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EL 29230 LANDER RIVER WEST

1st ANNUAL TECHNICAL REPORT
8/08/2012 - 7/08/2013

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

NAPPERBY

REYNOLD RANGE

AW Mackie

October 2013

CONTENTS

FIGURES

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1. EL 29230 – SUMMARY

A program of regional reconnaissance in conjunction with acquiring relevant NAPPERBY-HERMANNSBURG 1992 Geophysical located digital data was implemented. The general area around Harverson Pass hematitic breccia iron mineralisation was prospected. Image processing and interpretation of regional AMAG data revealed elevated TMI over Harverson Pass area requiring further investigation for sub-surface hematitic iron deposits. It is recommended a close spaced heliborne SKYTEM/AMAG geophysical survey be conducted over Harverson Pass area. Minerals sought are Cu, Pb, Zn, Ni, Ag, Mo, U, Fe, Au and REE.

2. EL 29230 INTRODUCTION

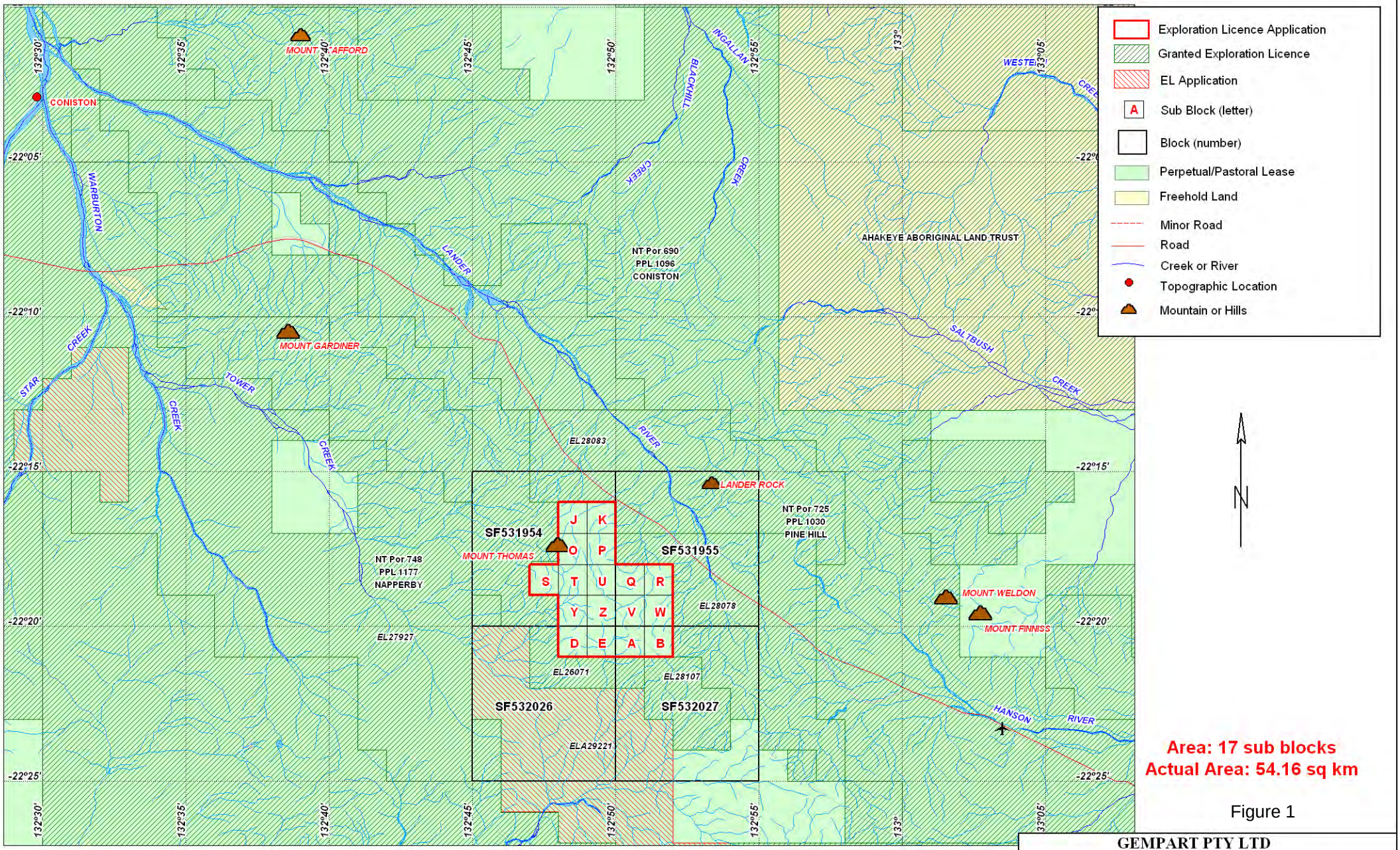
EL 29230 Lander River West is located about 200km northwest of Alice Springs over 54 sq km of well exposed, enigmatic Palaeoproterozoic Reynold Range Group rocks. Extensive areas of iron mineralisation occur as hematitic breccias or replacement iron deposits within basal conglomerate of Mt Thomas Quartzite 1812-1785Ma requiring further investigation.

3. LOCATION and ACCESS (Figure 1a)

EL 29230 is accessed from Alice Springs north via Stuart Highway for 160km until the Pine Hill – Coniston formed beef road turnoff is reached then 50km northwest to Harverson Pass track turnoff from there going west through Reynold Ranges for 11km where counry opens out allowing 4WD travel over Station tracks.

4. TENURE (Figure 1)

EL 29230 comprising 17 sub blocks (54 sq km) was granted to GEMPART(NT)P/L 8th August 2012 for 6 years.



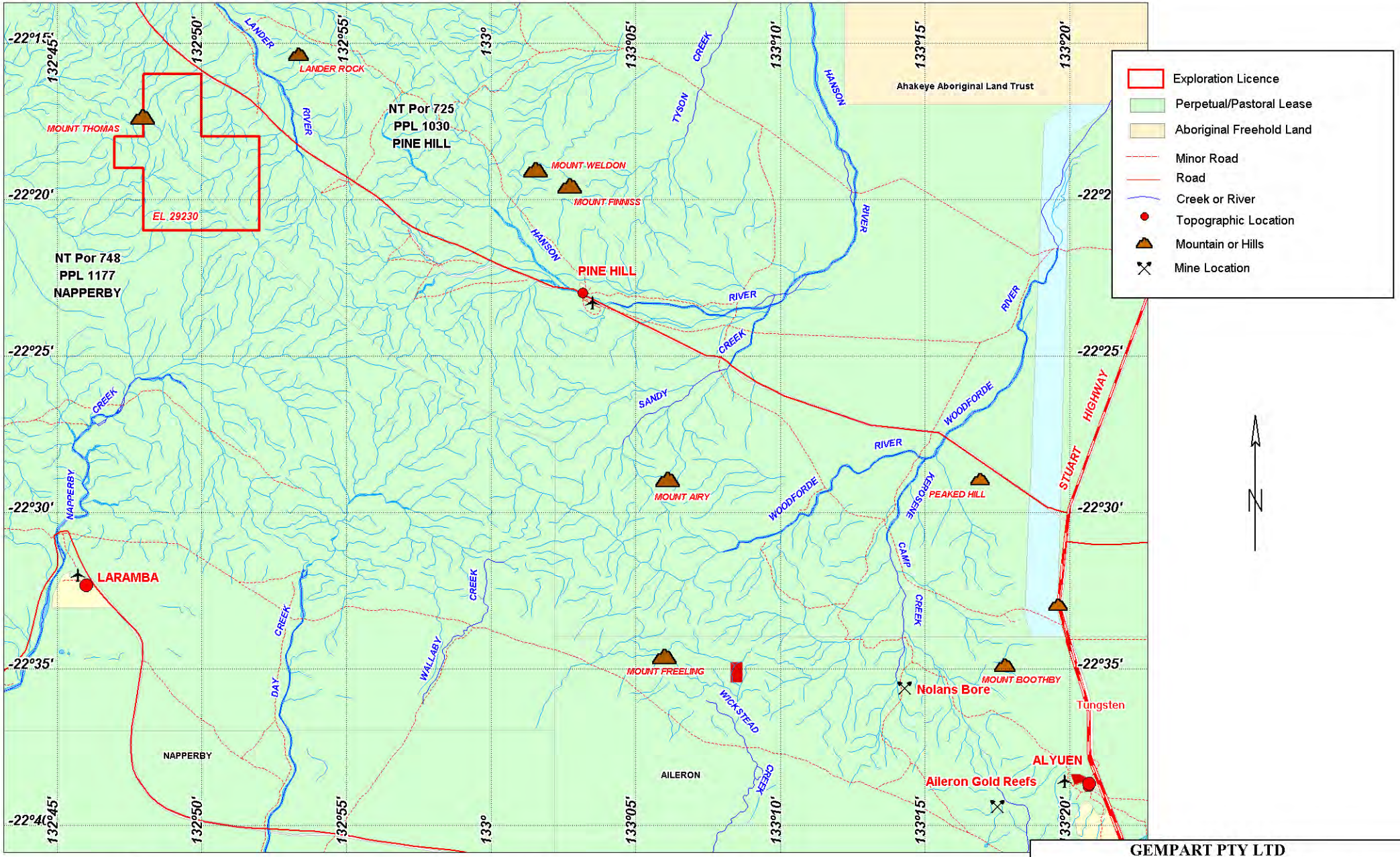
Area: 17 sub blocks
Actual Area: 54.16 sq km

Figure 1

GEMPART PTY LTD

Exploration Licence Application
"LANDER RIVER WEST"
Cadastre, Topographic & ELA Location

Drawn: CAPRICORN	**Datum:** GDA94	**Ref:** SF5314
Scale: 1:250,000	**Date :** NOV 2011	**Plan No:** GEM040



GEMPART PTY LTD

EL 29230 "LANDER RIVER WEST"

Cadastre, Topographic & EL Location

Figure 1a

Drawn: CAPRICORN	**Datum:** GDA94	**Ref:** SF5314
Scale: 1:250,000	**Date :** SEP 2012	**Plan No:** GEM049

5. PREVIOUS EXPLORATION (Figure 2)

1970s

CRAE P/L (AP2617, CR71/134) collected 169, -80# drainage samples over Reynold Range catchments from Lander Bore south east for 90km to Aileron. Samples analysed for Cu, Pb, Zn, Ni, Cr, Co, Mo, W. Of these, 35 were analysed XRF for an additional 30 elements. 11 +10# fractions were mineralogically observed. 11 Auger drillholes (104.5m) were completed over southern licence area however only 13 samples analysed for Cu, Pb, Zn, Ni, Ag, Mo, U. The following Bore waters were analysed for uranium-ppb; Lander 85, Algamba 13, Pine Hill 353, Gidyea 568, Sandy Creek 118, Dulcie 12, Boundary 198, Kerosene 70, Pridmores 181, Birthday 164.

Pacminex were granted EL1294 over Reynold Ranges in 1977 (CR78/146, 79/198) flying 250m l.s., altitude 80m, NE-trending flight line Radiometric survey over southern two thirds of EL29231. They also collected 154, minus 120# drainage and 14 rockchip samples analysed for Cu, Pb, Zn, Th, U, W, Sn, Mo from EL29230 licence area **(Figure 2a).** A twice background uranium anomaly (An 21) was delineated by above Radiometric survey straddling southwestern boundary of EL29230 likewise Anomaly 14 butting up to northwestern boundary. Ground checking revealed (1) porphyritic biotite granite and (2) contact of Mt Thomas Quartzite /Warimbi schist respectively. Two drainage samples namely 134 (Zn 210ppm) and 144 (Zn 530ppm) draining Anomaly 14 area were re-sampled, however both failed to repeat initial elevated values. Other anomalous sampling results off 29230 licence area include 519R (Mn 47.5%), HMC 1354(W 2.5%),RA 1367 (Pb 7500ppm) and drainage sample 382 (U 35 ppm).

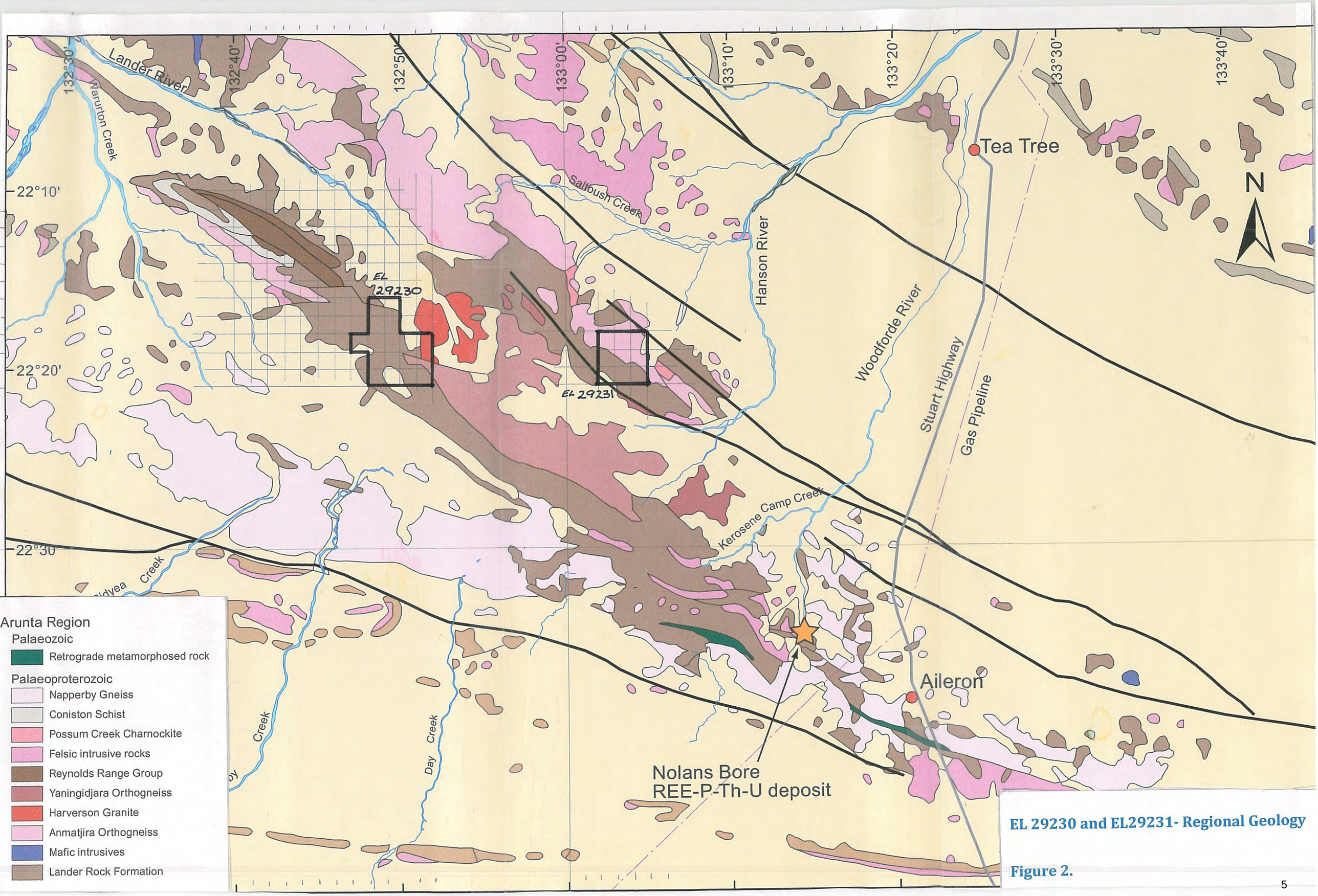
1980s

BHP Minerals conducted a regional heavy mineral drainage sampling program over Reynold Ranges from 1981-1984 collecting 4 x 20kg samples + geochemical split from drainages within EL29230 namely RTO 563-565 and observed for kimberlitic indicators for negative results. The above -80# splits were analysed for As, Ce, La, Nb, Ba, Zr, Cu, Pb, Zn, Co, Ni, Cr for no anomalous values (EL2341 CR82/134).

