SCRIVEN EXPLORATION PTY LTD

EL23591 & EL24951

1ST ANNUAL REPORT for MUCKATY

FOR THE YEAR ENDED 2nd MAY 2012

Group Report Number: GR250/12

Commodity: Au

Compiled by: Maryanne Muir

Title Holders: *Scriven Exploration Pty Ltd*

Map Sheet:	1:250,000 Helen Springs	SE 53-10
	1:100,000 Helen	5661
	1:100,000 Muckaty	5660

Datum: GDA94, Zone 53

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Scriven Exploration

EL23591 & EL24951 Annual Report for Muckaty for the Year Ending 2 May 2012

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ABSTRACT

The Muckaty Project is located approximately 130km north of Tennant Creek in the Northern Territory. The region is underlain by the Palaeoproterozoic Namerinni Group (Carruthers Formation) in the north east and to the south west the Tomkinson Creek Group (Morphett Creek Formation). These are overlain by the Mesoproterozoic Renner Group (Powell Formation and Gleeson Formation) which are centrally located placed north west to south east. The region is thought to be highly prospective for several minerals including Manganese, Copper, Lead, Zinc, Silver and Gold, mention has been made of Barite and Uranium.

Several companies have explored the Muckaty Project area, most recently between 1996-1997 BHP Minerals flew and EM survey over the region and followed up anomalies with ground EM and Drilling of WY1 (HSP002) & WY3 (HSD003) – this took place to the north of EL23591. The earliest exploration can be traced to the Dillingham Mining Company of Australia where rockchips returned a high of 3050ppm Cu with in EL23591.

Exploration activities conducted by Scriven Exploration during the first year of tenure include a literature review and a Geophysical Survey combined with planning a Geochemical Survey for the second year of tenure.

2011-2012 provided Scriven Exploration with the opportunity to commence exploration on EL23591 & EL24951 with the data obtained from the October – December 2011 airborne magnetic and radiometric survey. From the survey several anomalies were identified in conjunction with the Literature review.

2012-2013 should see the targets within the Exploration Licences surface sampled and analysed for a suite of elements with the priority target being the north south dyke, previously recorded manganese and copper highs and magnetic anomalies.

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1. INTRODUCTION

The Muckaty Project is located approximately 130km north of Tennant Creek in the Northern Territory. The region is underlain by the Palaeoproterozoic Namerinni Group (Carruthers Formation) in the north east and to the south west the Tomkinson Creek Group (Morphett Creek Formation). These are overlain by the Mesoproterozoic Renner Group (Powell Formation and Gleeson Formation) which are centrally located placed north west to south east. The region is thought to be highly prospective for several minerals including Manganese, Copper and Gold.

Exploration activities conducted by Scriven Exploration during the first year of tenure include a literature review and a Geophysical Survey combined with planning a Geochemical Survey for the second year of tenure.

2. PROPERTY DESCRIPTION AND TENURE

The Muckaty Project comprises two granted exploration licences (ELs 23591 & 24951) which cover a combined area of 378 square kilometres. The licences are held 100% by Scriven Exploration. See Table below for further details on grant dates.

Table 1: Tenement Details

Title	Status	Grant	Expiry	Area (SqKm)	Blocks
EL23591	Granted	3-5-2011	2-5-2017	314.3	119
EL24951	Granted	3-5-2011	2-5-2017	63.7	22

During the first half of 2012 Group Reporting was requested and granted by the Department of Resources – Minerals and Energy with the Report dates as follows 3rd May to 2nd May the following year. The Group Reporting Number is GR250/12.

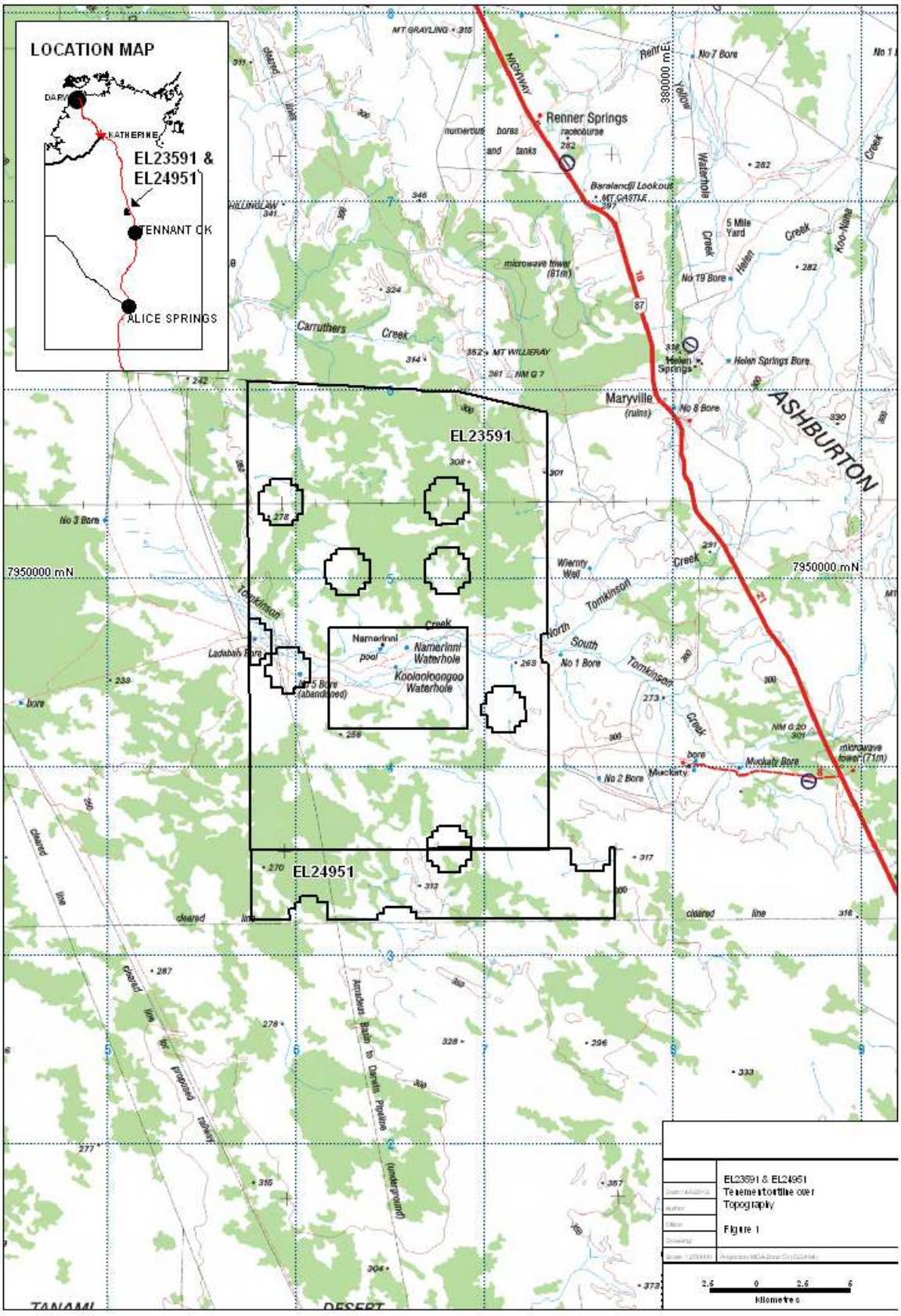
3. ACCESSIBILITY AND INFRASTRUCTURE

The Muckaty Project exploration licences are located approximately 800km south of Darwin and 130km north of Tennant Creek in the Northern Territory. The exploration licences are accessed from Stuart Highway to the west (Figure 1). Accommodation is available at the Renner Springs Road House located some 15km north of the northern most boundary of the EL23591 along the Stuart Highway. The licence lies within the Muckaty Perpetual Pastoral Lease owned by the Northern Land Council.

The underground NT Gas Pipe line runs through the west – south west corner of the Muckaty project areas. The proposed Federal Government Nuclear Waste Dump is partially located on the eastern edge of EL24951.

EL23591 is transected by the Tomkinson Creek from the WNW – ESE. There are at least three waterholes noted on the Topography (see Figure 1) – the Namerinni Waterhole, Namerinni Pools and Kooloolloogoo Waterhole.

Figure 1: Location of Muckaty Tenements on topography. Plans in GDA94.



4. GEOLOGICAL SETTING

The Muckaty project area is underlain by the Palaeoproterozic Namerinni Group (Carruthers Formation) in the North East and the Tomkinson Creek Group (Morphett Creek Formation) in the south west. Younger Mesoproterozoic sediments of the Renner Group (mostly Powell Formation and Gleeson Formation) overlie the Palaeoproterozic sediments. In the east of the exploration licence lies a North South trending dyke that runs over at least 40 km. The region is transected west north west to east south east by the Tomkinson Creek.

The area is covered by the HELEN SPRINGS 1:250,000 map sheet and explanatory notes (SE 53-10). Also the 1:100,000 mapsheets are as follows,

1:100,000	Helen	5661
1:100,000	Muckaty	5660

Within the project area the Palaeoproterozic Namerinni Group (Carruthers Formation) is concentrated in the northern half of the exploration licences and is described by the Northern Territory Geological Survey as a ”interbedded dolostone (including silicified dolostone, chert, dolomitic mudstone, quartzic dolostone, and laminated stromatilitic boundstone and bafflestone), shale, mudstone and sandstone” Hussey 2001. Evaporite pseudomorphs are described as common and include nodular and chert molds after anhydrite, hopper and cube casts and moulds after halite, and bladed or disc shapes after gypsum (Hussey et al 2001). Hussey (2001) states that the Carruthers Formation is characterised by stromatolites. The Carruthers Formation is divided into an upper, mid and lower lithofacies. EL23591 and EL24951 are covered by the upper lithofacies which is characterised by sandstones (thin to medium bedded, fine to coarse grained and rippled, crossbedded, mudstone, pebbly sandstone, dolostone, and stromatolitic bioherms that are ridge forming. The Carruthers Formation shows a conformable and transitional relationship with the underlying Jeromah Formation (predominantly Sandstone).

