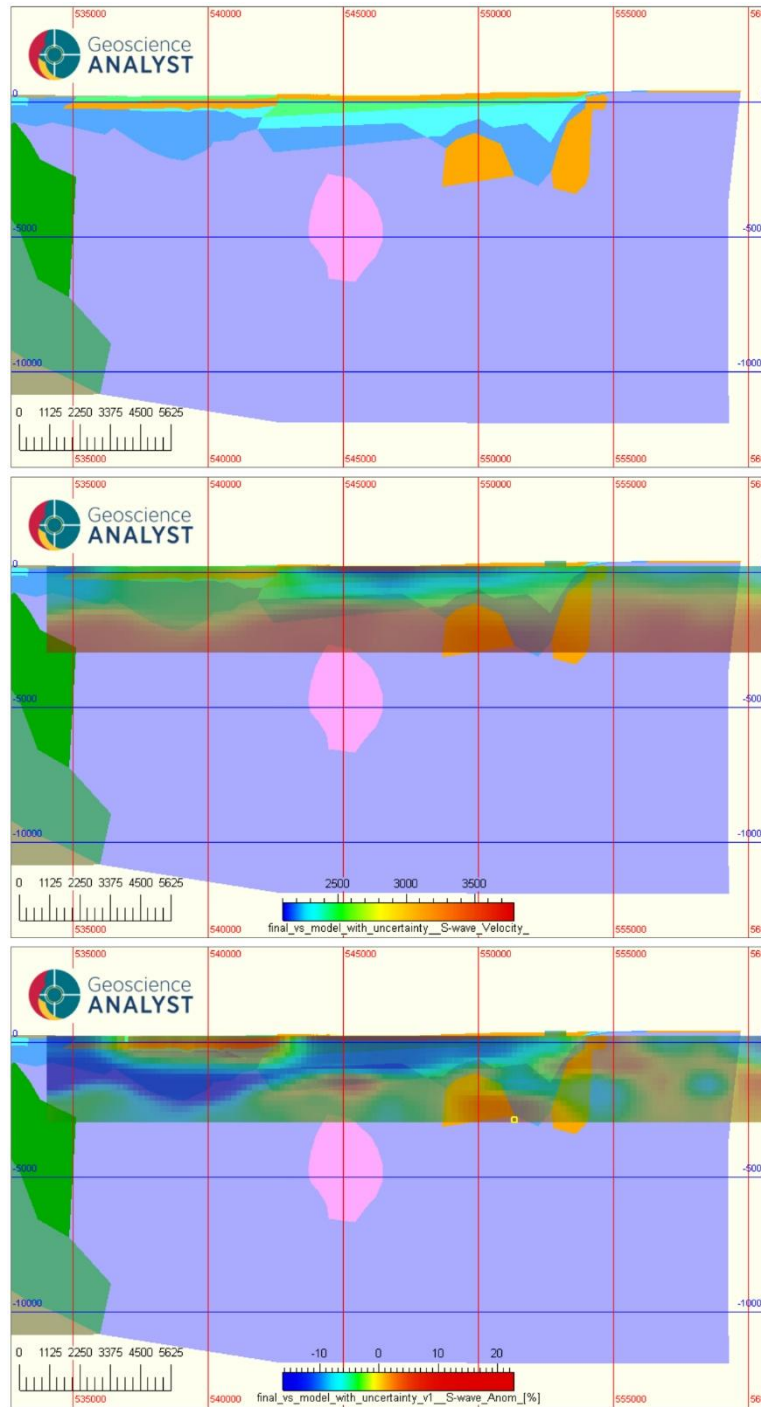


Figure 36: View north to 2.5D gravity model Section 4 (top) overlaid with V_s (middle) and $\%V_s$ anomaly (bottom) sections from the 2025 Lemont ANT model. V_s and $\%V_s$ anomaly scales as shown.

