

GEMPART(NT)P/L

EL29470 PLENTY HIGHWAY
ANNUAL TECHNICAL REPORT 5
(U,REE,Cu,Pb,Zn,Au,Ag,Ni,Cr,Co,PGE)
(Sn,W,Mo,Ta,Li)

HUCKITTA SF53 11

JINKA 6052

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1.SUMMARY

A fifth year program of (1)soil sampling, collecting 200,-5mm+1.6mm fraction samples over a 100m x 100m spaced grid centred over and around the Jubilee pegmatite –hosted mica workings was undertaken to test the lithium mineralisation potential of the historic Plenty River mica-bearing pegmatite field.Samples were sent to ALS for ME-MS61L analysis a 4 acid digestion method with Mass Spectrometry (MS) finish reading for 48 elements including Be,Cs,Li,Rb,Ta .At the time of writing Lab results are still pending and(2) Inversion modelling of a discrete,elliptical shallow VTEM AEM anomaly located on the western boundary of licence area was undertaken to determine if the above sub surface conductor was indeed a viable drill target ie indicative of massive sulphide-hosted base metal mineralisation or just more Riddoch Amphibolite ?

Depending on pending Lab analytical results ie are Jubilee and other unnamed pegmatites of the Lithium-Cesium-Tantalum bearing variety? If so additional soil sampling of the area north of the current grid is recommended plus a shallow RAB drill hole testing veracity of western boundary VTEM feature..Expenditure is set at \$11000.00 for forthcoming licence year.

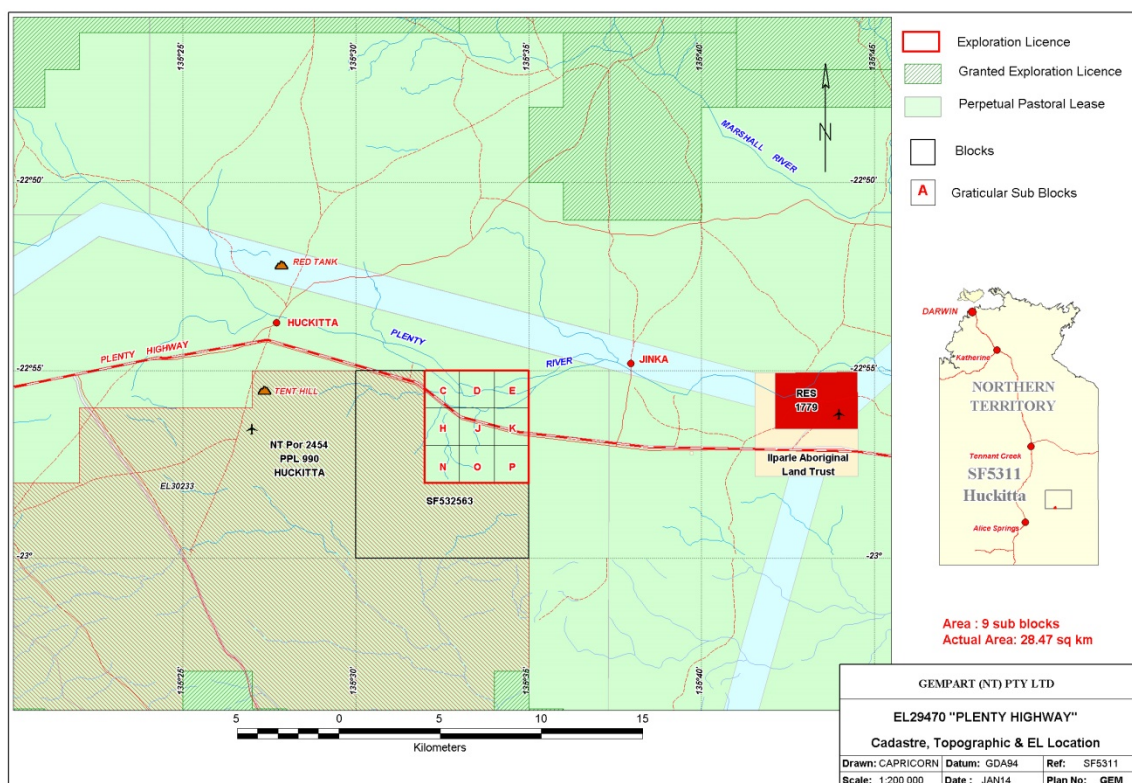


Figure 1.

2. INTRODUCTION

EL29470 Plenty Highway is neatly bisected (as name suggests) by Plenty Highway and easterly flowing Plenty River some 180km north east of Alice Springs. The licence area north of highway is overlain by present and palaeo-fluvial alluvial deposits of a major east south east-trending regional drainage system winding its way across central Australia for several hundred kilometres before evaporating in Simpson Desert. South of Plenty Highway the licence area is dominated by table-top Tertiary deposits of plateau-forming chalcidonic limestone assigned to Waite Formation.

