

Lottah Mining Pty Ltd
Annual Report on Exploration
EL 53/2007 “Mt Everett”
Dec. 2016 to Dec. 2017

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Abstract

Work Completed on EL 53/2007 "Mt Everett" during the period of July 2016 – July 2017 has consisted of a comprehensive compilation of previous exploration including existing airborne and ground magnetic surveys with a focus on the Blythe River prospect and the linear magnetic anomaly that extends to the south.

Fieldwork has consisted of reconnaissance mapping and sampling of the remnants of historic trenches and ground truthing other magnetic anomalies.

In-house desktop (uncalibrated and so indicative only) analyses of magnetite were 67.1% and 67.9% Fe.

Effort was expended assessing the granite margin for Li bearing pegmatites with one sample of pegmatitic granite sampled in the northern trench currently being analysed for Li.

Work proposed 2017/18 year will consist of the following.

- Further drone/ground magnetic at the Blythe River North and South prospects.
- Drilling at the Blythe River North and/or South prospects.
- Address other magnetic anomalies e.g. Mt Everett.

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1.0 Introduction

1.1 Location and access

EL 53/2007 covers an area of 45 km² in Tasmania's northwest, inland from Burnie.

Access to the tenement is best achieved from the Hampshire Natone road and thence by gravel roads such as Blythe Road. Access within the licence is via limited historic and current logging roads and tracks.

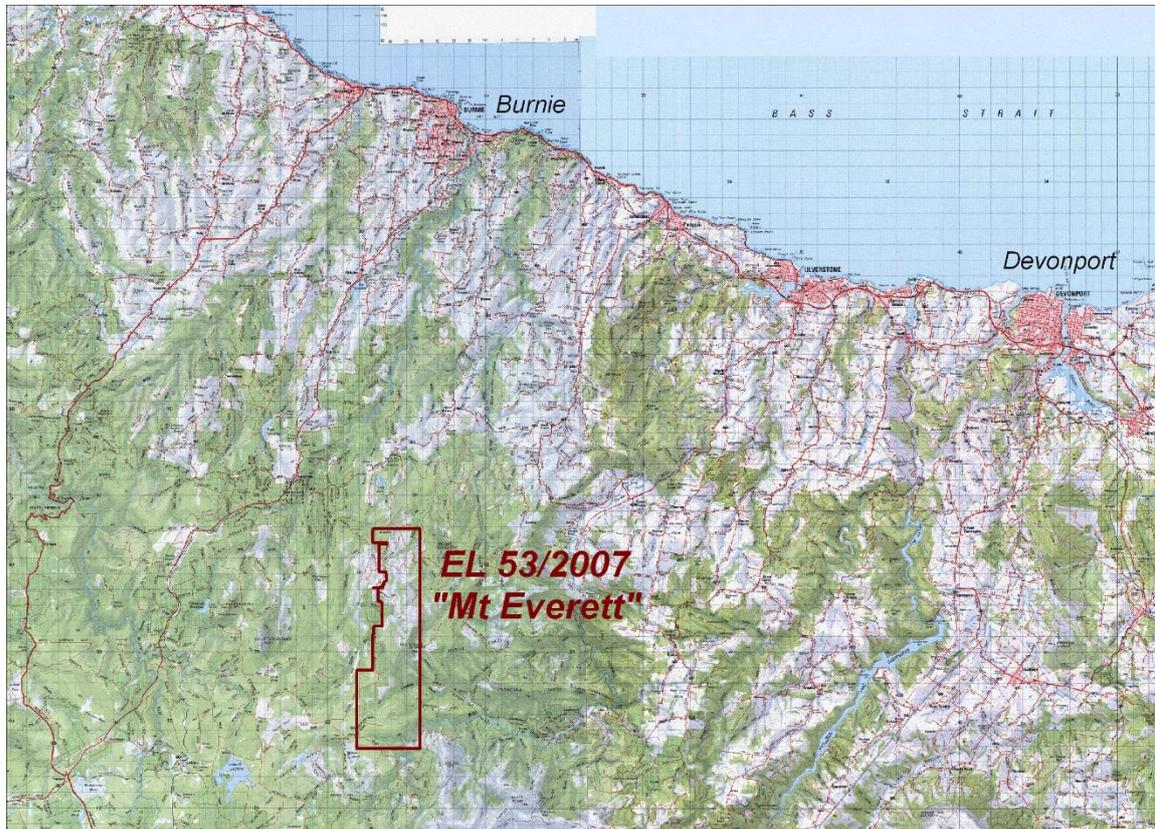


Figure 1.1: EL 53/2007 location.

1.2 Land status and usage

EL 53/2007 consists of primarily State Forest in the northern 2/3 of the tenement with private freehold in the southern 1/3. Almost the sole usage of the land is forestry.

1.3 Tenure

Exploration Licence EL 53/2007 "Mt Everett" was granted to Blythe River Iron Pty Ltd in 2007. Blythe River Iron Pty Ltd was bought out by Forward Mining whose parent company is Lottah Mining Pty Ltd.

ML 1996P/M was excised in part from EL 53/2007 on 4th June 2015.

EL 53/2007 remains in the name of Blythe River Iron Pty Ltd but is owned and managed by Lottah Mining Pty Ltd.

1.4 Exploration focus

Lottah Mining Pty Ltd has a JORC compliant magnetite iron resource at its Rogetta North project on ML 1996P/M to the immediate west of EL 53/2007. ML 1996P/M was in part excised from EL53/2007

Lottah Mining Pty Ltd also has a JORC compliant hematite iron resource deposit on EL 6/2005 to the northeast of EL 53/2007.

Lottah Mining Pty Ltd is targeting further magnetite and/or hematite iron deposits to add to its resource inventory.

Lottah Mining Pty Ltd is also targeting any commodities of commercial interest including but not limited to W03, Sn, Bi, Mo, Cu, Pb, Zn, Au, Ag, Li, Ni, REE, wollastonite and facing stone.

2.0 Geology

Regionally the geology of the Rogetta Project area is dominated by a basement of Proterozoic metasediments (and minor mafic volcanics) of the Oonah/Burnie Formations unconformably overlain by a sequence of Cambro-Ordovician volcanics and sediments, both intruded by the Devonian Husetop Granite, all obscured by a veneer of Tertiary basalt.

The basal unit of the Cambro-Ordovician sequence consists of Mt Read Volcanics, correlated with Tyndall Group. These are overlain by the Owen Group sediments.

The basal member of the Owen Group is a quartz pebble conglomerate with local additions of volcanoclastic detritus. The conglomerates are overlain by the Moina Sandstone which has a gradational contact with the overlying Gordon Group Limestone, becoming more calcareous towards the contact.

The Gordon Group limestones and dolomites are the host to skarn mineralisation.

These basement rocks were deformed in the Middle Tabberrabberan Orogeny under a largely east-west compressive stress regime. This resulted in the development of north to north-northeast striking F2 folds superimposed on a much broader east-west F2 fold.

Late in the orogeny the I-type Husetop Granite was emplaced passively and underlies most of the Rogetta Project tenements.

Skarn mineralisation was introduced into calcareous rocks by fluids derived from this granite with rarer vein style mineralisation also associated with this intrusive. Whilst previously considered to be a single body more recent work (McKeown, 1994) suggests that the granite consists of a number of phases often intruding as dykes as opposed to a large rounded batholith geometry.