At a maximum depth of only 3km, the ANT model lies above much of the least-resistive 1 Ohm.m MT isosurfaces. Where overlap occurs, conductive zones D and C show correlation with lower velocity regions for both 1 and 3 Ohm.m isosurfaces (**Figure 37**). By contrast, the upper regions of conductive zones A and B appear to correlate with higher absolute velocities (V_s) albeit with some evidence of reduced velocity anomaly ($\%V_s$) (note: MT anomaly E is outside the extent of the ANT model). However, alteration of the colour scale to show only positive $\%V_s$ anomalies at 2900m reveals an intriguing pattern of high velocity ‘blocks’ which lie immediately adjacent to MT anomalies A and B (**Figure 38**). Compared to areas in the north and west, patterns at depth within the southeast of the ANT model appear complex (**Figure 33**). Characterised by higher velocities, the blocky positive $\%V_s$ anomalies in this area may

indicate faulting and disruption of competent rock. Data from uncertainty analysis suggest resolution issues may affect interpretation of the ANT in this area (Hill et al., 2025) and the scale at which structures or fracture zones would become visible as velocity anomalies is unclear.

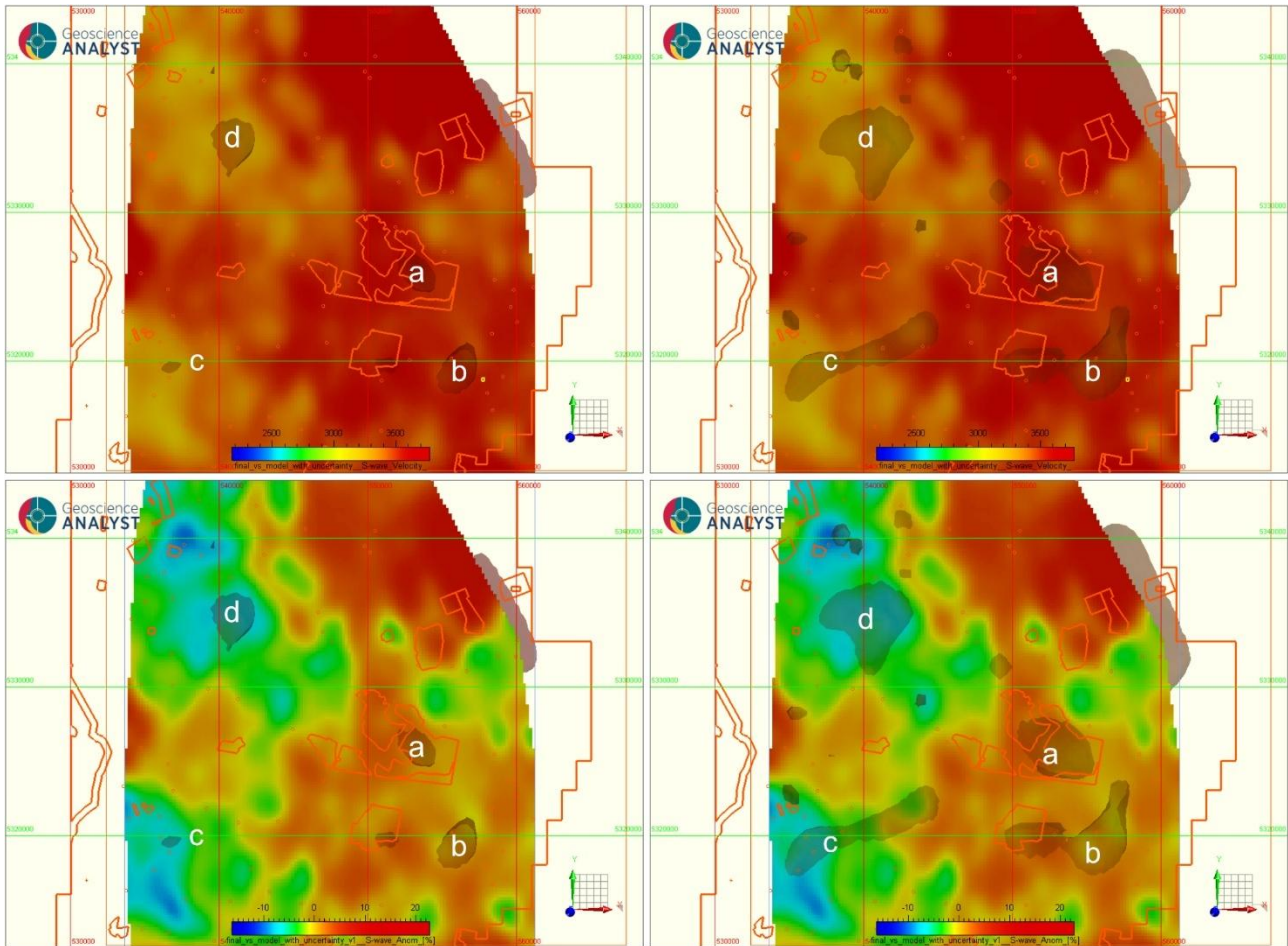


Figure 37: Comparison of low-resistivity Lemont MT isosurface intersections (grey areas; left column, 1 Ohm.m, right, 3 Ohm.m) with 2025 Lemont ANT model slices centred at 2900m depth (top row, absolute V_s , bottom $\%V_s$ anomaly, scales as shown).