3. LOCATION and ACCESS Figure 1

The licence area is located 230km by road from Alice Springs. Access is north via Stuart Highway for 70km then east via Plenty Highway for 160km until licence area is reached. The northeasterly turnoff to Prosser Bore marks eastern boundary of licence area.

4. TENURE

EL29470 Plenty Highway comprising 9 sub blocks (28.47 sq km) was offered for grant to Imperial Granite and Minerals P/L 10th December 2012 for 6 years however rent was paid by and licence subsequently transferred to Gempart (NT)P/L. EL29470 was sold to Xavier Resources P/L a subsidiary of Northern Cobalt Ltd 14th December 2017. Transfer documentation was lodged with Titles Division 15th January 2018.

5. PREVIOUS EXPLORATION

1980s

WMC recovered a single diamond from Entire Creek drainage sample AA614001 in 1979 precipitating a regional drainage sampling program including licence area collecting a total of 55 samples none of which were positive for diamonds or KIs (CR85/045).

CRAE P/L were granted EL4017 in 1982, covering licence area, following up HUCKITTA 500m I.s. AMAG interpreted dipolar anomalies possibly indicative of potentially diamondiferous kimberlitic/lamproitic intrusions, notated H13-20, four of which were traversed by GMAG (H13,17,19,20). A single drainage sample namely 821211 collected from northwest boundary of licence area returned negative results for KIs however sample 821202 draining H18 AMAG anomaly located 10km west of licence area contained 5 x 0.5 non-kimberlitic chromites (CR83/295).

1990s

BHP Minerals conducted a regional drainage/rock chip sampling program over the eastern half of QUARTZ and BRAHMA map sheets following up areas of elevated geochemistry with prospect scale GMAG/EM geophysical surveys. Several prospects were tested by fences of RAB drill holes intersecting anomalous Au, Pt, Pd, Ni, Cu geochemistry however no follow up drilling was undertaken (CR92/212).

Poseidon Gold LTD drilled 29 RAB holes on 4 traverses attempting to replicate the above BHP anomalous Ni, Cu, Pt, Pd RAB drill results during 1995 however no significant geochemical anomalism was intersected.

2000s

ARU/MTH Hammer Hill JV held the area from 1999 – 2013(ELs9765,10136) undertaking extensive regional drainage/lag geochemical sampling programs ,geophysical surveying and drill testing of subsurface potentially Ni-Cu mineralised mafic/ultramafic intrusives known to occur within a northwesterly trending regional belt including Hammer Hill and Middle Dam serpentinites.

The ARU/MTH JV flew 5000 line km of vertical time delay electromagnetic geophysical surveying (VTEM)in conjunction with AMAG trending northeast across project area on flight lines 250m-350m apart including the area south of Plenty River within EL29470 delineating a discrete, intense VTEM ellipsoidal anomaly conveniently butting up to Plenty Highway trending north south along western boundary of licence area requiring further investigation. Interpretation of AMAG shows VTEM anomaly occurring within contact zone of intruding granite and moderately magnetic HRMC metasediments possibly indicative of potentially skarn- hosted base metal –gold mineralisation?

