Torque Mining Ltd
Partial Relinquishment Report
Exploration Licence
EL 33/2010 – “Wanderer River”
March 2014

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1.0 Summary

Exploration over the relinquished part of EL 33/2010 Wanderer River in the 2011/2012 reporting year focused on a new generation VTEM helicopter borne EM survey over the prospective volcanics. The survey was completed late in the licence's first year.

No first-order conductors due to conductive massive sulphides were defined by the survey though some lower tenor, broader, lithological conductors were defined.

In the 2012/2013 reporting year exploration focused on compiling and digitizing existing soil geochemical data and gradient IP data to the end of attracting a JV partner to help finance exploration. Discussions were held with Xstrata. Unfortunately Xstrata chose not to advance discussions and enter into a JV with Torque Mining Pty Ltd.

Disappointing results from the VTEM survey have downgraded the prospectivety of the Thirkell Hill/D'Aguillar block of the Mt Read volcanics and so this portion is being released.

2.0 Introduction

2.1 Location and access

The relinquished part of EL 33/2010 is located very near to the remote southwestern coast of Tasmania around 40 kilometres west of Strathgordon and 80 kilometres south of Strahan. Altogether 169km² are being relinquished, leaving 41km² retained. Figure 2.1 shows the relinquished and retained parts of EL33/2010 "Wanderer River".

Access to the area is difficult with no continuous road access to the rest of the state. The only vehicular track to the area, a rough 4WD track known as the Low Rocky Point Track commences at the southern end of Birch's Inlet off the southeastern corner of Macquarie Harbour and thus requires boat transport.

This track crosses a bridge over the Wanderer River which has been decommissioned restricting access to the southern part of the licence. Access to the northern D'Aguilar Range/Thirkell Hill window is possible via a branch track off the Low Rocky Point track however there are significant washouts to the track near the licence boundary.

Access is most commonly made by helicopter either from Strahan or Strathgordon.

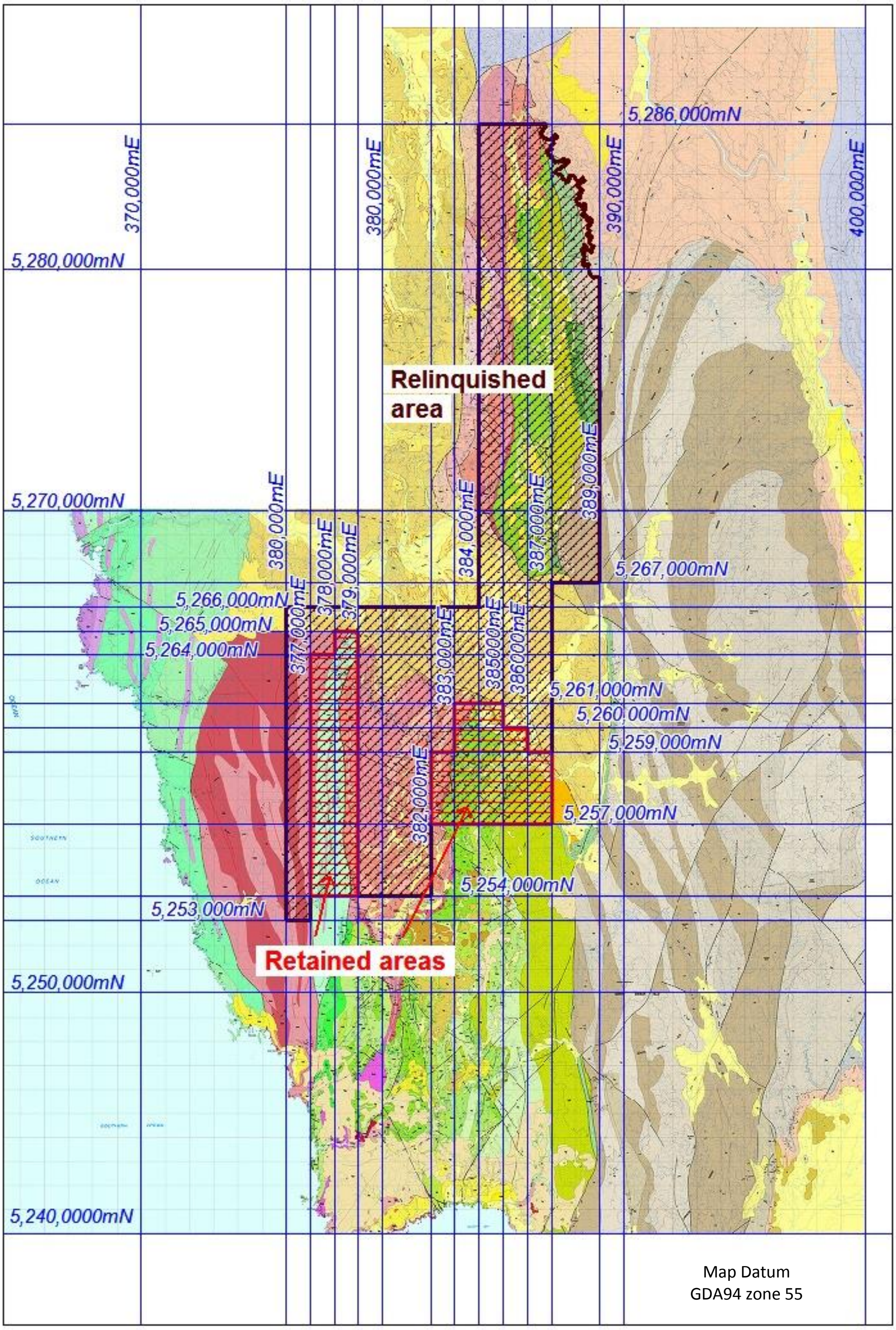

Figure 2.1: Relinquished and retained parts of EL 33/2010 Wanderer River licence showing topography, drainage and access. Map datum is GDA94 zone 55.

2.2 Tenure

EL 33/2010 was granted Frontier Resources Ltd (90%) and Exploration and Management Consultants Pty. Ltd. (10%) on 29th March 2011 and transferred to Torque Mining Ltd on 4th May 2012.

2.3 Land status and usage

The Wanderer River licence area is crown land and is classified as part of the South West Conservation Area. As such it is open to mineral exploration.

The Tasmanian Government proclaimed the prospective rocks south of Macquarie Harbour to be within the Sorell Peninsula Prospectivity Zone, a recognition of the mineral potential of the area. Under this act any change in the status of the land within the zone requires the approval of both houses of the Tasmanian parliament with any affected party entitled to compensation (this does not cover any decisions of the Federal government).

3.0 Geology

EL 33/2010 covers a highly significant portion of the southernmost land extent of the Mt Read Volcanics. For a detailed geological description of the prospective rocks the reader is referred to Corbett (2003).

Essentially the prospective Mt Read Volcanic rocks consist of felsic volcaniclastics and felsic lavas/intrusives with lesser finer sediments.

These are overlain by shales with minor interbedded felsic volcanics of the Waterloo Creek Group, in turn conformable, overlain by the Ordovician siliciclastic sediments of the Denison Group.

4.0 Exploration Philosophy

Torque Mining Ltd is exploring for base and/or precious metals. Mineralisation styles targeted are VHMS (Volcanogenic Hosted Massive Sulphides) either as seafloor precipitates or shallow subseafloor replacement, and/or hybrid VHMS/epithermal precious metal rich vein and/or replacement deposits.

5.0 Exploration undertaken over relinquishment area

5.1 Helicopter VTEM survey

5.1.1 Introduction

A new generation, deeper seeking, helicopter borne EM survey was flown over all prospective rocks i.e Mt Read Volcanics and Waterloo Creek Group rocks, within Torque's two tenements in the Southern Mt. Read Volcanics area (see figure 5.1).

The VTEM (Versatile Time-Domain Electromagnetic) survey was flown by Geotech Airborne Pty. Ltd. of Unit 1, 29 Mulgul Road, Malaga as their project number AA926.

The Mineral Exploration Working Group gave permission for the survey to be conducted within a 6 week period from 1st February to 15th March to slot between nesting wedged tailed eagles and orange bellied parrots. The survey was flown between 12th February and 23rd February with only 6 weather days though other days only saw partial flying.

5.1.2 Data collection

The base used was Strathgordon with the helipad at The Knob above the Lake Gordon damsite.

Total survey length was 986km of which 955km was originally planned and a further 31km added during the survey. The survey area was divided into three blocks to cover the three prospective areas within the two licences.

The survey was flown AMG east-west with flightlines with 150m spacings between lines. Magnetic data was also collected by a proton precession magnetometer.

The full survey report is included as appendix A. The report covers the whole survey which was flown as three discrete blocks. In spite of the fact that only one “D’aguiller Block” is being relinquished, it is considered by Torque Mining Limited that the cost of “blocking out” data from the other 2 blocks is not warranted. The full digital data set from the survey is held by MRT.

The following is reproduced from the Executive Summary section of the report:

"During February 1st to 23rd 2012 Geotech Airborne Pty Ltd. carried out a helicopter-borne geophysical survey over the Daguilar, Moores and WartHill Blocks situated approximately 33 kilometres west of Strathgordon, Tasmania.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEMplus) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 955 line-kilometres of geophysical data were acquired during the survey.

In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as the following maps:

- Electromagnetic stacked profiles of the B-field Z Component,
- Electromagnetic stacked profiles of dB/dt Z Components,
- Colour grids of a B-Field Z Component Channel,
- Total Magnetic Intensity (TMI), and
- EM Time-constant dB/dt Z Component (Tau), are presented.

Digital data includes all electromagnetic and magnetic products, plus ancillary data including the waveform.

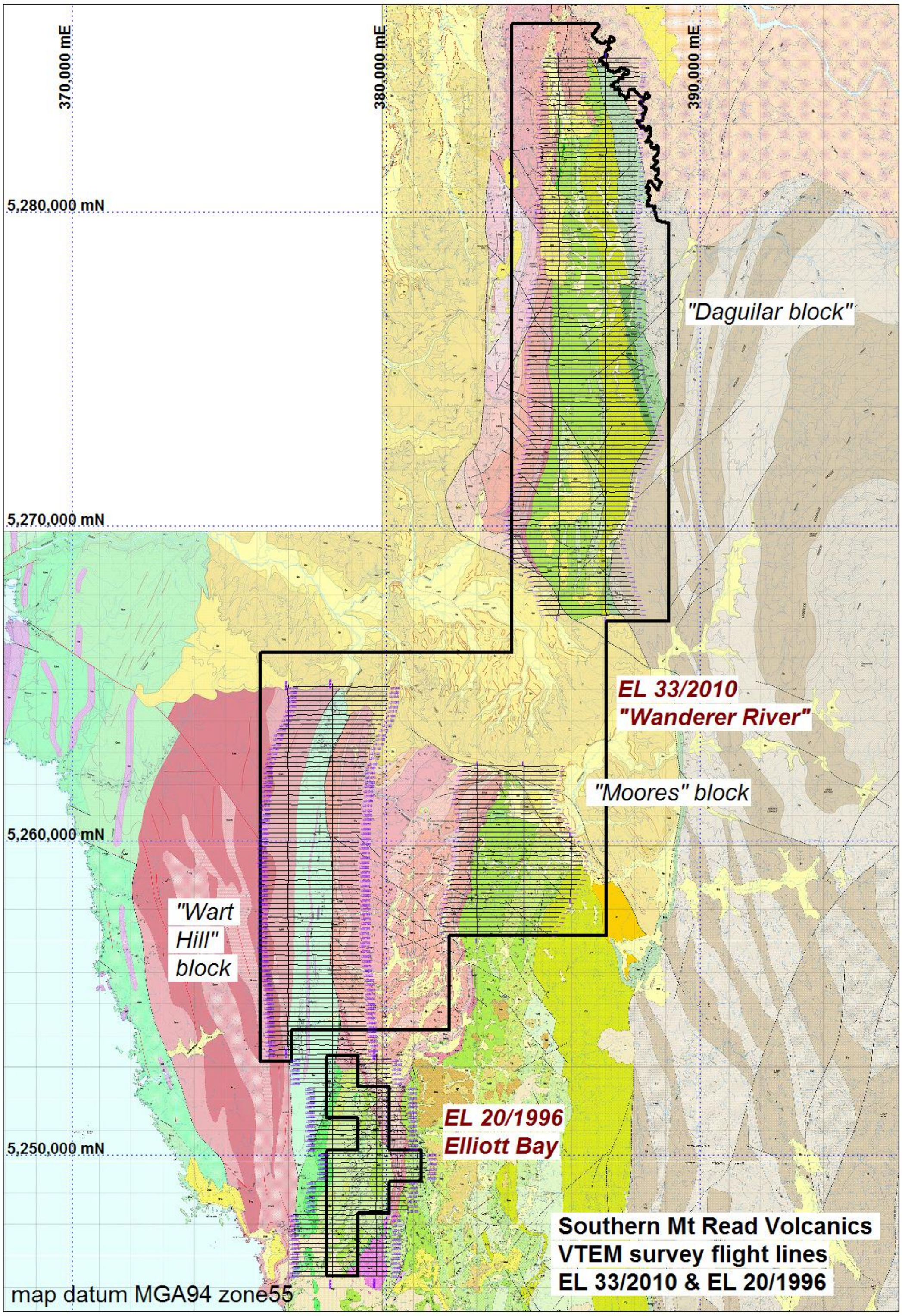

Figure 5.1: EL 33/2010 "Wanderer River" and EL 20/1996 "Elliott Bay" VTEM survey flight lines on MRT 1:25,000 geology.

The survey report describes the procedures for data acquisition, processing, final image presentation and the specifications for the digital data set."

5.1.3 Processing

Data generated was processed and imaged by geophysicist Phil Muir of Southern Mineral Exploration Geophysics, Hobart. Phil supplied the following notes to explain his approach.

"Conductivity Depth Image (CDI) Processing – Phil Muir

The original VTEM field data has been processed to generate CDI data using EmaxAIR software written by Fullagar Geophysics. EmaxAIR calculates conductivity versus depth pseudosections from the transient electromagnetic (TEM) data of various airborne EM systems. Conductivity-depth pseudosections are a convenient form of presentation of EM profiles for first-pass interpretation.

The EmaxAIR transformation proceeds in two stages: off-time data are first converted to apparent conductivity, and the depth assigned to each delay time is the depth of the induced current maximum in a half-space with conductivity equal to the apparent conductivity at that time.