Colchis Mining Corporation P/L collected 17 drainage and 14 rockchip samples analysed for Cu, Pb, Zn, As, Ag, Au from 29230 licence area during 1988 for no anomalous results (EL5511, CR89/20, 90/366).

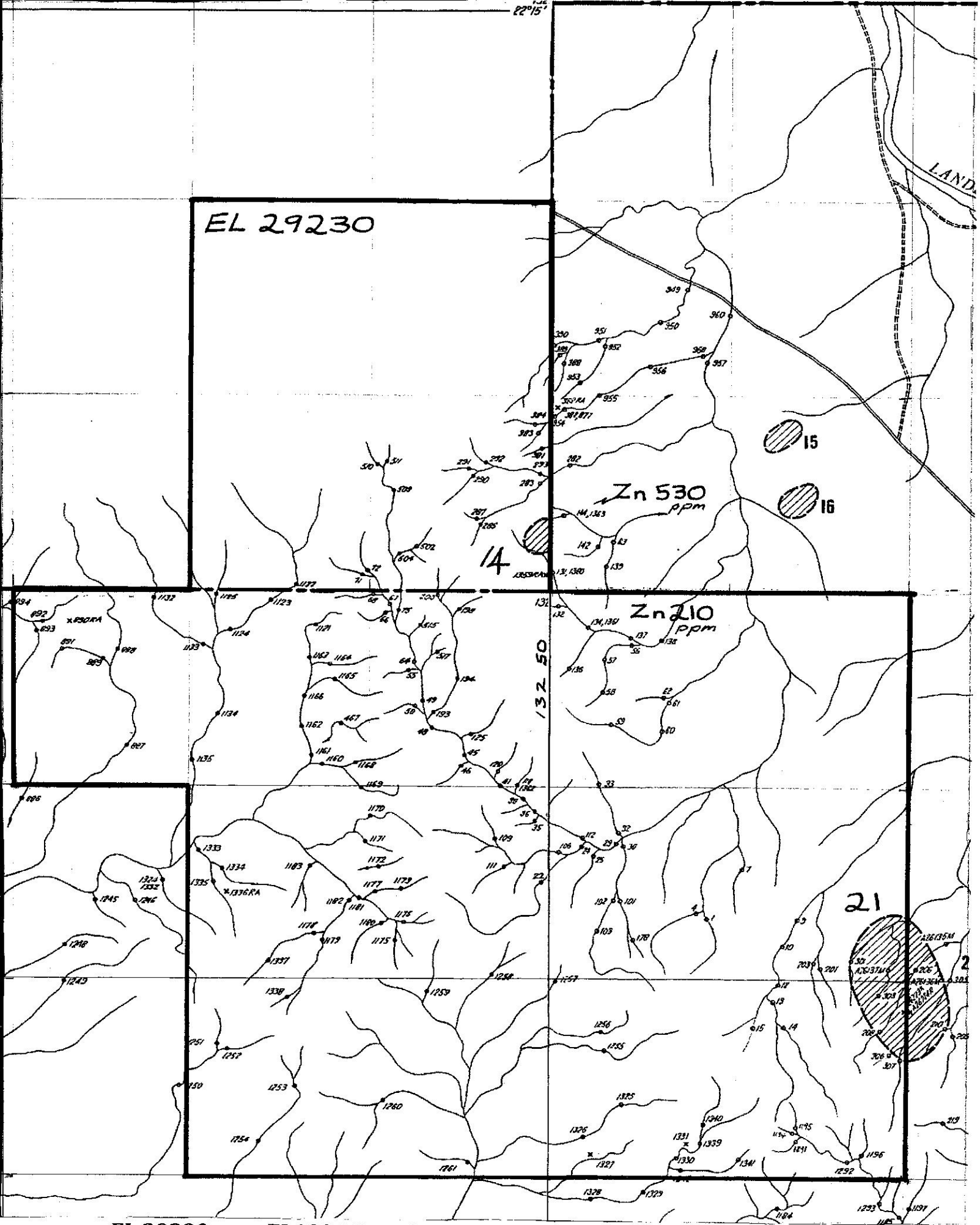
1990s

In 1992 Poseidon Gold Ltd (Posgold) pegged entire Reynolds Range commencing from Stuart Highway northwest 100km to Coniston Station namely ELs 7345, 7344, 7343. Posgold conducted an orientation soil sampling survey (116) over Reward basemetal working 9km north of 29230 licence area before commencing regional drainage/-1mm BLEG, Lag-6mm +1mm (fraction which most clearly defined mineralisation over Reward) and rockchip sampling programs. Initally 116, 89 and 72 drainage samples were collected over ELs 7343, 7344, 7345 respectively analysed for Au, Ag, Cd – AAS., As, Cd, Cr, Cu, Fe, Mn, Mo, Ni, Pb, V, Zn – ICP., Ba, W, V – XRF., of which 27 were from 29230 licence area, two BLEGs namely 8304 (Au 0.11ppb) and 8305 (Au 0.16ppb) require further



EL 29230 and EL29231- Regional Geology

Figure 2.



EL 29230 over EL1294 Pacminex CR78/146,CR79/198 – Drainage(154 samples)/Rockchip(14) samples-Aerial Radiometric survey NW flight lines ,250m l.s. Altitude 80m. **Figure 2a**

investigation **(Figures 2b,2c).** 1211 Lag samples were collected over EL7343 (plus 21 rockchips samples) of which 19 were from 29230 licence area **(Figure 2b).** Posgold flew 1300 line kms of NS, 200m l.s. AMAG and Radiometrics over an area 48km x 25km (1200sqkm) including most of 29230 licence area **(Figures 2d, 2e).**

Posgold conducted a regional ground gravity survey over EL 9278 (reading 45 gravity stations over 160sqkm) including northern two sub blocks of 29230 licence area (CR97/302).The ground gravity survey was primarily focussed on traversing a northeast mineralised trend underlying the Lander River flood plain ie alluvium/colluvium – covered low lying area between Reynolds and Anmatjira Ranges.

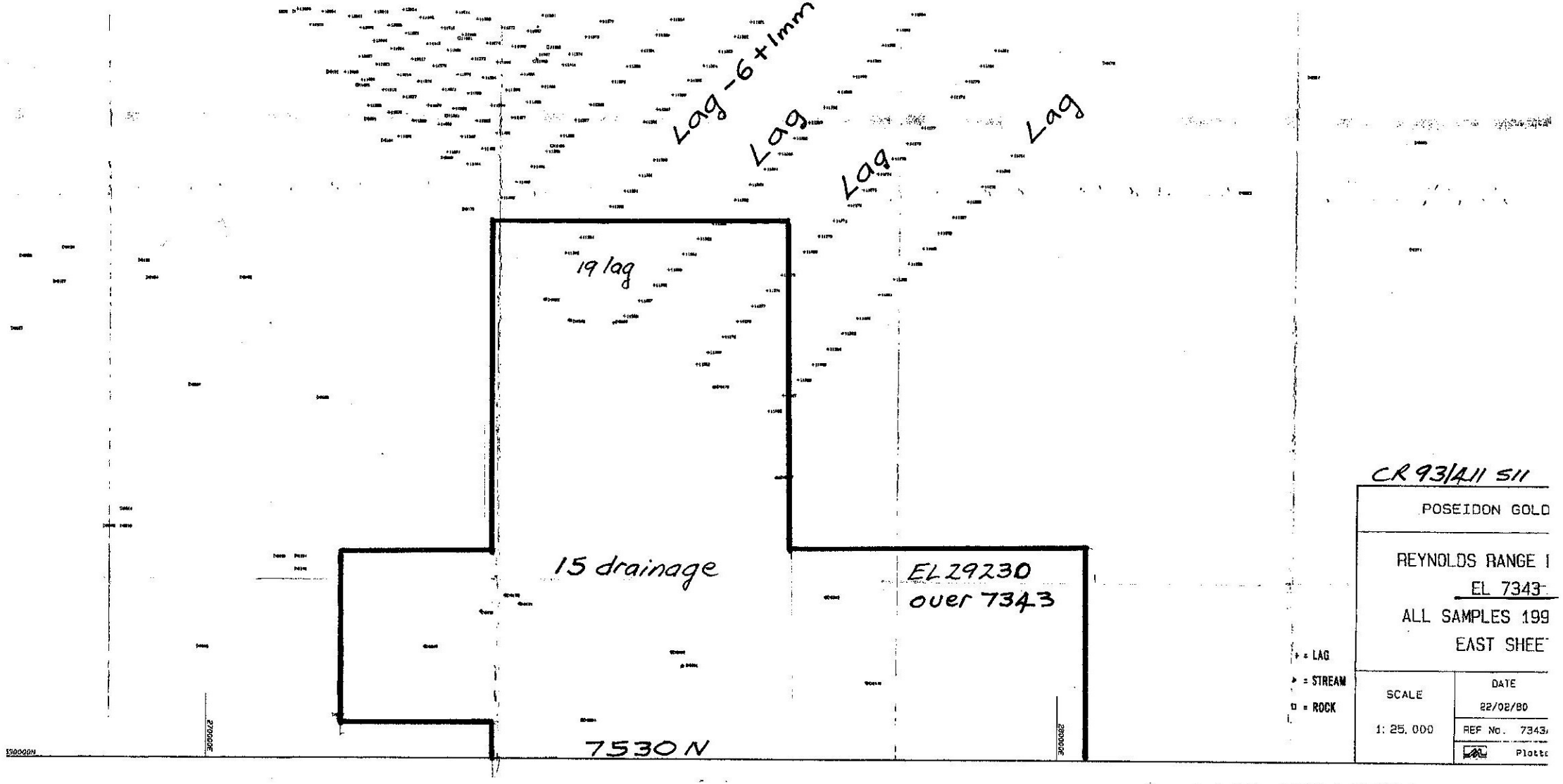
Posgold changed name to Normandy Gold P/L and farmed out Reynold Range project to Exodus Minerals Ltd in August 1997 including EL 9278 covering northern third of 29230 licence area. Exodus completed a 50k-scale geomorphological interpretation of project area outlining extensive areas hitherto unrecognised of residual/slightly transported regolith material deemed suitable for (1)-2mm soil sampling (340) and (2) -6mm/+2mm lag sampling (330). 30 samples were collected from 29230 licence area; #s 856 – 870 (incl) of which 856 – As 45ppm,859/860 – Cu 45ppm require further investigation.

Homestake Australia Ltd collected 235 -4mm drainage samples over Reynold Range (EL 9672) for BLEG analysis during December 1996. 10 samples were collected from 29230 licence area namely 155052-054, 093-095, 153-154, 196-198 of which 155153 and 154 assayed 0.3 and 0.1ppb Au, respectively. Interestingly 155155 assayed 34 ppb Au located 1500m south of 29230 southern boundary. A follow up -2mm BLEG drainage sampling program (114 samples) was completed by Exploremin for Homestake in 1997 repeating anomalous results from previous year's BLEG drainage sampling however apart from sample 139078-0.3 ppb Au there were no other elevated results ie sample 155155 - 34 ppb Au 1996, resample 138256-bld ppb Au 1997 **(Figure 2f & 2g).** Prospecting Traverse 1 commenced upstream from sample site 138256 where granite predominates further north the dominant lithology is orange brown micaceous schist continuing on until a steep escarpment of white quartzite interbedded with micaceous schist is reached. The depositional environment where changing from protolithic arenites now cropping out as micaceous schists to coarser sandstones ie quartzites is marked by the introduction of an iron-rich facies manifested by red-brown schist, yellow brown quartzite and hematitic ironstone ranging from 5m up to several hundred metres in length compositionally grading from exclusively hematitic +occasional chert nodule through to sand-pebble conglomerate +minor black hematite. 10 rockchip samples were taken from iron facies, all bld for Au however samples 138259,260 and 270 elevated in copper while 238270 was also elevated in lead and zinc.