The Carruthers Formation sedimentary and diagenetic structures indicate a marginal marine setting with occasional emergence, possibly in a coastal to continental supratidal sabkha environment, although alternative settings are such as intertidal lagoon or lacustrine are possible (Hussey et al 2001).

To the southern end of the Exploration licences the Tomkinson Creek Group is prevalent with the Morphett Creek Formation outcropping. The Northern Territory Geological Survey described the Morphett Creek Formation as a "succession of ridge forming sandstones and recessive siltstone and carbonate rocks". Four distinct lithofacies are recognised in the Formation with the Mitty Member (consisting of mixed siliclastic – carbonate and undifferentiated Morphett Creek Formation outcropping with in EL 23591 & EL24951.

Undifferentiated Morphett Creek Member is described as sandstone, pebbly sandstone, siliclastic mudstone, silicified stromatolitic dolostone and evaporate pseudoomorphs. The Miity Member is usually poorly exposed and the type section is described as thin to medium bedded sandstone, laminated mudstone and green and blue-grey chert (silicified microbial mat) and stromatilites Hussey etal 2001.

The Morphett Creek Formation is described by Hussey (et al) as "representing a transgression from fluvial to very shallow marginal marine settings to shallow water intertidal and marginal marine to sabkha environments. This formation is thought to represent steady subsidence following the wide spread extrusion of continental flood basalts in the Whittington Range Member atop of the Hayward Creek Formation".

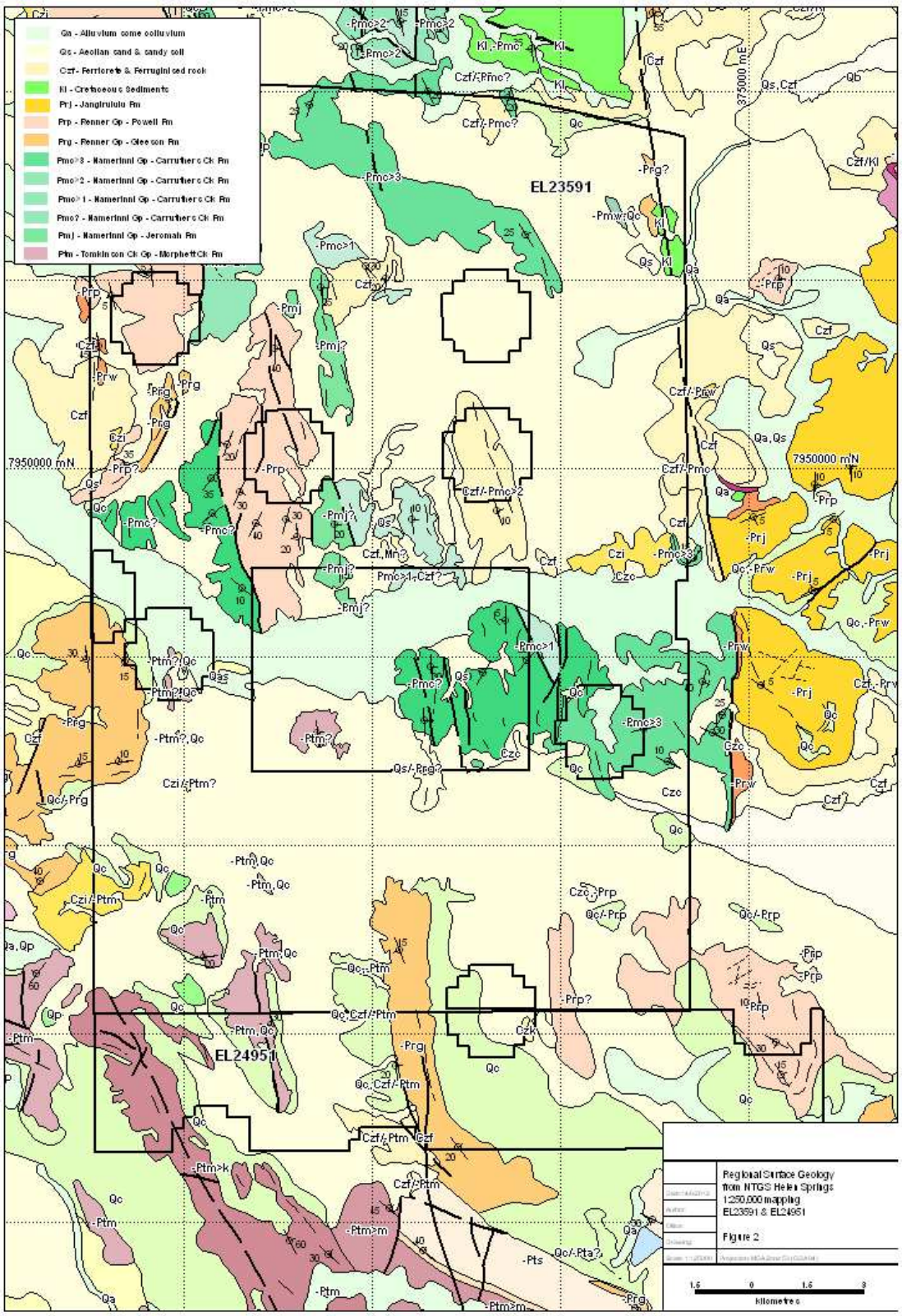
On the eastern edge of EL23591 & EL24951 lies a significant north-south trending coarse grained, ferruginised, recessive dolerite dyke that is' upper' mesoproterozoic in age. The dyke is best visualised in aeromagnetic data.

The recorded mineral occurrences on the Muckaty Project area are manganese in close proximity to the Namerinni Waterhole. Manganese has also been recorded is surface samples to 1690ppm in the north east by MIM Exploration. There are Copper occurrences recorded from the 1970s south of Muckaty Station by Dillingham Mining Company .

The NTGS has stated that there is a "clear stratigraphic control evident in the manganese deposits at Bootu Creek and Renner Springs with faults in close proximity" Hussey 2001. The fine grained nature of the mineralisation suggests that it was formed by the replacement of the original rock types (both sandstone and siltstone). The lack of sedimentary textures is suggestive of 'epigenetic, low temperature hydrothermal fluids'. The Mn rich fluids could be related to basin dewatering or minor hydrothermal activity.

The region may also be prospective for Base Metals and Diamonds with minor exploration having been completed for Uranium in the 1970's.

Figure 2: Regional surface geology from NTGS 1:250, 000 mapping. Plan in GDA 94



5. PREVIOUS EXPLORATION

The Muckaty project area has been the centre of several exploration programmes since the early 1970s through to the late 1990's. Several diamond holes and surface sampling has been completed in the region with a couple of older geophysical studies that were assessed to be far from perfect. The table below provides brief information on historic activities in the project area. A more extensive table is provided in Appendix 1.

BHP Minerals undertook an airborne EM survey followed up by ground EM with targets followed up by drilling to the North.

MIM Exploration searched the region for stratiform Base Metals mineralisation similar to McArthur River style mineralisation.

Key Resources and Clifford Minerals drilled several holes on the Exploration Licences and extensively to the north in the Renner Springs manganese fields.

Table 2: Review of Exploration in the Muckaty Region

Date	Company	Target	Activities
1996-1997	BHP Minerals	Zn, Pb, Zn SEDEX	Zircon Age of 1640 Ma. EM surveys (air and ground). Drilling. Surface sampling. Work completed to the north of EL23591.
1992-1993	MIM Exploration	Stratiform Base Metals Mineralisation	Stream sediment sampling, surface sampling, SIROTEM, Drilling MPD1 & MP2.
1990-1991	Ben Hall and Eupene Exploration	Manganese/Gold/Base Metals	Review of the Bootu Ck Region. Search for JV partner. Stream sediments/rockchips.
1986-1987	Ashton Mining	Diamonds	A couple of diamonds located in the district. None followed up.
1984-1986	Clifford Resources	Shale Hosted base metal deposits	Completed extensive mapping and drilling in conjunction with Key Resources
1981-1988	Key Resources Pty Ltd	Shale Hosted base metal deposits	Completed extensive drilling & RRMIP surveys.
1971	Metals Investment Holdings Ltd		Extensive review of the geology and mineral prospectivity of the region.
1971	Dillingham Mining Company of Australia	Cu/Pb/ Zn/Ag	Review of the region/ Rockchip and stream sediments sampling with the best result Cu-3050ppm.

6. EXPLORATION COMPLETED DURING THE REPORTING PERIOD 3rd MAY 2011 to 2nd MAY 2012.

Work during the reporting period has included:

- Reporting
- Literature Review and data analysis
- Airborne Aeromagnetic Survey

6.1 Airborne Aeromagnetic Survey

The airborne fixed wing magnetic and radiometric programme commenced 28 November 2011 and was completed by GPX Surveys Pty Ltd using a Fletcher FU-24 aircraft. The survey was not without its difficulties. The processing was completed during December 2011/January 2012 and covered the majority of EL23591 & EL24951 for a total of 3339.4 line kilometres at 100m line spacing at 30m height.
The job specification were as follows

Flying Specifications

Nominal ground clearance:	30 m

Sample Rates

Magnetometer:	20 Hz
Altimeter:	10 Hz
Base magnetometer:	1 Hz
Spectrometer:	1 Hz

Line Specifications

Traverse line spacing:	100 m
Traverse line direction:	090 – 270 degrees
Traverse line numbers:	110501 – 139200
Tie line spacing:	1000 metres
Tie line direction:	000 – 180 degrees
Tie line numbers:	170200 – 172110

The following equipment was used in the survey.

