

GEMPART(NT)P/L
EL 28838 BUNDY RIVER NORTH

1ST RELINQUISHMENT REPORT
5/02/2014
(Cu-Au-U)

ALCOOTA SF53-10
Utopia 5953
HUCKITTA SF53-11
Macdonald Downs 5853

A.W.Mackie
June 2014

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SUMMARY

A program of regional reconnaissance combined with detailed analysis of relevant open file located digital geophysical data was undertaken ie filtering/re-imaging above data to assist basement structural interpretation and more importantly depth to basement computations which showed most of the relinquished area, located north of Aileron Province basement and the onlapping Georgina Basin Neoproterozoic succession inferred boundary is deemed(1) depth prohibitive for the implementation of cost effective follow up exploration and (2)the relatively shallow depth to basement southwest corner area is underlain by inferred moderately magnetic,non-prospective granite consequently the area is relinquished.

1.INTRODUCTION

The relinquished area of EL28838 Bunday River North straddles the ALCOOTA/HUCKITTA 250k map sheets northeast/northwest boundary. The area relinquished i.e. northern half of licence area overlies a thin veneer of flat - lying Quaternary alluvium resting unconformably on Neoproterozoic Georgina Basin, Grant Bluff Formation sandstone.

2.LOCATION and ACCESS

The relinquished area of EL28838 comprising 51 sub-blocks(162sqkm) overlies flat-lying terrane dominated by Aeolian sand / fluvial deposits of the ephemeral northeast flowing Bunday River. Access commences from Alice Springs,north for 70km via Plenty Highway then east 110km via Plenty Highway to the Mt Swan turnoff then north for 66km to Macdonald Downs homestead. The road continues north for 9km to No 1 Bore where various station tracks branch-off to northeast/east providing reasonable access to relinquished area.

3.TENURE

The relinquished area of EL28838 Bunday River North comprising 51 sub - blocks(162sqkm) was granted to Gempart(NT)P/L for 6 years 5th February 2012 and subsequently surrendered by way of mandatory reduction on 5th February 2014.

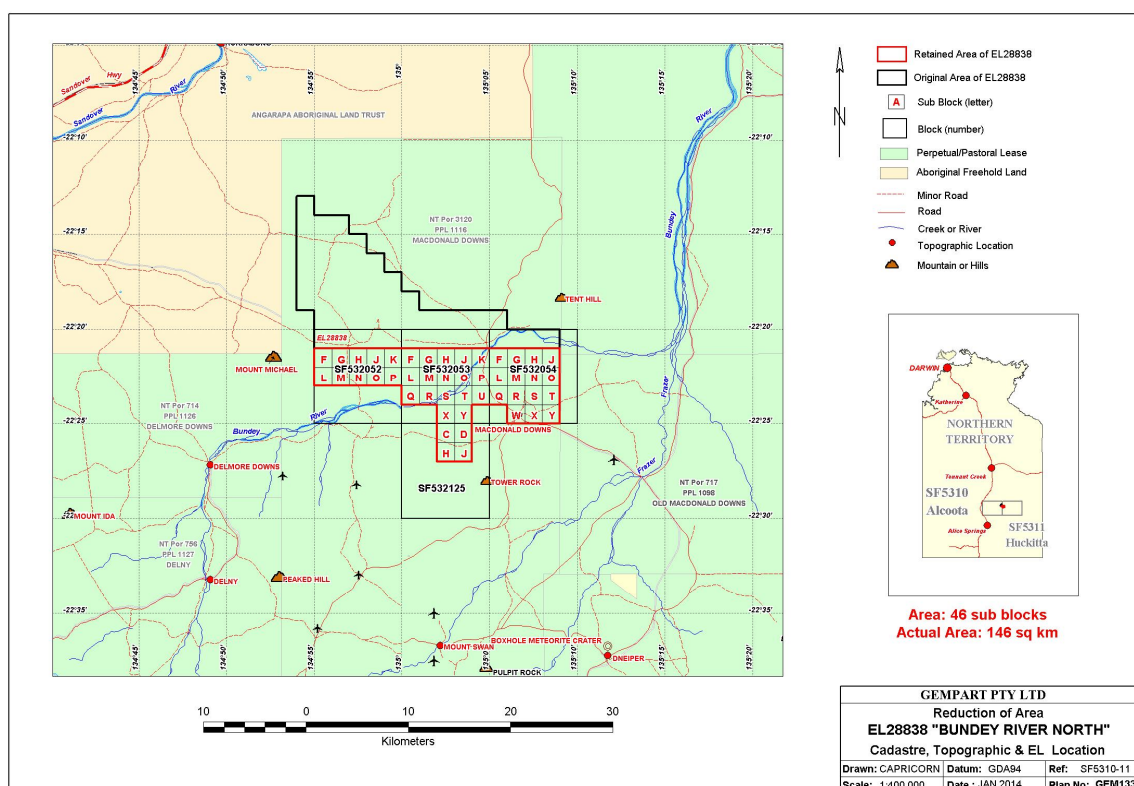


FIGURE 1. EL28838 Relinquishment Location/Sub-Block Plan

4.GEOLOGY Appendix 1., Figure 2.