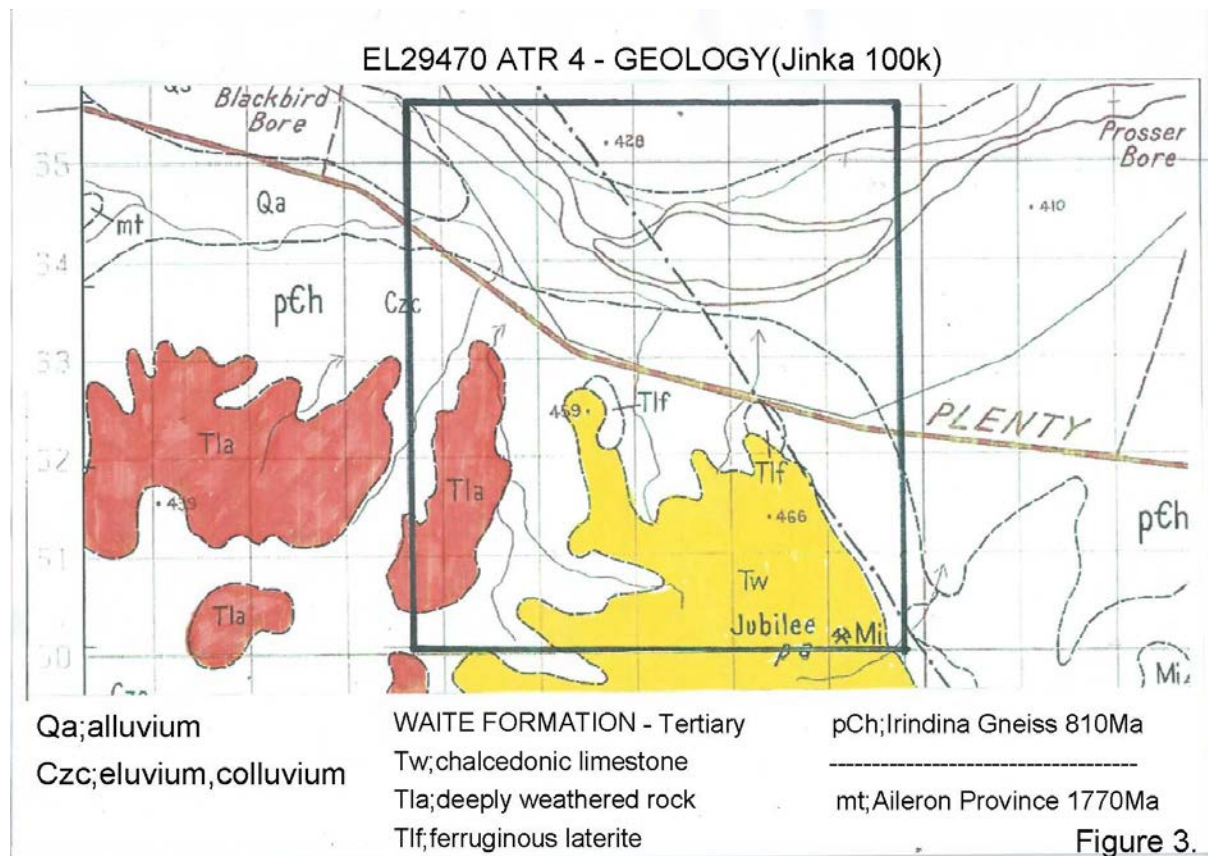
6. GEOLOGY (Figure 3)

The licence area is wholly located within highly metamorphosed Neoproterozoic to Cambrian aged Irindina Province which is in faulted contact with enveloping Aileron Province granulite /granitoid assigned to Palaeoproterozoic – Palaeozoic Arunta Region ensialic mobile belt covering 200,000 sq km of central Australia a major component of North Australian Craton. The Irindina Province comprises a thick metasedimentary succession with a subordinate igneous component including metabasalt, mafic to ultramafic intrusives, granite and pegmatite cropping out extensively in the Harts Ranges 30km to the west .Until 2000 Irindina Province rocks were deemed Palaeoproterozoic however detrital zircon geochronology of HRMC confirmed protoliths of these high grade metasediments were deposited during Neoproterozoic to Cambrian era(810-500Ma).Thus deemed high grade time equivalents of Georgina Basin succession to north and Amadeus Basin succession to south. Peak metamorphism (upper Amphibolite to Granulite facies) occurred during 460-470Ma Larapinta event closely followed by 450-300Ma ASO during the waning stages of which pegmatite sweats of Harts Ranges (330Ma)were intruded, an example, mined for mica crops out in south east corner of licence ie Jubilee mica workings.

The northern half of licence area is overlain by fluvial alluvial deposits of easterly flowing Plenty River system. South of Plenty Highway basement Irindina Gneiss comprising lateritised biotite gneiss, calcsilicate, amphibolite is uncomfortably overlain by 'tabletop' forming Tertiary Waite Formation chalcidonic limestone cropping out over most of the lower half of licence area. A north trending ridge of deeply weathered/lateritised residual biotite gneiss crops out on west side of licence area. The Jubilee pegmatite appears to break through relatively thin, flat lying Tertiary limestone cover ?

7. EXPLORATION PROGRAM 2014 (Figures 4a,5a,5b,5c,5d,5e,5f,5g)

A fifth year program of (1) soil sampling over and around Jubilee mica workings comprising 200 -5mm+1.6mm sieved fraction samples analysed for primarily Li,Cs,Ta,Bo and Be and follow up Inversion modelling of western boundary VTEM feature.