Survey Platform:	Fletcher FU-24 (VH-AFN)
Data Acquisition and Survey System:	Pico Envirotec AGIS PC104

Magnetometer Processor:	Pico Envirotec MMS-4
Magnetometer Sensor:	Geometrics G-822A Cesium Vapour
Fluxgate Magnetometer:	Billingsley Ultra Miniature TFM 100G2
Magnetic Base Stations:	GEM GSM-19W Overhauser
Spectrometer:	Exploranium GR820 (32 litre crystal)
Temperature and Humidity Sensor:	Vaisala HMP233
Barometric Pressure Sensor:	Vaisala PTB220
GPS and DGPS Receiver:	CSI DGPS Max
Radar Altimeter:	Collins ALT-50A
In-field Computer:	Toshiba Notebook
In-field Software:	Pico Envirotec PEIView, ChrisDBF, GPX proprietary software

See Appendix 2 for the associated data and survey report for details. Figures 3 to 15 illustrate the work completed in the region.

Figure 3: Airborne Aeromagnetic Location showing grid orientation and surveyed areas.

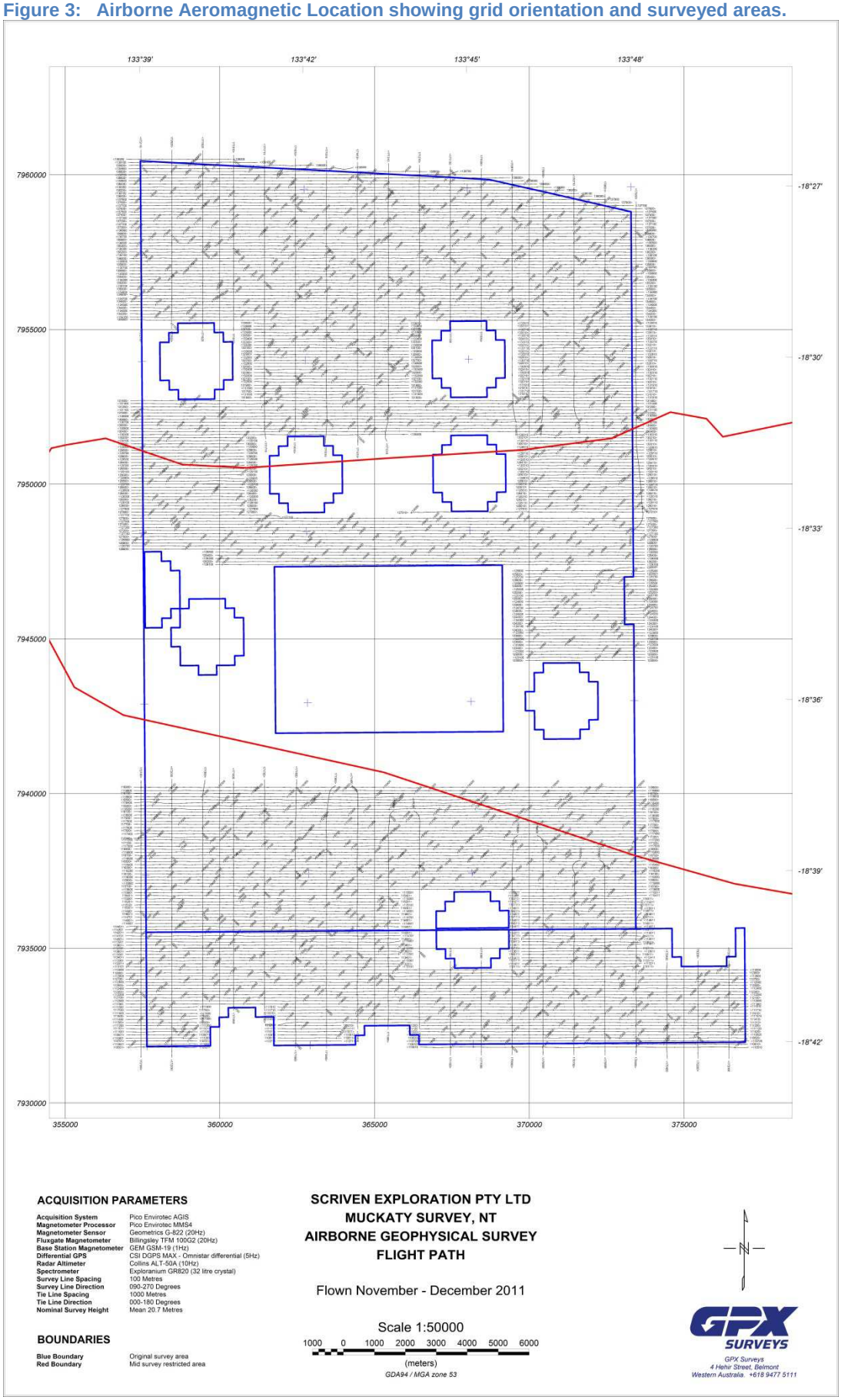


Figure 4: EL23591 & EL24951 over GPX Geophysics "MAG" image

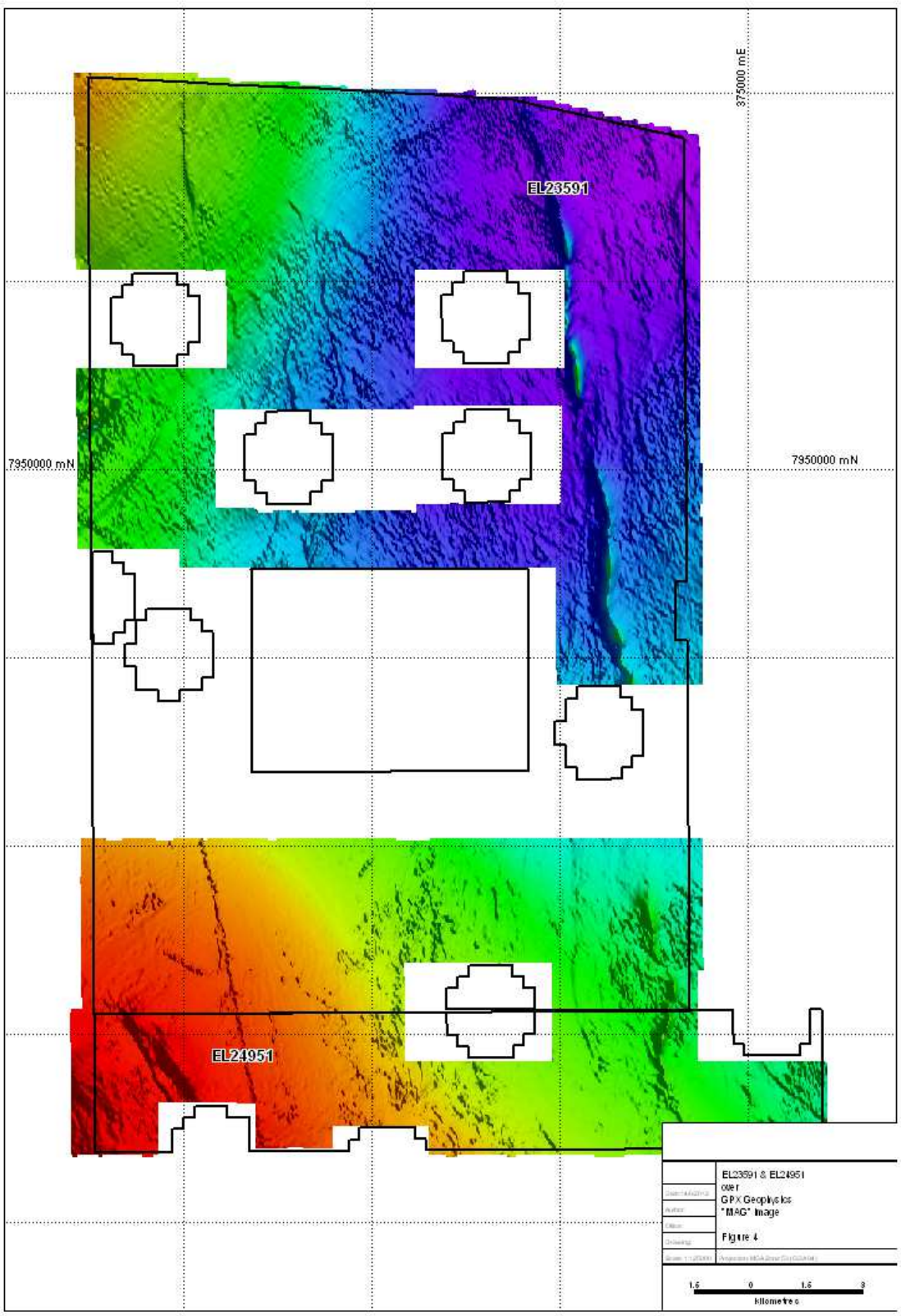


Figure 5: EL23591 & EL24951 over GPX Geophysics "DEM" image Digital Elevation Model.