The relinquished area of EL28838 is dominated by Quaternary fluvial deposits of northeast flowing ephemeral Bunday River (covers about 90% of above area).

However sheared/attenuated northwest trending - strike ridges of laminated to thinly bedded, fine grain quartz arenite assigned to Neoproterozoic Grant Bluff Formation rests unconformably on inferred Palaeoproterozoic South East Arunta Region. Aileron Province, Jinka Domain 1713Ma Mt Swan Granite within southwest corner of relinquished area. Mt Swan Granite is pink, porphyritic comprising; quartz-orthoclase-plagioclase-hornblende (partially altered to biotite) accessory iron oxides, apatite, zircon and allanite assigned to HHP Group of thorium/uranium enriched granites. Large phenocrysts of orthoclase, up to 100mm long are common tending to cluster near faults.

5.EXPLORATION PROGRAM Appendix 1.

Consultant geophysicist acquired, reprocessed, modelled and interpreted available open file located, digital geophysical data;

- (1) filtering, re - imaging to assist basement structure interpretation
- (2) automatic depth to basement computation of AMAG data to map basement structure.
- (3) targeted forward modelling of IOCG prospective AMAG anomalies
- (4) planning follow up groundtruthing GMAG/Ground EM geophysical surveys and possible additional infill geophysical data acquisition.
- (5) Statistical/principle component analysis of available radiometric data to delineate possible IOCG prospective subtle basement structures.

6.CONCLUSIONS and RECOMMENDATIONS

AMAG imaging shows near-surface magnetic basement combined with highly elevated K/Th channel readings over southwest corner of relinquished area interpreted as underlying Mt Swan Granite assimilating abundant/hi-density rafts and/or inclusions of more magnetic country rock? The magnetic basement unit trends northwest however its northerly extent is terminated abruptly by a parallel regional shear/fault zone beyond which the regional magnetic gradient drops off markedly. Although the magnetic basement unit is apparently at relatively shallow depths (depending on (1) thickness of exposed/subsurface non - magnetic Pug; Grant Bluff Formation and (2) whether basal stratigraphic unit of Neoproterozoic Georgina Basin type - section namely Oorrobra Arkose is present?). It is predominantly (inferred)moderately magnetic Mt Swan Granite hence potential prospectivity for IOCG mineralisation is considered to be very low therefore the prescribed area is relinquished.

7.REFERENCES

- Shaw,R.,et al 1975. The Geology of Alcoota 250k Mapsheet SF53-10.
Shaw,R.,et al 1975.Alcoota 1:250k Mapsheet Series SF53-10 Explanatory Notes
Ahmad,Masood.,2013. The Geology of NT. NTGS Special Publication 5.

APPENDIX 1.EL28838 GEOPHYSICS REPORT

To: Alistair Mackie
From: Grant Archer (Consulting Geophysicist)
Date: April 2013
Subject: EL28838 Geophysics

1. INTRODUCTION

A first stage geophysical interpretation and data processing was carried out over exploration licence 28838 to come up with a review of the available geophysical data.

Data sets used for this task consisted of open file aeromagnetic and radiometric data which had used a 400 meter interline spacing, and open file gravity data with a station spacing of 4000 meters.

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

2. DATA

Airborne Geophysical data used for the work consisted of the NTGS Elkedra and Alcoota / Alice Springs aeromagnetic surveys. Airborne surveys over the license have a 400 meter interline spacing and were flown with a North-South traverse line orientation.

Open file gravity data consisted of 26 stations with a spacing of 4000 meters.

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3. DISCUSSION

Figure 1 shows geophysical survey flight lines. Lines are North-South and use a 400 meter spacing.

Figure 2 shows the GEMPART (NT) PTY LTD Geologic map (Reference Gempart (NT) Pty Ltd).

Total magnetic data are shown in figure 3. Dynamic range of the data is of the order of 1000nT with deep magnetic structures in the north-east and shallow in the south-west. Figure 4 shows Reduced To the Pole magnetics.

A vertical derivative image of RTP magnetic data is shown in figure 5 and enhanced magnetics in figure 6.

Preliminary magnetic lineaments and zones and preliminary modelled magnetic source depths are shown in figure 7.

A bouguer gravity image is shown in figure 8 with station spacing of the order of 4000 meters. Station spacing is too wide to assist in identification of target areas.

A Digital terrain model is displayed in figure 9 using a 5 meter contour interval.

Figures 10 – 13 show radiometric data; potassium-uranium-thorium composite and potassium, uranium and thorium concentrations.

Conclusion

Geophysical data coverage over the license is limited to open file regional magnetic and radiometric data (400m spaced flight lines) and a limited amount of gravity coverage.

Magnetic intensity over the license varies from moderate in the south-west to weak in the north-east. Preliminary magnetic lineaments and zones were identified and some preliminary magnetic modelling was able to calculate some depth estimates. The model needs to be developed further.

Radiometric data is presented in a preliminary form and needs further analysis.

Electrical data and ground gravity acquisition could be considered to assist with exploration if appropriate for types of targets. More detailed magnetics would help map out magnetic anomalies.