The purpose of EmaxAIR's conductivity-depth processing is to quickly and reliably transform raw data into a useful form for presentation of conductivity at a true depth scale, and to allow for a fast initial interpretation of the data.

The basic method of CDI data presentation is in cross-section plots with one section per flightline. These are shown in Appendix B2. Appendix B1 contains the CDI data in ASCII format that can be used to create these section plots.

Another useful way to summarise CDI data over an area is to create plan-view "depth slice" images. In these plots the CDI data between arbitrary depth ranges are presented as images. Depth ranges can be generated using either Depth-below-surface or Relative-level (RL) limits. In this report the depth slices are based on RL intervals of 100 metres.

Depth slice CDI images are included as figures 5.9 to 5.18 this report and in Appendix B3 and B4. In the in text figures and Appendix A3 the colour stretch used for each slice is consistent. In the figures in Appendix B4 the colour stretch is tailored to that individual slice; each slice has a different colour stretch and this must be remembered when comparing conductivities from one depth slice image to another."

5.1.4 Interpretation

Geotech's in-house geophysicist's provided a discussion of anomalous results generated by the survey which is reproduced from their report (included in appendix A) herein:

> " ***Daguilar Block***
>
> *The total area coverage is 59km2. Total survey line coverage is 438.8 line kilometres. Based on the geophysical results obtained, the area has several conductive zones. Some of these zones are considered as sub-horizontal lithological conductors, some as steeply dipping structural conductors, and some as local targets (reference in Appendix C: L10020, L10840 10400 RDI).*
>
> *If the conductors correspond to an exploration model on the area it is recommended picking anomalies with conductance grading and center localization of the targets, detail resistivity depth imaging and plate Maxwell modelling for some of the anomalies prior to ground follow up and drill testing are recommended.*

Referring to the anomalous zones listed by Geotech above;

D'Aguilar block

- The processing with "EmaxAIR" suggests the eastern conductive anomaly is a moderately-west-dipping feature which continues in a less conductive noisy trend across the section, reaching down to about -500m RL before flattening out.
- The anomalous conductivity zone on L10400 appears to be the response of an overburden with elevated conductivity. Based on my "EmaxAIR" processing I'm dubious about the conductivity data tightly hugging the surface. That said, my processing also suggests there's nothing on this line but a conductive overburden.
- The anomalies on the western end of L10840 are due to processing errors in the original contractor-supplied data whereby the decay curves are monotonically increasing for the first several channels of the decay curve, causing erroneously high signal levels at mid and late times (see decay curve images attached). The processing with "EmaxAIR" has automatically rejected these bad decays, hence the missing portions of the section in the west.

Phil Muir's processed images are included in appendix B. Phil was unable to see any responses considered due to conductive sulphide mineralisation.

The survey has defined a number of lithological conductive zones. One intriguing feature being further considered is the linear zone at the southwestern corner of the Daguilar block. Here the southern part of the linear trend corresponds with the graben bounding structure whilst the northern part corresponds with the Waterloo Creek Group shales. Whilst such shales may be expected to generate an EM response the lack of a conductive response north along strike suggests that there is something different about the shales here (though it may be as simple as shearing along this unit). This linear zone has been remarked upon previously and corresponds to earlier generation Geoex McPhar H-400 EM anomalies (McGregor-Dawson, 1975) assigned names Viking 12 and Viking 13 in the area referred to by previous Frontier explorers as the Thirkell South zone.