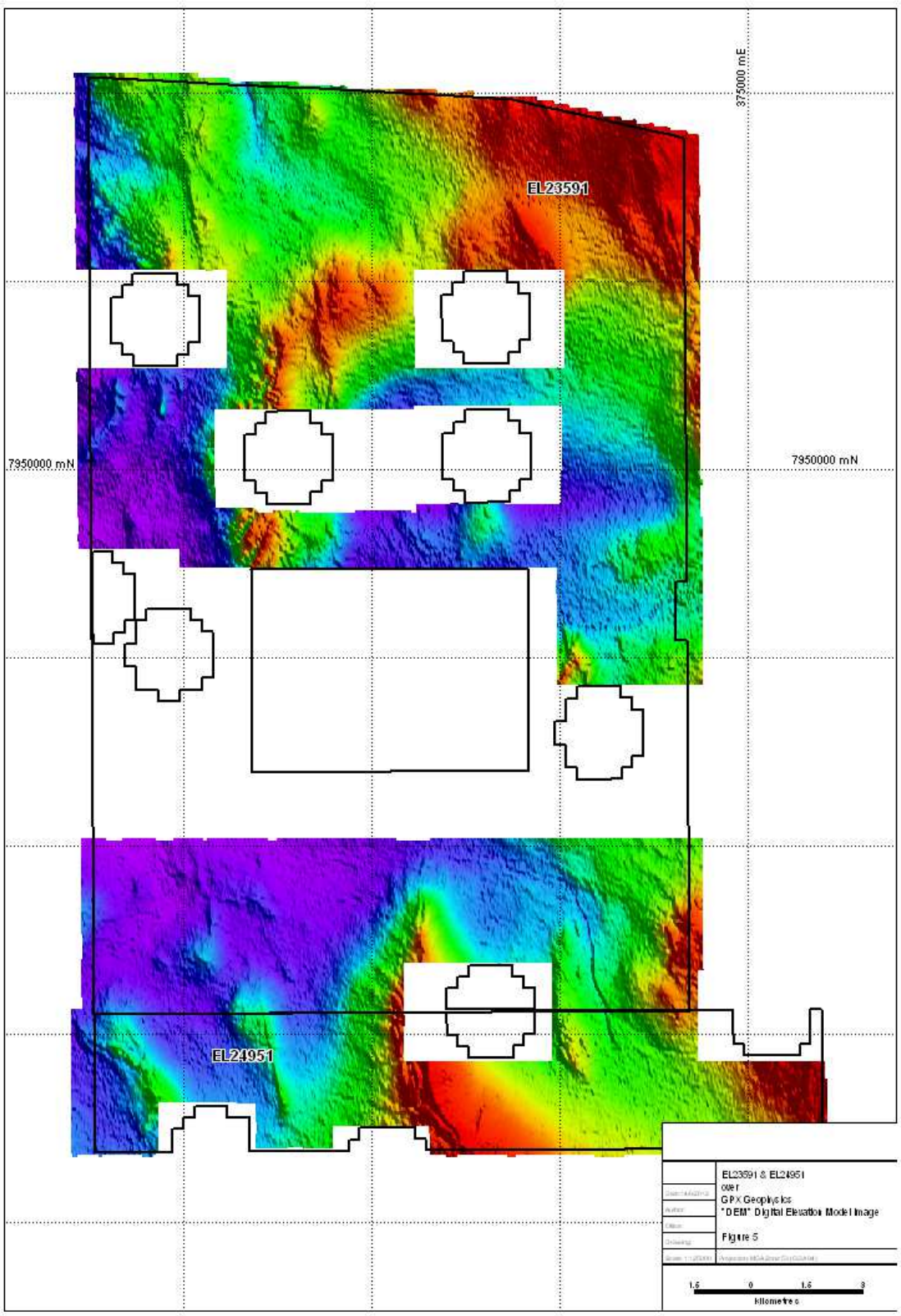


Figure 6: EL23591 & EL24951 over GPX Geophysics "1VD" image

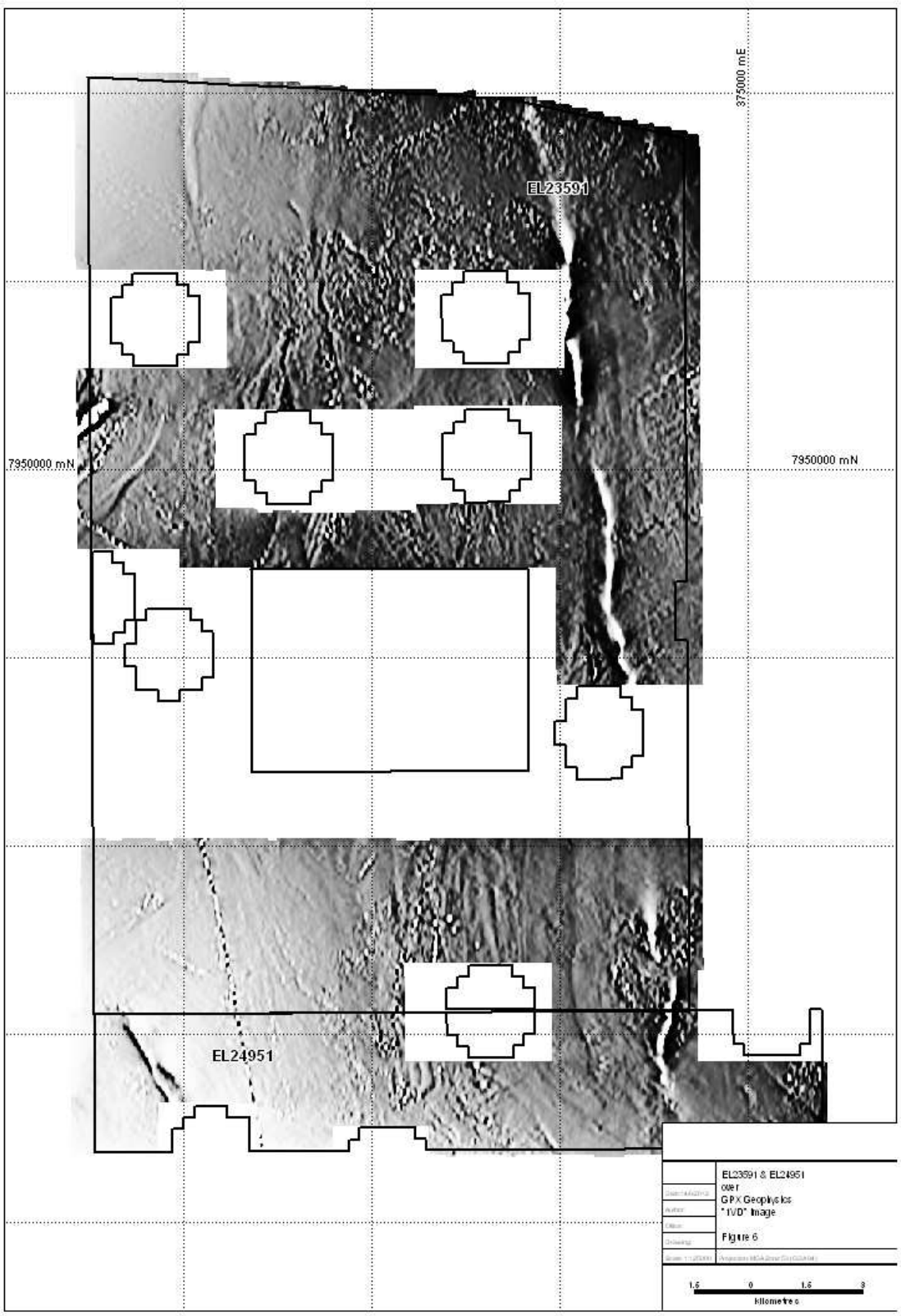


Figure 7: EL23591 & EL24951 over GPX Geophysics "RTP" image

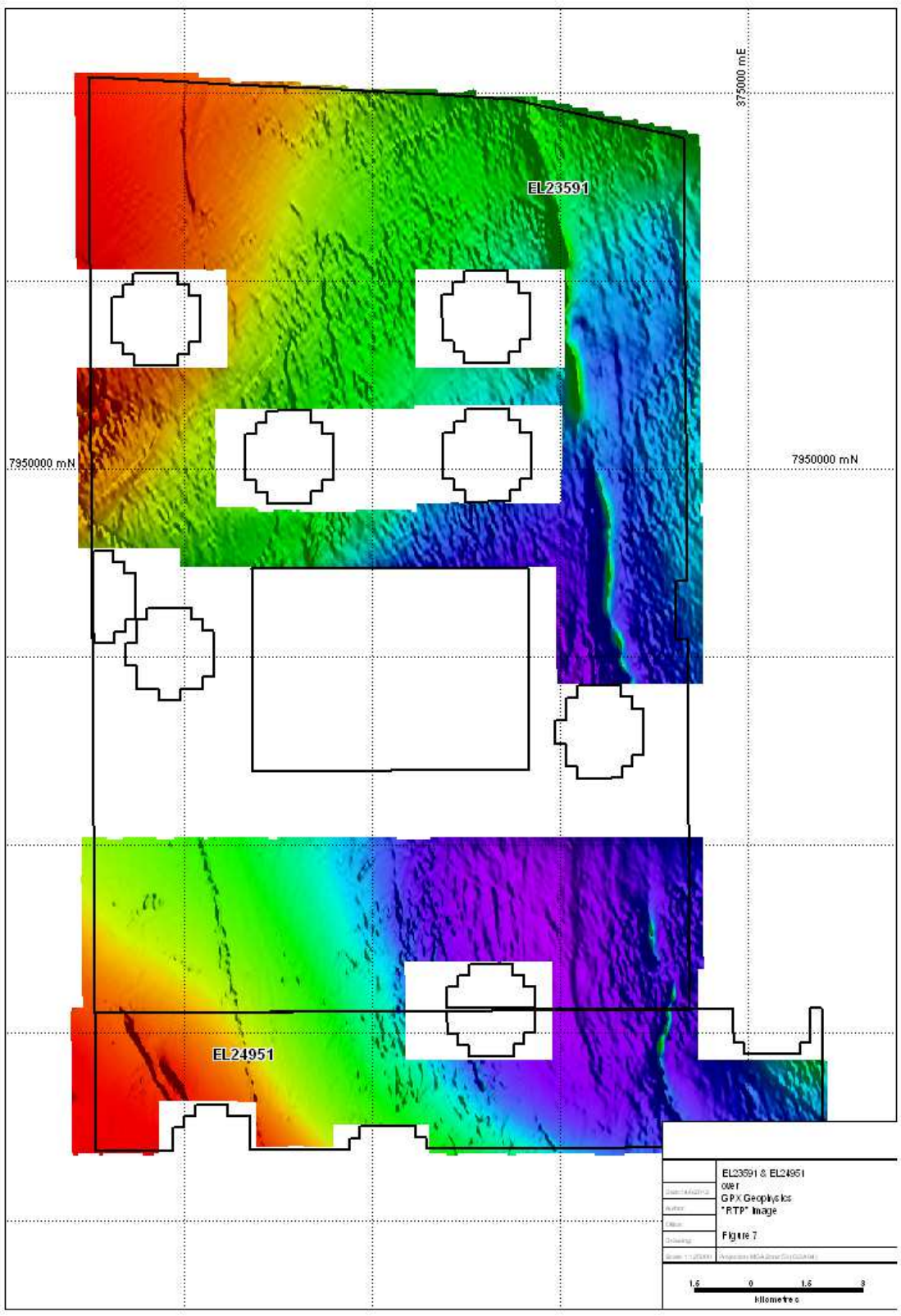