8. EXPENDITURE

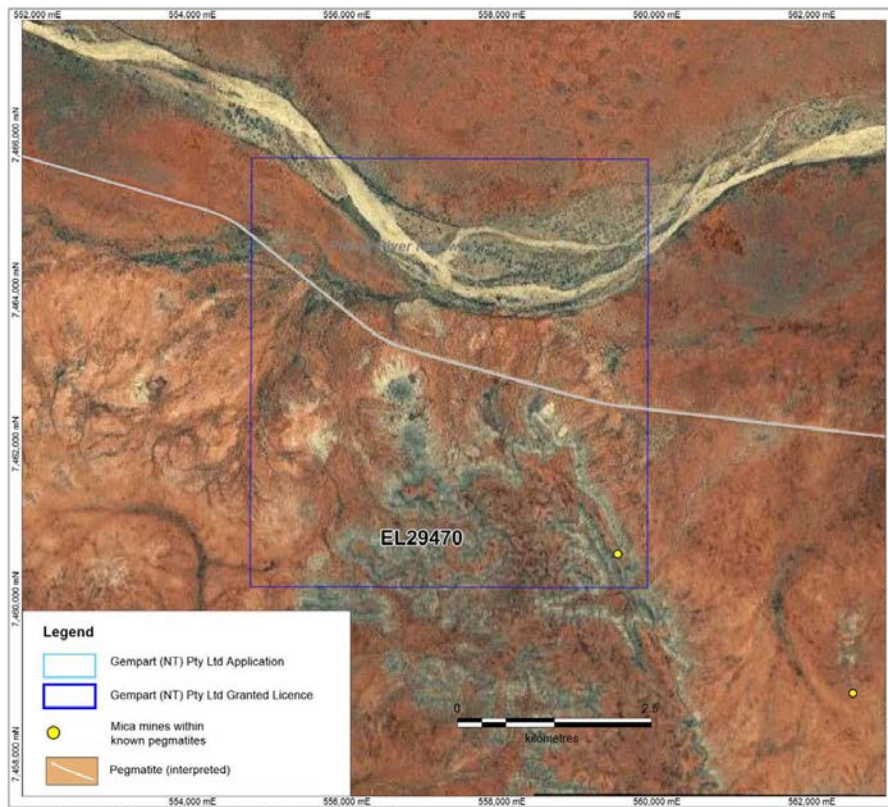
1 Prospecting/ground checking southeast licence area around Jubilee mica Workings for spodumene/amblygonite pegmatite –hosted lithium mineralisation	\$3000.00
2. 200 x soil samples collected ,sieved despatched to lab.by 2 man crew @ \$1200/day over 5 days.....	\$6000.00
3.Advanced Inversion modelling software acquired /run over western boundary VTEM feature by Consultant Geophysicist.....	\$3000.00
5.Review results/Reporting.....	\$2000.00
6 Administration.....	\$1000.00
TOTAL.....	\$15000.00

9. CONCLUSIONS AND RECOMMENDATIONS

The historic pegmatite –hosted mica mine located on the southeast corner of the licence area namely Jubilee working was prospected for possible lithium-bearing spodumene/amblygonite/lepidolite mineralisation inconjunction with a 200 sample soil sampling program sieved to -5mm+1.6mm fraction in the field and despatched to Lab for ME-MS61L analysis for primarily Be,Cs,Li,Rb,Ta to ascertain if locally cropping out pegmatites are of the prospective L-C-T variety?At time of writing results from Lab are still pending.If above pending soil assay results are positive then additional infill sampling is recommended inconjunction with a shallow RAB drill program testing sub surface veracity of western boundary VTEM feature ie is AEM delineated elliptical conductor indicative of massive sulphide hosted base metal mineralisation or more Riddoch Amphibolite?.Expenditure is set at \$11000.00 for forthcoming licence year.

