



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

**EL 1/2004 RAMSAY RIVER**

**ANNUAL REPORT FOR THE PERIOD  
3 JANUARY 2006 – 2 JANUARY 2007**

**Compiled by/Author: A M Rigg**

**DATE: January 2007**

**SUBMITTED TO: Executive Chairman**

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Stellar Resources - Melbourne**

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## **ABSTRACT**

This second Annual Report for EL 1/2004 Ramsay River covers the period from 3 January 2006 to 2 January 2007.

The Ramsay River licence area contains historical occurrences of lead-silver-zinc, tin, gold and copper. Previous exploration in the area includes extensive stream sediment sampling, some soil and rock chip sampling, geological mapping, a range of geophysical surveys and several drill holes, which have revealed numerous anomalies. As many of these remain untested or inadequately drilled, the licence is considered to remain prospective for the discovery of significant base metal mineralisation.

Field work on the licence for the period was undertaken with a focus in the north-west of the licence area. Geological mapping and geochemical sampling was undertaken for five km along the Arthur River centred on Arthur Dam and extending along Wombat Hill south-east of Arthur Dam. A diamond drilling programme commenced at Arthur Dam, where five holes were drilled. In Melbourne office, work has included the compilation of an exploration chronology, the further collection of existing regional geological, geochemical and geophysical data and map production.

Further modelling and definition of geophysical targets has taken place from electromagnetic and aeromagnetic datasets. With reference to the existing regional geological, geochemical and geophysical data, and with further detailed drill data available, target definition, modelling and drilling will be considered on current projects. It is intended to ground map and possibly drill test other prospective targets, which include the untested eastern side magnetic anomalies adjacent to the Meredith granite

Subject to the availability of an instrument, Stellar has been considering flying a 50m fls aeromagnetic survey to cover the licence area, especially where the existing flight line density is greater than 50m in the eastern side of the licence.

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## **1 INTRODUCTION**

### **1.1 EXPLORATION RATIONALE & GEOLOGICAL SETTING**

Geological data compilation, analysis and commentary has been produced by consulting geologist Mr C H Young of Chris Young Consulting Pty. Ltd.

The licence covers the NE part of the Meredith Granite, which is recognised to have similar petrochemistry to the Heemskirk suite. The NE part of the Meredith Granite is considered to extend at shallow depth further NE and porphyry dykes at Mt Bischoff are attributed to the presence of granite at shallow depth. The margins of the Meredith granite in this region flank a series of major magnetic anomalies. The historic Mt Bischoff (Sn), Cleveland (Sn-Cu) and Magnet (Pb-Ag-Zn) Mines lie within 3km of the licence. Numerous small tin and base metal shows occur within the licence. Base metal mineralisation appears to be hosted by Precambrian and Cambrian volcanosedimentary sequences, with all reported occurrences being vein-style. Previous drilling by the Tasmanian Mines Department and Pasminco Limited has shown ultramafic rocks to be present in the same area.

The potential for skarn hosted nickel sulphides of the Avebury style is considered to be excellent.

