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EL 29231 HANSON RIVER WEST

FINAL REPORT

08/08/2012 to 05/06/2014

(Cu,Pb,Zn,Ni,Ag,Mo,U,Fe,Au,REEs)

NAPPERBY SF53 09

AILERON 5552

A.W.Mackie

July 2014

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FIGURES

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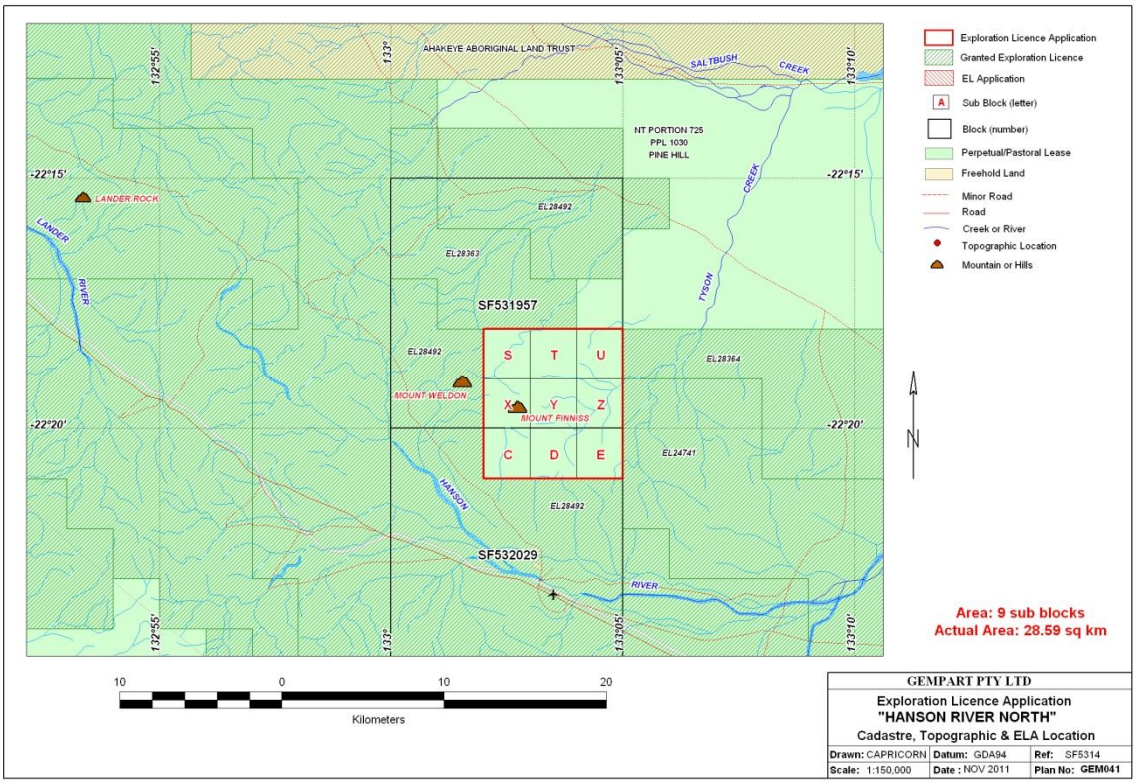
Figure 1. Location



1.SUMMARY

A first year exploration program of limited regional reconnaissance , previous exploration review and acquisition ,image processing, modelling ,interpretation of Napperby-Hermannsburg 1992 Geophysical located digital data was undertaken. A previously discovered U-Th-REE mineralised prospecting pit within southern-central licence area appears to have a regional AMAG footprint in conjunction with elevated Uranium channel readings requiring further investigation. However upon reviewing above geophysical data the apparent elevated uranium channel thumb print anomaly is considered too small to be of economic interest consequently the licence was surrendered in June 2014.

2.INTRODUCTION

EL 29231 Hanson River North is located 170km northwest of Alice Springs covering 29sqkm of Anmatjira Range on NAPPERBY mapsheet area.

3.LOCATION and ACCESS (Figure1.)

Access from Alice Springs is north via Stuart Highway for 142km then northwest for 32km on Coniston formed beef road to Pine Hill Homestead. The southern part of licence area can be accessed by Station tracks north of Pine Hill for 7 km to the foot of range likewise northern licence area from Bluebush Bore located 13km northwest of Stuart Highway turnoff .

4.TENURE

EL29231 Hanson River Nth comprising 9 sub blocks was granted to Gempart(NT)P/L 8th August 2012 for 6 years.It was surrendered ,JUNE 2014

5.PREVIOUS EXPLORATION

1970s

In 1977 Otter Exploration (EL 1444) completed an airborne Radiometric survey over the licence area (9 northwest trending flight lines ,2km apart).43 radiometric anomalies were delineated ,11 ground-checked of these only one namely PH-3 is within 29231 licence area (biotite-quartz-feldspar gneiss,250cps).While investigating PH-3 a shallow working/pit was discovered 500m to the west (PH-13).Rockchip sample N1-4 taken from pit comprising monazite-garnet gneiss assayed U 1000ppm,Th 6.3% >10000cps.While N1-4A composite rockchip sample of mainly monazite assayed Ce 10.1%,La

4.75%,Y 2750ppm,Nd 3.98%,Gd 0.8%,Sm 0.34%,Dy 640ppm,Er 900ppm,Yb 110ppm.Drainage samples downstream of pit namey N1-1 and N1-3 assayed Nb 20ppm and 30ppm respectively(Figure 2h).While Pine Hill Stock Bore 5km to southsouthwest and also downstream of monazite pit assayed U 720ppb. In 1979 a 100m x 100m grid was constructed over the area of pit and scintillometrically surveyed .Two rock samples were petrographically examined comprising fresh, polygonal-euhedral mosaic – forming crystals of monazite and porphyroblastic grossularite garnet crystals containing grains of monazite+patches of quartz ,ilmenite and goethite after cubic pyrite with minor biotite, zircon crystals and grains of spinel.

1980s

BHP Minerals commenced a regional heavy mineral drainage sampling program over Anamatjira Range in 1983 collecting one sample – RTO807 from a northeast draining creek originating from licence area .It was observed for KIs and a -80# geochemical split was analysed for As, Ce, La, Ba, Nb, Zr, Cu, Pb, Zn, Co, Ni, Cr for negative results.