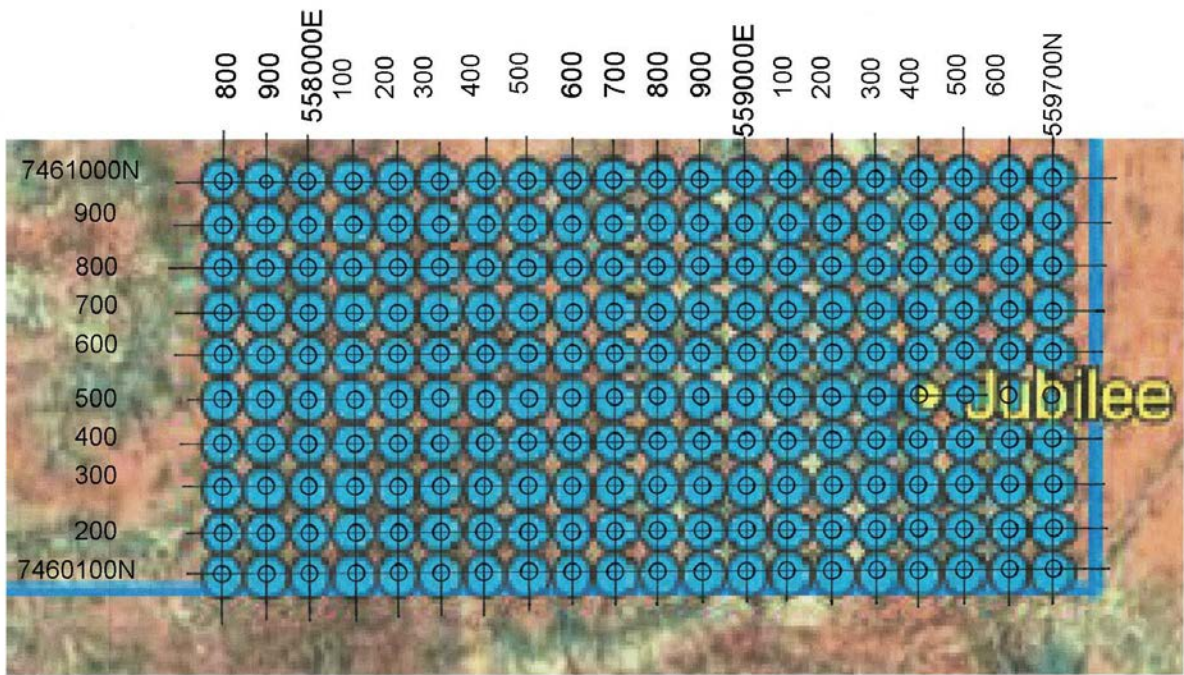
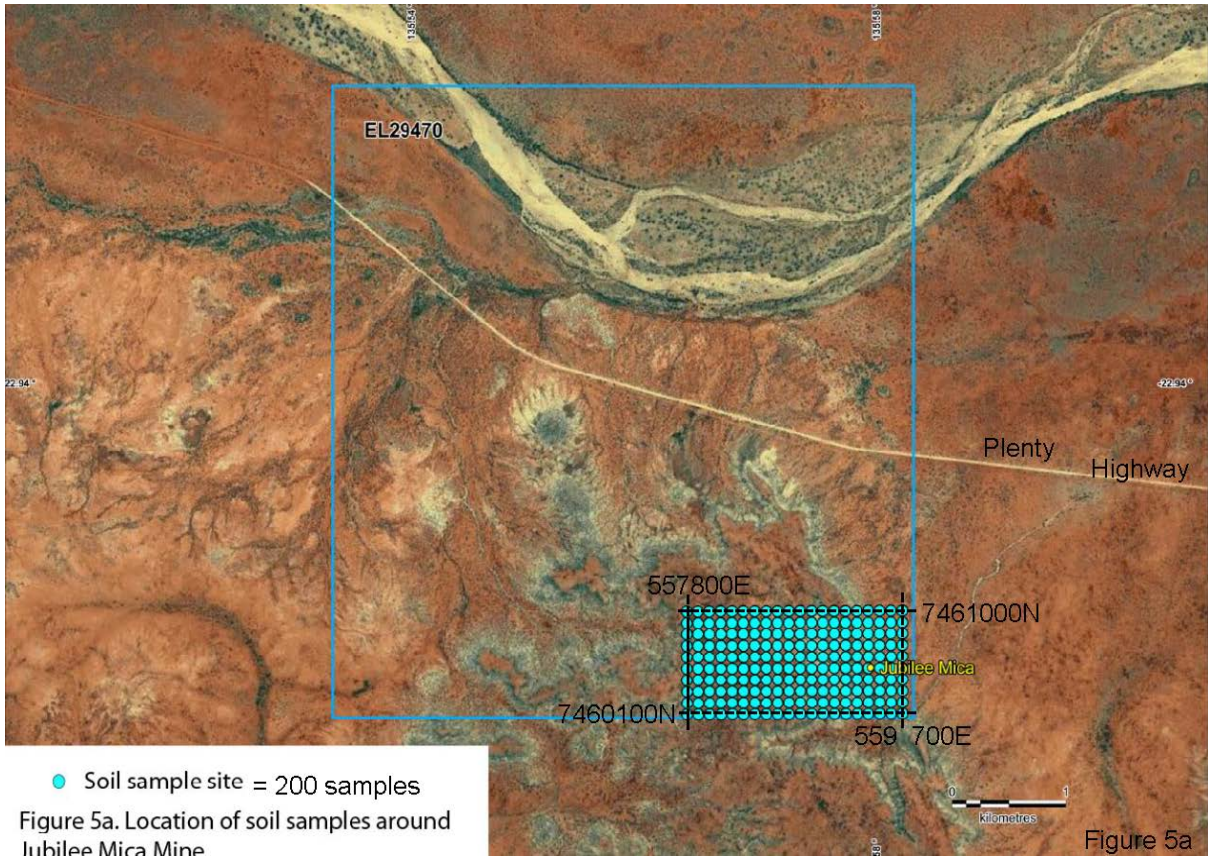
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- Hamilton, R.,EL3303 Final Report WMC LTD .NTGS Report CR85/045(unpublished)
- Anon., BHP Minerals Final Report Brahma Project. NTGS Report CR92/212(unpublished)
- Mithril Resources LTD ASX Announcements 2007-2013
- Arafura Resources LTD ASX Announcements 2007-2013
- JINKA 1985 GA 100k Geology Sheet 6052
- HUCKITTA 1986 NTGS 250k Geology Sheet SF53-11