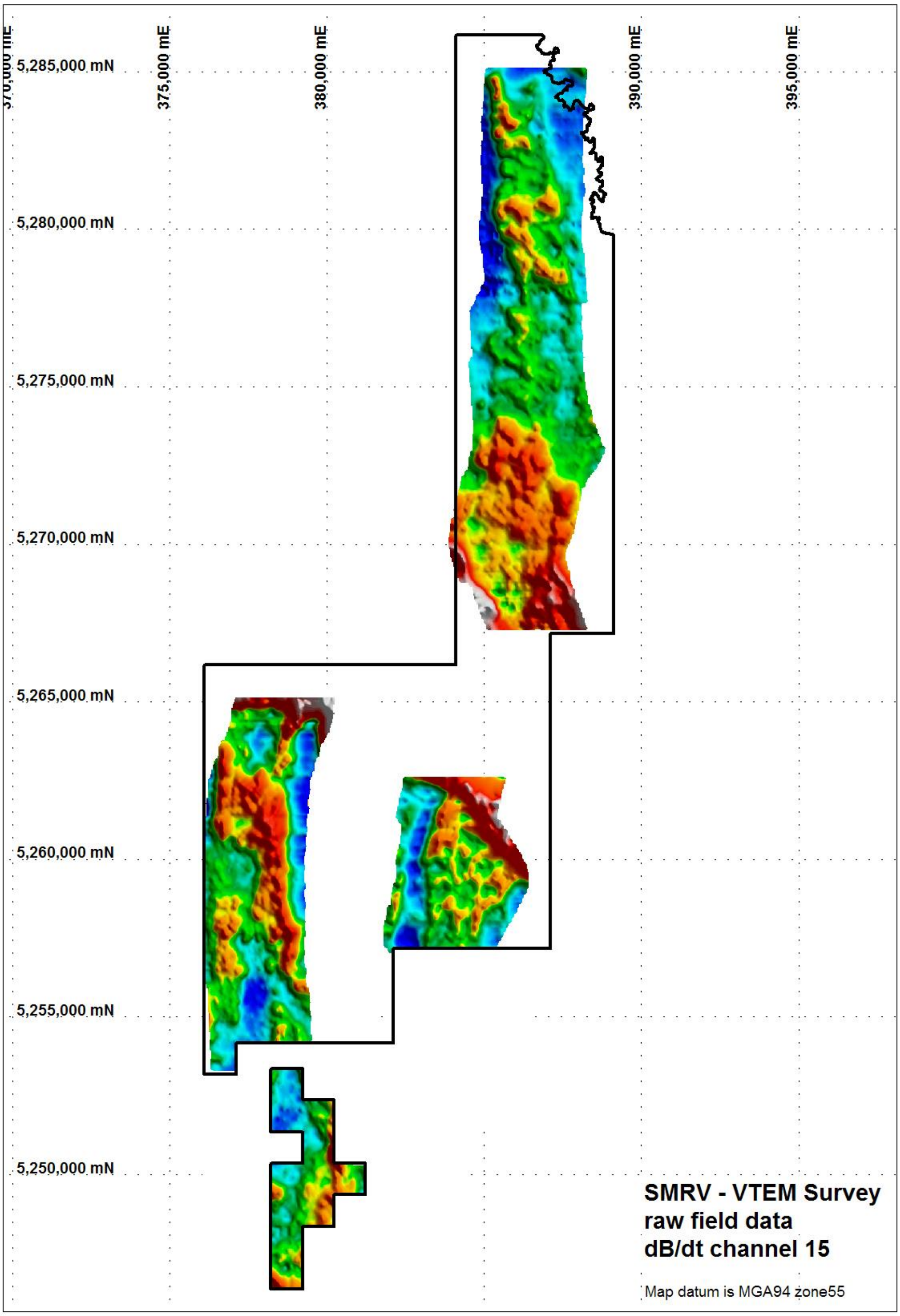

Figure 5.2: Raw field data dB/dt channel 15

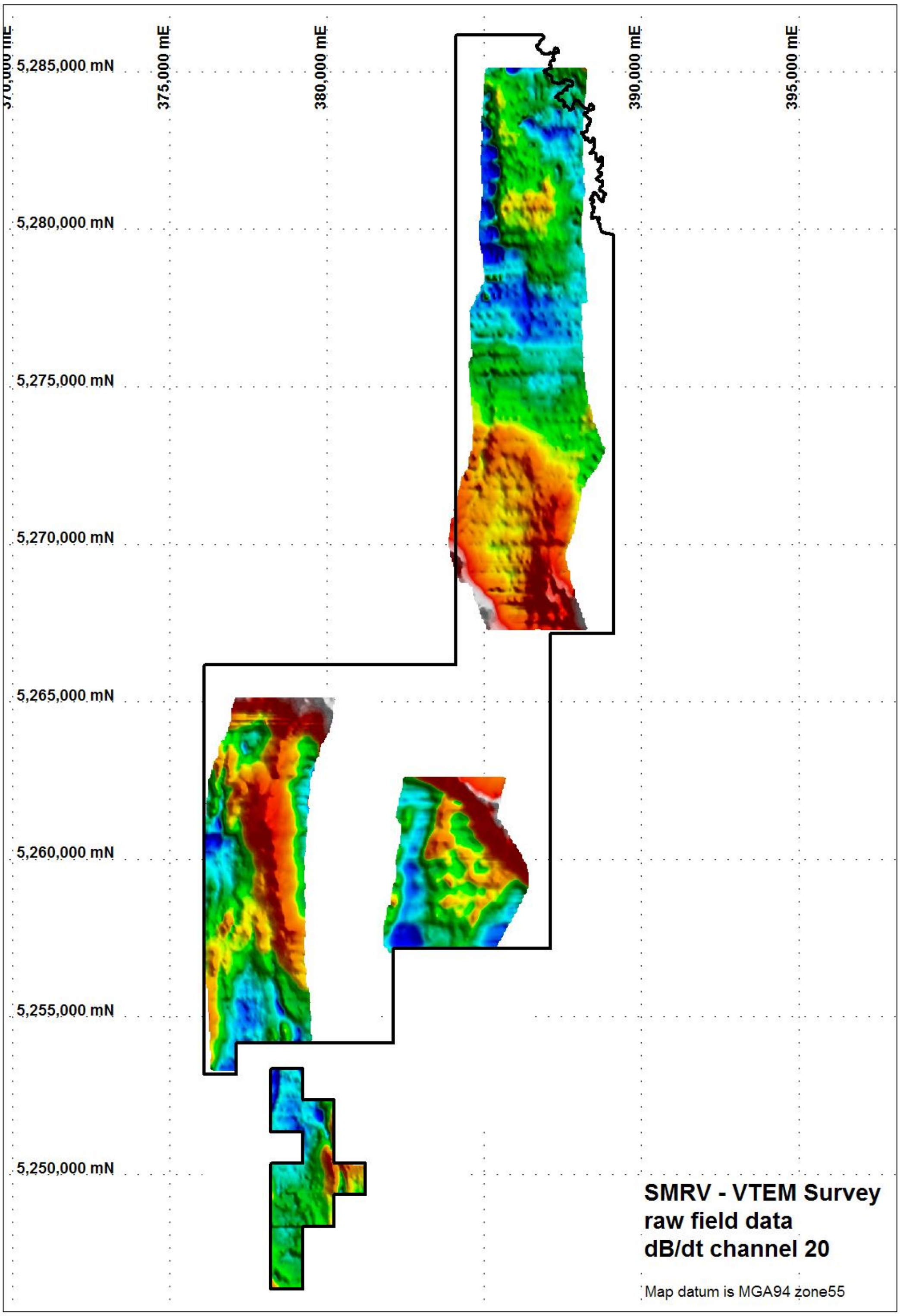

Figure 5.3: Raw field data dB/dt channel 20

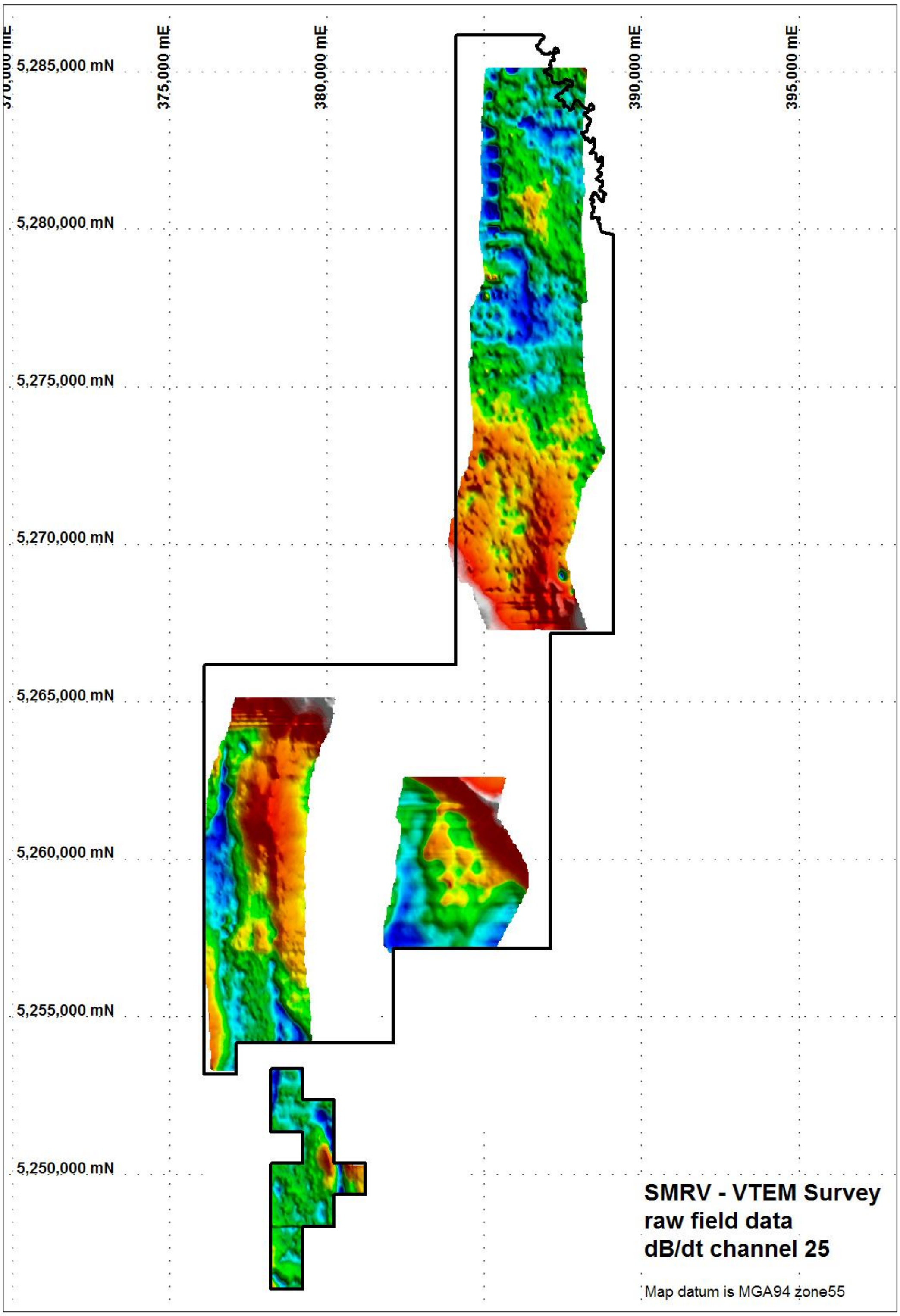

Figure 5.4: Raw field data dB/dt channel 25

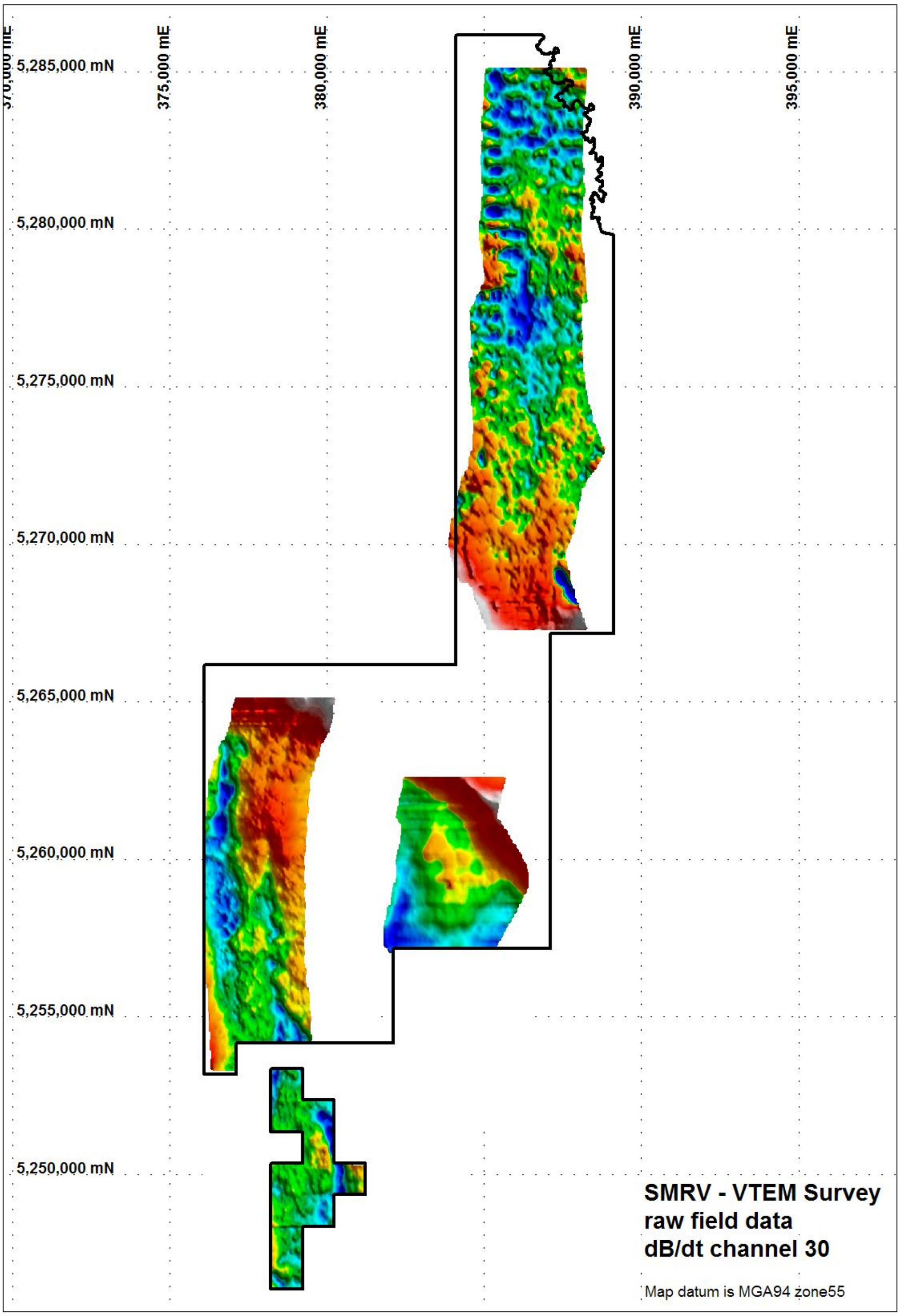

Figure 5.5: Raw field data dB/dt channel 30

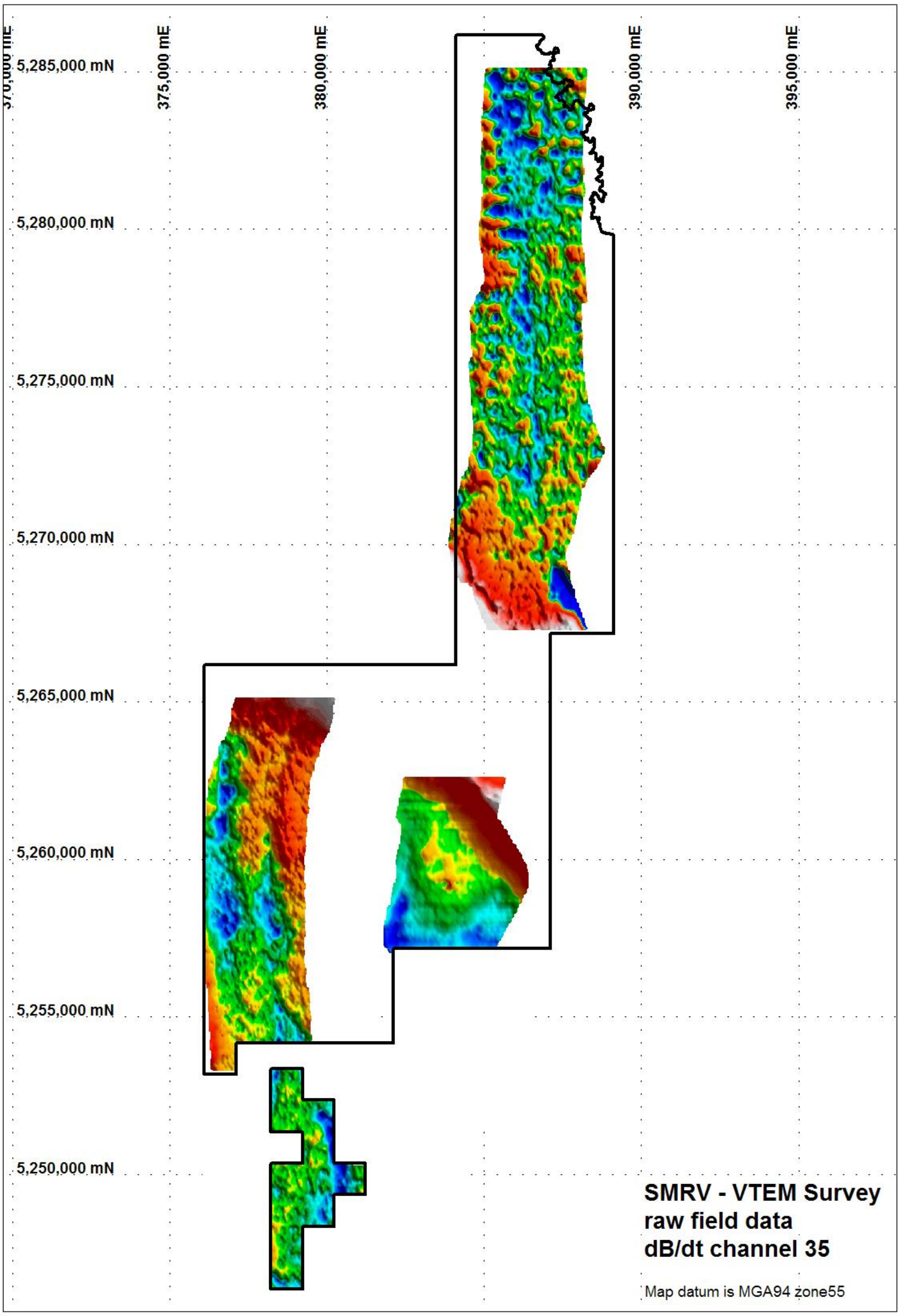

Figure 5.6: Raw field data dB/dt channel 35

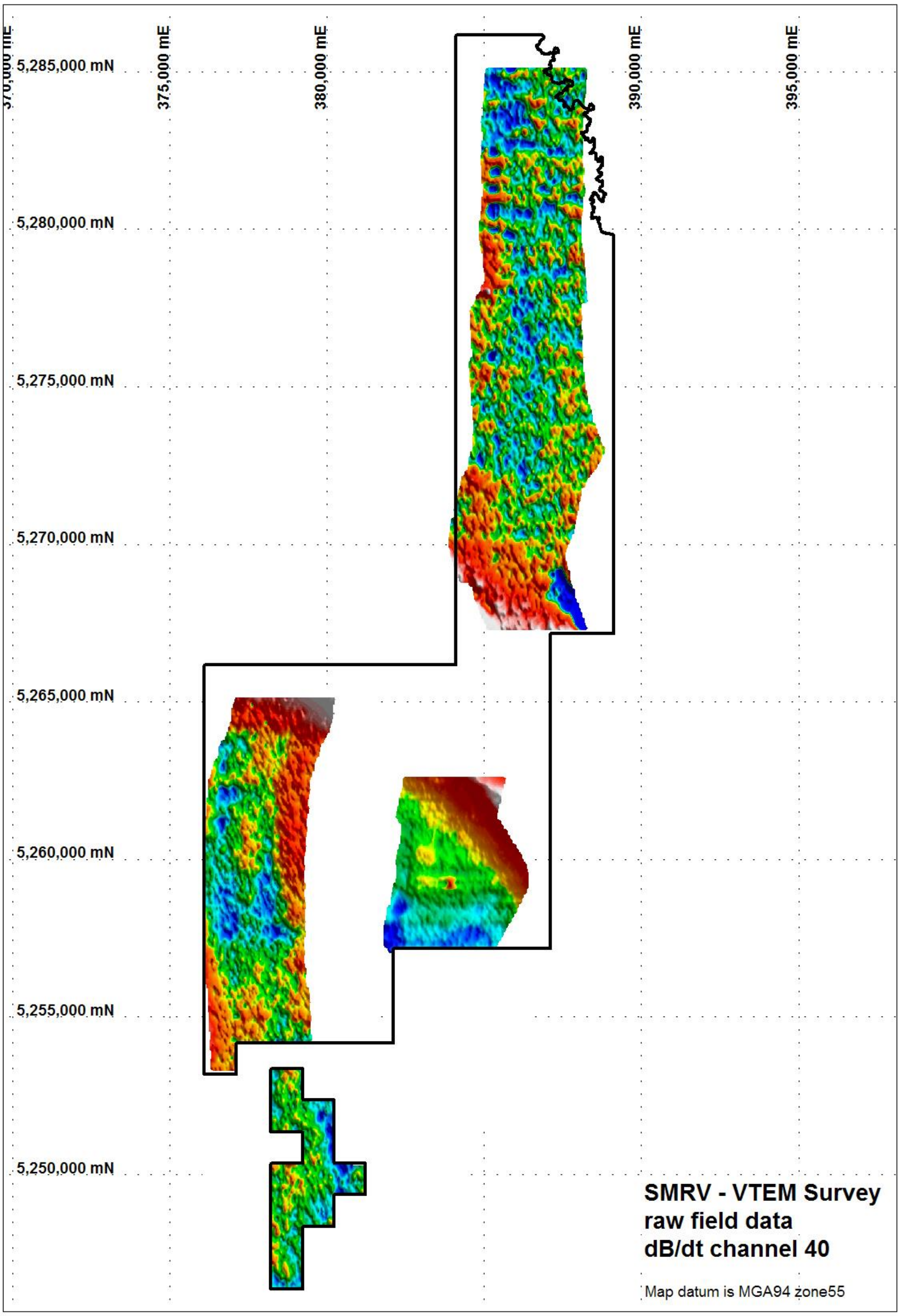

Figure 5.7: Raw field data dB/dt channel 40

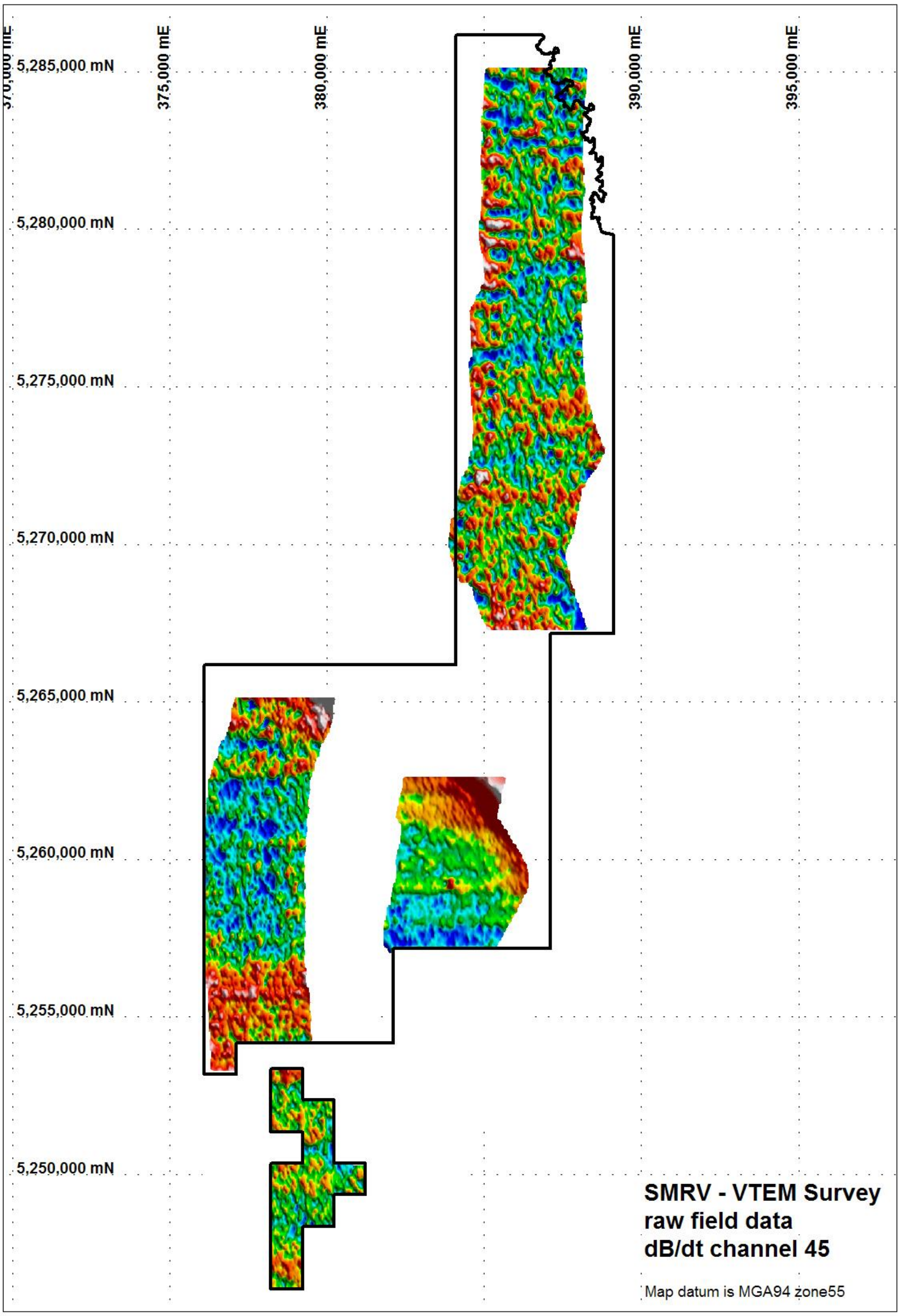

