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EL 28837 "Pulpit Rock"

Annual Technical Report 4

14/03/2015 – 13/03/2016

Pb, Zn, Cu, Ni, Co, Cr, Mo, W, Sn, As, Ag, Au, Mn, U, Th

Huckitta SF53-11

Dnieper 5952

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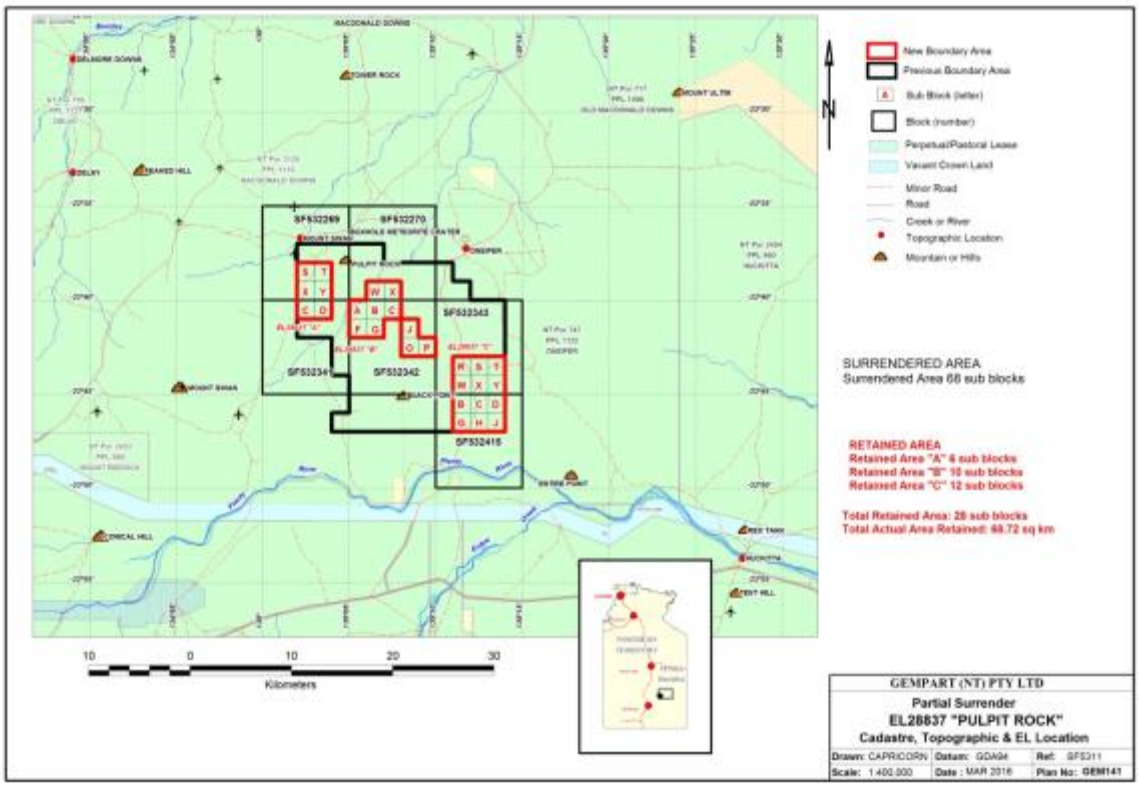
Appendices

1. SUMMARY

The licence area is underlain by mainly magnetically interpreted 1844Ma Kanandra Granulite;pCsk , time equivalent of Strangways Metamorphic Complex rocks on ALICE SPRINGS prospective for IOCG/VHMS basemetal deposits ie Johnnies Cu – Au and Utnalanama Zn - Cu - Au deposits located 80km to southwest. The licence area is wedged between two major east to east south east trending shear zones namely Delny (north) and Entire Point ShearZone (south).

2008 SKYTEM 500m l.s. AEM/AMAG geophysical surveying has delineated 11 sub surface conductors within licence areas 1(3),2(3) and 3(5) however about 90% of licence area is overlain by either a thin veneer of Quaternary alluvial deposits and/or Tertiary Waite Formation chalcedonic limestones which are known to contain conductive potable ground water acquifers .The Waite Formation thickens to southeast where previous aircore drilling within Area 3 has bottomed @ 140m vertical depth, still within Tertiary Basin sediments thus requiring detailed geophysical analysis of available AEM/AMAG located digital data to more accurately establish depth to magnetic basement estimates through forward magnetic modelling and complex computational depth to basement calculations.Reasonably accurate depth estimates are achievable using currently acquired geophysical data however close spaced AEM/AMAG geophysical surveying of Area 3 is proposed prior to sub surface conductor RAB/RC drill testing if warranted ,expenditure for forthcoming licence year is set at $32000.00



2. INTRODUCTION

EL 28837 Pulpit Rock is located within southwest HUCKITTA about 130km northeast of Alice Springs. It is entirely underlain by 1844-1820Ma Kanandra Granulite a metamorphosed to granulite facies mainly basic volcanic body deemed prospective for IOCGU deposits (GA2012).

3. LOCATION and ACCESS Figure 1

EL 28837 Pulpit Rock comprising 254 sqkm of mainly flat lying alluvial deposits and/or Tertiary Waite Formation is accessed via Stuart Highway north of Alice Springs for 70km, east along Plenty Highway for 110km until Mt Swan - Dneiper turn off is reached then 10km north into the licence area and beyond either north to Dneiper or west to Mt Swan, traversing most of licence area.

4. TENURE

EL 28837 Pulpit Rock comprising 96 graticular blocks,(304 sqkm) was granted to Gempart (NT) P/L for 6 years on 14 March 2012. A variation of covenant and waiver of reduction were successfully applied for during 2013.A Partial Relinquishment of 68 sub blocks was approved February 2015.Current licence area 1,3&3 is 28 sub blocks.

5. PREVIOUS EXPLORATION

1970 - 1980

In 1970 CPM (AP2162) conducted an IP survey along the Perenti Cu prospect shear zone (a single traverse 1828m long). Three inclined core drill holes were collared to test resultant IP anomalies namely DDNT - 12 - 3, 2 and 1, 170m, 127.4m and 1.86,4m TD respectively (Total 484.32m).

A brief log of drillhole 3 is as follows:

0 - 143m	foliated quartz-chlorite-biotite-feldspar granite
143 - 157.6m	quartz reef + chlorite + 2% chalcopyrite + specular hematite
157.6 - 170m	chlorite-rich granite + chalcopyrite/quartz veins + hematite.

14.6 m of core was split from 143 to 157.6m assayed for Cu, Pb, Zn, Ag and Au returning 11.9m averaging 0.6% Cu. DDNT-12-2 was spilt from 133 - 152m (16 samples) assayed for Cu, Pb, Zn, Ag, Au returning 9 m averaging 0.37% Cu. The following is an abridged log:

0 - 133m	foliated granite
133 - 136.15m	breccia, chlorite-hematite matrix with red feldspar+ quartz fragments
136.15 - 142.2m	quartz reef + 2% disseminated chalcopyrtie minor fluorite
142.2 - 143.7m	breccia
143.7 - 145.9m	quartz reef
145.9 - 167.7m	hematite - chlorite rock

167.7 - 187m porphyritic feldspar hematite rock + chlorite + sulfide

In 1971 Kratos Uranium NL (AP 2587) conducted an airborne radiometric survey along northwest - southwest flight lines 1609m apart over an area of 944sqkm covering northern half of EL 28837.Of 15 anomalies delineated only one namely 11PR, 3km east of Mt Swan homestead was followed up (1740 cps at 30m) comprising Waite Formation overlying granitic gneiss assaying Thorium 105ppm, Uranium <40ppm.

1980 – 1990

In 1983 WMC (EL 3303) collected 41 drainage samples centred over the headwaters of Plenty River, draining lower half of EL 28837. Several pyrope garnets were recovered from AA614017, however followup infill sampling failed to repeat initial positive KI results.

CRAE were granted ELs 2788 and 2789 in 1981 undertaking a regional drainage/gravel sampling program collecting 29 samples of which 11 were processed and observed for KIs.The-40# and-80# fractions were analysed (AAS) for Pb,Zn,Cu,Ni,Co,Cr,Mo,W,Sn,As,Ag,Au,Mn,U,Th delineating an area of elevated Sn anomalism around drainage sample site 821706 (Sn 55ppm/Sn 60ppm).Initial follow up sampling (8) returned anomalous Sn values as high as 1150 ppm.A pan concentrate from above site assayed Sn 9770 ppm.A 5km x 5km area west,south and north of above highest order Sn anomaly was gridded (10 traverses, 5km x 500m l.s.),GMAG surveyed,mapped,soil(94),drainage(59) and rockchip(20) sampled revealing a subcropping,grey,porphyritic Sn-bearing granite associated with Sn-enriched pegmatitic veins cropping out around the outer perimeter intruding mafic schist(sheared mafic granulite?) assigned to 1820Ma Kanandra Granulite.Reviewing recently released 1981 HUCKITTA geophysical survey data identified 12 discrete AMAG anomalies requiring further investigation.The 12 AMAG features were identified as potentially kimberlitic magmatic intrusions,five of which are within EL 28837 namely H1, H2, H3, H9, H10 additionally a weak dipolar anomaly located 2km north of sample site 821723 (2 x 0.5 chromites) located on grid line 7000E delineated by above GMAG survey was rockchip, soil and auger drill sampled for no anomalous geochemical results. The mooted anomaly source was magnetic inclusions in granite? AMAG feature H1 is overlain by an east west trending prominent quartz ridge fault trace. Ground magnetometry was carried out and gravel sample 968947 (negative for KIs) was collected. AMAG features H4, 5, 6, 7, 8 were GMAG-traversed and sampled for no anomalous results except for rockchips 9689949/970275 comprising magnetite-quartzite rock overlying Anomaly H4 which assayed 660ppm Zn, 120ppm Pb, 105ppm Cu, 155ppm Ni, 830ppm Ba and Zn 630ppm respectively.Only 11 gravel samples were processed and observed reporting 1, 2 and 1 chromites from 821719, 821723 and 821727 respectively.

During 1983, Uranerz P/L conducted 26.7 line km of detailed scintillometry and collected 50 rockchip samples from EL 3308 an area covering 20km from west to east, of DSZ butting up to the eastern boundary of EL 28837. They also conducted a radon survey across Delny - Mt Sainthill Fault Zone comprising 2 x 3.5km north south traverses. They concluded all radiometric anomalies identified were Thorium based?

Anomalous rockchips included, 0090- 4.25%Cu, 0095, 0082, 0089 > 1000ppm Ce > 1500ppm Th;magnetic granite. 0086-3525ppm Th, 0079-410ppm U;quartzofeldspathic gneiss. 0113, 0114, 0115, 0116 >150ppm U, 0.3% Th ;epidote-magnetite granite.

1990 – 2000

Roebuck Resources NL (ROR) were granted EL8088 in 1994,the western half of which includes most of EL 28837. They conducted a lag sampling program including magnetic pisolites or "M" sampling over selected larger AMAG anomalies of inferred 1844-1820Ma Kanandra Granulite deemed time equivalent of Strangways Metamorphic Complex rocks on ALICE SPRINGS hosting metamorphosed VHMS basemetal deposits.

Two lead anomalies plus elevated copper and arsenic were delineated over two hi - AMAG areas namely Dingo Dam and Bank Dam. 319 samples were collected and assayed for Au, Cu, Pb, Sn and As. The sampling of magnetic and non-magnetic lag over areas of high AMAG susceptibility appears successful in highlighting anomalous metal values over broad areas of residual regolith?

Interestingly R108 (float from the Bank Dam Anomaly) assayed 160 ppm Cu, 130ppm Pb and 235ppm Zn.

2000 – 2010

RIOTINTO were granted EL22897 in 2002 conducting a heliborne 200m l.s. HOIST EM geophysical survey (395 line km) over a circular (500m l.s.) AMAG feature. 16 rockchip , 5 petrology samples and 4.62 line km of GMAG were collected over anomaly followed up by 4 drill holes (971.9m) intersecting a possible impact crator infilled with carbonaceous muds/shale devoid of potentially economic basemetal –Au mineralization.

Tanami Gold NL (TGNL) were granted EL 22924 December 2002, covering northern half of 28837 licence area relinquished in March 2005.Initially exploration comprised rockchip sampling a northwest trending quartz-filled shear zone cropping out 400m from NTGS documented location of Perenti Cu prospect which GA described as ‘disseminated copper minerals in one of a series of quartz-breccia reefs in a large northwesterly shear zone which cuts across the contact of the Mt Swan Granite.The Perenti reef is 850m long and about 450m wide.Drilling has proved copper values to be very low’.Ten samples of ferruginous vein quartz namely ALK052-060 and ALK063 were collected from’not the Perenti prospect’ and analysed for Au,Cu,Pb,Zn,Ag,As and Bi for best result of Au 59ppb ALK059 and Cu 455ppm ALK053.In 2005 TGNL were granted EL24454 butting up to eastern boundary of 28837 licence area which along with 22924 were joint ventured to Mithril Resources Ltd (MTH) in April 2007 who conducted a regional drainage sampling program during March/April 2008 collecting 191 magnetic lag and/or laterite lag and 27 rockchip samples.However only 177 lag and 24 rockchip samples were analysed, for 48 elements returning elevated nickel (339 ppm) and chromium(2610 ppm) values from samples taken around the area of Middle Dam Ultramafic.Sample T170(Ni 569ppm)was taken from sump of core drill hole NTGS Dneiper 1 . The three core holes testing Perenti Cu prospect drilled by CPM in 1968 namely DDNT-12-1,2 and 3 were relogged and sampled ie 8 quarter-core samples were analysed confirming correct order of magnitude of original values however only one coordinate was provided by NTGS for all three drill holes namely latitude 22.49 degrees,longitude 135.02 degrees resulting in a fruitless ground search for above drill hole collars.In October 2007 MTH commissioned Geotech Airborne to fly a regional heliborne versatile time domain electromagnetic (VTEM) geophysical survey over Areas 3 and 4 butting up to northern and eastern boundarys of 28837 licence area respectively,609 line km on north-south flight lines 300m apart were flown generating 21 target zones of various magnitudes requiring further

investigation.Field inspection of 21 VTEM target zones revealed they are mostly concealed beneath either a thin veneer of Quaternary alluvial deposits or Tertiary Waite Formation chalcedonic limestone. In December 2009 ABM Resources NL purchased ELs22924/24454 however no additional field work was undertaken before surrendering the licences in June 2010.

EL 25378 was granted to Hale Energy Ltd February 2007 over what is currently the licence area of EL 28837 . The area is deemed prospective for palaeo-drainage hosted uranium deposits within overlying relatively shallow Tertiary Waite (fluviatile/lacustrine) sedimentary accumulations of clay/sandy clay lesser sand, lignite and evaporite horizons. Alcoa drilled 71 holes (6260m) to maximum depth of 200m in 1979/80 exploring for sedimentary - type uranium deposits within the Waite Basin 6 of which were collared within licence area of EL 25378.

In January 2008 heliborne SKYTEM (time domain electromagnetic geophysical survey) comprising 52, 500m l s, N-S traverses (1085 line km) were flown over eastern half of 25378 (read 28837 licence area). SKYTEM delineated palaeochannels were tested by 27 aircore drillholes (1685m).A total of 567, 3m composite drill samples were forwarded to AMDEL for multi-element analysis. Average drill hole depth was 60m intersecting sand/carbonaceous clay in most holes recording a maximum scintillometer reading of 317cps.

BRAC011 intersected basement i.e. pyritic quartz biotite garnet gneiss with significant disseminated to massive pyritic bands - the source of SKYTEM interpreted basement conductors?

Interestingly BRAC012 (7481500N, 520500E(referFigure3)intersected coal from 103m to the end of the drill hole (128m) beneath a thick sequence of lacustrine clays.

6. GEOLOGY

EL 28837 licence area is located within Aileron Province, South East Arunta Region a Palaeoproterozoic to Mesoproterozoic multiply deformed and metamorphosed ensialic mobile belt covering 200,000sqkm of central Australia. The Arunta Region is subdivided into three fault bounded latitudinal provinces namely Aileron (Palaeoproterozoic), Warumpi (Mesoproterozoic) and Irindina (Neoproterozoic - Palaeozoic). The larger Aileron Province comprises greenschist to granulite facies metamorphic rocks with protoliths ranging from 1865 - 1710Ma, assigned to North Australian Craton deemed geologically continuous with gold - bearing Tanami and Tennant regions to the north.

The Arunta Region comprises nine metasedimentary packages overprinted by twelve discrete tectonothermal events of which Ongeva package is dominant in south eastern Arunta Region. It includes lower and middle Strangways Metamorphic Complex (SMC), Bonya Schist, Deep Bore Metamorphics, Cacklebery Metamorphics, Kanandra Granulite and Mt Bleechmore Granulite age-dated 1844 - 1800Ma. Irindina Province comprising supracrustal assemblage, the Harts Range Group (HRG) a rift sequence deposited during latest Neoproterozoic or early Cambrian within a deep sub-basin subsequently metamorphosed to granulite facies during early Ordovician (480 - 460 Ma) extensional Larapinta Event then exhumed during compressional 450-300Ma Alice Springs Orogeny(ASO). The licence area constitutes part of the northern margin of south eastern Arunta Region where two major, steeply south-dipping mylonite zones namely Delny (DSZ) and Entire Point

Shear Zone(EPSZ) separate HRG Ordovician granulites from Palaeoproterozoic Jinka terrane which is also basement to unmetamorphosed Neoproterozoic Georgina Basin, platform cover located further north. The above mylonite zones have extensively reworked Palaeoproterozoic Kanandra Granulite underlying licence area.

The juxtaposition of Ordovician granulites adjacent to unmetamorsphosed Neoproterozoic sediments implies the north-verging shear zones accommodated large scale exhumation of greater than 20km during Palaeozoic.

The licence area is bounded to the north by west north west trending Delny Shear Zone and to the south by east south east trending Entire Point Shear Zone, 80% of which is overlain by a relatively thin veneer of Cainozoic sediments namely Tertiary chalcedonic limestone, sandstone, mudstone and sandy conglomerate assigned to Waite Formation also including lower Tertiary weathered rocks, laterite and silcrete of deeply incised Waite Formation cropping out along drainage systems. Recent aircore drilling by Hale Energy over southeast of licence area intersected on average 60m of Tertiary sediments however coal measures were intersected at about 103m(extreme southest corner).

Kanandra Granulite;pCk crops out extensively for 10km from western licence area boundary to Black Point and beyond butting up to exposed Dneiper Granite (1771Ma). The dominant rocks type is fine grain massive mafic granulite which form ridge cappings with low rubbly outcrop on slopes of low rounded hills interlayered with medium grain layered quartzofeldspathic gneiss, migmatitic garnet-quartzofeldspathic gneiss with biotite - garnet and hornblende gneiss. The fine grainsize combined with complete recrystallisation and abundance of interlayered aluminous metasediments/absence of chilled margins and igneous layering suggest protoliths were basaltic lava flows or sills? Coarse grain pyroxenite pods/lenses showing distinctive dimpled weathering surfaces are often associated with mafic granulite.

