BOWEN ENERGY LTD

PARTIAL RELINQUISHMENT REPORT FOR EPM16270 BULLSEYE CREEK #2 GEORGETOWN REGION, QLD, 18.10.2013.

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GeoDiscovery Group

12 January 2014

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EXECUTIVE SUMMARY

EPM 16270 of Bowen Energy Ltd is located about 60km west of Georgetown in North Queensland and is being explored in conjunction with adjacent tenure EPM 16269 held by the Company. This partial relinquishment report reviews all exploration carried out for the tenure.

Geological data show that EPM 16269 straddles the boundary between the Palaeoproterozoic Georgetown Province represented by the Upper Etheridge Group metasediments and the unconformably overlying Langlovale Group, with the Mesoproterozoic Croydon Volcanics and associated intrusives of the Croydon Province. The province boundaries are faulted along what has been termed the Croydon Fault. These provinces are locally overprinted by Siluro-Devonian tectonism and intrusives as well as Permo-Carboniferous volcanic complexes. Mesozoic sediments of the Carpentaria Basin onlap the tenure area and there is local Tertiary and Cainozoic cover. There are no known mineral occurrences in the tenure with the central and eastern parts of the tenure under Mesozoic cover.

Work carried out by Bowen Energy involved the following:

- Open file review of all previous company exploration work in and around the tenure
- Definition of potential mineralisation target types and interpretation of aeromagnetic and gravity imagery to define targets. Epithermal and sub-volcanic breccia gold may offer the best potential related to Permian intrusives. A significant gravity anomaly along the Croydon Fault Corridor was defined and suggested to have Cu-Au possibilities. Permian and Devonian intrusives in the region have porphyry Cu-Au potential.
- Reconnaissance geology
- 3D modeling of government gravity and magnetic data. This divided the gravity anomaly into three significant anomalies, one of which fell within the tenure (Target Y).
- Ground magnetics over specific targets K, M1, Y, O, P, Q, Z4, S, R.
- Drill testing of two targets, Y and Z4 with shallow RC holes with geochemical analysis and magnetic susceptibilities of the drill chips
- Review and synthesis of results.

The drilling of gravity and magnetic Target Y in a short vertical hole showed that part of the feature was silica-sericite-pyrite-pyrrhotite-(arsenopyrite) altered granite (5% sulphides) under 47m of Mesozoic cover. Gold, copper and arsenic were anomalous. The gravity anomaly may not be explained by the mineralisation intersected to date.

The Croydon Fault Corridor is seen as a permissive structure and Target Y along this with extent of about 2000m x 1000m, is recommended to be covered by 200m spaced IP lines to see if this gravity anomaly is related to mineralized intrusives.

Targets O, P, Q, M1 and K are reversely polarised magnetic features which are probably rhyolite porphyry intrusives with potential for sub-volcanic breccia gold targets and marginal epithermal gold targets. One or more IP lines are recommended to test the magnetic targets as a prelude to possible drilling.

The pyritic, carbonaceous Langdon River Mudstone has potential for sediment-hosted lead-zinc in magnetic Targets R and S and also possibly gold. Drilling of a small gravity target Z4 did not find lead-zinc, but did locate some locally anomalous gold results on the strongly carbonaceous to manganese-rich siltstones. This gold may be related to overprint by mineralizing fluids from sub-volcanic intrusives, as a small one is interpreted some 500m further south based on the magnetics.

No targets were defined with the relinquished areas.

1 INTRODUCTION

This report summaries the exploration work and results for EPM 16270 for the year ended 28.11.2013. This tenure was explored concurrently with adjacent tenure, EPM 16269 as the Bullseye Creek Project.

EPM 16270 is located approximately 60km west of Georgetown in North Queensland (**Figure 1**). The Gulf Development Road cuts through the northeastern section of EPM 16270 while station tracks give access to parts of the tenure (**Figure 1**).

2 TENURE

EPM 16270 of 99 sub-blocks was granted on 29 November 2011 for a period of three years. 50 sub blocks were relinquished in 2013. The block and sub-block listing is shown in **Table 1**.

Table 1. Details of sub-blocks EPM 16270.

The 50 sub-blocks to be relinquished from the tenure are detailed as follows:

BIM	Block	Sub-blocks
NORM	1933	U,Y,Z
NORM	1934	F,G,L,M,Q,R,V,W
NORM	2002	B,C,D,E,H,J,K,O,P,U
NORM	2003	A,D,F,L,Q,R,V,W,X
NORM	2004	P,L
NORM	2005	D,E
NORM	2006	A,B,
NORM	2075	A,B,C,F,G,H,J,K,M,N,O,P,S,T

The 49 sub-blocks to be retained from the tenure are detailed as follows:

BIM	Block	Sub-blocks
NORM	1933	V,W,X
NORM	2003	B,C,E,G,H,J,K,M,N,O,P,S,T,U,Y,Z
NORM	2004	A,B,C,D,E,F,G,H,J,K,M,N,O,Q,R,S,T,V,W,X,Y
NORM	2005	A,B,C,F,G,H,L
NORM	2075	D,E

3 GEOLOGICAL AND GEOPHYSICAL SETTING

The geology of the Georgetown region has been detailed by Withnall, 1996 and Withnall et al., 1997. It consists dominantly of Palaeoproterozoic metamorphics with some Palaeoproterozoic to Mesoproterozoic granitoids and the extensive Mesoproterozoic

Croydon Volcanics (**Figure 2**). Palaeozoic sedimentary sequences are developed in the far east and a small basin, the Inorunie Group on the Croydon Volcanics in the west. There is extensive Siluro-Devonian igneous activity through the provinces. Further strong disruption of the Proterozoic sequences was caused by Permo-Carboniferous volcanics and intrusives in ring complexes. Cainozoic to Recent basalts cover part of the sequences in the east and south.

Proterozoic relationships are shown in **Figure 3** with the high grade Einasleigh Metamorphics in the east and lower grade rocks of the Etheridge Group in the west. The Etheridge Group is divided into a lower Robinson River Sub-group and an Upper Etheridge Group. The Langlovale Group unconformbly overlies the Etheridge Group and is in turn unconformably overlain by the Croydon Volcanics.

Outside of the outcropping Proterozoic of the Georgetown Inlier, the Proterozoic is covered by sediments of the Jurassic to Cretaceous Eromanga Basin that is itself overlapped by sediments of the Carpentaria Basin in the north.

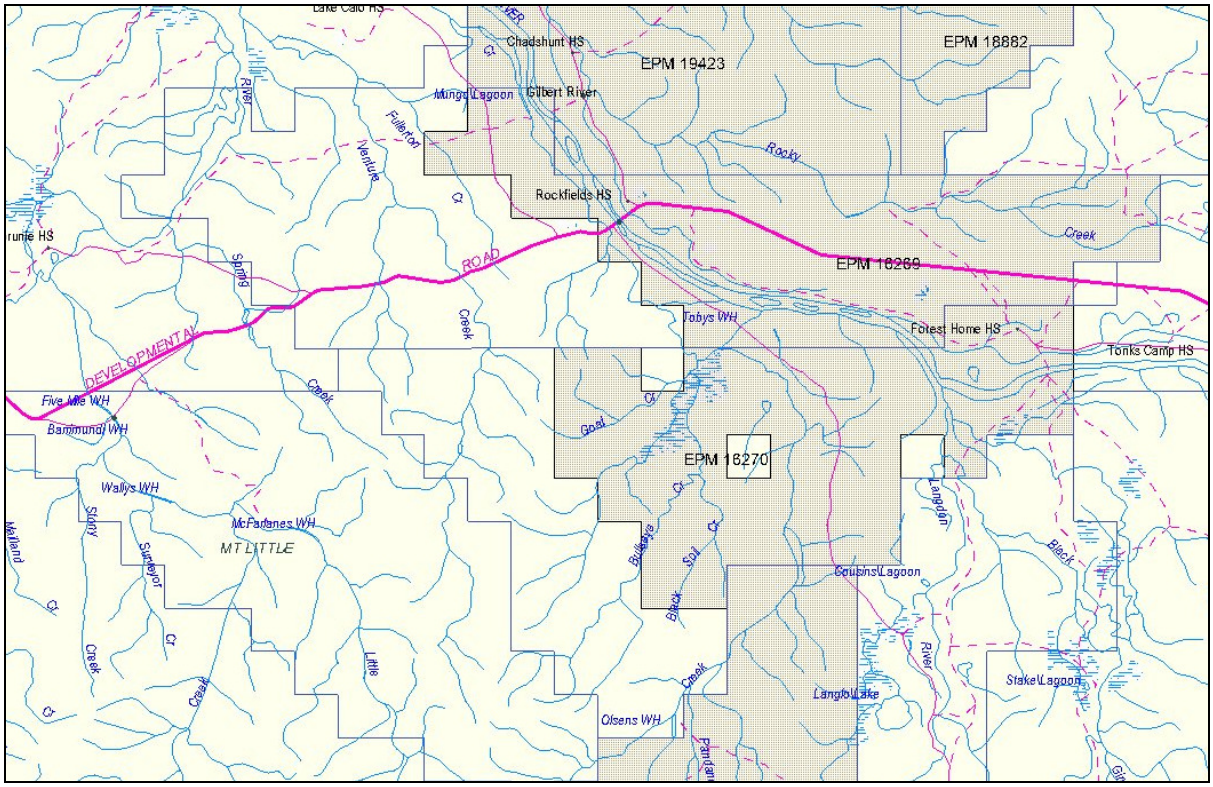

Figure 1. Location of EPMS 16269 and 16270 in the Georgetown region with respect to current mineral tenure. Retained areas are grey highlighted.

EPM 16269 straddles metasedimentary units of the Mesoproterozoic Langlovale Group and Palaeoproterozoic Etheridge Group in the east and cross the major fault and Province boundary separating these groups from the Mesoproterozoic Croydon Volcanics to the west (**Figure 4**). Represented in the Langlovale Group is the Malacura Formation (fine grained sandstone) and Yarman Formation (maroon shale and fine grained sandstone). The Upper

Etheridge Group has the Langdon River Mudstone and then the Stockyard Creek Siltstone. Ignimbrites and lavas of the Croydon Volcanics (including the Idalia Rhyolite) form the basement to much of the western section of EPM 16269 with basaltic andesite at the base, though there are co-magmatic intrusives of Esmeralda Granite in the east.

While major Permo-Carboniferous volcanic complexes are present in the Georgetown region, there is only one small Permo-Carboniferous Volcanic Complex recognized to the south of the tenure with isolated outlier exposures of the basal Goat Creek Andesite, the Bullseye Rhyolite (ignimbrite to crystal tuff and associated sediments of conglomerate and sandstone). Another complex in EPM 16270 located to the west of EPM 18270 where a related granitoid, the Awing Granodiorite with porphyry copper affinities, occurs immediately to the south of the volcanic complex (**Figure 4**). Rhyolite dykes oriented in a northwest trend are common in the structural zone encompassing the Volcanic Complex. There is variable alluvial cover, and Tertiary cover (Bulimba Formation) and more extensive Mesozoic cover of the Carpentaria Basin (e.g. Jurassic-Cretaceous Yappar Member) in the central to northwest so that EPM 16269 has Mesozoic cover and alluvium in the central to eastern segments.

This is clearly seen on the ternary radiometrics where outcrop areas are in white and pink and the Mesozoic and Tertiary are in blue greens (**Figure 5**).