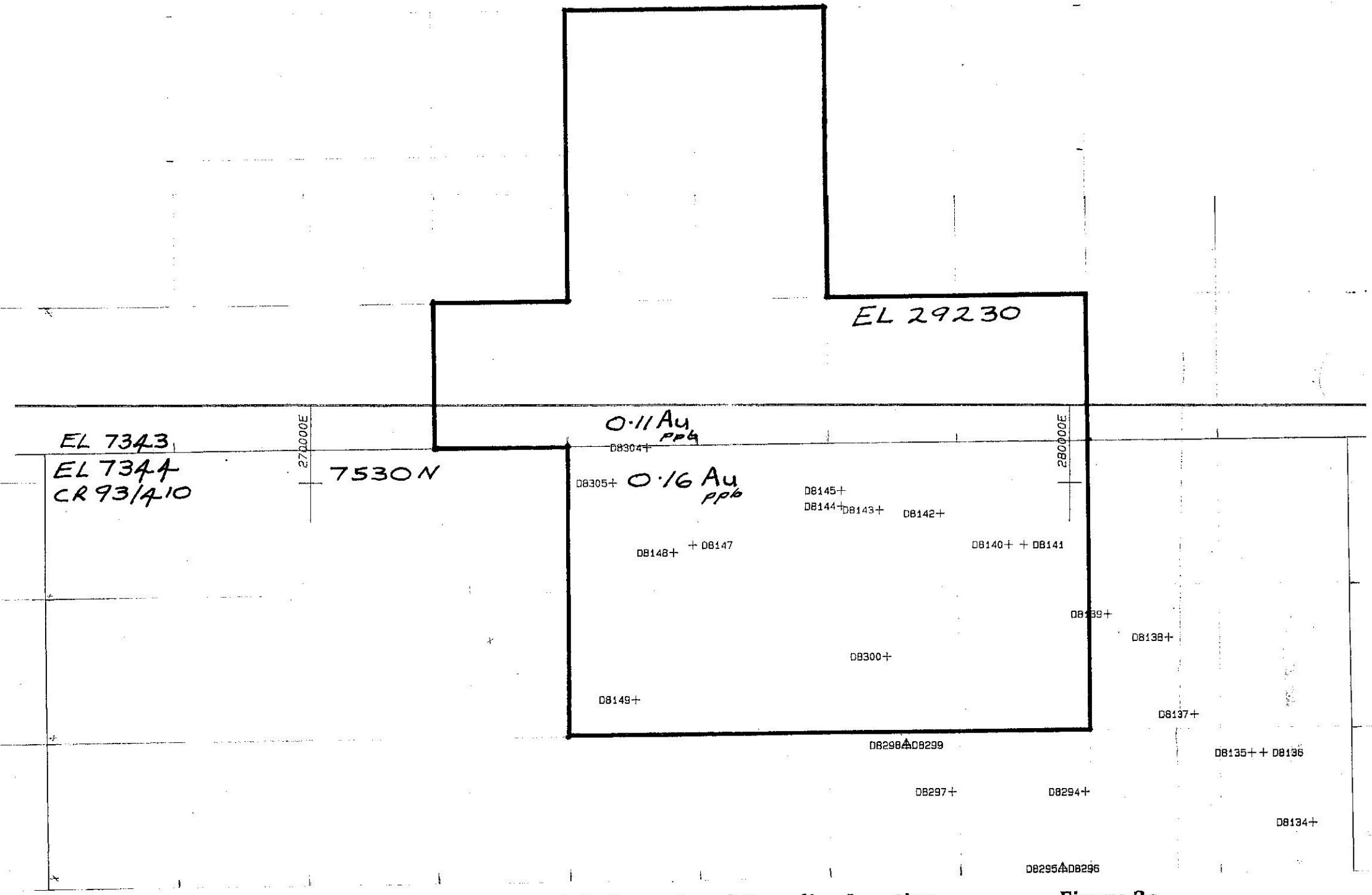
2000s

Arafura Resources Ltd completed a ground gravity survey over EL 25371 in 2008 (2km x 2km station grid) including one station within southeast corner sub block of EL 29231.

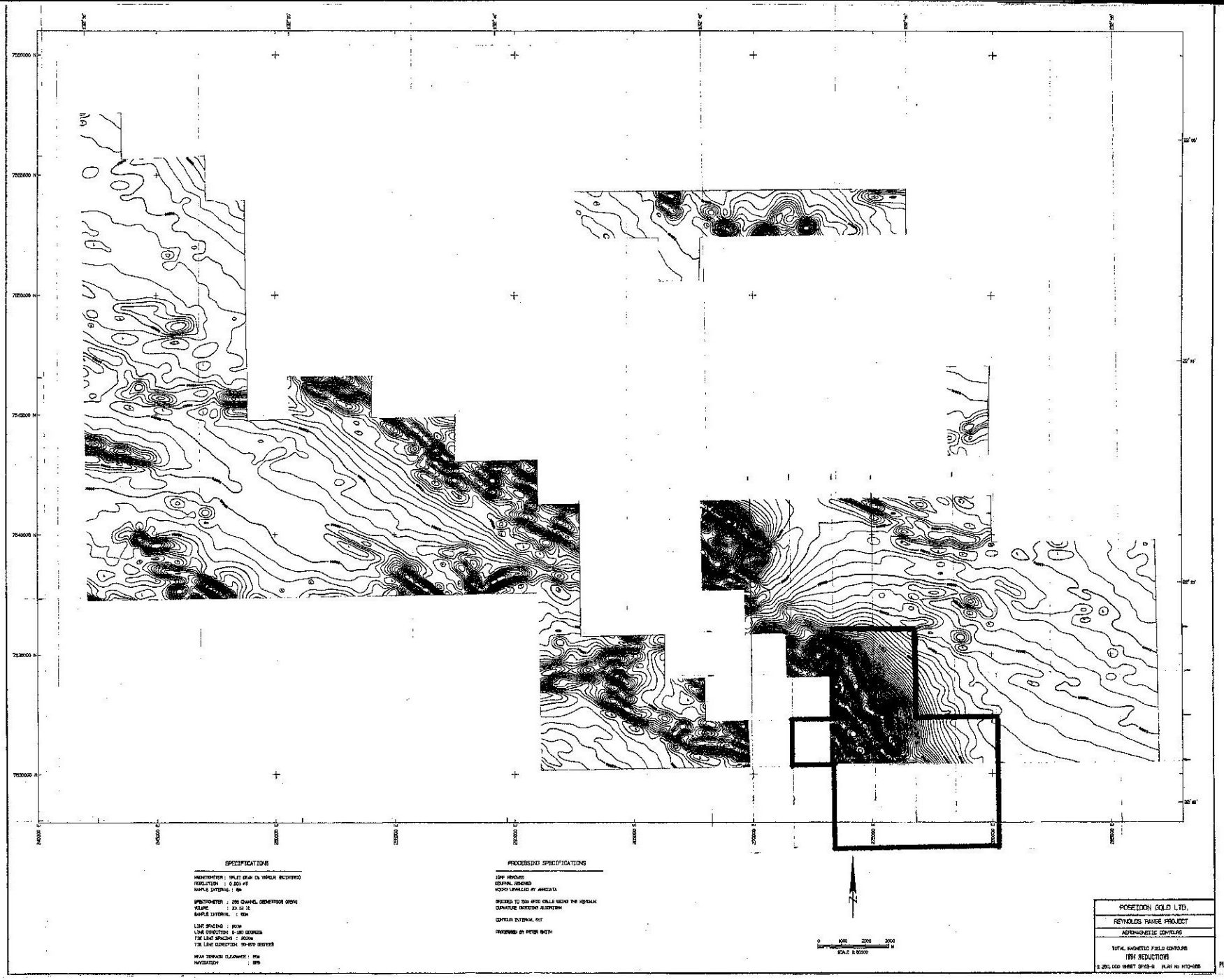
Territory Resources Ltd investigated the iron potential of EL 26071 in 2012. TTR concluded Anomaly 13 within central west of 29230 licence area is the best example of shear-hosted goethite/hematite hydrothermal iron mineralisation near or on unconformable contact of 1812-1785Ma Mt Thomas Quartzite and underlying 1868-1840Ma Lander Rock Beds **(Figure 2h).** Four rockchip samples assayed 47.7%, 30.2%, 54.3% and 48.3% respectively. Silica averaged about 16% while phosphorous <1%.



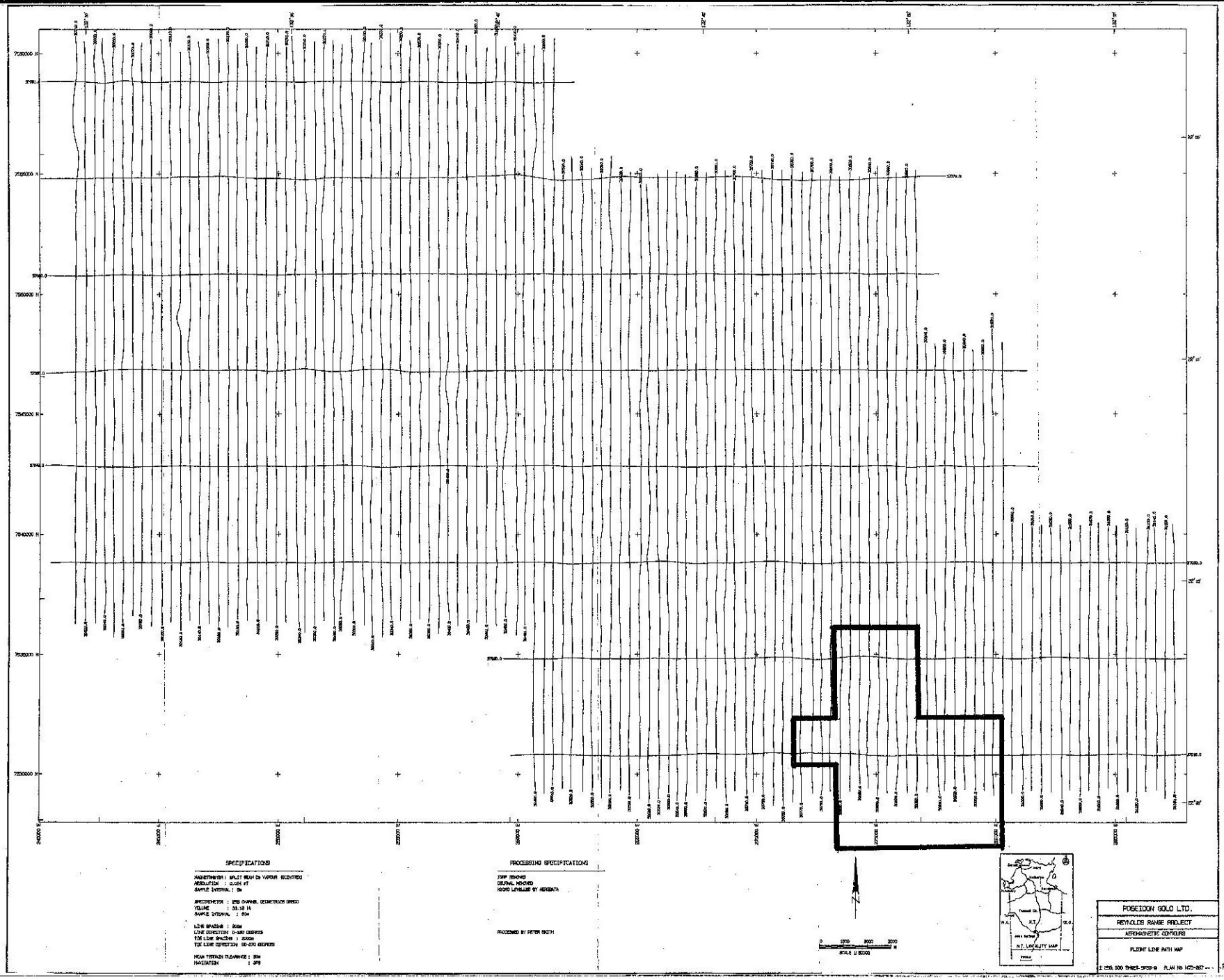
EL 29230 over Posgold EL7343 Drainage(15)/Lag(19 -6mm+1mm) Sampling Location **Figure 2b**



EL 29230 over Posgold EL 7344 Drainage (12 -6mm+1mm) Sampling Location **Figure 2c**