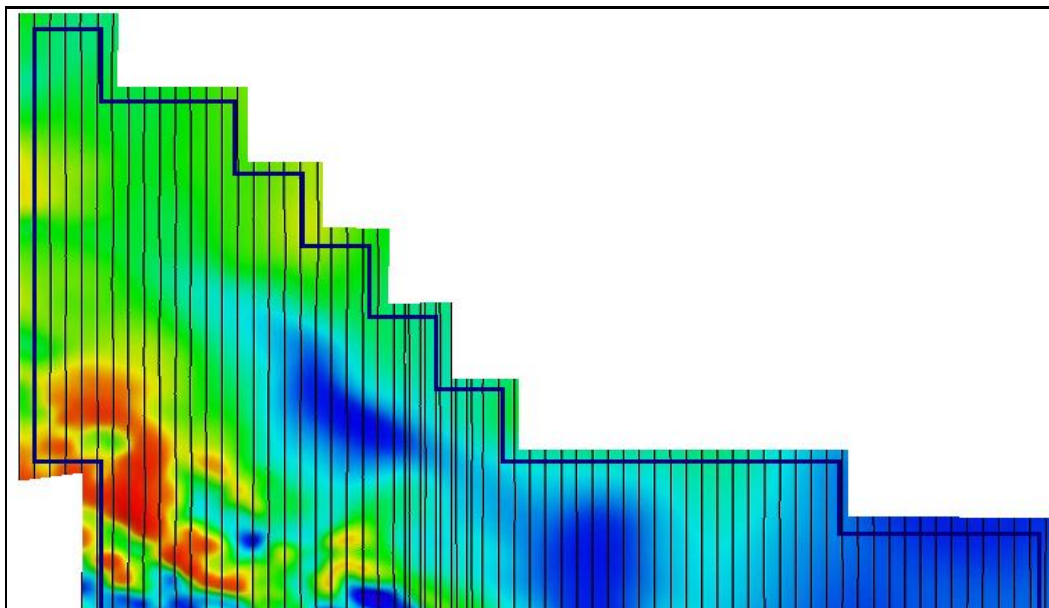


Figure 1. EL28838 Bunday River North. Elkedra and Alcoota / Alice Springs airborne geophysical survey
Magnetic data is background image.

