



**STELLAR RESOURCES LIMITED**  
Rubicon MinTech Ventures Pty. Ltd.

**EL 1/2004 RAMSAY RIVER**

**ANNUAL REPORT FOR THE PERIOD**  
**10 JANUARY 2014 – 9 JANUARY 2015**

by: **K. C. Morrison & A. M. Rigg**

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**Department of Infrastructure, Energy and Resources - Hobart**  
**Stellar Resources Limited - Melbourne**

## ABSTRACT

This Annual Report for EL1/2004 Ramsay River covers the period from 10 January 2014 to 9 January 2015.

Exploration of the RY02 prospect in the Butler's Road area continued, with the cutting of 1600 metres of infill and westerly extension to the grid, and a small campaign of mapping and soil, rock chip and stream sediment geochemistry.

The prospect geology was mapped as a tourmaline–quartz schorl rock alteration aureole around a feldspar porphyritic facies of the Meredith Granite, with the alteration zone interpreted to be the source of the low level tin anomalism detected in soils and rock chips. The highest tin values to date are from stream sediment pan concentrates taken from a creek on the western margin of the prospect, as it is currently understood. Pan concentrate tin grades in the 2-8% range are associated with a heavy mineral assemblage dominated by chrome spinel and ilmenite, indicating a different provenance from the tourmaline dominant heavy mineral assemblage encountered over the remainder of the prospect. Petrographic and XRD analysis of the higher grade pan concentrates confirms that sulphides are absent and that cassiterite is the only tin mineral detected.

Follow up mapping and geochemistry to determine the source of the stream sediment anomaly, hopefully defining a worthwhile drill target, is proposed for the 2015 licence year.

Expenditure on EL1/2004 for 2014 totalled \$54,855.

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Ore Deposit Assessments Pty Ltd

## 1. INTRODUCTION

### 1.1. EXPLORATION RATIONALE & GEOLOGICAL SETTING

As a consequence of previous exploration results from Stellar Resources work on EL1/2004, current exploration aims are more focussed on the low sulphide tin potential of fractionated facies and apophyses of the Meredith Granite and its contact zones, within the remaining portion of the original EL (Figure 1).

There are several small tin and base metal occurrences within the licence area and the Mt Bischoff (Sn) and Cleveland (Sn-Cu) mines lie within 3km. Anomalous tin soil geochemistry is evident in the Butler's Road area, where previous explorers generated currently unexplained EM anomalies, highlighting this area for possible significant mineralisation.

#### 1.1.1. Geological Setting

The licence covers part of the Late Carboniferous tin-prospective NE portion of the Meredith Granite, which has intruded an association of Early Cambrian Luina Group marine sediments and basaltic rocks, and Early Cambrian allocthanous slivers of mafic-ultramafic rocks (Figure 2). The northern end of the prospective area is partly covered with Tertiary basalt.

The north-east corner of the Meredith Granite is known to extend at shallow depth and underlie the historic Mt Bischoff porphyry and dolomite replacement tin deposit. The historic Magnet Mine is located on a northern boundary of the Ramsay licence. It is a lode-style base metal and silver deposit (0.64Mt @ 7.3%Zn, 7.3%Pb and 427 g/t Ag) hosted by a structurally emplaced mafic/ultramafic body known as the Magnet Dyke. The lower levels of the old mine (below 8 level) are within EL1/2004 while the postulated feeder structure trends south-west into the EL. Tin may occur below the old workings in a zone closer to the underlying granite.

### 1.2. LICENCE

TENEMENT NUMBER: 1/2004

TENEMENT NAME: Ramsay River

TENEMENT LOCATION: Located 60km south-west of Burnie, with main road access from the Corinna-Waratah Road approximately 10km west of the Murchison Highway (Figure 1). The licence covers 41km<sup>2</sup> from the Magnet Mine area west of Waratah township, south to 5405000mN (GDA94) which is 1km south of the Corinna-Waratah Road in the vicinity of the Mt Ramsay Track. Much of the EL area is Crown Land, covered by patches of rainforest, forest, tea-tree scrub and button grass plain. Access is provided by the Corinna Road, numerous logging and old exploration tracks, and walking tracks. Much of the area is accessible only by foot.

TENEMENT YEAR: 10 February 2014 to 9 February 2015.

TENEMENT HOLDER: Rubicon MinTech Ventures Pty Ltd., a wholly owned subsidiary of Stellar Resources Ltd.

REPORTING PERIOD: 10 February 2014 to 9 February 2015.