Figure 8: EL23591 & EL24951 over GPX Geophysics "TOT" image

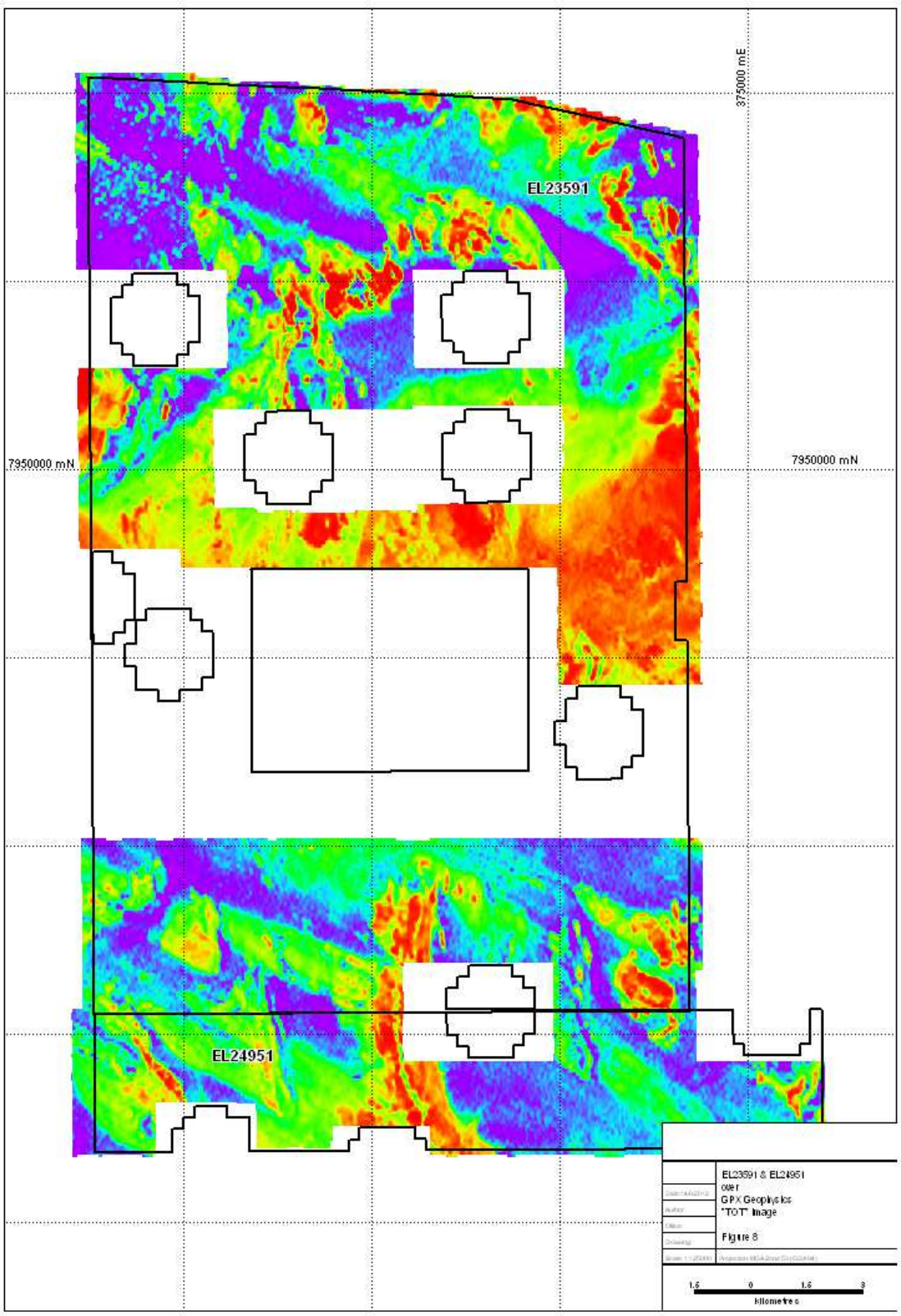


Figure 9: EL23591 & EL24951 over GPX Geophysics "THO" image

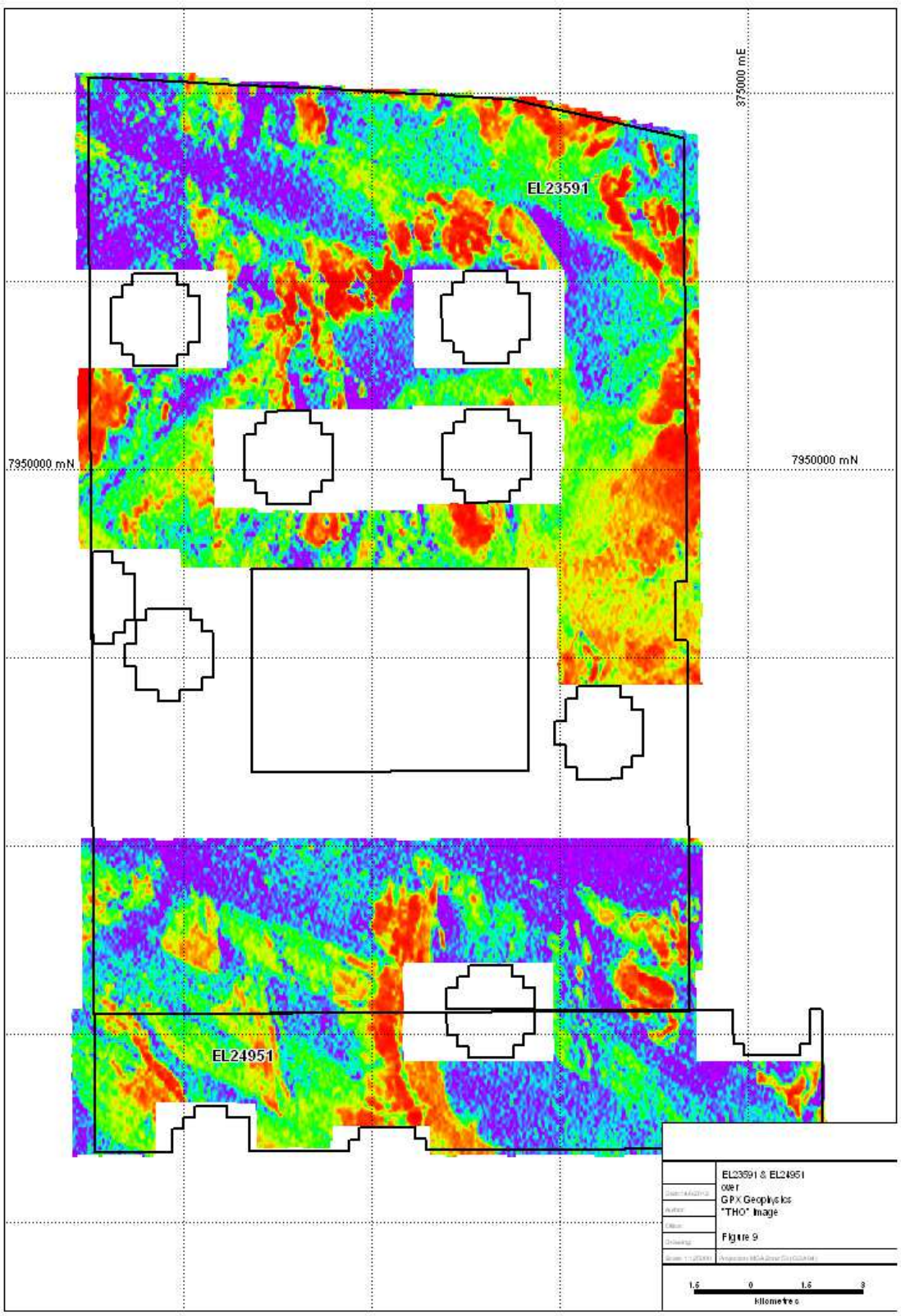


Figure 10: EL23591 & EL24951 over GPX Geophysics "Ternary RGB" image