Comparison of the ANT dataset with the location of granite bodies predicted from 3D gravity modelling does not reveal a consistent pattern of V_s or V_s anomaly associated with these features. The overlap of these two datasets is limited to the Macquarie River Granites, with lower density isosurfaces like the M2 -0.04 lying deep in the ANT section where its uncertainties are highest. Where overlap does occur, granite bodies appear to coincide with positive $\%V_s$ anomalies (**Figure 39**), however, in the absence of the gravity model it would not be possible to pick these bodies from the ANT alone. Unlike dolerite intrusion, which has both a very high velocity and a resistive MT signature, the Macquarie River granites are distinguished by neither, implying gravity remains key to their detection. Despite this uncertainty it is clear that the Lemont ANT model holds considerable potential to assist with 3D mapping of important unit boundaries north and south off the TB01-ST – Ross 1 section line. This possibility would need to continue to be investigated as part of ongoing modelling work at Lemont.

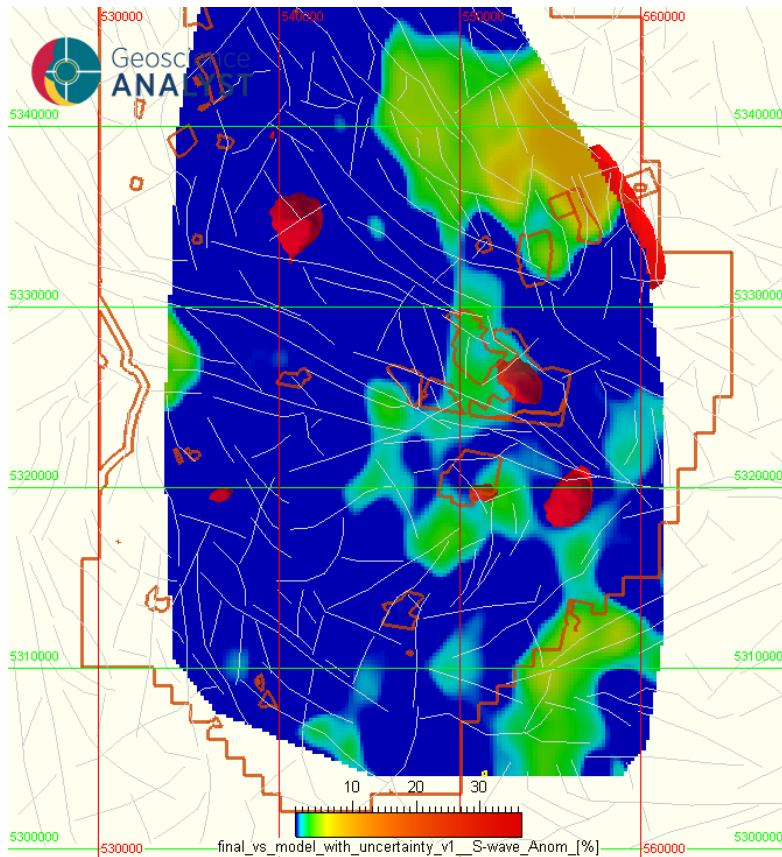


Figure 38: -2900m slice of %V_s anomaly from the 2025 ANT model coloured such that all values <1% are blue, intersected with 1 Ohm.m isosurfaces from Lemont 3D ANT (red). Lines overlaid are potential field lineaments.