EPM 16270 is located along the intersection of two major structures in the Georgetown Inlier. These are the northwest trending, long-lived Robertson Fault Corridor and the north-south Croydon Fault that separates the Langlovale Group from the Croydon Volcanic Group (**Figures 4, 6**). As well there are other regional faults that trend north to northwest within the Upper Etheridge Group and closely associated with the Stockyard Creek Siltstone. They may have been important faults that controlled sedimentation in the Etheridge Group.

The aeromagnetics show the folding in the Etheridge Group with a variable magnetic character of the Stockyard Creek Mudstone, the magnetically quiet Croydon Volcanics and the reversely polarized Permo-Carboniferous volcanic complexes (**Figures 6, 7**). Northwest trending Permian rhyolite dykes are shown cutting the Croydon Volcanics in the structural corridor of the Robinson Fault. North-south dyke swarms are also evident. The gravity image shows a prominent ridge associated with the fault between the Langlovale Group and the Croydon Volcanics (**Figures 8, 9**), but a distinct north-south gravity high zone is located within the Langlovale Group close to Esmeralda Granite.

Two episodes of folding are recognized in the Langlovale Group, while the unconformably underlying Upper Etheridge Group has at least three deformations.

There are no known mineralization occurrences in the tenures other than an epithermal gold occurrence (Langlo Prospect) near the southeast boundary of EPM 18270. The porphyry copper-(gold) mineralization in the Awring Granodiorite is located about 8km west of this tenure at Mt Little. Significant structurally controlled gold vein deposits of the Forsayth field are located about 35km to the east, while the Croydon mesothermal goldfield is located about 37km west. Other porphyry related copper deposits occur at Mt Turner some 37km to

the east, while small rhyolitic breccia deposits associated with Permo-Carboniferous volcanic activity are located at Huonfels are 25km to the northeast, but also at Agate Creek some 96km to the southeast.

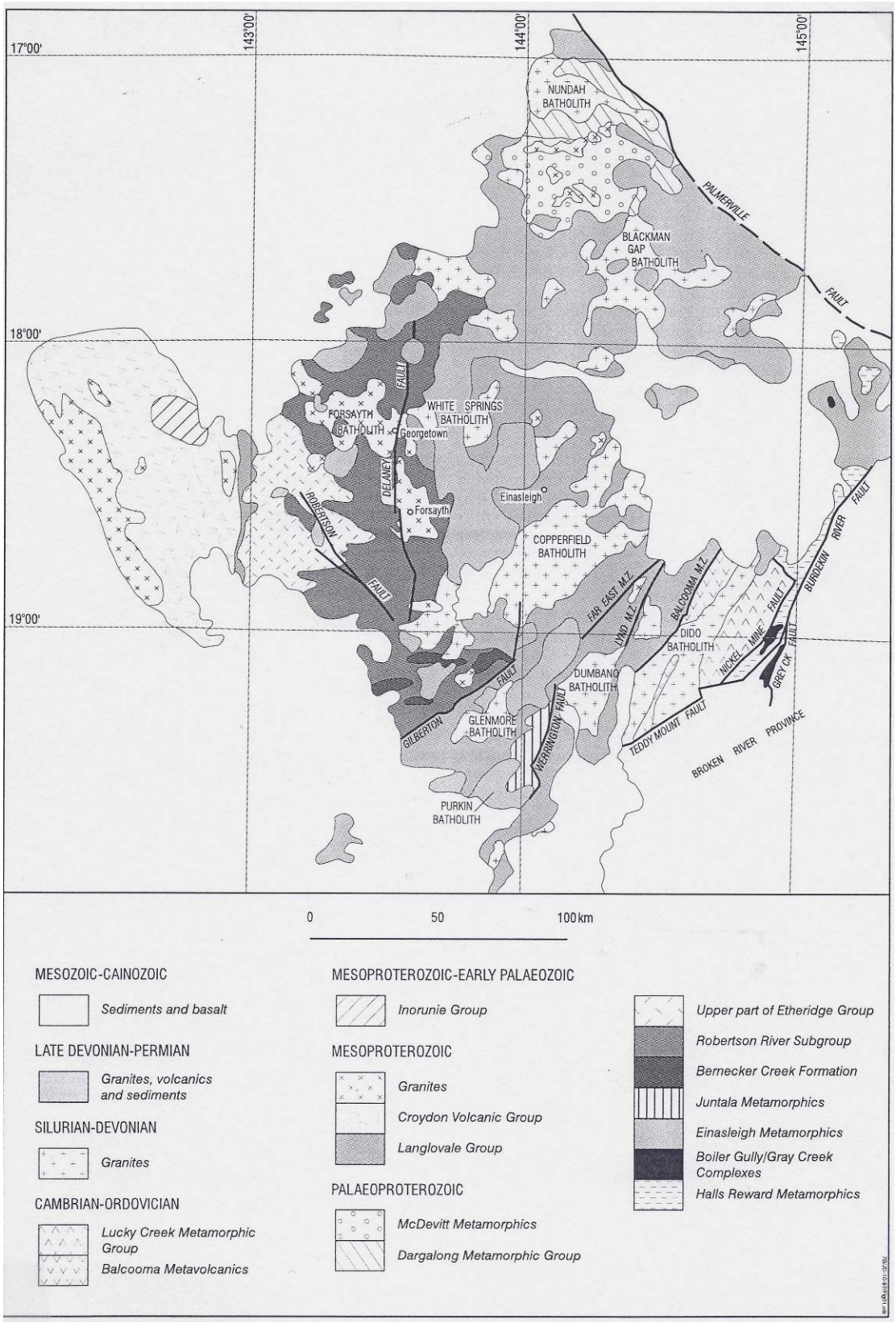

Figure 2. Simplified geology of the Georgetown Region (after Withnall et al., 1997).

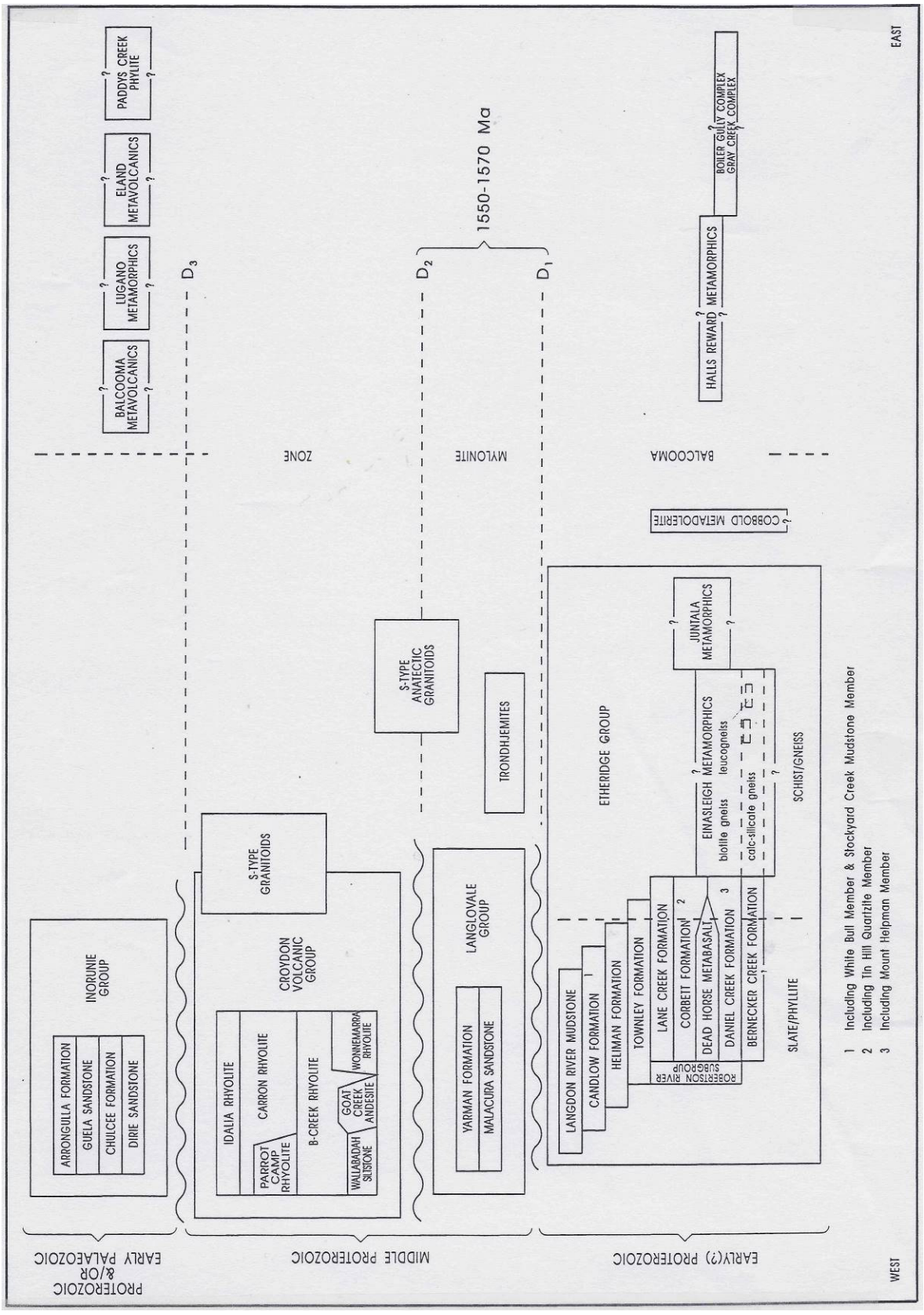

Figure 3. Proterozoic stratigraphic relationships in the Georgetown Region (after Withnall et al., 1997).

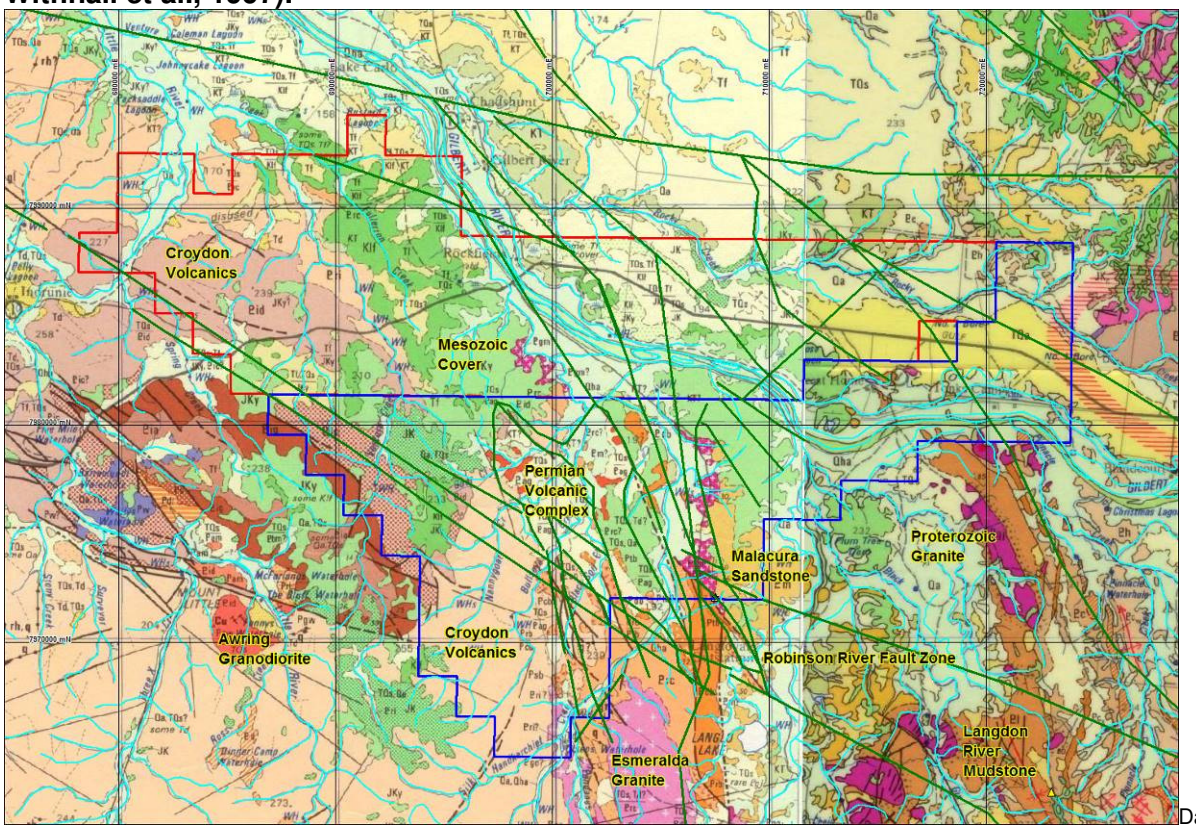

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Figure 4. Regional geology of EPM 16269 (and EPM 16270) area with interpreted faults from aeromagnetics in green.