The Kanandra Granulite was first metamorphosed to upper amphibolite or hornblende granulite facies during 1780-1770Ma Yambah Event and again deformed and metamorphosed during 1730-1690 Ma Strangways Event (800 degrees, 6Kb) the main tectonothermal event to affect south east Arunta Region. Cropping out granulite on ALCOOTA northwest of Kanandra Dam i.e. 2km west of licence area has a highly variable magnetic character i.e. low/flat ranging to very high with massive to sub-linear texture. The interpreted extent of the granulite body concealed beneath alluvial deposits is defined by its variable magnetic character for over 100km from west to east. The most northern part of the body, adjacent to DSZ has a low - flat magnetisation possibly due to magnetite destruction related to shearing or a low magnetite phase of an intrusion? There are numerous discrete circular magnetic-highs scattered throughout intrusion deliniating aforementioned mafic plugs? The body is fragmented by numerous northwest trending faults and lesser east, northeast trending faults and bounded to the north by DSZ and to the south by EPSZ.The Kanandra Granulite has similar zircon isochron spread as Lander Rock Formation metasediments ie 1844-1820Ma which dominate central/northern Arunta Region.They are also deemed age equivalents of lower SMC multiply deformed and metamorphosed rocks on ALICE SPRINGS hosting VHMS basemetal deposits hence they are considered prospective.

Prospectivity-wise DSZ and its northwest- trending splays including local Perenti trend formed major conduits for hydrous fluids during late Devonian phase of ASO, characterised by pervasive hydrous retrogression and veining i.e. coarse apatite occurring in quartz reefs suggesting REE potential also barite / fluorite mineralistion as well as iron-flourine-silica+Cu sulfide enriched mineralizing fluids occurring as quartz-hematite-fluorite-chalcopyrite-bornite shear-hosted breccias at Perenti prospect.

Furthermore recent GA research of geothermal heat flow/conductivity as a precursor to potential IOCG mineralisation has prioritized prospectivity of Kanandra Granulite including licence area.

7. EXPLORATION PROGRAM Figures 4a-4p , Appendix 1.

1. Vehicular reconnaissance and prospecting of Areas1,2&3 to ascertain surface extent of flat-lying Tertiary Waite Fm chalcedonic limestones

2. Review results of detailed AEM/AMAG located digital data analysis/Reporting

3. Consultant Geophysicist attempted to define more accurately depth estimates to magnetic basement of Area 1,2&3 SKYTEM Conductors(11) through advanced forward magnetic modelling and complex computational depth to magnetic basement calculations.

8.EXPENDITURE

Ground checking/prospect Areas1,2&3 Tw chalcedonic limestone	$5000.00
Consultant geophysicist –advanced forward magnetic modelling and complex computational depth to magnetic basement calculations to establish veracity of SKYTEM Conductors	$13500.00
Review results/prospectivity analysis partial relinquishment Area/Reporting	$8000.00
Administration	$4500.00
TOTAL	$31000.00

9. CONCLUSIONS and RECOMMENDATIONS

The licence area is underlain by 1844Ma Kanandra Granulite a metamorphosed to granulite facies mainly basic volcanic body deemed prospective by GA for VHMS basemetal /IOCG mineralisation. However about 90% of licence area is overlain by flat-lying Tertiary Waite Fm chalcedonic limestones known to contain subsurface conductive groundwater acquifers hence veracity of 11 deliniated SKYTEM Conductors within Areas1,2&3 is brought into question whether they are indeed magnetic basement-hosted and therefore potentially indicative of IOCGU-type sulphide mineralization?

Advanced geophysical forward magnetic modelling combined with complex computational depth to magnetic basement estimate calculations using currently acquired located digital geophysical data has partly resolved above conundrum however a proposed close spaced AEM/AMAG geophysical survey over Area 3 followed by RAB/RC drill testing of any sub surface depth resolved conductors if warranted is recommended .Expenditure is set at $32000.00 for forthcoming licence year.

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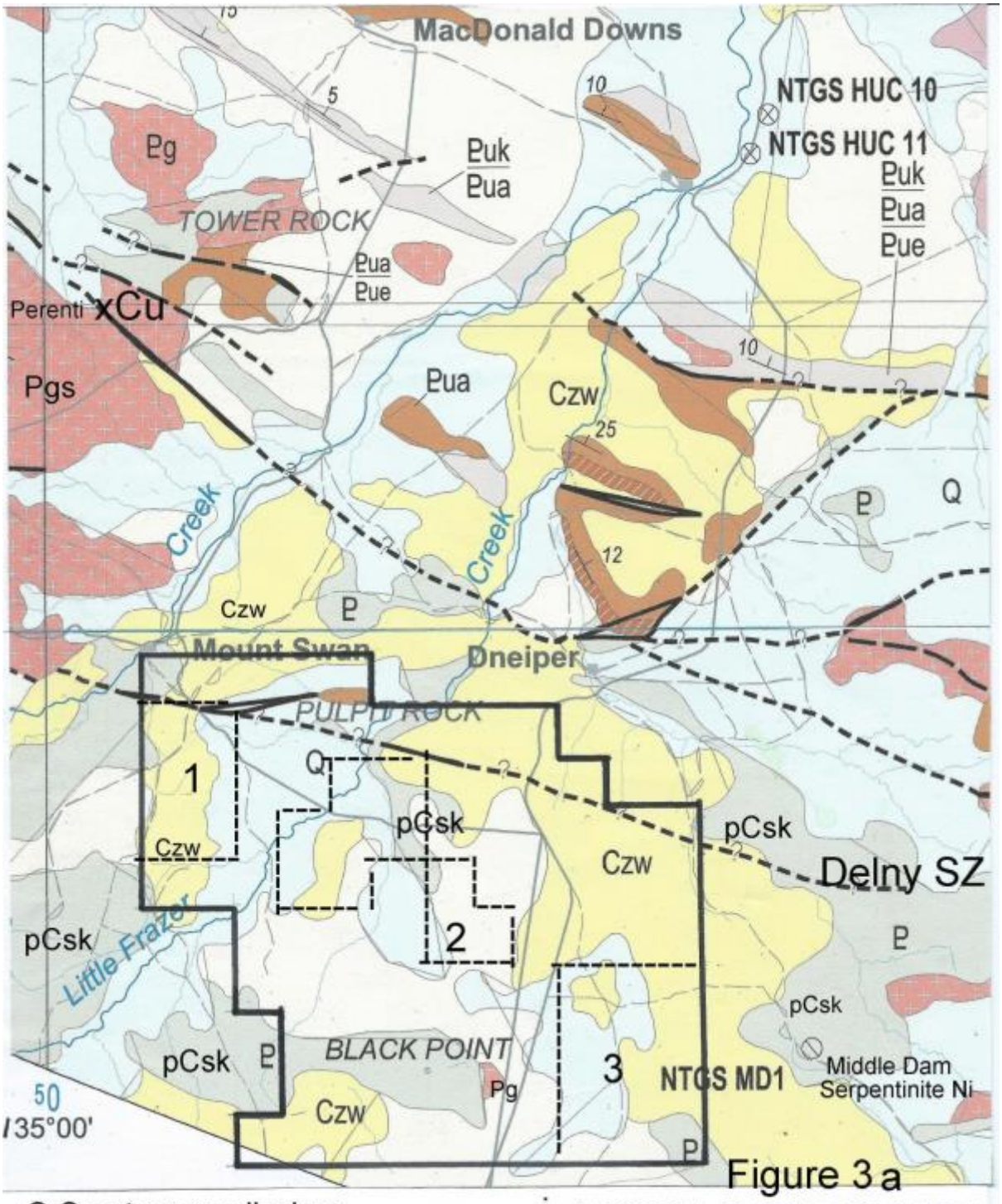


Figure 3 a

Q;Quarternary-alluvium
Czw;Tertiary Waite Fm-chalcedonic lst.

Puk;Neoproterozoic Elkera Fm
Pua;Neoproterozoic Grant Bluff Fm
Pue;Neoproterozoic Elyuah

Pgs;1714Ma Mt Swan Granite

EL28837 GEOLOGY 500k
ATR 4

pCsk;Kanandra Granulite1844M
mafic granulite,pelitic migmatite,
metapsammite,rare cs

EL 28837 ATR 4 - Conductor Areas1,2&3 over Waite Fm chalcedonic limest.

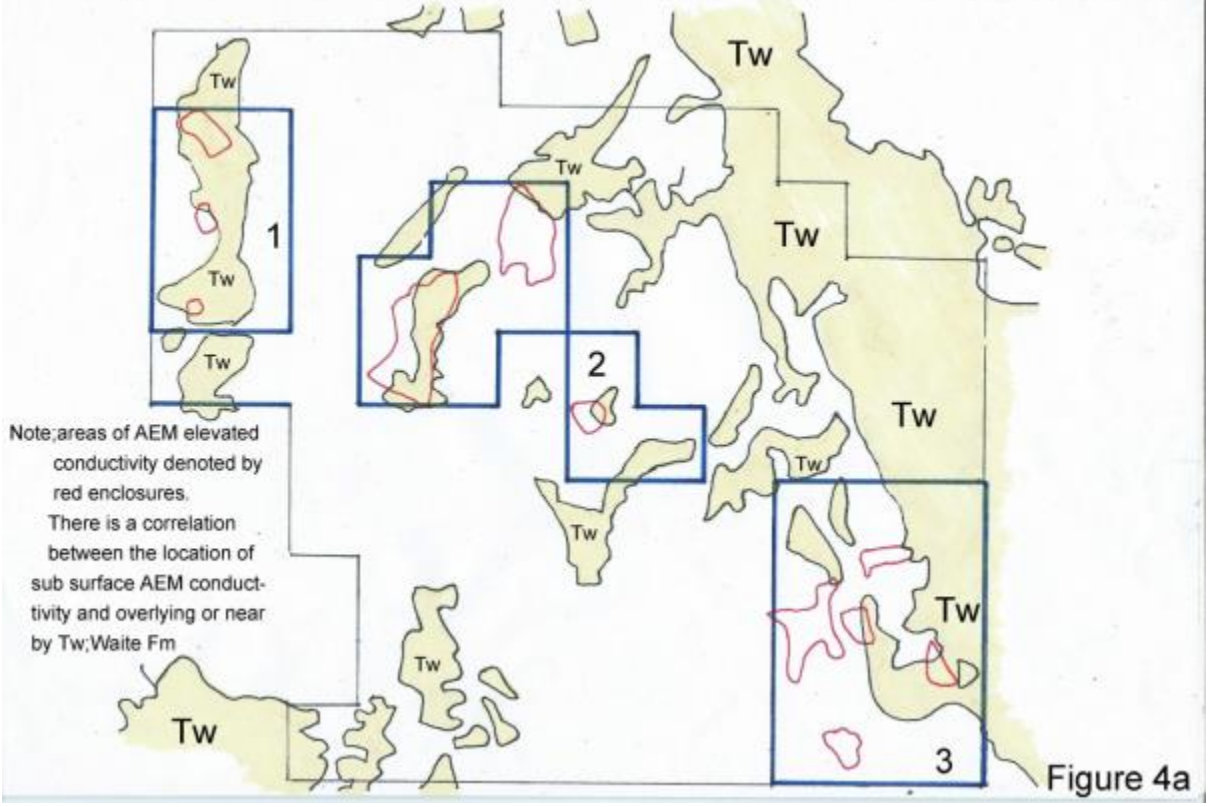
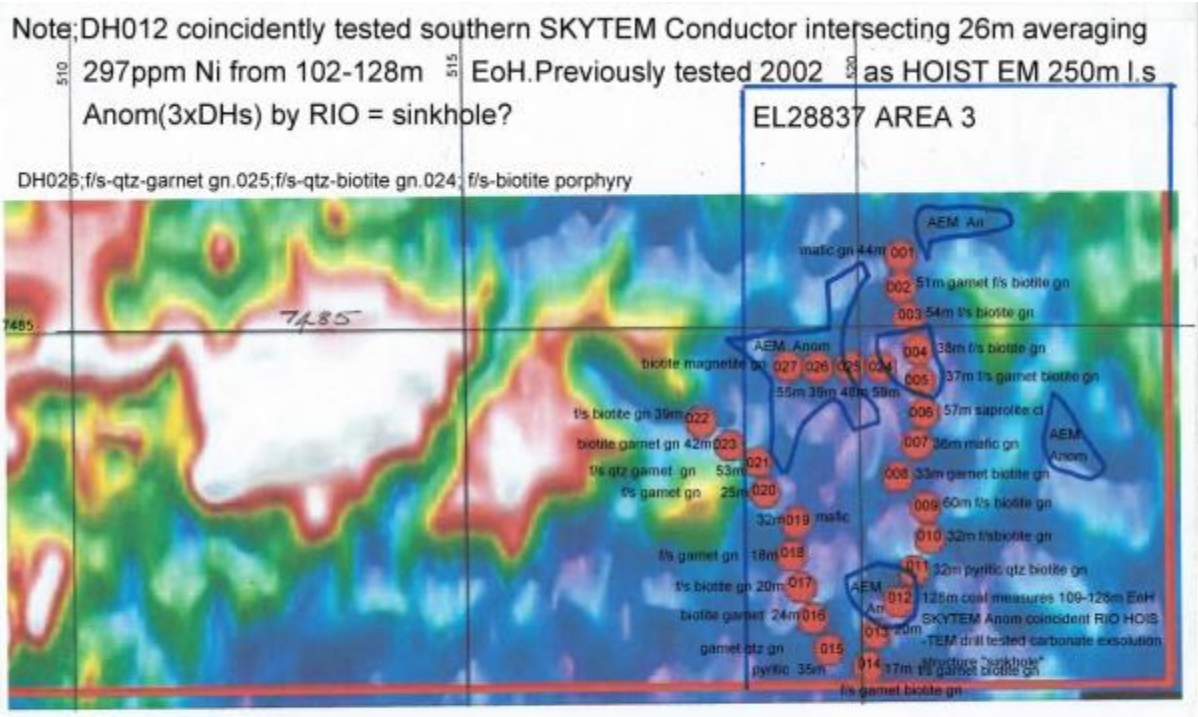


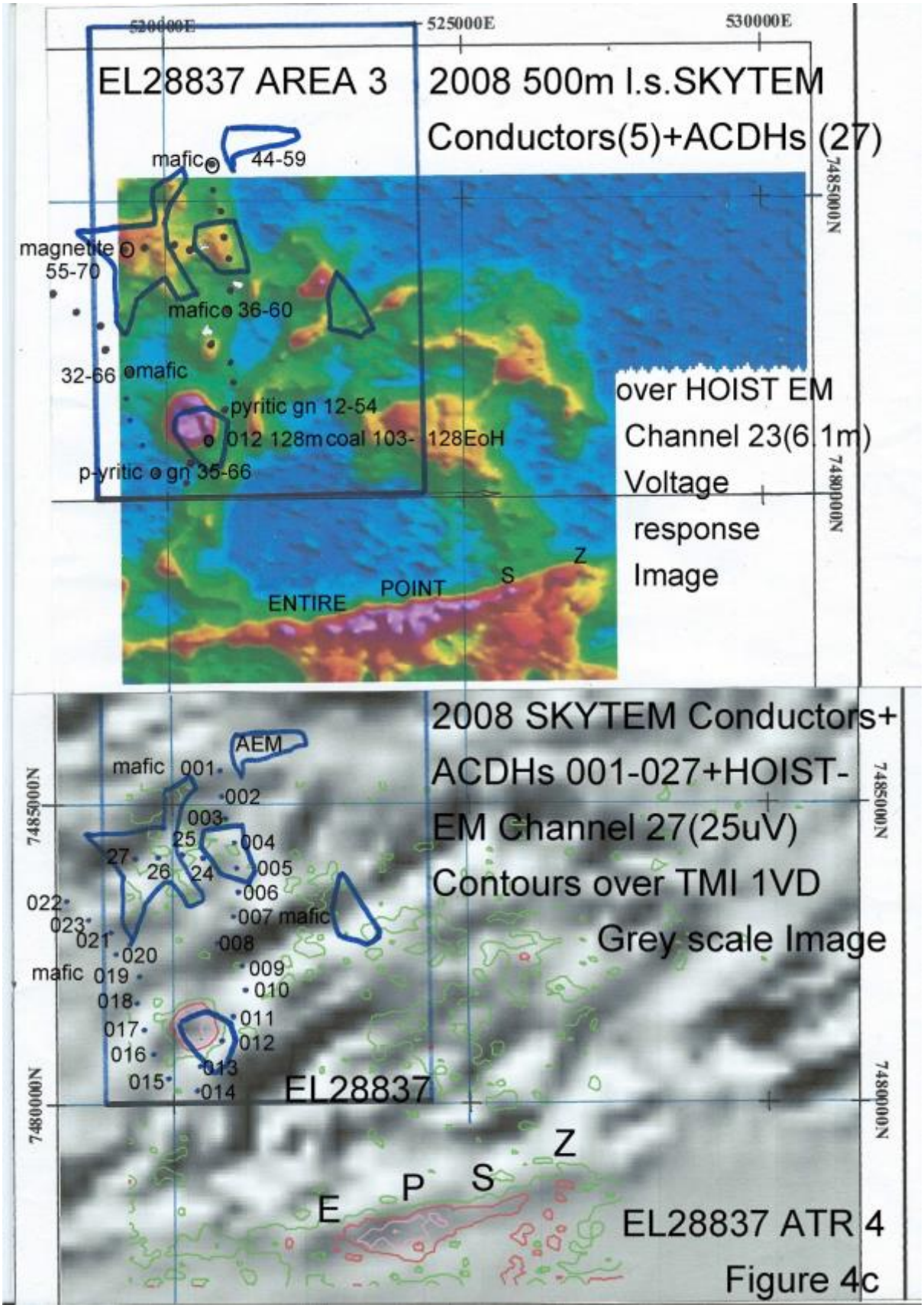
Figure 4a

Note;DH012 coincidently tested southern SKYTEM Conductor intersecting 26m averaging 297ppm Ni from 102-128m EoH.Previously tested 2002 as HOIST EM 250m l.s Anom(3xDHs) by RIO = sinkhole?