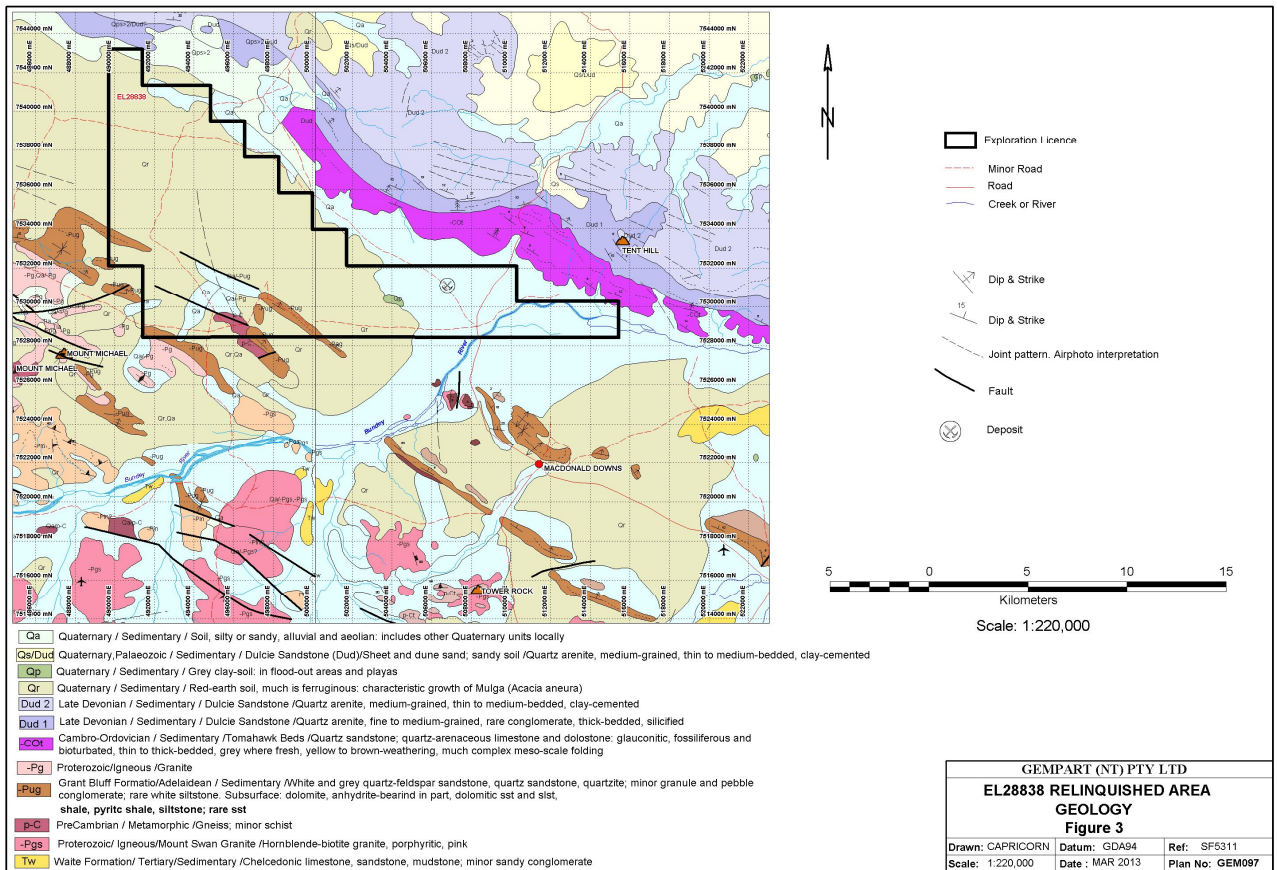


Figure 2 GEMPART (NT) PTY LTD geologic map (Reference Gempart (NT) Pty Ltd)

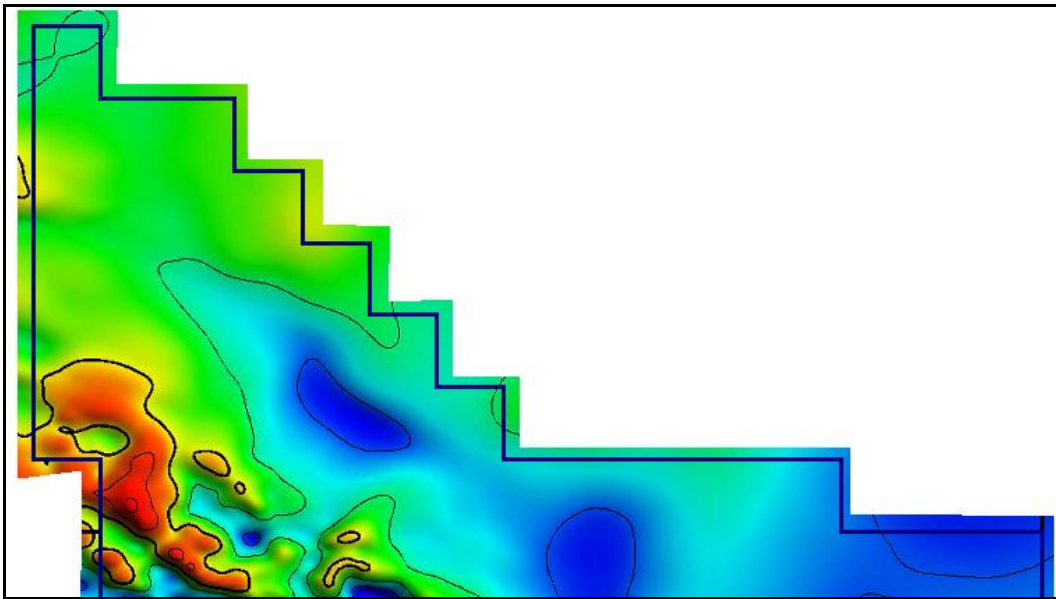


Figure 3. EL28838 Bunday River North. Magnetic image with 200nT contours.

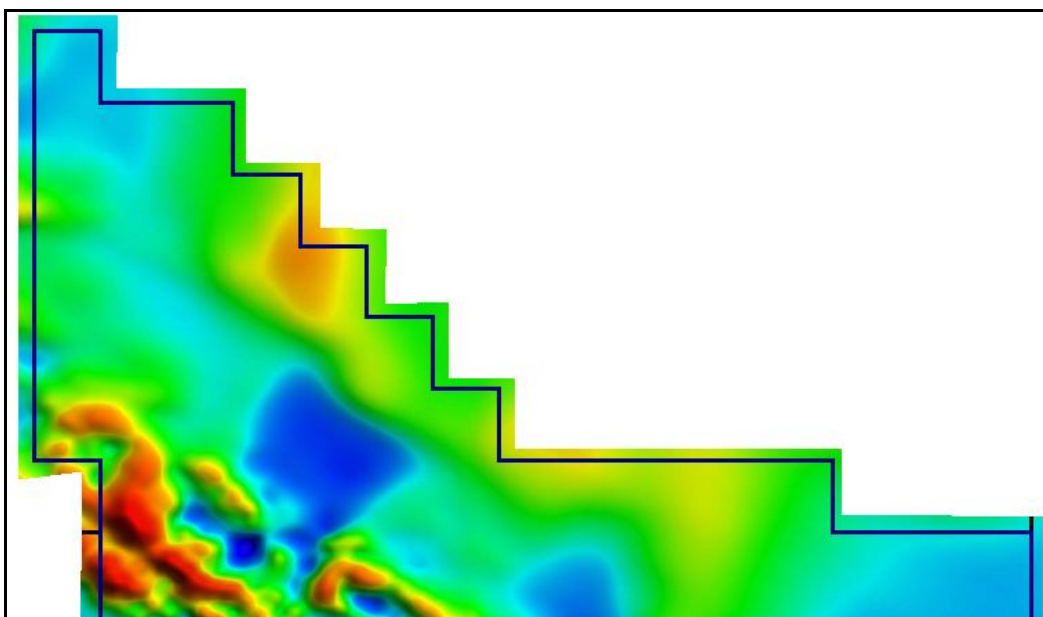


Figure 4. EL28838 Bunday River North. Reduced To the Pole Magnetic image.