Figure 5.8: Raw field data dB/dt channel 45

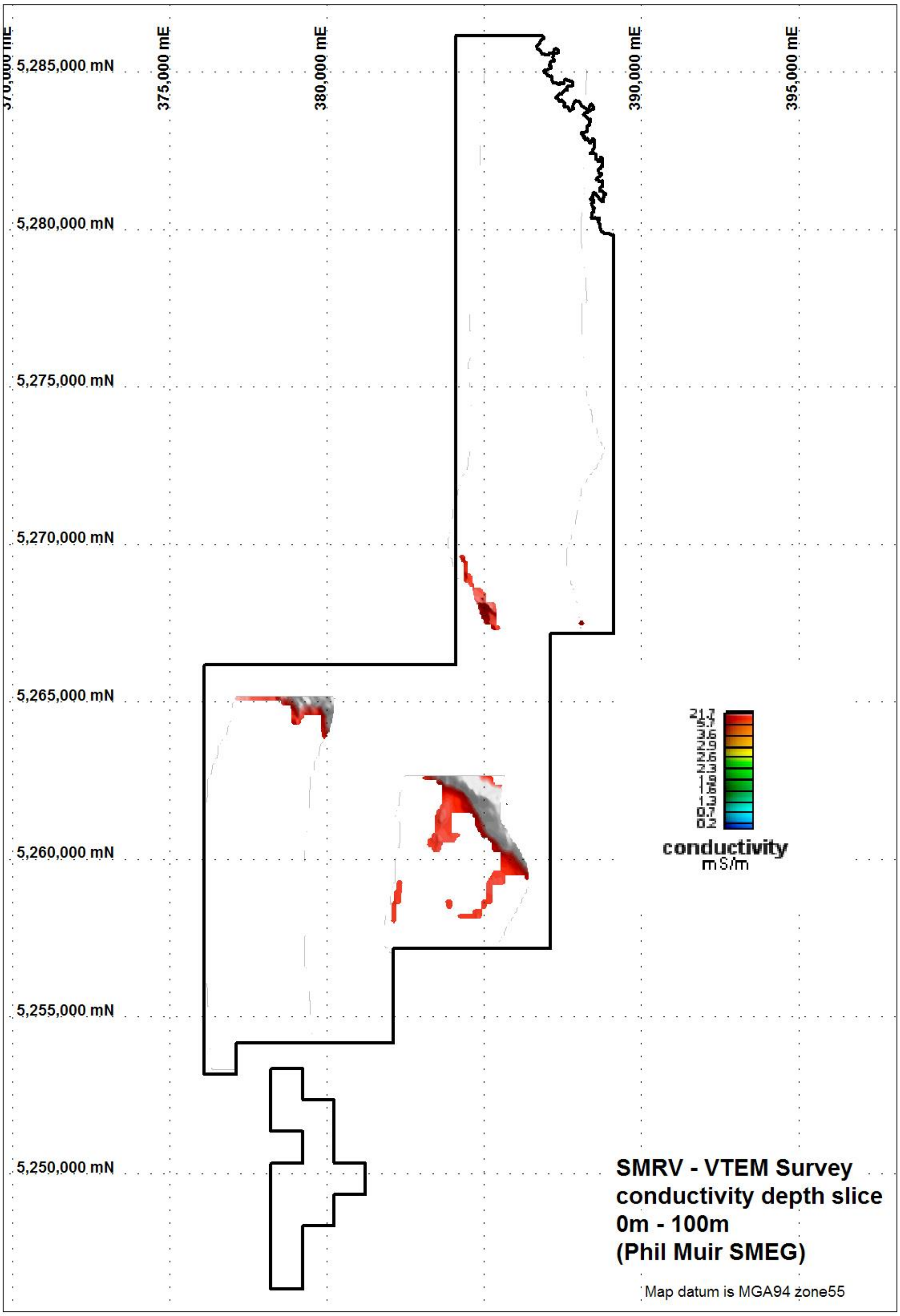

Figure 5.9: Processed data conductivity depth slice 0m to 100m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

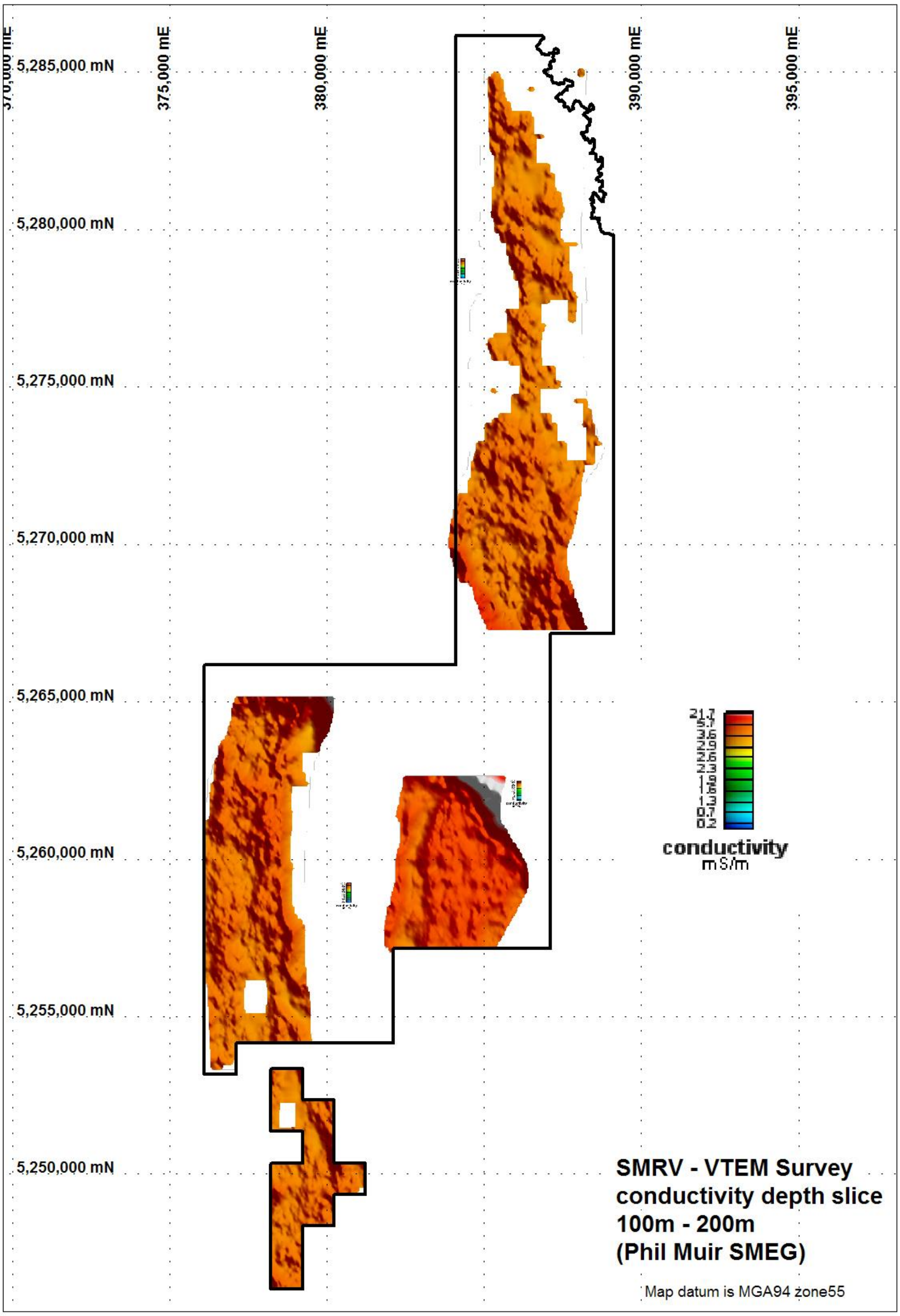

Figure 5.10: Processed data conductivity depth slice 100m to 200m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

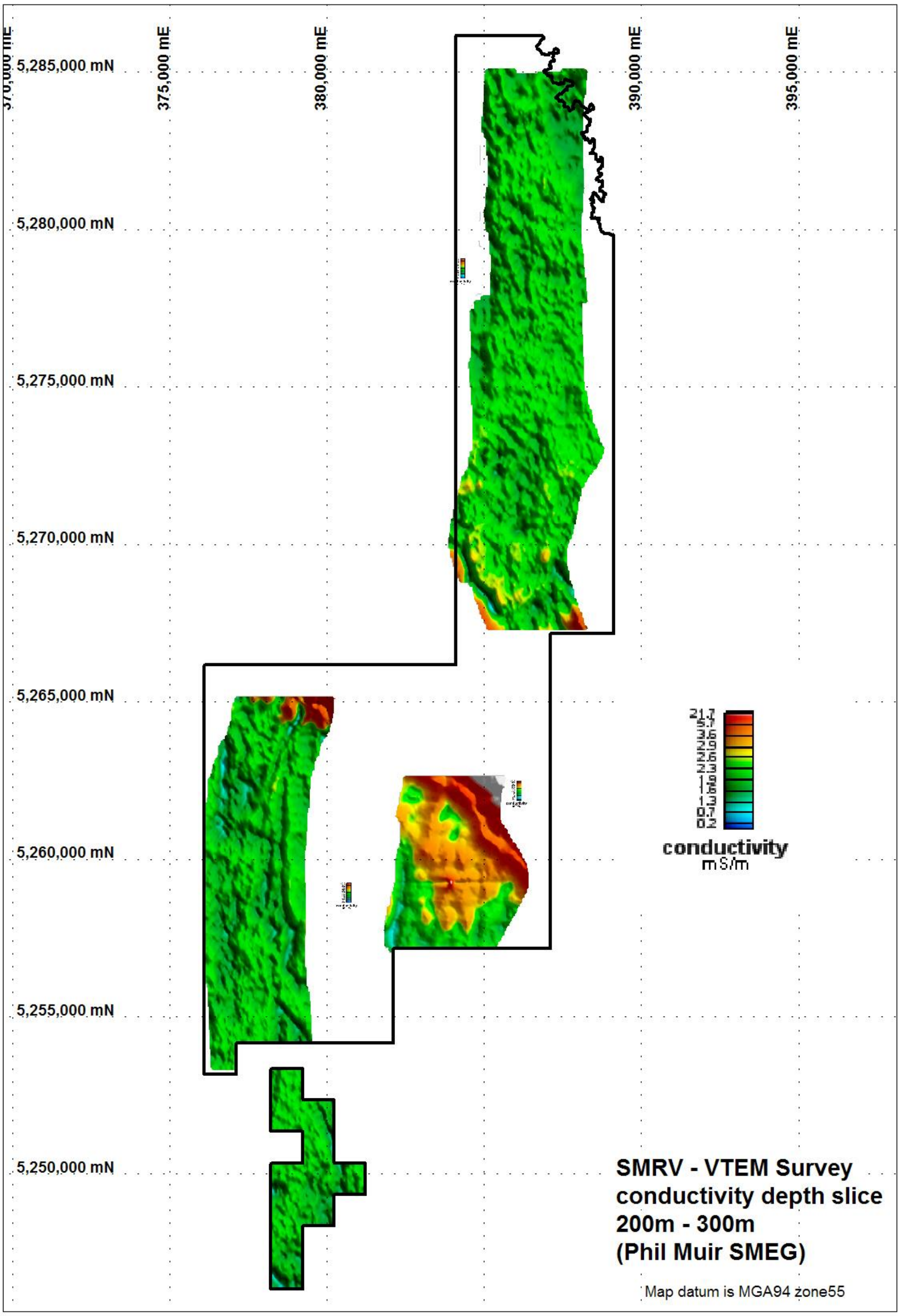

Figure 5.11: Processed data conductivity depth slice 200m to 300m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