In the Tertiary topographic lows were filled by basal sediments followed by thick Tertiary basalt flows which spilled over onto more undulating topography as a thin veneer.

Within EL 53/2007 granite outcrops over the northern third of the licence with gravity data indicating that the granite body continues beneath the rest of the licence area. Tertiary basalt covers the bulk of the rest of the licence with the Cambro-Ordovician rocks outcropping on the eastern side of the middle third and at the very southern end of the licence.

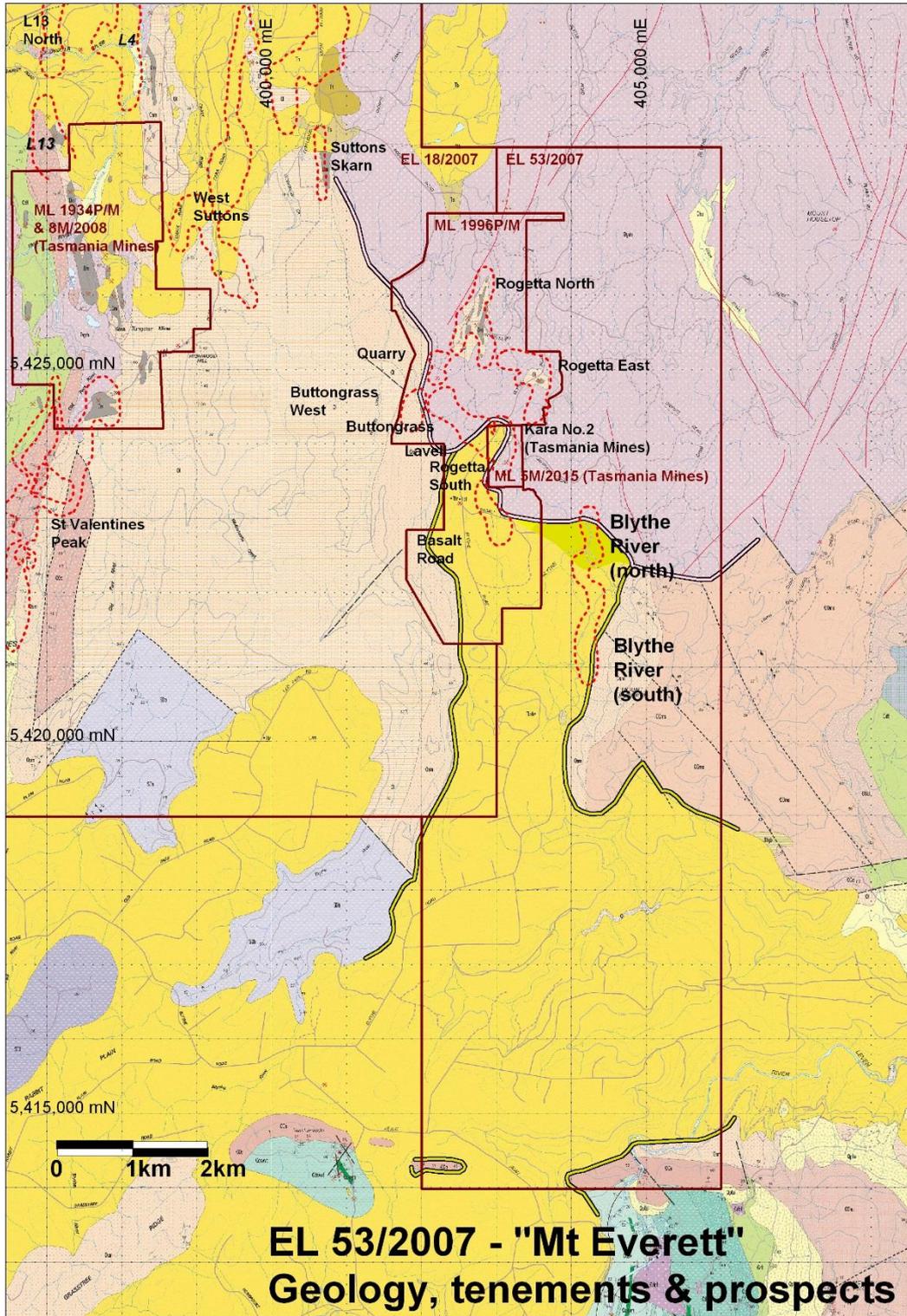


Figure 2.1: Geology, tenements and prospects for Lottah's Rogetta Project. Solid lines along contact between granite and basalt and granite and Cambro-Ordovician rocks is for reference in subsequent geophysical images. Red dashed line is outline of major magnetic anomalies as defined by the TMI image in figure 5.1.

3.0 Review of Previous Work

3.1 Prior to current tenement

The area of EL 53/2007 has seen relatively limited focussed exploration with that which has occurred largely targeting tin and tungsten in skarn. The two main bodies of work are those carried out by Shell on their EL 36/1979 and Comalco on EL 4/1977 (which included a 1km wide strip within the current EL 53/2007).

Regional aeromagnetics in 1980 and INPUT EM + magnetics in 1983 by Shell on EL 36/1979 recognised the Blythe River prospect as a north-south linear magnetic high (Lawton *et. al.* 1983).

Shell followed this up with gridded soil sampling (Sn, W, Mo, Cu, Zn, Ba) and magnetics on an initially 1.5km long north-south baseline with 100m spaced east-west wing lines to cover the northern end of the trend (Blythe River North) (Lawton *et. al.* 1983). The grid was extended a further 1.2km south to cover the southern magnetic anomalies (Blythe River South).

Two trenches were dug across the northernmost magnetic anomaly's peak. Both intersected magnetite skarn. The southernmost trench on line 2700mN intersected a 15m thick zone of magnetite skarn dipping -25° to the southwest. The northernmost trench intersected a 20m thick zone of skarn but with only 3 thick zones of magnetite skarn, again dipping -25° to the southwest. Shell concluded that based on the ground magnetics the magnetite skarn only extends 15-20m down dip though this is unconfirmed by drilling.

Comalco carried out stream sediment of the magnetic fraction sampling for tin and tungsten defining an area just east of the Blythe River (500m west of the Blythe River South magnetic anomalies) with anomalous drainage for tungsten (blue scheelite). A grid was established and magnetics and gradient IP surveys read. The geology was shown to be Tertiary basalt with one small window of Ordovician sandstone.

A 700m long IP anomaly was defined which was drill tested in a more accessible part of the anomaly by BRD1. The 57m hole did not penetrate the Tertiary cover with water influx corresponding to Tertiary sands and gravels causing the hole to be terminated. A zone of peat intersected between 4m and 7m was considered to be the source of the IP anomaly and no further work was recommended.

Given the position of the anomalous drainage with respect to the Blythe River South magnetic anomaly it is conceivable that the latter was the source of the tungsten.

3.2 During current tenement

EL 53/2007 originally contained the Rogetta East prospect which has been included in ML 1996P/M (which was granted on 4th June, 2015) with a significant body of work conducted on that prospect. That work is detailed in previous reporting.

Work during the current tenement over the current area of EL 53/2007 has been more limited with the focus shifting to the rest of the tenement in late 2015.

4.0 Exploration completed during the reporting period July 2016 to July 2017

4.1 Introduction

Work on EL 53/2007 during the period of December 2016 to December 2017 has consisted of the following;

- Comprehensive compilation of previous exploration work with the downloading of all relevant reports from MRT's website and the construction of a drillhole database.
- Compilation of existing airborne magnetic data and digitising of the Shell's Blythe River grid ground magnetics surveys.
- Reconnaissance field mapping at Blythe River (north) prospect.