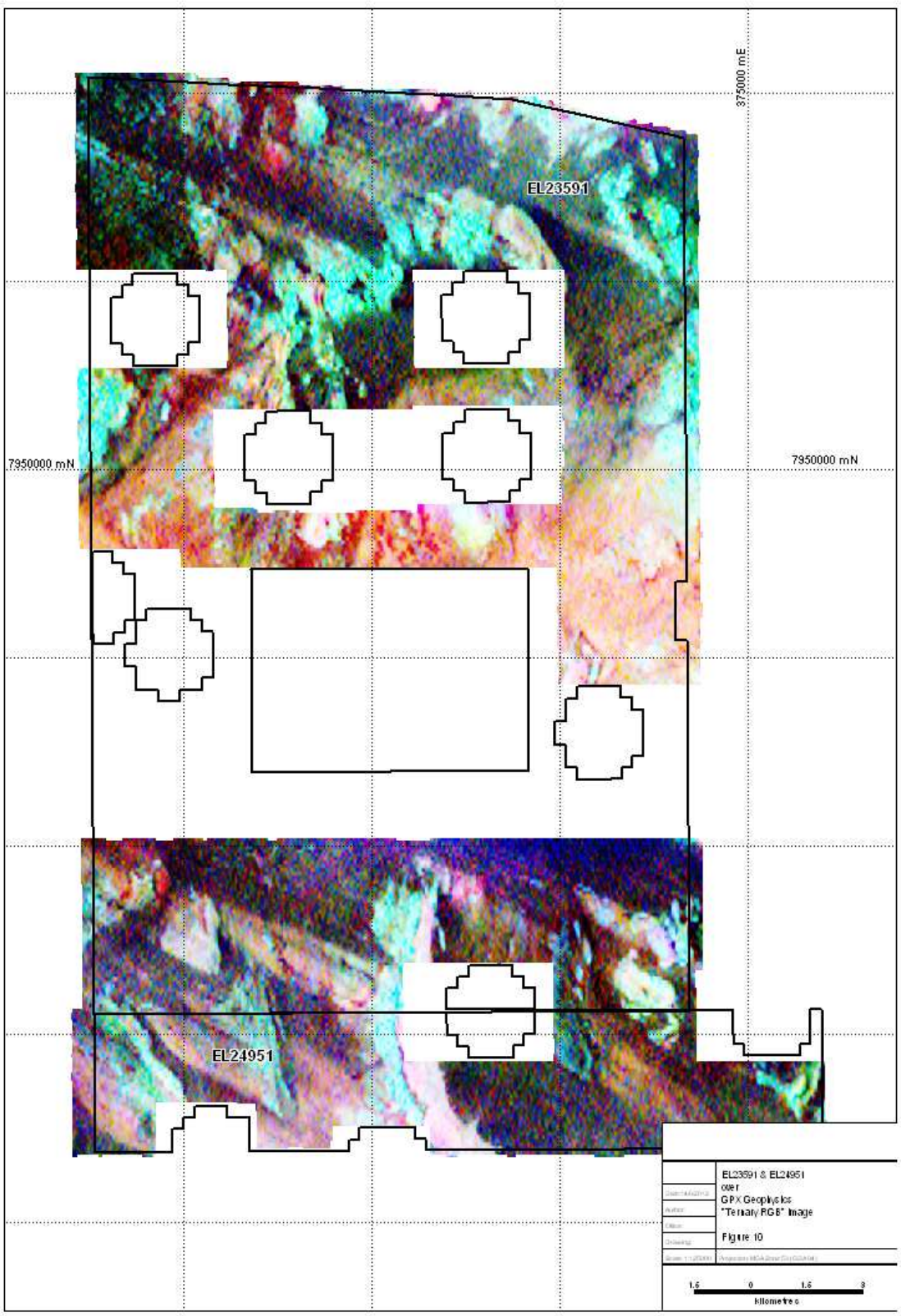


Figure 11: EL23591 & EL24951 over GPX Geophysics "POT" image

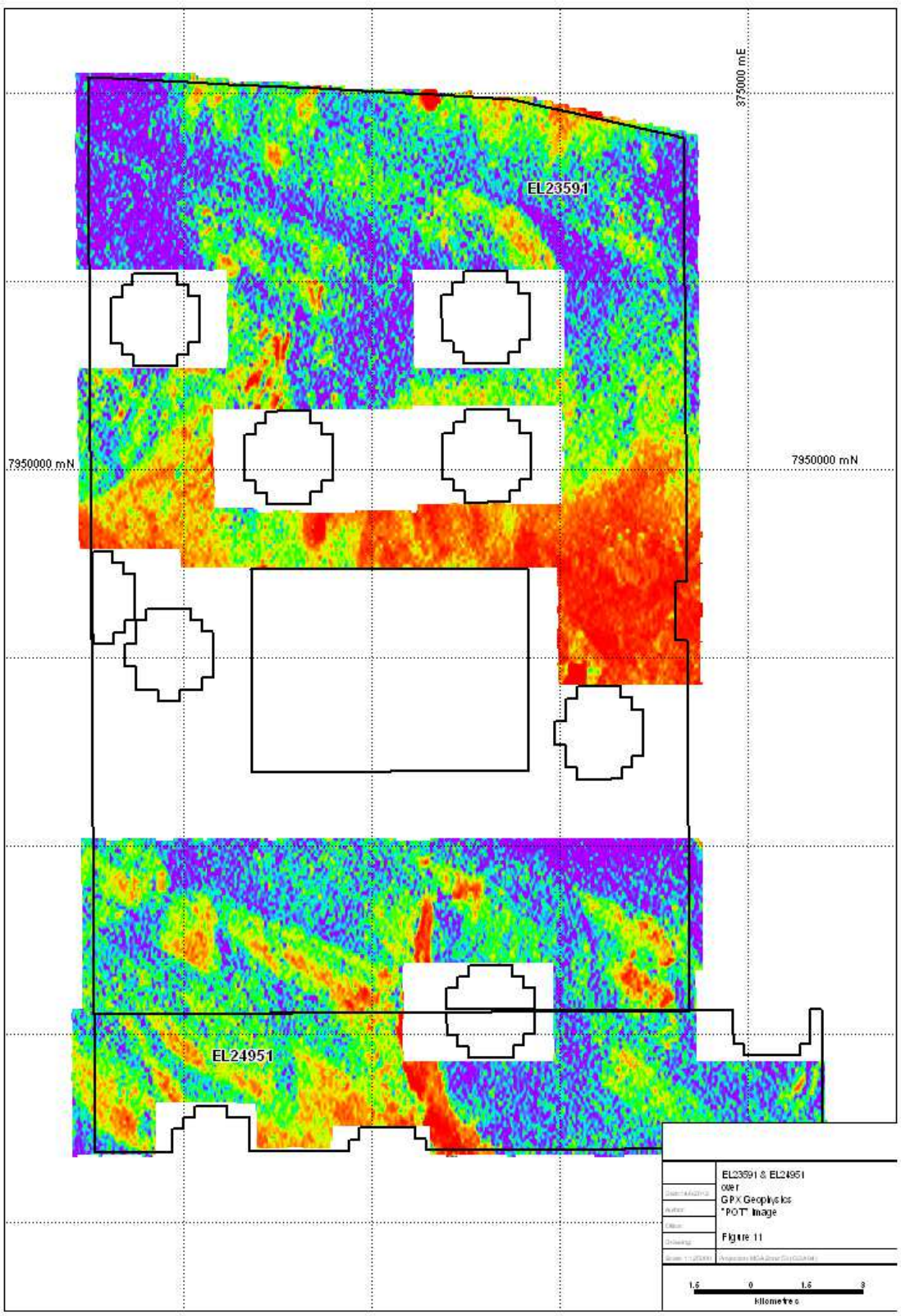


Figure 12: EL23591 & EL24951 over GPX Geophysics "Ternaray CMY" image