EL29470 ATR 5 Interpreted pegmatites over Google Earth

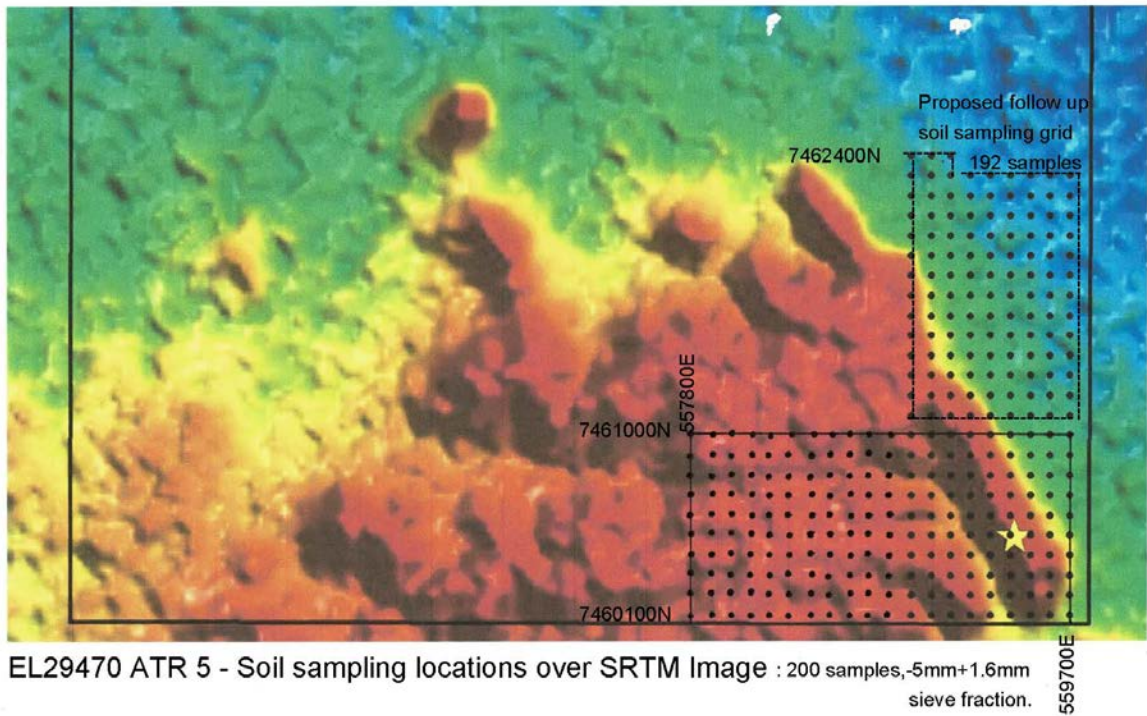
Figure 4a



EL29470 ATR 5 - 100m x 100m = 200 stations Soil Sampling Grid Location

Plan. NOTE: soil sample comprised -5mm + 1.6 fraction, ME-ICP analysed primarily for Li-Ce-Ta-Bo-Be + 40 other elements including Cu,Pb,Zn,Ag,P,Th,U,Ni,Co,Cr,Sn,W,Mo.

Figure 5b



EL29470 ATR 5 - Soil sampling locations over SRTM Image : 200 samples, -5mm+1.6mm sieve fraction.