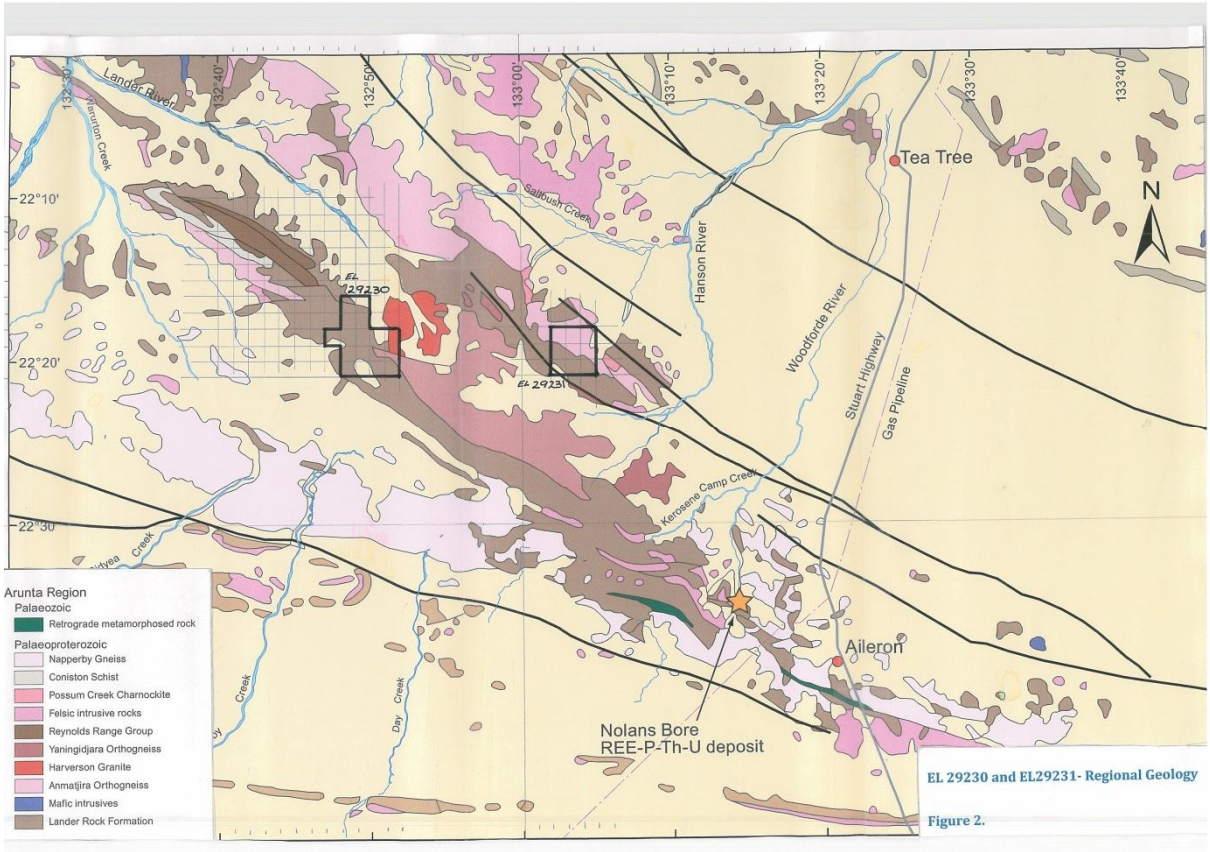
1990s

In November 1996 WGC flew a Regional AMAG/Radiometric survey for Aberfoyle Resources Ltd over EL 9145 i.e. N-S,500m l.s. flight lines, Altitude 80m covering 29231 licence area.

2000s

No on-ground exploration of licence area however several regional reconnaissance geophysical and Remote Sensing Interpretations i.e. Landsat, ASTER, NOAA ,Thermal Infrared data sets were implemented for delineation of potential Palaeochannel – hosted uranium mineralisation by TNGL/DYL and Dynasty Metals.

6.GEOLOGY (Figures 2,3)

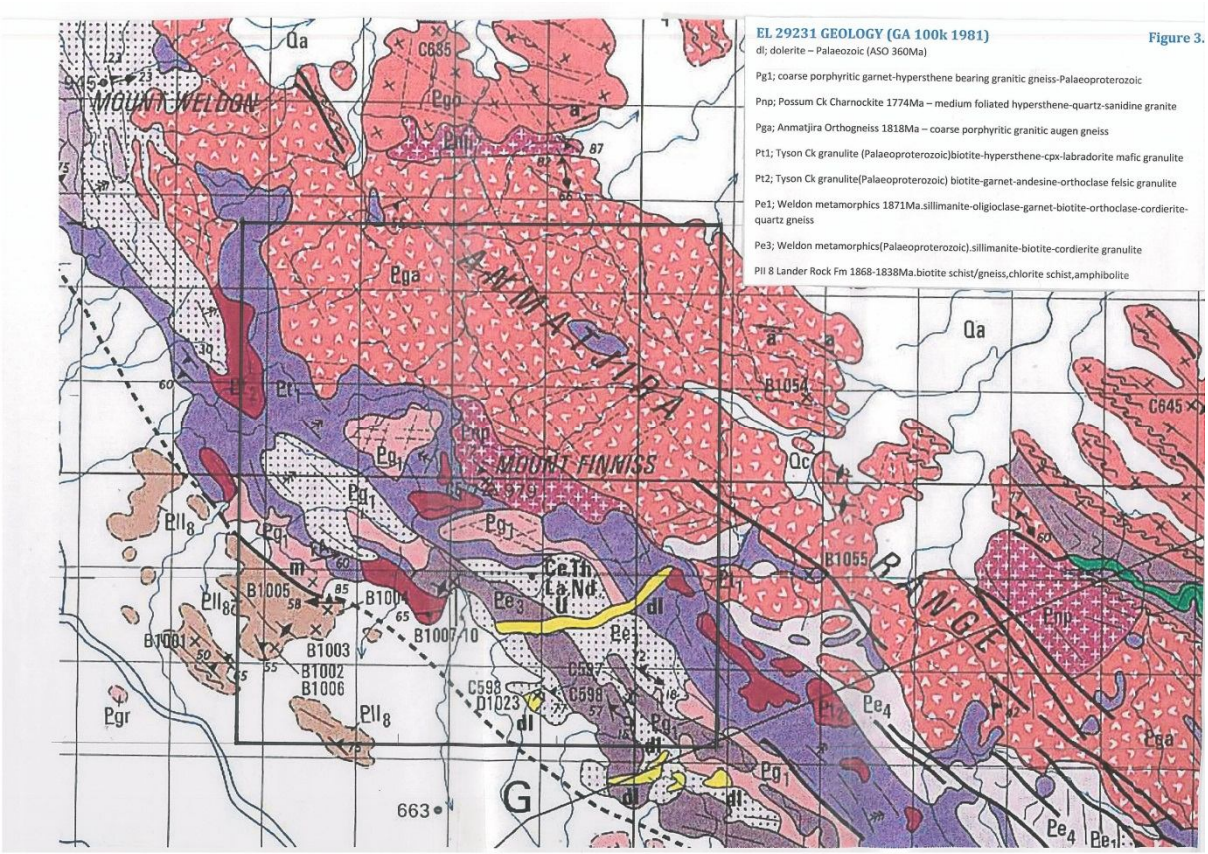


EL 29231 is located on NAPPERBY about 140km northwest of Alice Springs overlying 29sqkm of granulite facies basement rocks assigned to Palaeoproterozoic Aileron Province of central Arunta Region a long-lived, multiply deformed, geologically complex ensialic mobile belt covering 200,000sqkm of central Australia.

The northeastern part of licence area is overlain by the Anmatjira Orthogneiss (1818Ma) a coarse grain grey granitic gneiss comprising microcline, plagioclase, quartz, biotite and muscovite. Red biotite and rare euhedral cordierite grains are also present however most of which are now recrystallised aggregates of muscovite and greenish biotite. Zircon, tourmaline, apatite, ilmenite, allanite and fluorite are accessory with sericite, clinozoisite, epidote, chlorite and titanite being secondary. Microcline is mantled by sericitised plagioclase occurring as large ovoids up to 10cm across or subhedra 2.5cm long. Importantly from prospectivity perspective the deformed granitic intrusive is highly uraniferous intruding Lander Rock Fm, Weldon metamorphics and Tyson Creek granulite. Tyson Creek mafic granulite trends northwest across 29231 licence area comprising interlayered mafic granulite-Pt1 and subordinate felsic granulite – Pt2.Layers range from a few centimetres to a few metres thick. Felsic granulite also forms irregular masses up to 1km long. Mafic granulite protoliths are purportedly basic volcanic flows or sills, whereas felsic granulite masses formed by metamorphic segregation or partial melting? The metapelitic Weldon metamorphics(1871Ma) –Pe1 and Pe3 butt-up conformably to Tyson Creek granulite ? comprising coarse grain migmatitic gneiss(Pe1)often strikingly layered red (garnet-rich)white(feldspar+sillimanite) and blue (cordierite-rich).Felsic granulite (Pe3)is thinly to thickly

layered medium grain comprising quartz –cordierite-orthoclase. Interpreted protoliths of granulite facie Weldon metamorphics are interbedded shale, shaly sandstone and greywacke +minor mafic igneous rock. Mount Finniss is comprised of Possum Creek Charnockite(1774Ma) located centrally within licence area wedged between Pga to northeast and Pt1 to southwest .It is a medium grain strongly foliated brown felsic rock forming a discrete mass 4km long intruding and containing angular xenoliths of Tyson Creek granulite. The charnockite characteristically contains rounded pegmatitic schlieren of quartz –K-feldspar and mantled feldspar augen spaced 200mm apart. It comprises quartz-K-feldspar (hi-temp sanidine)-antiperthitic plagioclase-hypersthene+opaque grains. The rock shows patchy alteration of hypersthene to hornblende or biotite, opaque grains to biotite and sanidine to microcline. It is classified as a hi-temperature granite apparently intruded when Tyson Creek granulite and Weldon metamorphics were metamorphosed to granulite facies i.e.1575-1590Ma Chewings Event (first major tectonothermal episode to affect the area)? The northwest trending granulite facies volcanometasedimentary ,centrally located within licence area package is juxtaposed against greenschist facies Lander Rock Fm by a regional northwest trending thrust fault traversing across southwest corner of licence area .Lander Rock Fm (1868-1838Ma)are a Arunta basement forming highly folded sequence of pelitic/impure psammitic metasediments comprising 60% of exposed rocks of northern Arunta Region characterised by impure quartz sandstone containing detrital muscovite and biotite, siltstone, carbonaceous siltstone, shale and sericitic slate. They also include phyllite, quartzite, chert, andalusite biotite slate, mica schist, sillimanite – biotite – muscovite schist and biotite gneisses. Deemed provenance of Lander River Fm is largely a granitic terraine .