4.2 Data compilation

A thorough approach to compiling historic exploration data and in particular drillhole data, has been implemented with drillhole collars accurately georeferenced and assay and lithological data also input in order to create a comprehensive drillhole database. That work is advanced but ongoing. There is only one drill hole within the current EL 53/2007 being BRD1 drilled by Comalco in 1983.

Existing geophysical data enhanced by Southern Geoscience Consultants for Red River in 2007 has been obtained and a series of plans generated better defining the regional magnetic anomalies (figures 5.1 to 5.6).

Ground magnetic data from Shell's survey over the Blythe River grid has been digitised and an image generated (figures 5.7 and 5.8).

Trench mapping has also been digitised and is shown in figures 5.10 to 5.12.

4.3 Blythe River (north) prospect

Reconnaissance field mapping was undertaken at the Blythe River (north) prospect to follow-up the magnetic anomalies defined in the regional aeromagnetic datasets and to attempt to locate the trenches.

5.0 Discussion

5.1 Data compilation

Data compilation work on EL 53/2007 is part of a larger body of work compiling all exploration data (with an initial focus on iron) for the whole of Lottah's Rogetta Iron Project tenements in the region.

As noted earlier only one historic drill hole has been drilled within the current area of EL 53/2007. Mineral Resources Tasmania database lists the hole as being at 403,712.8mE and 5,421,383.9mN (MGA94) which is consistent with the coordinates listed in Askins (1983) of 403,600mE and 5,421,200mN (AGD66). Shell did not survey the location of the hole but tape and compassed from a crossing point on the Blythe River a distance of 300m away and so accuracies are likely to be +/-25m at most.

Magnetics and radiometrics images generated by Southern Geoscience Consultants for Red River Mining Pty Ltd are shown in figures 5.1 to 5.6.

The magnetics images show the Blythe River North and South anomalies as lying on a north-south trend with peaks at either end.

A second trend parallel and just east of the Blythe River anomalies corresponds with the crest of Mt Everett and may be a topographic feature, however this anomaly deserves field checking.

5.2 Blythe River North and South prospects

Ground magnetics data from Shell's 1981 survey is shown in figure 5.7 as colour coded data points and in figure 5.8 as a processed image (ID2 with 60m range and maximum of 4 points per 5m square) in figure 5.8. The ground magnetics has located the position of the aeromagnetic anomalies but with limited detail over the Blythe River South anomaly due to less wing lines being read.

Geology for the Blythe River North prospect mapping by Shell in 1981 and costean locations is shown in figure 5.9.

The geological sections of the trenches have been digitised in figures 5.11 and 5.12 with legend in figure 5.10.

Field reconnaissance mapping located the 2750mN trench which is now essentially collapsed in. The 2700mN trench is less clearly defined but loose float around 404,230mE 5,422,965mN may represent it.

Samples of magnetite skarn were collected from both localities and analysed using Lottah's in-house XRF which is in need of refurbishment and recalibration and so results are indicative only but a selection of samples analysed from the northern trench averaged 67.9% Fe whilst the loose float around the expected position of the southern trench averaged 67.1% Fe. Average WO₃ and Sn values were low.

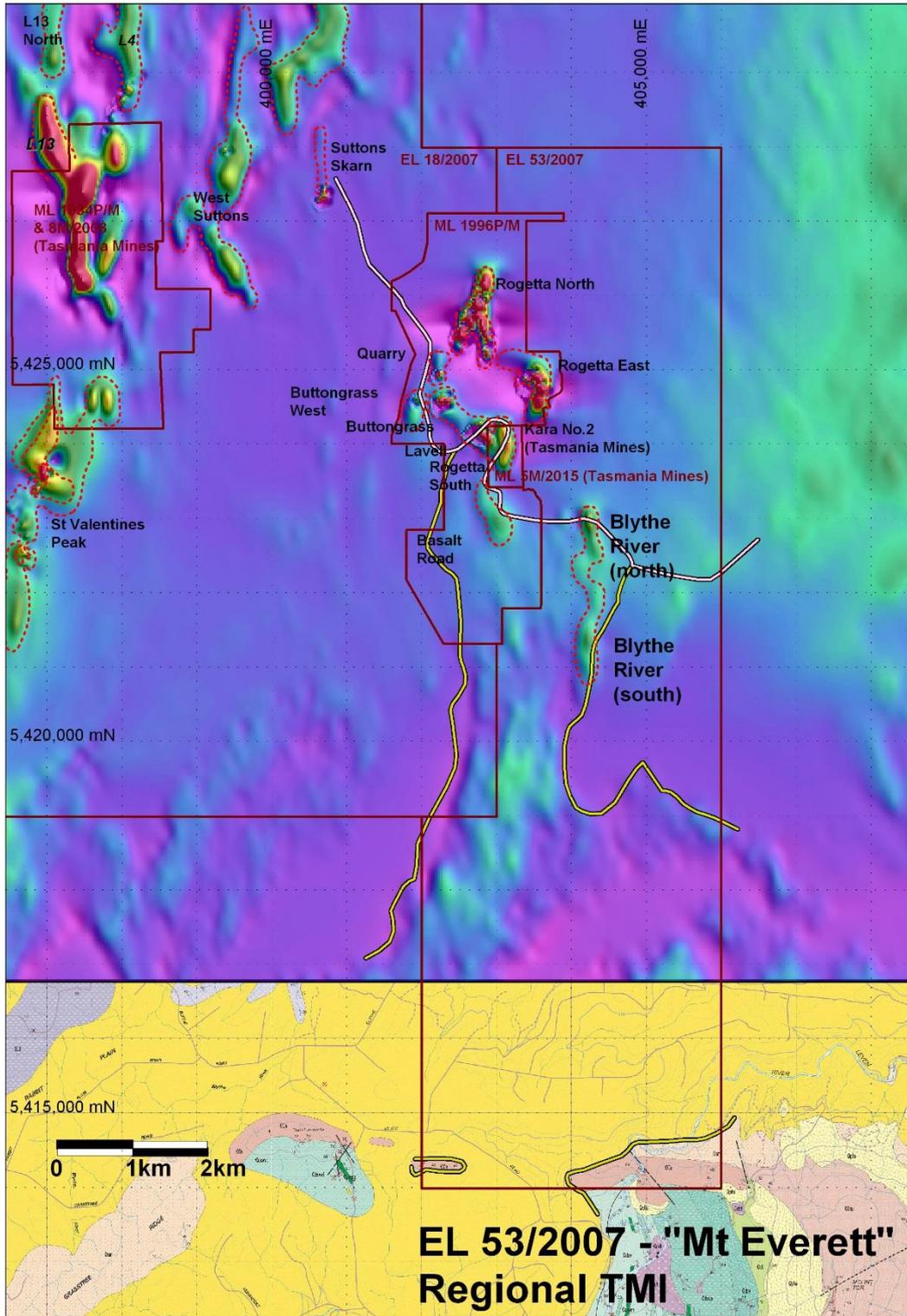


Figure 5.1: Prospects and tenements on Total Magnetic Intensity Reduced To Pole 25m upwardly continued image. Red dashed line around anomalies is that shown on figure 2.1. Solid lines are geological reference lines as defined on figure 2.1.