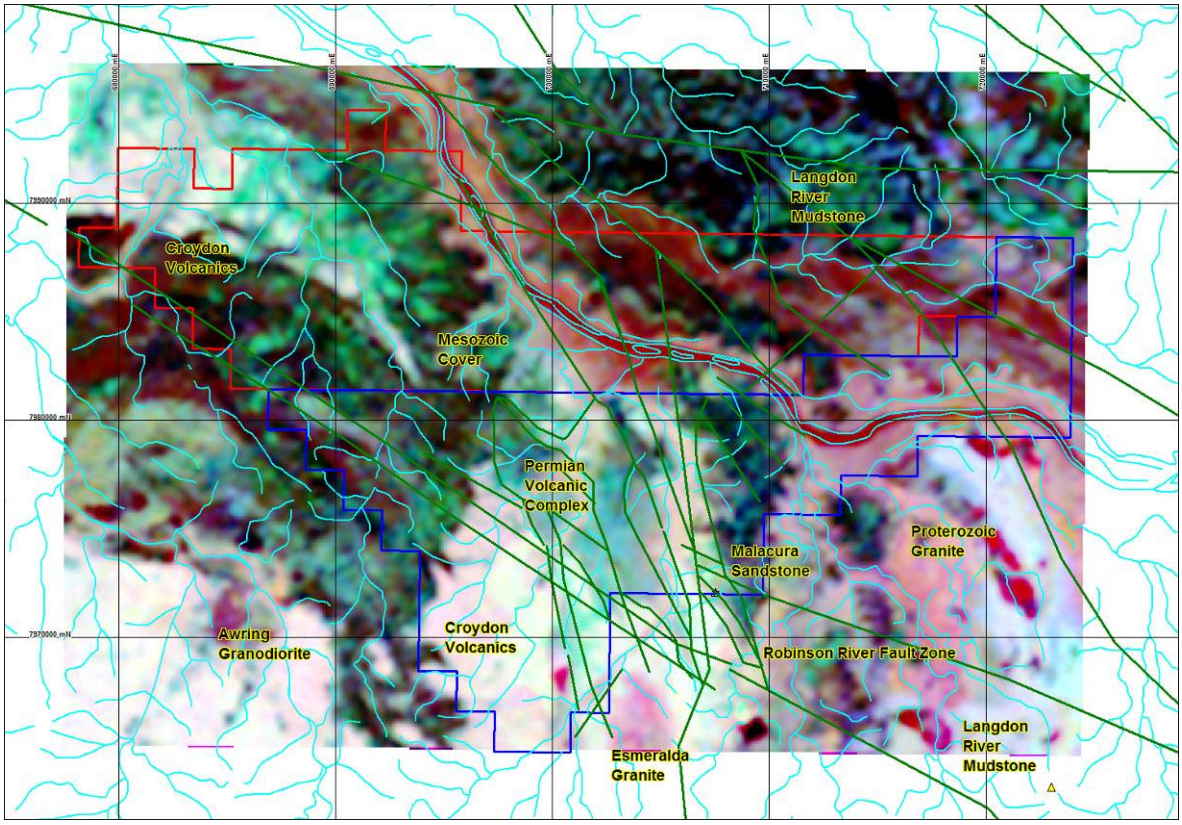

Figure 5. Ternary radiometrics of the Bullseye Creek Area with EPM 16269 in red.

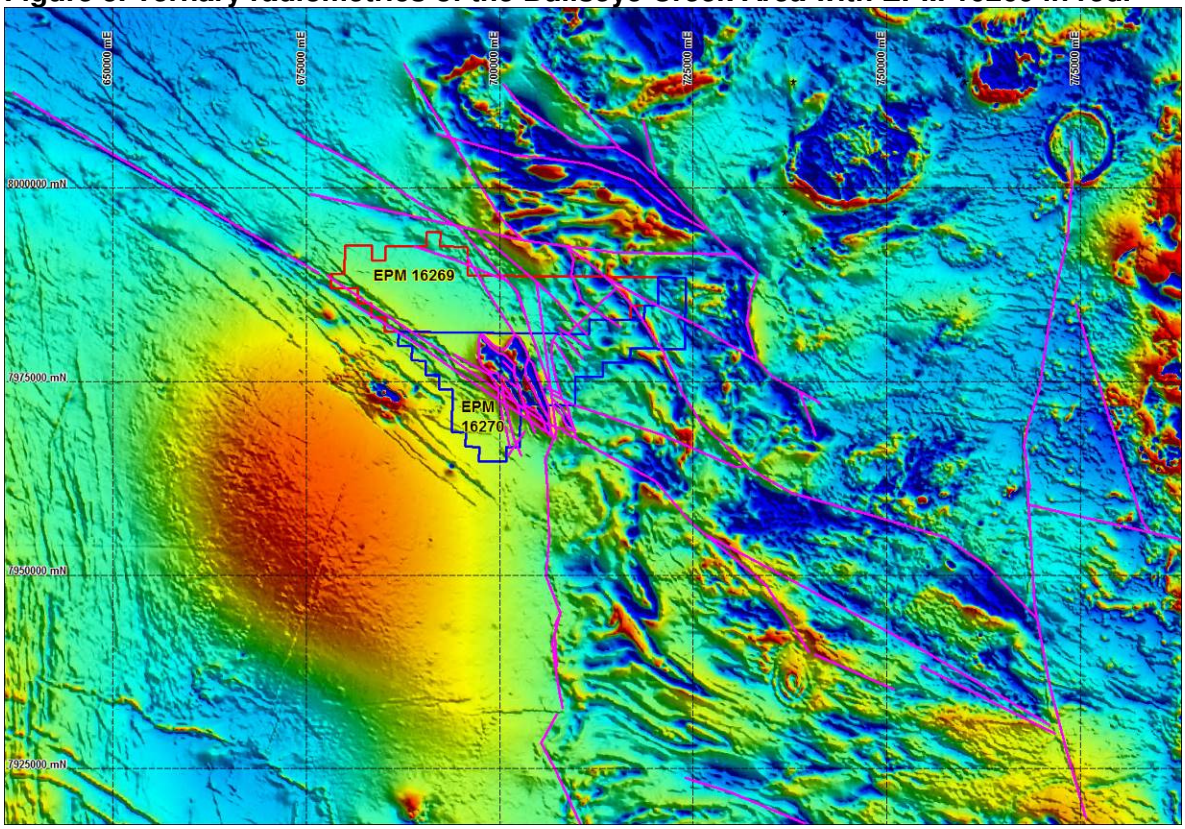

Figure 6. Regional TMI image showing EPM 16269 with major structures in purple.

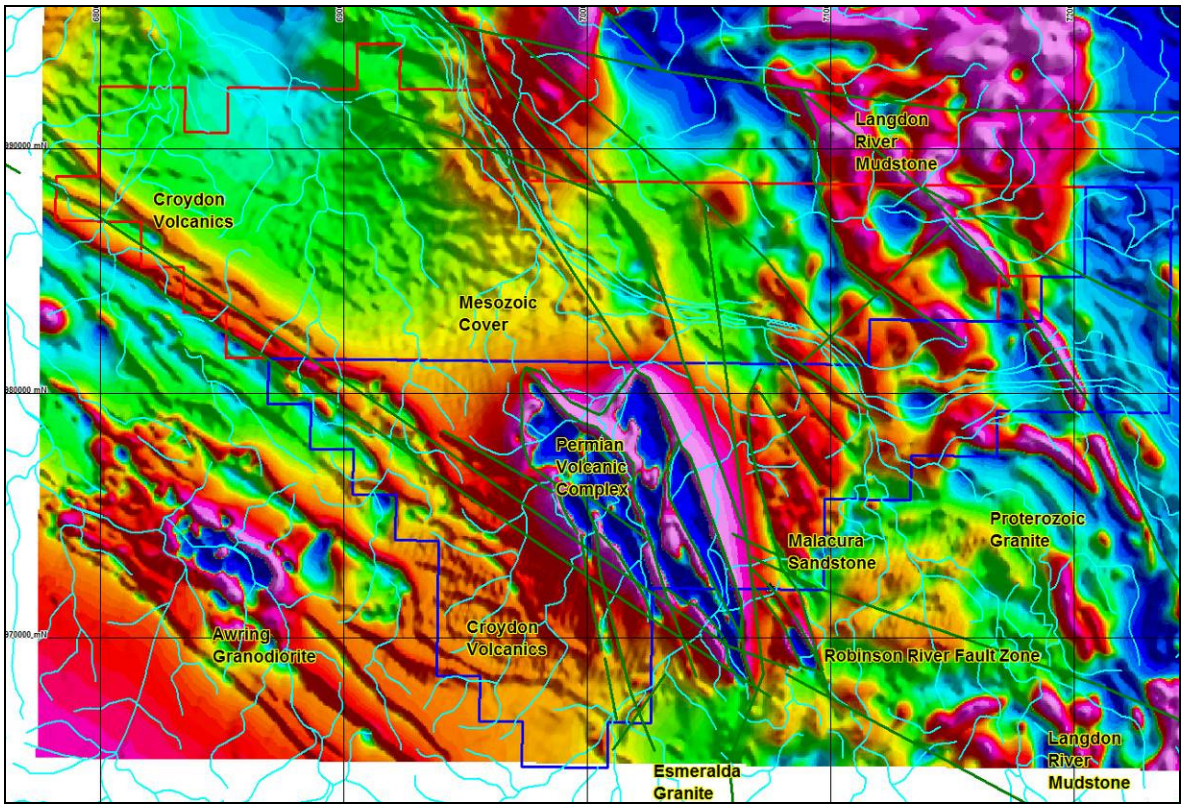

Figure 7. TMI RTP image of EPM 16269 area (red polygon) with main faults in green lines. Note the two reversely polarized magnetic complexes of Permo-Carboniferous volcanics and sediments.