400m south of Uranium-REE occurrence comprising late-stage monazite hosted mineralisation is a dolerite dyke (ASO-age?) trending east –east northeast for 2km x150m wide apparently in-filling openspace within strike-slip fault plane. Monazite is a REE-U-Th phosphate mineral similar to REE-U-Th fluorapatite veins hosting Nolans Bore deposit 35km to southeast(47Mt averaging 12% phosphate,2.9%REOS,250ppm U308).Recent geochronology by GA has tentatively age-dated mineralisation 1244Ma considerably older than mooted ASO-age (360Ma) therefore timing relationship of monazite-garnet gneiss hosted U-Th-REE mineralisation and intrusion age of nearby dolerite is currently unresolved.



7.EL 29231 EXPLORATION PROGRAM

2013

1.Regional reconnaissance southeast from Blue Bush Bore on Station track to foot of Anmatjira Range was undertaken traversing northern part of licence area likewise on southern side north via Station tracks from Pine Hill Homestead again only as far as foot of Range.

2.A review of relevant previous exploration activity inconjunction with preparation/interpretation of Geology, TMI, Landsat composite images downloaded from GIWS server was undertaken.

3.Consultant Geophysicist acquired relevant Napperby- Hermannsburg 1992 survey located, digital, data-image processed, modelled and interpreted.

2014

The located digital geophysical data acquired, processed, modelled and interpreted during 2013 was reviewed .

8.EXPENDITURE

2013

Regional Reconnaissance/map field checking		$1000.00
Consultant Geophysicist-acquisition, modelling, interpretation Napp-Hmb data		$6000.00
Desktop studies, CR review -7days@$1000/day		$7000.00
Administration		$1000.00
	TOTAL	$15000.00

2014

Review of geophysical data acquired 2013		$3500.00
Administration		$500.00
	TOTAL	$4000.00

9.CONCLUSIONS and RECOMMENDATIONS

AMAG interpretation of licence area shows a circular magnetic 'spot-high' slightly east of garnet – monazite U-Th-REE mineral occurrence discovered by OTTER in 1979 coincident with elevated uranium channel readings. However review of acquired geophysical data shows the elevated uranium thumb print anomaly is too small to be of economic interest subsequently the licence area was surrendered.

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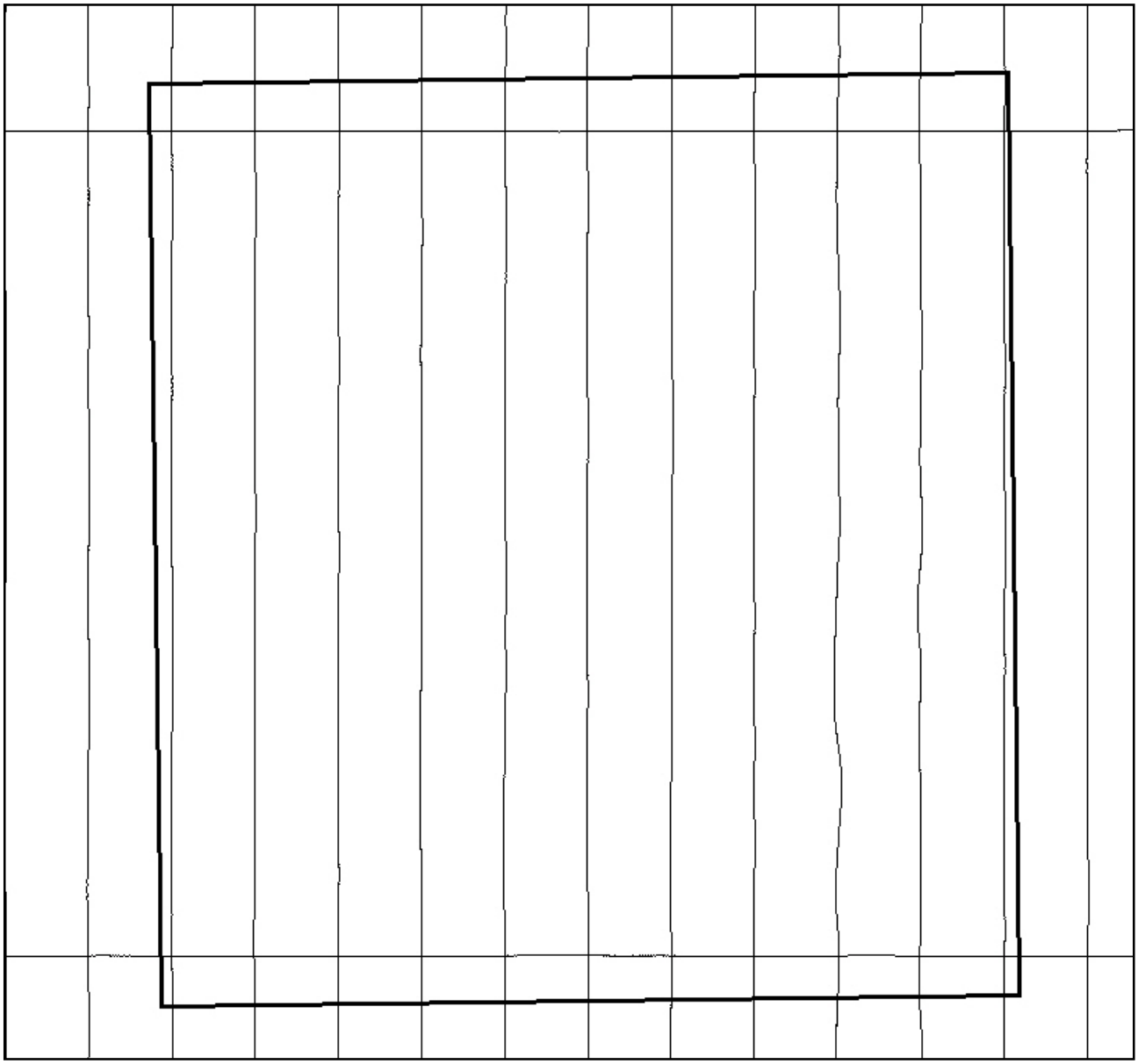

Figure 10a EL29231 aeromagnetic survey flight lines (500 meter line spacing)