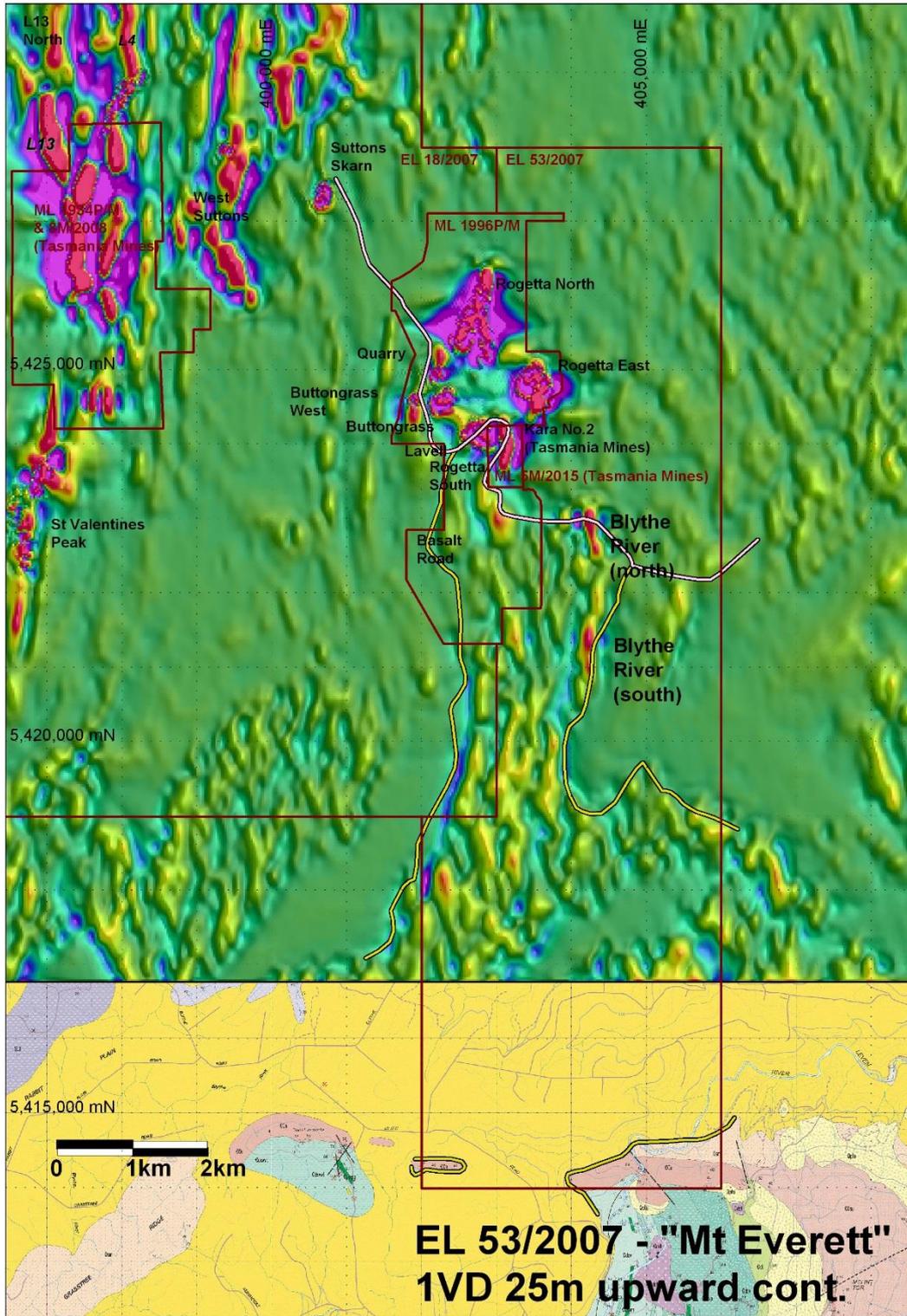


Figure 5.2: Prospects and tenements on 1st vertical derivative 25m upwardly continued magnetics. Solid lines are geological contacts for reference as defined on figure 2.1.

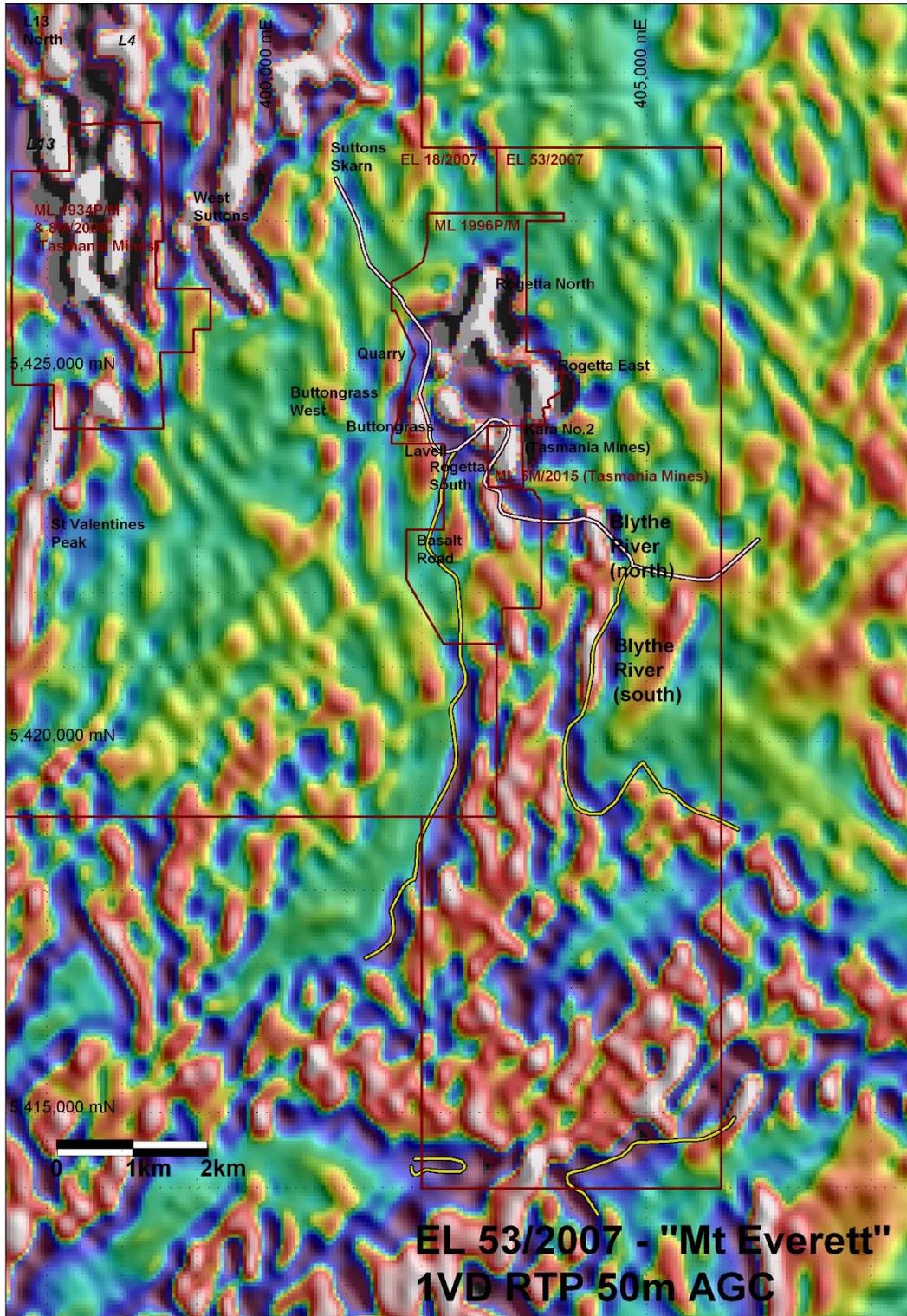


Figure 5.3: Prospects and tenements on 1st vertical derivative 50m auto gain controlled upwardly continued magnetics. Solid lines are geological contacts for reference as defined on figure 2.1.