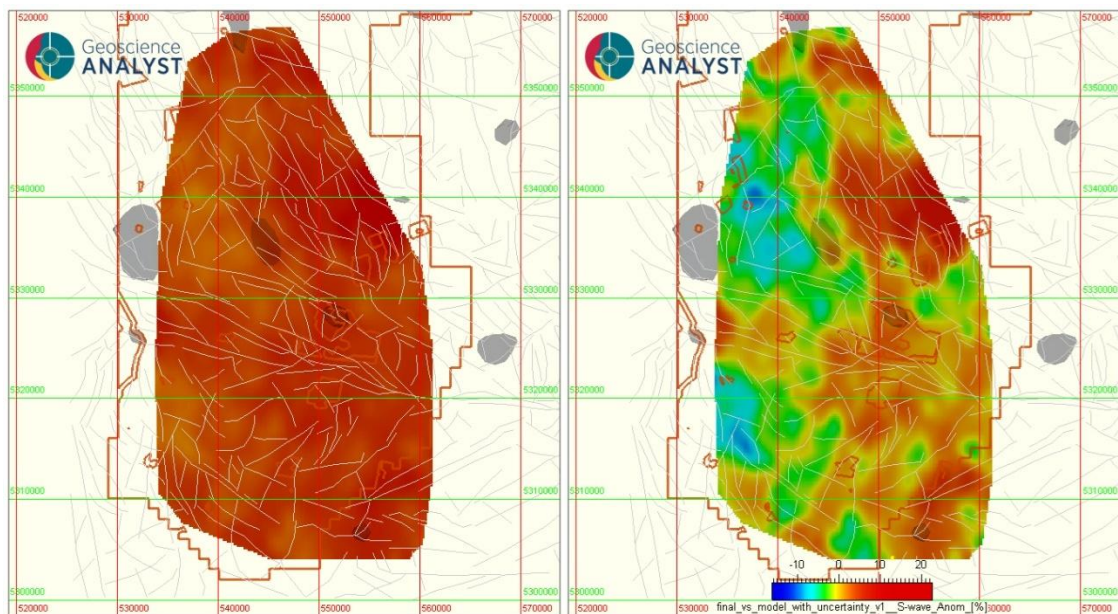


Figure 39: Intersection of 2025 Lemont ANT -2900m slice V_s (left) and %V_s (right) with -0.04 isosurfaces from M2 (Regional Constrained) 3D gravity model (shadows). Lines overlaid are potential field lineaments.

In December 2025 as part of a broader commercial transaction by Northstar Energy Limited (Northstar) acquired Direct Lithium Pty Ltd the Holder of SEL 21/2022 from Solution Energy Pty Ltd. Northstar is focused on the development of geothermal resources across Australia. On completion of the transaction, Northstar conducted a comprehensive geological review of the geothermal potential of SEL 21/2022.

Northstar is focussed on developing electricity generation capability by utilising closed loop Advanced Geothermal Systems (AGS) with binary Organic Rankine Cycle (ORC) units to generate base load carbon free base energy from Hot Sedimentary Aquifers (HSA)'s. Northstar has licensed technology to develop a Forced Geothermal Circuit (FGC), which is ideally suited for HSAs.

The geological review undertaken by Northstar of the available geological and geophysical data, highlights the geothermal targets contained within the License areas are predominantly fractured Hot Dry Granites, with moderate geothermal temperatures not suited to Northstar's FGC technology.

The conditioned work program activities undertaken by the previous owners of Direct Lithium and Fingal Energy did not contain any legacy field or on ground activities and were limited to desktop analysis and interpretation of existing geological and geophysical data.

As described above the geology contained within the license area, and the current Enhanced Geothermal Systems technology is not a high priority for Northstar to pursue at this time. Therefore, Northstar surrendered the permit on 20 July 2026.

Application of new and updated processing techniques to the considerable legacy geophysical dataset available across SEL 21/2022 has resulted in a material change to geological interpretations beneath this area. This work led to the identification of new geothermal targets and altered the play definition of the existing Lemont geothermal resource.

5.1 Lemont Project

Previous geological models of this area utilised granite distributions based on gravity interpretation that are now shown to be incorrect. The reduction in size and likely heat production capacity of granite bodies interpreted within the resource area implies that the existing play model, in which high surface heat flows are attributed to the presence of HHP granites at depth, are likewise, incorrect. The 3D earth model upon which the existing resource was based has been materially altered and the existing resource quantification is no longer valid.