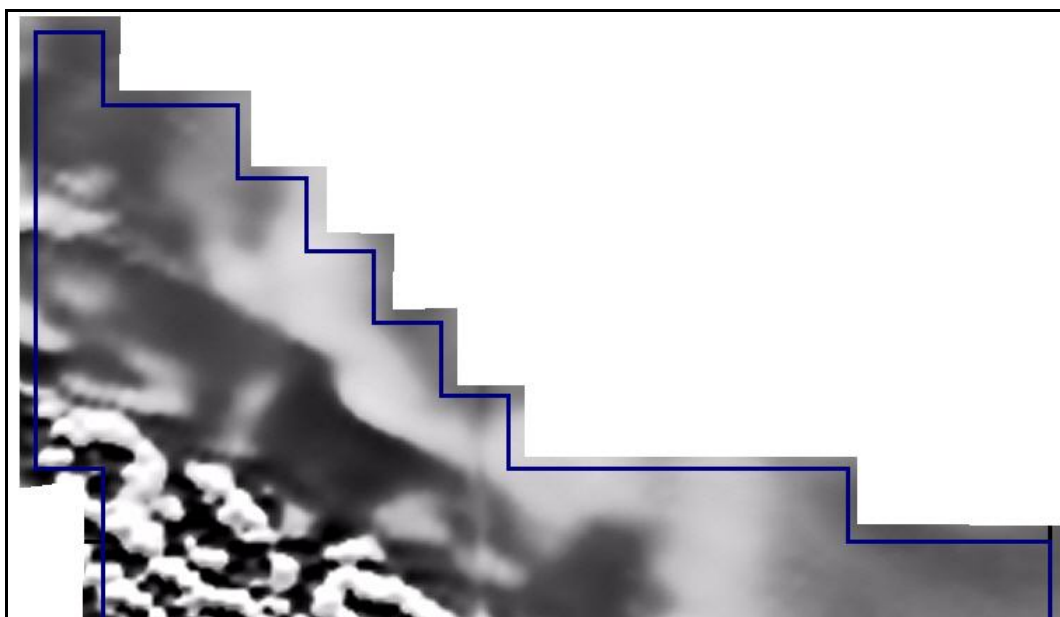


Figure 5. EL28838 Bunday River North. RTP vertical derivative magnetic image.

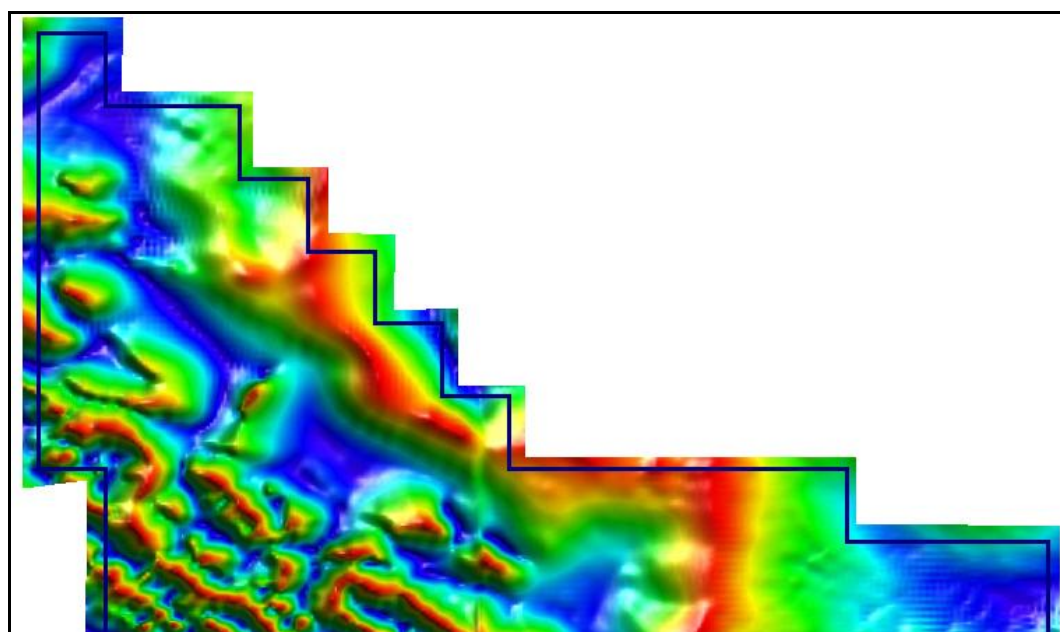


Figure 6. EL28838 Bunday River North. Enhanced magnetic image.