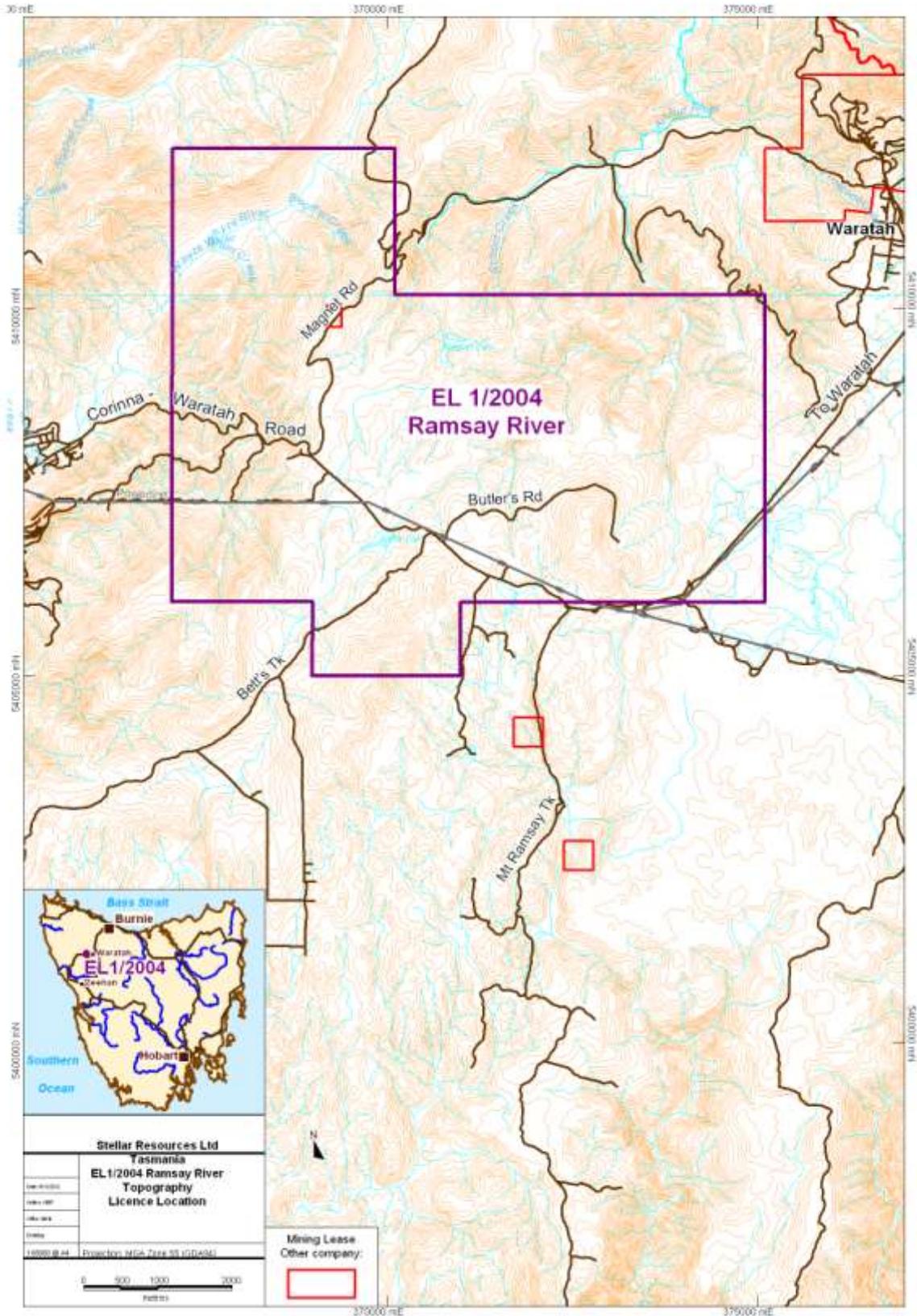
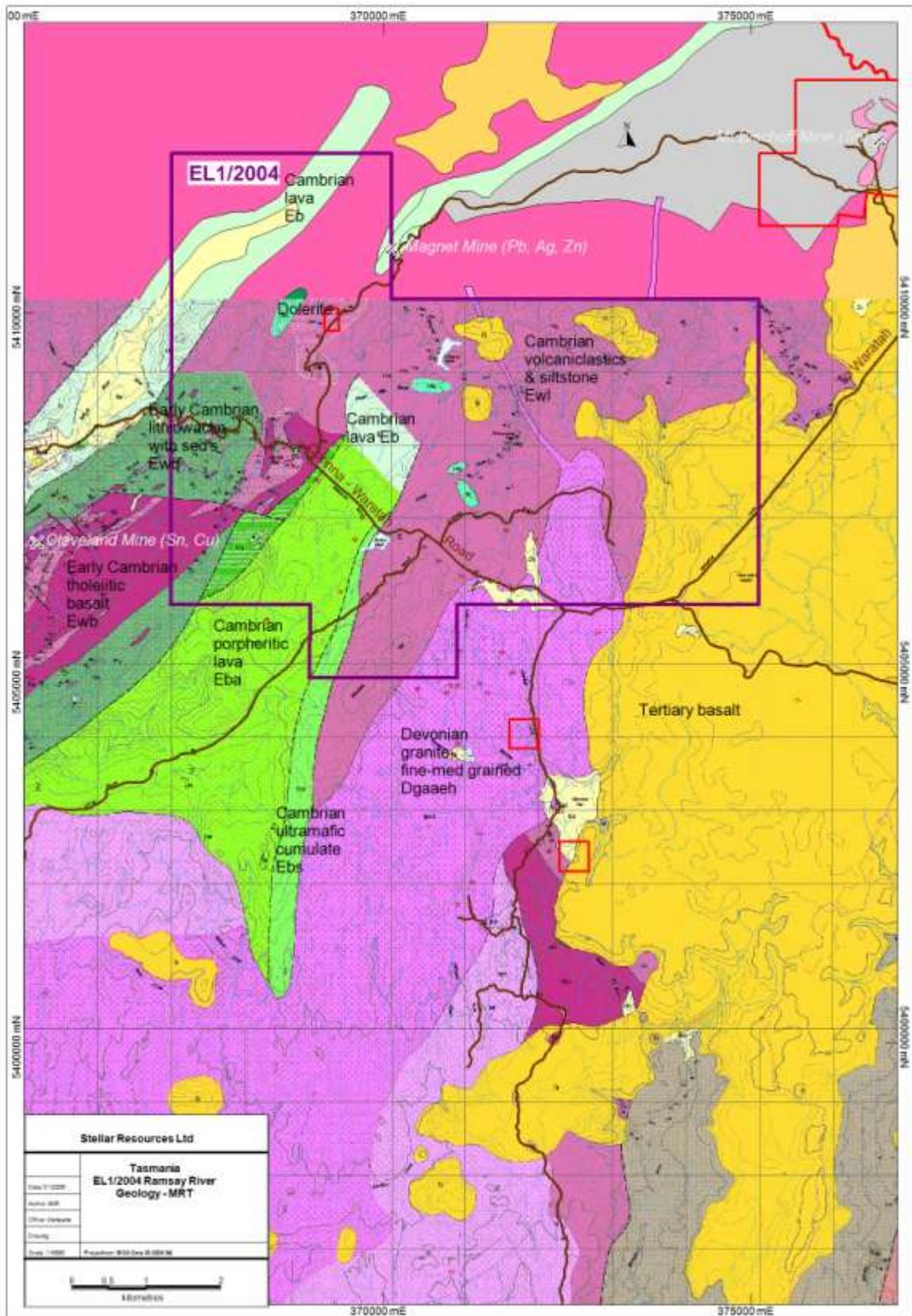


Figure 1. EL1/2004, Licence Location Map.



**Figure 2.** EL1/2004, MRT Geology Plan

## LAND TENURE

### SCHEDULE

LAND DISTRICT OF RUSSELL  
VICINITY OF RAMSAY RIVER 8KM SW OF WARATAH  
MUNICIPALITY OF WARATAH / WYNYARD  
EXPLORATION LICENCE 1/2004 41km<sup>2</sup>  
RUBICON MIN TECH VENTURES PTY. LTD.

Commencing at the northwest corner at grid coordinates 367 112 mE 5 412 184 mN, thence grid east to 370 112 mE, grid south to 5 410 184 mN, grid east to 375 112 mE, grid south to 5 406 000 mN, grid west to 371 000 mE, grid south to 5 405 000 mN, grid west to 369 000 mE, grid north to 5 406 000 mN, grid west to 367 112 mE and finally grid north to the point of commencement.

Coordinate datum – GDA94, MGA Zone 55.

### EXCLUSIONS

- (a) Any land owned or leased by the Commonwealth of Australia.
- (b) Mining leases amounting to 70ha (more or less) which were applied for or in force prior to the date of application for this licence.
- (c) Crown reservations or other land set apart or dedicated for any public purposes such as public reserves, municipal reserves or roadways unless such areas have been brought under the provisions of the *Mineral Resources Development Act 1995*.
- (d) Land declared as a fossicking area under the *Mineral Resources Development Act 1995* as shown hereunder:  

10ha Magnet Fossicking Area
- (e) Areas of private land which either have been, or are in the process of being, purchased by the Crown under the Regional Forest Agreement - Private Forests Reserves Program and / or private land over which the landowners have agreed, or are in the process of agreeing, to place a covenant or management agreement for conservation purposes under the Regional Forest Agreement - Private Forests Reserves Program.

### LAND TENURE

The area (Figure 3) comprises:

Private Property  
Multiple Use State Forest  
Meredith Range Regional Reserve  
Savage River Regional Reserve

The licence area contains areas, which are listed (including listed on an interim basis) on the Register of the National Estate kept under the *Australian Heritage Commission Act 1975*.