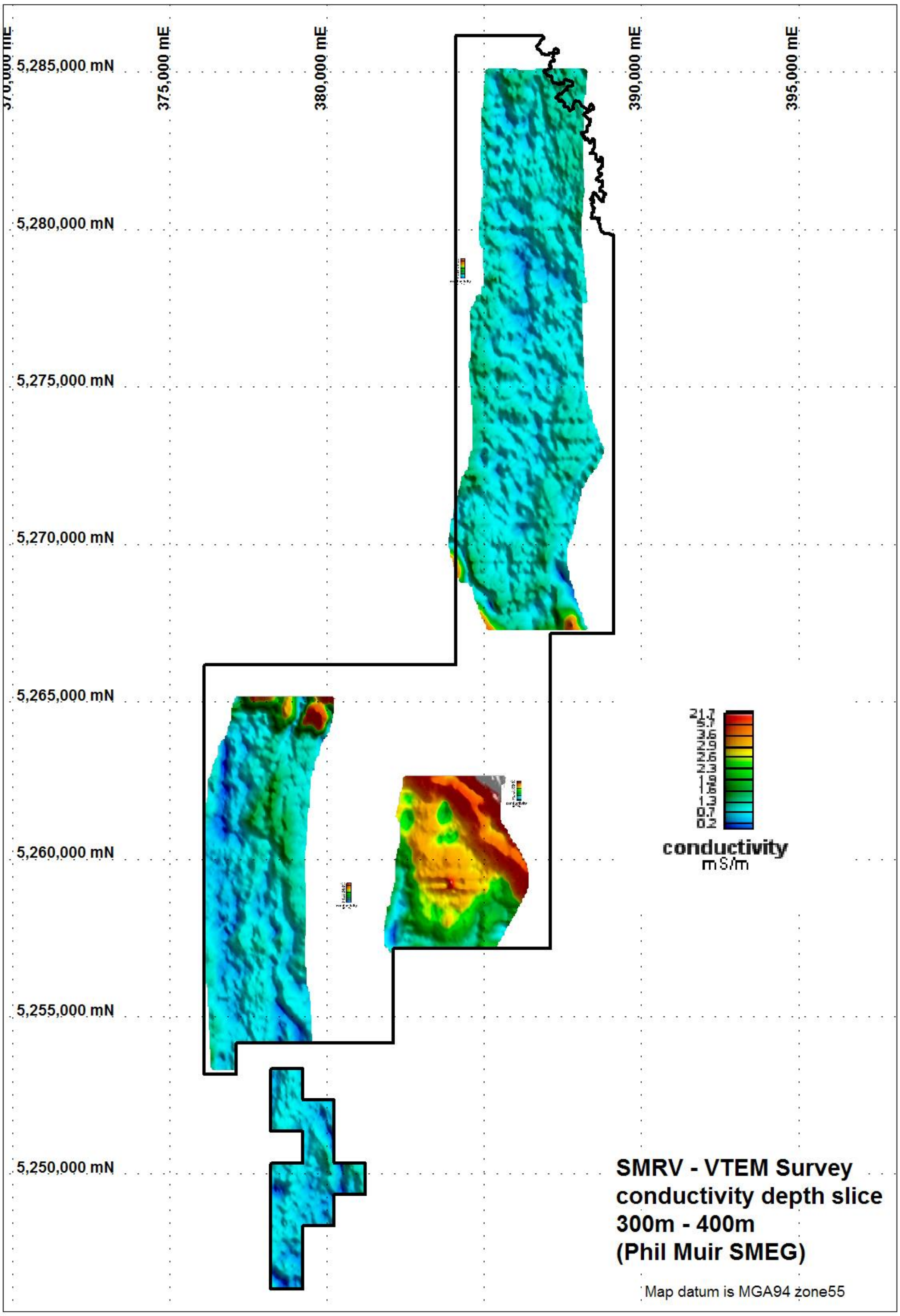

Figure 5.12: Processed data conductivity depth slice 300m to 400m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

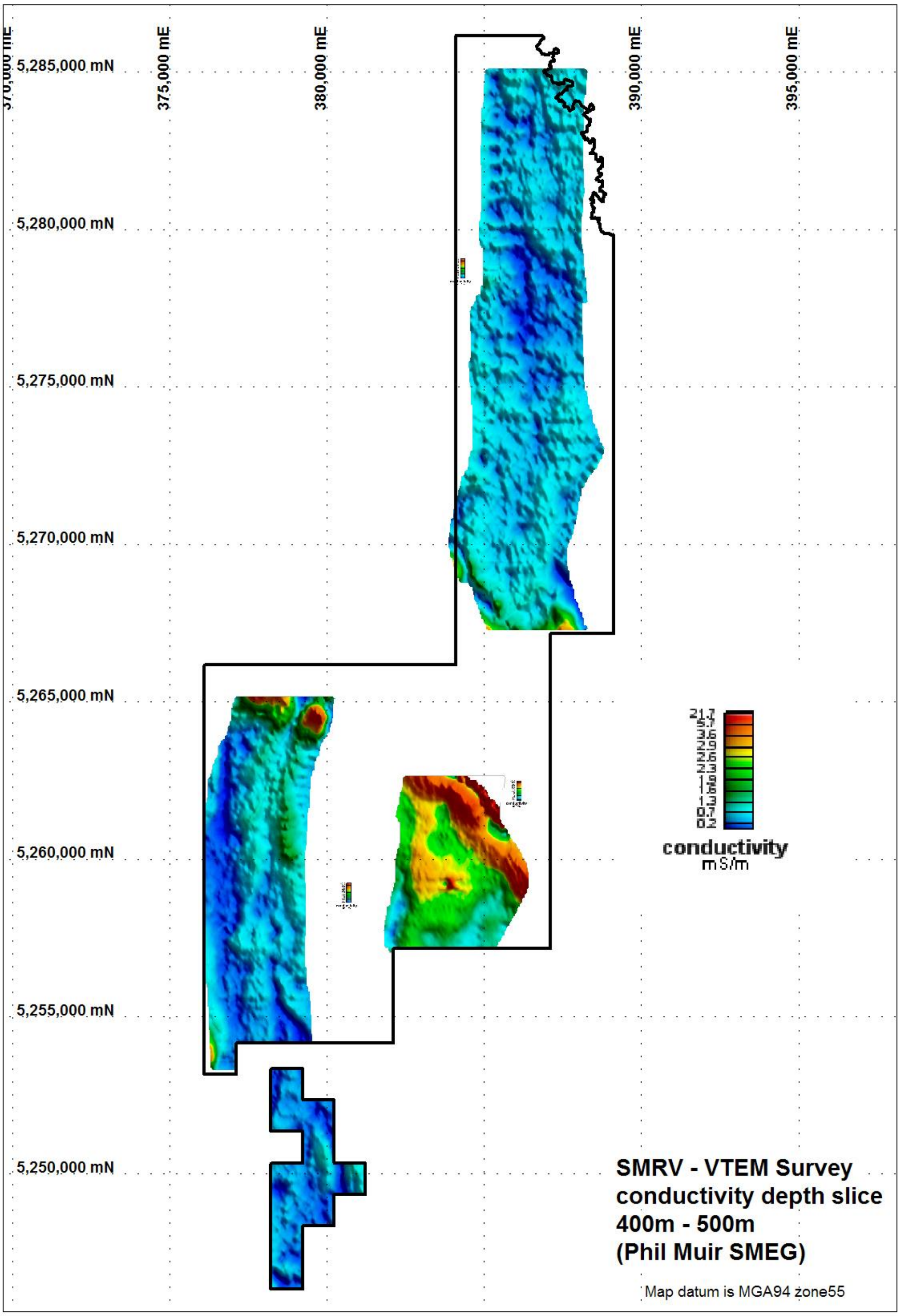

Figure 5.13: Processed data conductivity depth slice 400m to 500m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

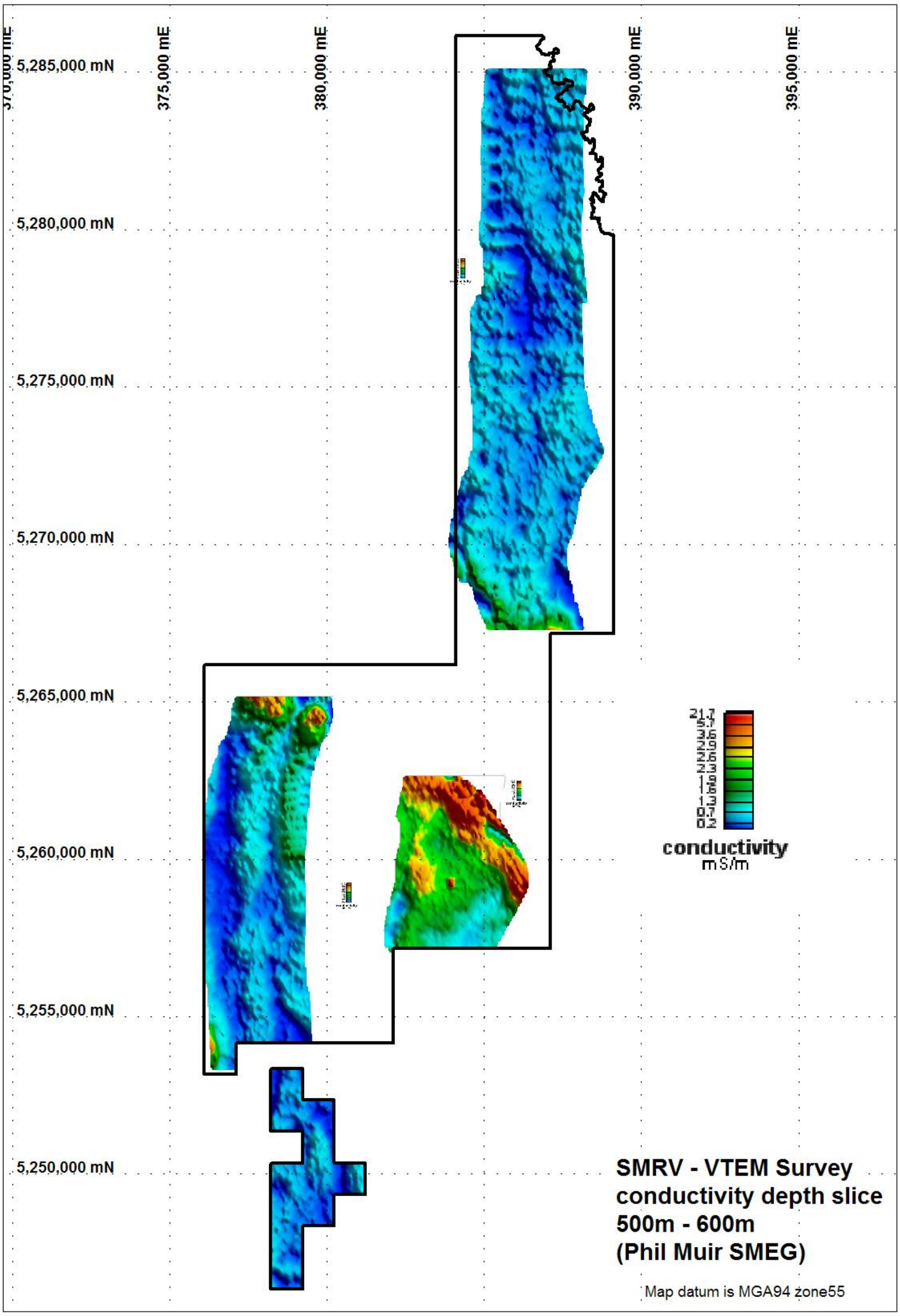

Figure 5.14: Processed data conductivity depth slice 500m to 600m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

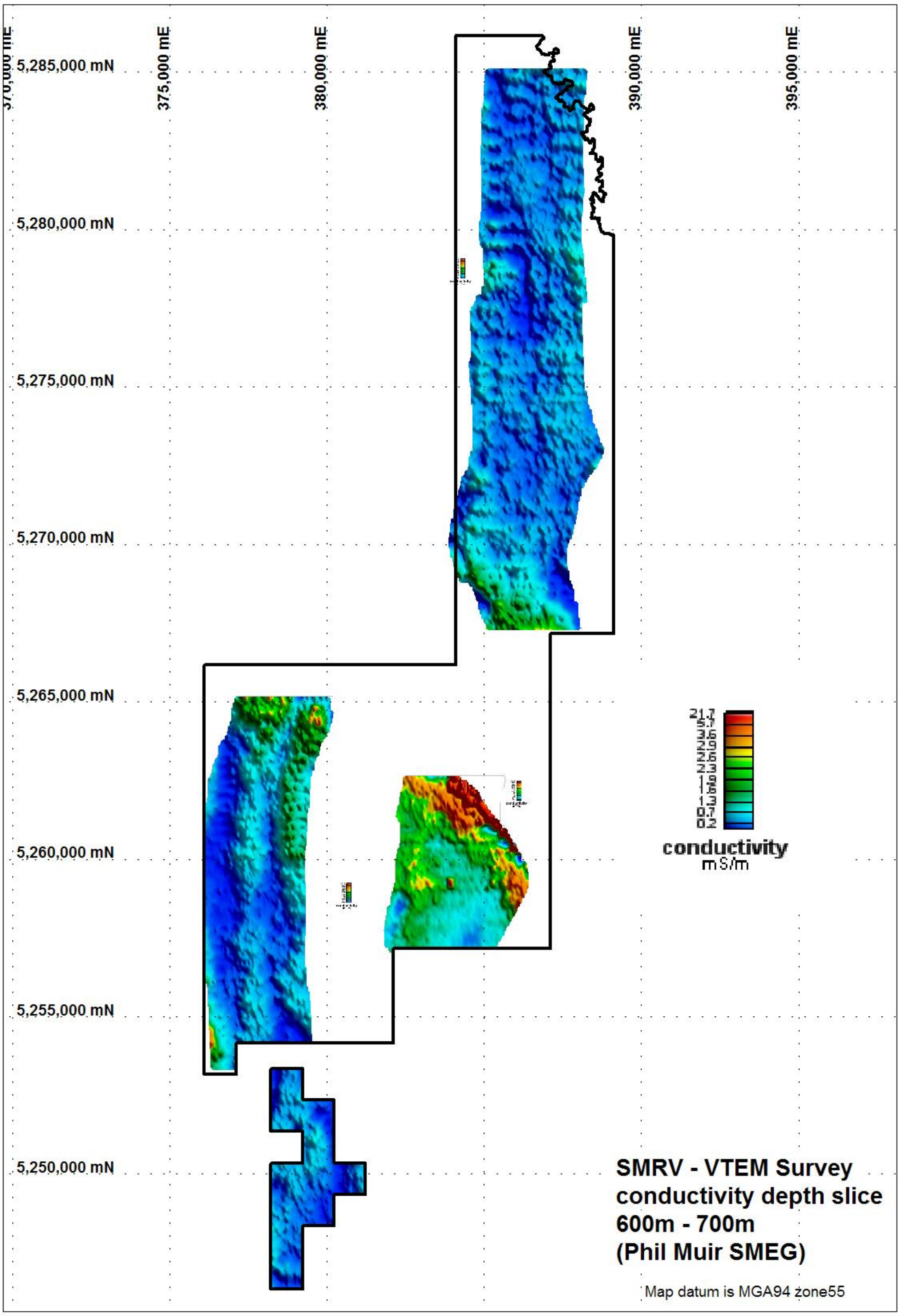

Figure 5.15: Processed data conductivity depth slice 600m to 700m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