Figure 5c,

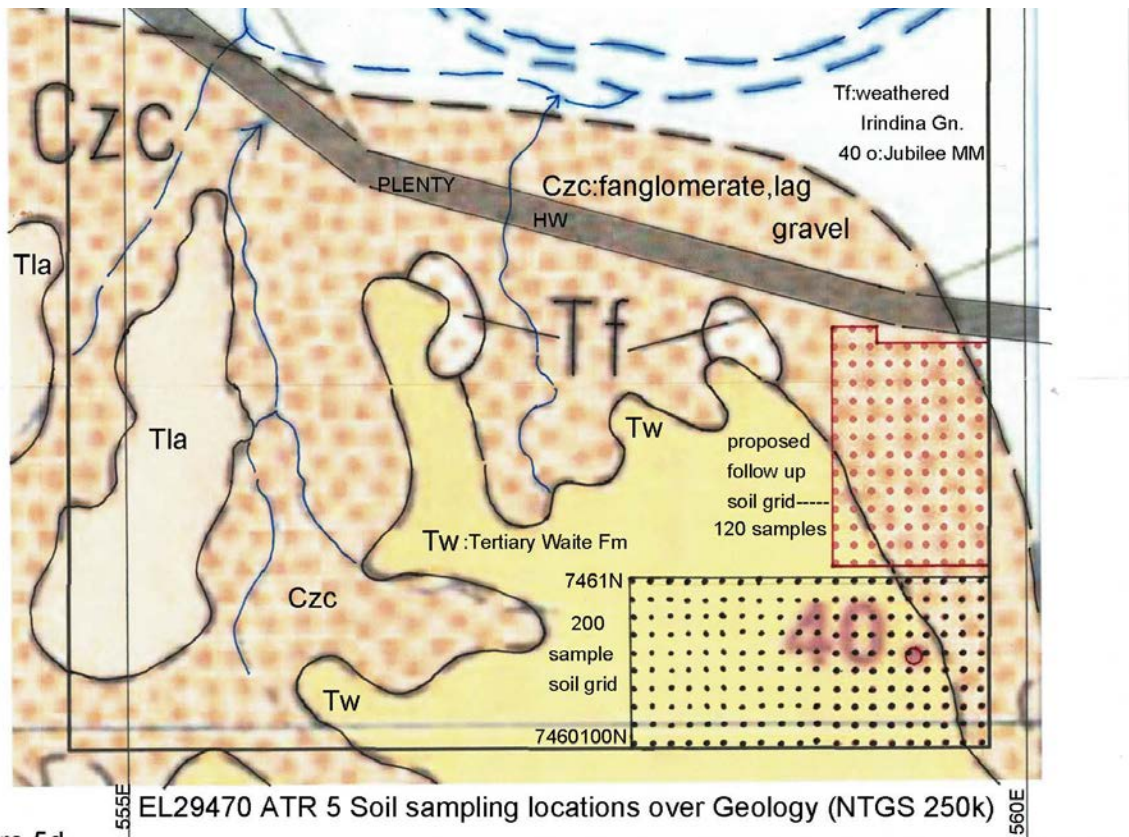


Figure 5d

EL29470 ATR 5 Soil sampling locations over Geology (NTGS 250k)

