



**Annual Report**  
**EL25/2010**  
**For Period 08 February 2011 to 07 February**  
**2011**  
**Tasmania**

**11.01.2012**

**Author:**  
Charles Hughes Bsc (Hons).  
Senior Geologist  
Perth, WA

**Copies to:**  
MRT  
Corona Gold Ltd

## Table of Contents

1.0 Introduction.....	3
2.0 Tenure.....	3
3.0 Access.....	5
4.0 Geology.....	5
5.0 Mineralisation.....	5
6.0 Structure.....	6
7.0 Exploration Philosophy.....	6
8.0 Exploration History.....	8
9.0 Work Completed This Reporting Period.....	11
9.1 Compilation and Interpretation of Historical Data.....	11
9.2 Brief Reconnaissance to Bluff River Grid area.....	11
10.0 Conclusion.....	13
11.0 Environment.....	13
12.0 Expenditure.....	13
13.0 References.....	14

## Figures

Figure 1: Tenure.....	4
Figure 2: Geology.....	7
Figure 3: Anomalies and targets.....	10
Figure 4: Field Camp.....	12

## Tables

Table 1: Historical Exploration Summary.....	15
Table 2: Expenditure.....	14

## 1.0 Introduction

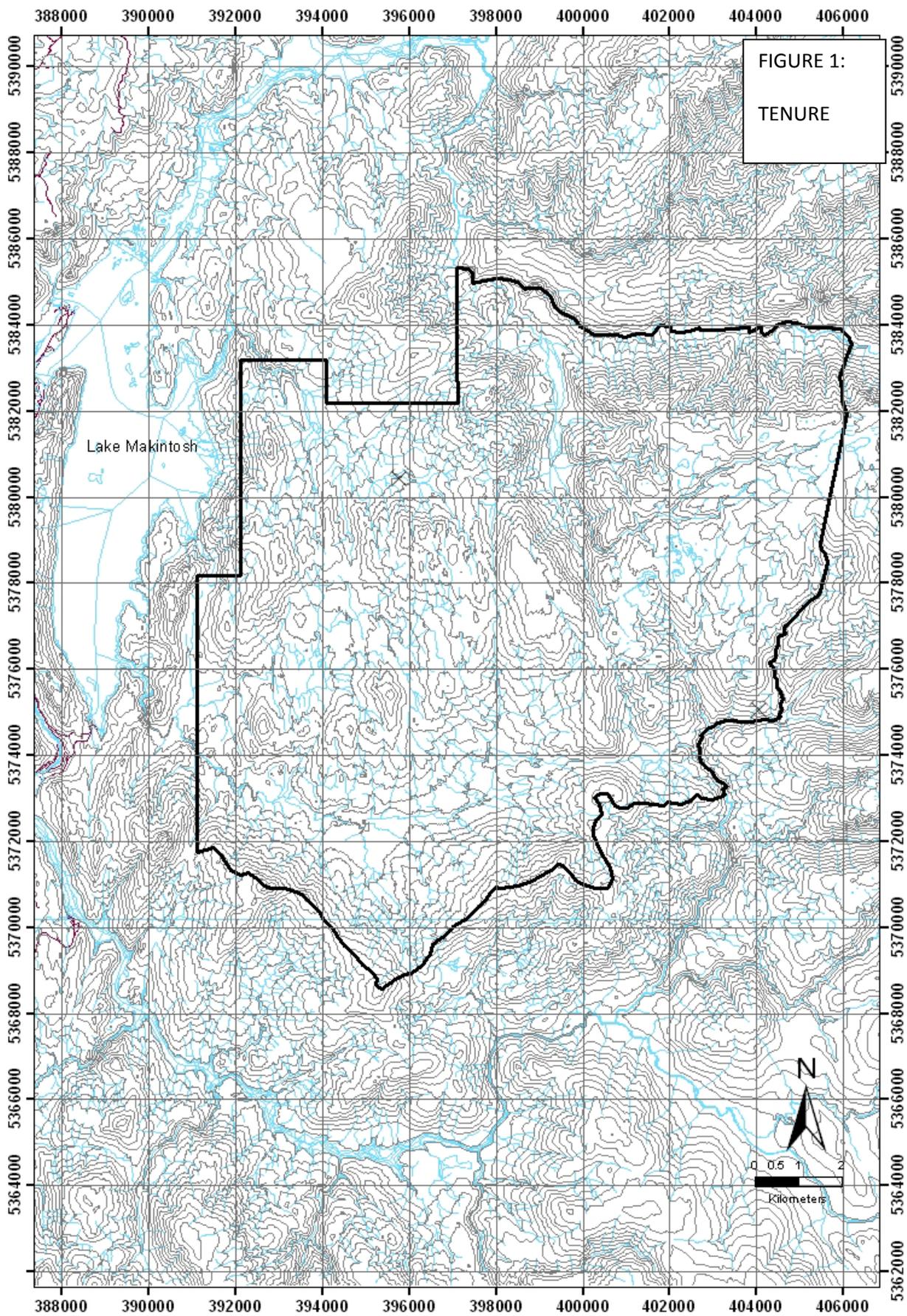
EL25/2010 is located 13km east of Tullah on the West Coast of Tasmania.