Despite these difficulties, anomalously high apparent surface heat flow remains a fact at Lemont. Updated legacy drill hole datasets available from MRT have allowed revision of legacy heat flow data across Tasmania, enabling more accurate location of pre-2000 values. Data previously assigned only approximate locations have now been attributed to specific drill sites. The result of this work is a revised thermal field (**Figure 40**) which indicates that a broad area of the state is characterised by surface heat flow $>80\text{mWm}^{-2}$. Comparison to geological data make it clear that high surface heat flows are not limited to areas of known granite occurrence. The cause of anomalously high regional heat flow is uncertain, however, similarities are apparent between the spatial distribution of heat and the location of Tertiary volcanic centres. Isotopic dating of basalts across Tasmania ranges from 65 – 8.5Ma, perhaps implying a sustained period of high mantle heat input throughout the period. It is possible that residual heat related to Cenozoic volcanism may still be providing additional energy into the upper crust. This being the case, areas like Lemont may be viewed as the product of local environments acting to further elevate what may already be an anomalously high basal heat flow.

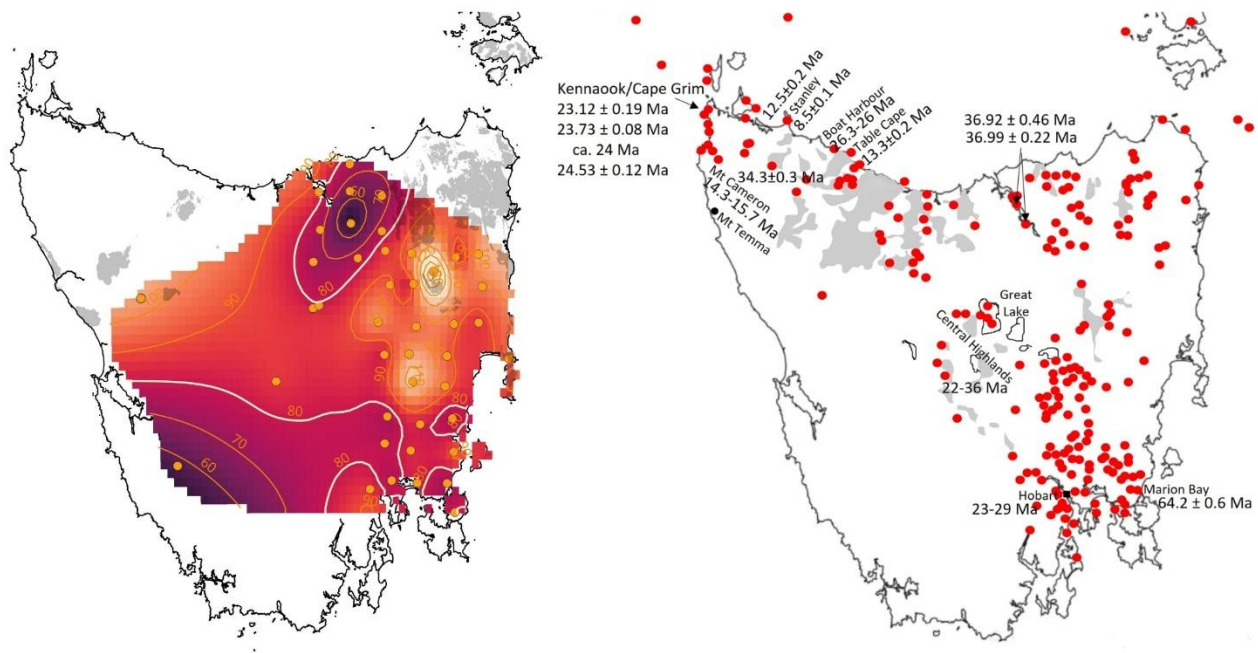


Figure 40: Left, Tasmanian heat flow field based upon legacy borehole data (orange dots), contours labelled in mWm^{-2} ; the location of exposed granite (grey shaded), note the 80mWm^{-2} contour which includes large granite-free areas across the central lakes plateau. Right, location of Cenozoic volcanic centres (red dots) and basaltic volcanics (grey shading) with isotopic age data as labelled (image from Fox et al. 2023).

The elimination of granitic heat production as a significant contributor to the Lemont resource implies that alternative mechanisms are required to transport or otherwise concentrate heat into this area. Options available include heat refraction via thermal conductivity contrasts and heat advection via fluid movement in permeable systems. Evidence from MT surveys has consistently suggested the latter and five targets have been generated based on 1 Ohm.m isosurfaces derived from 3D modelling of these data. Identified as MT targets A – E, the known characteristics of these features are summarised in **Table 5**.