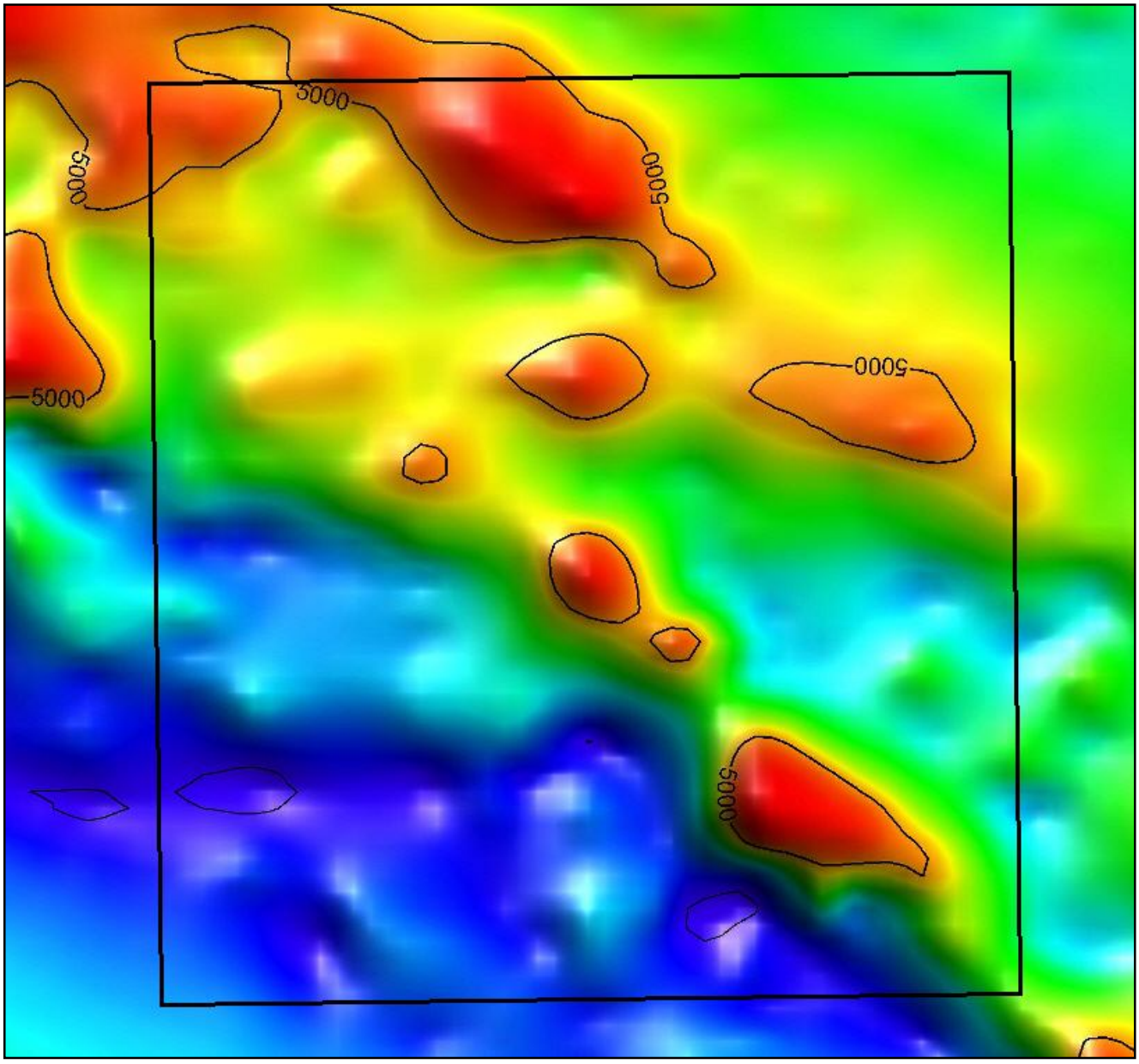

Figure 10b EL29231 Magnetic data with 200nT contour interval.