EL28837 ATR 4 - AREA 3 SKYTEM Anomalies (5)+2008 Aircore DH(27)Location+lithology and depth to basement.Note DH012 TD 128m intersected coal measures 109-125m within Tw carbonaceous clay/shale/siltstone)over TMI R to P Huckitta survey Image

Figure 4b


520000E
525000E
530000E
EL28837 AREA 3
2008 500m l.s.SKYTEM
Conductors(5)+ACDHs (27)
mafic 44-59
magnetite 55-70
mafic 36-60
32-66 mafic
pyritic gn 12-54
012 128m coal 103- 128EoH
p-yritic gn 35-66
7485000N
7480000N
over HOIST EM
Channel 23(6.1m)
Voltage
response
Image
ENTIRE
POINT
S
Z
2008 SKYTEM Conductors+
ACDHs 001-027+HOIST-
EM Channel 27(25uV)
Contours over TMI 1VD
Grey scale Image
AEM
mafic 001
002
003
004
005
006
007 mafic
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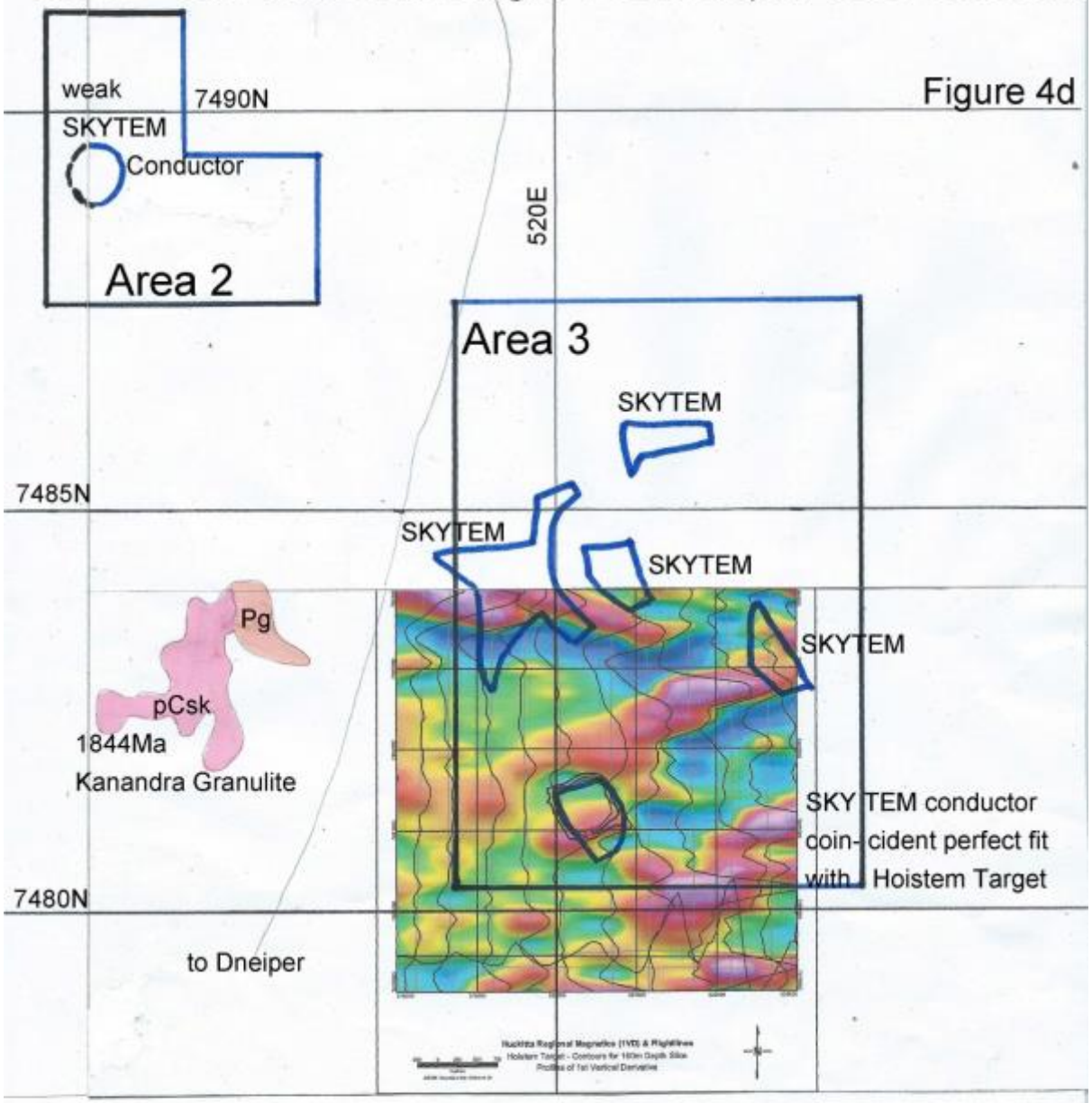
EL28837 ATR 4
Figure 4c

EL28837 ATR 4 - Areas 2&3 2008 SKYTEM 500m l.s. Conductors over HUCKITTA TMI 1VD+500m l.s.flight lines + RIO Hoistem Target 100m depth slice contours

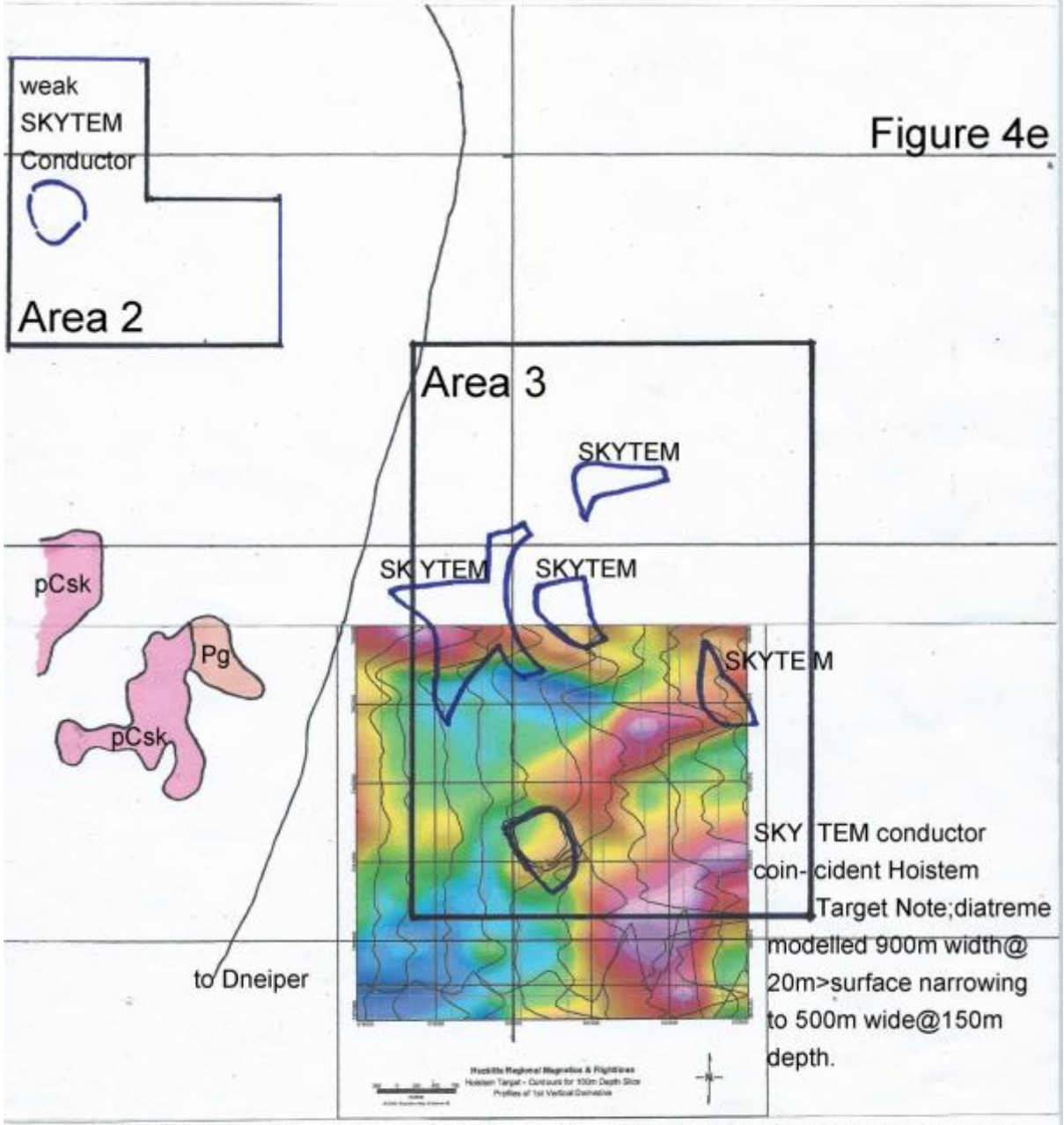
Figure 4d



The Hoistem conductor located centre of image as defined by apparent resistivity model contours 3,4&5 ohmm@100m depth. Note;Hoistem feature associated discrete magnetic response ie consistent with nonmagnetic cylinder within magnetic host.

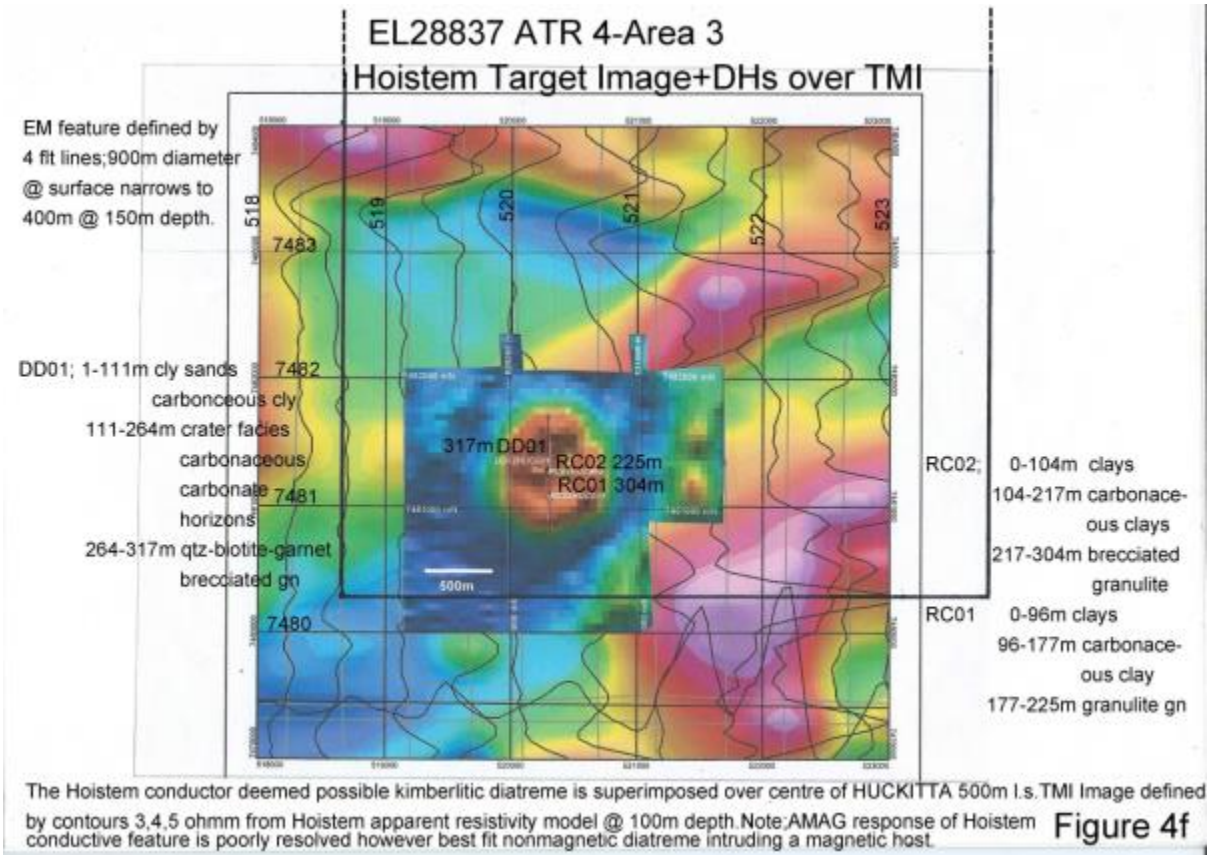
EL28837 ATR 4 - Areas 2&3 2008 SKYTEM 500m l.s Conductors over HUCKITTA TMI+500m flight lines + RIO Hoistem Target 100m depth slice contours.

Figure 4e



SKY TEM conductor coin- cident Hoistem Target Note;diatreme modelled 900m width@ 20m>surface narrowing to 500m wide@150m depth.

The Hoistem Target conductor located centre of above Image defined by Hoistem apparent resitivity model@100m depth contours 3,4&5 ohmm.TMI 600m spaced flight lines traverse edges of Hoistem feature only thus magnetic response poorly resolved however positive peak (nT50)on southern edge consistent non-mag.diatreme intruding magnetic host?



The Hoistem conductor deemed possible kimberlitic diatreme is superimposed over centre of HUCKITTA 500m l.s.TMI Image defined by contours 3,4,5 ohmm from Hoistem apparent resistivity model @ 100m depth.Note:AMAG response of Hoistem conductive feature is poorly resolved however best fit nonmagnetic diatreme intruding a magnetic host.

Figure 4f

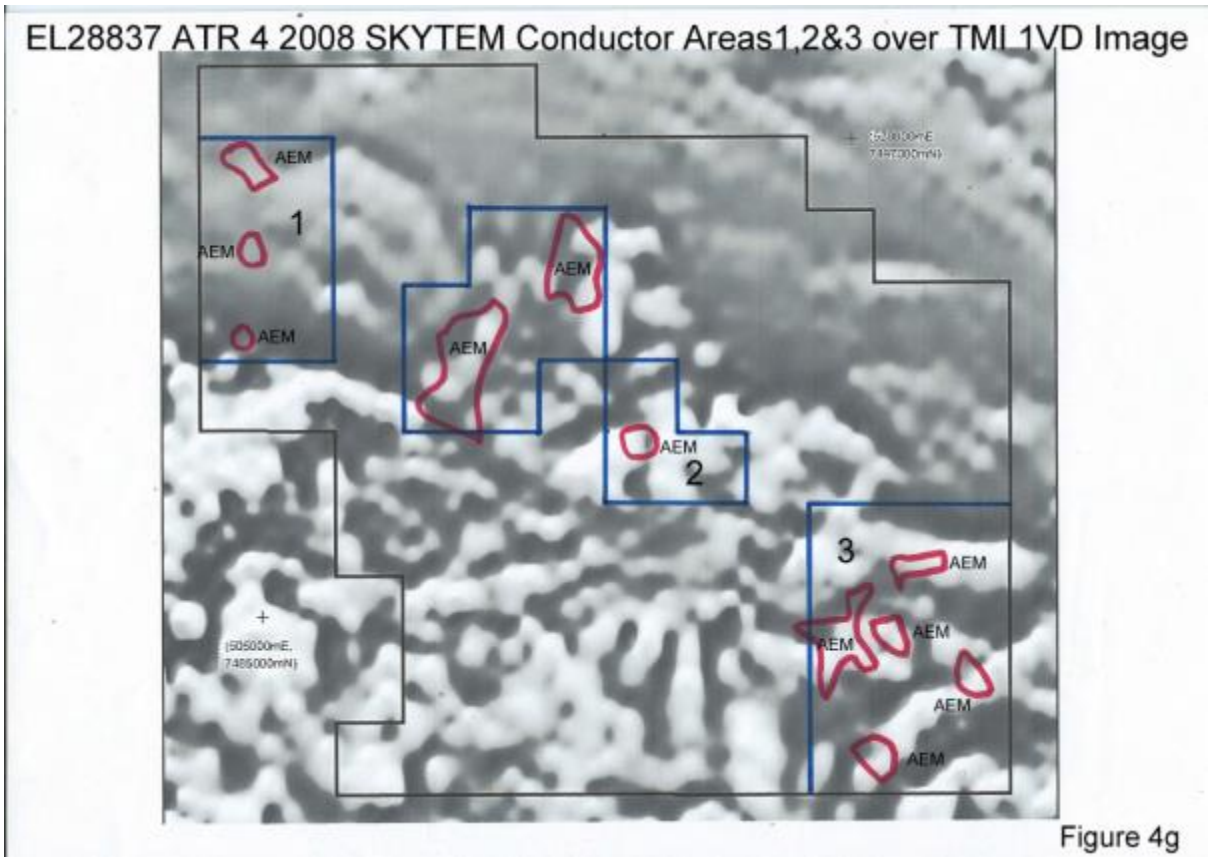


Figure 4g

EL28837 ATR 4-2008 SKYTEM Conductor Areas1,2&3 over Total Count+AMAG Linears

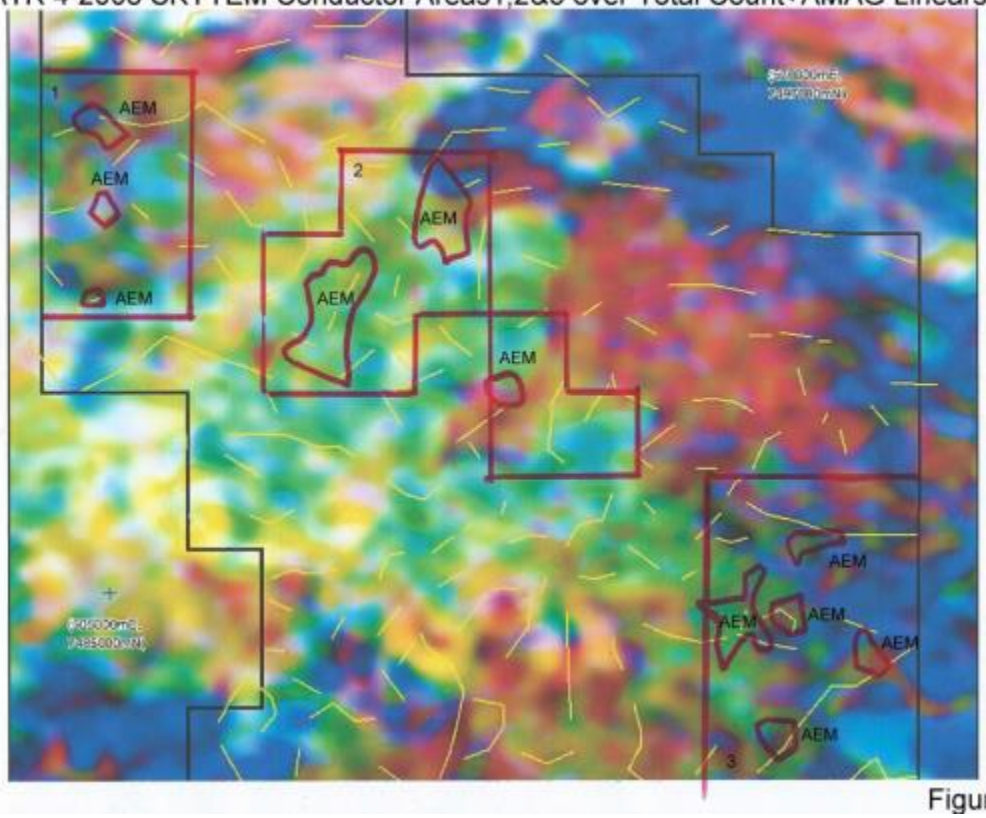


Figure 4h

EL28837 ATR 4-2008 SKYTEM Conductor Areas1,2&3 over Regional Gravity+AMAG linears