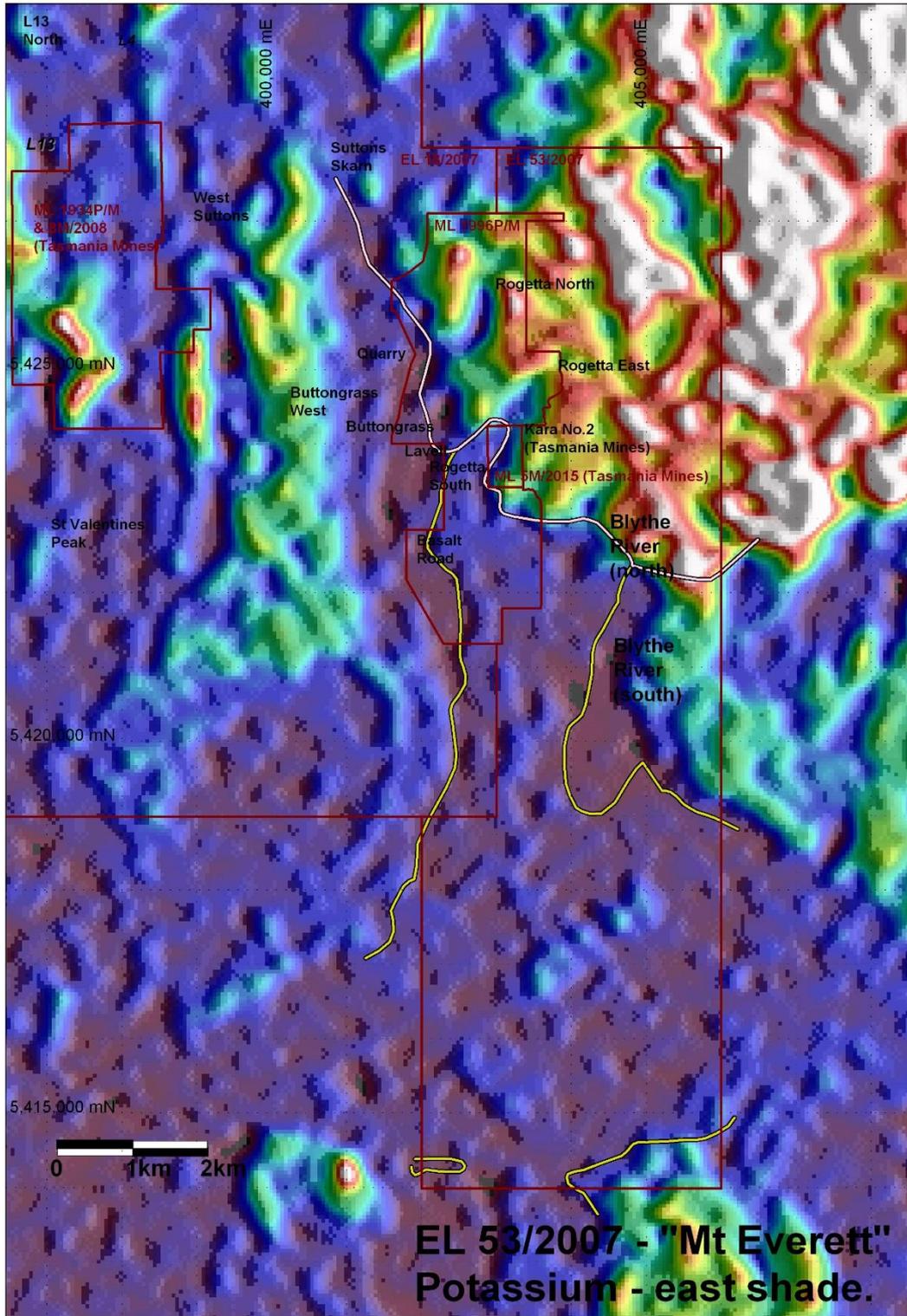


Figure 5.4: Prospects and tenements on radiometrics Potassium image. Solid lines are geological contacts for reference as defined on figure 2.1.