The principal exploration activities conducted on EL21/2010 in the reporting period has been literature research and a brief reconnaissance trip to the Granite Tor area

Several interesting geochemical and geophysical anomalies have been generated by past explorers in the Granite Tor area and warrant follow up work.

## 2.0 Tenure

Corona Gold Ltd owns 100% of EL25/2010, which encompasses 166 km<sup>2</sup> of tenure and is wholly located in the Granite Tor Conservation area.



### 3.0 Access

There are no access roads, tracks or pathways into the tenement.

### 4.0 Geology

The area is dominated by the Devonian aged Granite Tor Pluton, which intrudes alternating sequences of Pre Cambrian quartzite's and metapelitic units with rare carbonate horizons and graphitic phyllites belonging to the Tyennan Group. Locally pelitic metasediments are hornfelsed at or near the contact of the intruding granite. Greisenisation is recorded associated with tin and tungsten mineralisation, specifically in the south west of the tenement area near Bluff River where a small tin occurrence, associated with a greisen, was worked historically.

#### 4.1 Granite Tor Pluton

The Granite Tor Pluton is a fractionated S-type coarse grained porphyritic biotite-muscovite granite (McClenaghan, 2003). Locally the pluton varies chemically from granite to adamellite, and texturally from equigranular to porphyritic, with little variation in the amounts or types of accessory minerals; which include zircon, apatite, tourmaline and rare garnet (Speijers, 1979). McClenaghan (2003) interprets this minor amount of variation as evidence for only one intrusive phase; however, work by Alcoa of Australia Limited (Speijers, 1980) in the early 1980's differentiated the pluton into a maximum of 7 phases, including altered phases. McDougal and Leggo (1965) have used K-Ar dating methods to infer an age of 359 +/- 5 Ma, placing the formation of the pluton in the Late Devonian. The pluton is inferred to have a dome like morphology and dips gently underneath the Precambrian rocks which it intruded (Speijers, 1980). Locally greisenisation occurs, more so in the eastern part of the pluton, near Bluff River, where tin mineralisation is associated with greisen vein formation (Noldart and Jennings, 1966). Towards the east of the pluton two major north west trending faults have formed a graben whereby Tyennan lithologies are down thrown relative to the Granite Tor Pluton.

#### 4.2 Tyennan Group

Tyennan Group metasediments occur as a series of intensely folded and faulted north east trending quartzites and metapellites with occasional carbonate horizons located within the graben structure near Bluff River, and graphitic phyllites located on the western boundary of the pluton (Speijers, 1980). The metasediments have been metamorphosed to the upper greenschist facies (Gee et al., 1970) and have been subjected to multiple deformation phases (Everard, 1987). The metasediments are reported to be of late Proterozoic age (Turner, 1982). Locally the metapellites are hornfelsed near or at the contact of the intruding pluton (Speijers 1980).

### 5.0 Mineralisation

Tin mineralisation is reported associated with the Devonian Granite Tor pluton. Cassiterite is found in a sequence of north trending multiple quartz-tourmaline veins and greisen veins within granite in the Bluff River area, and in minor alluvial concentrations (Noldart and Jennings, 1966).

Mineralisation will be commented on further in section 4.0 Exploration History and section 5.0 Exploration Philosophy.