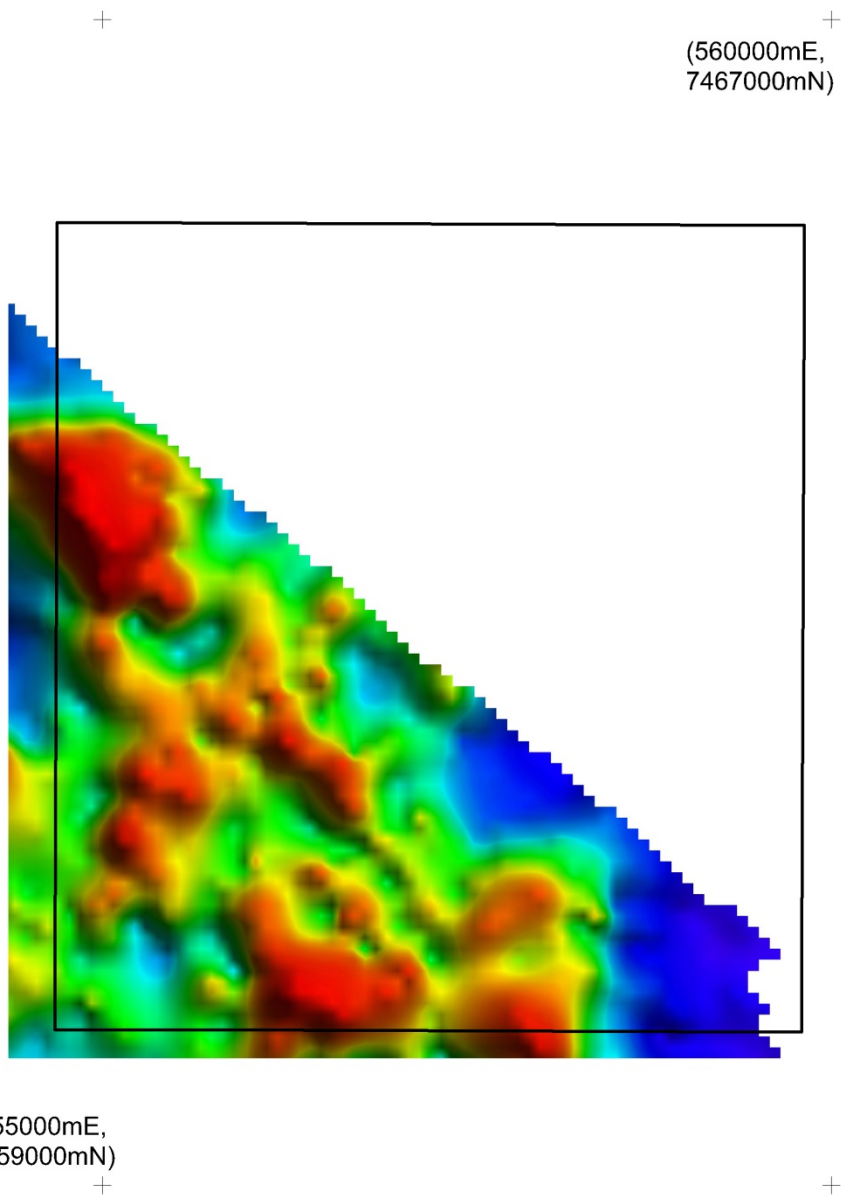


Figure 5F EL29470 Conductivity Depth Transformation 100 meters

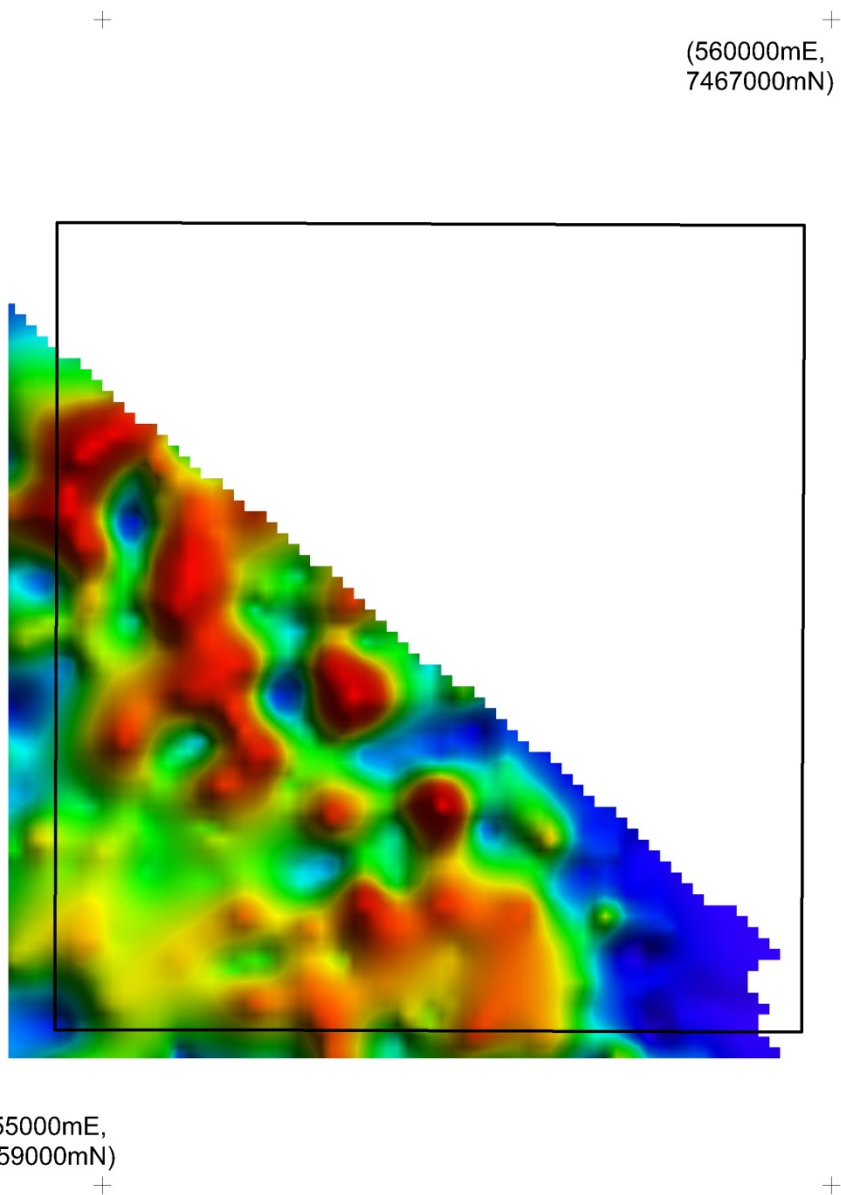


Figure 5G EL29470 Conductivity Depth Transformation 160 meters