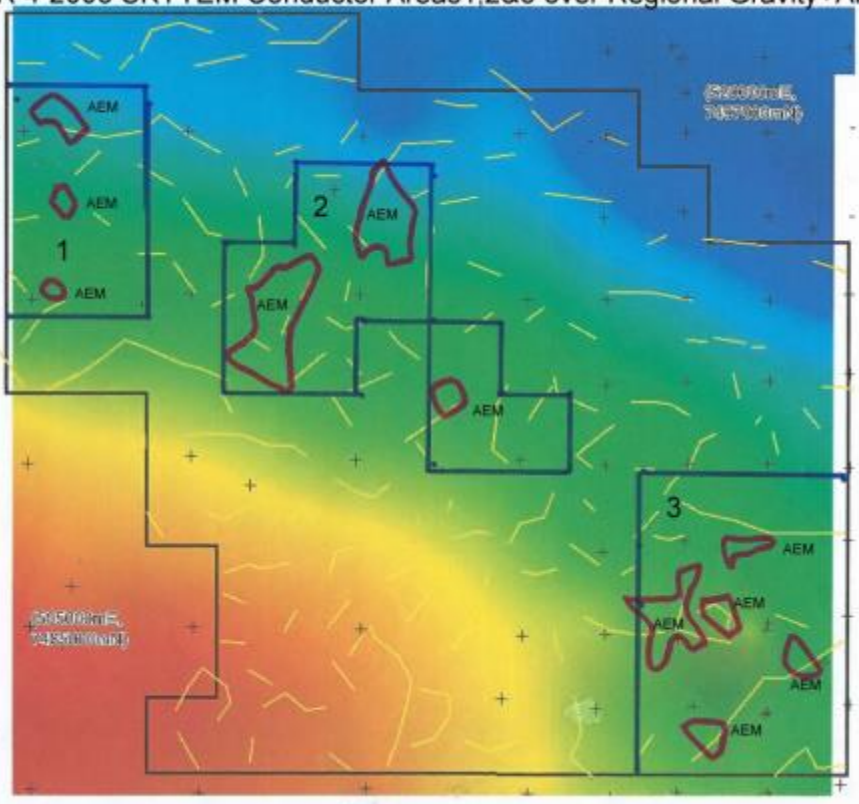
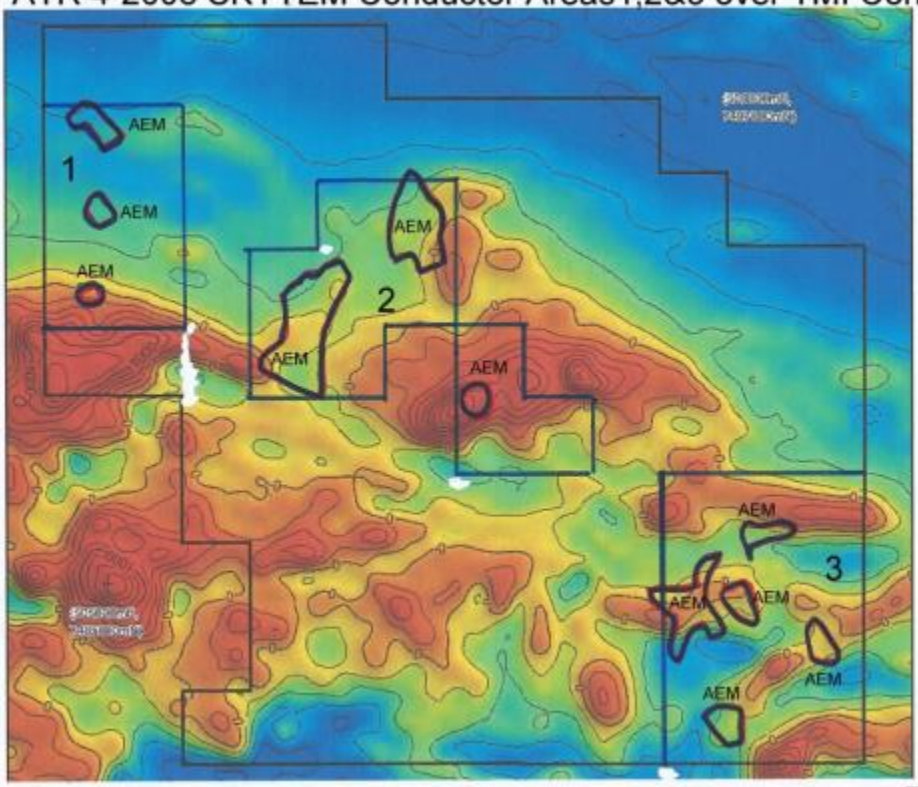


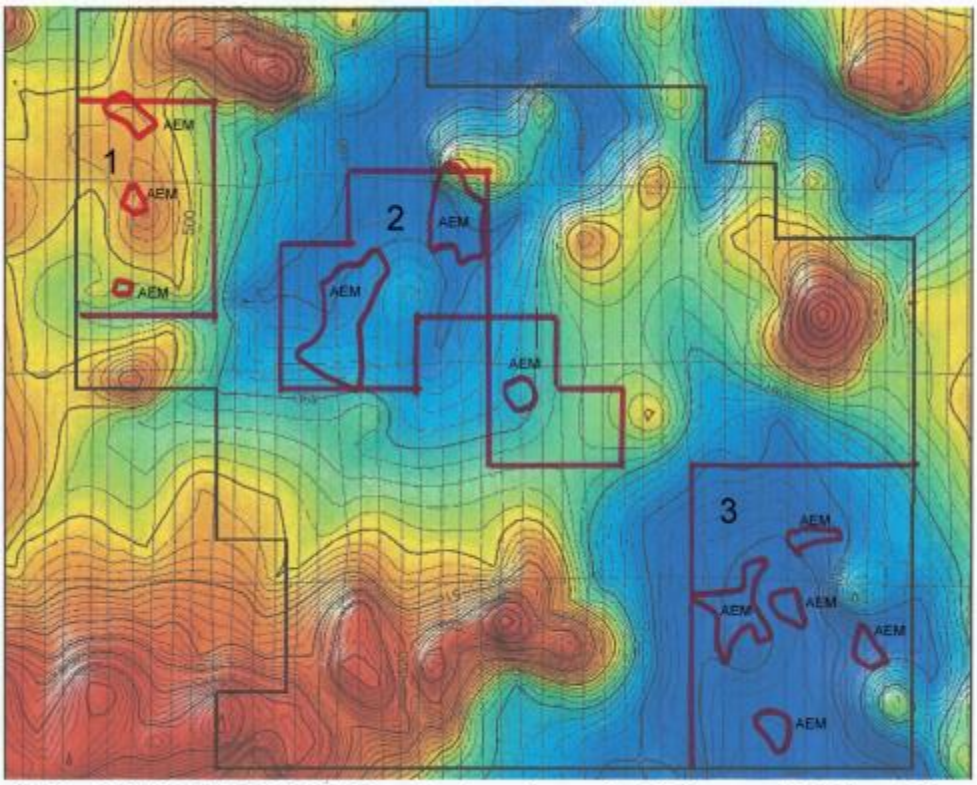
Figure 4i

EL28837 ATR 4-2008 SKYTEM Conductor Areas1,2&3 over TMI Contours



Hi AMAG = mafic granulite protolithic 1844Ma Tholeitic basalt prospective VHMS basemetal(Au-Ag) sulfide mineralisation

Figure 4j



EL28837 ATR 4-2008 SKYTEM Conductor Areas1,2&3 over DTM Figure4k

EL28837 ATR 4-2008 SKYTEM Conductor Areas1,2&3 over Depth to Magnet-ic Base-ment

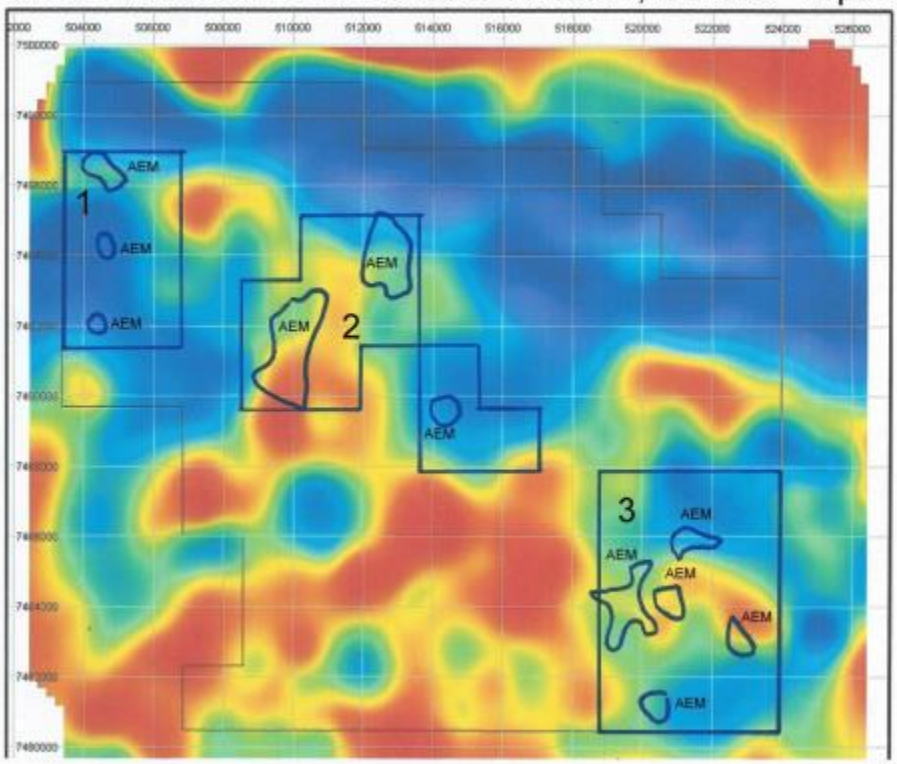
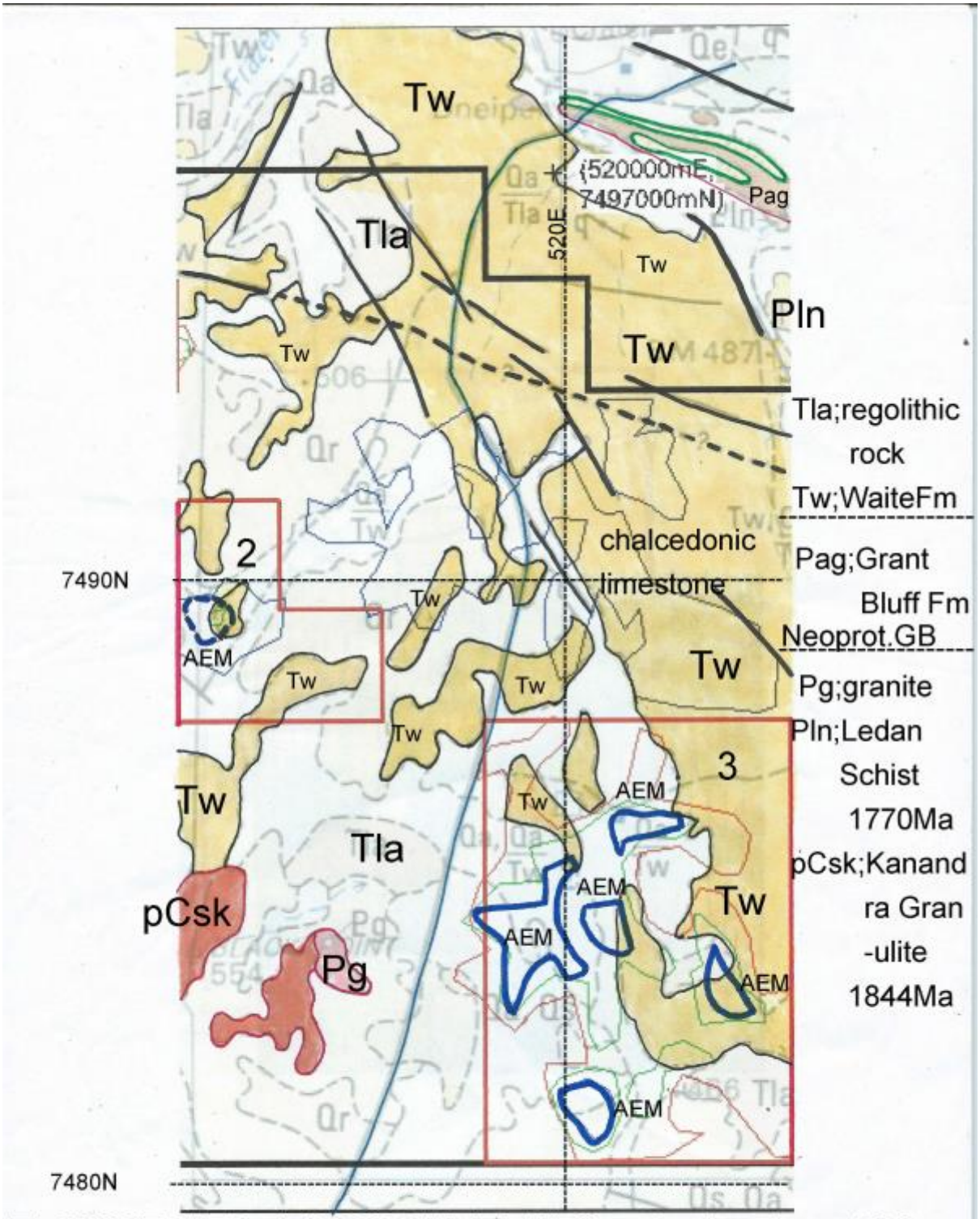
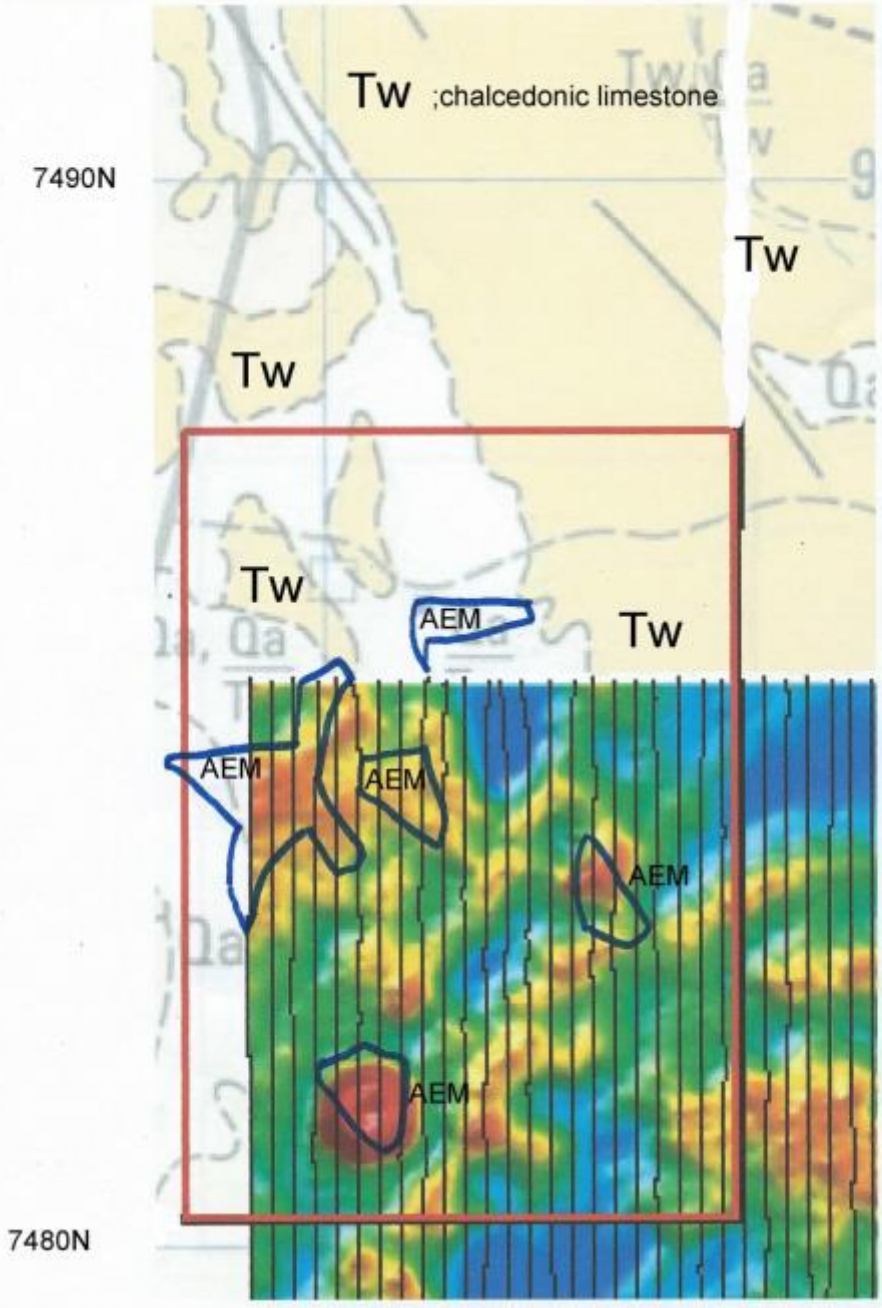


Figure 4l



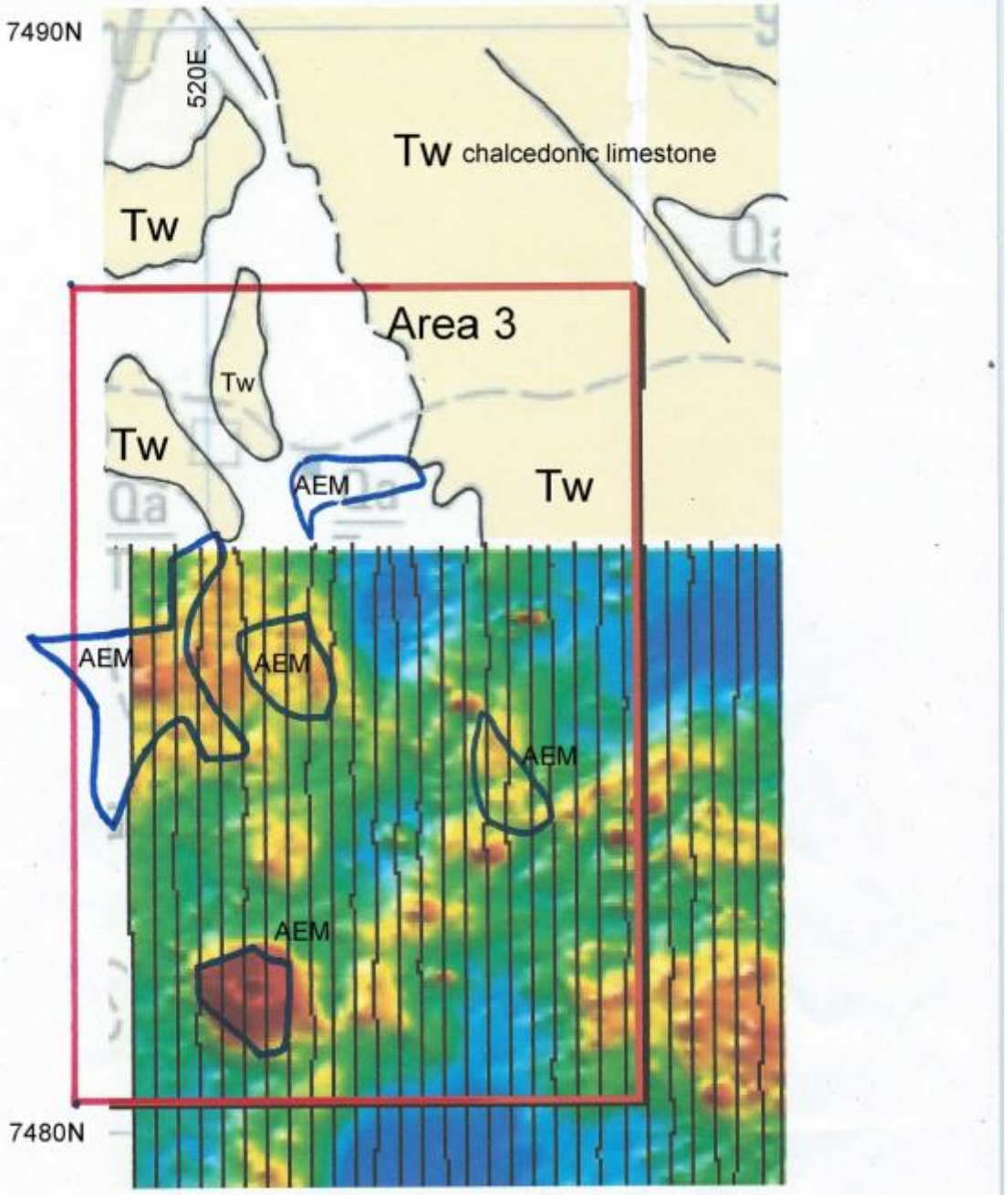
EL28837 ATR 4-2008 SKYTEM Conductor Area1&2 over GEOLOGY 250k