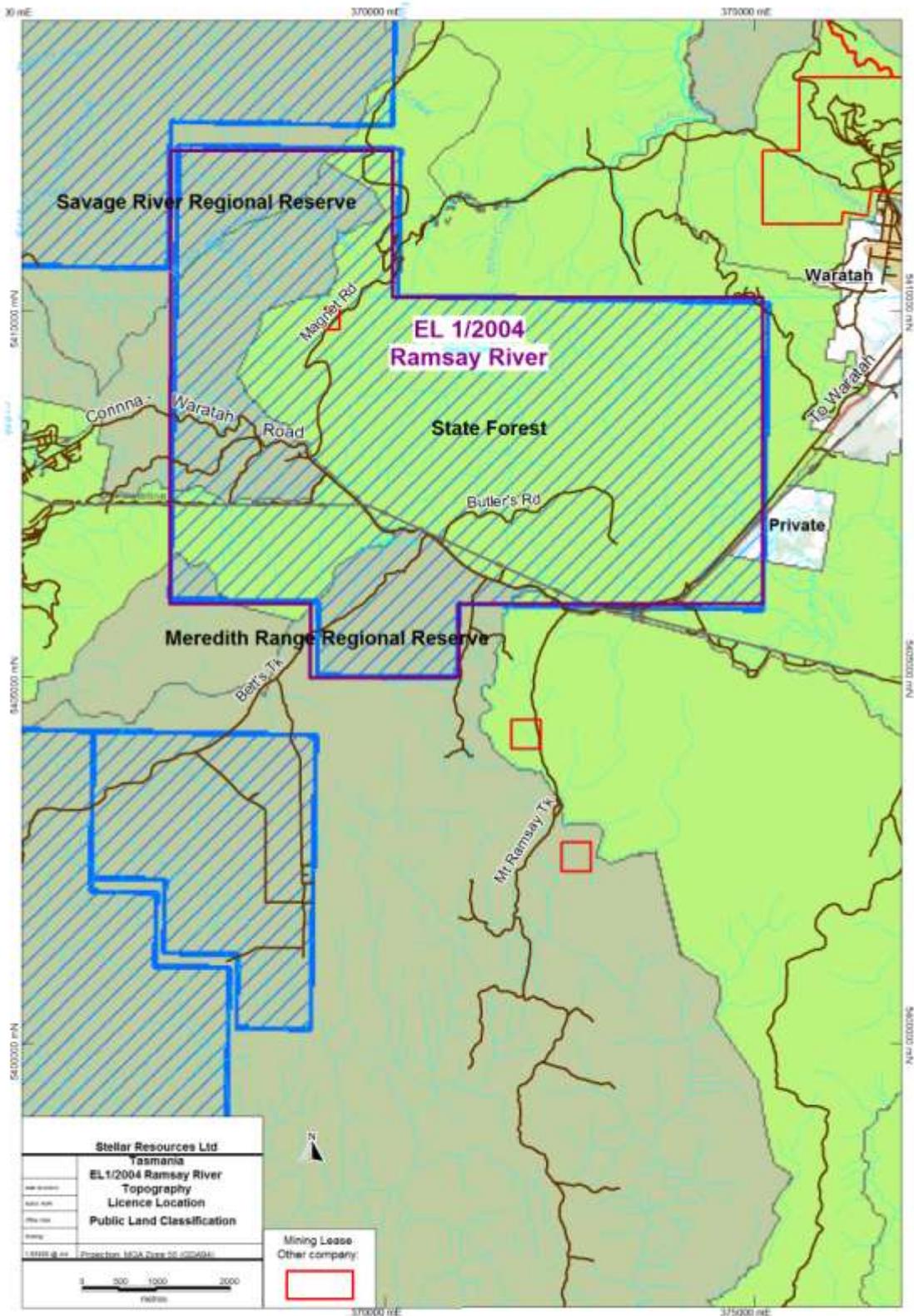


Figure 3. EL1/2004, Public Land Classification, LIST.

## 2. REVIEW OF PREVIOUS WORK

Data from MRT digital geology, geophysics and geochemical datasets and open-file company reports has been captured, summarised and reviewed. Over the term of the licence several targets have been reviewed and field tested with soil geochemistry programmes and/or drilling.

During 2006 Stellar carried out a regional mapping and soil/rock chip programme aimed at identifying potential nickel targets in the ultramafic rocks that outcrop around the northern end of Betts Track and near Arthur Dam. The company also carried out a five hole (AD005 – AD009), 1200 m diamond drilling program that was primarily aimed at the further testing of known base metal targets near Arthur Dam. One drill hole tested a magnetic anomaly just west of the entrance to Betts Track. The conclusions were:

- Serpentinised pyroxenite bodies around the northern end of Betts Track and Arthur Dam are relatively small, structurally emplaced lenses with limited potential for nickel mineralisation;
- Hornfelsed, greywacke sandstone that contains substantial magnetite as disseminations and in veinlets is the likely source of strong aeromagnetic anomalies around Betts Track and Arthur Dam;
- Vein style copper mineralisation in the eastern part of the Arthur Dam prospect appears to be of sub-economic grade. However, there is potential for the further drill testing of vein style zinc, lead and silver mineralisation in the south western part of the Arthur Dam prospect.

During February 2009, 36 samples of soil or rock were collected from channels cut in the walls of a series of old costeans and adits south of the Magnet Mine, and assayed for Cu, Pb, Zn, Ag, Sn & Au. These workings were cut across the southern extension of the structure hosting the Magnet mineralisation. Only one sample, from the northernmost adit, returned any significant assays (0.4 %Pb, 1.9 %Zn & 17 g/t Ag).

In 2011 Stellar conducted soil geochemical surveys in five areas of the licence to test prioritised EM/mag/geochem anomalies defined through earlier analysis (Silic, 2006) of the WTRMP Meredith Granite airborne EM survey.

RY01, an EM/mag/geochem anomaly on 'Butler's Hill' near Butler's Road, previously sampled and drill tested by Comstaff/BHP, was soil sampled and mapped. Results confirmed the Comstaff sampling, showing anomalous Sn, Pb & Zn in a greisenised zone. There was no apparent relationship between the EM anomaly and the adjacent magnetic anomaly. A Sn zone of up to 170ppm in soil was defined over and to the east of the EM anomaly.

RY02, an EM/mag/geochem anomaly 900m northeast of RY01 near Butler's Road, also previously soil sampled by Comstaff was sampled and mapped. Again Comstaff sampling was confirmed, showing anomalous Sn, Pb & Zn in a greisenised zone. There was no apparent relationship between the EM anomaly and an adjacent magnetic anomaly. A Sn zone, larger than that of RY01, of up to 473ppm in soil was defined from the northwest to south of the EM centre. RY02 was the most prospective anomaly sampled.

RY03, 1200m southeast of RY01, represented a weaker EM/mag target. The low-order geochemical response was reflective of the geology, rather than elevated mineralisation.