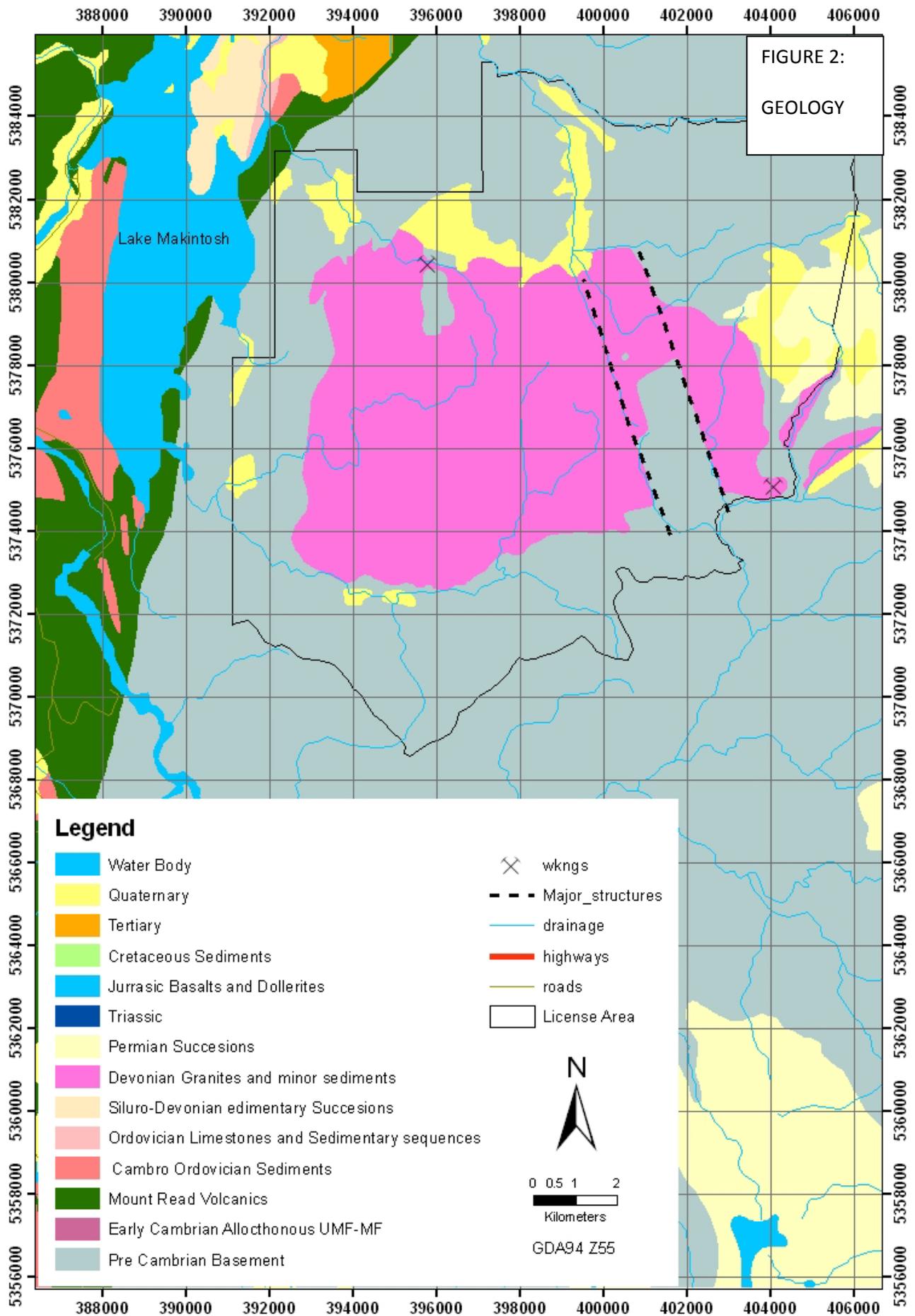
## 6.0 Structure

Structure in the Granite Tor area is dominated by east north east trending steeply dipping belts of the Tyennan Group metasediments (commented on in further detail below) and a series of major north west trending normal faults, presumably of tertiary age.

The Late Proterozoic Tyennan Group metasediments have been subject to a complicated multiphase deformational history. Two phases of deformation have been recorded in the Proterozoic (Gee et al., 1970) which Turner (1982) attributes tentatively to the Frenchman Orogeny dated at 815+/- 65 Ma, and the Penguin Orogeny dated at 744+/-15 Ma. Subsequent to this the Tyennan group has been affected by late Cambrian/early Ordovician "Juksian" orogenic activity, and Devonian Tabberabberan Orogeny (Everard, 1982). This has resulted in complex structure within the Proterozoic units, with multiple phases of folding dissected by multiple phases of faulting often destroying primary structural orientations and fabric.