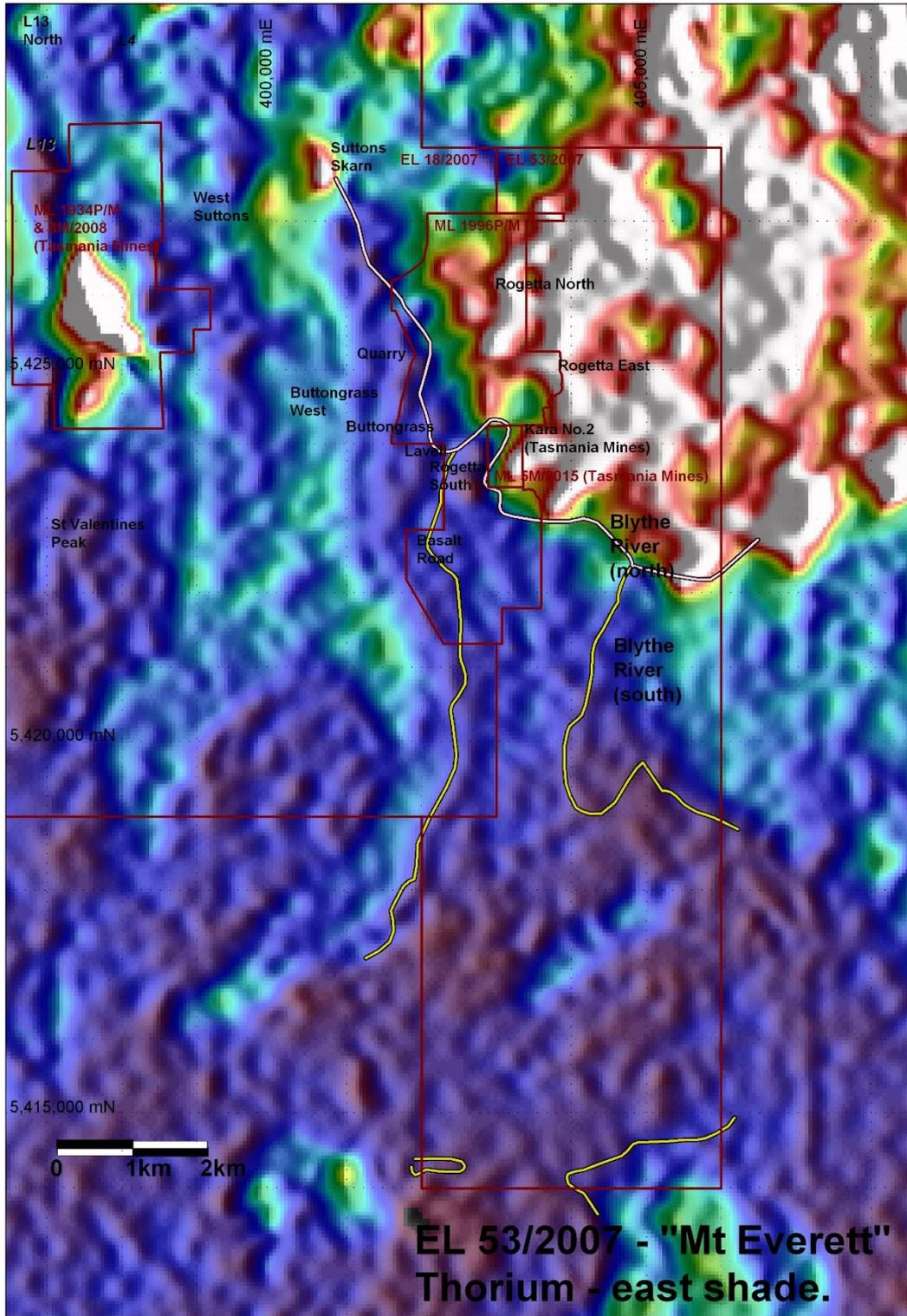


Figure 5.5: Prospects and tenements on radiometrics Uranium image. Solid lines are geological contacts for reference as defined on figure 2.1.

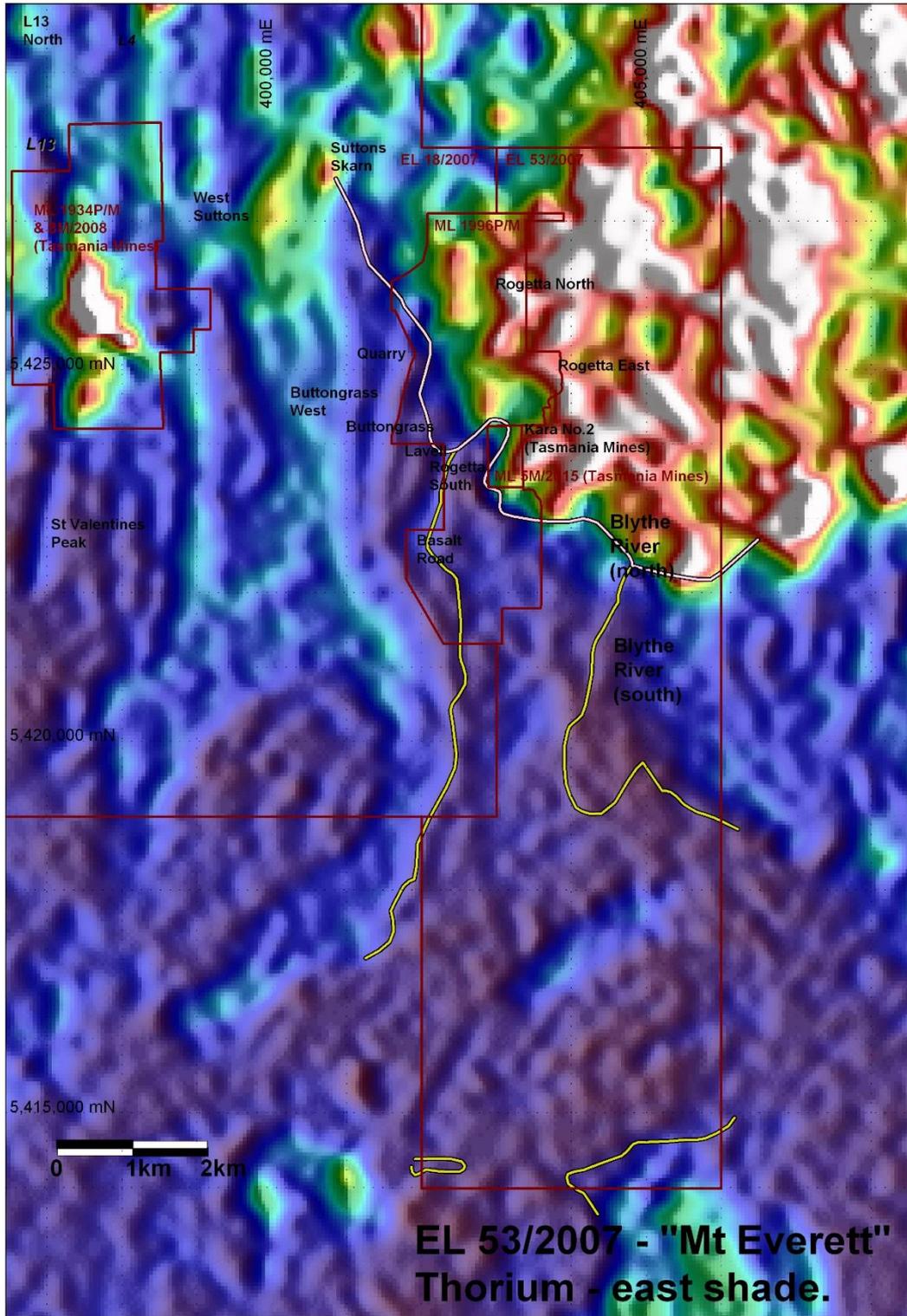


Figure 5.6: Prospects and tenements on radiometrics Thorium image. Solid lines are geological contacts for reference as defined on figure 2.1.