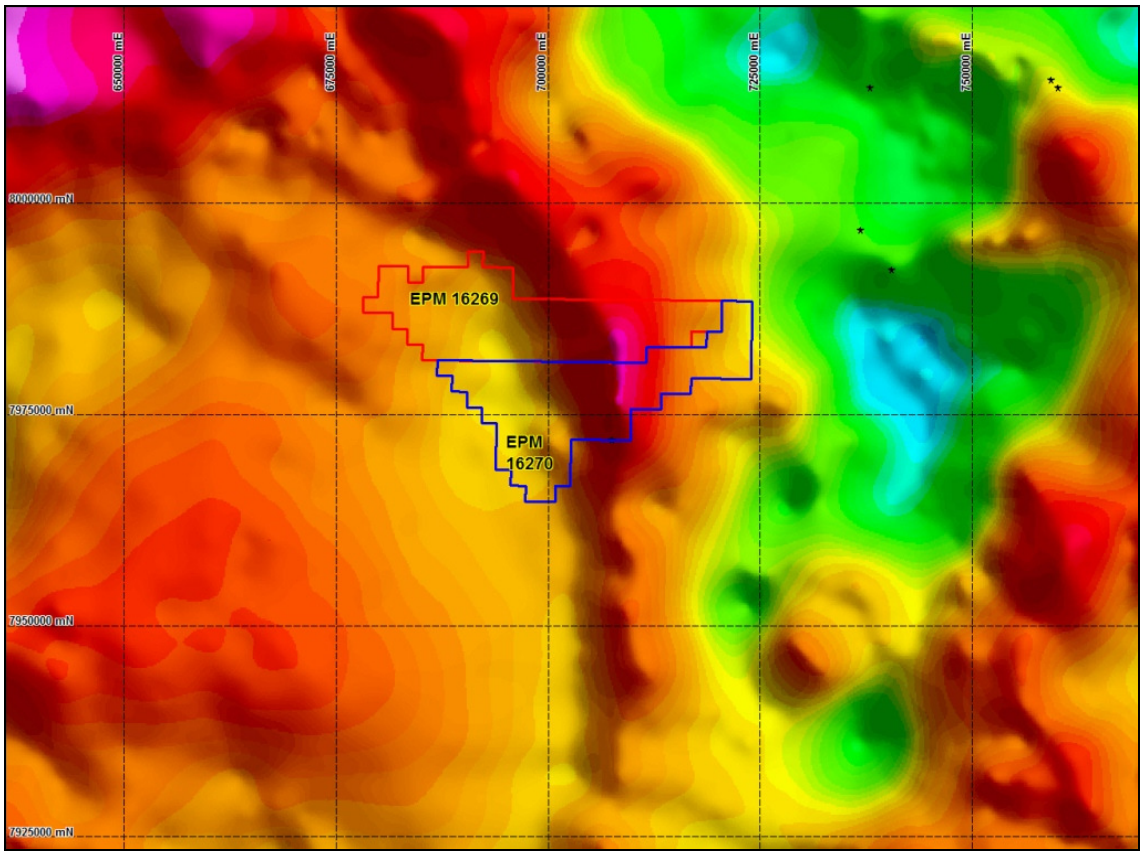

Figure 8. Regional Bouguer gravity image showing EPM 16269 and EPM 16270.

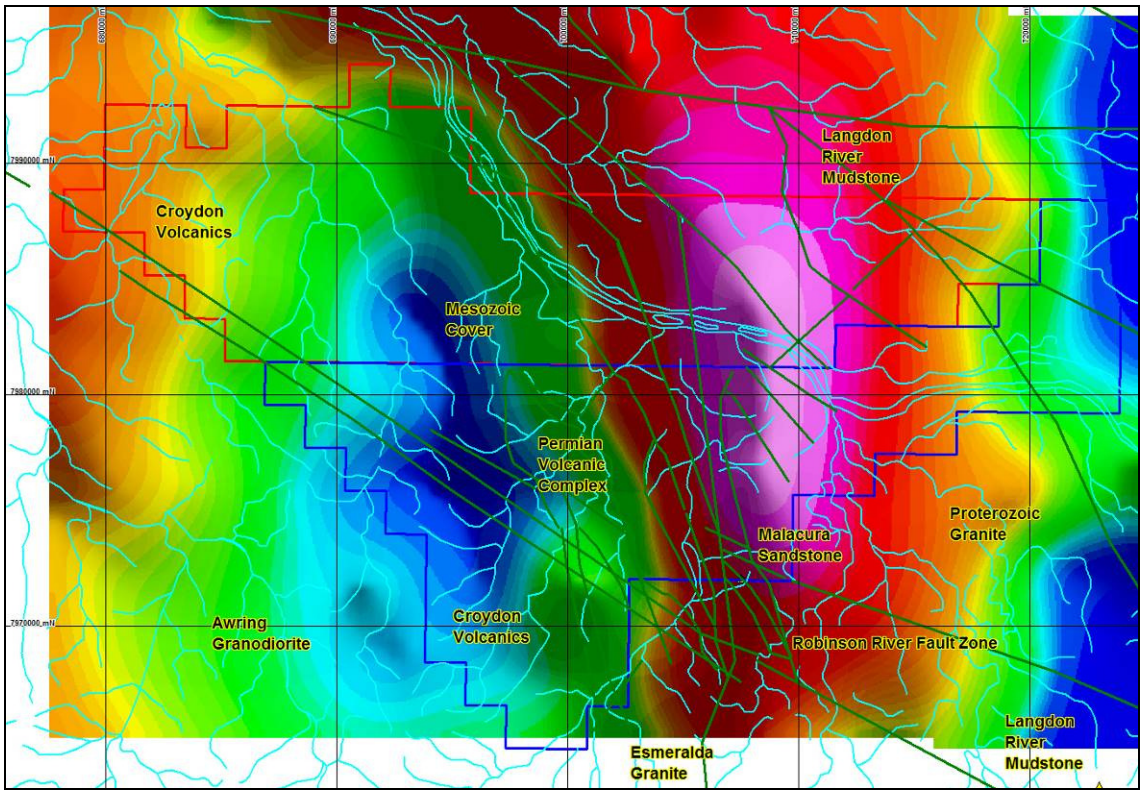

Figure 9. Bouguer gravity image of EPM 16269 and EPM 16270 showing strong north-south gravity ridge.

4 WORK CONDUCTED

4.1 Introduction

Work conducted by Bowen Energy has involved the following:

1. Open file review of previous exploration in and around the tenure
2. A targeting exercise based on the understanding gained from the open file work, published geology and available magnetic and gravity imagery.
3. Reconnaissance geology to check on exposure in areas of Mesozoic cover
4. 3D modelling and inversion of gravity and magnetic data from the Department of Natural Resources and Mines
5. Assessment of all results

4.2 Open File Research

This work was initially incorporated in an internal report to Bowen Energy Ltd (Gregory, 2012) and the results of that work are summarised in the present report.

The methodology employed to determine previous exploration in and around the tenure was to use the Department of Natural Resources and Mines (DNRM) Interactive Resource and Tenure Maps to define a polygon area encompassing the tenures and then to search the DNRM open file report databases in 10 year periods for the relevant reports. Snapshots of the overlapping tenures for each period are shown in **Figures 10-14.** Exploration within the tenure areas has been sporadic as there is only one mineralisation occurrence, so that focus was usually in known mineralised areas. Depending on the time period, porphyry copper-gold, Carlin-type bulk tonnage gold, epithermal gold, sub-volcanic breccia gold, stratabound Pb-Zn in the Upper Etheridge Group, alluvial tin and gold and even graphite have been targets.

All reports gleaned from the searches were perused for data and information that could be relevant to the exploration in the tenure. Summaries of the work carried out in those reports are given in a table in **Appendix 1** together with the relevant open file report references and report name and authors. Datasets that could be gleaned from the reports are also listed in the table.

Most of the exploration work has focused elsewhere in the region, but the tenure area has seen airborne geophysics, regional stream sediment sampling and some local gridding, soil and rock sampling and drilling. A review of all the historical tenures that intersect the area of EPM 16270 serves to highlight potential targets in the tenures themselves.

Pickands Mather (A-P 517M) carried out stream sediment sampling and mapping in the Mt Little and The Bluff copper prospects west of the present tenures. No significant anomalies were generated.

Central Coast Exploration NL (A-P 1726M) reviewed the Mt Little area between two leases and showed there was a mineralized corridor to 130m width, but with lower tenor of copper than at Mt Little prospect within the Awring Granodiorite

Porphyry copper-gold potential of the Awring Granodiorite, an intrusive complex in the Mt Little area, has been investigated in detail by several companies. The most significant was the detailed exploration by **West Coast Holdings** on EPM 3232, where a 1300m x 500m alteration system was extensively tested with airborne magnetics and radiometrics, stream sediments, ground magnetics, RAB for bedrock geochemistry, IP, percussion and diamond drilling. The system was shown to be low grade with minor Zn, Cu, Pb, W. A pipe-like body was also investigated in the south of the intrusive and found to relate to a mafic dyke. A new W discovery was made in a breccia zone at the north of the Awring Granodiorite where there was a Cu-W-Sn-Ag association.

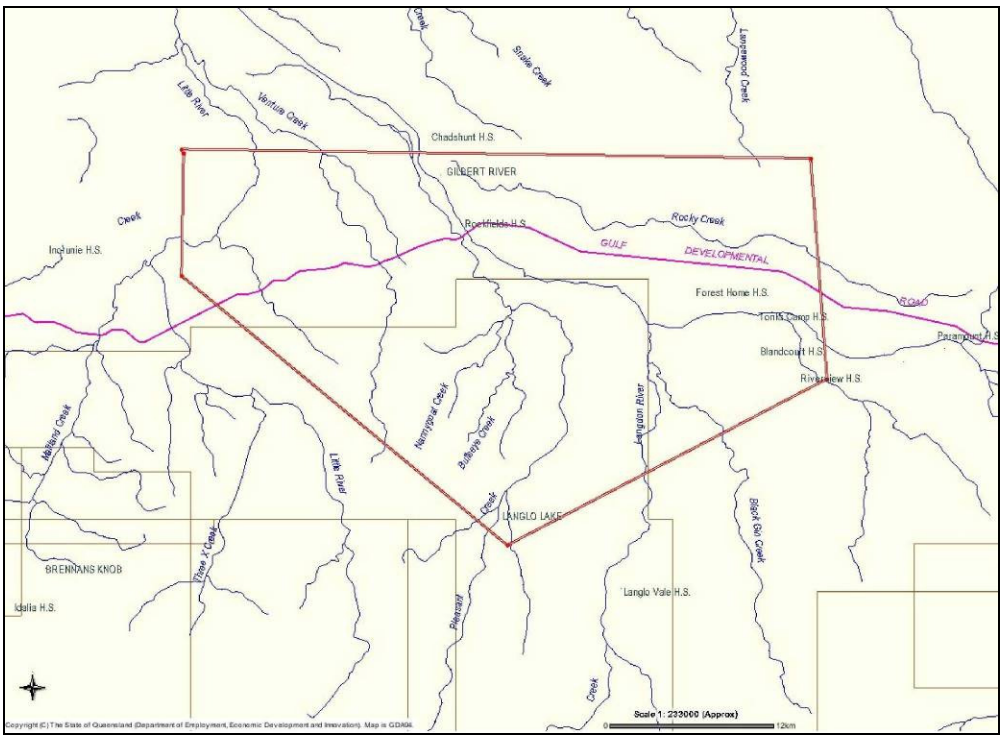

Figure 10.Search area in red, historical EPM tenure outlines 1960-1969 (after DNRM interactive maps).