## 7.0 Exploration Philosophy

Corona is principally targeting tin and tungsten mineralisation in EL25/2010, associated with the Devonian Granite Tor Pluton. There are several models by which tin and tungsten minerals can be precipitated into an economical amount in a mineralising granite system, and this will be commented on below. Previous workers have delineated a 3200m x 1200m area where soil sampling returned anomalous tin near Bluff River, to the east of the Granite Tor Pluton, and a 1000m x 300m area where soil sampling returned anomalous tungsten near Mt Swallow, towards the north west of the Granite Tor Pluton (Speijers, 1980). These soil anomalies are both open to extension, and have not been tested by drilling. In addition to this several other targets generated by previous workers have not been tested.



## 8.0 Exploration History.

The Granite Tor area has had sporadic exploration since the early part of the 20<sup>th</sup> century. Tin has been the consistent focus in this area, with two historic tin workings recorded. Modern exploration has consisted mainly of geophysical and geochemical surveys conducted in the early 1980's culminating in the delineation of a significant tin in soil anomaly. No drilling has been conducted.

### 8.1 Historical Exploration

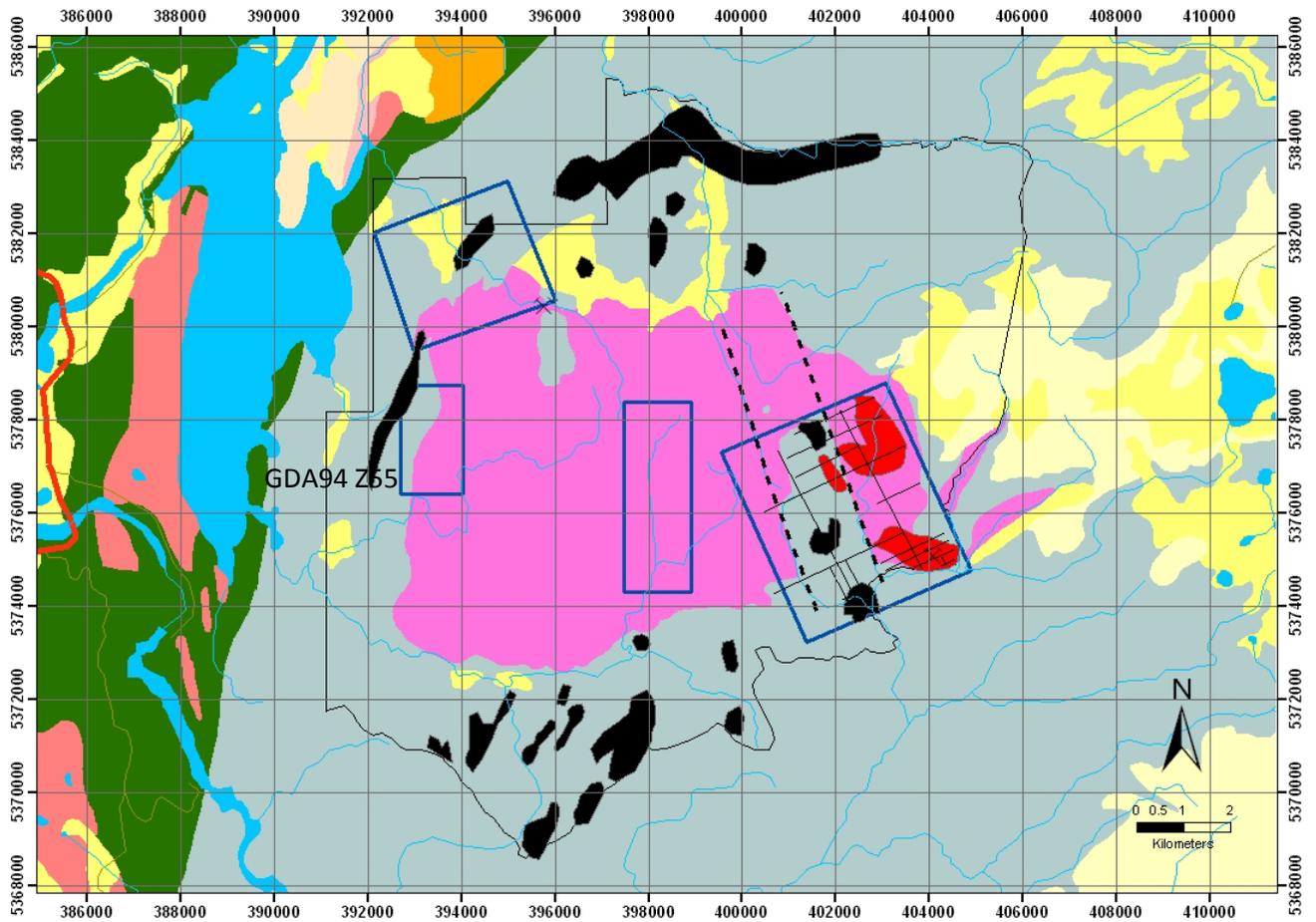
W. Aylet discovered tin in the Bluff River area in 1910 and a reward section was granted for a period of three years thereafter (Henderson, 1944). The tin occurrences were worked sporadically until 1928 by a number of different syndicates however no record of any production exists (Noldart and Jennings, 1966). The Granite Tor area was visited by Q.J Henderson in 1944 on behalf of the Tasmania Mines Department (Henderson, 1944) who concluded that there was no chance for an economic alluvial tin deposit in the Bluff River area, but that more exploration was warranted to determine whether there would be an economic tin greisen deposit in the area. The area was next visited in 1966 by A.J. Noldart and D.J. Jennings on behalf of the Tasmania Mines Department (Noldart and Jennings, 1966) who concluded that the area was too remote to attempt further mining.