## **1.2 LICENCE**

Tenement number: 1/2004

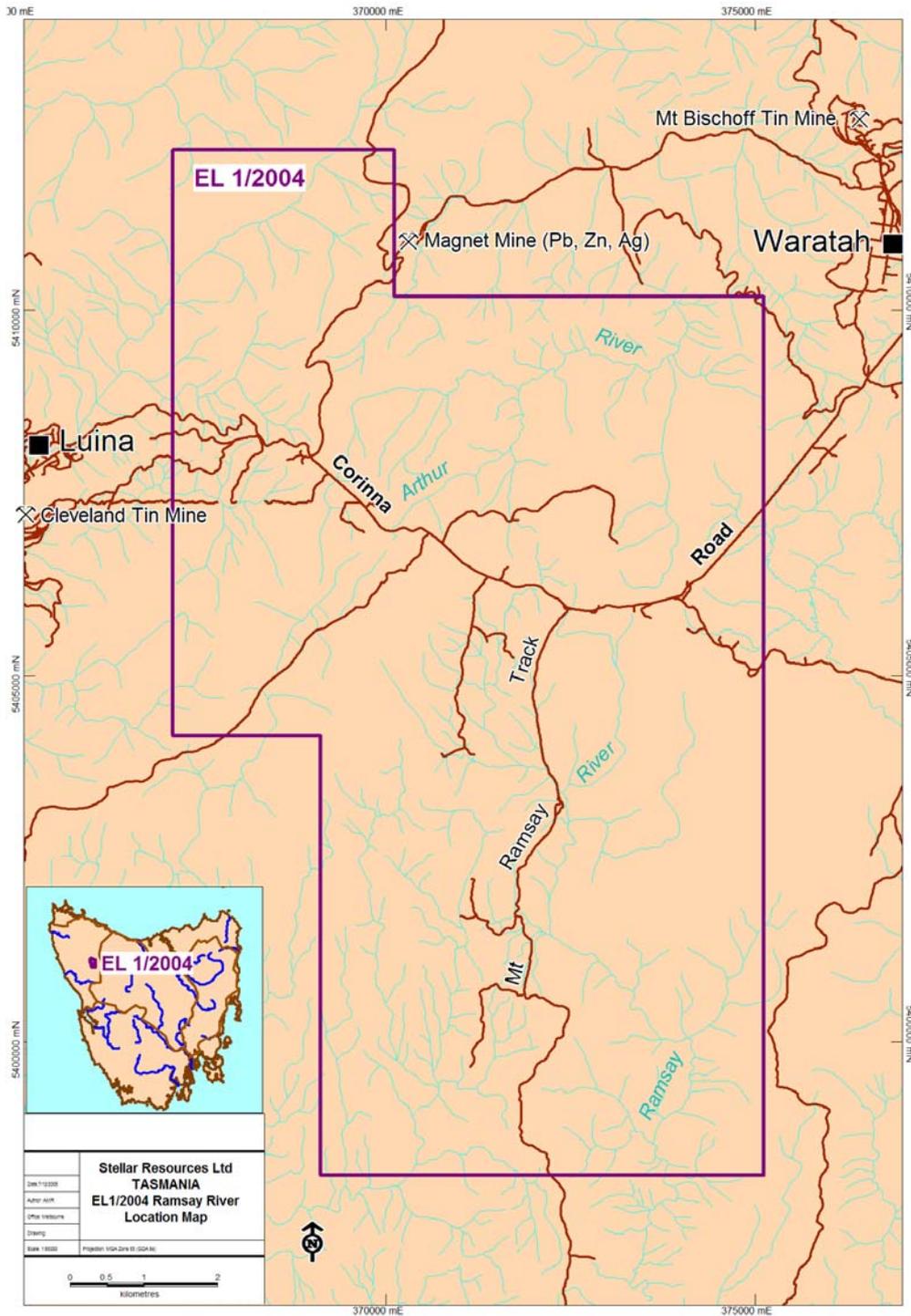
Tenement name: Ramsay River

Tenement location: Located 60km southwest of Bumie, with main road access from the Corinna Road approximately 10km west of the Murchison Highway (Figure 1). The licence covers 90km<sup>2</sup> from the Magnet Mine area west of Waratah township, south to within 3km of Mt Ramsay. Much of the EL area is Crown Land, covered by patches of rainforest and forestry, ti-tree scrub and button grass plains. Access is provided by Corinna Road, numerous logging and old exploration tracks, and walking tracks. Much of the area is accessible only by foot.

Reporting period: 3 January 2006 to 2 January 2007.

Tenement holder: Rubicon MinTech Ventures Pty Ltd., a wholly owned subsidiary of Stellar Resources Ltd.

### 1.3 LOCATION OF LICENCE



**Figure 1**  
**Ramsay River EL1/2004**  
**Location Map.**  
 Data Courtesy: DPIWE.

## 1.4 LAND TENURE

### SCHEDULE

LAND DISTRICT OF RUSSELL  
VICINITY OF RAMSAY RIVER 8KM SW OF WARATAH  
MUNICIPALITY OF WARATAH / WYNYARD  
EXPLORATION LICENCE 1/2004 90km<sup>2</sup>  
RUBICON MIN TECH VENTURES PTY. LTD.

Commencing at the northwest corner at grid coordinates 367 000 mE 5 412 000 mN thence grid east to 370 000 mE grid south to 5 410 000 mN again grid east to 375 000 mE again grid south to 5 398 000 mN grid west to 369 000 mE grid north to 5 404 000 mN again grid west to 367 000 mE aforesaid thence again grid north to the point of commencement.