RY15, an EM/mag target is located in the Ramsay River valley, approximately 4km south of the Corinna-Waratah Rd., being adjacent to the old South Bischoff tin mine and scattered alluvial tin workings. A low-order geochemical response was registered, again being reflective of geology rather than any anomalous mineralisation.

RY36, an EM/geochem anomaly near the Ramsay River near the southern boundary of the licence was soil sampled and mapped. This was a follow-up to soil sampling conducted by Comstaff in 1981, which had reported zinc assays near the EM anomaly of up to 2.3%. Stellar sampling could not replicate, to the slightest degree, the Comstaff assays. Comstaff's reporting gave no reference or explanation to their strong single-line results. Stellar could only conclude that there may have been a problem with the original sample assaying process - possible contamination.



### 3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD

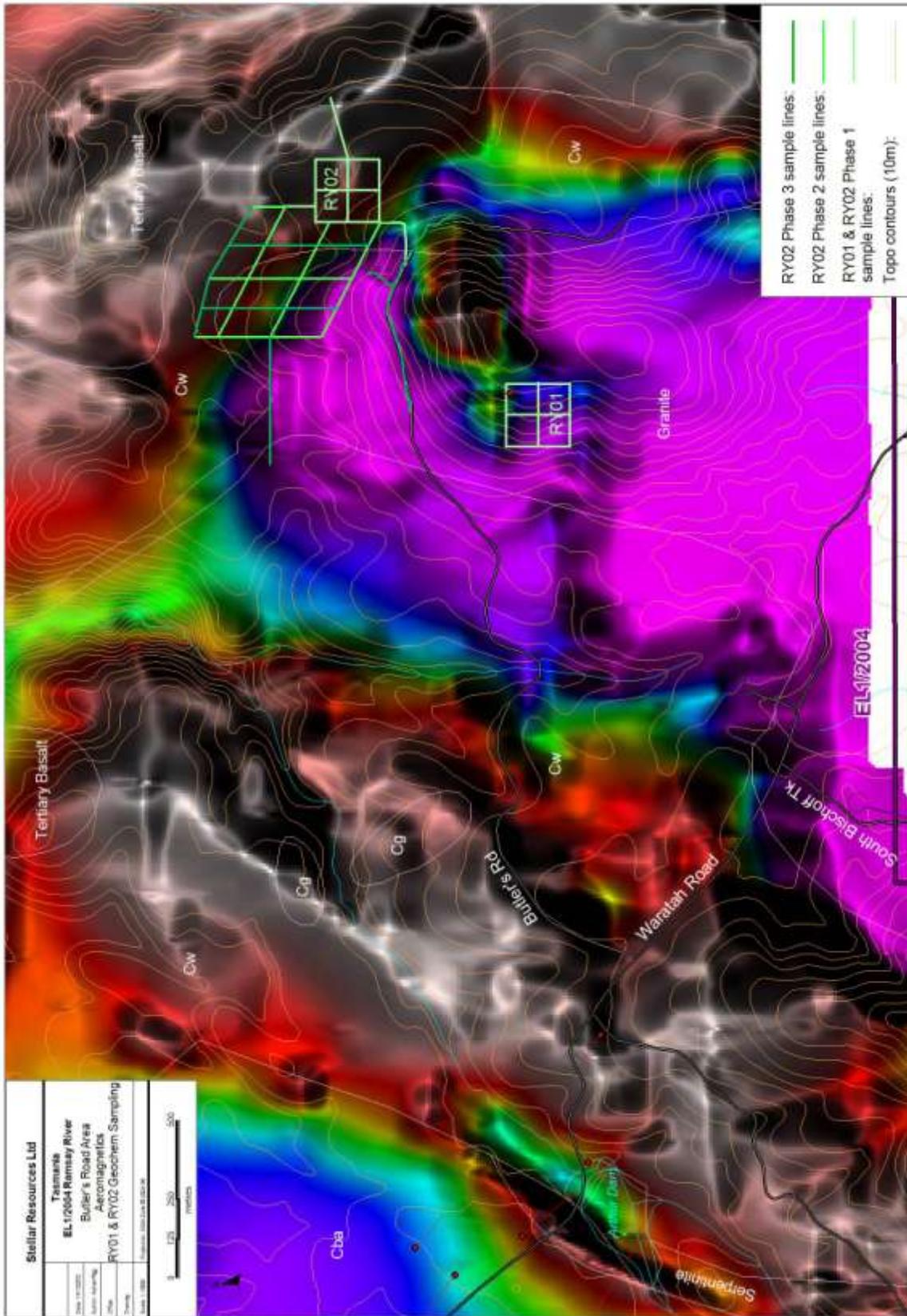
A campaign of infill and extension grid line cutting to facilitate mapping, soil, rock chip and stream sediment sampling was conducted on the RY02 prospect. The programme was managed by Ken Morrison, with a field crew supplied by Ron Gregory Prospecting based at Waratah.

Approximately 1.6 km of new tracks were cut (Figure 5 & 6) through mixed dense horizontal and relatively open rainforest, and on the western extension line, patches of thick cutting grass, bauera and tea tree. B/C horizon soil samples at depths ranging from 0.1 to 0.7m were taken by hand auger. Reconnaissance mapping, logging of rock fragments recovered during the soil sampling, and sampling of outcrop and float where available was conducted at the same time as the survey.