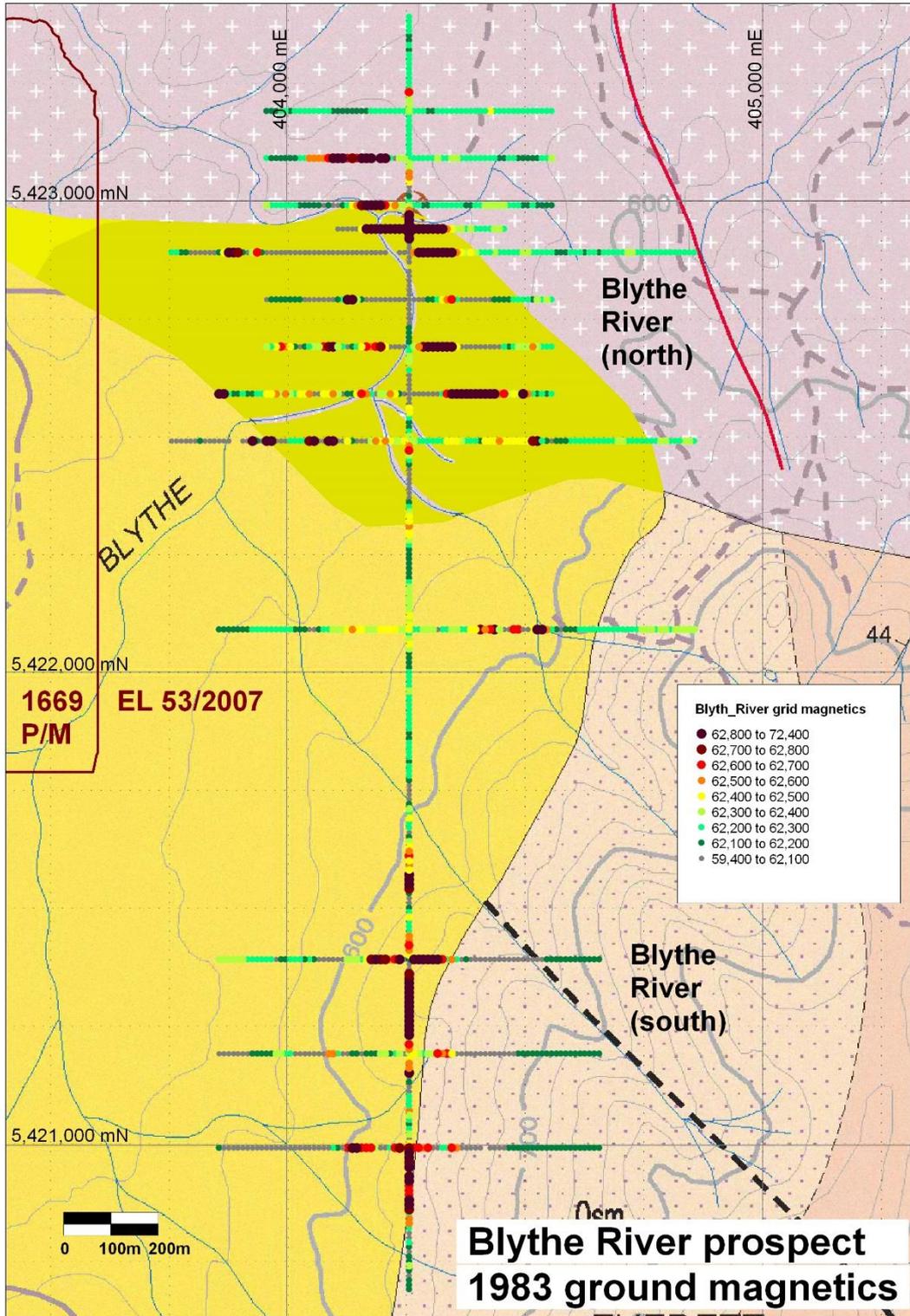


Figure 5.7: Blythe River prospect showing Shell's 1981 ground magnetics survey as colour coded data points superimposed on 1:25,000 MRT geology.

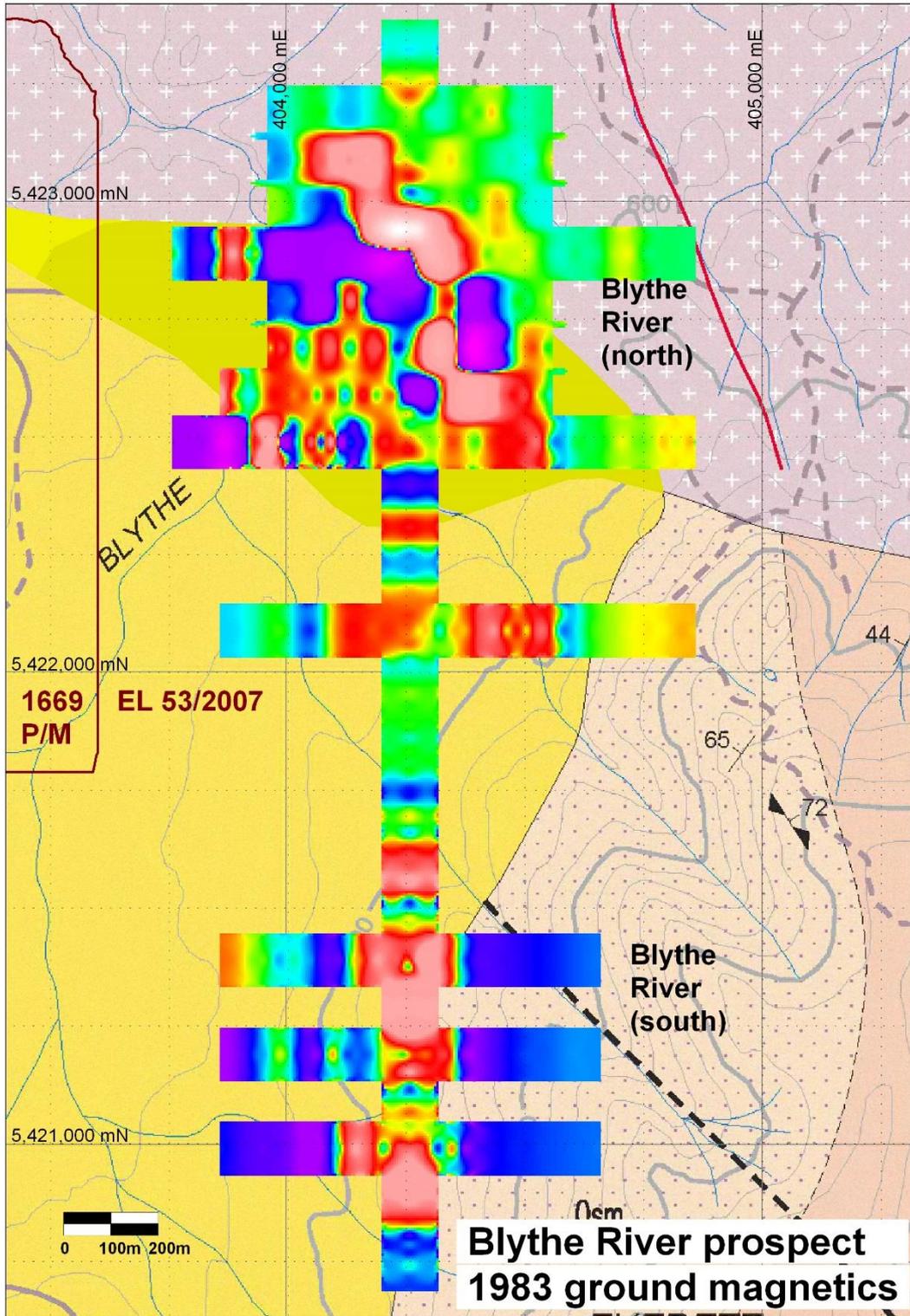


Figure 5.8: Blythe River prospect showing Shell's 1981 ground magnetics survey as an enhanced image (ID2 with 60m range and maximum 4 points per square) superimposed on 1:25,000 MRT geology.