MT Anomaly	Granite Body	Heat Flow (mWm^{-2})	Min. Depth (mASL)	Active Seismic	ANT	Interpretation
A	Macquarie River (S)	105 - 118	-2100	-	High $V_s/\text{Mod } \%V_s$	NW-striking reactivated Tabberabberan structure in Mathinna, underlies granite & dolerite laccolith
B (E/W)	-	96 - 118	E: -1700; W: -2500	-	High $V_s/\text{Mod } \%V_s$	ENE-WSW Cretaceous strike-slip fault and/or fault intersection
C (E/W)	-	90 - 118	E: -2700; W: -3400	-	Low $V_s/\text{Low } \%V_s$	ENE-WSW Cretaceous strike-slip fault and/or fault intersection
D	Macquarie River (N)	105	-1600	West-dipping structure at base of Lower Parmeener	Low $V_s/\text{Low } \%V_s$	NE/SW striking Permo-Carboniferous normal fault at base of Lower Parmeener/top Mathinna; adjacent to granite
E	-	92 - 105	-3600	-	-	NNW-striking reactivated Tabberabberan structure, probably in Mathinna

Table 5: Geophysical character and interpretation of 1 Ohm.m MT anomalies defined by the Lemont 3D MT.

Individual anomalies differ significantly in both depth and structural affinity. Anomalies A and D provide targets with potential for granite-related plays that may also host potential for EGS. The shallowest target is D; the hottest likely to be A. Anomalies C and B are poorly understood and require further modelling and investigation of the geophysical data. Anomaly E is both deep and outside of some geophysical coverages making it a lower priority at this stage.

2.5D gravity modelling results were returned in August 2025 and, as such, the interpretations of the data presented above are preliminary. Significant work remains to be undertaken to integrate available geophysical datasets into a coherent geological model of the Lemont area by future explorers. Tasks to be undertaken are recommended to include integration of MT and ANT results with gravity to better characterise anomalies A – E. A 3D geological model would need to be constructed for this area to assist in determining both drill priorities and data gaps. Structural analysis of Lemont would need to continue with a detailed review of available stress data and investigation of the likely interaction between structures A – E and the modern regional stress field. Thermal modelling would also need to be undertaken, with a recommendation to initially focus on a 2D model along the newly defined E-W section from TB01-ST to Ross 1. The goal of this work would be to create a working geological/thermal model of Lemont leading to confirmation of drill targets.

5.2 Avoca Project

New 3D modelling of legacy gravity data has produced improved mapping of the Ben Lomond Batholith near Avoca in the north of the tenement area. Significant volumes of HHP granite are predicted to extend west beneath cover from the known outcrop and a cupola mapped within this body presents a new target for both geothermal and mineral exploration (**Figure 41**). Density measured from core samples of Ben Lomond granite indicates values around $2.59 - 2.60 \text{ g/cm}^3$, consistent with its highly-fractionated chemistry. Assuming this body is largely homogenous implies depth to top of the identified cupola is likely to be between 2 – 4km, an ideal value for EGS as it enables heat build-up above the buried HHP granite whilst still remaining at drillable depth.