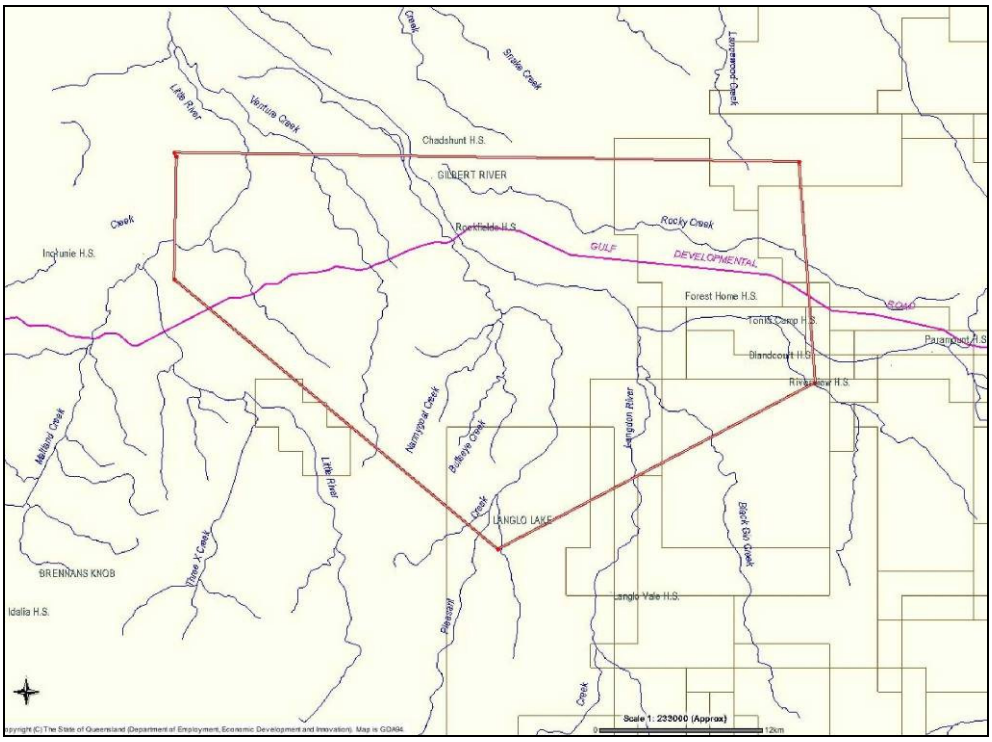

Figure 11. Search area in red, historical EPM tenure outlines 1970-1979 (after DNRM interactive maps).

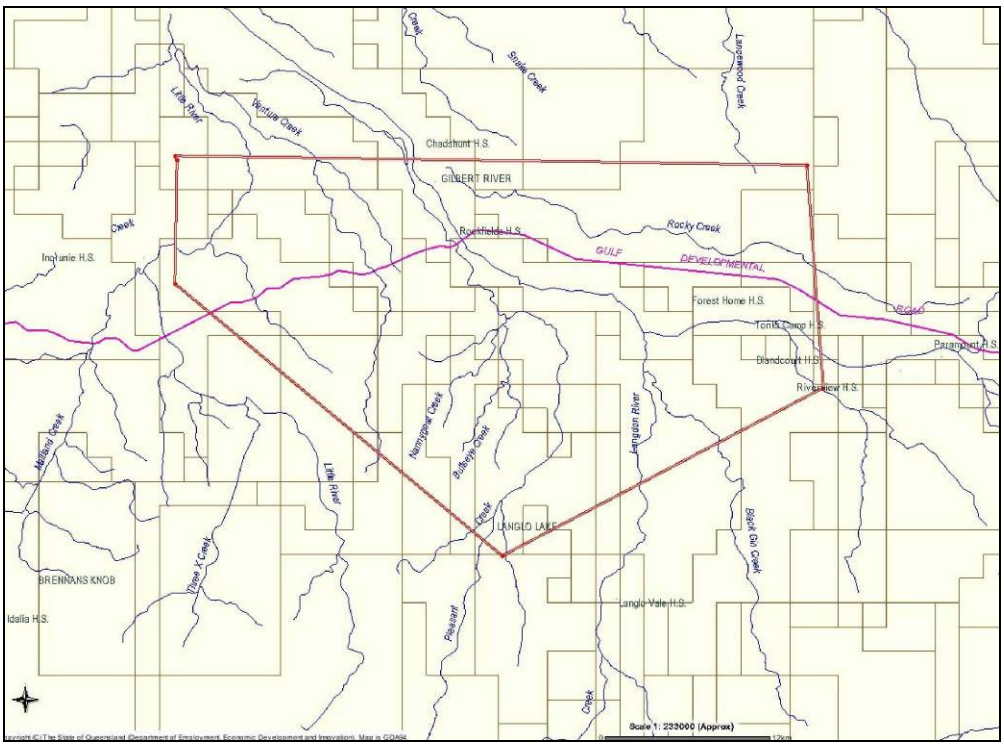

Figure 12.Search area in red, historical EPM tenure outlines 1980-1989 (after DNRM interactive maps).

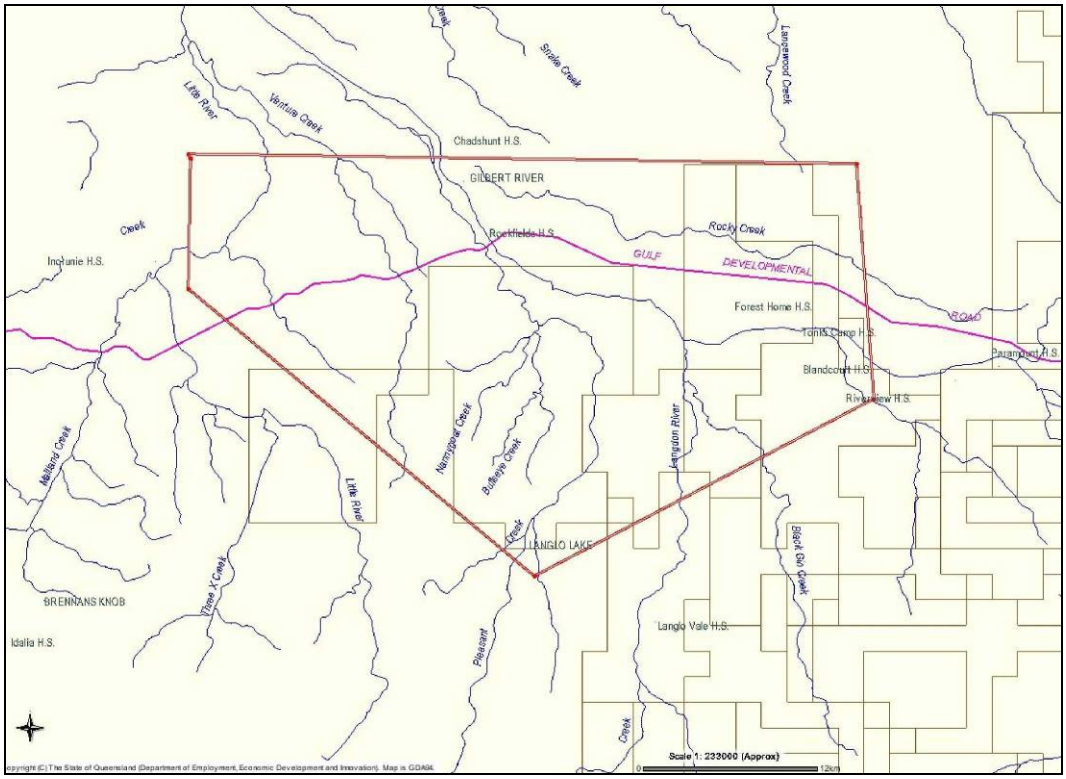

Figure 13. Search area in red, historical EPM tenure outlines 1990-1999 (after DNRM interactive maps).

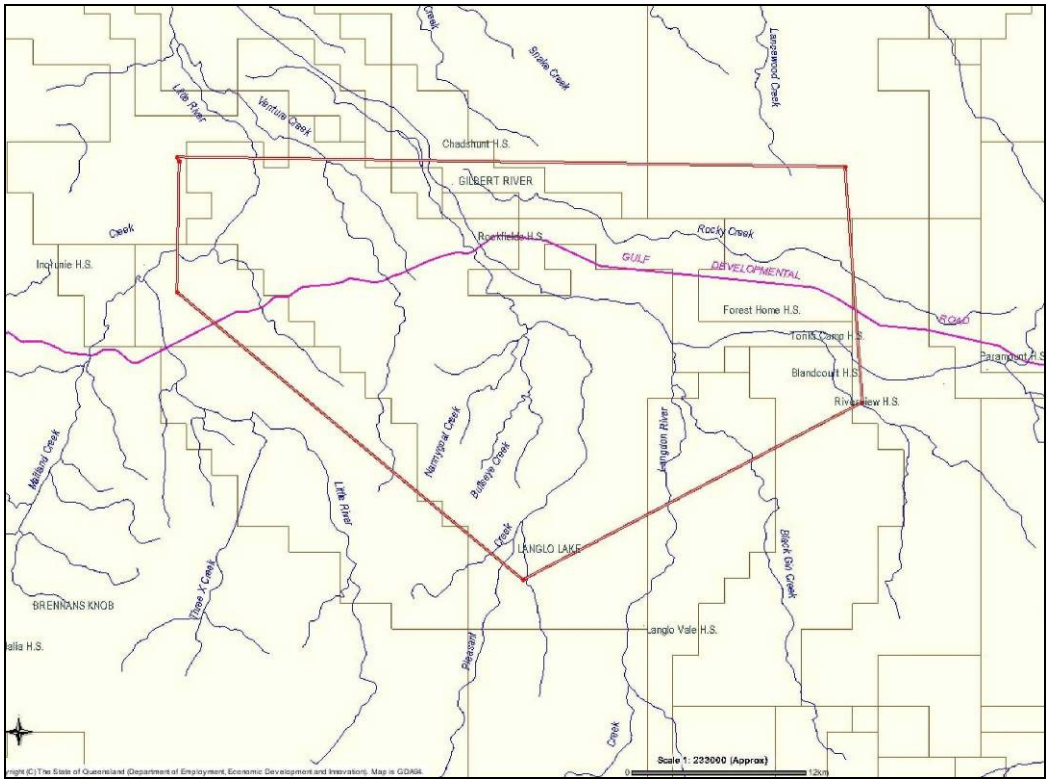

Figure 14. Search area in red, historical EPM tenure outlines 2000-2009 (after DNRM interactive maps).

CRA Exploration (EPM 4518) carried out a BCL and -80# stream survey in the Mt Little areas. While there was Au anomalism generated, follow-up showed this was not significant in accord with the previous findings of West Coast Holdings.

MIM Exploration (EPM 24621) conducted IP surveys on the northern margin of the Awring Granodiorite and drilled two drill holes in altered, brecciated granodiorite with a best result of 22m of 0.2% Cu.

Western Mining (A-P 2225M) was one of several companies to consider stratiform gold in the Upper Etheridge Group, but decided that the exploration model for Carlin-type gold did not fit the sequence, so no ground work was accomplished.