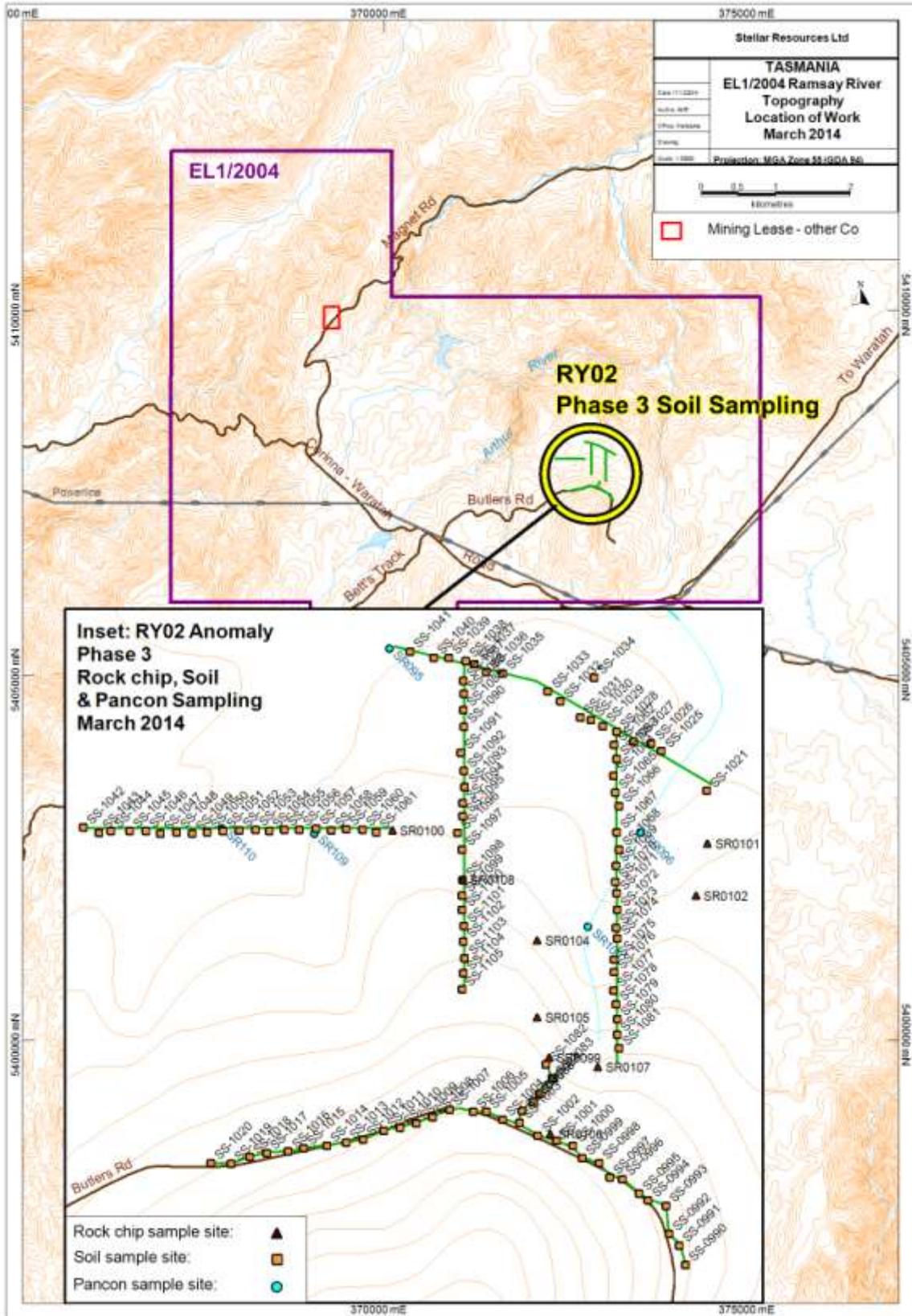
A total of 116 soil samples (Figures 6, 7 & 8), 19 rock chip samples and 2 pan concentrate samples (Figure 6, 9 & 10) were collected (Appendix 1). Samples were sent to ALS Burnie for drying and pulverising with pulp splits being assayed for tin only, by XRF (method ME-XRF05/15b), at the ALS Townsville lab (Appendix 2).

A repeat of pan concentrate sample SR110, which assayed 2.1% Sn, was subsequently taken and provided to Garry MacArthur, MODA, for a mineralogy determination by microscopy and XRD analysis (Appendix 3).

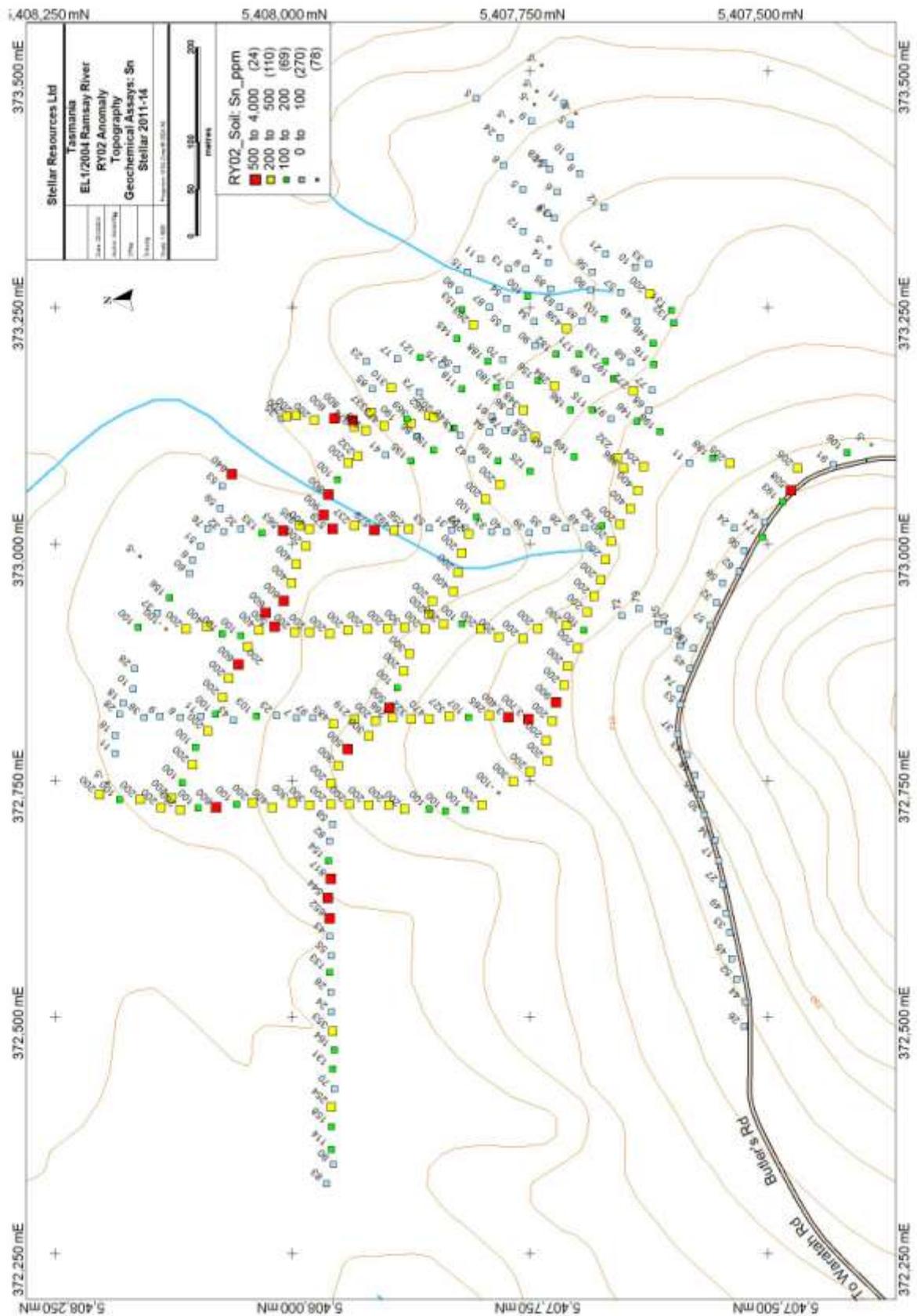
Figures 8 and 9 show the current state of prospect scale geological interpretation based on mapping. Outcrop/subcrop exposure is estimated at about 30%, sufficient to be confident that the concentration of black tourmaline and quartz distributed around the granite-Luina Group contact represents a greisen-like alteration facies along the edge of the granite.