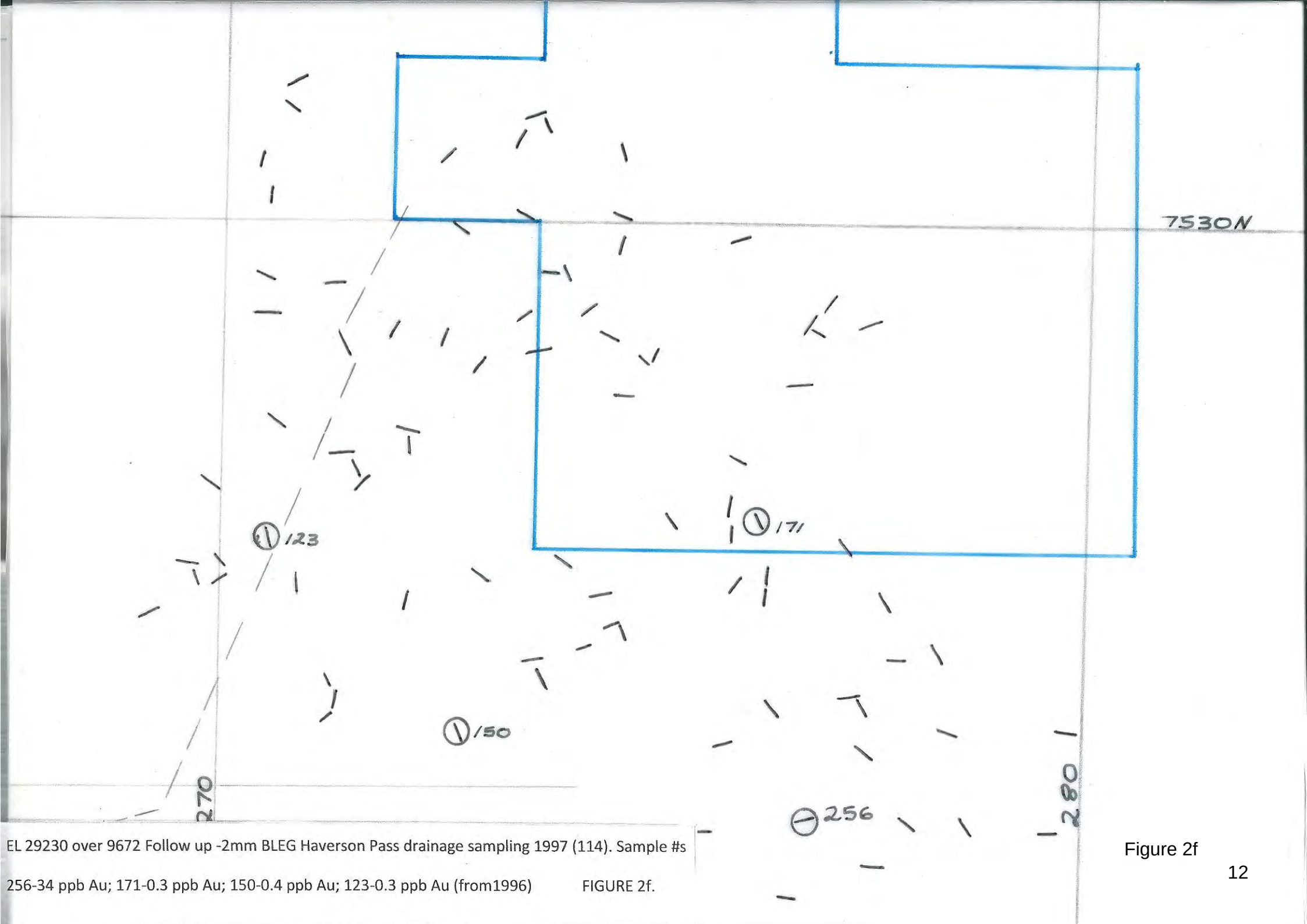


EL 29230 over Posgold 1992 Reynold Range Survey – TMI contours **Figure 2d**



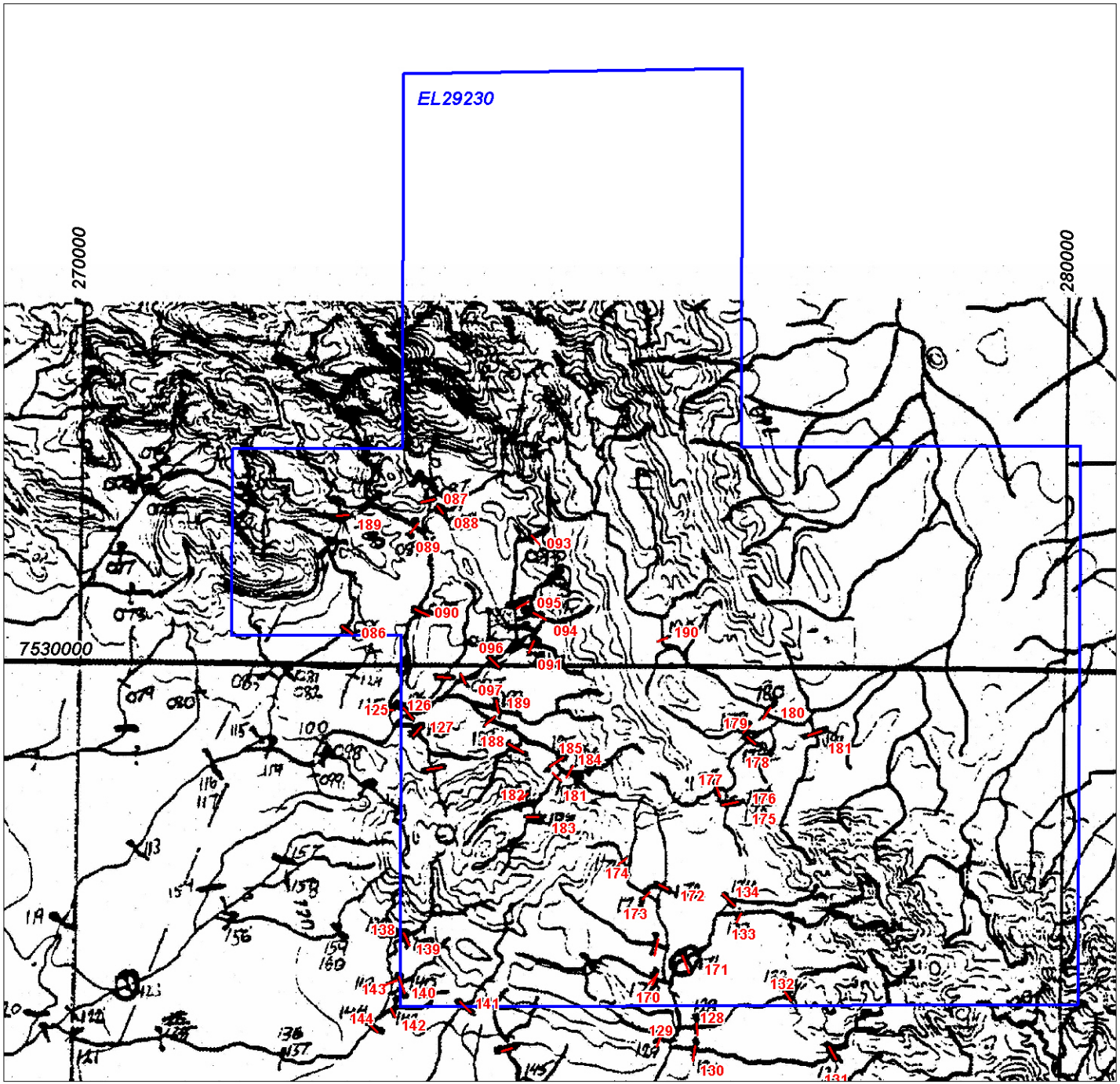
EL 29230 over Posgold 1992 Reynold Range AMAG/Radiometric Survey N-S Flight Line Plan- 200m l.s. Altitude 50m

Figure 2e



EL 29230 over 9672 Follow up -2mm BLEG Haverson Pass drainage sampling 1997 (114). Sample #s 256-34 ppb Au; 171-0.3 ppb Au; 150-0.4 ppb Au; 123-0.3 ppb Au (from1996) FIGURE 2f.

Figure 2f



MN

EL29230 Boundary

190 -2mm BLEG Sites
Sample Prefix 139

EL 29230

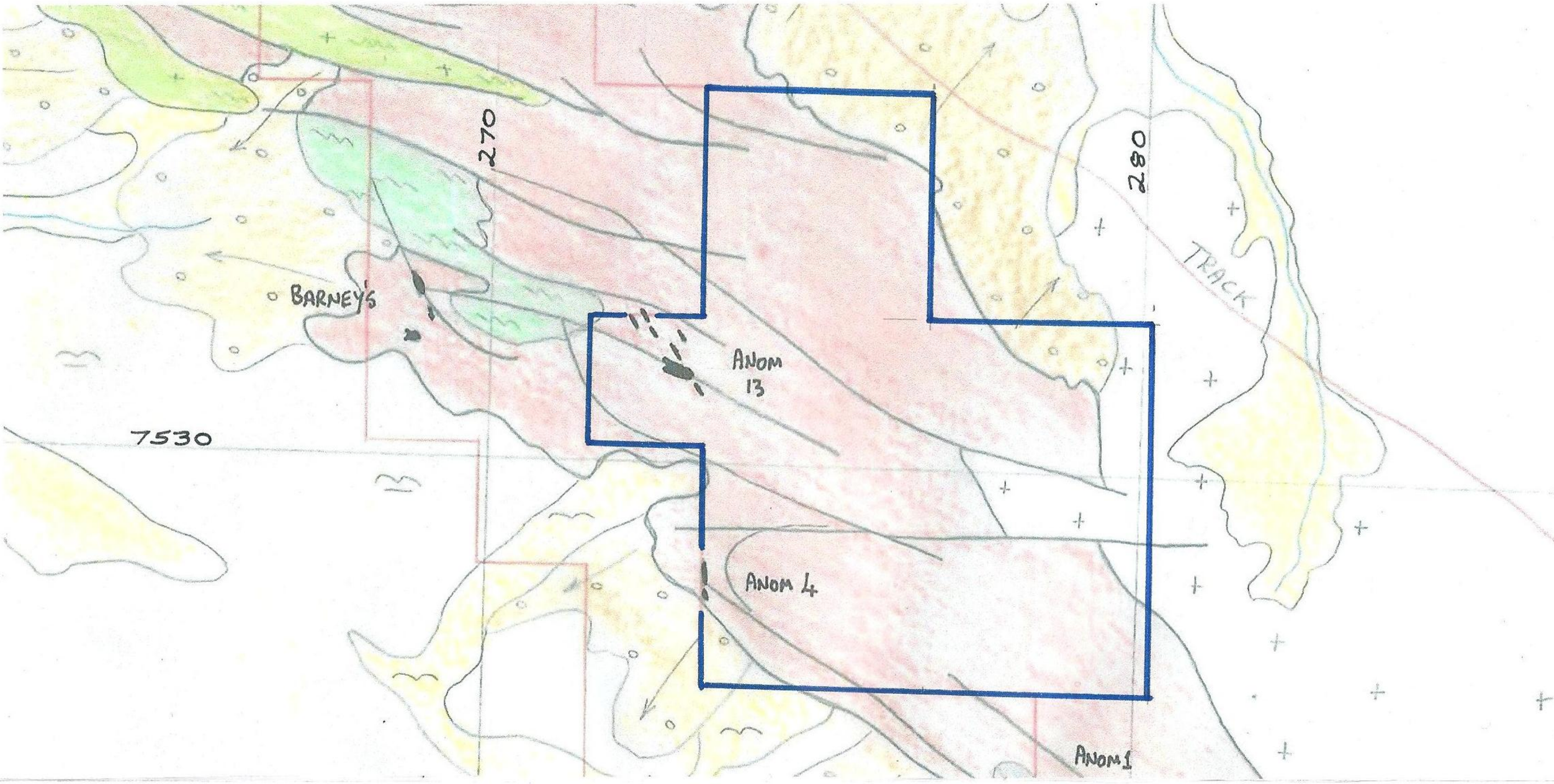
"Dragons Lair"
(EL 9672)

(Exploremin 98)

BLEG Sample Locations

Projection AGD66 (Zone53)

Figure 2g



EL 29230 over TTR Reynold Range Iron Occurrences EL 26071 CR2012/101

Figure 2h

Iron occurs (1) hematite replacement lenses within conglomerate at base of Mt Thomas Quartzite.(2) goethite/hematite within fault zones near or on unconformable contact of Mt Thomas Quartzite (1812 – 1785Ma) and Lander Rock Beds (1868 – 1840Ma).(3)shear-hosted goethite/manganese lenses within Algamba Dolomite Member.(4)secondary CID deposits in palaeochannels south of iron deposits. Anomaly 13 best example(2) where NW trending faults parallel and crosscutting Mt Thomas Quartzite(Prt2) contain goethite for 1km of strike length.TTR samples TRK570B,571,572,573 assayed 47.7%,30.2%,54.3% and 48.3% respectively.Silica averaged about 15%,P<1%.

6. EL29230 GEOLOGY (Figures 3, 4)

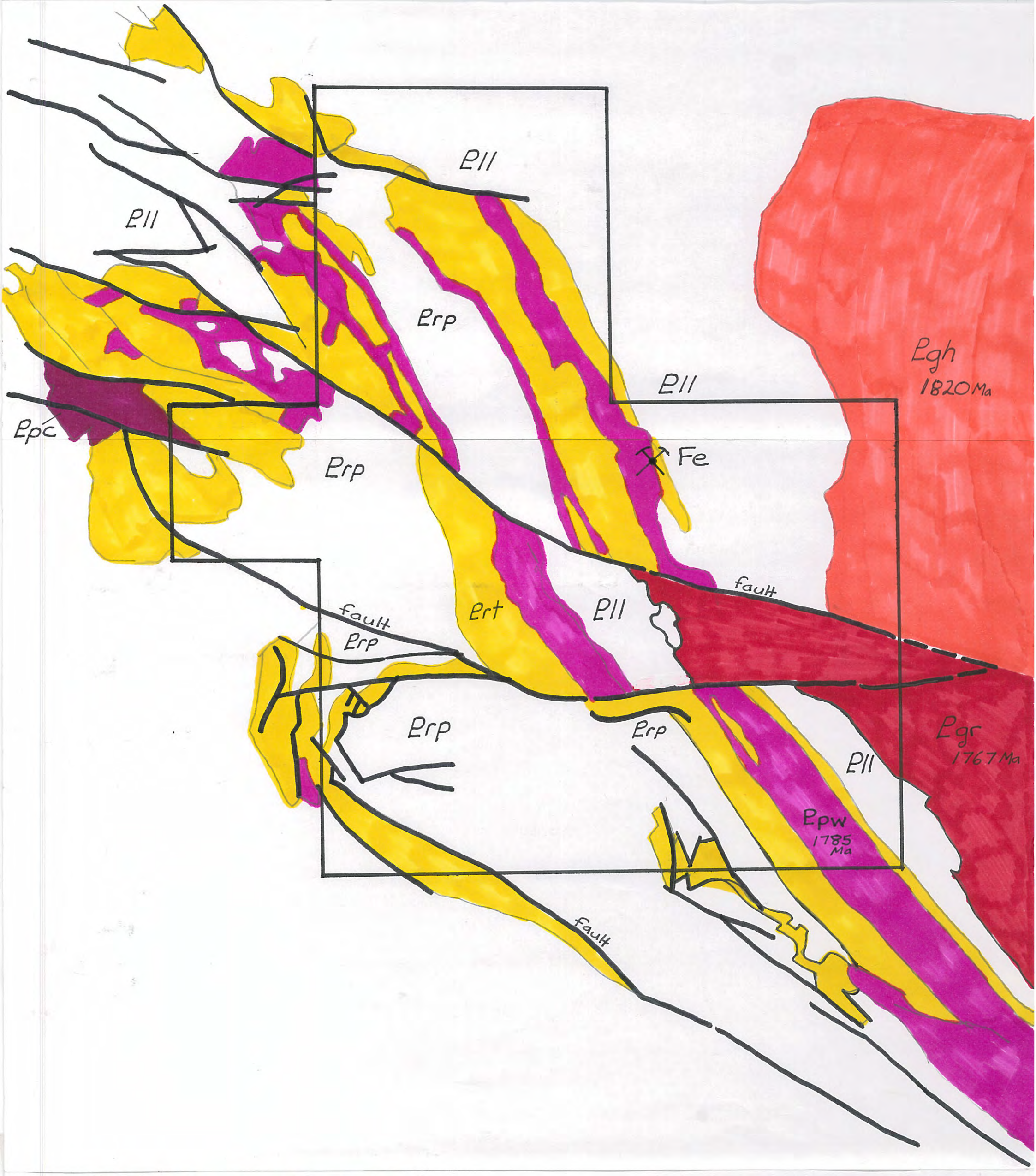
The licence area is located on NAPPERBY, central Aileron Province assigned to Palaeoproterozoic Arunta Region a multiply deformed ensialic mobile belt covering 200,000sqkm of central Australia.