### 8.2 Modern Exploration

Modern exploration started in 1978 when Alcoa of Australia Limited (Alcoa) pegged a large area of ground east of Tullah that included the Granite Tor area (Speijers, 1978). Alcoa explored the area (in Joint Venture with Shell Company of Australia from 1981) until 1983 when the Granite Tor area was relinquished due to a lack of "sufficient interest" (Smyth, 1983). The work completed by Alcoa consisted of geophysical surveys, geochemical surveys, photo-geological interpretations and petrological examinations, and is summarised below in Table 1. Bass Metals Ltd picked up the ground in 2008 (Bates, 2009), but completed no work on the ground before relinquishment one year later. For this reason Bass's work is excluded from the table below.

Year	Relevant Report	Exploration Activities	Significant Results
1978	Speijers, 1978. A report on work conducted by Alcoa between May and November 1978.	1150 line km airborne magnetic and radiometric survey flown on east-west orientated, 400m-200m spaced survey lines.	Delineated 20 magnetic anomalies within Tyennan Group metasediments adjacent to Granite Tor Pluton, indicating possible skarn or replacement style tin mineralisation.
			Radiometric survey was unsuccessful due to variation in terrain clearance.
1979	Speijers, 1979. A report on work carried out by Alcoa between November 1978 and May 1979.	Colour Aerial Photography	Photography not interpreted.
		Rock chip sampling of the Granite Tor Pluton with subsequent chemical analysis and petrology	Assaying determined the Granite Tor Pluton is enriched in Sn, W, Li and depleted in Pb, Zr, Ti, Mg. Granite Tor Pluton intruded in one phase, some pneumatolytic alteration has occurred.
		280 stream sediment samples sieved using -16 +44 mesh and -44 mesh with subsequent chemical analysis	Results not returned at time of report writing.
		Stream water sampling with subsequent chemical analysis for fluorine	No significant result reported.
		Field checking of 13 aeromagnetic anomalies.	No obvious explanation for most of the magnetic anomalies, except perhaps the presence of minor amounts of magnetite along joint fractures. One anomaly; anomaly "Q" is associated with a dark grey sulphidic fine grained metasediment.
1980	Speijers, 1980. A report on work carried out by Alcoa between November 1979 and June 1980.	Interpretation of Aerial Photography	Detailed geological map of the Granite Tor Area.
			Recognition of several vegetation anomalies that could be related to mineralisation
			Recognition of major North or North North West trending fracture system that pre dates pluton emplacement, and West North West system postdating emplacement.
		Reinterpretation of airborne magnetic and airborne radiometric geophysics.	Major potassium rich zones in the centre and south east of the pluton
			Possible potassium alteration on the northwest contact of the pluton and Tyennan Group metasediments.
			Major east north east fault zone to the north of the pluton.
Further 85 stream sediment samples taken as before with subsequent chemical analysis and the results of the previous year's sampling.	Three major tin stream sediment anomalies, one in the south east near Bluff River tin workings, one in the centre of the pluton and one on the north western contact.		
Establishing the 10 line km Swallow grid based on coincident tin-tungsten stream sediment anomalies, aeromagnetic anomaly, zone of potassium alteration, sulphidic metasediments in the vicinity. Soil sampling, ground magnetic traverses and geological mapping.	Delineation of 1 coherent ~1000mx300m weak (~20ppm) tungsten in soil anomaly trending E-W, anomaly appears to be defined. Coincident strong tin-tungsten (max 750ppm and 50ppm respectively) at western end of base line with coincident elevated base metals (max zinc 73ppm max lead 130ppm), anomaly is open to the west.		
Establishing the 30 line km Bluff grid based on coincident known tin in greisen mineralisation, significant stream sediment tin anomaly, recognition of skarn rocks and calc-silicate rocks in the area.	Delineation of a 3.6km x 1.2km tin in soil anomaly trending north south within which are 3 separate coherent anomalies over 100ppm tin with coherent anomalism (i.e. on multiple soil lines) grading over 500ppm tin. Several zones of tungsten and base metal anomalism accompany this. Anomaly is open to the south.		
1981	Speijers, 1982. A report on work carried out by Alcoa/Shell between 1981 and 1982 field season.	Joint Venture between Alcoa of Australia Ltd and Shell Company of Australia Ltd. Two grab sample taken from the north west contact area.	Tin-tungsten exploration sidelined for base metal exploration resulting in no work in the area this report is concerned with.
			Grab samples taken of greisen; one assaying 1.3% Sn and the other assaying 0.4% W from the Broughman/Swallow area.
1982	Smyth, 1983. <sup>1</sup> Relinquishment report	No work completed, area of interest relinquished.	None