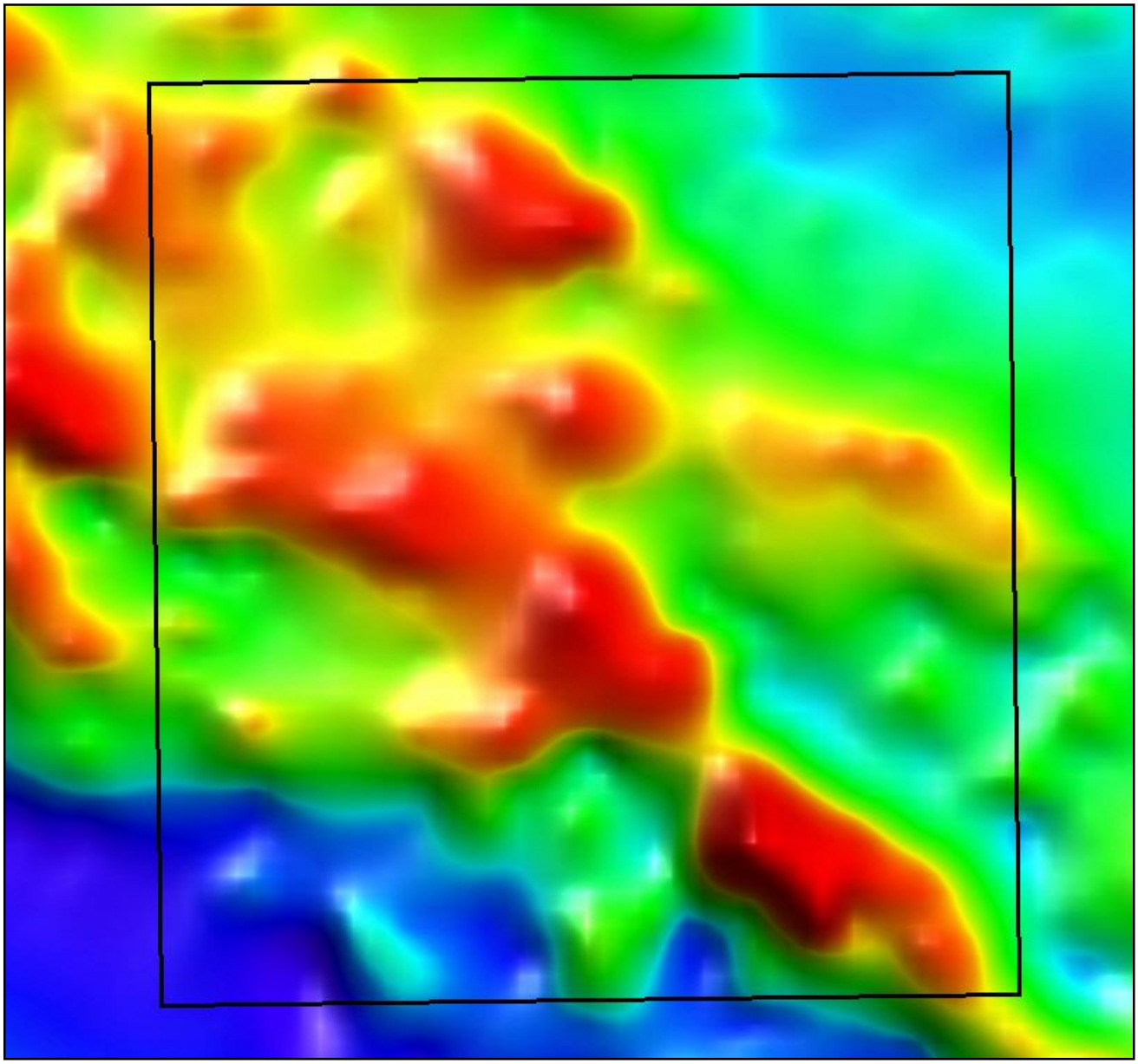

Figure 10c EL29231 Magnetic data reduced to the pole

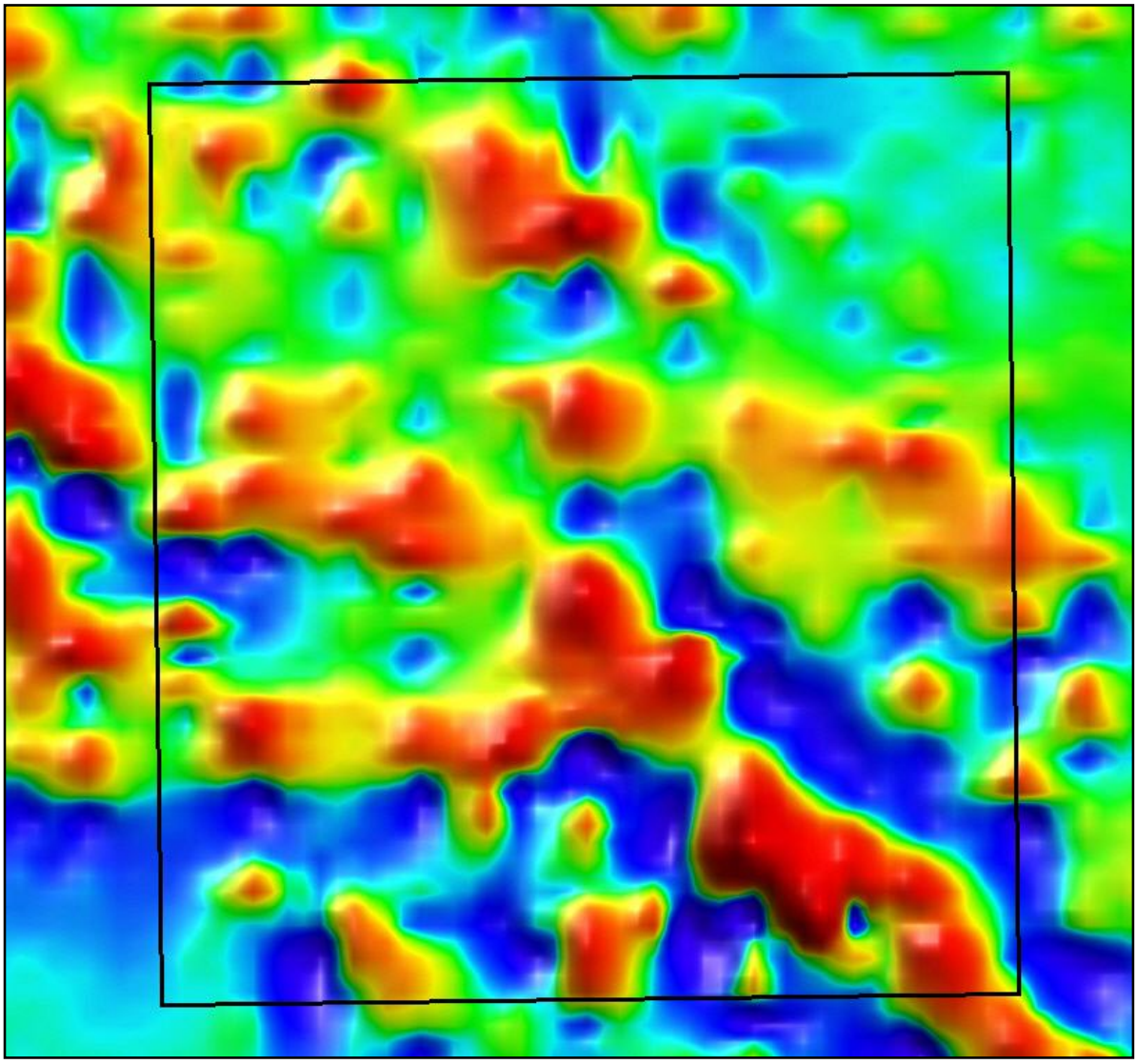

Figure 10d EL29231 PRELIMINARY Vertical derivative magnetic data (RTP).