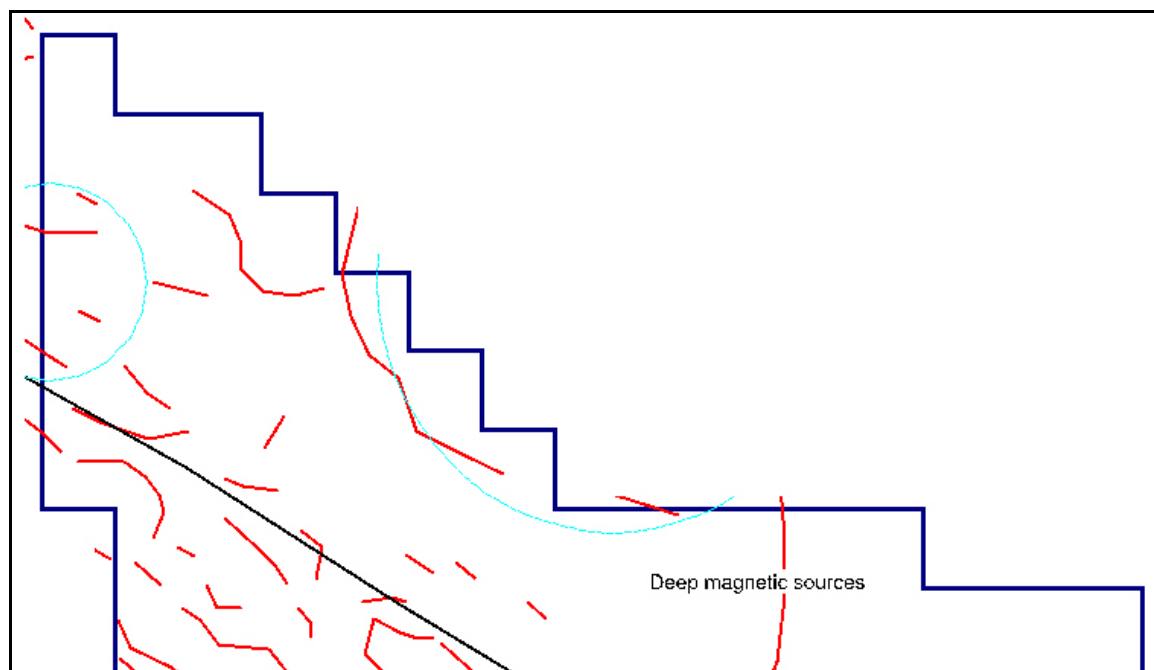


Figure 7. EL28838 Bunday River North. Preliminary magnetic lineaments and zones and preliminary modelled magnetic source depths.

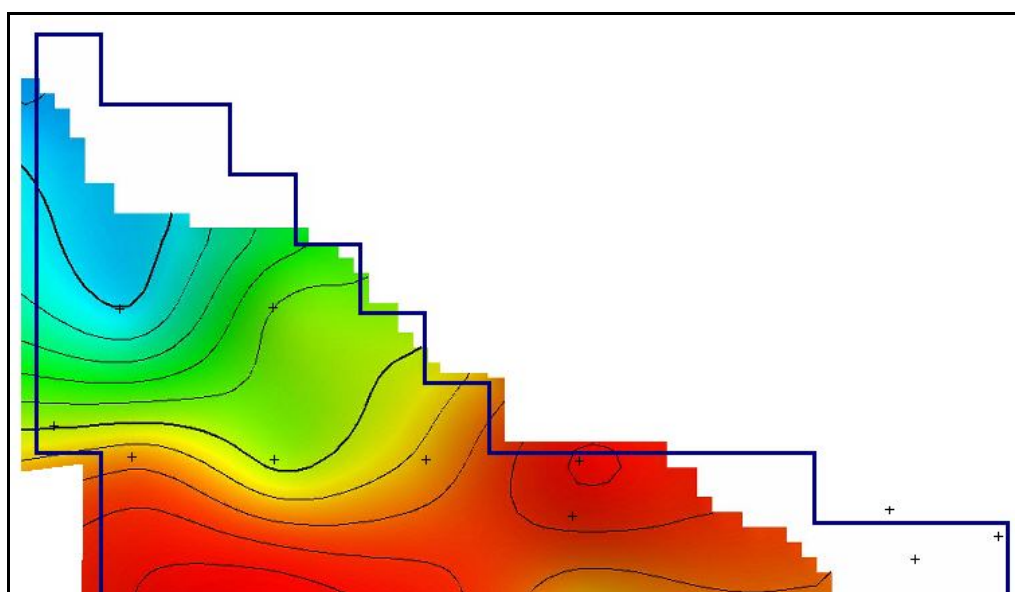


Figure 8. EL28838 Bunday River North. Bouguer gravity and station plots (crosses)