Figure 4m



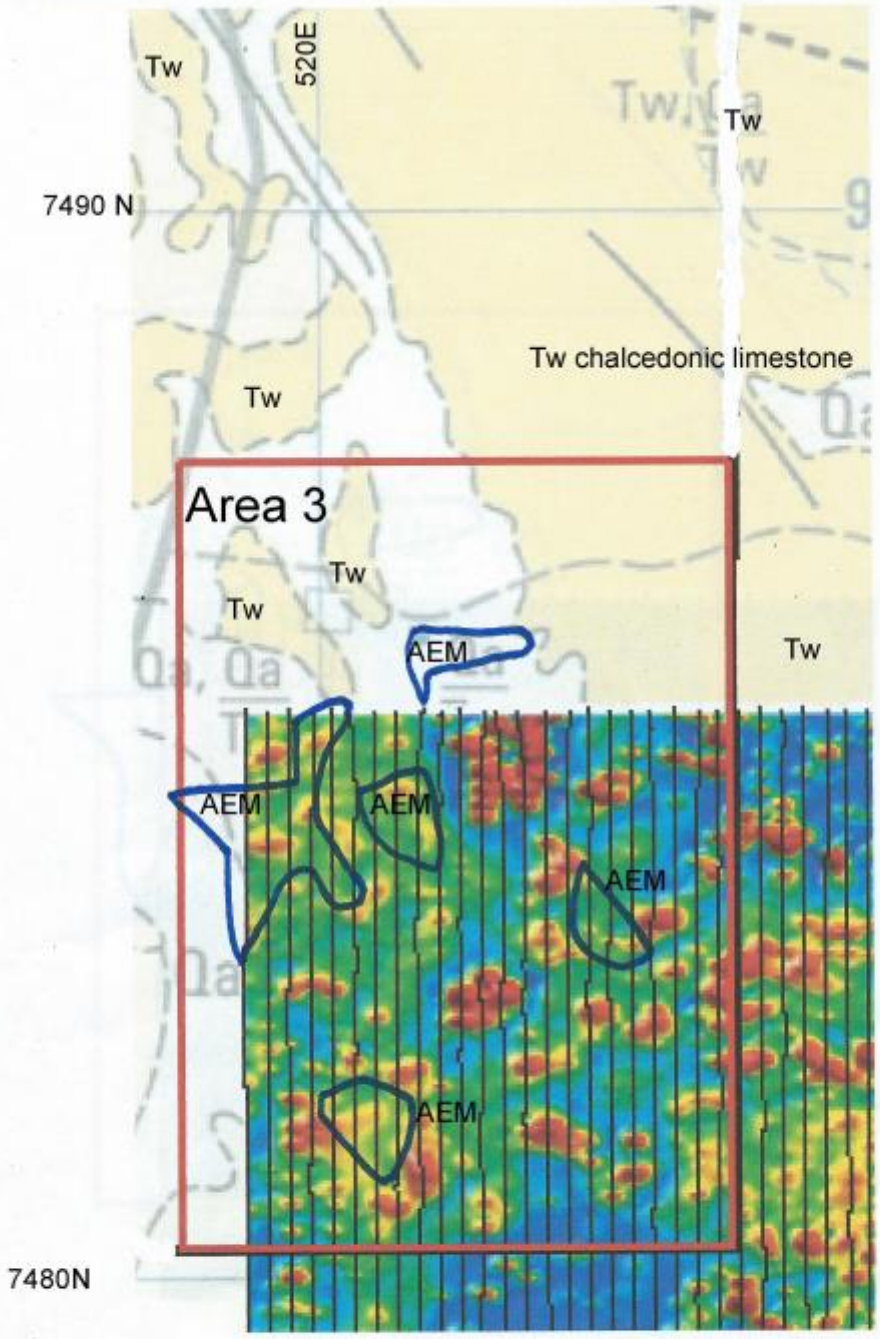
EL28837 ATR 4-Area 3 2008 SKYTEM Conductors(5) @500m l.s. over Hoistem 200m l.s.50m Conductivity slice

Figure 4n



EL28837 ATR 4-Area 3 2008 SKYTEM Conductors(5) @500m l.s. over Hoistem 200m l.s. 100m depth Conductivity slice.

Figure 4o



EL28837 ATR 4-Area 3 2008 SKYTEM Conductors(5) @500m l.s.over 2002 Hoistem 200m l.s. 200m depth Conductivity slice.

Figure 4p

APPENDIX 1

Geophysical Consultants Report

MEMORANDUM

To: Alistair Mackie

From: Grant Archer (Consulting Geophysicist)

Date: May 2016

Subject: EL28837 Geophysics

1. INTRODUCTION

EL 28837 "Pulpit Rock" has been targeted for potential for IOCG and VMS base metal deposits. A considerable proportion of the license area is covered by Quaternary alluvial deposits and Tertiary Waite Formation limestones which are reported to potentially host acquifers. It is suggested the Waite Formation in Area 3 could be deeper than 140m.

Geophysics was to be used to determine depth of magnetic basement underlying Waite Formation and the Quaternary.

Further work was to be carried out to extend analysis of AEM data over target areas of interest.

Data sets used for this task consisted open file aeromagnetic data and SKYTEM and partially coincident HoistEM AEM survey data.

All figures referred to in this memorandum have been appended to the end of the text.

2. DATA

Data used for this work was comprised of one airborne magnetic survey and two electromagnetic surveys. Magnetic data consisted of the 1981 NTGS Huckitta aeromagnetic survey using a 500 meter line spacing (North-South). Airborne electromagnetics surveys used were the Bundey River SKYTEM survey (2007) using 500 meter line spacing and the Huckitta HoistEM survey (2002) using 200 meter line spacing (AGD66 had to be converted to MGA94).

3. DISCUSSION

Figure 1 shows Huckitta 1:250,000 geology map (reference NTGS) with the tenement boundary divided into 3 area's A, B and C identified from left to right (B is the adjoined area). Published geology essentially consists of quaternary (Qa and Qs), deeply weathered rock and Waite Formation Equivalents.

Figures 2, 3 and 4 show the various airborne survey lines for the available data, ranging from open file aeromagnetic data (Figure 2), SkyTEM survey data (Figure 3) and HoistEM data (Figure 4). A compilation of all airborne survey lines are shown in figure 5.

Aeromagnetic data (Reduced to pole) is shown in figure 6 with an overlay of geology. Dynamic range of these data is of the order of 2500nT.

Figure 7a shows a plot of automated depth to magnetic basement over the tenement area (red shallowest). This version of computed data suggests magnetic basement generally gets shallower going to the south east. Other presentations of magnetics are shown in Figures 7b and 7c. Vertical derivative data suggests consistency with data shown in figure 7a (general shallowing to the east). Figure 7c attempts to display data "independent" of depth and suggests magnetic basement is detectable with these data over the full tenement area.

Some important results of SkyTEM inversion data are summarized in Figure 8 where "contours" are shown (conductive anomalous areas of potential interest).

An example of SkyTEM inversion data enhanced to highlight areas of interest is shown in Figure 9.

The HoistEM line data database was transformed to GDA 94 from AGD66. An example of inversion of HoistEM data is shown with "similar" SkyTEM data in figure 10. A good agreement is discovered between data sets with observation of the circular feature located at 520400mE, 7481400mE (it has been speculated this feature is a result of a meteor impact).

Late time data is shown in figure 11.

Various forward and inversion magnetic modelling was carried out to better delineate the depth of magnetic basement with some of the results shown next in this report in reverse order in the report (from Area3, Area2 and then Area1).

The published drilling data base indicates 5 shallow holes on the license in the south-west corner of Area3.

Figure 12 shows a plan view of some of the forward/inverse modelling lines illustrated in this memorandum for Area3. Figures 13-16 shows some anomalies which were modelled. It is noted that altitude data were not available within these located data (Huckitta) but survey altitude was reported at 100 meter. [annotated depths in the figures are relative to sensor height which is presumed to be 100 meters]

Depths described in figures 13 and 14 on aeromagnetic line 2046 are 216 meters (after removing sensor height) in the north at 7486600mN and close to surface in the south at 7482800mN (after removing sensor height) and shows potential of shallowing to the south.

A modelled anomaly (7486560mN) on Line 2050 is shown in Figure 15 with a corrected depth below surface of 36 meters. This is the main EW structure in the north and suggests a shallowing of this structure to the east.

Line 2040 (western line of Area 3) gave corrected depths of 69 and 139 meters below surface (Figure 16). The published drilling data base provides hole "HT3" was drilled to 42 meters whereas the modelled magnetic depth at this location (7484000mN) was 139 meters well in excess of hole depth (the sources was not tested).

Area 2 line 2029 presented in this memorandum can be seen in figures 17 and 18. The modelled anomaly here is the main magnetic structure in the south at 7488950mN and has corrected depths of 0 meters (surface) and 77 meters as part of this anomaly.

Line 2015 from Area 1 is presented in Figures 19 and 20. This is magnetically quiet area. The anomaly presented here had a corrected depth of 130 meters below surface and represents the magnetic anomaly on the eastern boundary at 7493000mN.

Further work was to be carried out to extend analysis of AEM data (EM modelling) over target areas of interest but is not presented here. However the circular feature noted in AEM data at 7481400mE (both survey data sets) is apparent in mid to late time channels and in inversion data certainly in the range 30m – 100m below surface. The possibility of an impact crater has been suggested.

CONCLUSION

Work was carried out with the available geophysical data (survey summary shown in Figure 5) to focus on depth to magnetic basement in the first instance through forward and inversion magnetic modelling and additionally work towards AEM data review and EM plate modelling(but results of EM modelling are not reported in this memorandum).

Forward and inverse modelling of magnetics was carried out and suggested depths ranging from surface down to 220 meters. Inaccuracies in these results are contributed to by missing elevation data in the source located data used for modelling of magnetics; a nominal survey altitude of 100 meters was used in analysis.

Based on these magnetic modelling results magnetic basement targets are at a feasible depth for test drilling guided by AEM anomalism with consideration to the possibility of ground water.

The published drilling data base indicates 5 shallow holes on the license in the south-west corner of Area3. Hole “HT3” was drilled to 42 meters whereas the modelled magnetic depth at this location was 139 meters well in excess of hole depth.

Data acquisition of close spaced AEM or ground EM and airborne magnetics has been proposed for Area3 and would be advantageous to further refine this analysis including further assessment of the risk of potential conductive ground water.

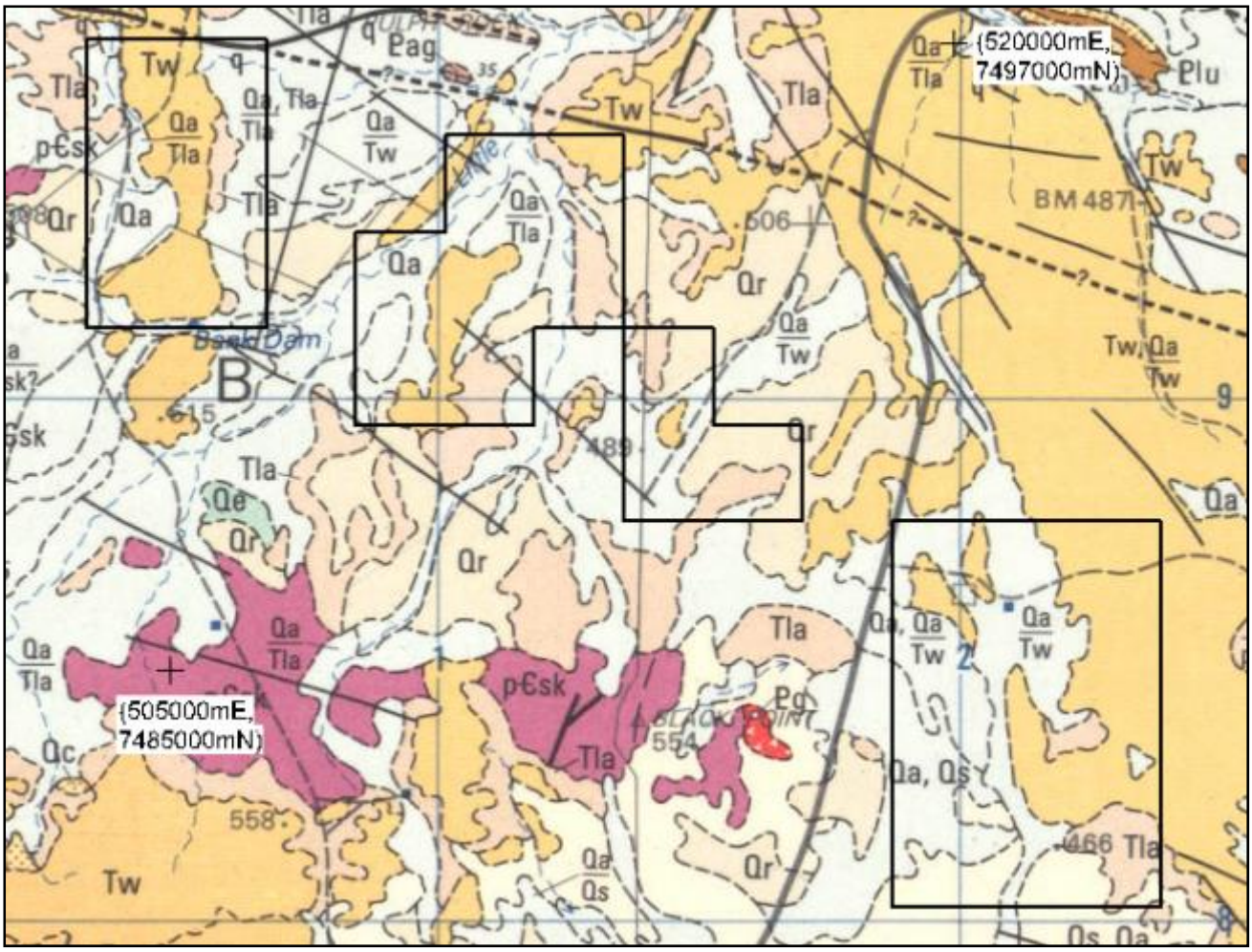


Figure 1 EL28837 Huckitta 1:250,000 geology map (reference NTGS). MGA Zone 53.

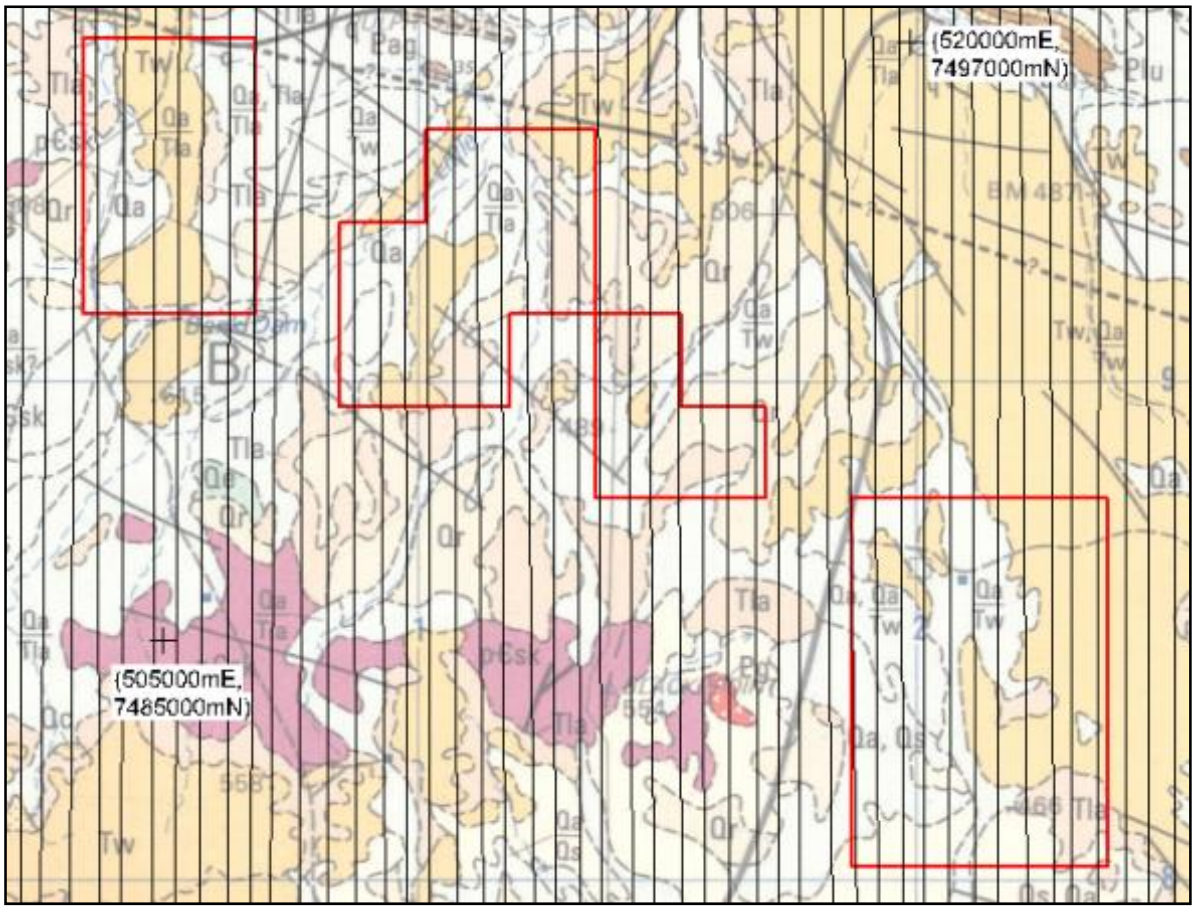


Figure 2. EL28837 Huckitta 1981 airborne geophysical magnetic survey (500 meter line spacing).