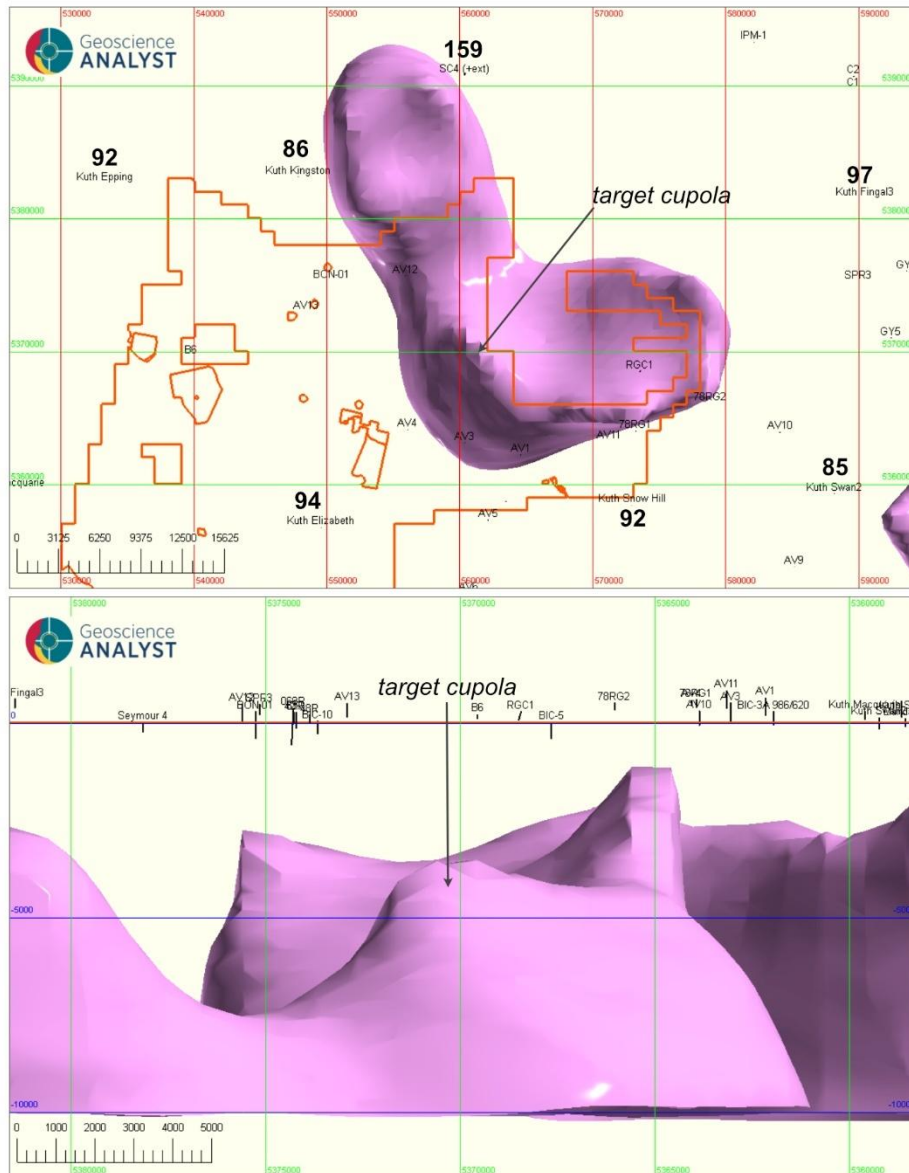


Figure 41: Avoca prospect target cupola in the Ben Lomond Batholith; plan image (top) and section view from west (bottom). Granite surface (pink) mapped as the -0.06 (2.61g/cm³) isosurface from the M2 (Regional, constrained) 3D gravity model. Numbers in plan view are legacy surface heat flow measurements (mWm⁻²).

Surface heat flow data in and around the granite outcrop predict a minimum surface heat flow of at least 90mWm⁻². These granites are known to be enriched in lithium, should they be host to fracture permeable systems then potential exists for a geothermal resource with economically significant fluid chemistry (lithium salts). Identification of permeable resource plays is a primary goal of DLPL's forward program, hence confirmation or elimination of this possibility at Avoca is a desirable outcome. For this reason, an MT survey across the north-east of SEL 21/2022 is recommended as forward work in this area.

6. CONCLUSION AND RECOMMENDATIONS

Work completed during the term of the permit has applied new and updated data processing techniques to the considerable legacy geophysical dataset available across SEL 21/2022. The results of this work have generated new interpretations that have materially altered the existing view of granite

distribution beneath all of central-east Tasmania. It has led to the identification of new geothermal targets and altered the play definition of the existing Lemont geothermal resource.

Five MT anomalies, defined by 1 Ohm.m isosurfaces within the new 3D inversion, have been identified as targets for naturally fractured (permeable) geothermal plays in the Lemont area. These targets include a range of lithologies and interpreted fault geometries. Forward work program recommendations at Lemont should focus on better characterising these features to enable prioritisation and future drill targeting.

Identification of significant volumes of HHP granite at Avoca extending west beneath cover from the known Ben Lomond Batholith present a new target for both geothermal and mineral exploration. The forward work program recommended at this location would aim to identify any zones of permeability associated with the granite subcrop.

7. ENVIRONMENTAL MANAGEMENT ACTIVITIES

No ground disturbing activities were undertaken on SEL 21/2022 during the reporting period so no Environmental Management Activities were required or carried out.

8. BIBLIOGRAPHY OF REPORTS LODGED

Reports lodged during the term of SEL 21/2022 are listed below:

- Direct Lithium Pty Ltd 1st Annual Report SEL21_2022 20230914-20240913
- Direct Lithium Pty Ltd 2nd Annual Report SEL21_2022 20240914-20250913

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KEYWORDS

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Fracture permeability

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