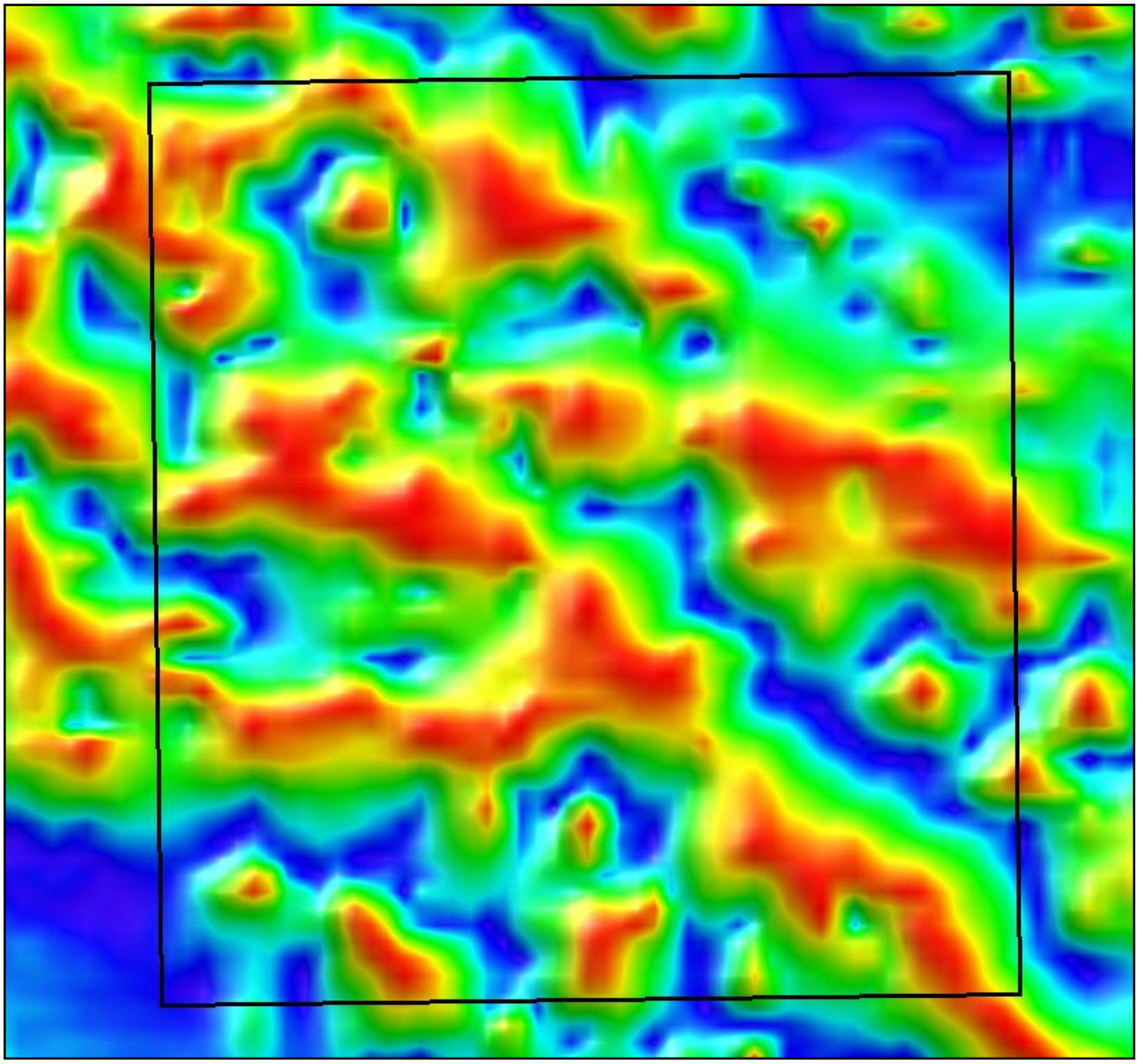

Figure 10e EL29231 PRELIMINARY Filtered magnetics

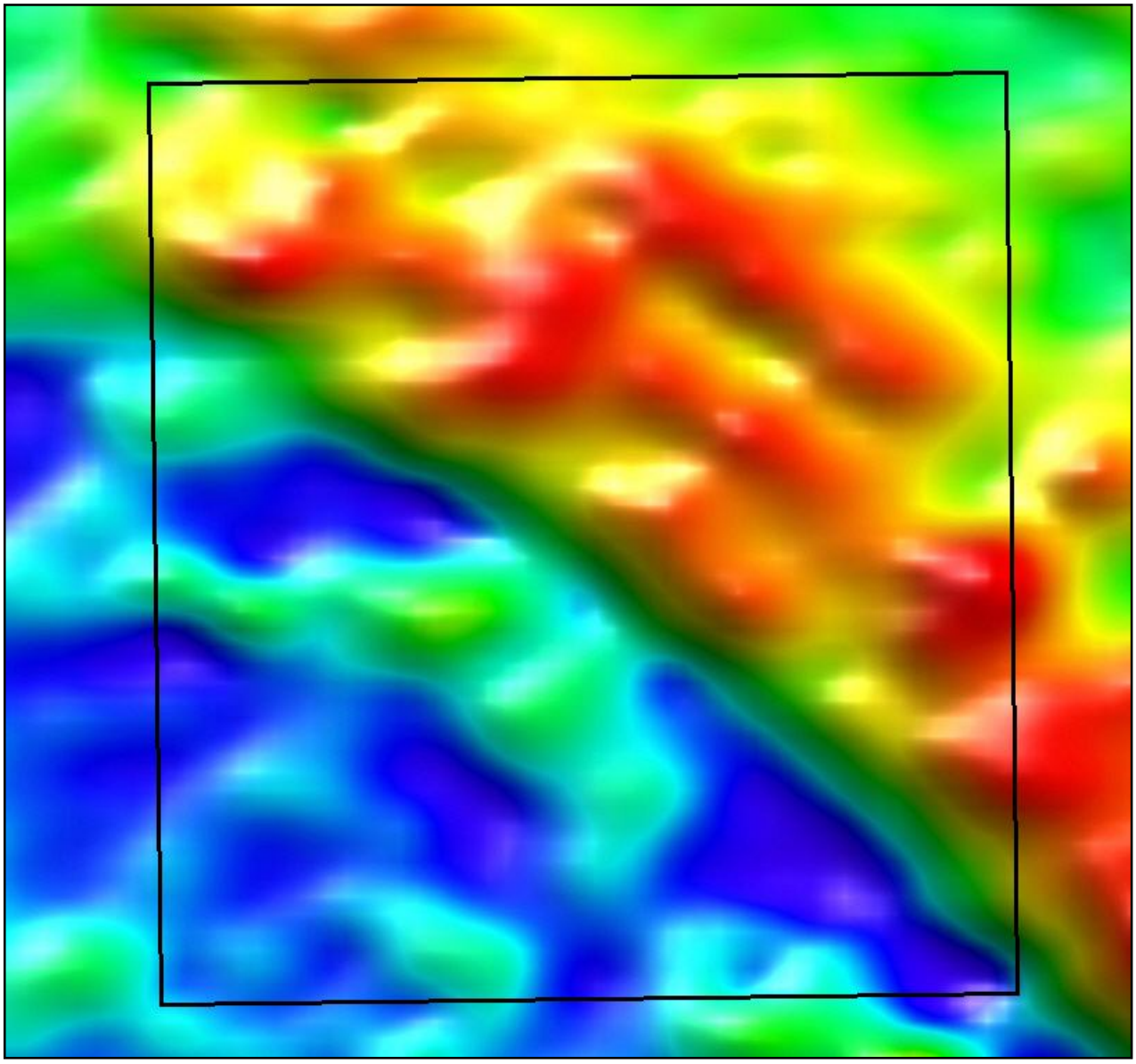

Figure 11 EL29231 Uranium count

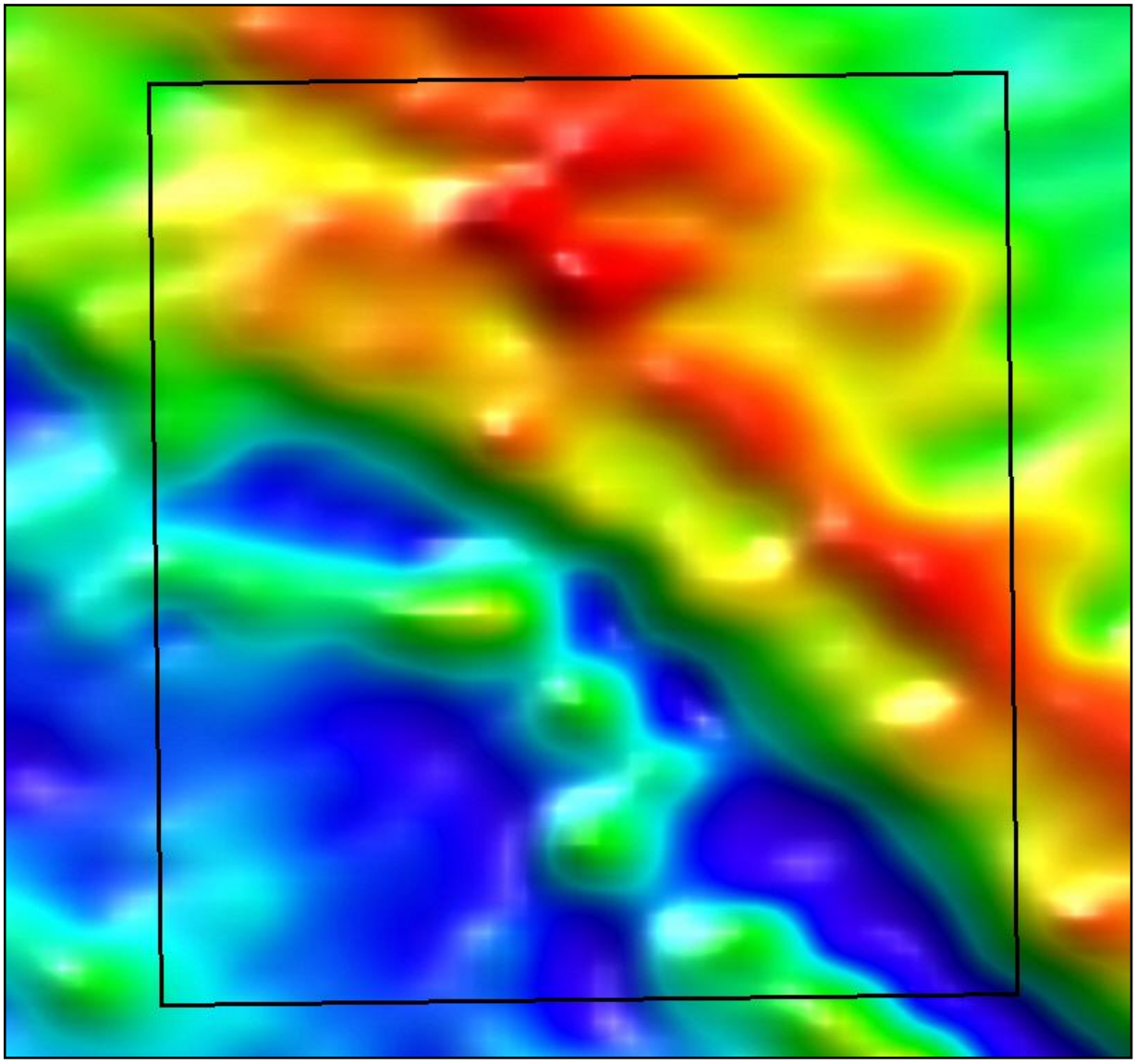

Figure 12 EL29231 Thorium count