Table 1: Historical Exploration Summary



**Legend**

- |                        |   |
|------------------------|---|
| ✕ wkngs                | Water Body                                      |
| - - - Major_structures | Quaternary                                      |
| — Grids                | Tertiary  |
| — drainage             | Cretaceous Sediments                            |
| — highways             | Jurassic Basalts and Dollertes                  |
| — roads                | Triassic  |
| ■ Magnetic Anomalies   | Permian Successions                             |
| □ Drainage Anomalies   | Devonian Granites and minor sediments           |
| ■ Soil Anomalies       | Siluro-Devonian edimentary Successions          |
| □ Granite Tor ELA      | Ordovician Limestones and Sedimentary sequences |
|                        | Cambro Ordovician Sediments                     |
|                        | Mount Read Volcanics                            |
|                        | Early Cambrian Allocthonous UMF-MF              |
|                        | Pre Cambrian Basement                           |

Figure 3 Anomaly compilation Map of EL25/2010

## 9.0 Work Completed This Reporting Period

The principal activities this reporting period have been the compilation and interpretation of historical data for the area, and a brief reconnaissance trip to the Bluff River Grid area.

### 9.1 Compilation and Interpretation of Historical Data

The results of the compilation and interpretation of historical data are shown in Section 8

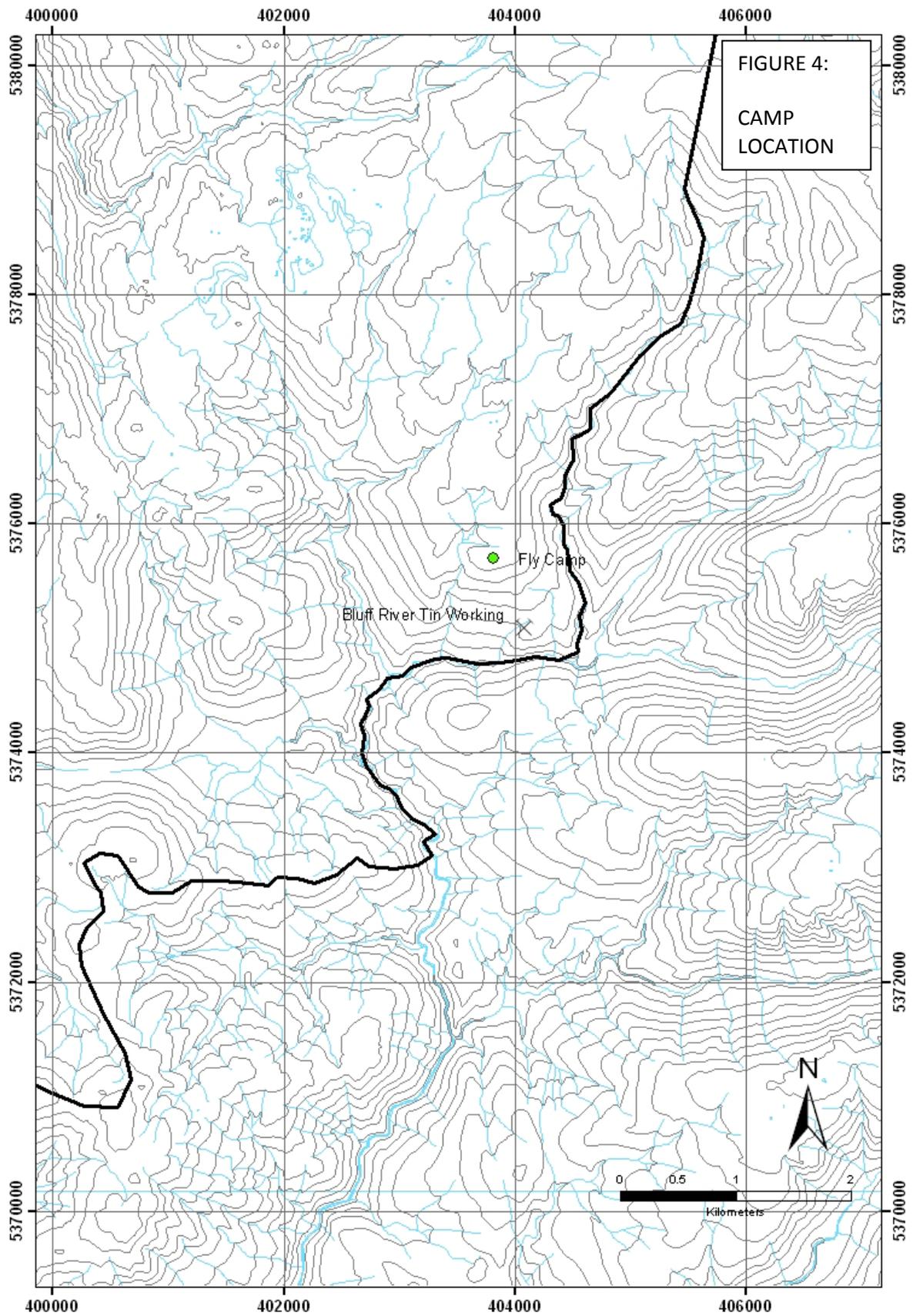
### 9.2 Brief Reconnaissance to Bluff River Grid area

A party of three including the author undertook a three day trip to the Granite Tor area to become acquainted with the terrain, vegetation and weather and to get a feel for the logistics needed to undertake efficient exploration programs in the area.