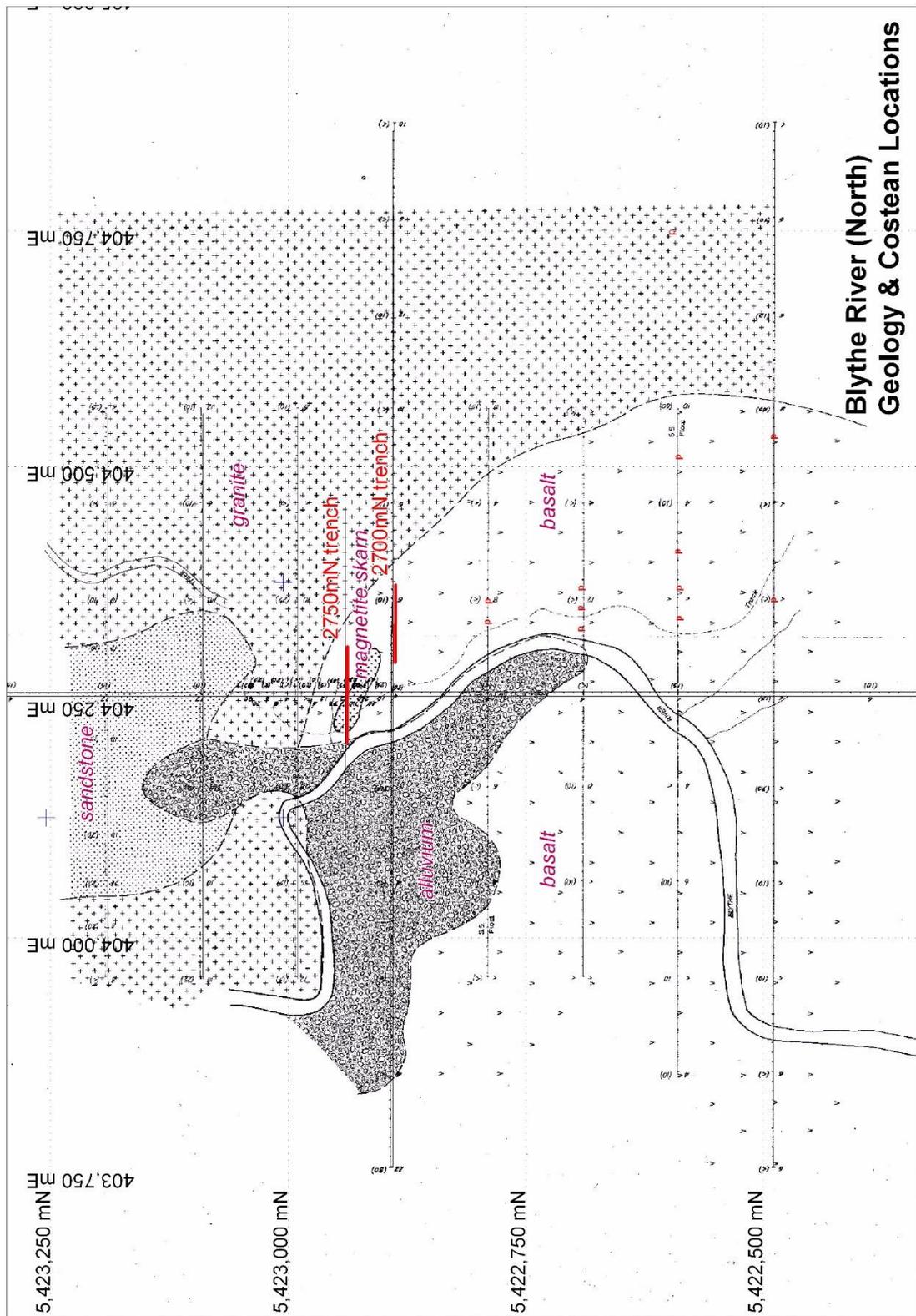


Figure 5.9: Blythe River prospect geology from Shell's 1981 mapping with trench locations as red lines and pit locations as red P's.

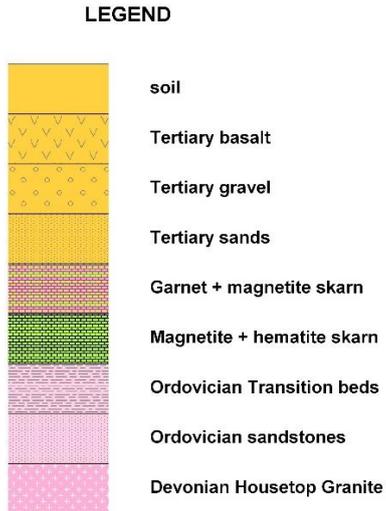


Figure 5.10: Legend for figures 5.11 and 5.12.

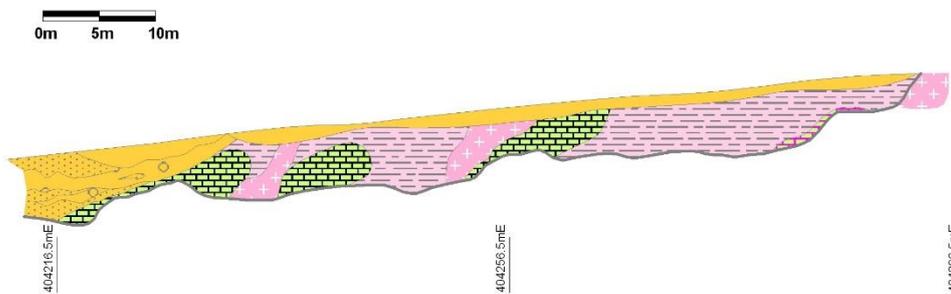


Figure 5.11: Northern trench (2750mN) showing geology. Grid eastings are at 40m separation for scale. Granite dykes shown are pegmatitic with some potential for Li and other category 5 minerals.

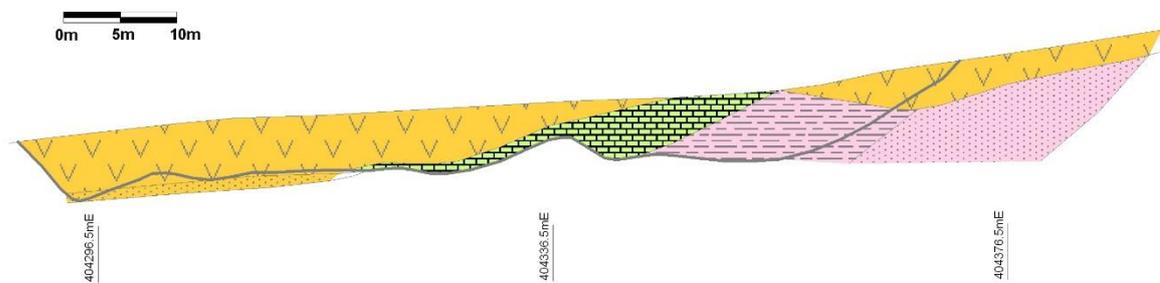


Figure 5.12: Southern trench (2700mN) showing geology. Grid eastings are at 40m separation for scale.



Figure 5.13: Mound alongside northern trench with material including magnetite skarn on heap. In-house desktop XRF analyses (uncalibrated and indicative only) averaged 67.9% Fe.



Figure 5.14: Loose magnetite skarn in cleared disturbed area in area where southern trench expected. In-house desktop XRF analyses (uncalibrated and indicative only) averaged 67.1% Fe.

6.0 Proposed Works Programme 2017/18 year

Work proposed 2017/18 year will consist of the following.

- Further drone/ground magnetics at the Blythe River prospect.
- Field assessment of the Blythe River South anomalies.
- Planning for drilling Blythe River North and/or South prospects and possibly carrying out that work in the coming year, if not soon after.
- Field assessment of Mt Everett anomaly.

The size of the ground magnetics surveying and drilling is yet to be determined.

7.0 Expenditure

Exploration expenditure for EL 53/2007 for the period December 2016 to December 2017 was \$8,850 bringing the total to date to \$759,460.

8.0 Environmental

Environmental disturbance on EL 53/2007 during the reporting period was negligible.

Existing infrastructure access was utilised for site visits.

9.0 References

Askins, P.W. (1980). Completion Report, Blythe Road area, EL 4/77. unpub. rept. for COMALCO. [TCR 80_1433]

Lawton, J.J., Wright, R.G., Buchhorn, I.J. & Oakes, G.D. (1983). EL 36/79 Loongana – Progress Report on Exploration for the Period 1st May, 1980 to 30th June, 1983. unpub. rept. for The Shell Company of Australia, Metals Division. [TCR 83_2045]

Weste, G. (1979). EL 1/76 Guildford & Southern Part of EL 4/77 - Report on all Exploration from Oct. 1978 to Dec. 1979. unpub. rept. for COMALCO. [TCR 79_1409]