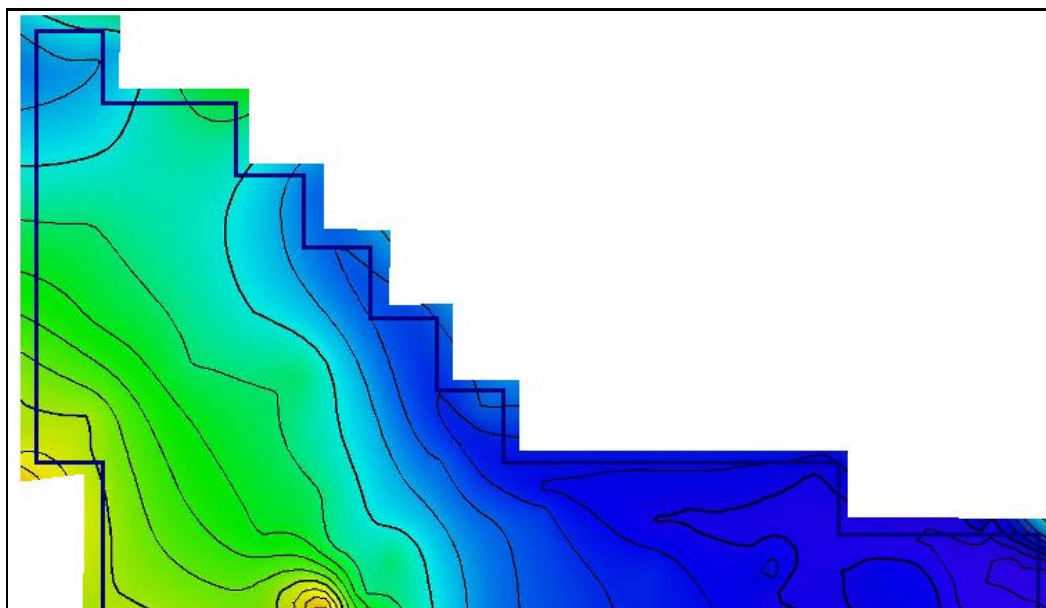


Figure 9. EL28838 Bunday River North. Digital terrain model (5 meter contours).

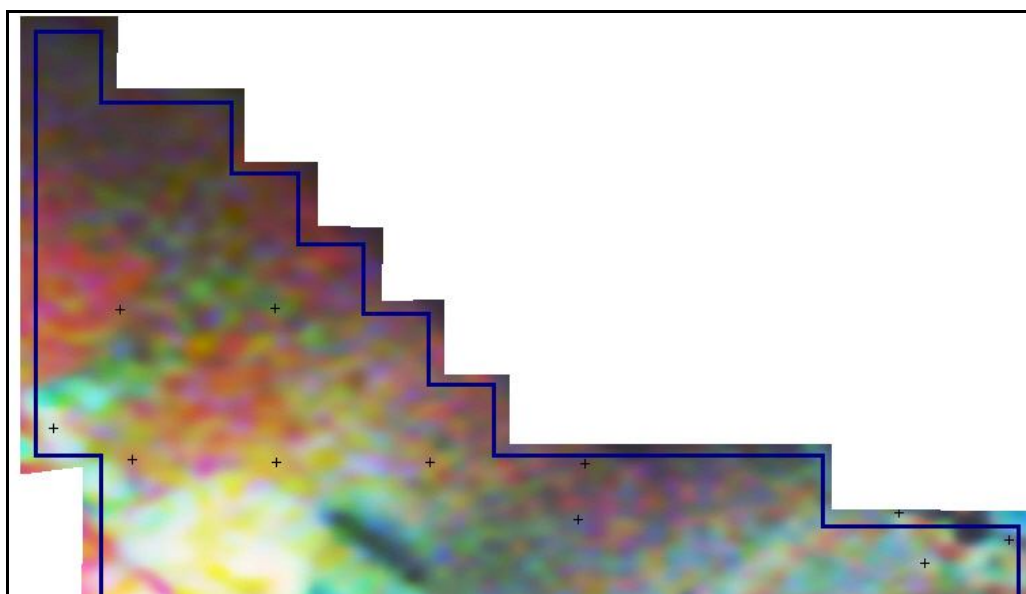


Figure 10. EL28838 Bunday River North. Potassium-uranium-thorium composite image.

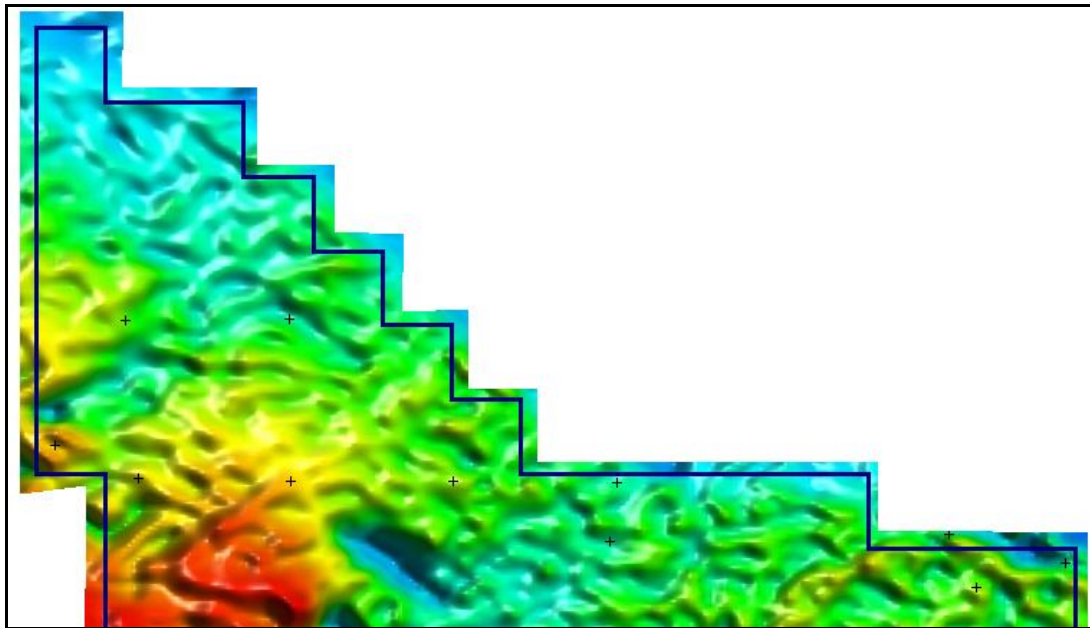


Figure 11. EL28838 Bunday River North. Potassium concentration(%).