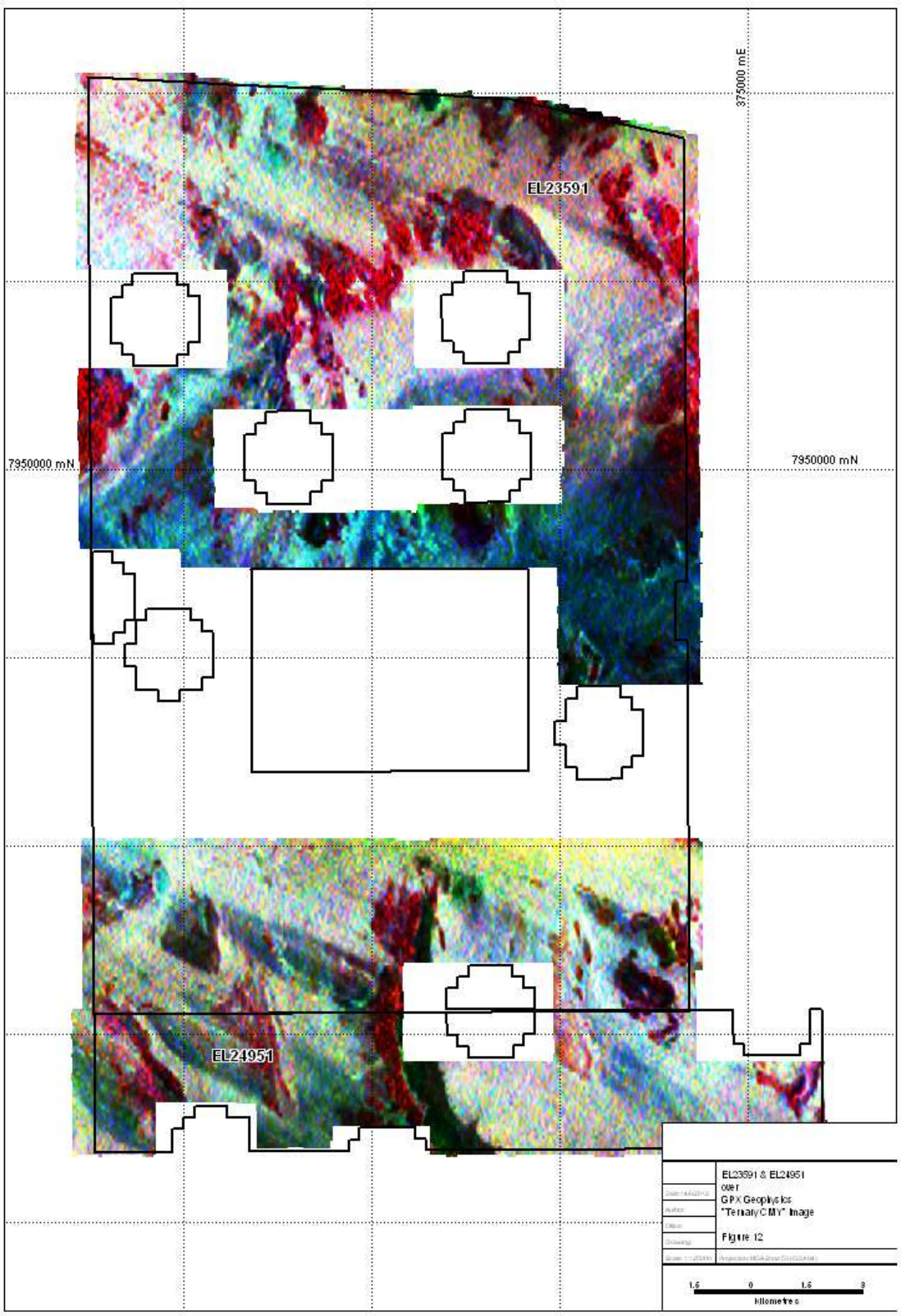


Figure 13: EL23591 & EL24951 over GPX Geophysics "URA" image

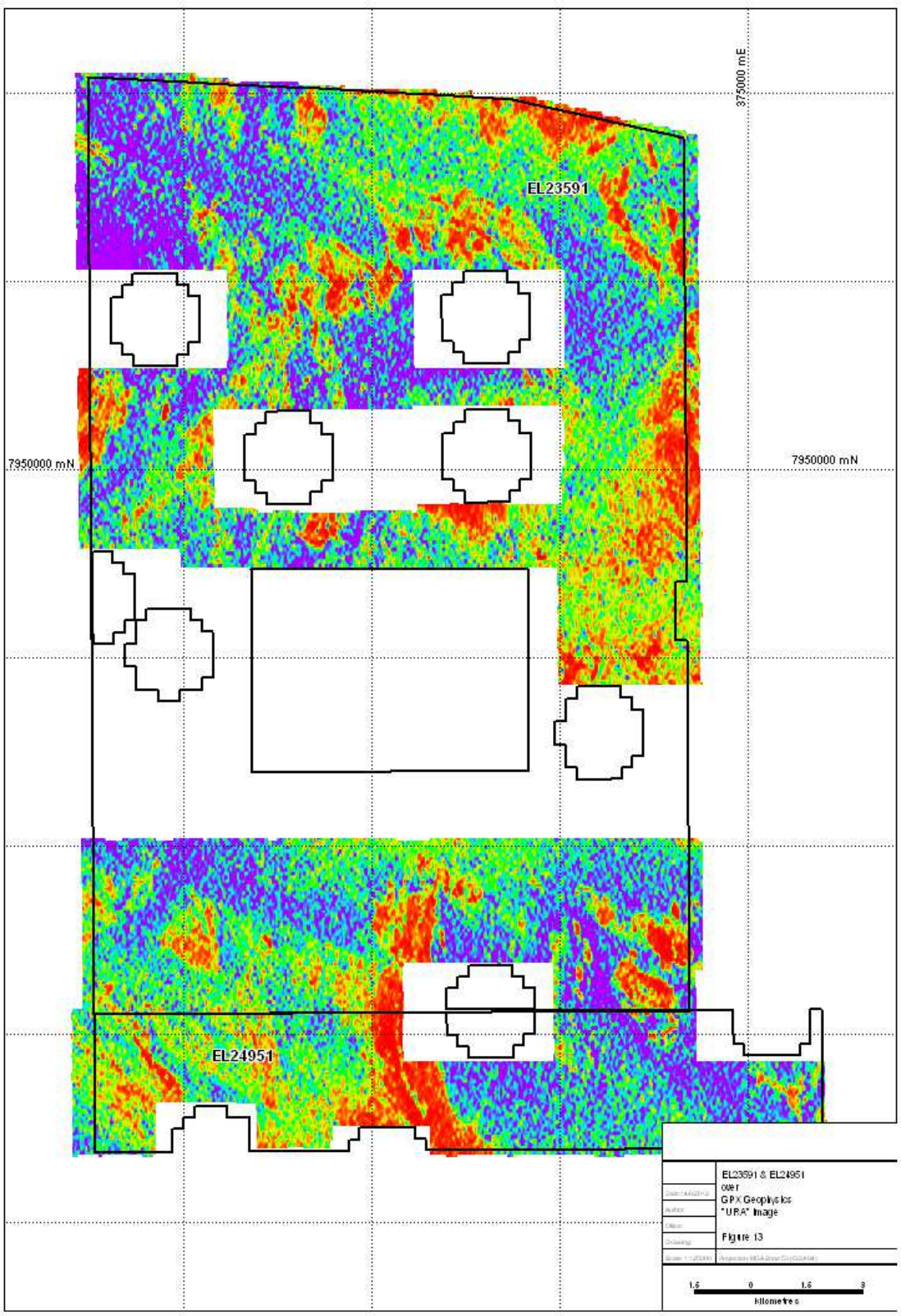


Figure 14: EL23591 & EL24951 over RTP Tilt

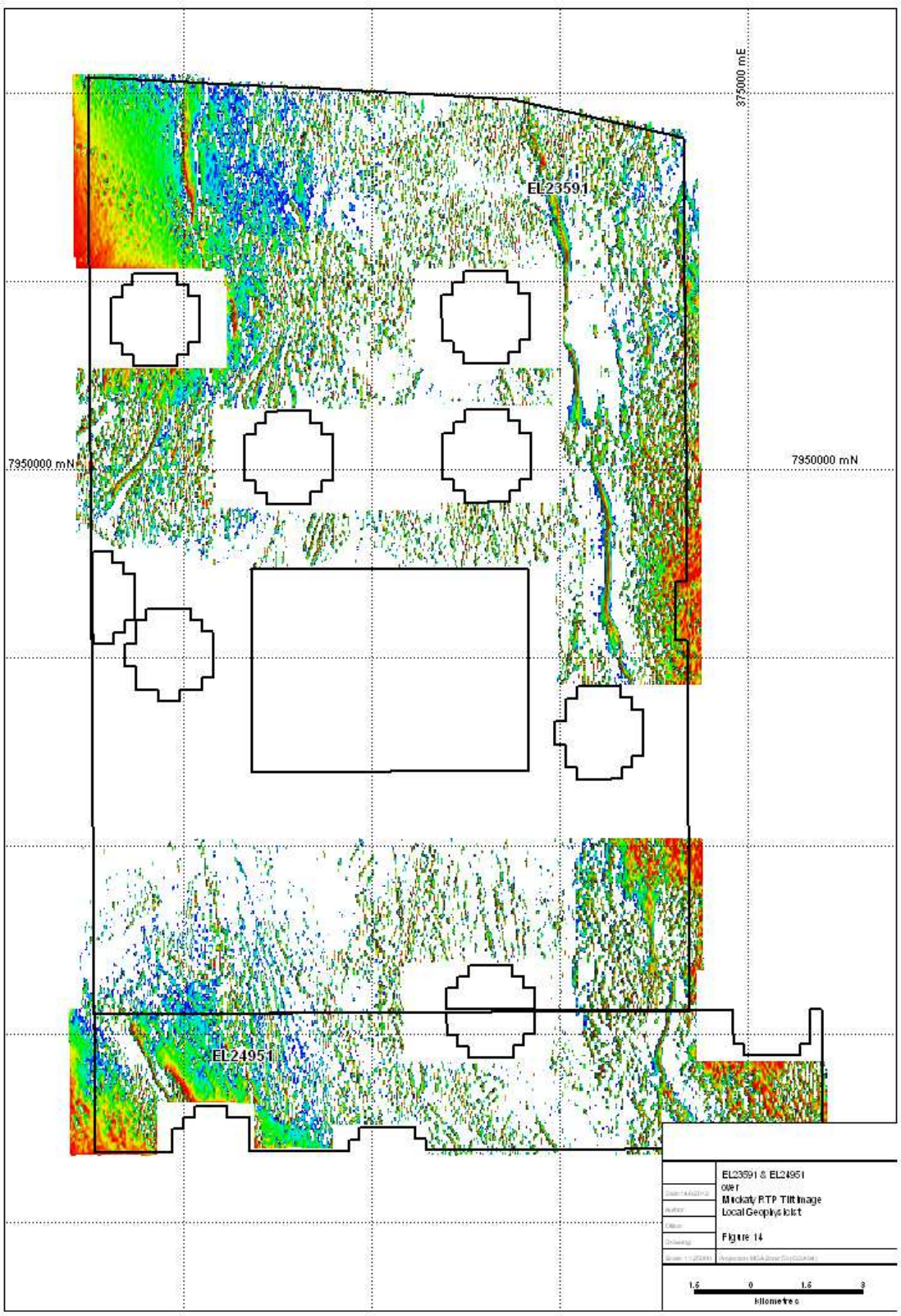
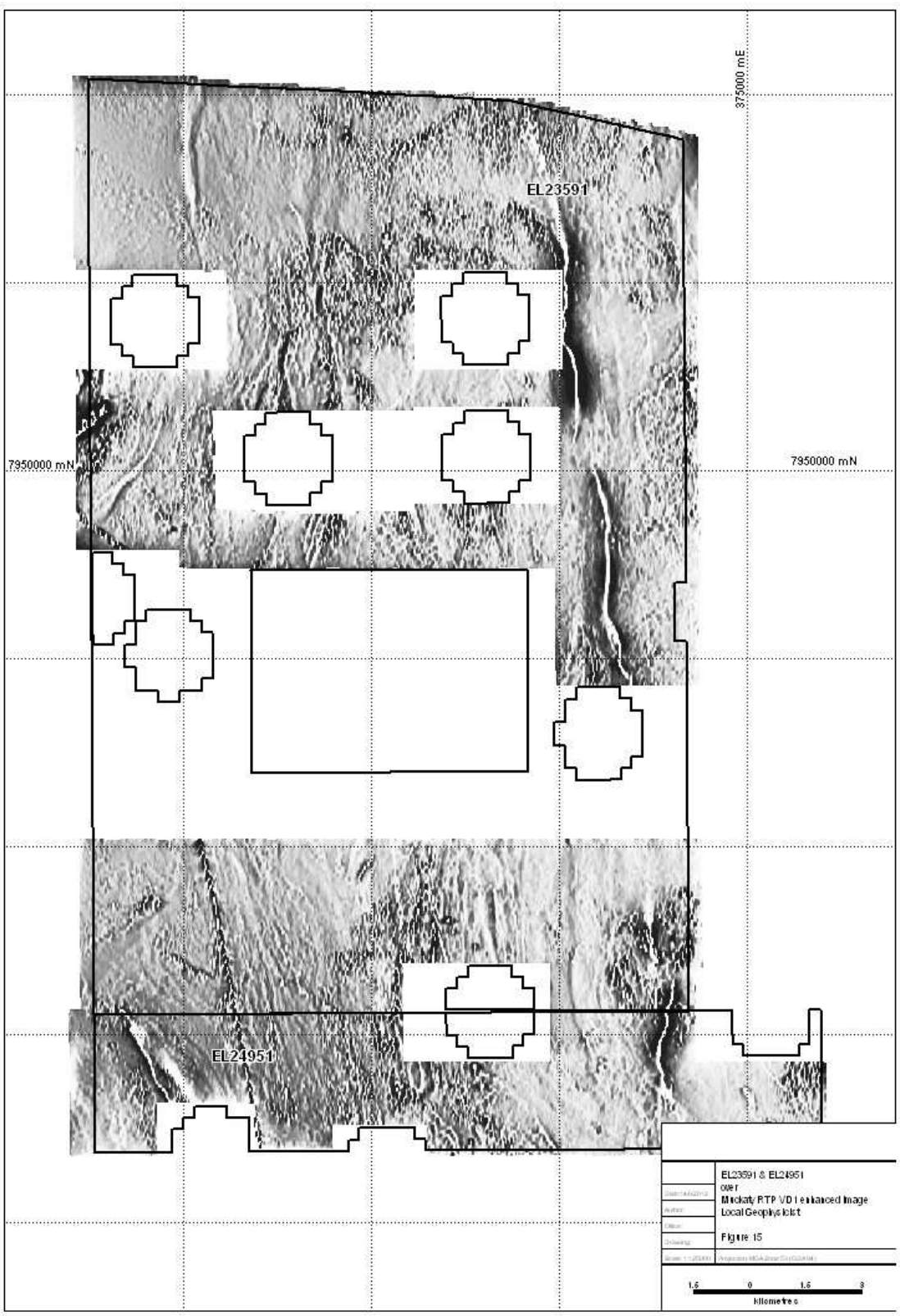