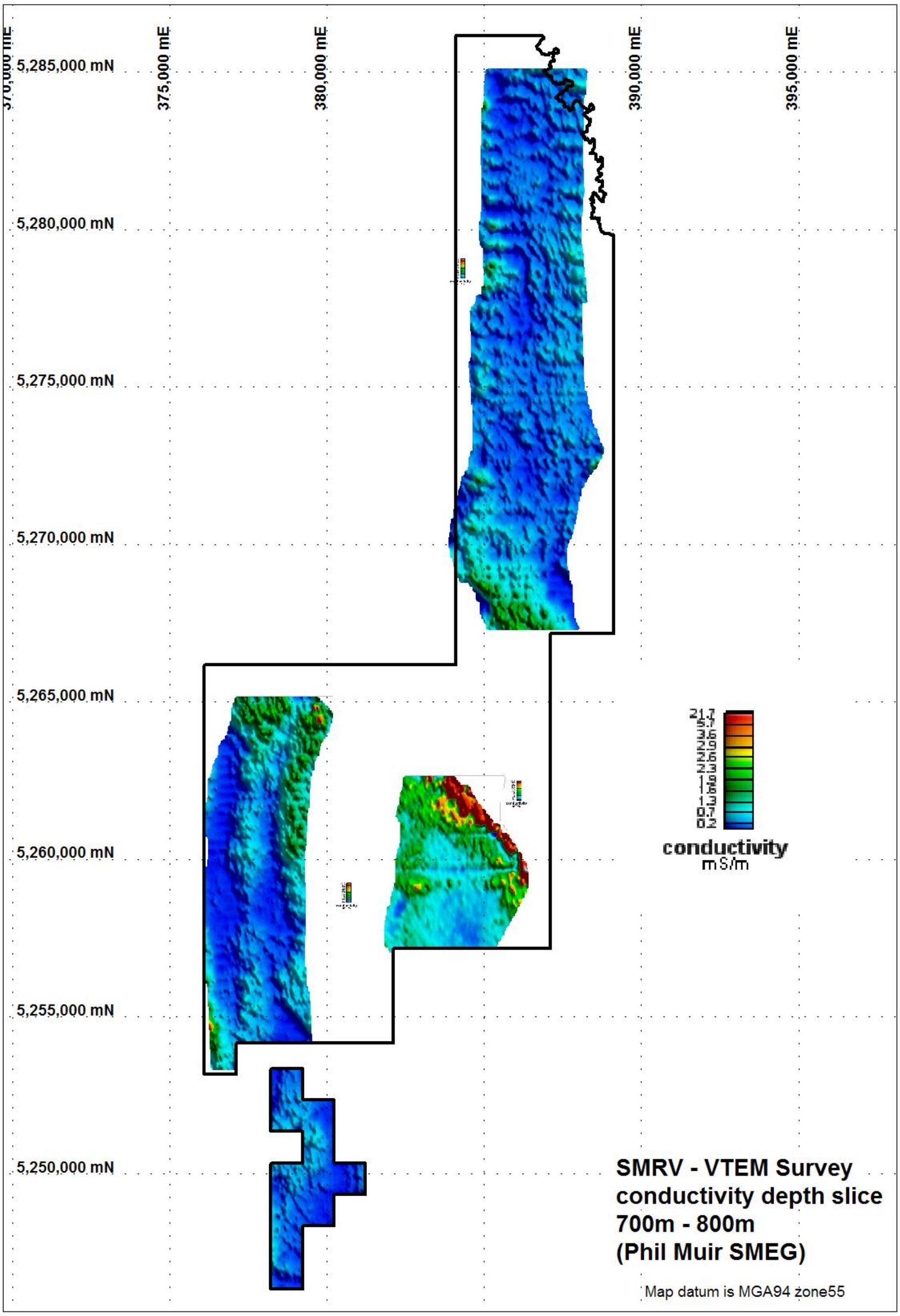

Figure 5.16: Processed data conductivity depth slice 700m to 800m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

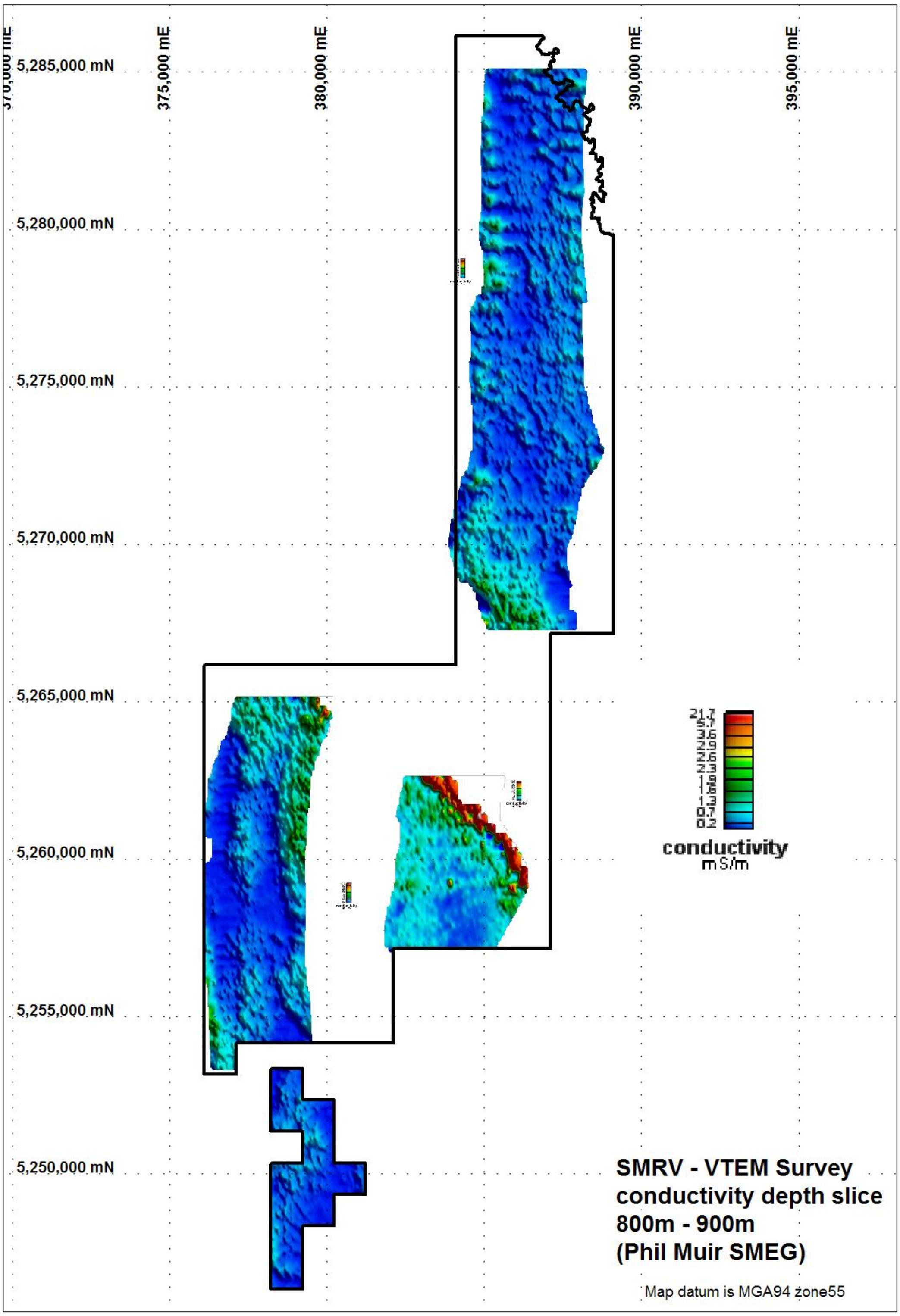

Figure 5.17: Processed data conductivity depth slice 800m to 900m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

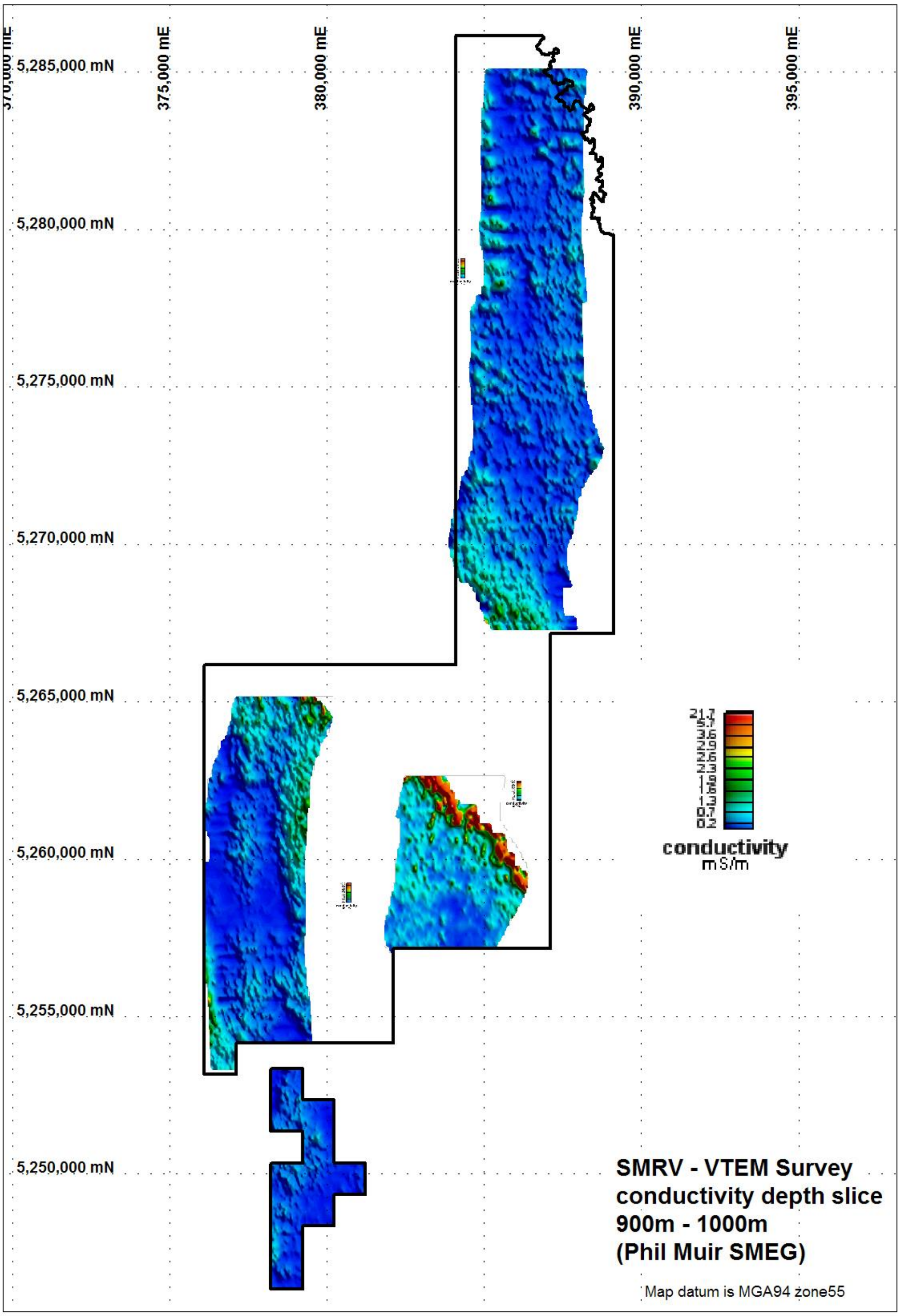

Figure 5.18: Processed data conductivity depth slice 900m to 1000m (consistent colour between slices) generated by Phil Muir, Southern Mineral Exploration Geophysics.

5.2 Compilation of existing data

Existing soil data from the Thirkell Hill belt was compiled into a database and indicative plots and images generated. 1975 gradient array IP was digitised (chargeability only) and an image generated. All work continues to enhance the largely untested potential of the targeted stratigraphic package i.e. upper felsic volcanics/basal Waterloo Creek Group shale.

5.2.1 Existing soil data

Early regional surveys were shallow A-horizon with AAS analysis. A-horizon sampling in the mid-1990's were analysed by a Mineral Resources Tasmania developed method known as Huminex which analyses metals in carbon compounds. Locations of A-horizon samples and results for Zn and Pb are shown on figures 5.19 and 5.20 respectively. The three discrete grids are Huminex samples, the large broader (800m) spaced grid is the early generation A-horizon sampling.

(Beware that all soil images herein are presenting compiled raw, unlevelled data and there may be biases inherent in the sampling/analysis).

Geopeko's 1981 C-horizon sampling showed that the early generation A-horizon was significantly under-calling compared with C-horizon. Later C-horizon sampling showed generally poor correlation with Huminex results also. Locations of C-horizon samples and results for Zn and Pb are shown on figures 5.21 and 5.22 respectively.

So the reliable C-horizon soil sampling has only been done over discrete prospect areas and effectively not at all regionally. The C-horizon soil sampling which has been done is one discrete grid i.e. the D'Aguilar South alteration zone at the northern end of the belt and the Old Camp and Condor River (Viking 10-22) zones in the central western part.

That C-horizon sampling which has been done has been largely for Cu, Pb and Zn. Developments in geochemistry have shown elements such as As, Sb and Tl to better map out alteration systems around buried massive sulphides than classic Cu, Pb and Zn. Other than very limited As analysis no such sampling has been done.

On the Moores block soil sampling is all C-horizon. Sample locations and Zn and Pb results are shown on figures 5.23 and 5.24 respectively. The strong Zn anomaly focussed on the quartz+feldspar+biotite porphyry is unexplained though anomalous geochemistry is often associated with such intrusives.

A and C soil horizon assays can be found in Appendix C in digital csv format.