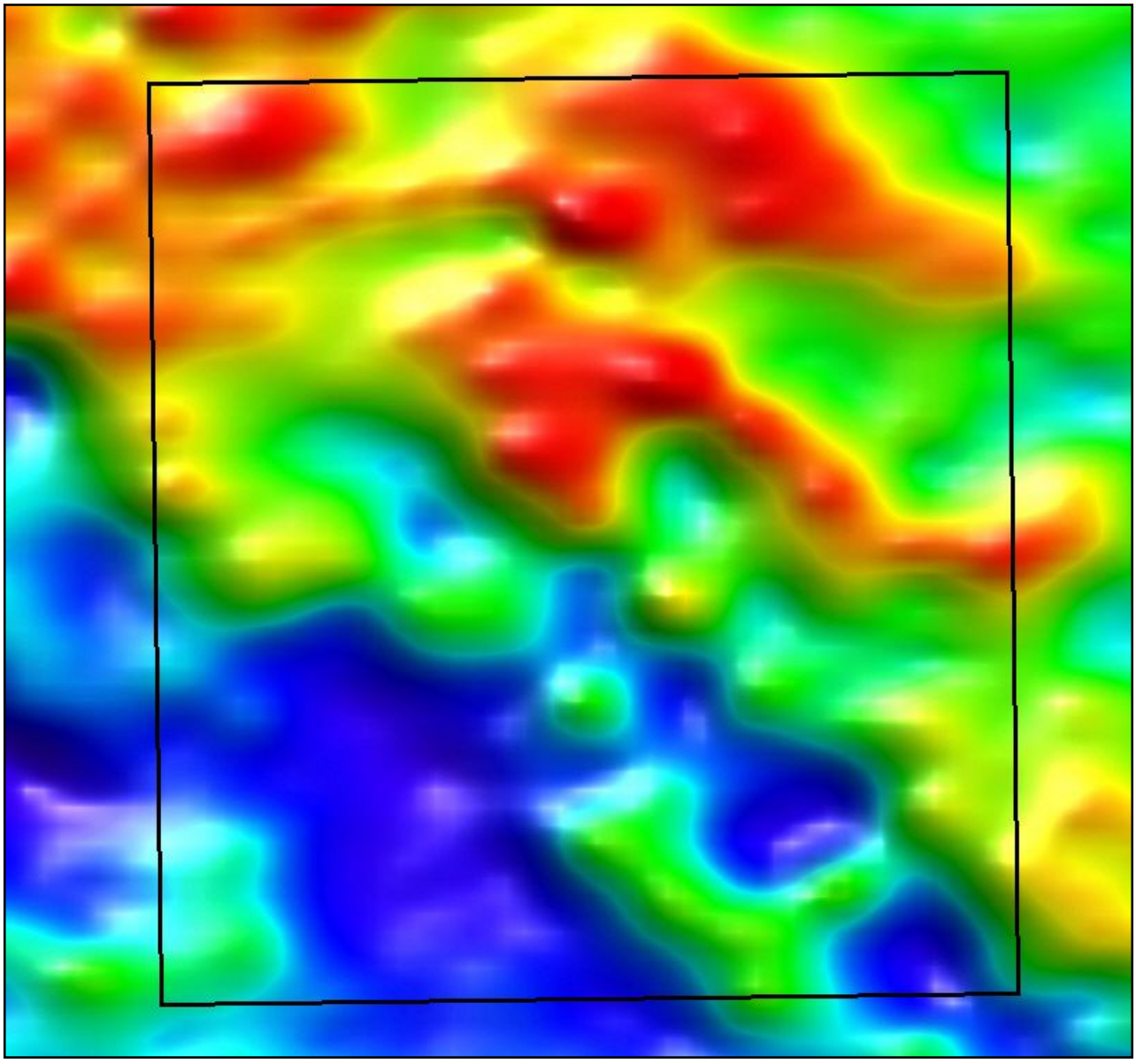

Figure 13 EL29231 Potassium count

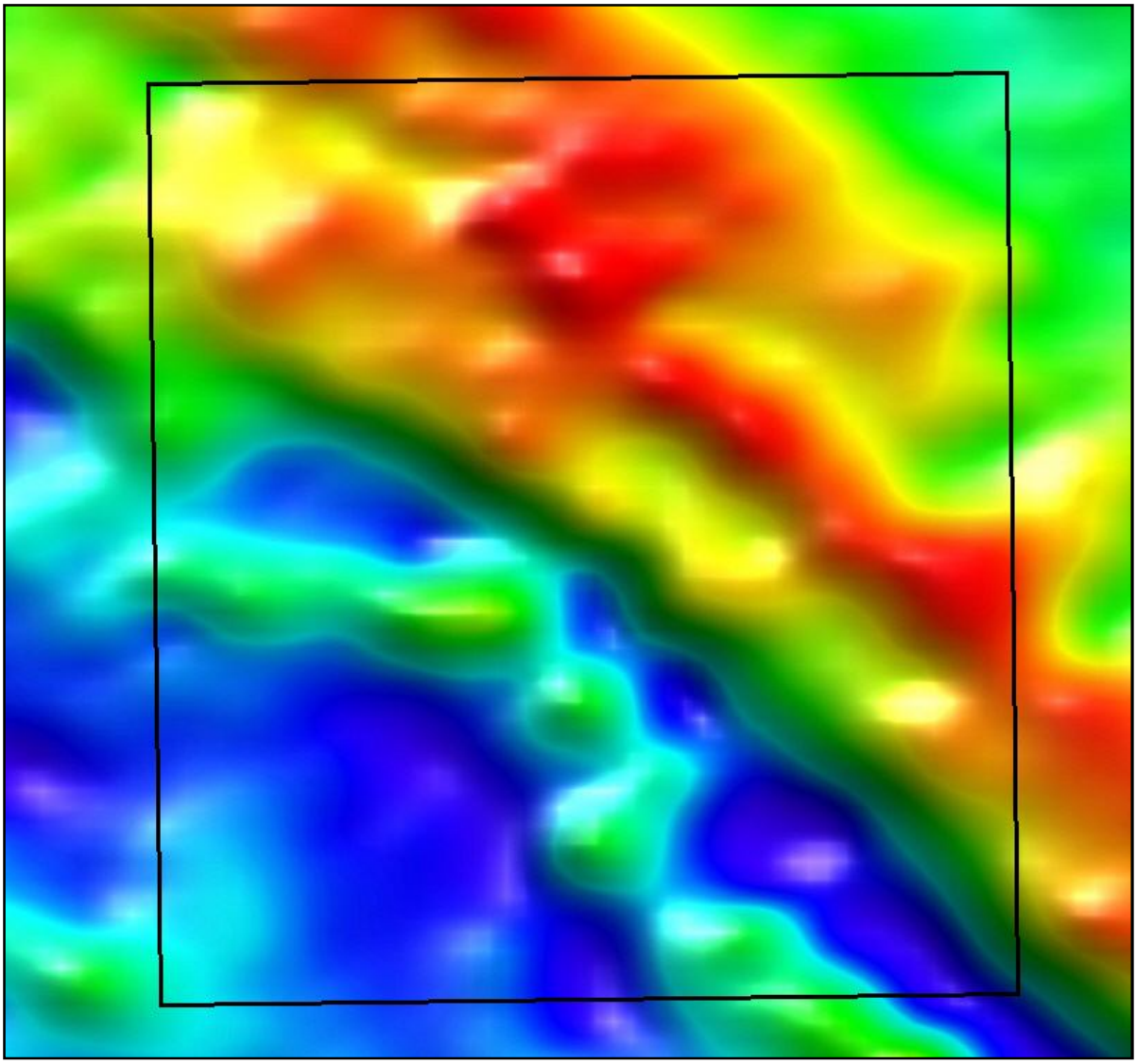

Figure 14 EL29231 Total count

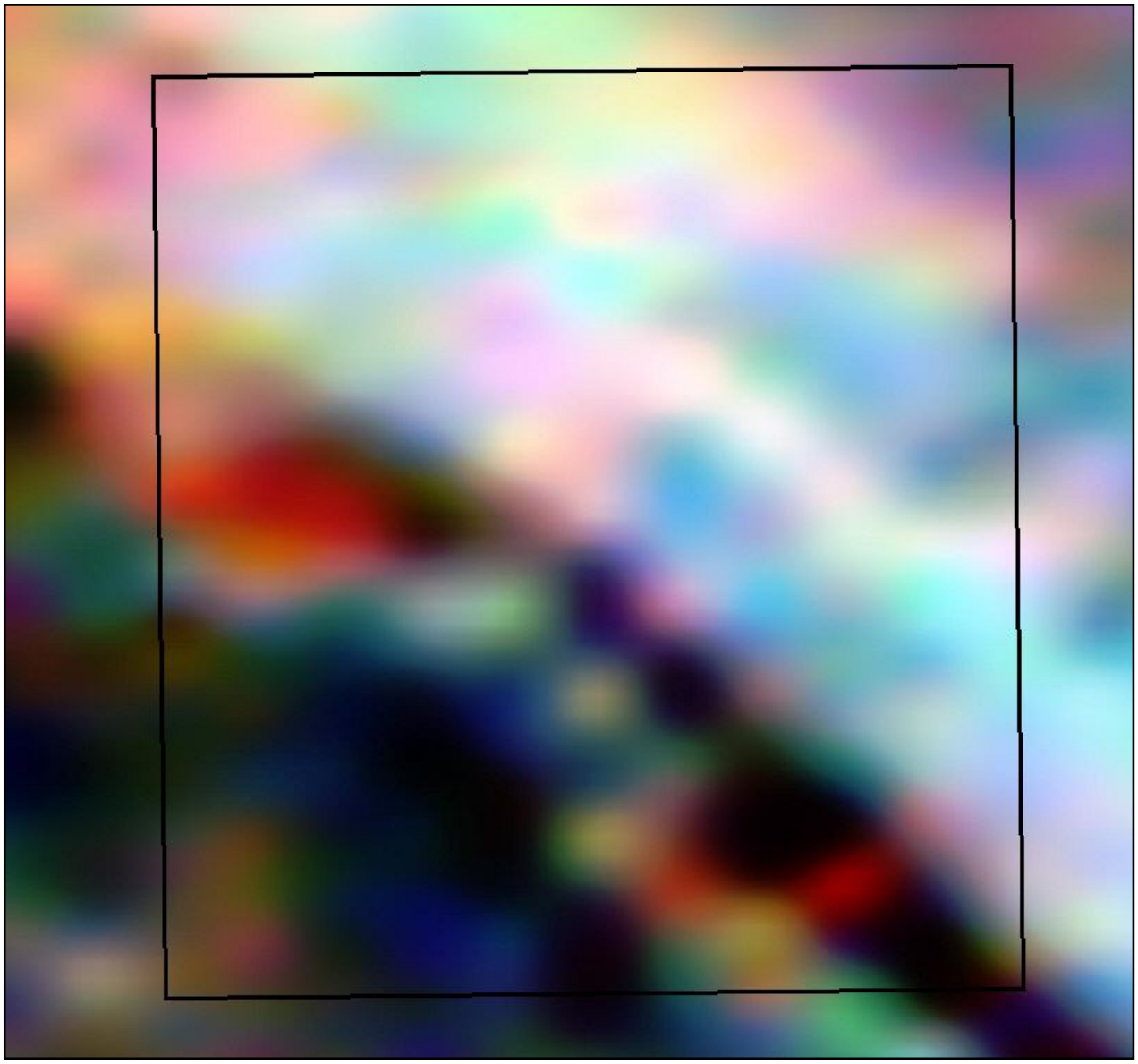

Figure 15 EL29231 Potassium–Uranium-Thorium composite