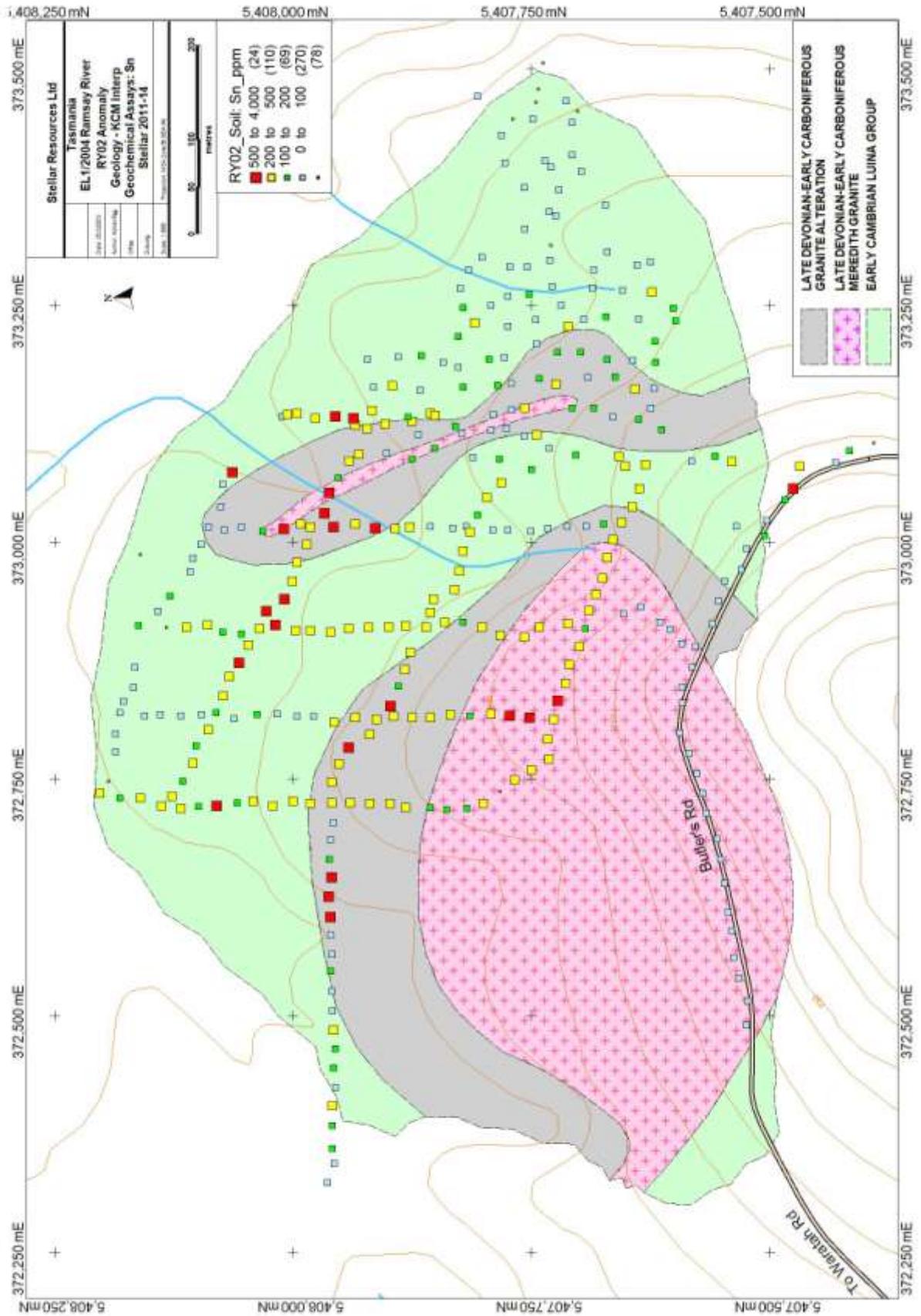
**Figure 5.** EL1/2004, Butler's Rd Area Aeromagnetics with anomalies RY01 & RY02 rock chip, soil & pancon sampling programme lines.



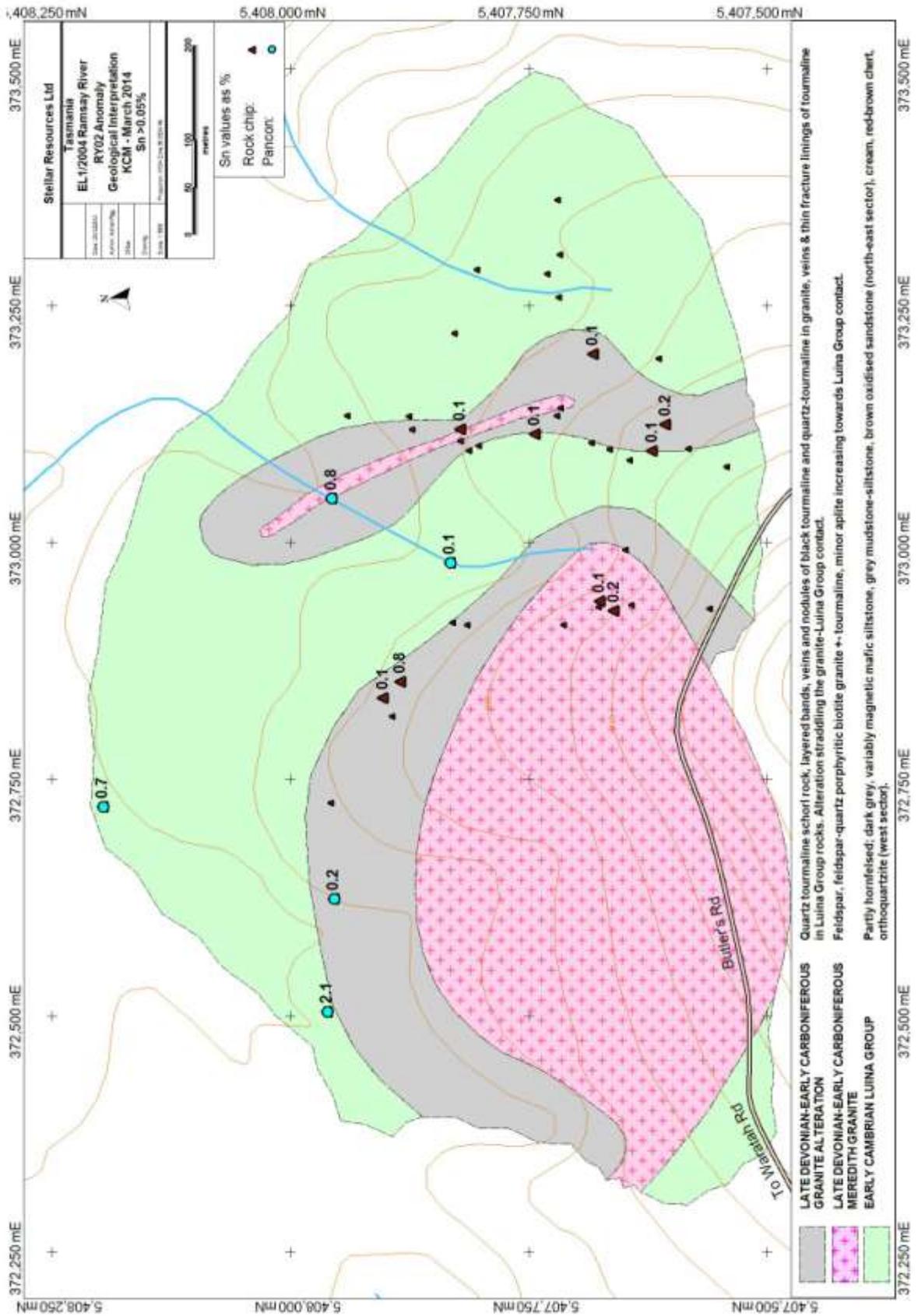
**Figure 6.** EL1/2004, Anomaly RY02, Phase 3 rock chip, soil & pancon sampling programme sites – March 2014