The oldest rocks underlying licence area belong to the earliest sedimentary sequence of west and north Aileron Province ie 'Lander Package' containing detritus 1880-1840Ma deemed time equivalent of Killl Killi Fm (Granites-Tanami) to west and Ooradidgee Grp (Tennant) to north. The earliest extant Aileron Province rocks are clastic sediments of various mappable metamorphic grades (rather than mapping identifiable stratigraphy) ie lowgrade Lander Rock Fm (formerly Beds) term widely used for exposures of low metamorphic grade although several of its time equivalents reached granulite facies. Collectively 'Lander Package'rock occupies 60% of exposure of Aileron Province. The thickness of sedimentary pile is unknown as neither the base or basement onto which it was deposited have been identified. Lander River Fm comprises interbedded pelites and psammites indicative of turbiditic sedimentation. Locally interlayered within sequence and folded with it are basalt/dolerite representing lava or sills. Original sedimentary structures other than gross bedding are obscured by early schistocities and later cleavages. The Lander Package is directly intruded by major plutons, 1770-1795Ma and others belonging to 1810-1800Ma Stafford Event thus imposing minimum age of sedimentary sequence. The depositional age of Lander Package is otherwise unconstrained?

The observed top of Lander Package is a major regional angular unconformity above which lies the Mt Thomas Quartzite and above that conformable Pine Hill Fm of Reynolds Range Group (RRG) a distinctive package of quartzite, pelite, psammitic schist minor calcsilicate, rare basalt (latter absent licence area) deposited in shallow – marine environment metamorphosed to greenschist facies during 1600-1570Ma Chewings Event. The Reynolds Range Group is preserved as discontinuous erosion remnants in keels of major northwest trending Aileron Province synclines. Somewhat uniquely RRG is not seen in direct contact with intrusions or metamorphic effects of local Stafford (1810-1800Ma), Yambah (1790-1770Ma) or Strangways (1740-1690Ma) Events all of which affect stratigraphic units underlying the regional angular unconformity? RRG subdivided into four stratigraphic units (1) basal Mt Thomas Quartzite a mature orthoquartzite unconformably overlying Lander Package basement rocks forming prominent northwest to west north west strike ridges dominating the landscape(extensively dislocated by by arcuate east west strike- slip faults ie Harverson Pass fault). The lower units of Quartzite are conglomeratic with minor pebbly arkose sometimes flooded with hydrothermally derived iron – rich fluids forming ore grade hematitic /goethitic fault controlled breccia deposits eg Harverson Pass, Anomaly 13 and Anomaly 4. The Quartzite upper units are pelitic and also ferruginous. Relict sedimentary structures indicate hi-energy intertidal depositional environment (2) Pine Hill Fm comprises pelites interlayered with thin sheets of siltstone and sandstone interpreted as storm deposits. They are recessive restricted to low-lying areas between quartzite ridges mainly on western side of licence area (3) Algamba Dolomite Member and (4) Woodforde River Beds are absent. Harverson Granite (Pgh 1820Ma) crops out on eastern boundary of licence area intruding Pll and juxtaposed against(or is intruded by Mt Airy Orthogneiss 1767Ma?) by Harverson Pass fault. Pgh is a coarse grain ,weakly deformed, deuterically altered, megacrystic K-feldspar, S-type granite cropping out over 64 sq km between Reynolds and Anmatjira Ranges. Interestingly several deposits occur near Pgh (1) Reward Cu Mine 9km north of licence area from which 8 tonne of Cu was produced from secondary ore 1953-57. Primary

mineralisation comprises shear hosted quartz veins-chalcopyrite-pyrite-galena within andalusite-mica schist (2) Pine Hill quartz vein-hosted Au-Cu prospect within Pll metapsammites crops out 4km west south west of Reward (3) Southeast-trending Lander valley overlies a regional shear zone hosting economic Au-Sb mineralisation also within Pll metapsammites ie 8 drill indicated prospects 2-5km north of Stuart Highway-Pine Hill-Coniston road trending northwest over 20km from Reward.

The Warimbi Schist (Ppw 1785Ma) is a metamorphosed/intensely deformed micromonzogranite. It is phyllonitic comprising blue grey or brown augen of quartz in fine grain grey-green schistose feldspathic groundmass streaked with dark elongate smeary aggregates of biotite. Intruded as a lopolith it has been rotated to the subvertical so now crops out in cross section readily apparent wihin licence area trending northwest within and parallel to Mt Thomas Quartzite.Where intruded Mt Thomas Quartzite comprises pink-brown micaceous sandstone as well as orthoquartzite and coarser grained recrystallise quartzite while Pine Hill Fm (Prp2) comprises coarse grain muscovite schist with interlayered metasandstone and coarse metaquartzite. Where intruded by Warimbi Pll comprises mica schist and andalusite biotite slate.



EL 29230 LANDER RIVER WEST GEOLOGY

Figure 3

Pgr – Mt Airy Orthogneiss 1767Ma; coarse porphyritic granitic augen gneiss

Ppc – Coniston Schist 1785Ma; biotite-sericite-quartz schist+feldspar augens

Ppw – Warimbi Schist 1785Ma; biotite-sericite-quartz schist

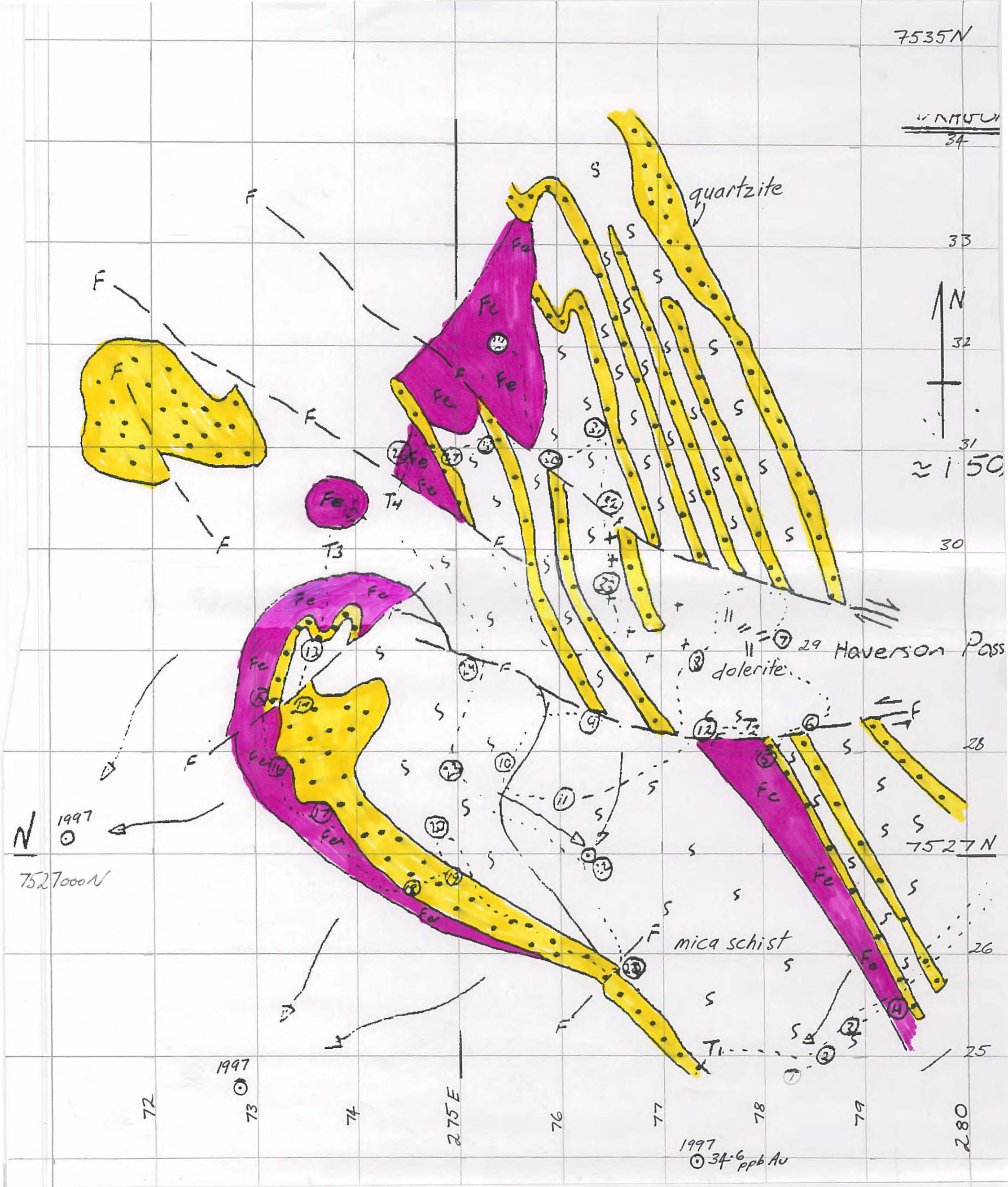
Prp – Pine Hill Fm RRG 1812-1785Ma; muscovite schist,shale,slate,siltstone,sandstone,hematite quartzite

Prt – Mt Thomas Quartzite RRG 1812-1785Ma; orthoquartzite,hematite quartzite,basal arkose conglomerate

Pgh – Harverson Granite 1820Ma; coarse porphyritic granite

Regional angular unconformity

Pll – Lander Rock Fm 1868-1840Ma; mica quartz sandstone,siltstone,shale,slate,schist,phyllite,andalusite hornfels



EL 29230 HAVERSON PASS Fe Prospect

Photo - Geology

Basal conglomerate/arkose Mt Thomas Quartzite - RRG

IRON facies = Fe-rich mineralising fluids forming hematitic breccia deposits along Warimbi schist (1785 Ma) Mt Thomas Unconformity.

Figure 4.

7. EL 29230 EXPLORATION PROGRAM 2013

1. A regional reconnaissance from Coniston beef road southeast for 5km to Harverson Pass iron prospect was undertaken to prospect general area of exposed Mt Thomas Quartzite basal hematitic conglomerate for additional areas of mineralisation.

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

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

(See Figures 5, 5a, 5b, 5c, 5d, 5e, 5f, 5g, 5h, 5i, 5j, 5k)

8. EXPENDITURE

Regional Reconnaissance, field map checking.
$5,000.00

Consultant Geophysicist-acquisition, processing, interpretation Napp-Hmb survey data.
$7,000.00

Literature review, desktop studies; 7days@$1000/day	$7,000.00
Administration	$1,500.00
TOTAL	**$20,500.00**

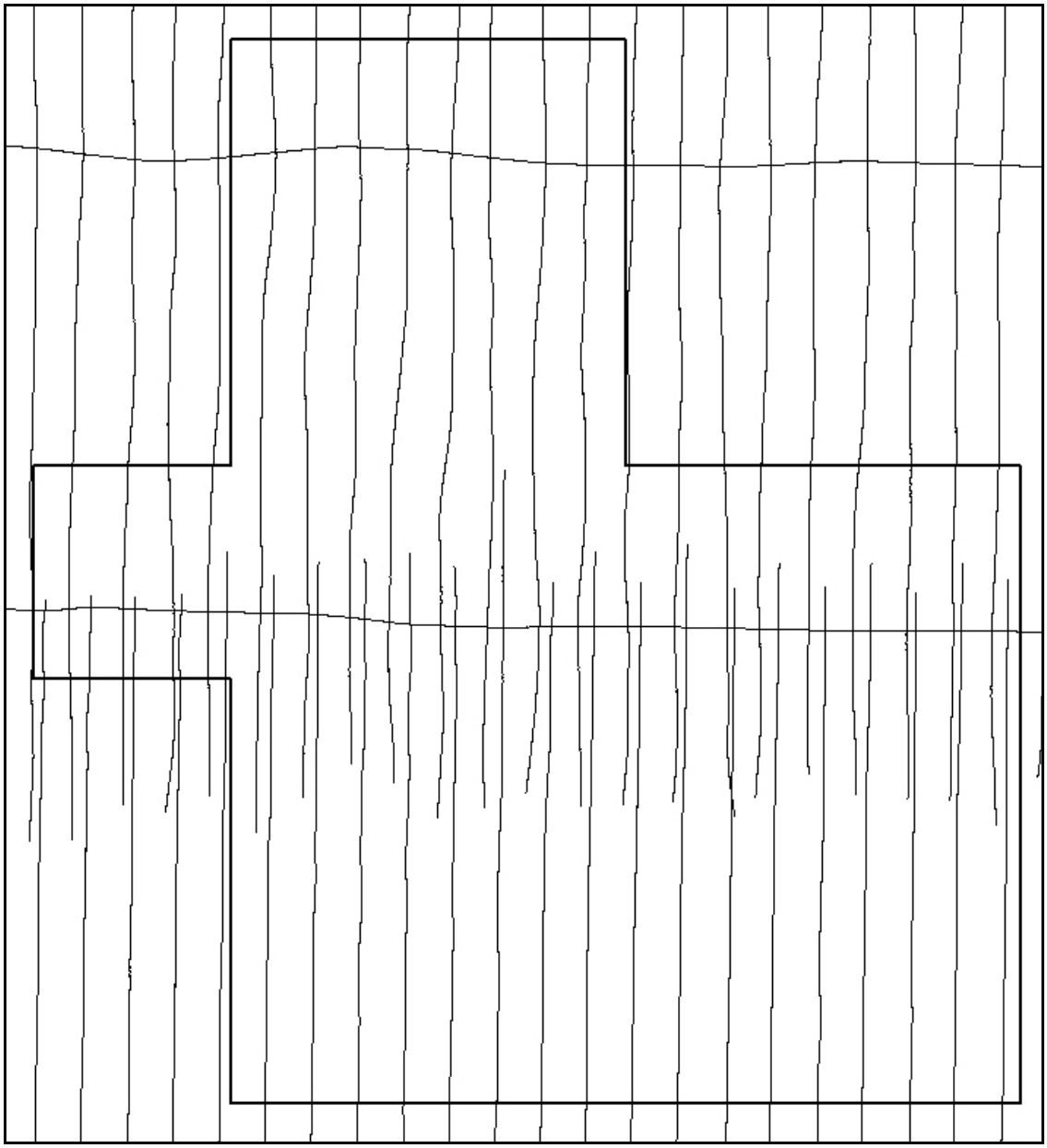


Figure 5 EL29230 Napperby 1992 and Napperby-Hermannsburg 1997 aeromagnetic survey flight lines (400 meter line spacing)