The program was supported by helicopter. The Bluff River Grid area was chosen for the reconnaissance trip as this area is host to significant known anomalies, including alluvial or elluvial tin workings and a large tin in soil anomaly, and fairly good access was predicted to be available to transect the Granite.

The alluvial or elluvial tin workings at Bluff River were not found on the ground, although were later spotted from the air, perched upon a small terrace above a precipitous drop in to the Bluff River Gorge. A water race was found on the ground vertically above the workings and this was seen leading to the working from the air and will be used as a locator to find the workings in another program. No tin or tungsten mineralization was seen in the reconnaissance, although greisen veins cutting quartzites were seen, exposed in the above mentioned water race. Some granite was seen, and where seen seemed to be particularly micaceous, it isn't known if this is a primary phase or an alteration phase, the amount of mica observed may suggest an alteration phase. Generally though button grass covered the plateaus and the valleys were heavily vegetated and require cutting.

Logistically the area will need to be fully helicopter supported for any sizeable exploration program. Access to the area may be gained via the Cradle Mountain area and by boat via Lake Makintosh but both of these would involve long arduous journeys.



## 10.0 Discussion/Conclusion

Exploration by Corona to date within EL25/2010 has focused on researching and generating anomalies worthy of follow up work. Several interesting anomalies have been generated and require further testing next reporting period. This will focus on visiting recorded mineralisation and anomalies

## 11.0 Environment

A fly camp was established and used for 3 days in the Bluff River area, the camp was low impact and the area was returned to what it was before. All rubbish was taken out.