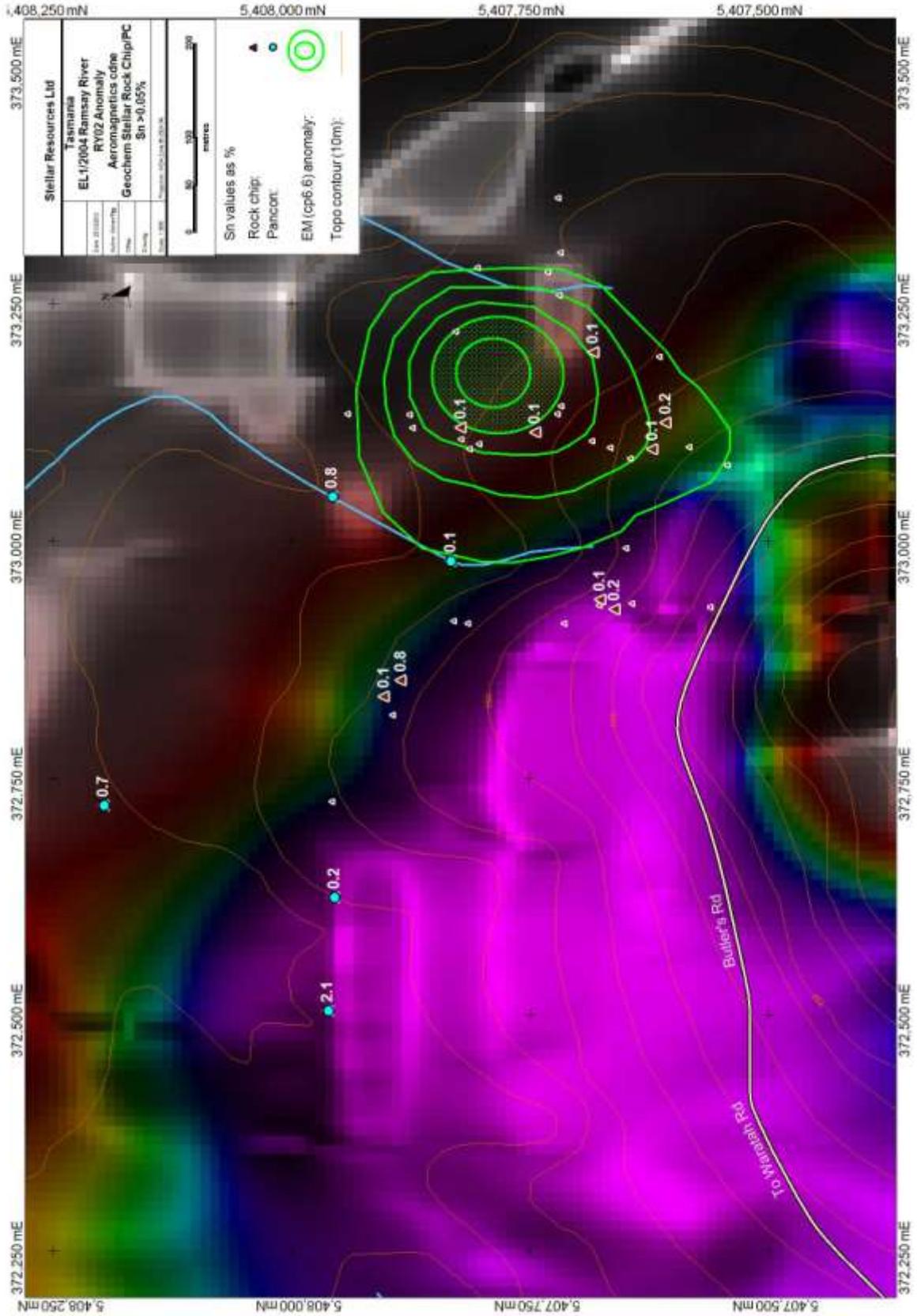
**Figure 7.** EL1/2004, Anomaly RY02, soil Sn geochemistry results & values 2011 - 2014.



**Figure 8.** EL1/2004, Anomaly RY02, Stellar geological mapping & soil Sn geochemistry 2011 -2014.



**Figure 9.** EL1/2004, Anomaly RY02, Stellar geological mapping & rock chip and pancon Sn geochemistry >0.05%.



**Figure 10.** EL1/2004, Anomaly RY02, Aeromagnetics with rock chip and pancon Sn geochemistry >0.05%.

## 4. DISCUSSION OF RESULTS

The mapping and soil sampling increased confidence in the distribution of the tourmaline-quartz style of alteration aureole straddling the granite-Luina Group contact, and the increase in tin concentration in the western half of the prospect, corresponding to the main area of the schorl aureole (Figures 8 & 9). These results are consistent with the tourmaline-rich alteration sourcing the weak tin anomalism detected in soil and rock chips, however there is no indication of a trend leading towards a contourable high worthy of a drill target.

The most positive result by far from RY02 to date is the 2.1% Sn pan concentrate taken from the western end of the grid (Figures 9 & 10). Microscope and XRD mineralogy by MODA (Appendix 3) on a repeat sample from the same site revealed a black sand heavy mineral assemblage containing mainly chrome spinel and ilmenite, in contrast to the tourmaline-rich stream sediment and rock chip samples previously taken from the prospect. The ilmenite can be attributed to a granite facies relatively low in tourmaline. Some ilmenite-quartz composite grains are reported from the microscope inspection, with the chrome spinel implying a ultramafic-mafic source. The drainage from which sample SR110 was taken trends upslope to the south-west, towards the western contact of the north-south trending nose of Meredith Granite underlying the western half of the RY02 prospect. It is also the area in which a NNW trending dyke (mapped by MRT) emanates from the granite apophysis and suggests potential for a different, more tin mineralised, alteration style associated with the western contact geology.