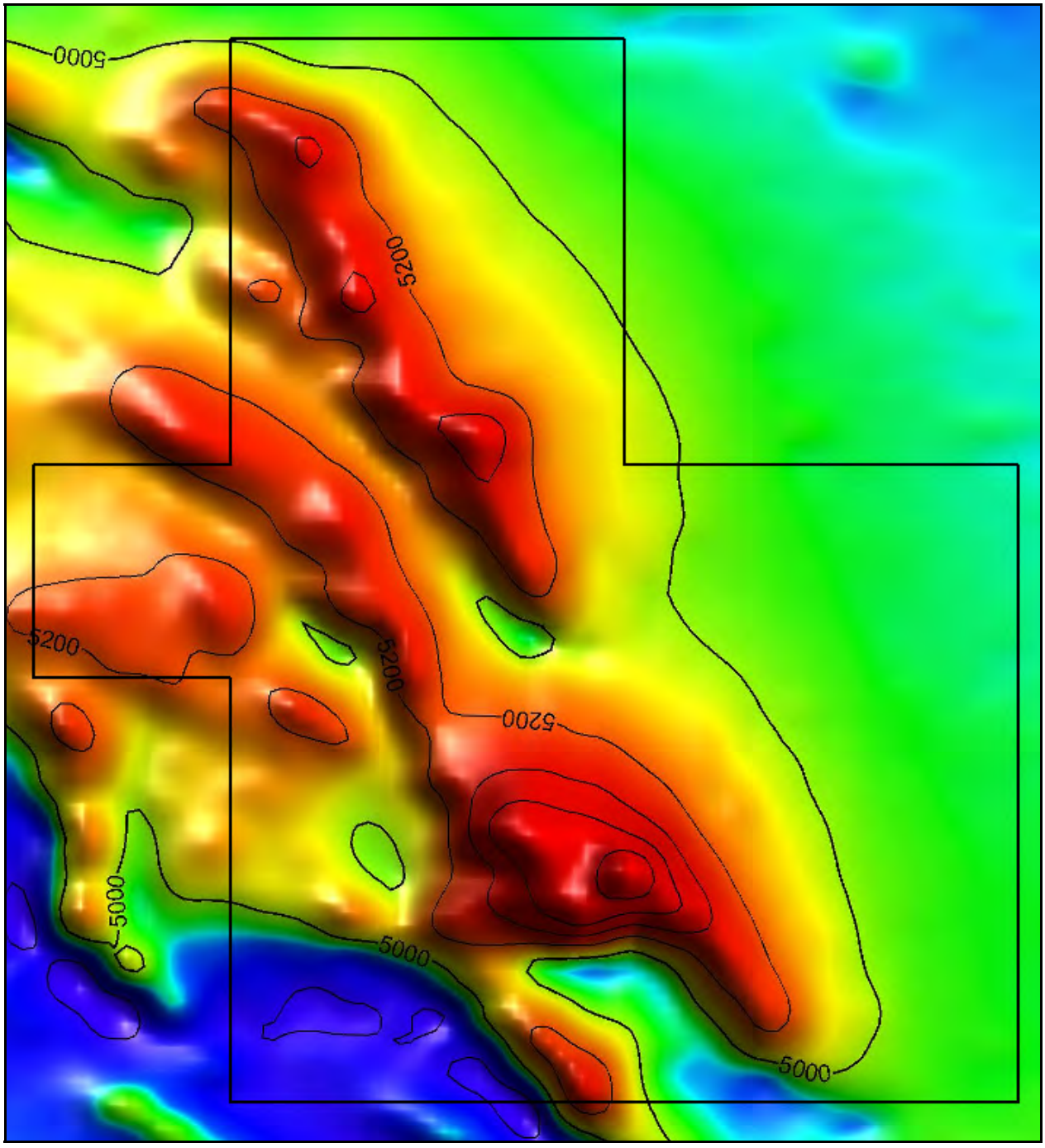


Figure 5a EL29230 Magnetic data with 200nT contour interval.

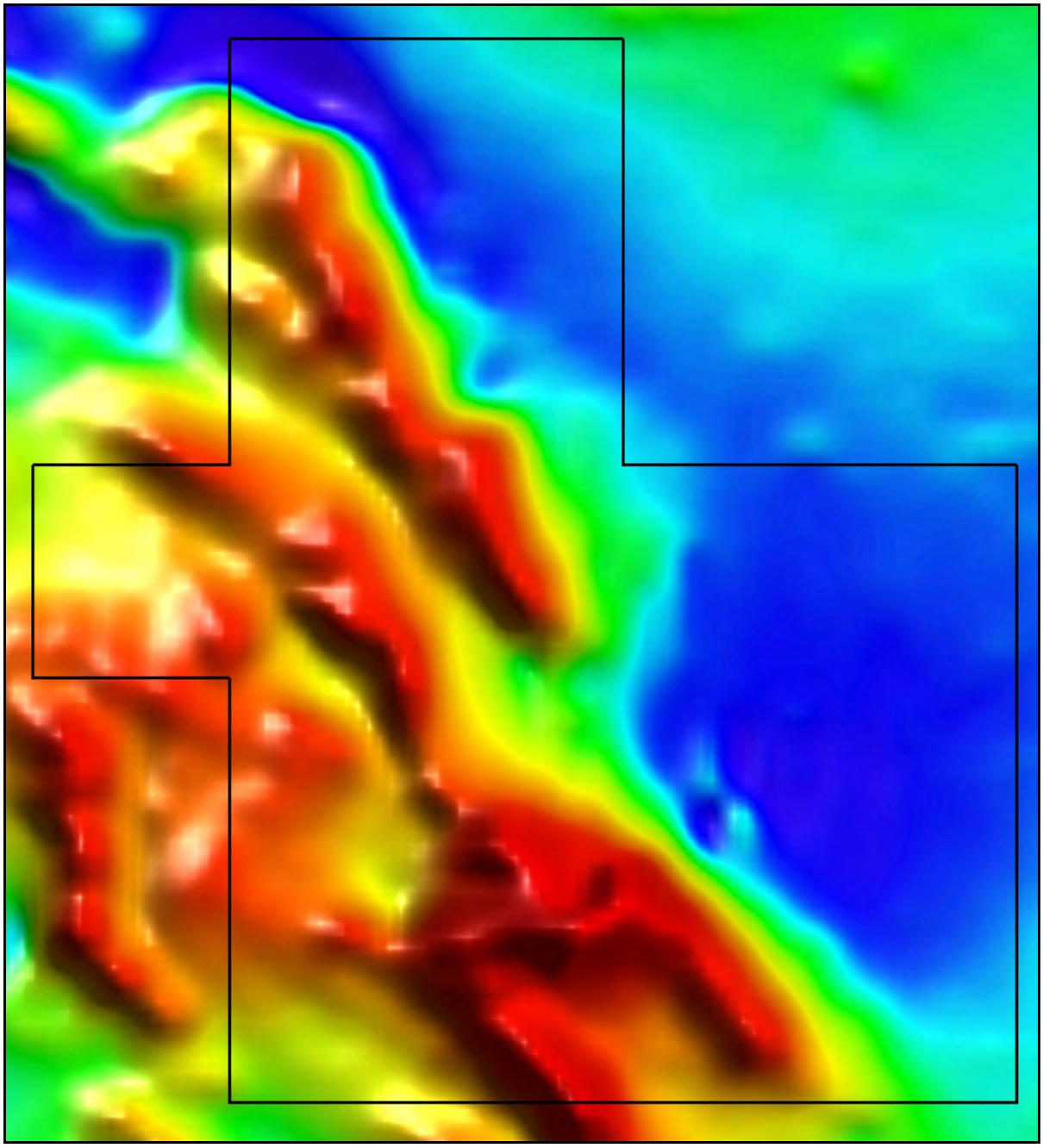


Figure 5b EL29230 Magnetic data reduced to the pole

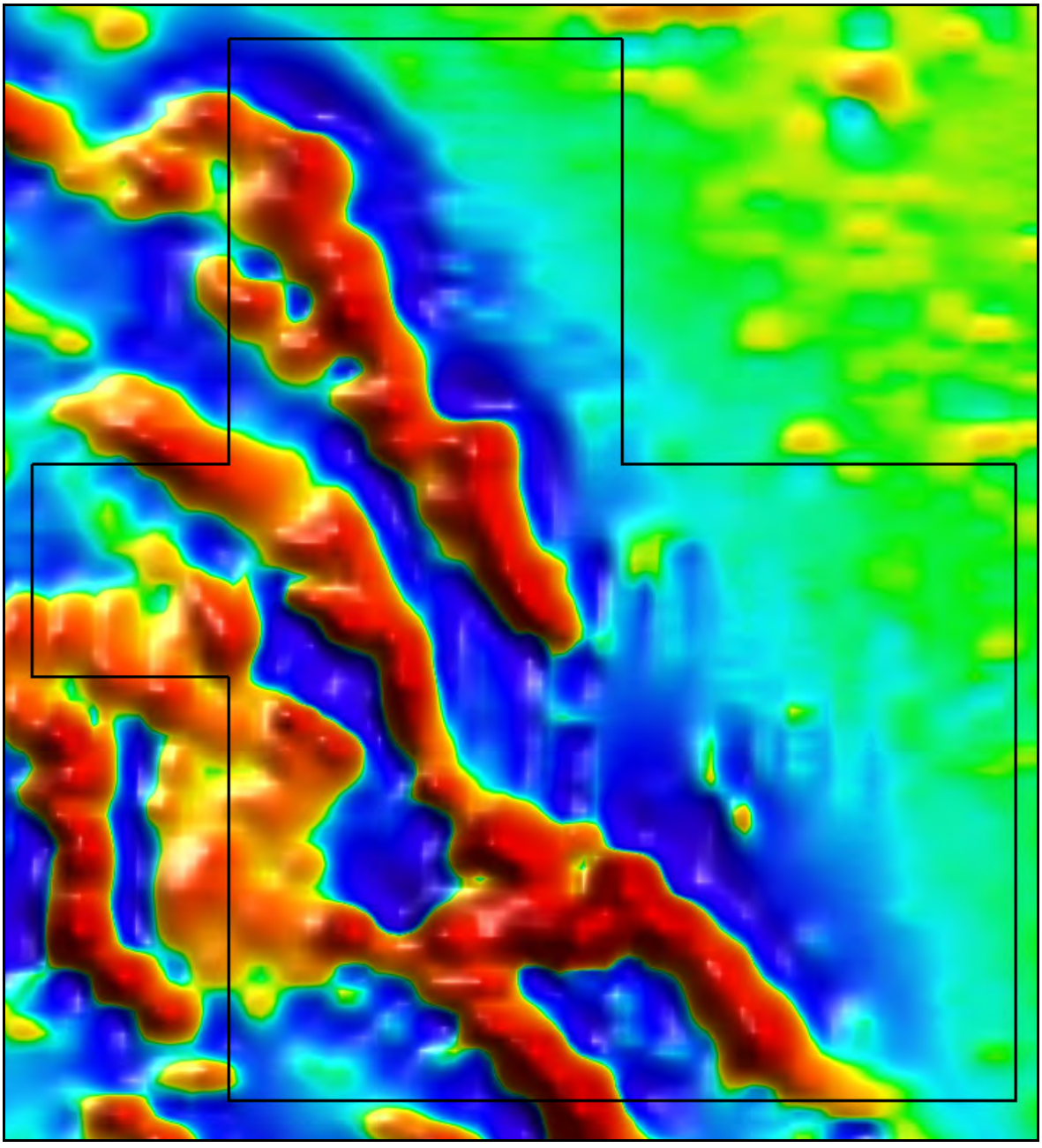


Figure 5c EL29230 PRELIMINARY Vertical derivative magnetic data (RTP).