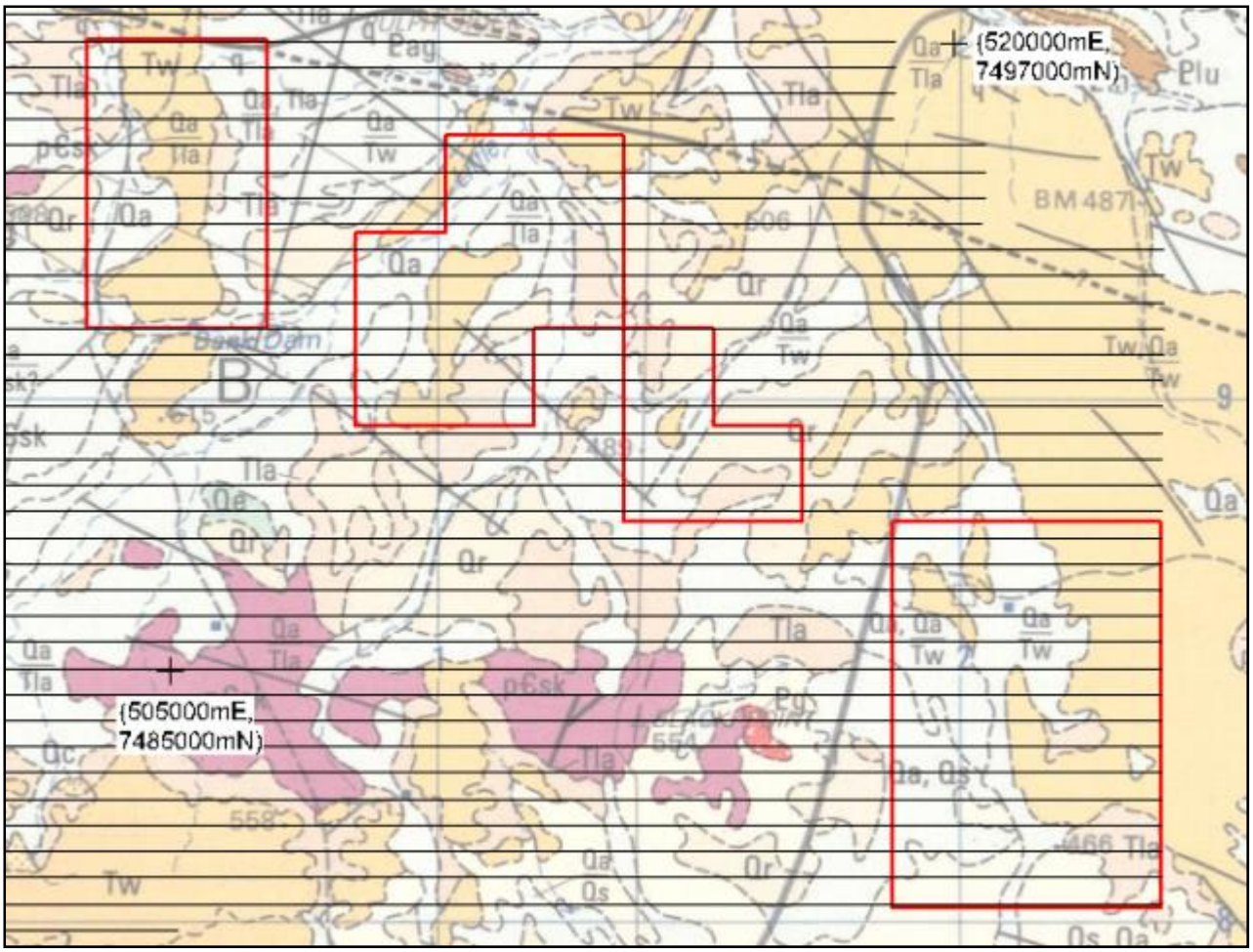


Figure 3. EL28837. Bundey River 2007 SKYTEM survey lines (500 meter line spacing)

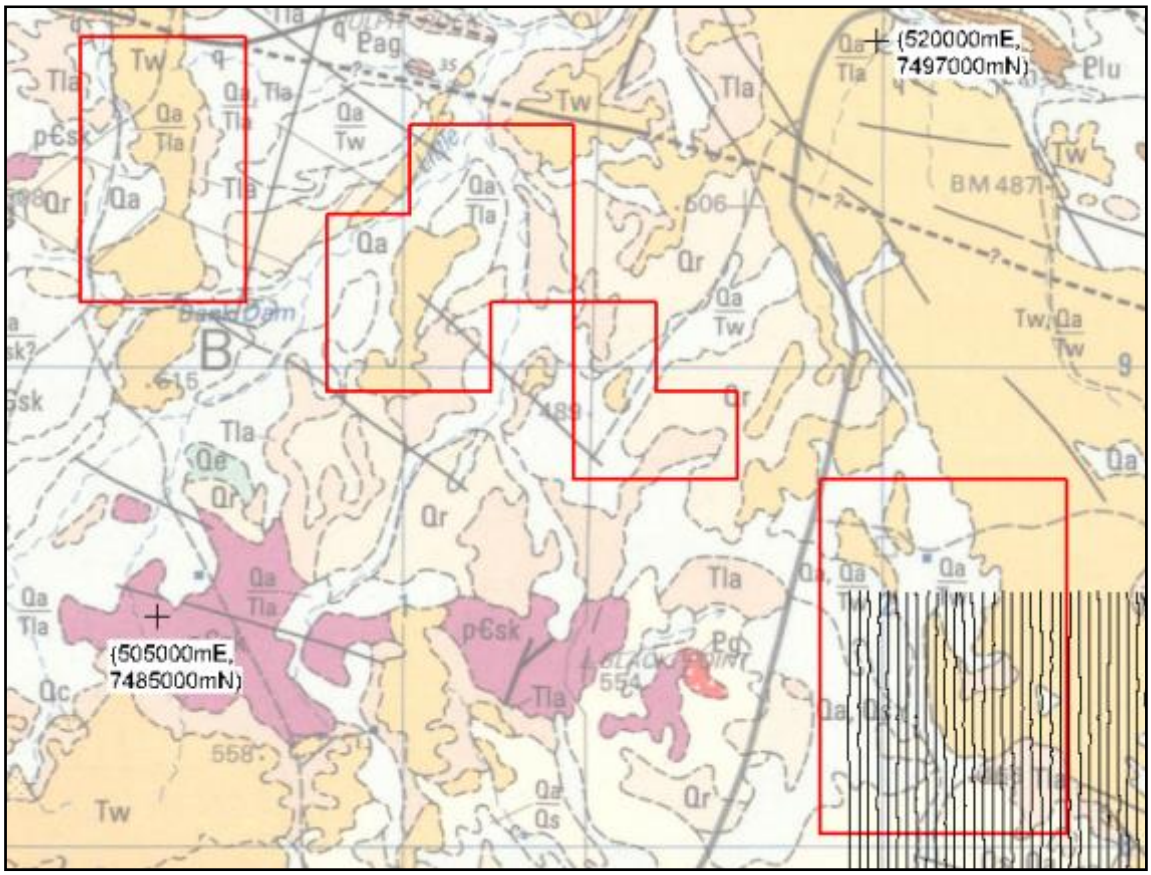


Figure 4. EL28837. Huckitta HoistEM 2002 survey lines (200 meter line spacing)

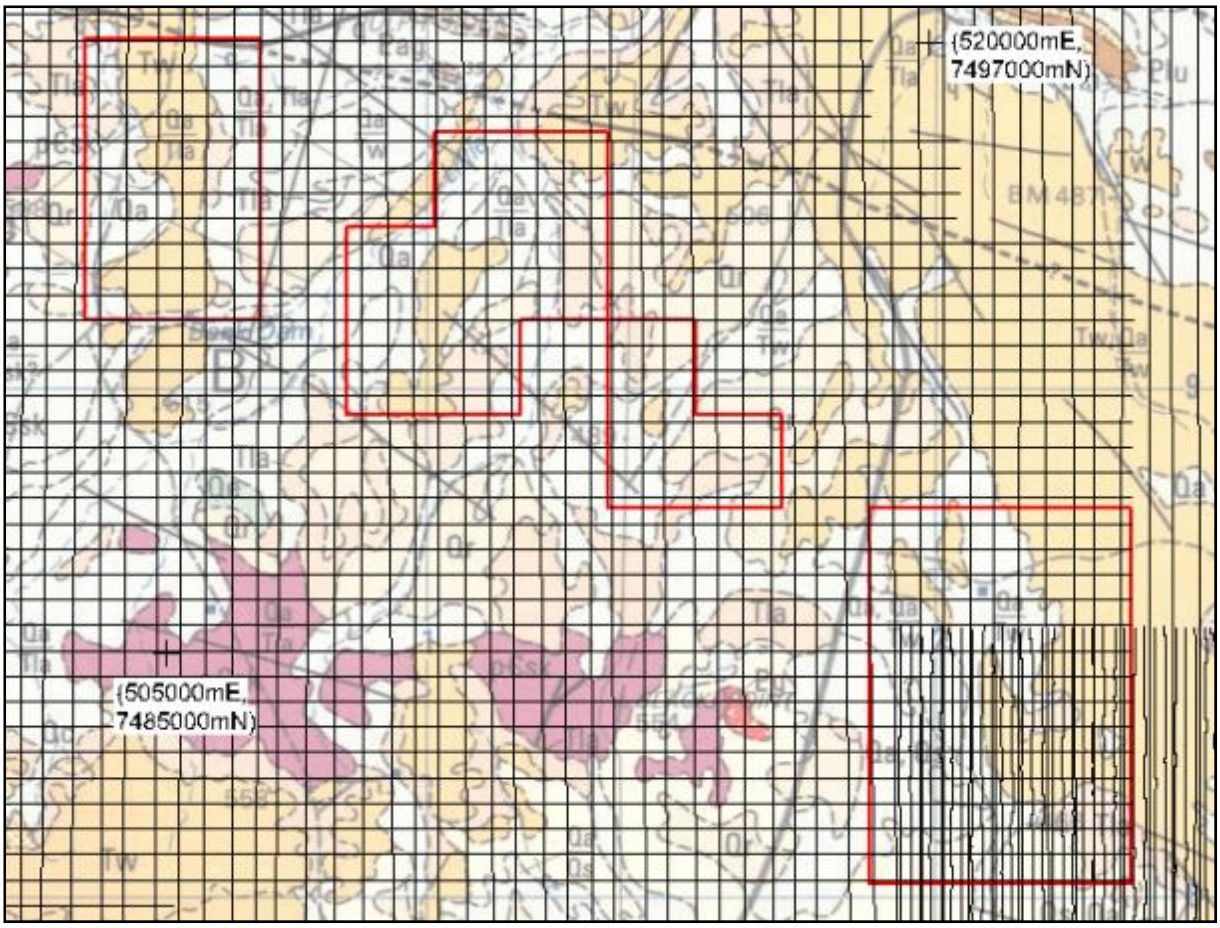


Figure 5. EL28837. Plot of all available survey lines combined (aeromagnetics / HoistEM / SkyTEM)

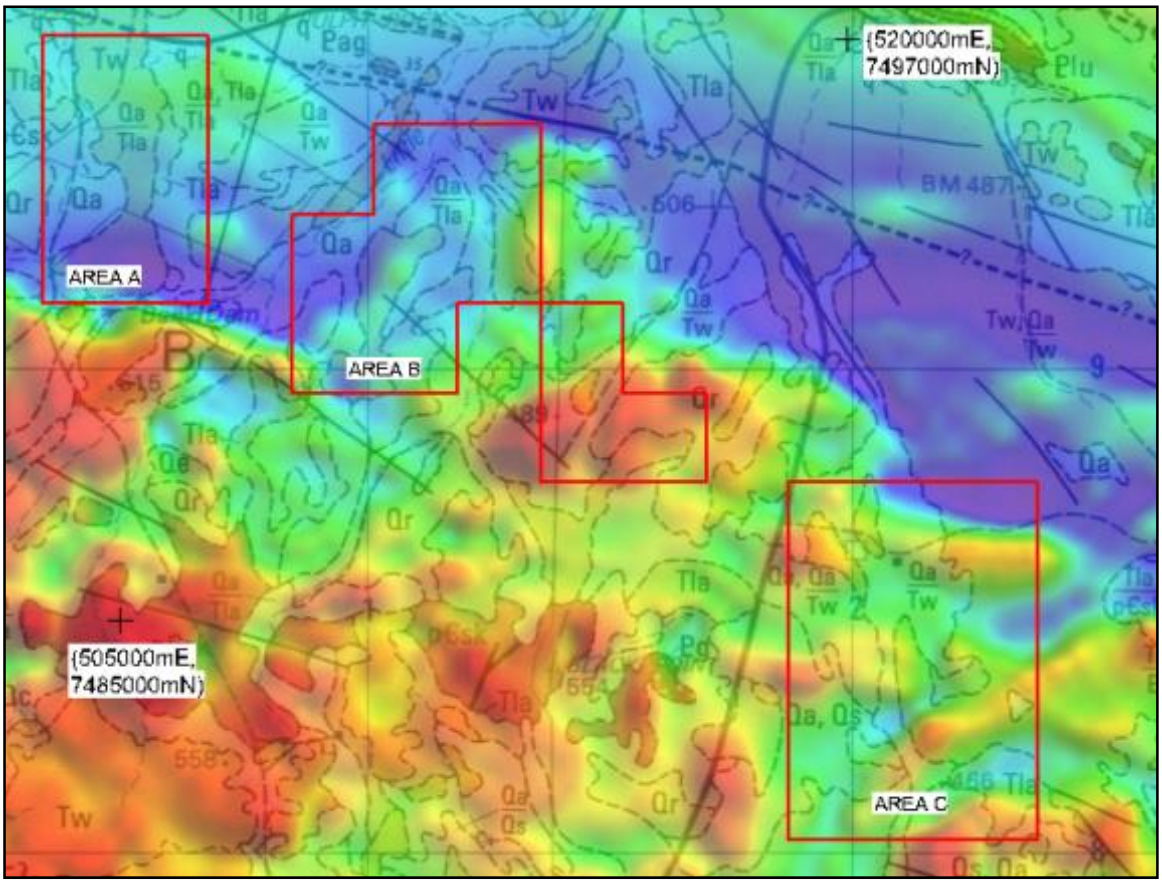


Figure 6. EL28837. Areas A, B, C identified. Reduced to the pole magnetics – Geological overlay.

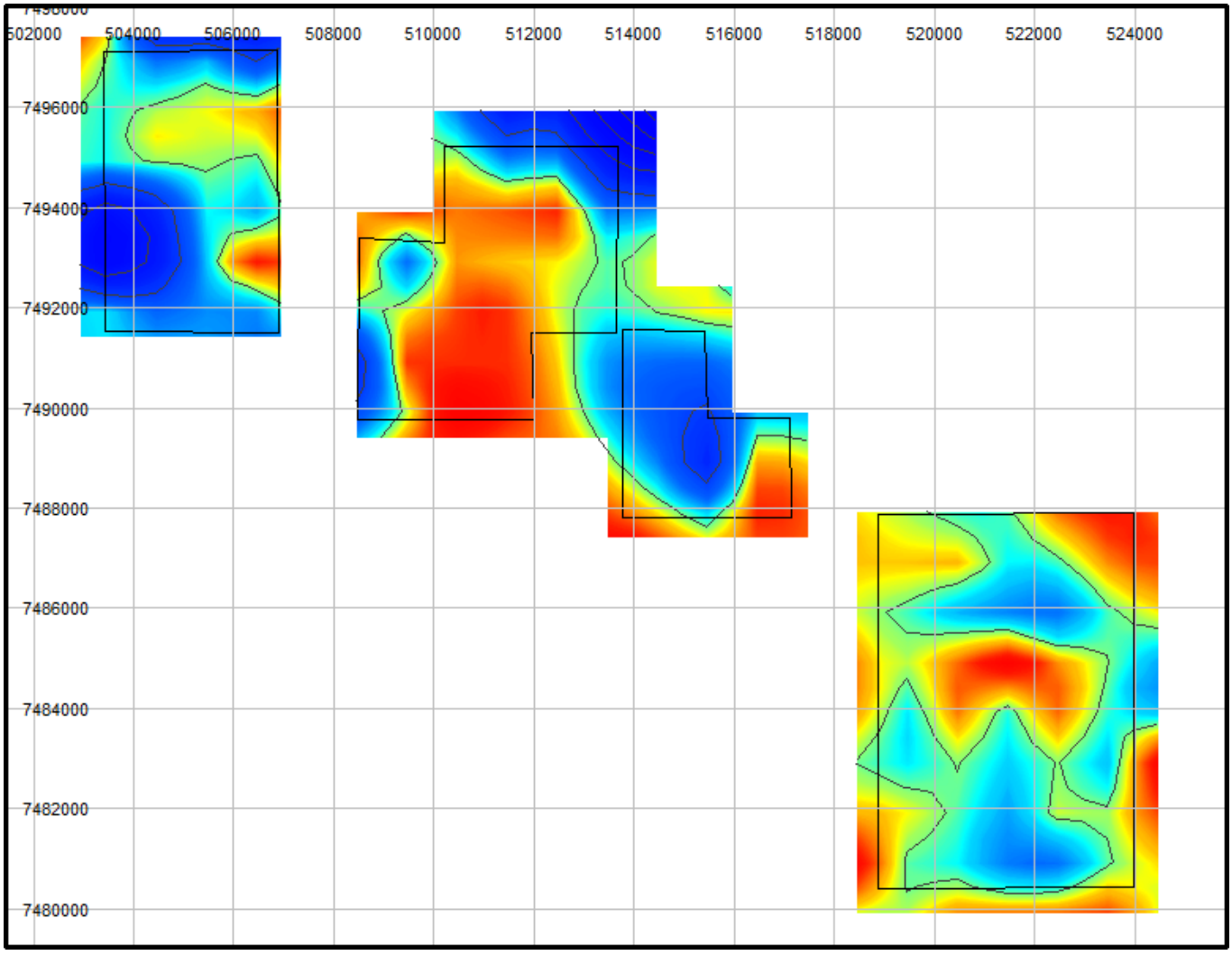


Figure 7a. EL28837 Automated depth to magnetic basement image.

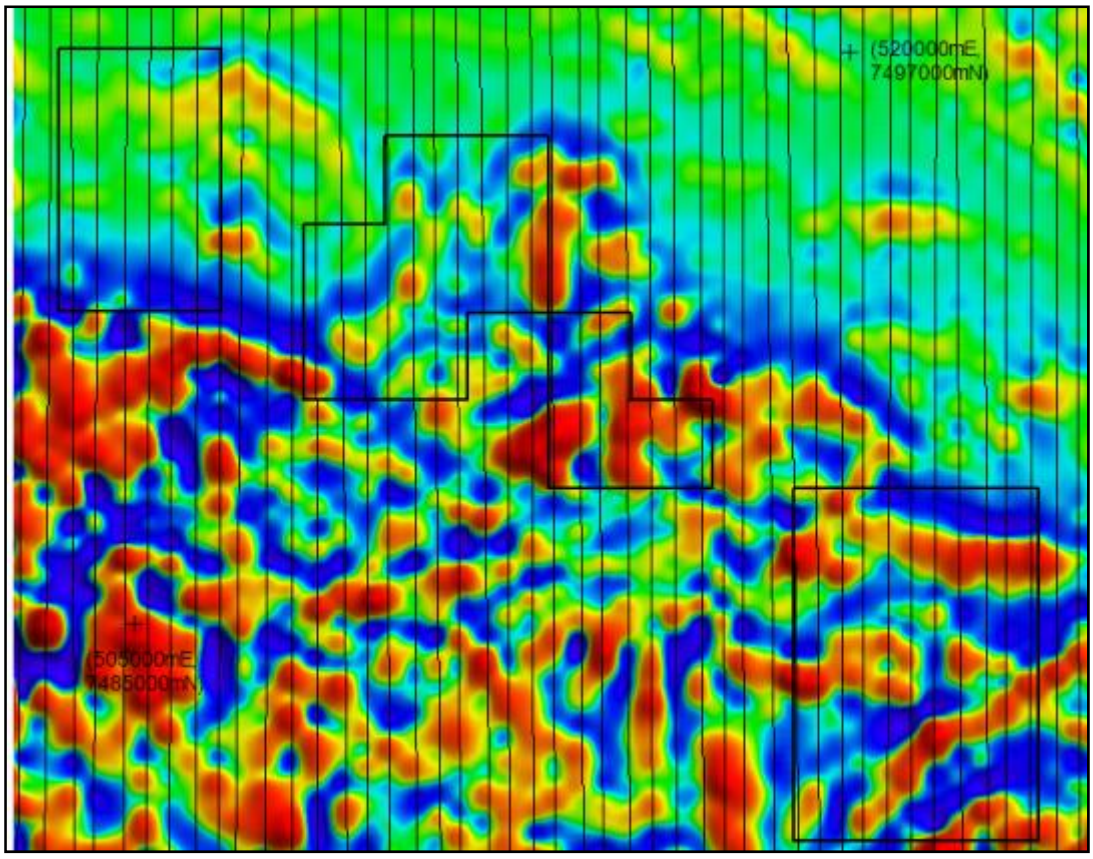


Figure 7b. EL28837 Vertical derivative of magnetic data.