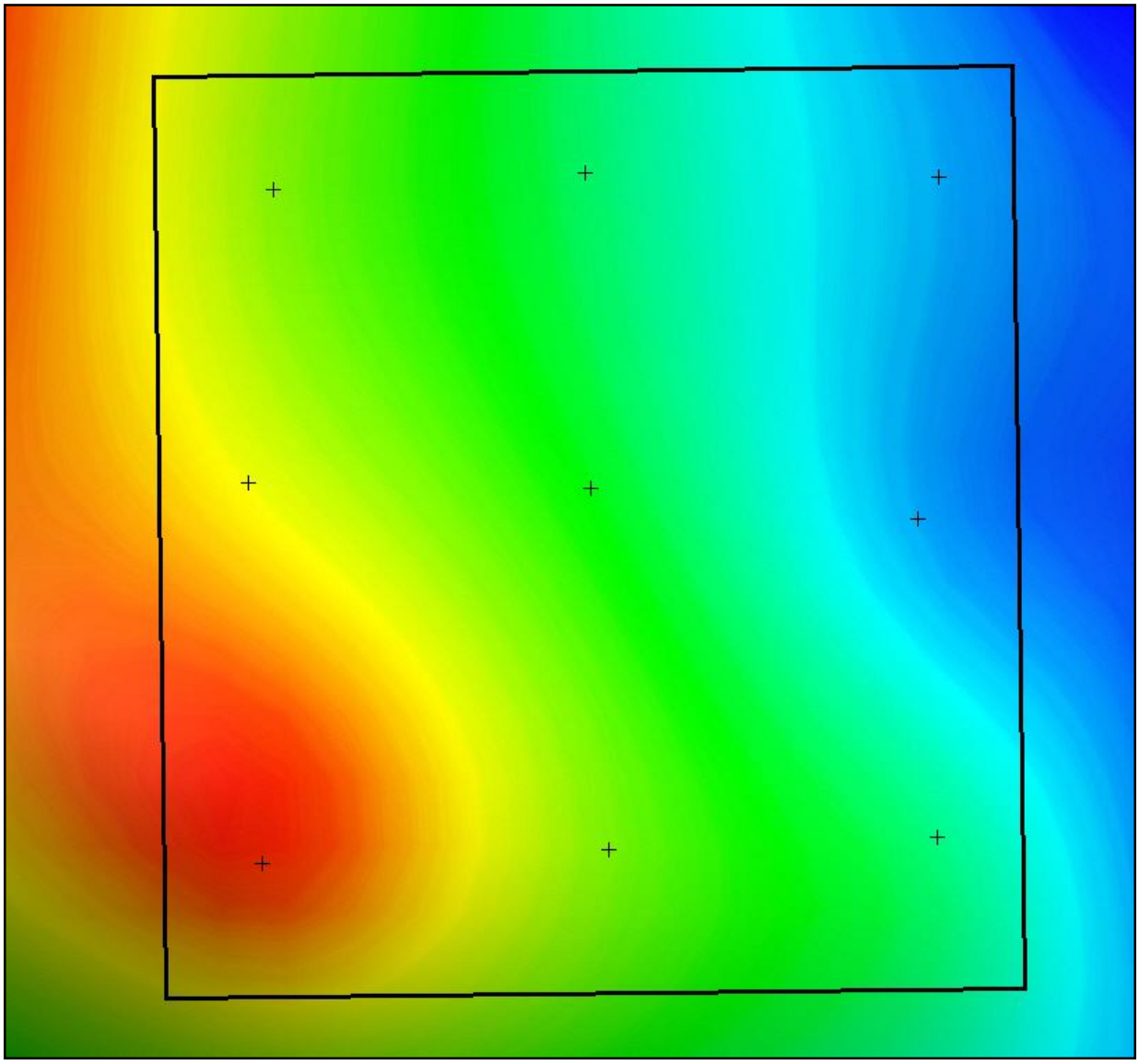

Figure 16 EL29231 Bouguer gravity with station location plot.

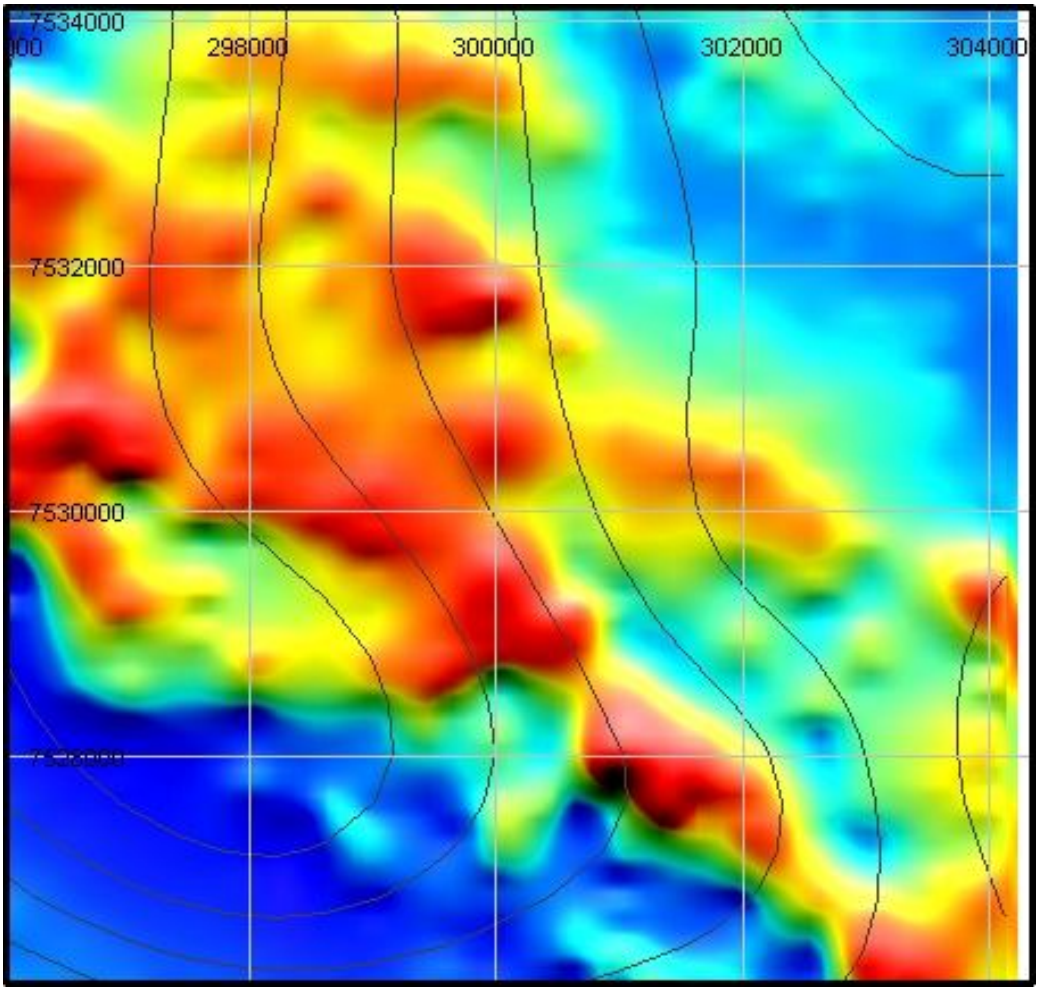

Figure 17 EL29231 Bouguer gravity contours (1mGal) and magnetic data (RTP)