## 12.0 Expenditure

ITEM	Cost		
Salaries and wages	\$26,255		
Accommodation	\$1,858		
Consumables	\$1,530		
Hire vehicles	\$560		
Travel	\$1,610		
Helicopter Hire	\$4,120		
Sub Total	\$35,933		
Office Costs @ 10%	\$3,593		
		Total	\$39,526

## 13.0 References and Bibliography

- Anon., 1994. A list of Transparencies from EL2/1978, Granite Tor area, Tasmania. Unpublished report. MRT report number: 94-3584.
- Bates, S., 2009. Granite Tor Project (North Rosebury Group) Tasmania, EL30/2008, Final Report 18 November 2008 to 23 January 2009. Unpublished annual technical report for Bass Metals Ltd. MRT report number: 09\_5801.
- Dominy, S. C., Camm, G. S., Bussell, M. A., Scrivener, R. C., and Halls, C., 1995. A review of tin stockwork mineralisation in the South-West England orefield. *Proceedings of the Usher society*, **8**, pp. 368-373.
- Everard, G. B., 1964. Petrological notes on specimens from the Mackintosh Quadrangle, South-East quarter. Unpublished governmental report. MRT report number: TR8\_135\_143.
- Everard, J. L., 1987. Metamorphism in the Precambrian rocks of the Tyennan Geanticline- a review. Unpublished technical report for the Tasmania Department of Mines. MRT report number: UR1987-07.
- Gee, R. D., Marshall, B., and Burns, K. L., 1970. The metamorphic and structural sequence in the Precambrian of the Cradle Mountain area, Tasmania. Geological Survey report no. 11. Tasmania Department of Mines. MRT report number: GSREP11.
- Henderson, Q. J., 1944. Bluff River Tin deposits. Unpublished technical report for Tasmania Department of Mines. MRT report number: UR1891-1969/197-199.
- McClenaghan, M. P., 2003. Ground truthing of Western Tasmania Regional Minerals Program geophysical data in the Granite Tor area. Unpublished technical report for Tasmania Mines Department. MRT report number: UR2003\_10.
- McDougall, I., and Leggo, P. J., 1965. Isotopic age determination on granitic rocks from Tasmania. *Journal of the Geological Society of Australia*. **12**, pp. 295-332.
- Moreland, R., 1990. Renison Bell Tin Deposit, in *Geology of the minerals deposits of Australia and Papua New Guinea* (Ed. F. E. Hughes), pp. 1249-1251.
- Noldart, A. J., and Jennings, D. J., 1966. Bluff River Tin Deposits. Unpublished technical report for Tasmania Mines Department. MRT report number: TR11\_13\_15.
- Rojik, P., 2005. Tin deposits at Prebuz and Rolava in the Krusne hory/ Erzgebirge, Czech Republic: classic localities, new challenges. *Journal of the Czech Geological Society*, 50/3-4, pp. 157-165.
- Spiegers, D. C., 1978. Report on EL2/78 Granite Tor Area, Tasmania. Unpublished annual technical report for Alcoa of Australia Ltd. MRT report number: 78-1308.
- Spiegers, D. C., 1979. Report on exploration of EL2/78 during 1978-1979 field season. Unpublished annual technical report for Alcoa of Australia Ltd. MRT report number: 79-1349.
- Spiegers, D. C., 1980. Report on exploration of EL2/78 During 1980. Unpublished annual technical report for Alcoa of Australia Ltd. MRT report number: 80-1490.
- Spiegers, D. C., 1982. Exploration at Granite Tor EL2/78 during 1981-1982 field season. Unpublished annual technical report for Alcoa of Australia Ltd. MRT report number: 82-1825.

Smyth, W. D., 1983 <sup>(1)</sup>. The Shell Company of Australia Limited Metals Division, EL2/78 Granite Tor, Annual Report on retained area for the period June 1982 to June 1983. Unpublished annual technical report for the Shell Company of Australia Limited. MRT report number: 83-2033.

Smyth, W. D., 1983 <sup>(2)</sup>. The Shell Company of Australia Limited Metals Division, EL2/78 Granite Tor Relinquishment Report. Unpublished annual technical report for the Shell Company of Australia Limited. MRT report number: 83-2020.

Smyth, W. D., 1984. The Shell Company of Australia Limited Metals Division, EL2/78 Granite Tor, Final Report on the area. Unpublished annual technical report for the Shell Company of Australia Limited. MRT report number: 84-2094.

Taylor, R., 1979. Geology of tin deposits. Developments in economic geology, ed. **11**. Elsevier Scientific Publishing.

Turner, N. J., 1982. Tasmanian Proterozoic Rocks. Unpublished technical report for Tasmania Mines Department. MRT report number: UR1982\_45.