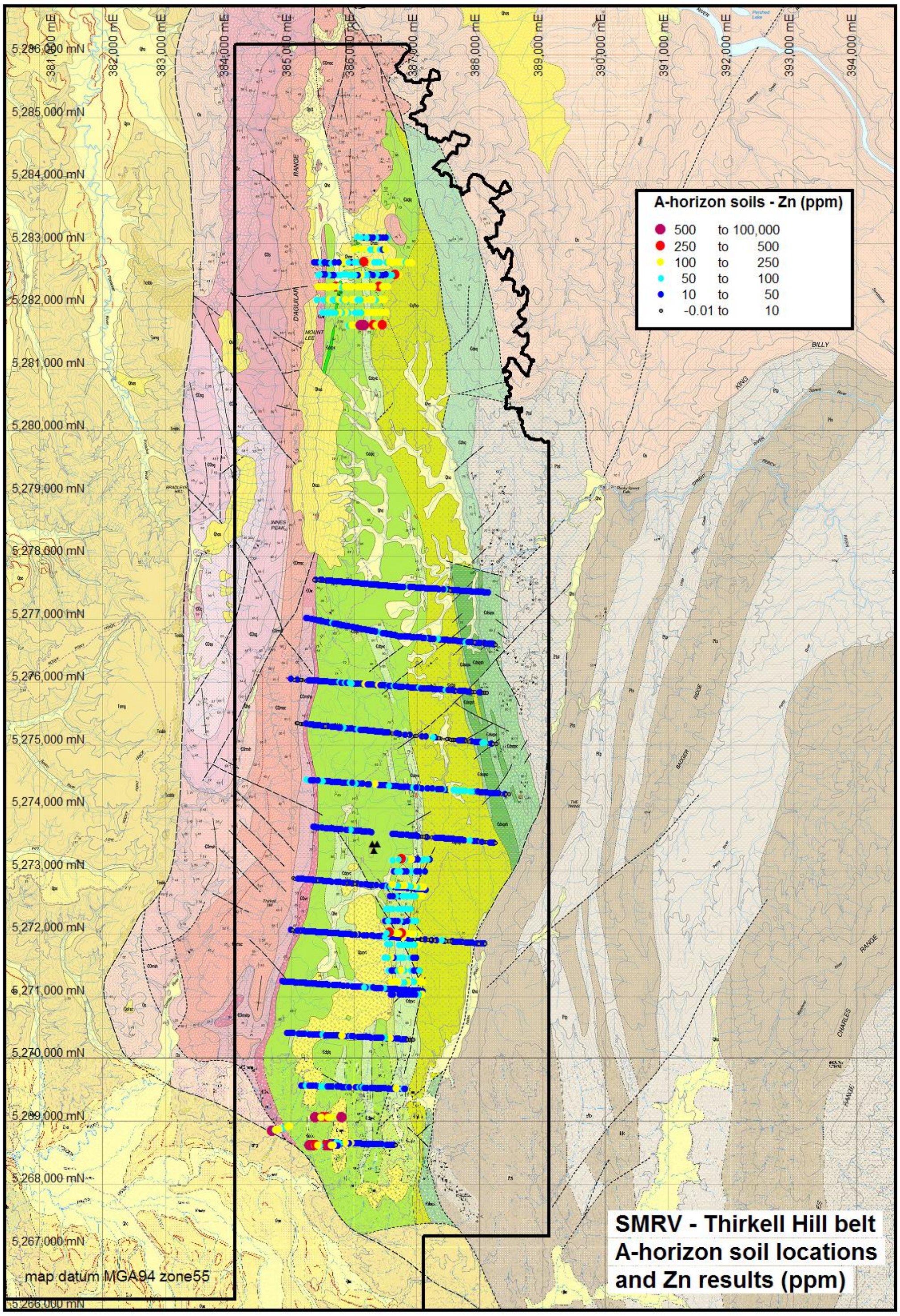

Figure 5.19: Thirkell Hill belt A-horizon soil sampling and Zn results.

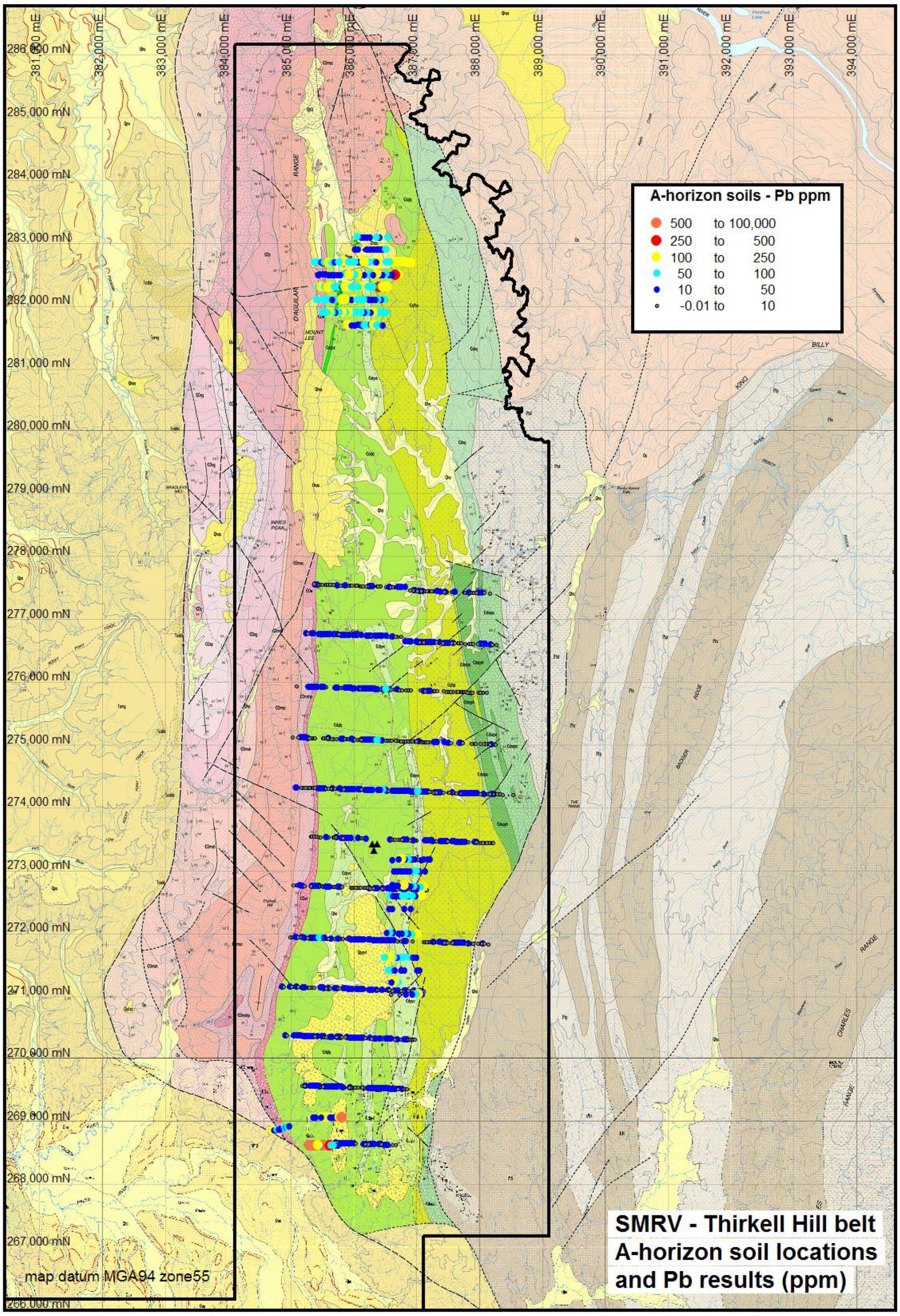

Figure 5.20: Thirkell Hill belt A-horizon soil sampling and Pb results.

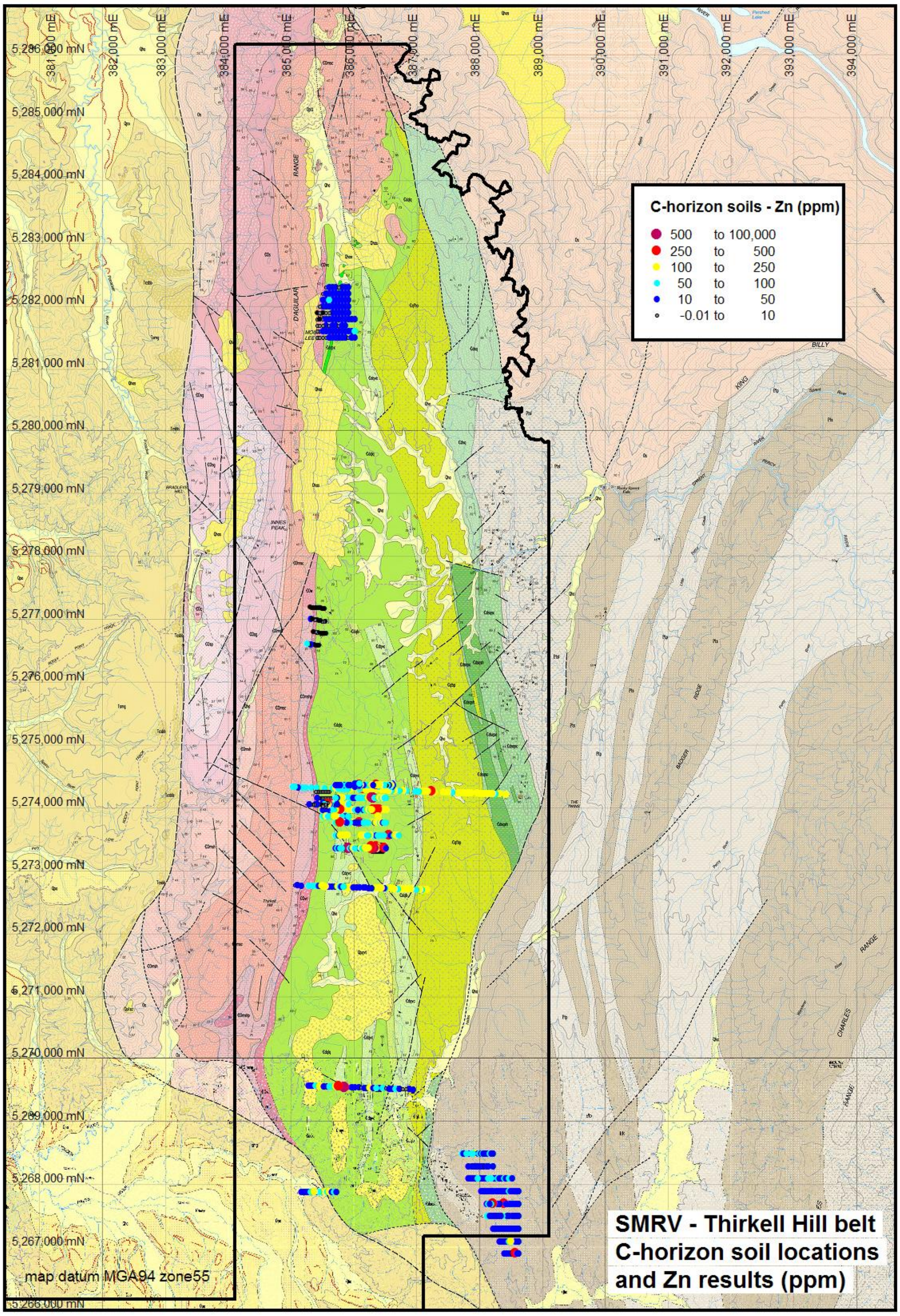

Figure 5.21: Thirkell Hill belt C-horizon soil sampling and Zn results.

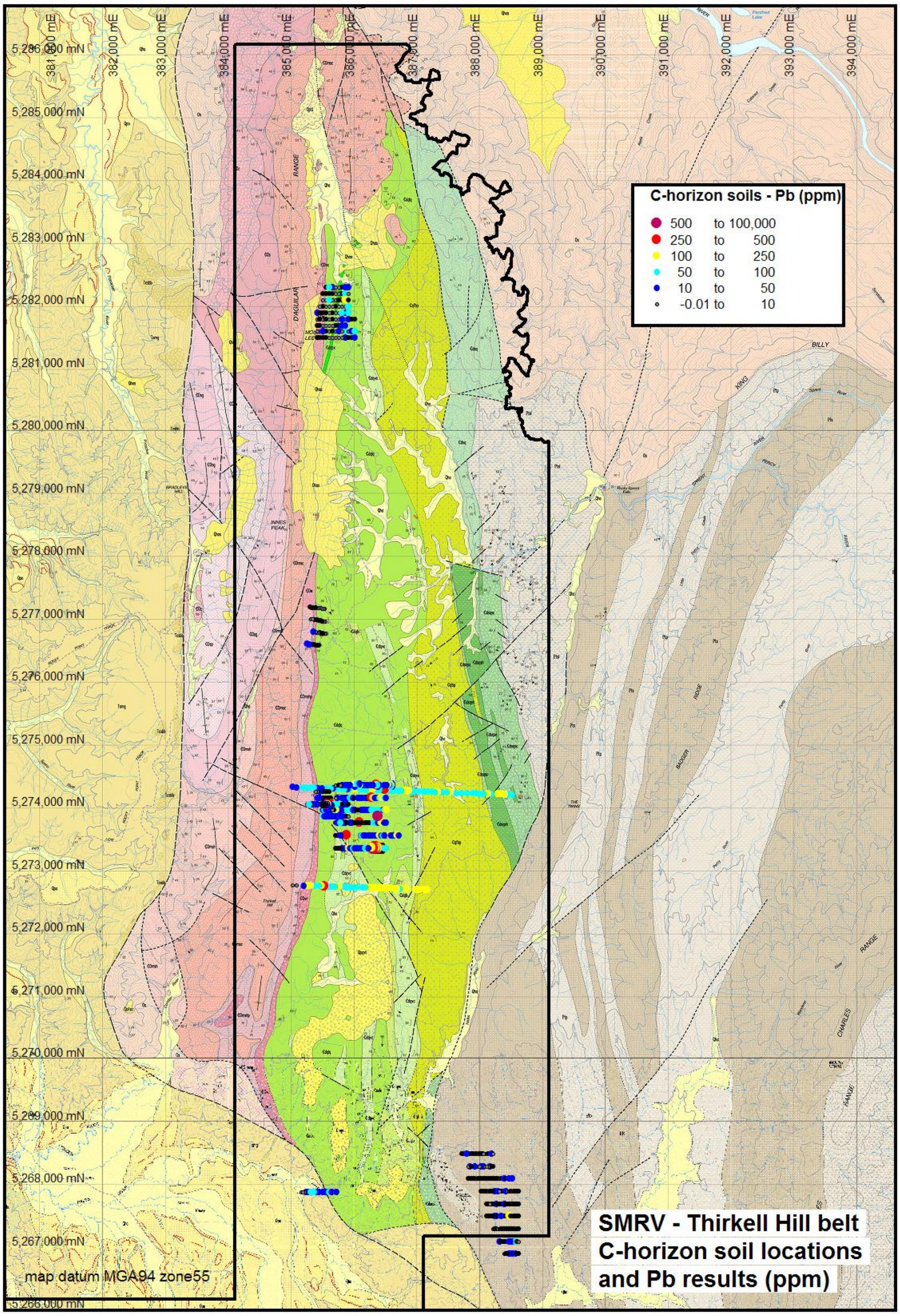

Figure 5.22: Thirkell Hill belt C-horizon soil sampling and Pb results.