Samedan of Australia (A-P 2156M) explored for Carlin-style gold with a soil sampling program in the Candlow Formation on 21 lines. Five percussion holes were drilled with a best result of 1m of 1.39g/t Au which did not suggest a stratabound host.

Newmont (A-P 1250M) targeted the Stockyard Creek Siltstone for stratabound gold with detailed rock chips on 2km spaced lines. Spotty gold or spurious results were suggested to be the cause of anomalism that could not be repeated.

Anglo American (A-P 2727) carried out a search for stratiform gold and base metals in the Upper Etheridge Group. This involved stream sampling which produced disappointing results for Au, but high background levels of Cu, Pb and Zn in the Langdon River Siltstone.

Keela Wee Exploration Ltd (EPMs 5252, 5255) undertook a Carlin–type gold search in the Upper Etheridge Group in conjunction with a porphyry copper-gold and epithermal gold search. Stream sediment sampling (BCL and -40#) produced gold and base metal anomalies, but no correlation. Some gold anomalies related to narrow quartz veins in Proterozoic granite, others to reworking of detrital gold from the basal Mesozoic.

Keela Wee Exploration Ltd (EPM 5531) also aimed to search for gold in the Upper Etheridge Group, but defined a 6.3ppb gold anomaly that related to a 100m x 300m zone of epithermal quartz along a northwest fault zone separating Esmeralda Granite and metasediments from the Croydon Volcanics (this is in the corridor of the Croydon fault zone This occurrence was termed the Langlo Prospect and is on the southeast boundary of EPM 16270 and was tested with nine percussion holes with 8m of 0.18g/t Au and 28m of 0.15g/t Au the best result in hole LA7 (Karfs, 1989a, 1989b). The mineralisation relates to high level chalcedony veining related to Permian rhyolite porphyry intrusives. Local lattice quartz (after carbonate) was recognized locally in the east associated with silicification and chalcedony veining, but gold results from rock chips were very patchy from at least three sub-parallel northwest trending zones. Other BCL anomalies related to brecciated siltstone (0.72g/t Au in rock chips) and reworking of gold from the basal Mesozoic.

SIgnificant work relating to EPM 16270 was carried out by **Afmeco** (A-P 2787) in the Bullseye Creek area. Here a heli-borne spectrometer survey produced minor anomalies that were followed up by airphoto interpretation and ground mapping and sampling with

recognition of breccia zones on faults that showed is part of a Carboniferous volcanic complex. It is the southern part of this complex that was studied as alluvial and Mesozoic cover to the north curtailed any exploration there. Some mapping and rock chipping were undertaken, but no significant results for Au were recorded.

In another tenure, EPM 5661 in the Polly Lagoon area, **Keela Wee** defined weak BCL stream anomalism that was traced to minor narrow chalcedonic quartz veins of no interest.

West Coast Holdings (A-P 2981) recognised a graben structure with reversely polarised magnetics indicative of Carboniferous volcanics west of EPM 16270 and suggested uranium potential by comparison with the Maureen deposit in the Galloway Volcanics. However, drilling of a negative magnetic anomaly found only basalt of the Goat Creek Basalt.

PNC Exploration (EPM 3920) searched for volcanic-associated uranium mineralisation in the Croydon Volcanics and in Permo-Carboniferous volcanics. They undertook airborne geophysical surveys, geological traversing, radiometric and geochemical prospecting. Three radiometric anomalies related to greisen zones in the Olsen's Granite and adjacent Croydon Volcanics. The U potential was downgraded and Sn potential not investigated.

While distant from EPM 16270, to the northeast, **CRA Exploration** (A-P 4102M) followed up BMR stream Pb-Zn-Ag anomalies in the Huonfels area with BCL and discovered the Roan Bull Prospect, a Permian sub-volcanic rhyolite breccia deposit within granodiorite. Work involved aeromagnetics, RAB, soil and rock sampling, ground magnetics, detailed mapping, percussion drilling, surface and down-hole geophysics, IP and mise-a-la-masse. This showed enhanced Au-Pb-Zn on the southern margin of the breccia, but drilling failed to intersect significant mineralisation. The breccia pipe is associated with a reversely polarised, ovoid to bullseye magnetic anomaly typical of the many such breccias in the Permo-Carboniferous volcanic areas.

ACM operations Pty Ltd (EPM 5323) undertook a search for base and precious metals in the Proterozoic volcanics and intrusives of the Croydon Province. BLEG results defined the Malacura Anomaly in the Esmeralda granite well south of the present tenures. Follow-up with soil BLEG and mapping did not produce significant results.

Alluvial gold search by **Felstone Investments Pty Ltd** (EPM 4920) focused on the gravels of the Gilbert River in palaeochannels. However, drilling failed to find significant channels.

Uranium search by **Buka Minerals** (A-P 1136M) using airborne geophysics produced radiometric anomalism associated with black shales. Ground checking and mapping of anomalies was followed by shallow drilling that were coincident with graphitic horizons, but no potential for uranium.

Graphitic ignimbrites of the Croydon Volcanics were investigated by **Queensland Metals** (EPM 5033) for flake graphite, but with negative results.

Keela Wee in JV with CRA (EPM 7296) searched for Century-type Pb-Zn in carbonaceous siltstones of the Upper Etheridge Group. This highlighted Palaeozoic Pb-Ag veins deposits rather than stratabound Pb-Zn of Proterozoic age.

The most significant search for base metals in the Upper Etheridge Group was conducted by **MIM Exploration** (EPM 7633, 7865). Regional stream sediment sampling, rock chips and soils led to definition of stratigraphically controlled Zn at New Moon West as well as other stratabound anomalies in Langdon River Mudstone and Upper Candlow Formation. Some Pb-Zn anomalism was found to be related to Carboniferous quartz-feldspar porphyries. Despite the drilling of ground EM conductors and the trialing of Questem lines, the priority EM conductors related to pyritic carbonaceous units with no enhancement of high backgrounds. None of these areas are close to the present EPMs, but the data are relevant to the Stockyard Creek Siltstone that occurs in the tenures.

Alcoa of Aust Pty Ltd (A-P 2530M) explored the Gilbert River Basin for alluvial Sn using mapping and backhoe sampling of gravels. Final testing involved aircore drilling in 73 holes, but Au grades were usually insignificant.

Anglo American (A-P 2588, 2589) tested for Au and Sn in Tertiary sediments of the Wyabba Beds. Drilling showed that Au values were very low, but there were issues in defining the basal units. Areas draining the Croydon Goldfield were deemed more favourable.

Eagle Mineral Resources Ltd (EPM 13685) undertook a search of strandline heavy mineral deposits in the Karumba Basin. Work showed that these did not exist and questioned early BMR work suggesting the existence of a marine trough.

4.3 Targeting

Aeromagnetic images and gravity images in combination with published geology and open file data were used to define exploration targets. Structure is critical to this exercise, as is the recognition of signatures of Permian rhyolitic complexes and small intrusions and breccias that could be gold hosts.

The targets are defined on various images in **Figures 15-22.**

UBC 3D modelling and inversion of the Government magnetics and gravity data was undertaken particularly to clarify the strong gravity ridge along the Croydon Fault as shown in **Figure 21**.

No targets were defined within the relinquished portions of EPM16270.