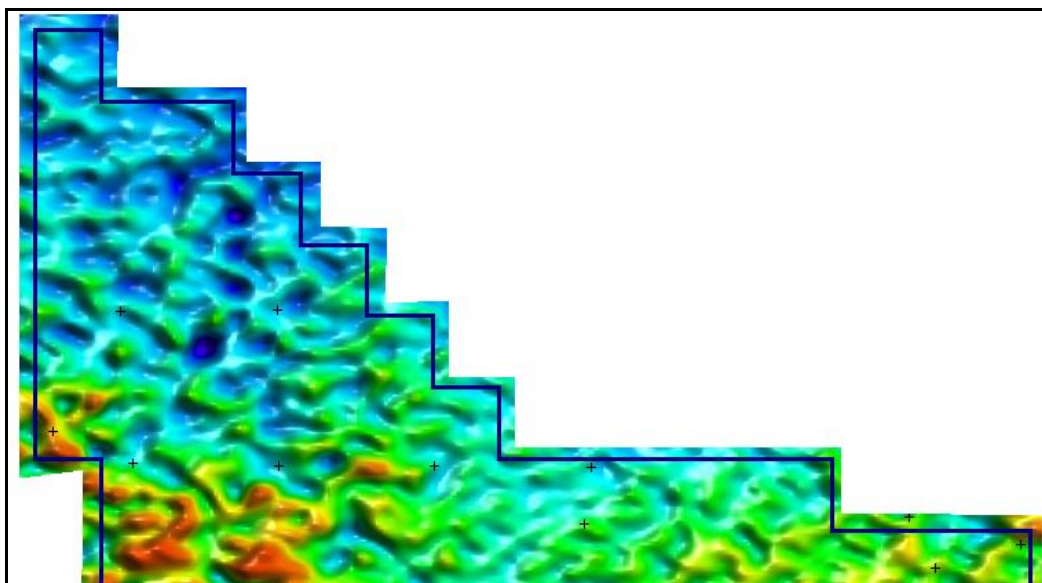


Figure 12. EL28838 Bunday River North. Uranium concentration.

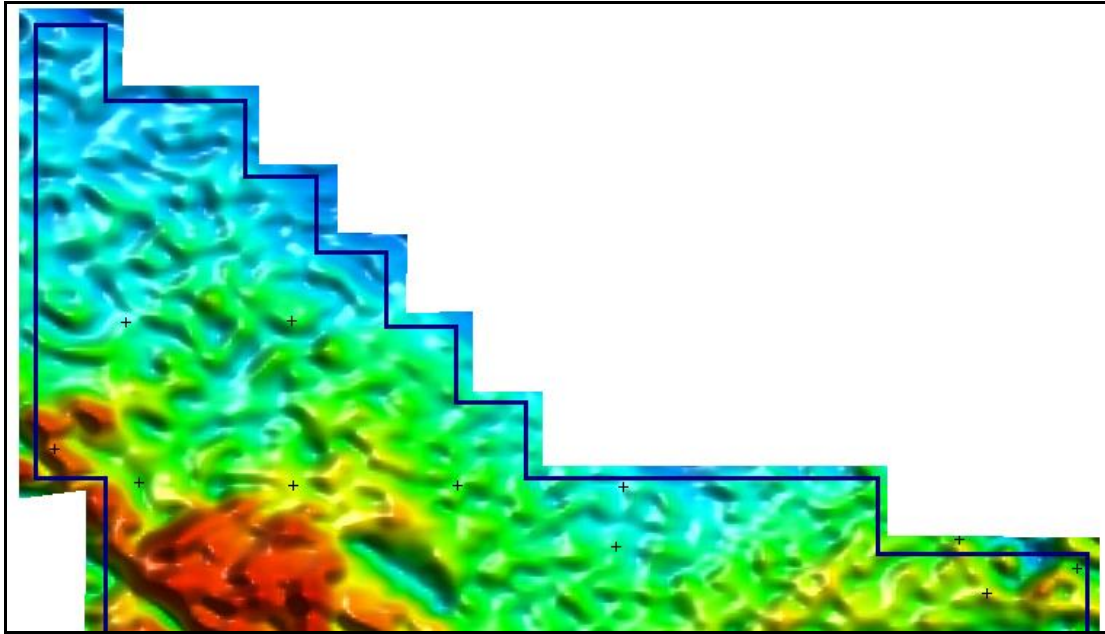


Figure 13. EL28838 Bunday River North. Thorium concentration