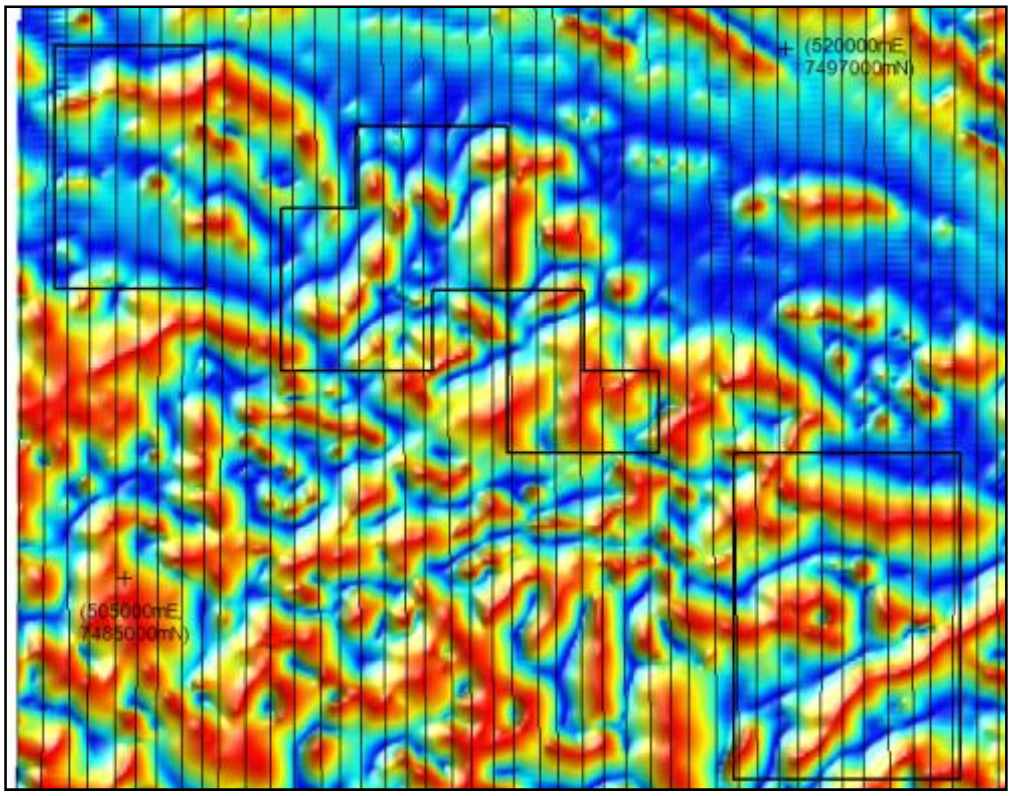


Figure 7c. EL28837 Filtered magnetic data.

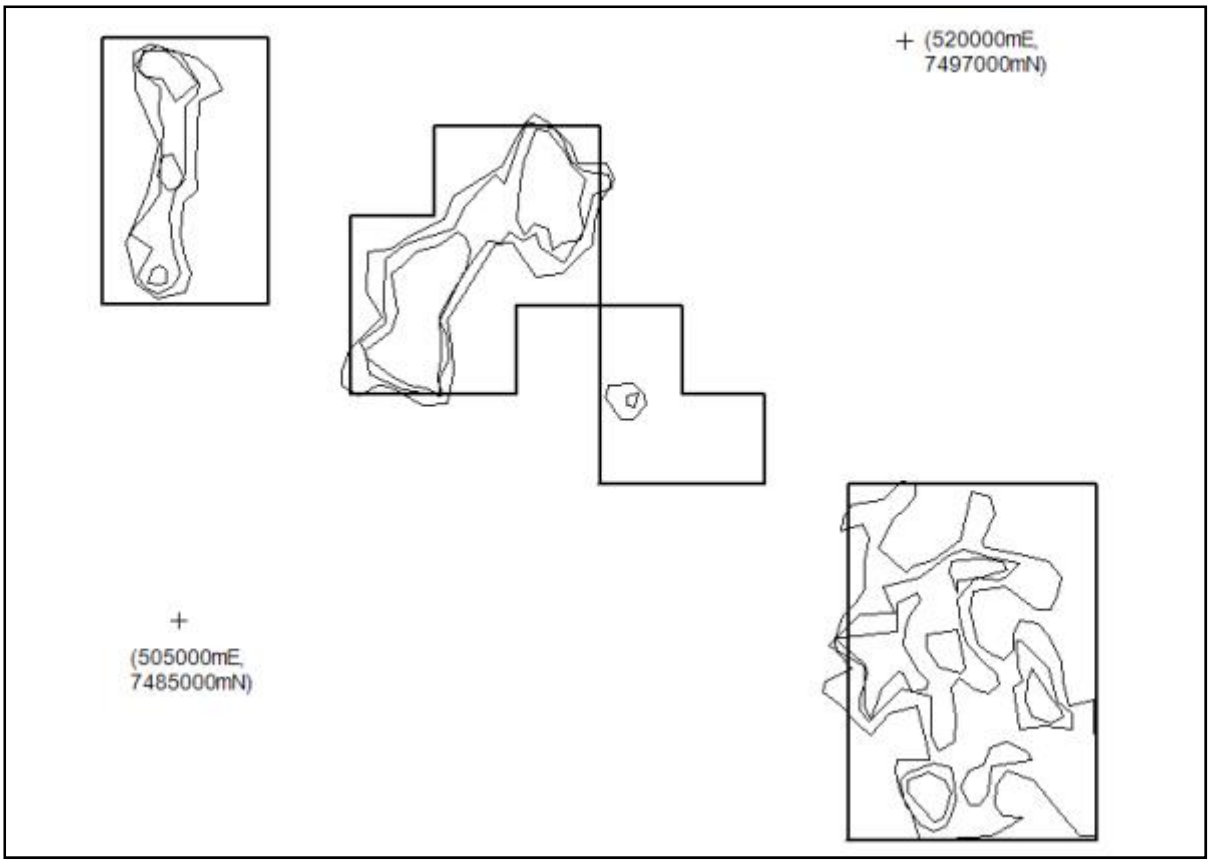


Figure 8. EL28837 Summary of results of interest from SkyTEM inversion.

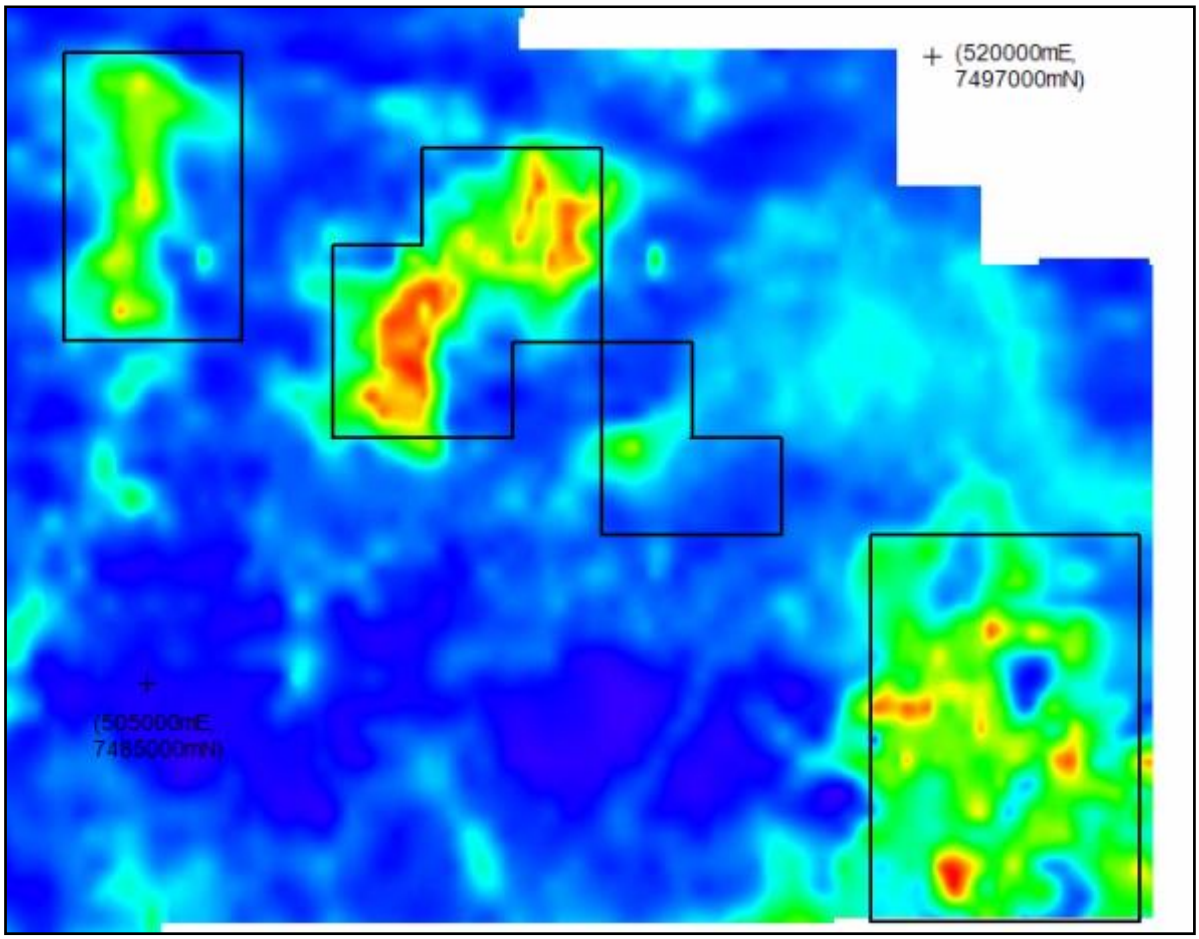


Figure 9. EL28837 Example of SkyTEM inversion data.

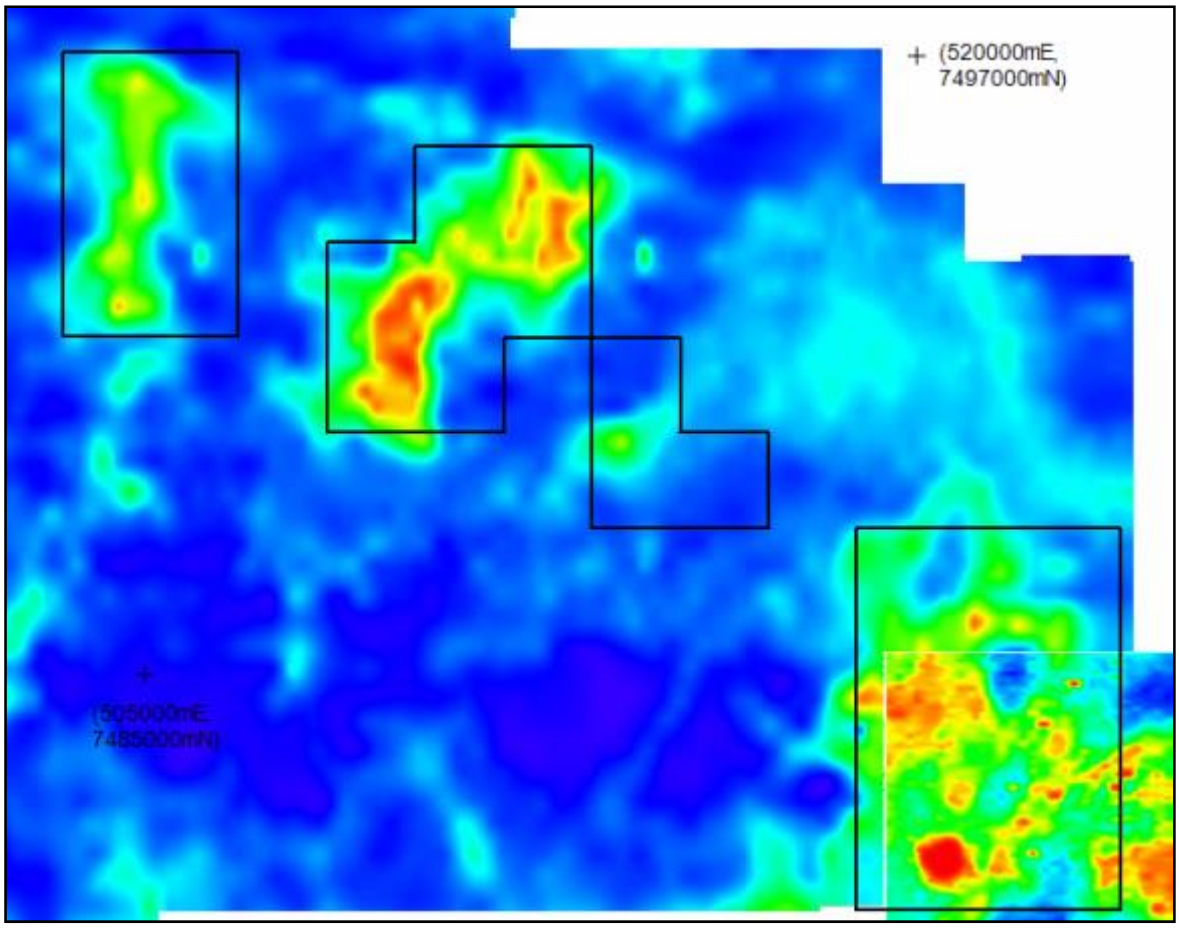


Figure 10. EL28837 Example of SkyTEM and HoistEM integrated inversion data.

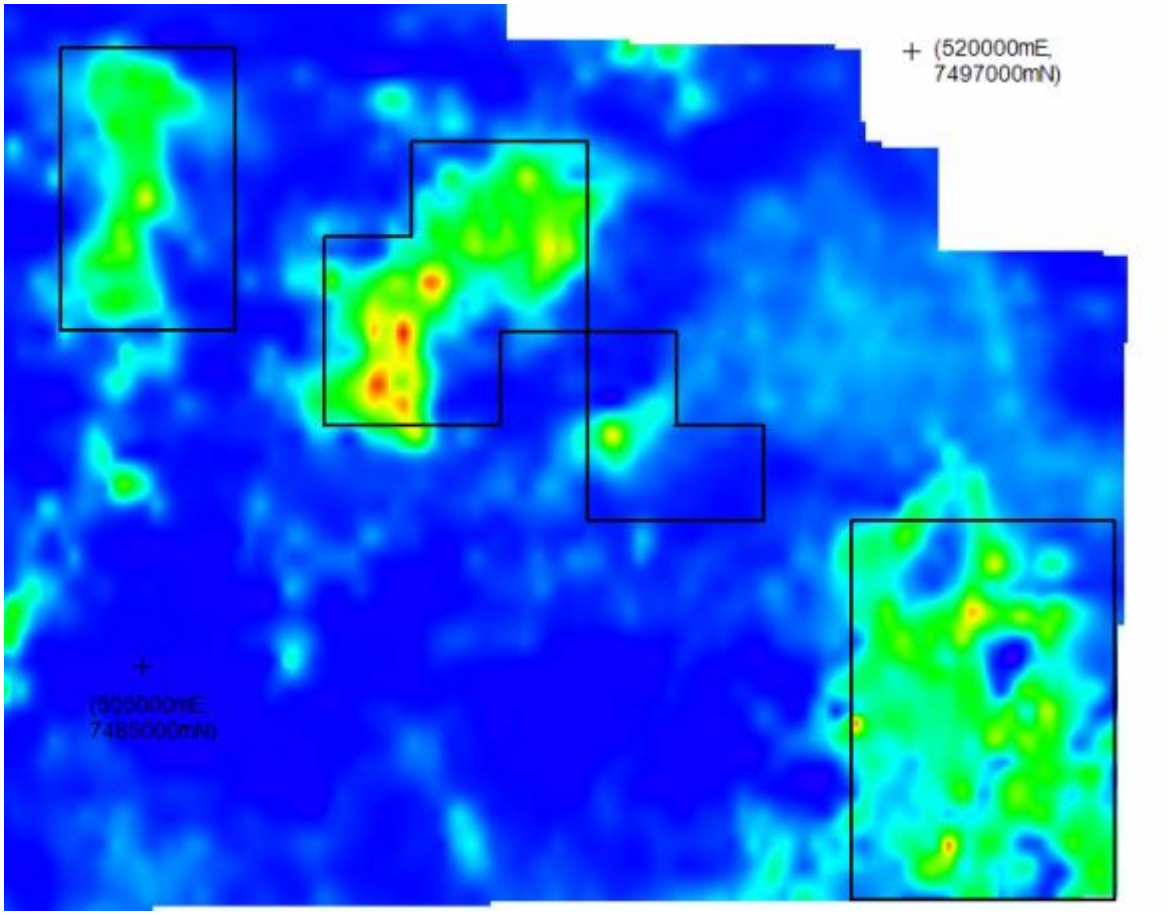


Figure 11. EL28837 SkyTEM late time data.