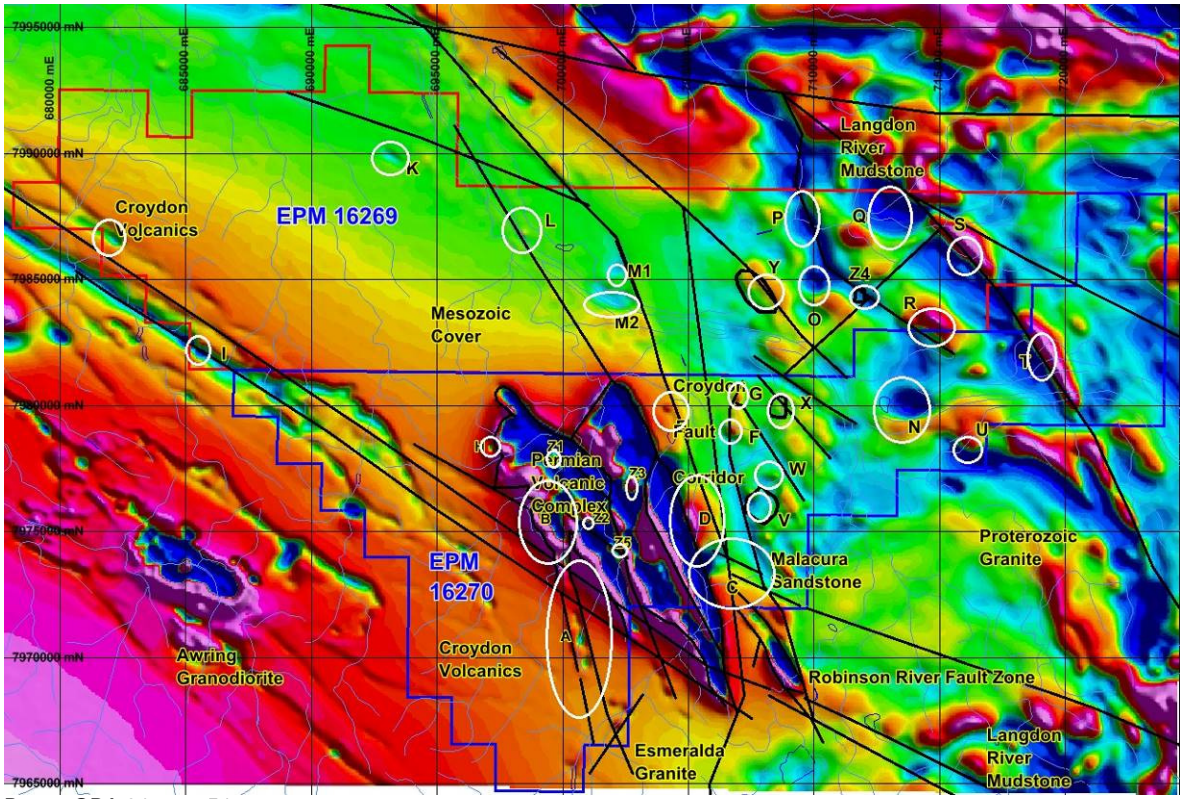

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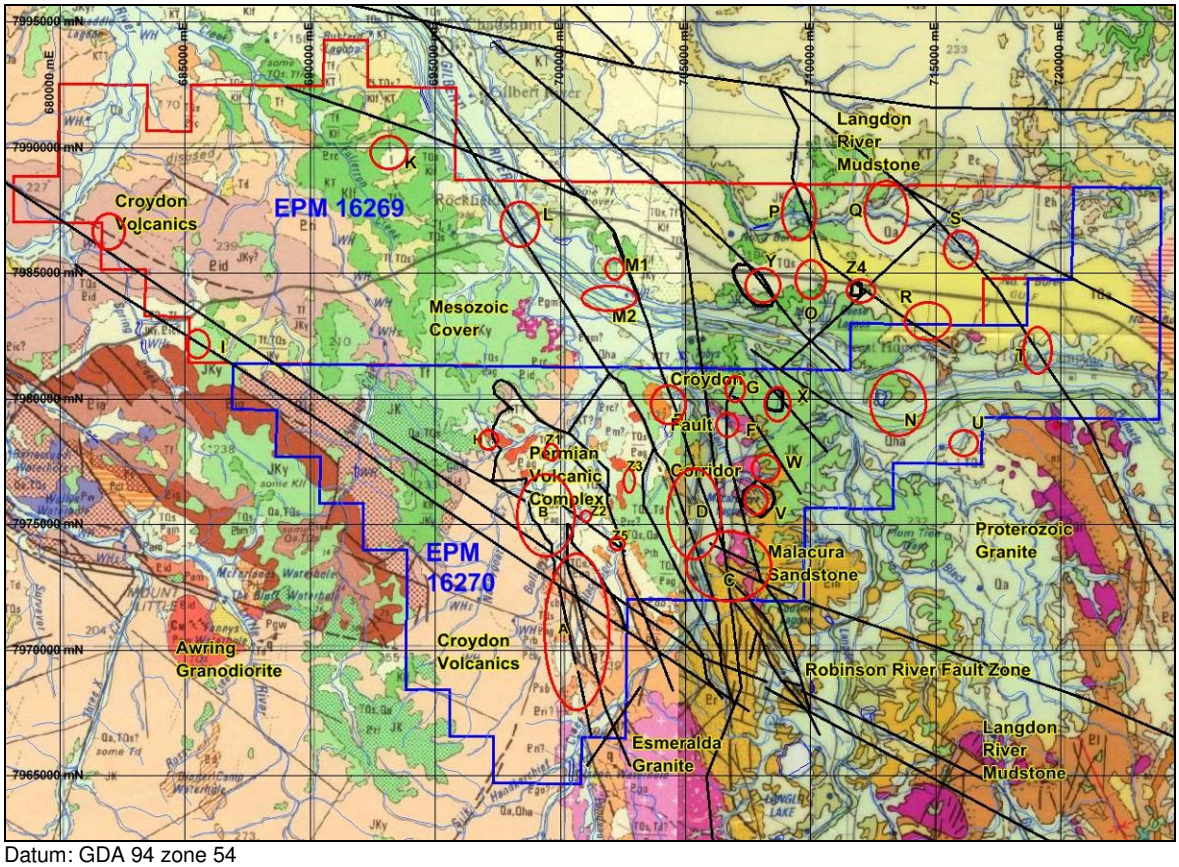
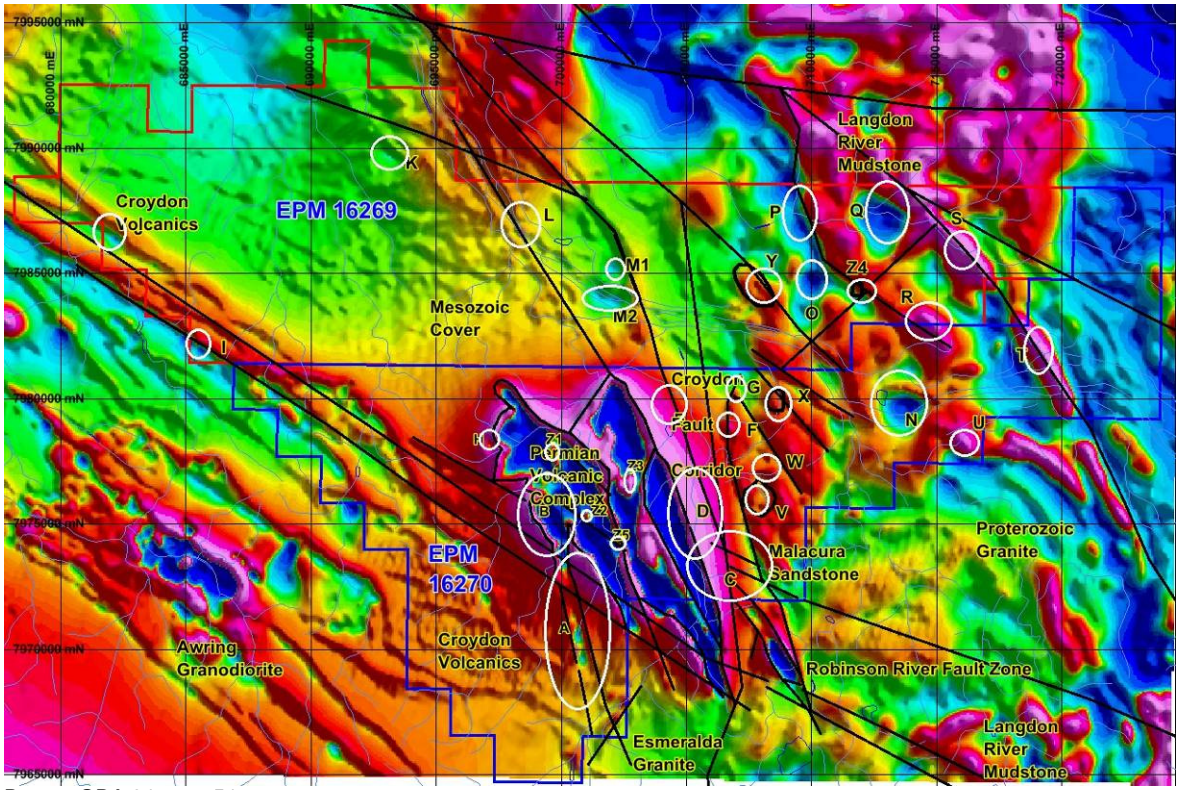
Figure 15. TMI magnetic image showing targets, structure and geological annotation for EPM 16269 and EPM 16270.



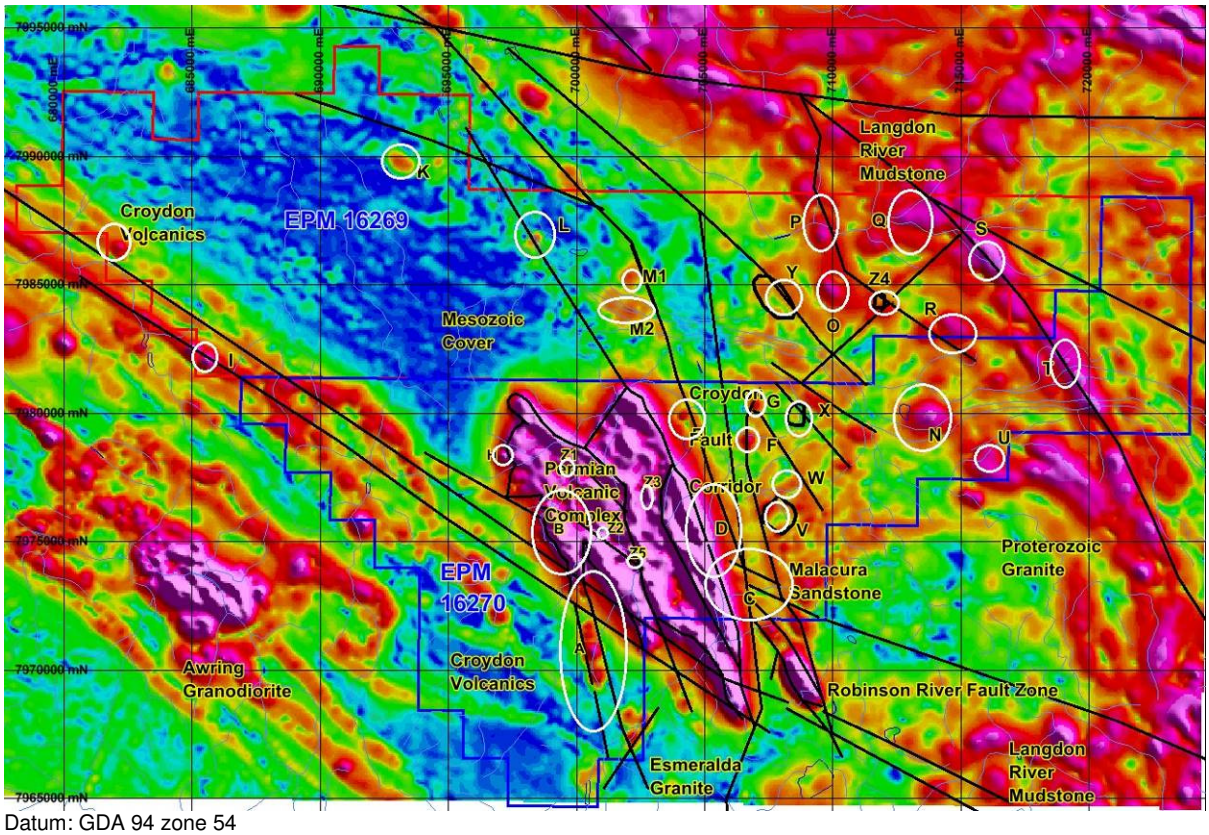
Datum: GDA 94 zone 54

Figure 16. Published regional geology and targets for EPM 16269 and 16270 (after Geoscience Australia Croydon and Georgetown 1:250 000 geology).



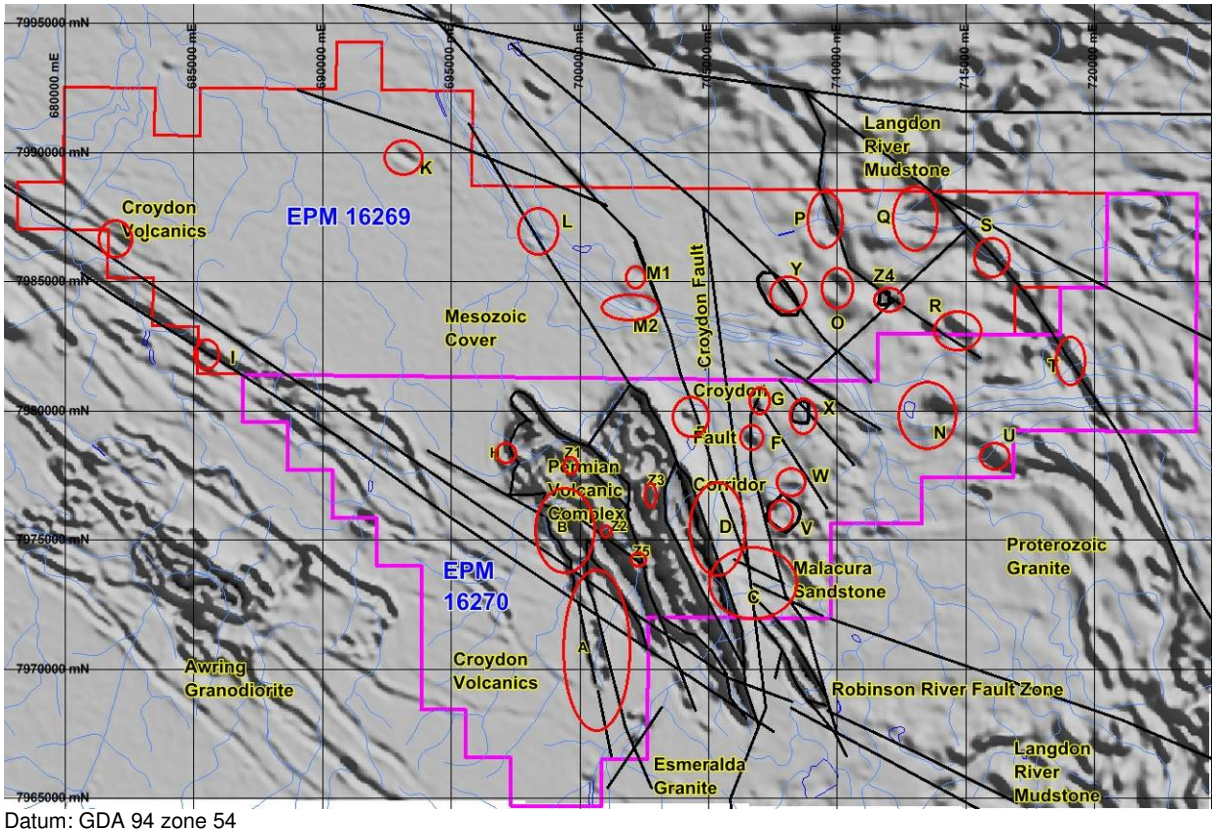
Datum: GDA 94 zone 54

Figure 17. TMI RTP image for EPM 16269 and EPM 16270 showing targets and geology annotation.