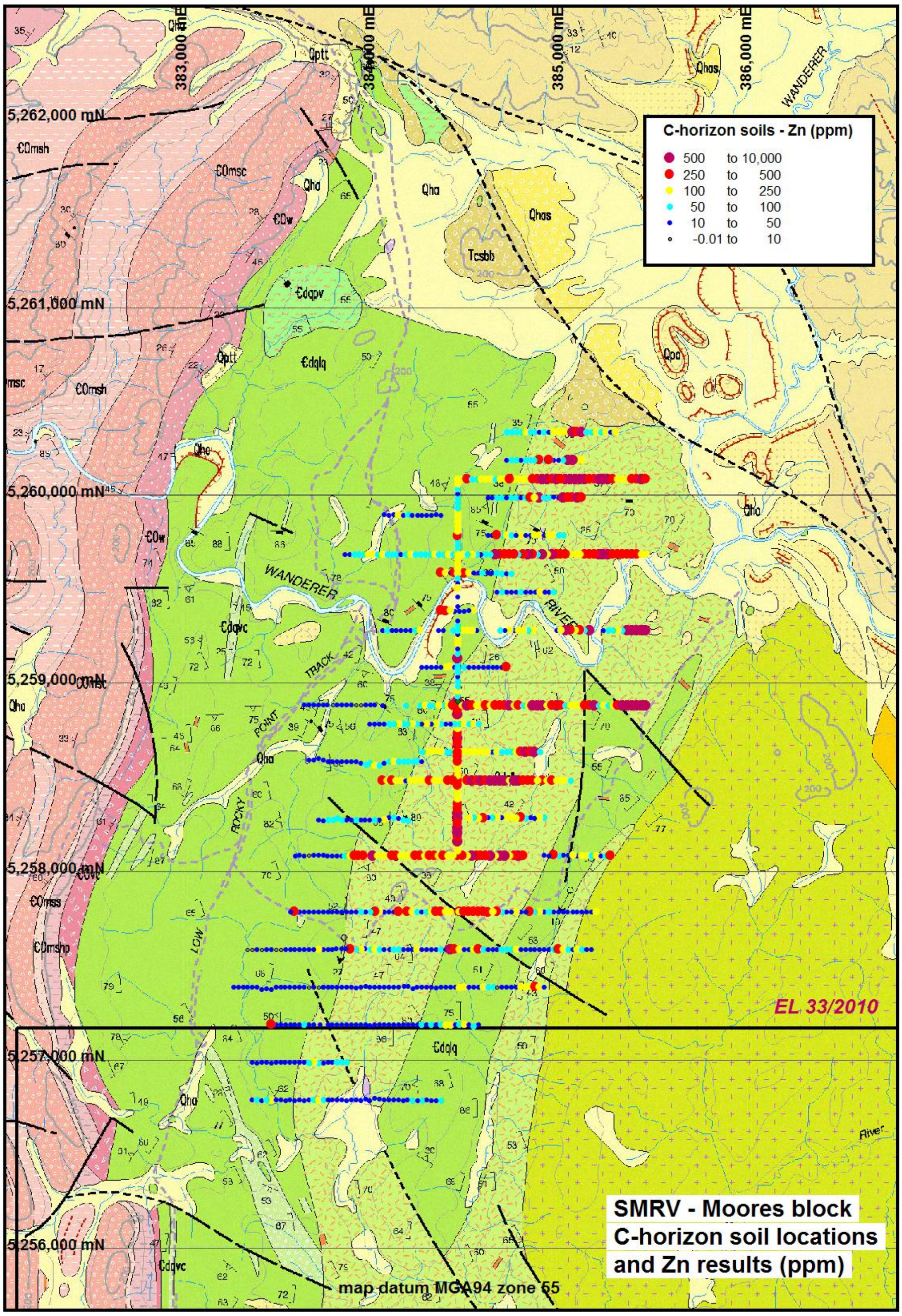

Figure 5.23: Moores block C-horizon soil sampling and Zn results.

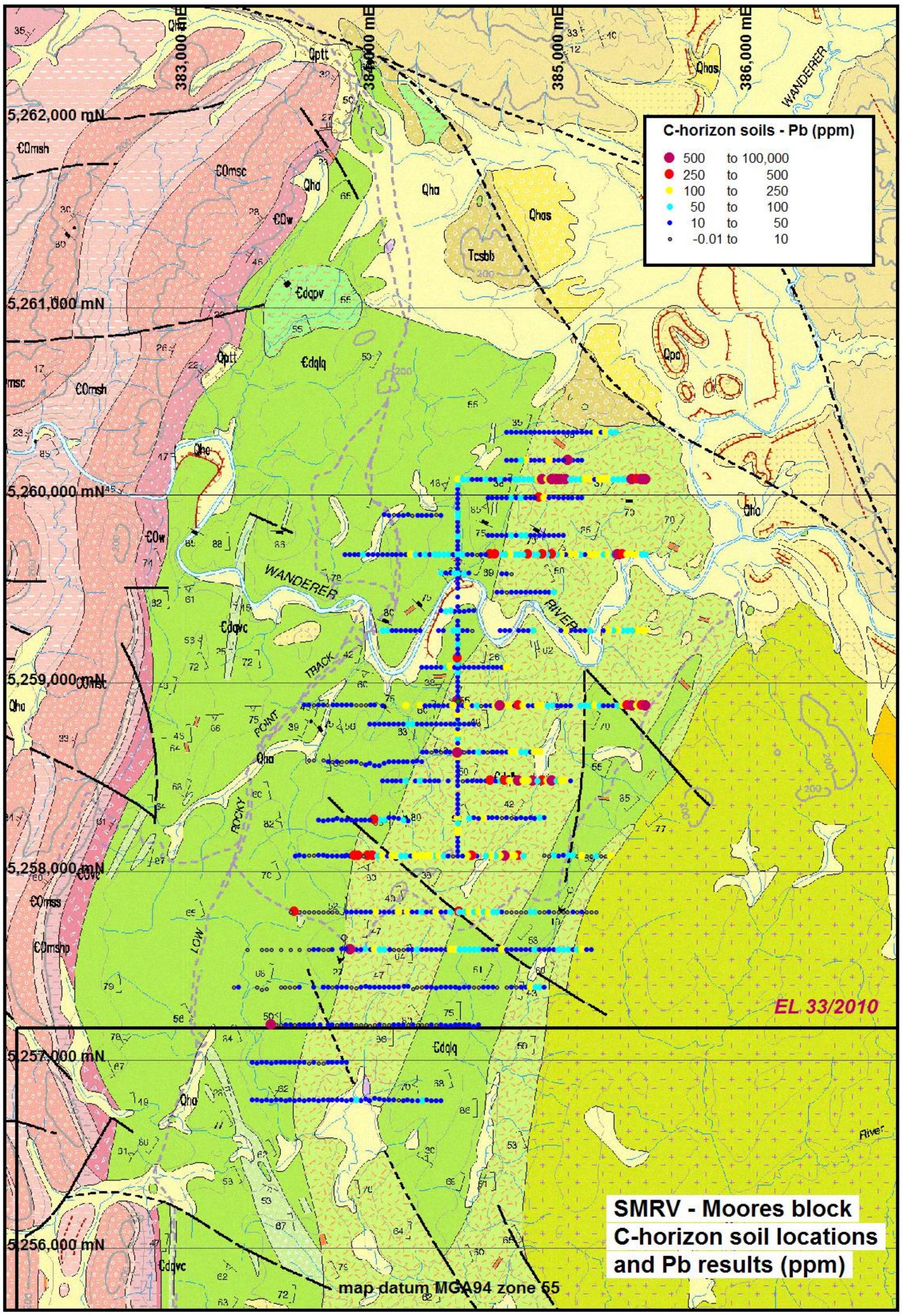

Figure 5.24: Moores block C-horizon soil sampling and Pb results.

5.2.2 1975 gradient array IP

The 1975 gradient array IP chargeability profiles were digitised and a digital image generated (see figure 5.25). Unfortunately the resistivity profiles were not able to be levelled with any confidence. The chargeability data shows a broad anomalous zone on the eastern side of the belt with a sharp linear anomaly high along the western side corresponding with the Waterloo Creek Group shale.

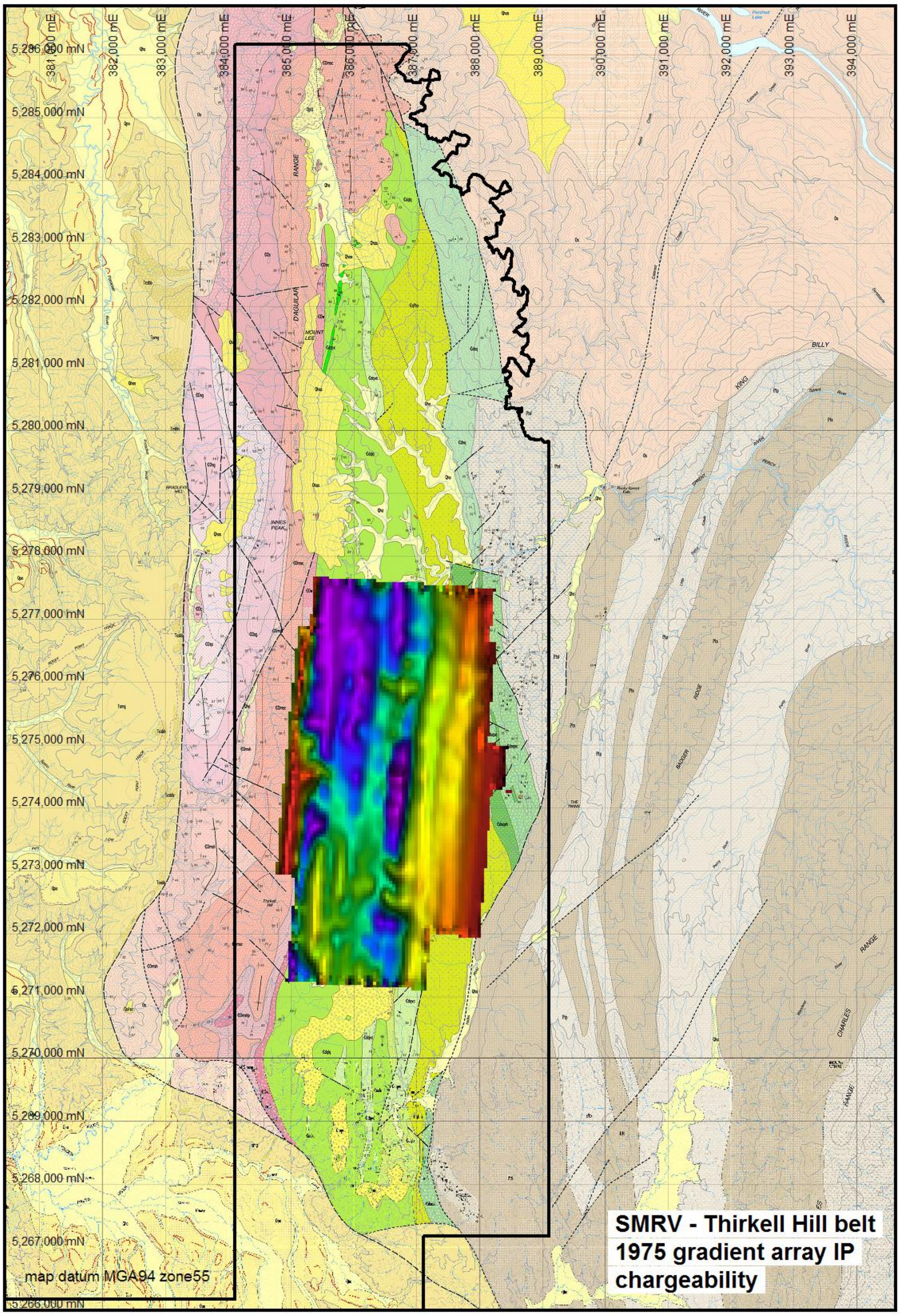

Figure 5.25: Gradient array IP Thirkell Hill belt - chargeability.

6.0 Conclusions and Recommendations

Frontier initially took up the Wanderer River licence, recognising that the belt of Mt Read volcanics within the relinquishment area had not been surveyed by a new generation EM survey. Whilst such surveys will not locate all ore body types, massive sulphide ore body types like the Rosebury and Hellier ore bodies should show a conductive response.

Unfortunately, The VTEM survey conducted by Frontier in 2011/2012 did not locate any conductivity anomalies which might be due to conductive massive sulphides, the only significant responses being to the black shales of the Waterloo Group.

Whilst the EM survey will not have sterilized the ground for all ore body types, further exploration is not justified within the constraints of Torques overall exploration budget.

7.0 Environmental Impact and Rehabilitation

There has been no field work done in the relinquished portion.

8.0 References

MacDonald, G. 2013 EL 33/2010 Wanderer River Annual Report on Exploration Activity March 2012 to March 2013 - *Unpub. Rept. closed file report for Torque Mining Ltd EL332010_201303*

MacDonald, G. 2012 EL 33/2010 Wanderer River Annual Report on Exploration Activity March 2011 to March 2012 - *Unpub. Rept. closed file report for Frontier Resources Ltd EL332010_201203*

Corbett, K D. 2003. a review of geology and exploration in the Macquarie Harbour-Elliot Bay area South West Tasmania. *Tasmanian Geological Survey Record 2003/04*.

McGregor-Dawson, J.L. (1975) EL 9/74 Birch Inlet Annual Report on Exploration 1974/75. *Unpub. Rept. for Union Oil Development Corporation.*