Figure 15: EL23591 & EL24951 over VD1 RTP enhanced image



6.2 Literature Review and Target Generation.

The work done on the previous exploration section summarises the Literature Review and a more extensive table is available in Appendix 1 outlining each report in the area briefly. Several of the older campaigns were converted into mapinfo files and targets for surface sampling were identified.

The Dillingham Mining Company of Australia conducted a geochemical sampling programme during 1971. Sample PEL-19R is recorded as a rockchip and returned a result of 3050ppm Cu and 150ppm Zn, 40ppm Pb and 25ppm Ni. The sample was located using transform the original map through to current coordinates using fixed points. This sample has been targeted with surface sampling for follow up.

Historical EL6679 was lag sampled during the early 1990s by MIM Exploration. The area was sampled in a 'Cross' pattern and showed up elevated manganese results with the maximum result being 1690ppm Mn. These results were targeted for confirmation with three lines of surface sampling.

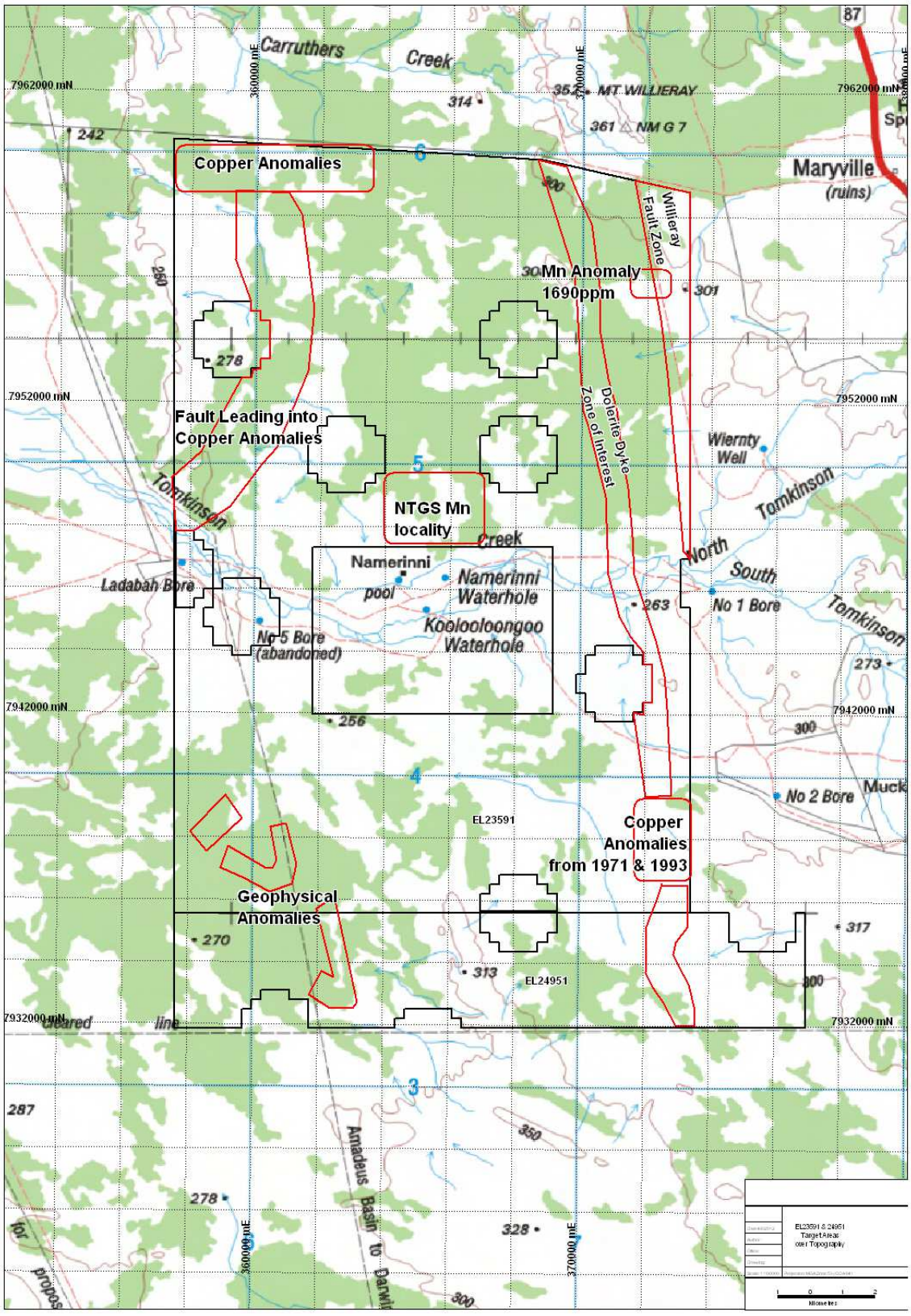
Two manganese occurrences are shown on the Northern Territory Geological Survey Mapping roughly central in EL23591. These occurrences were targeted for follow up geochemical sampling and description.

The Regional north south dyke has been targeting as it has been reported to contain quartz veining – unfortunately this sample was not able to be located accurately. There are two major faults paralleling the dyke. The eastern most has been called in several reports the 'Willieray Fault'. The western fault has been referred to as the 'Magnetic Fault' and probably has been host to the dyke.

In the southern part of EL24951 there are some folded subtly magnetic beds that are coincident with faulting described by the NTGS. A line of surface sampling has been used to assess whether there is any anomalism is the area. It should be noted that the magnetic feature may be masked by colluvium.

To the North east of EL23591 a north south feature is noted on the magnetics – this maybe associated with the mineralisation found to the north of EL23591 around Carruthers Creek. This area has been put on hold pending further thought.

Figure 16: EL23591 & EL24951 Target areas over Topography



7. CONCLUSIONS AND RECOMMENDATIONS

2011-2012 provided Scriven Exploration with the opportunity to commence exploration on EL23591 & EL24951 with the data obtained from the October – December 2011 airborne magnetic and radiometric survey. From the survey several anomalies were identified in conjunction with the Literature review.

2012-2013 should see the targets within the Exploration Licences surface sampled and analysed for a suite of elements with the priority target being the north south dyke, previously recorded manganese and copper highs and magnetic anomalies.

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Appendix 1 – Literature Review

See Folder: GR250-12_2012_A_02_Appendix_1 -

GR250-12_2012_A_02_Appendix_1.xls

Appendix 2 – Airborne Geophysics

Data - See Attached folder - GR250-12_2012_A_03_Appendix_2.