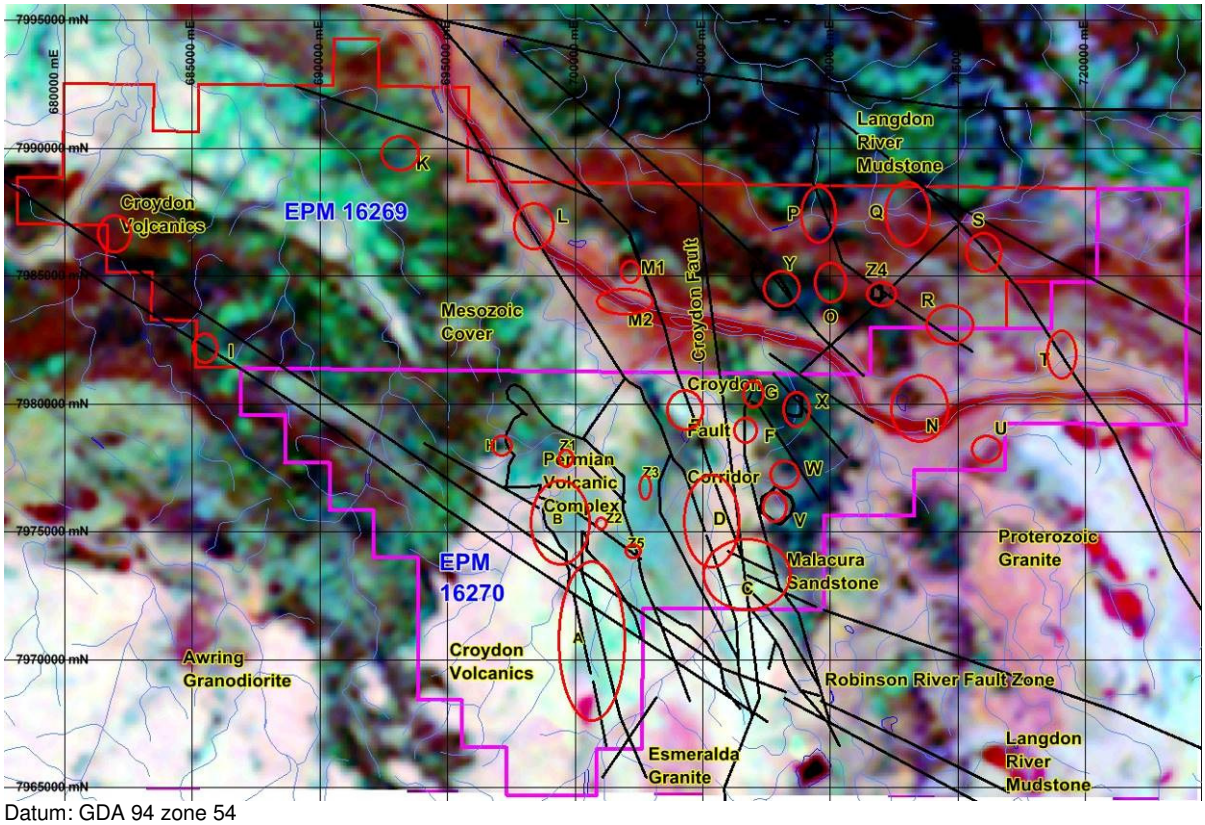
Datum: GDA 94 zone 54

Figure 18. TMI analytical signal image showing targets and geology annotation for EPM 16269 and EPM 16270.



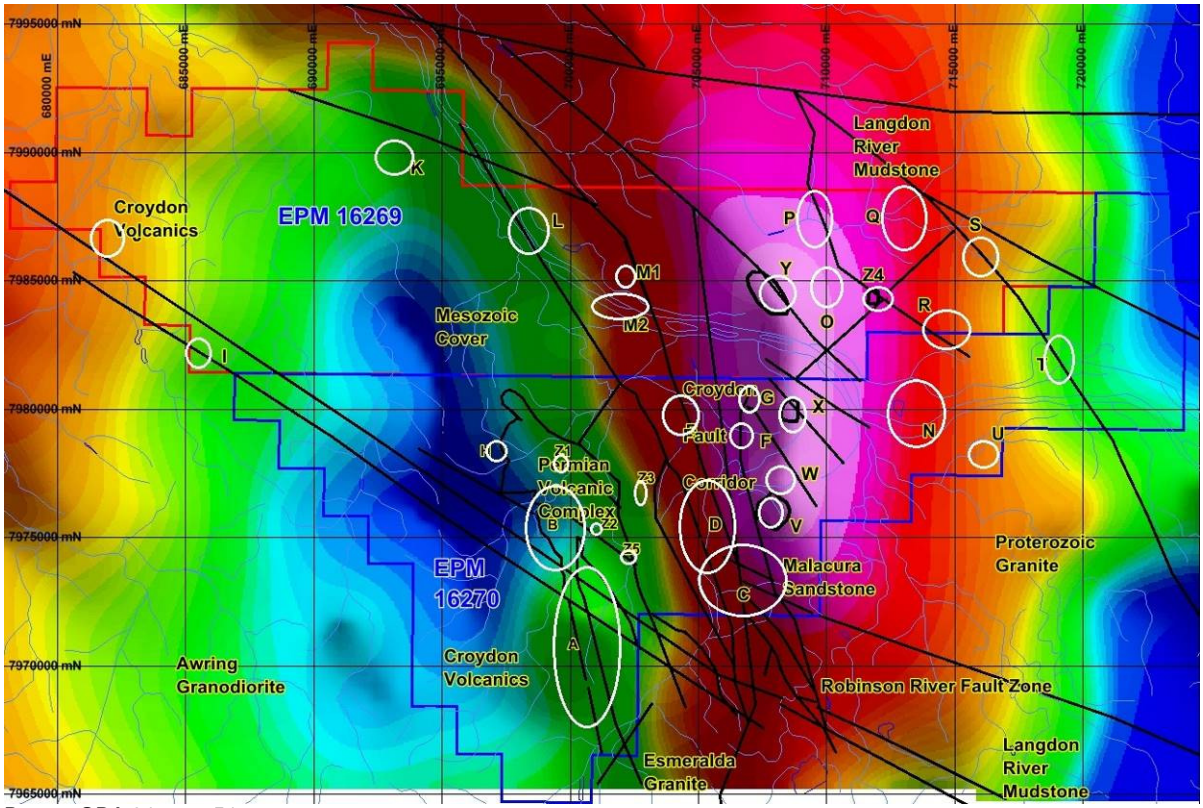
Datum: GDA 94 zone 54

Figure 19. TMI 1VD image showing targets and geology annotation for EPM 16269 and EPM 16270.



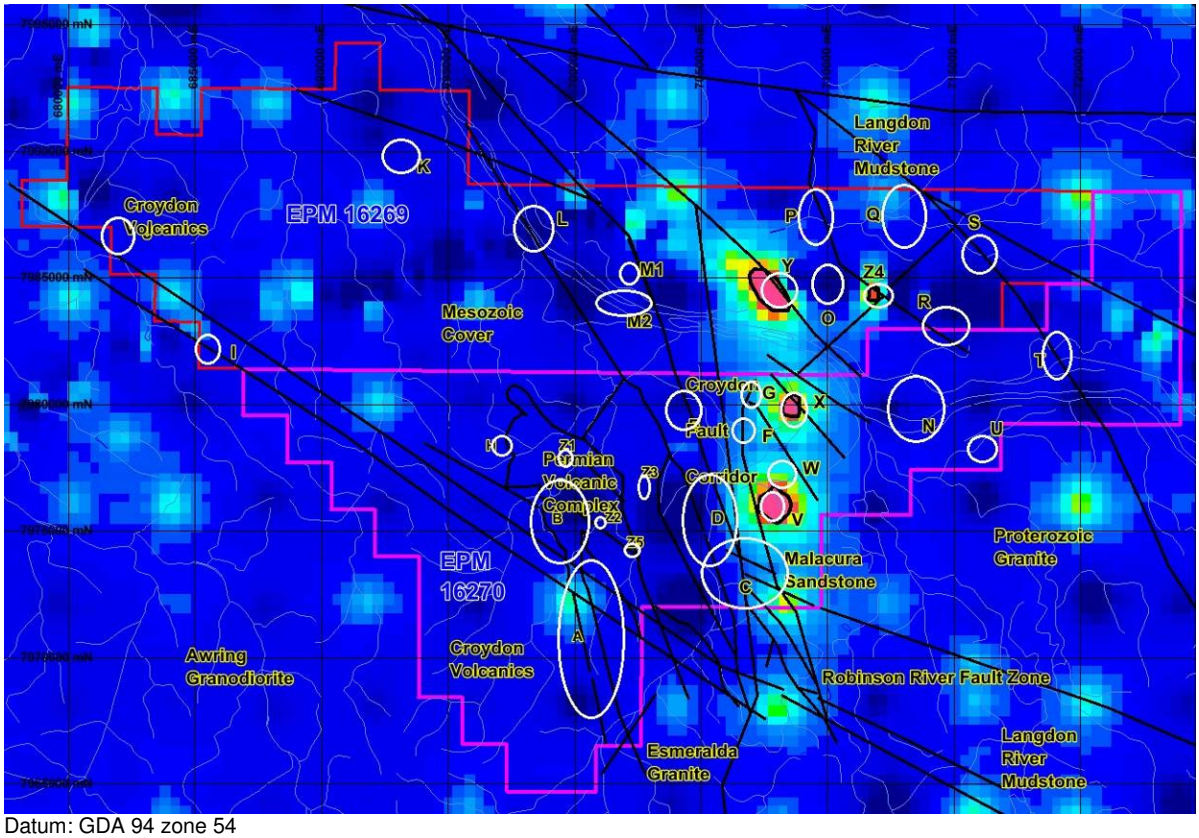
Datum: GDA 94 zone 54

Figure 20. Ternary radiometric image showing targets and geology annotation in EPM 16269 and EPM 16270.



Datum: GDA 94 zone 54

Figure 21. Bouguer gravity image showing targets and geology annotation in EPM 16269 and EPM 16270.



Datum: GDA 94 zone 54

Figure 22. UBC modelled gravity RL 400m for EPM 16269 and EPM 16270.

4.4 Reconnaissance Geology

Ground checking of specific targets and target zones was undertaken to ascertain access and the possibility of windows of basement through the Mesozoic cover. Mesozoic cover was found to mask all targets.

5 CONCLUSIONS AND RECOMMENDATIONS

No potential anomalies were evaluated on the relinquished portions of EPM16270, through in house prioritization the area is considered as low priority and future expenditure would be focused on other areas within EPM16270 regarded as having higher potential to host mineralization. As such the area outlined in this report was recommended for relinquishment.

6 REFERENCES

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