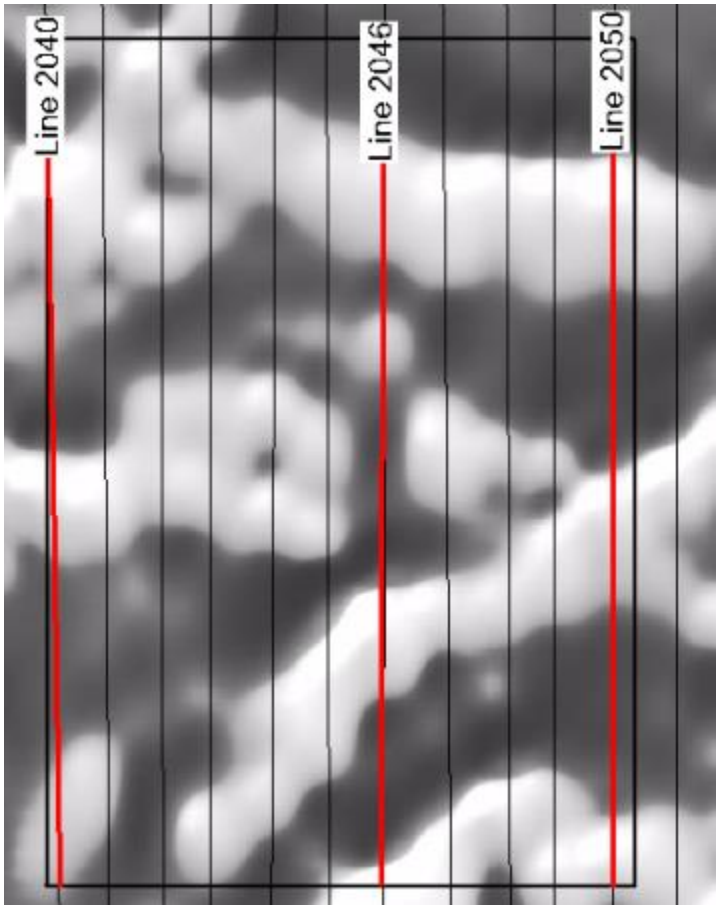


Figure 12. EL28837 Area 3. Forward modelled magnetic profiles presented in figures 12-15

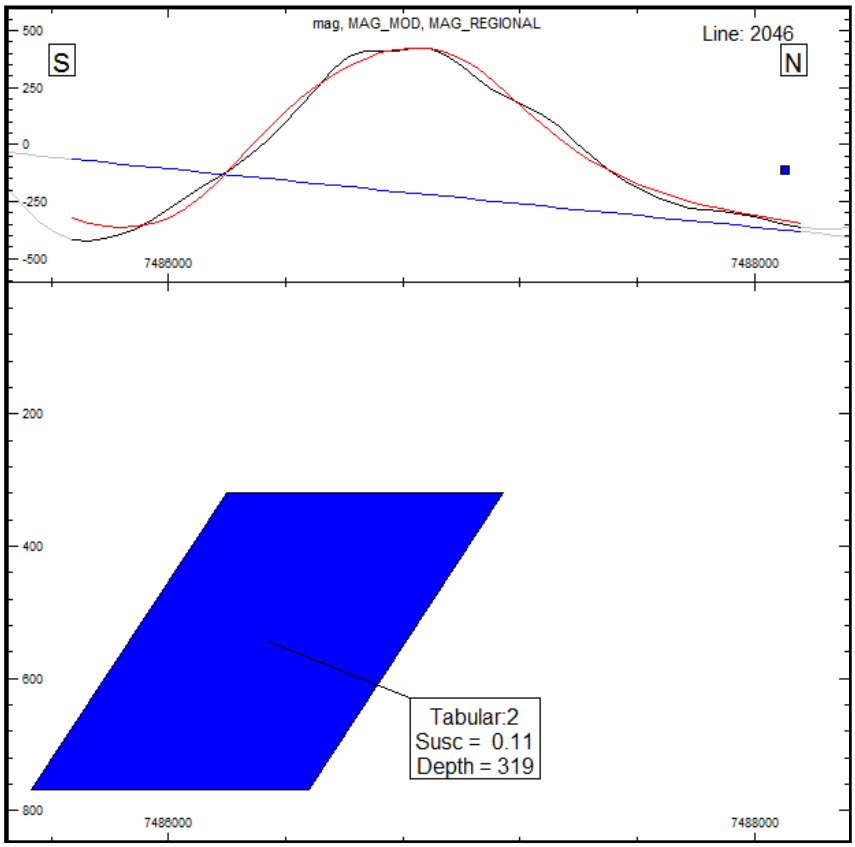


Figure 13. EL28837 Line 2046 in area 3. Forward magnetic modelling in vicinity of 7486700mN. (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)

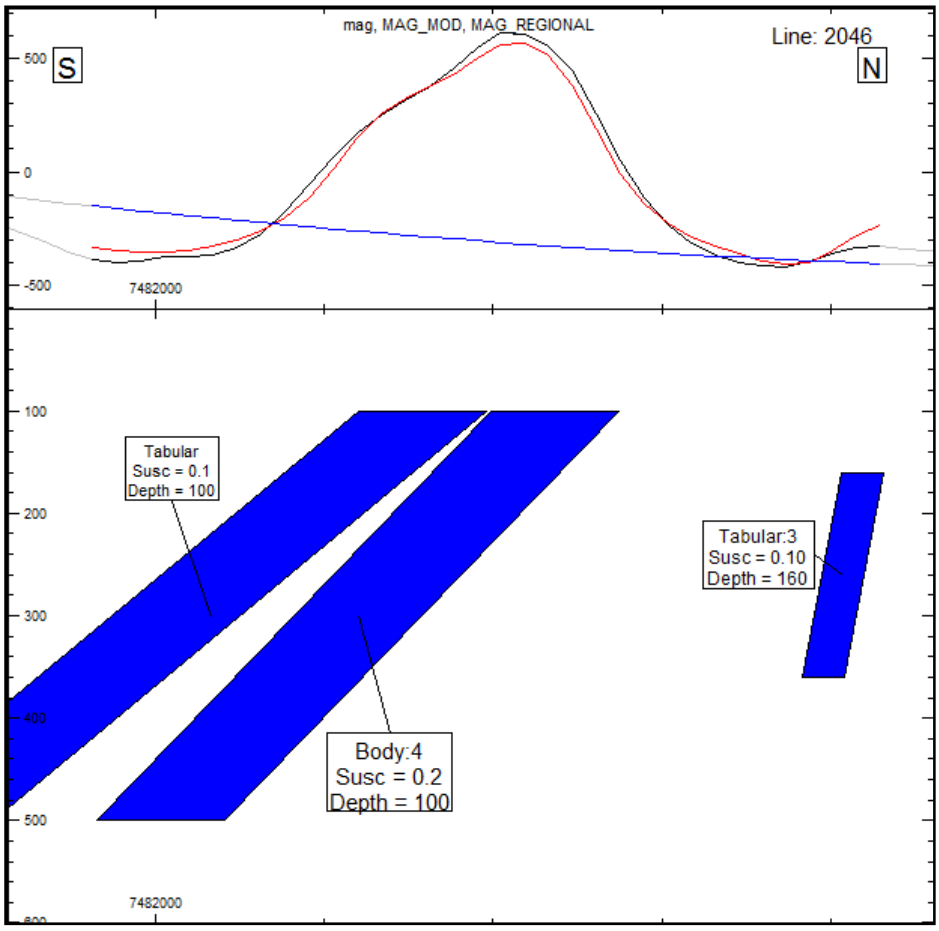


Figure 14. EL28837 Line 2046 in area 3. Forward magnetic modelling in vicinity of 7482800mN (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)

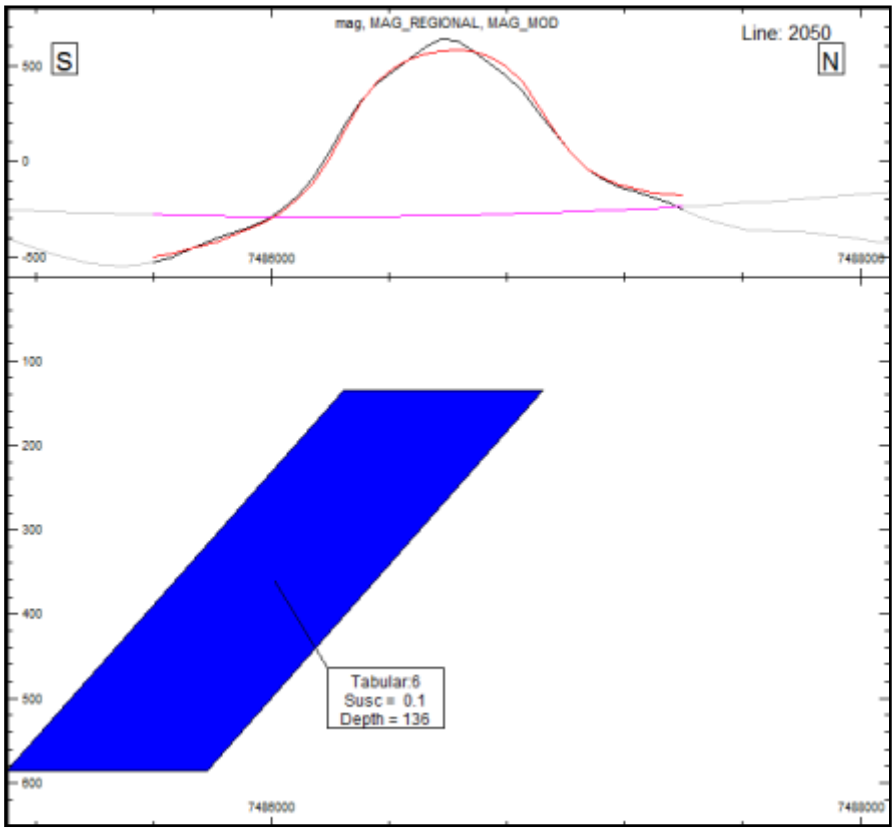


Figure 15. EL28837 Line 2050 in area 3. Forward magnetic modelling in vicinity of 7486600mN (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)

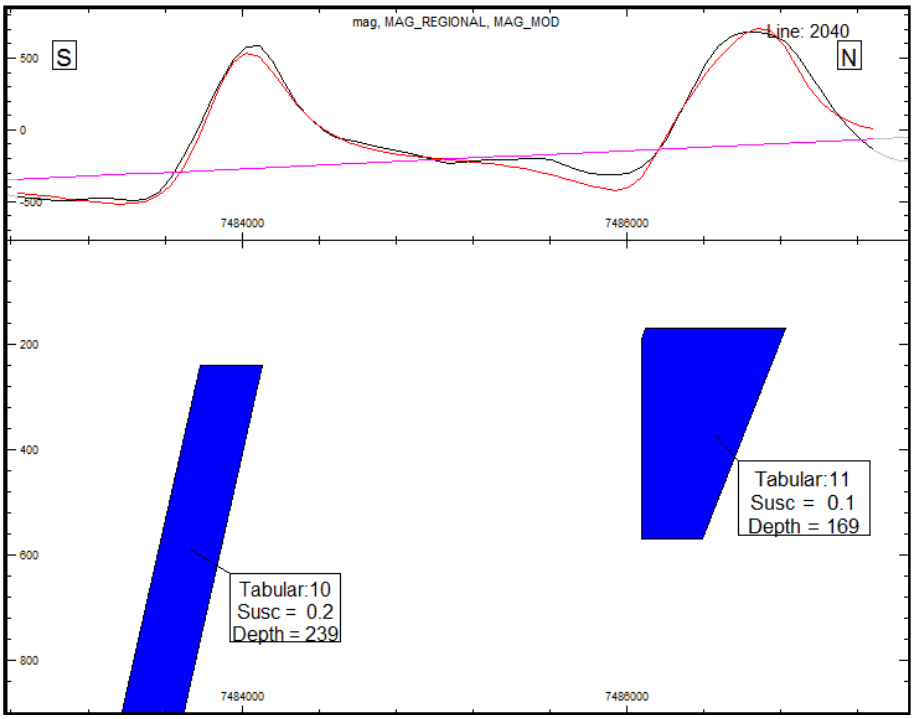


Figure 16. EL28837 Line 2040 in Area 3. Forward magnetic modelling. (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)

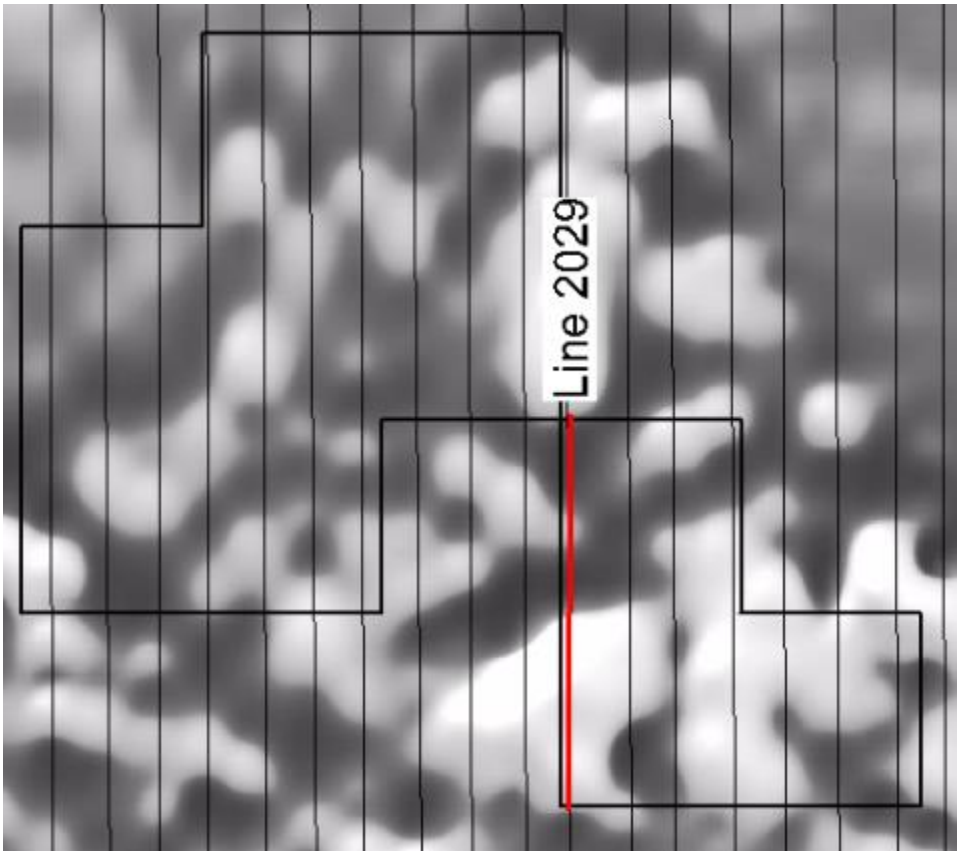


Figure 17. EL28837 Area 2. A forward modelled magnetic profile presented in figure 17

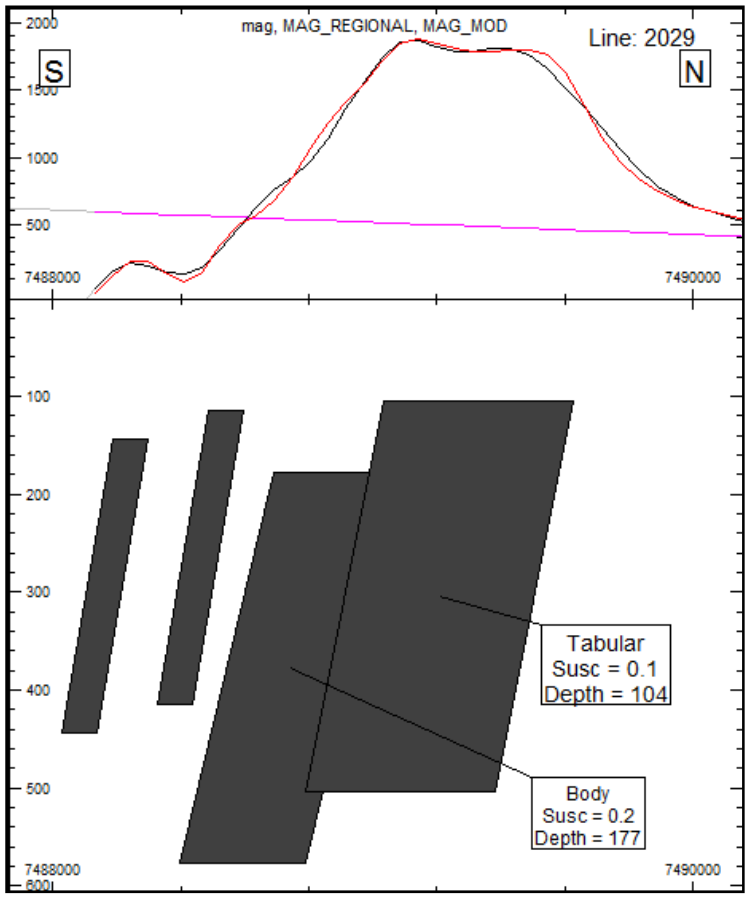


Figure 18. EL28837 Line 2029 in Area 2. Forward magnetic modelling. (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)

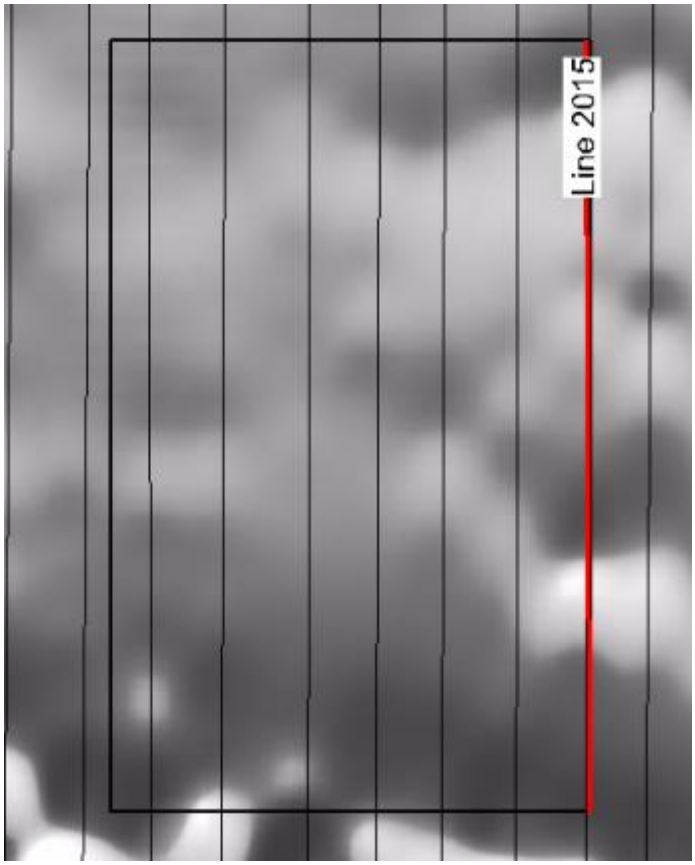


Figure 19. EL28837 Area 2. A forward modelled magnetic profile presented in figure 19

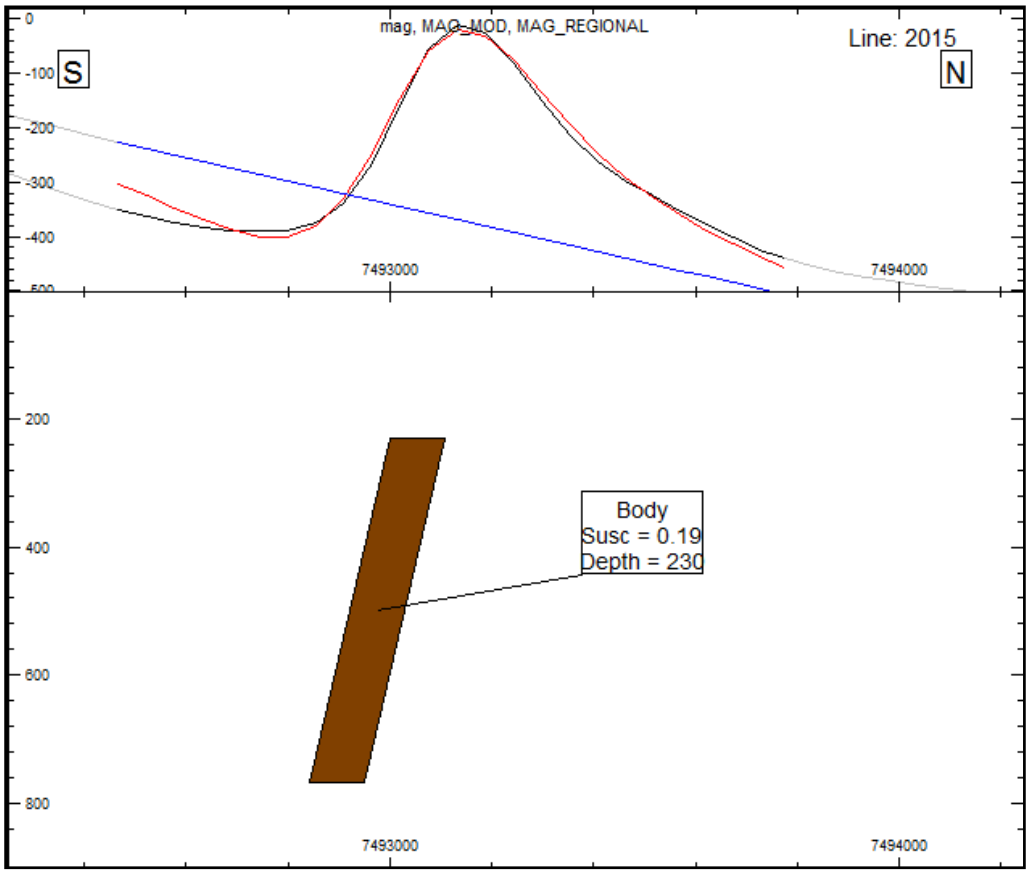


Figure 20. EL28837 Line 2015 in Area 1. Forward magnetic modelling. (depth is depth from magnetic sensor and is corrected to surface by subtracting the survey altitude of 100 meters – altitude data was not provided in located data)