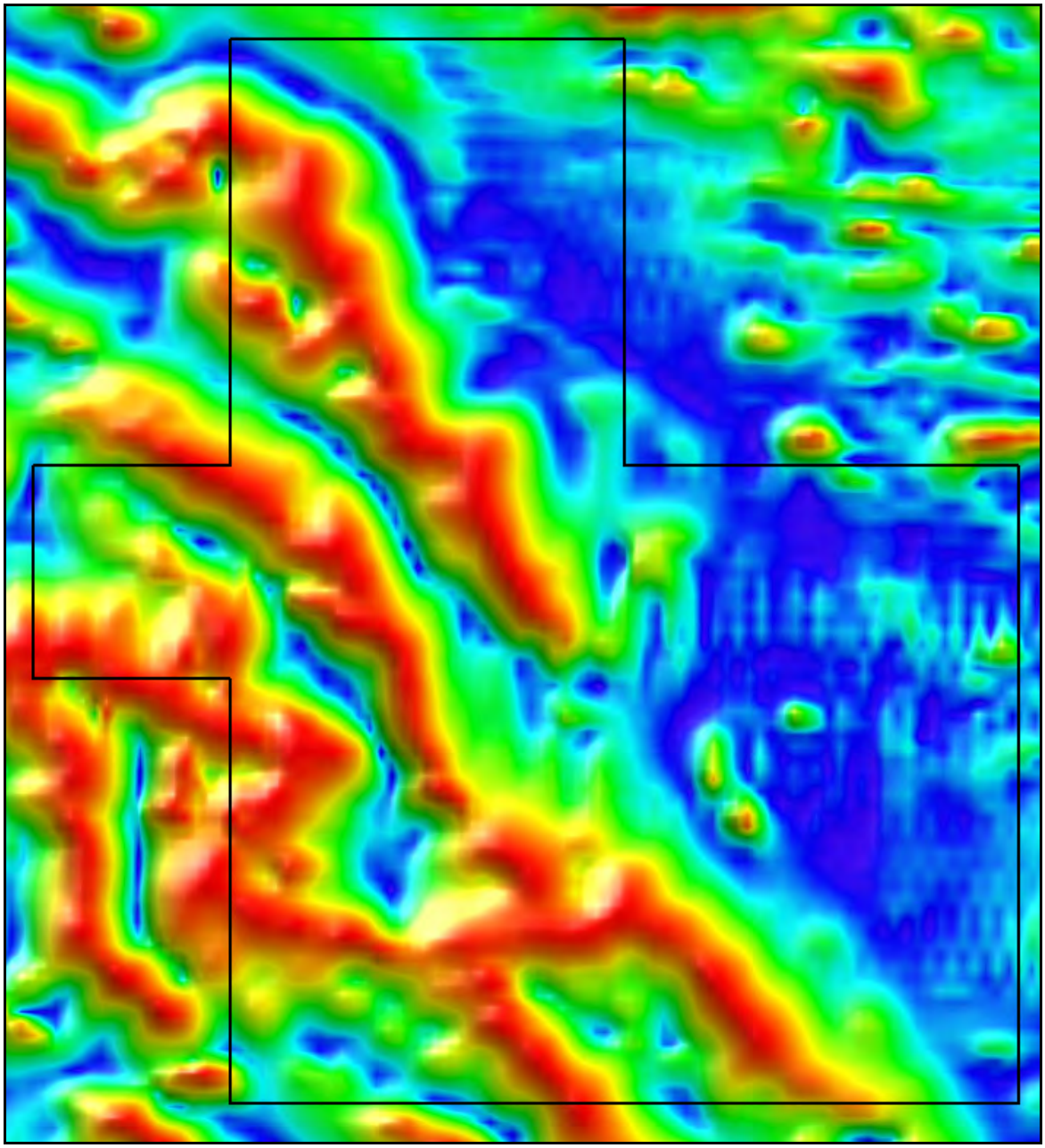


Figure 5d EL29230 PRELIMINARY Filtered magnetics

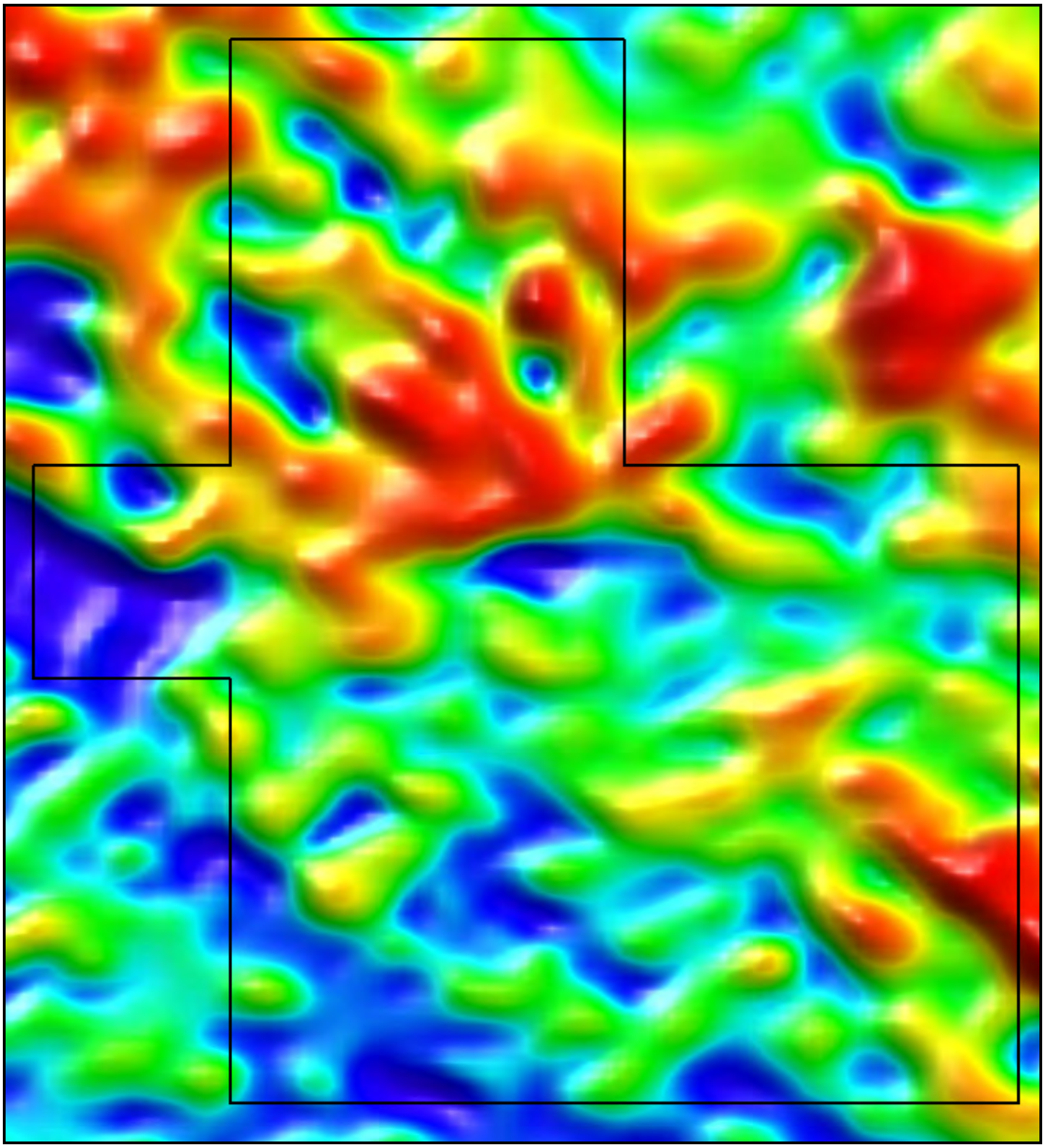


Figure 5e EL29230 Uranium count

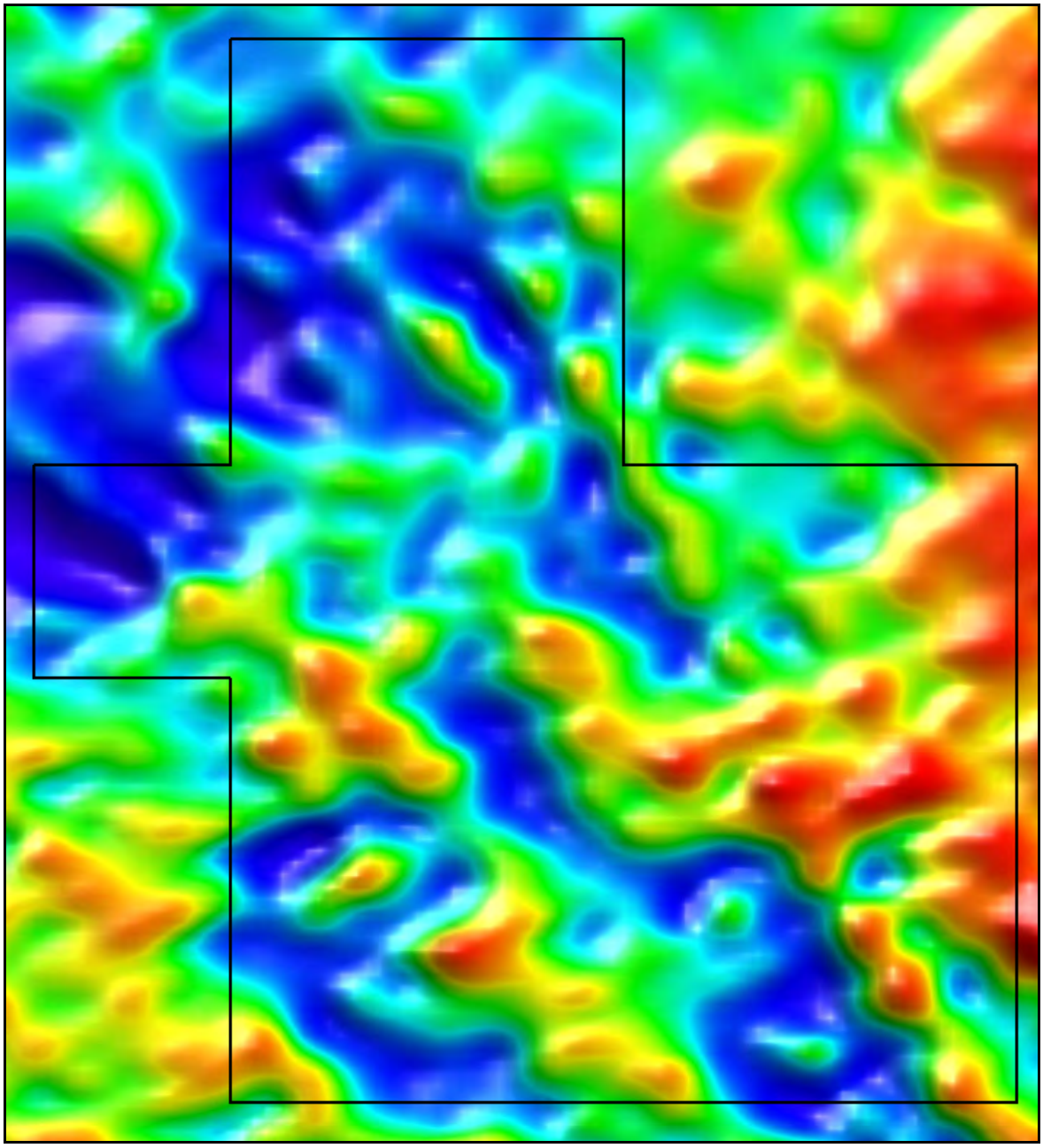


Figure 5f EL29230 Thorium count

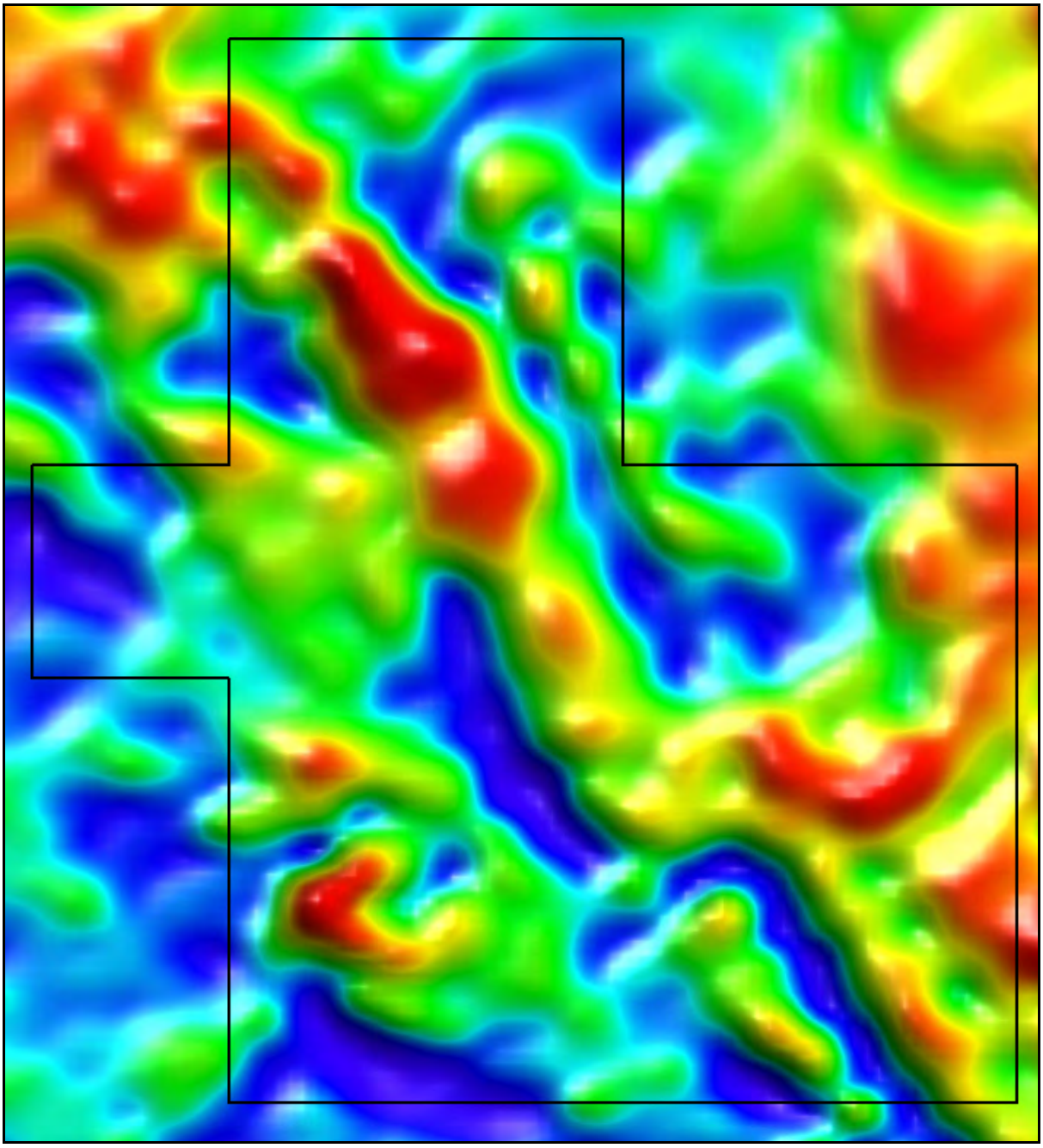


Figure 5g EL29230 Potassium count

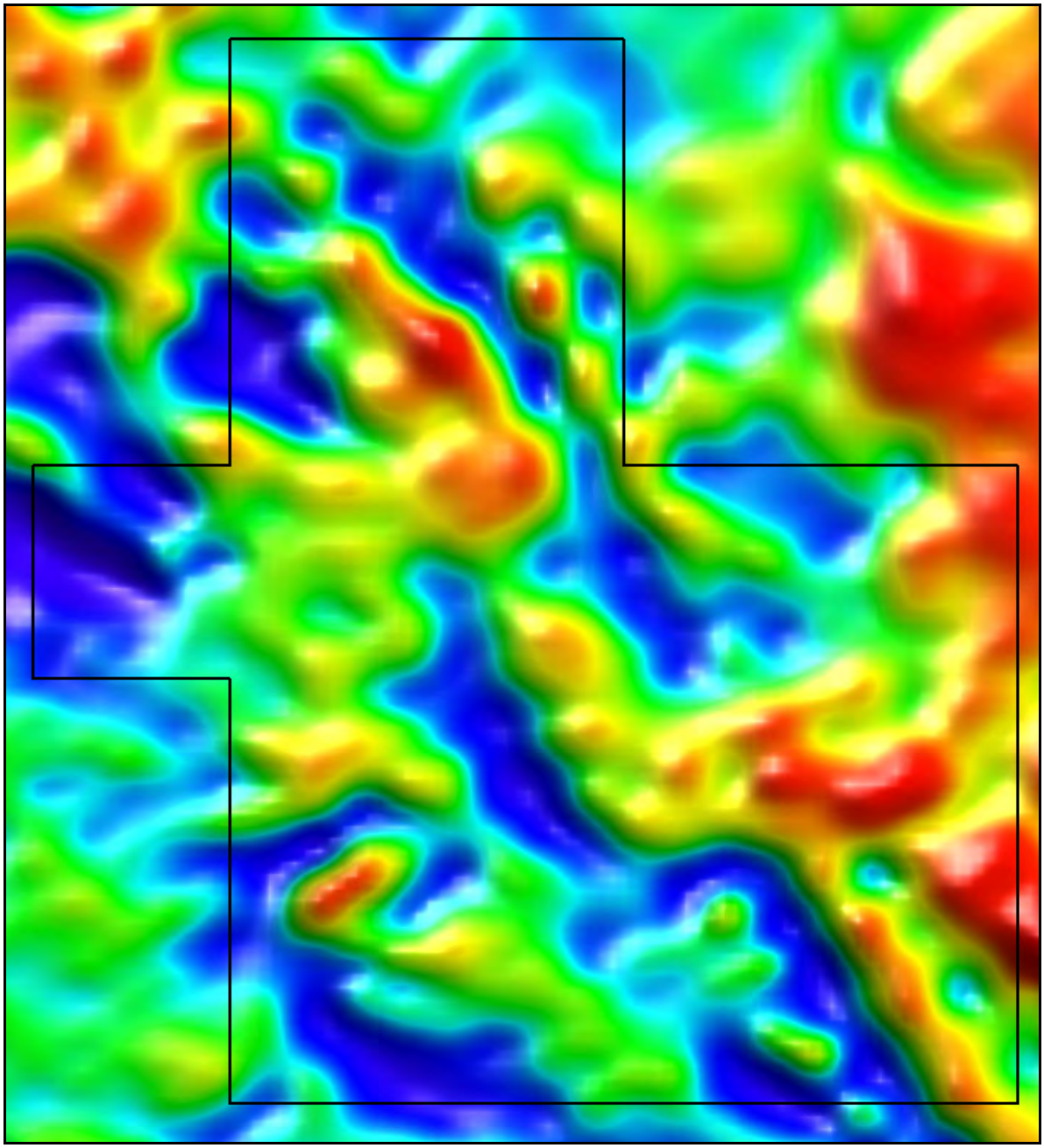


Figure 5h EL29230 Total count

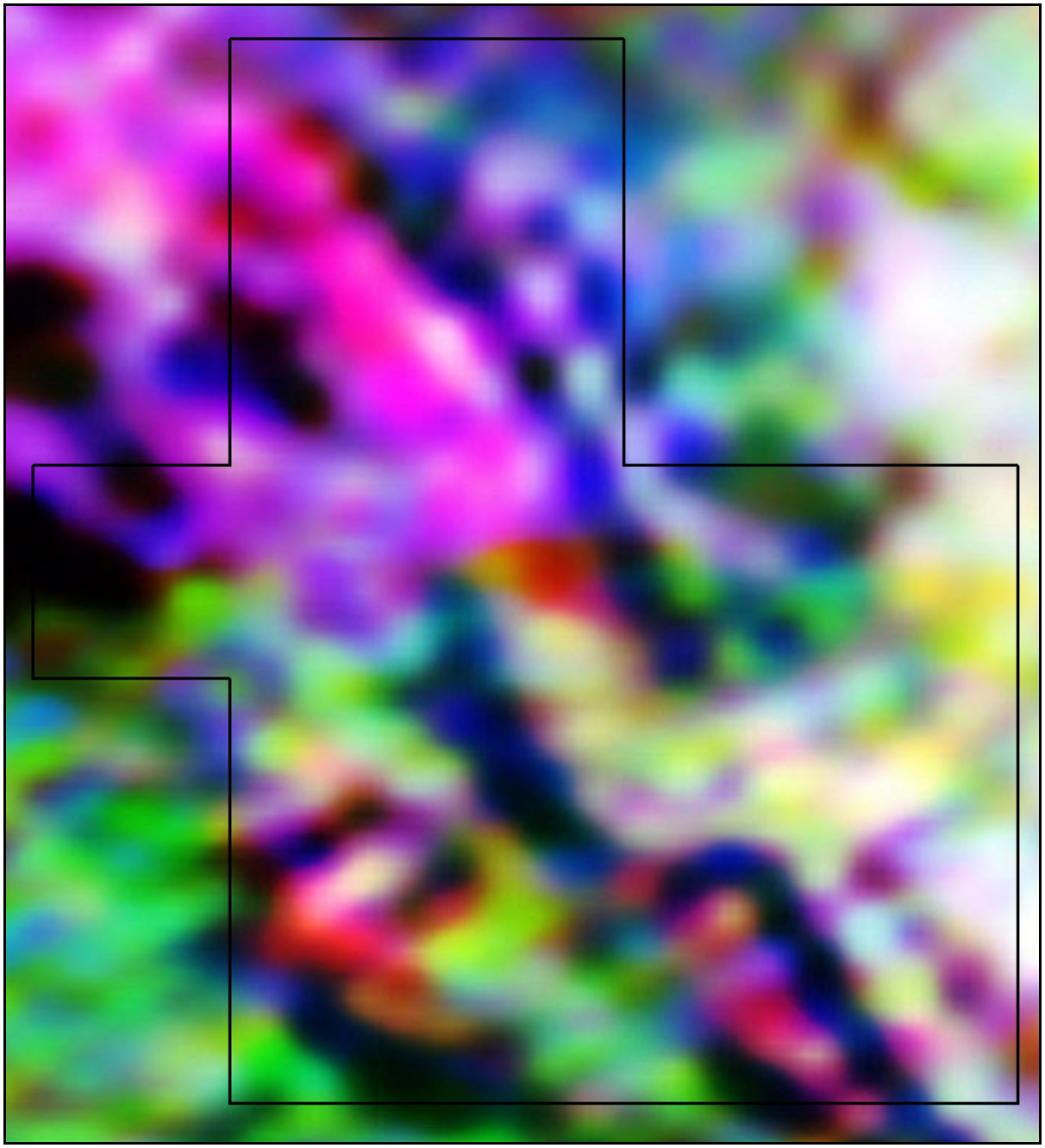


Figure 5i EL29230 Potassium–Uranium-Thorium composite

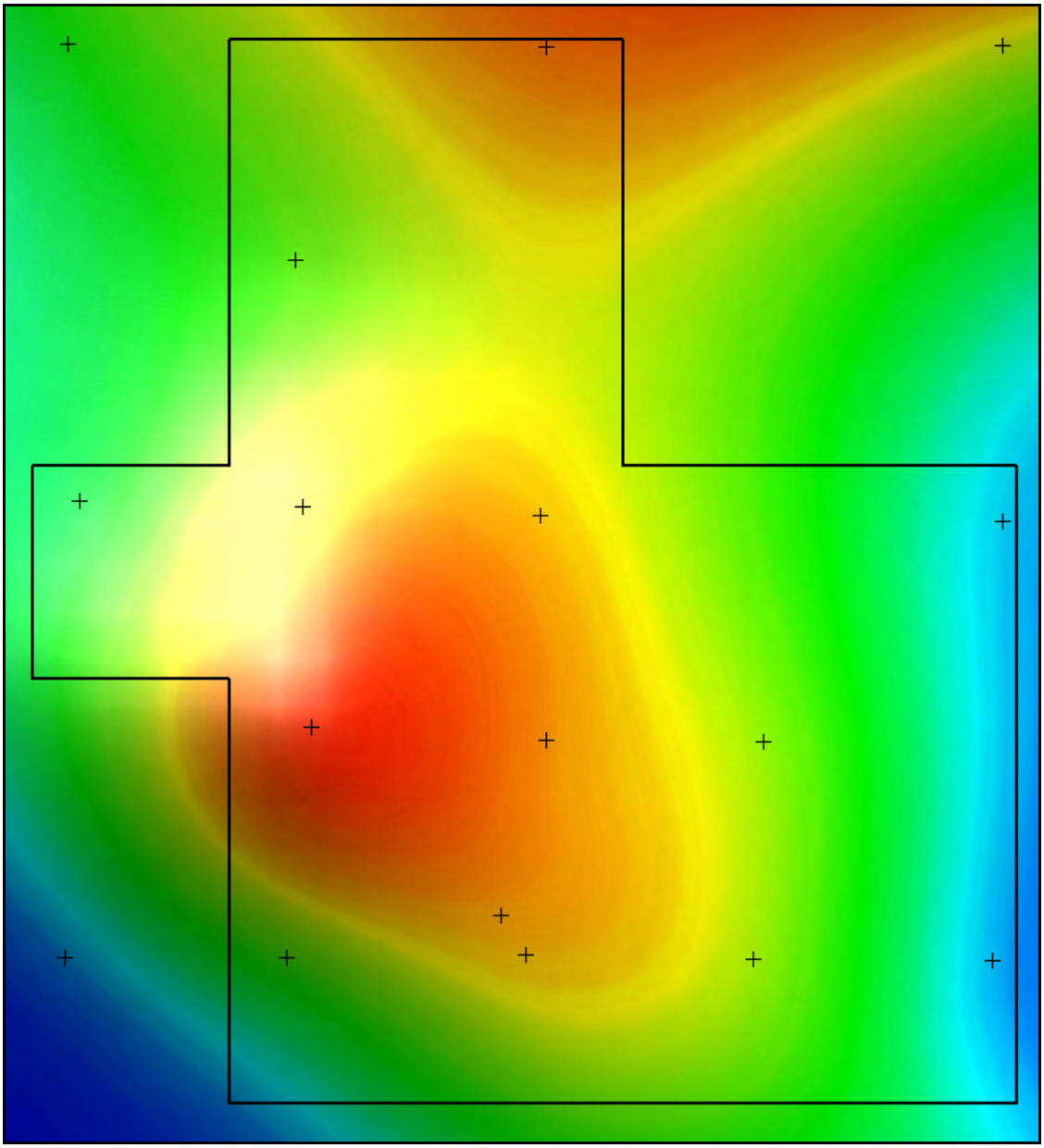


Figure5j EL29230 Bouguer gravity with station location plot.

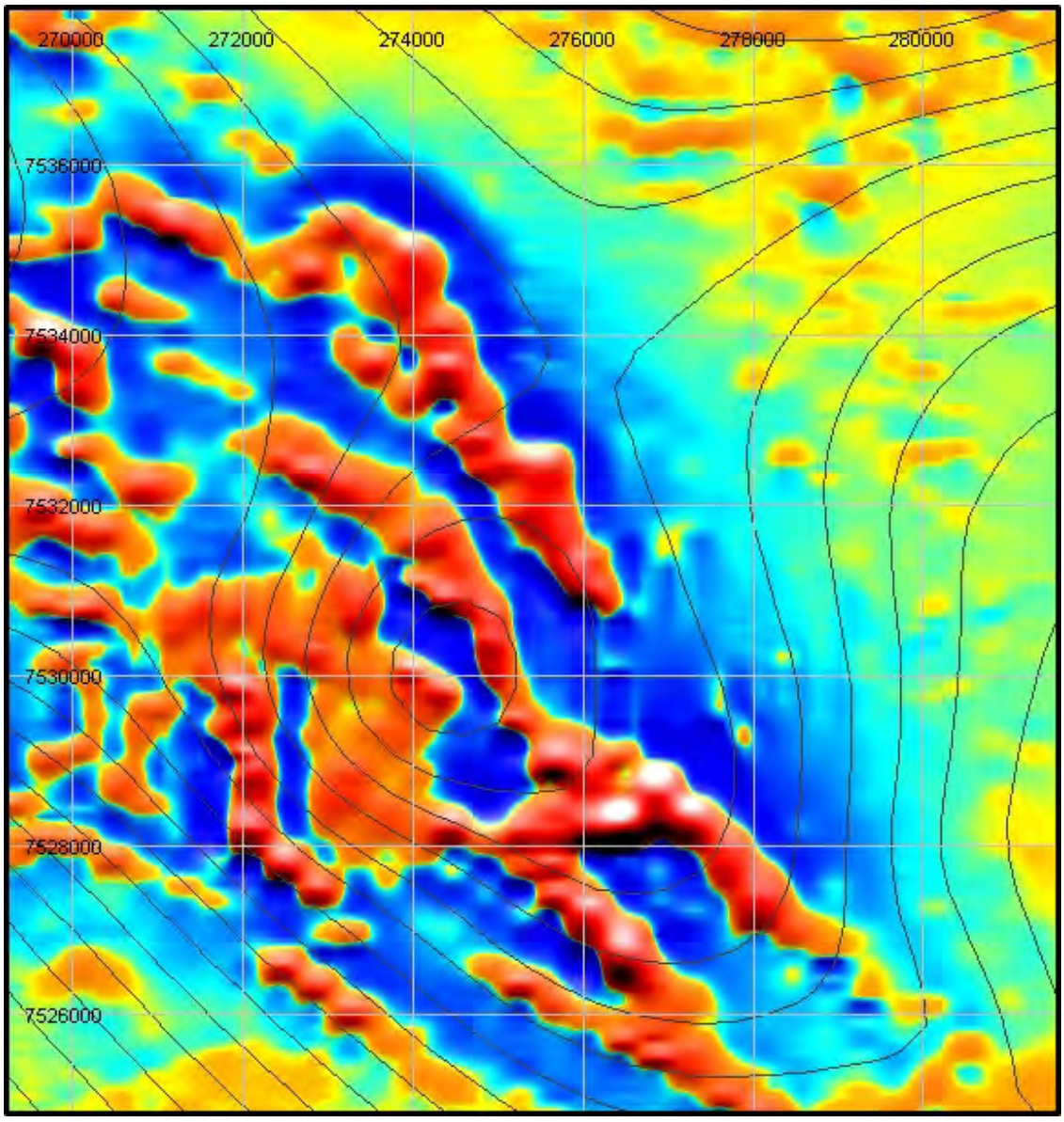


Figure 5k EL29230 Bouguer gravity contours (1mGal) and magnetic vertical derivative (RTP)

9. CONCLUSIONS & RECOMMENDATIONS

AMAG interpretation reveals elevated TMI over Harverson Pass area including iron prospect requiring further investigation. It is recommended a close spaced heliborne time – delay electromagnetic /AMAG geophysical survey be conducted over area of elevated regional magnetics possibly delineating sub-surface extensions of hematitic mineralisation.Expenditure is set at $25,000.00 for 2014 licence year. Minerals sought are Cu, Pb, Zn, Ni, Ag, Mo, U, Fe, Au and REE.

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