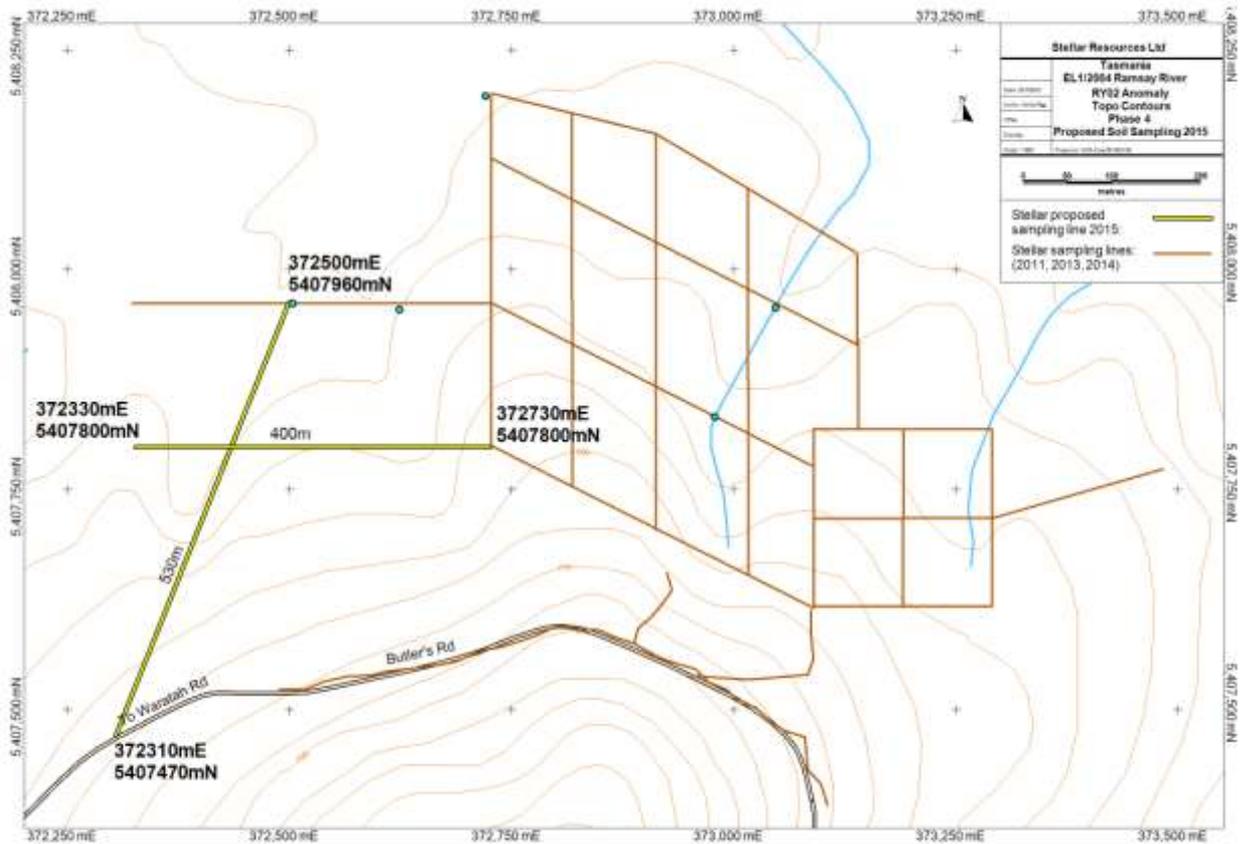
The MODA report in Appendix 3 includes both semi quantitative XRD analysis and thin section point counting. The mean of the two methods indicates about 6% cassiterite in the pan concentrate and, more importantly, no indication of sulphides or tin minerals other than cassiterite.

## 5. CONCLUSIONS

Results of the RY02 Phase 3 mapping and sampling programme support the conclusion that weak tin anomalism is hosted within an aureole of tourmaline-quartz schorl rock alteration around the contact margin of a porphyritic facies of the Meredith Granite. No vectors towards potential ore grade mineralisation within the aureole have been detected and no worthwhile drill target defined

A more positive conclusion results from cassiterite-bearing heavy minerals recovered in pan concentrate samples from drainage accessed by the western extension grid line. The heavy mineral assemblage consists predominately of chromite, ilmenite and cassiterite, with only minor tourmaline, indicating potential for a tin mineralised target up stream, outside the schorl rock aureole.

A campaign of further track cutting, mapping and geochemistry is proposed for 2015, with the aim to follow up the anomalous drainage and test the possibility of a target related to a granite-Cambrian volcanics/ultramafics contact, south-west of the current sample coverage, and towards the western margin of the granite (Figure 11).



**Figure 11.** EL1/2004, Anomaly RY02, proposed Phase 4 soil sampling programme.

## 6. ENVIRONMENT

All track cutting and sampling was in accordance with the MRT Exploration Code of Practice, the specific conditions of the Work Programme and in consultation with the land manager, Forestry Tasmania Murchison District. No sample bags or litter were left in the field and auger holes were manually back filled after sampling. No environmental issues remain outstanding from the programme.

## 7. EXPENDITURE

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		<b>Rubicon Limited</b>			
Job No	Job Details	Department	Class		
Tran. Date		Doc Ref - Description	Posting Ref	Amount	
Job Code: 6502	EL 1/2004 Ramsay River	D1	RUB		
	1063	Technical	Total	\$7,617.17	
Phase Total	106	STAFF COSTS		\$7,617.17	
	1061	Professional Technical	Total	\$3,781.25	
	1062	Labour	Total	\$12,600.00	
Phase Total	106	CONTRACT PERSONNEL		\$16,381.25	
	1072	Geoscientist	Total	\$10,400.00	
Phase Total	107	CONSULTANT PERSONNEL		\$10,400.00	
	1161	Analytical/Sample analysis	Total	\$3,651.38	
	1163	Preparation/core cutting other	Total	\$310.00	
Phase Total	116	ASSAYS		\$3,961.38	
	1251	Vehicle Costs All	Total	\$1,125.94	
	1252	Office Costs	Total	\$45.00	
	1253	Field Operations Consumables	Total	\$299.00	
Phase Total	125	SUPPORT COSTS		\$1,469.94	
	1551	Meals and Accomodation	Total	\$775.82	
	1552	Airfares	Total	\$86.72	
	1553	Vehicle Hire	Total	\$67.88	
	1554	General Expense	Total	\$6.82	
Phase Total	155	TRAVEL		\$937.24	
	1651	Administration	Total	\$14,188.00	
Phase Total	165	OVERHEADS		\$14,188.00	
Job Total : 6502				\$54,854.98	
Class RUB				\$768,586.90	
Report Total:				\$768,586.90	

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## Keywords

Location:	Waratah – Luina, Butlers Road
Mineralisation environment:	stockwork veins, greisen,
Minerals:	cassiterite, galena, sphalerite, tourmaline, chromite, ilmenite
Exploration methods:	mapping, soil and rock chip geochemistry
Mine/prospect name:	Magnet Mine, Arthur Dam, Butlers Road, RY02, RY01
Stratigraphic name:	Luina Group, Meredith Granite
Lithologic name:	granite, schorl, basalt, volcanoclastic, siltstone, ultramafics
Geological Province:	Waratah-Luina, Tyenna Orogeny Stage 1
Geological age:	Cambrian, Devonian-Carboniferous, Tertiary

## **APPENDICES**

Appendix 1: RY02 phase 1, 2, 3 rock chip register, RY02 phase 3 soils register

Appendix 2: RY02 phase 3 rock chip, soil & pancon assays

Appendix 3: Ramsay RY02 Prospect Panned Concentrate Mineralogy, September 2014. McArthur Ore Deposit Assessments Pty Ltd