Coordinate datum - AGD66, AMG Zone 55.

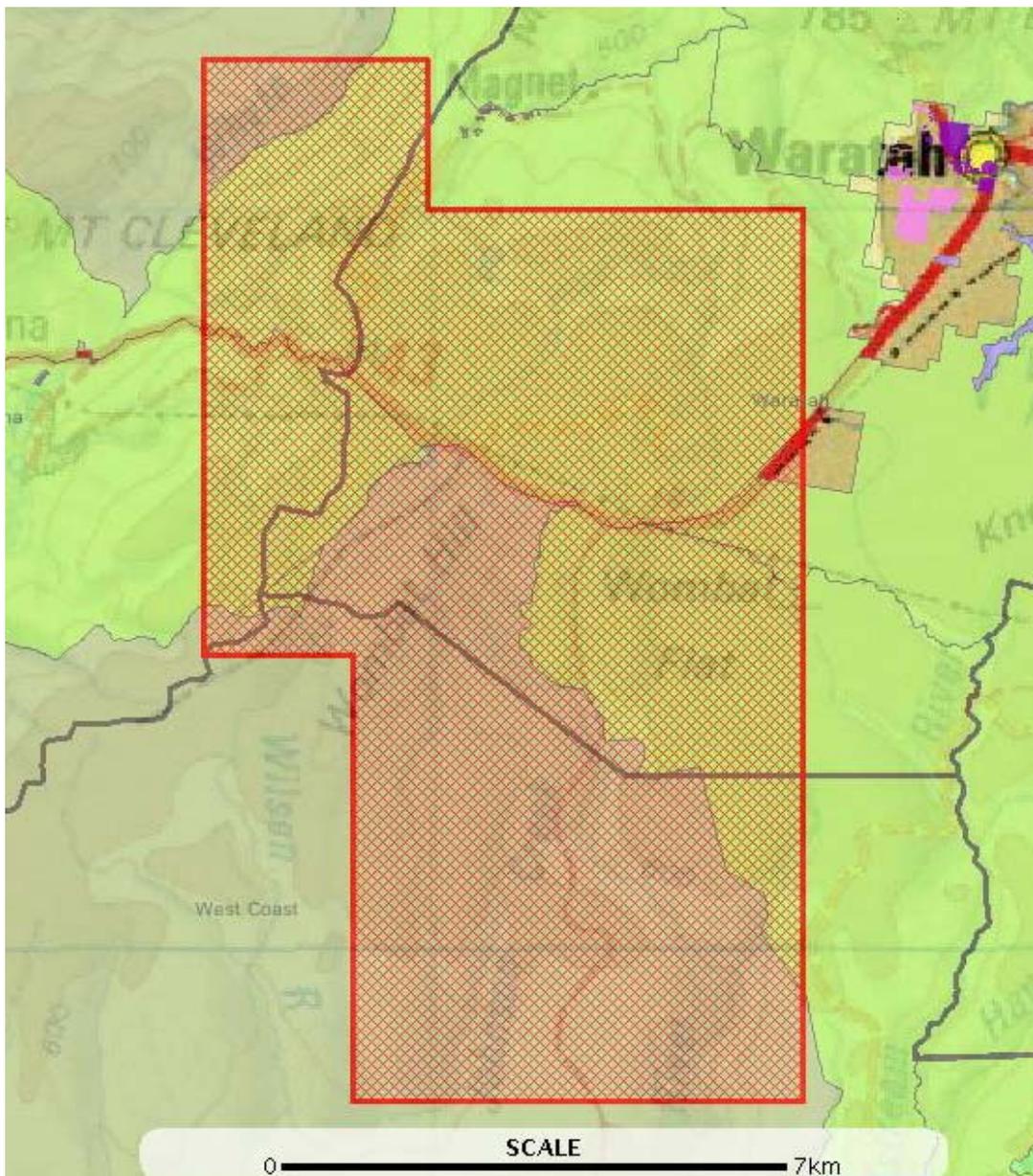
### EXCLUSIONS

- (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 comprises: Private Property  
Multiple Use StateForest  
MDC Informal Reserve  
Meredith Range Regional Reserve  
Savage River Regional Reserve  
(Figure 2)

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*.

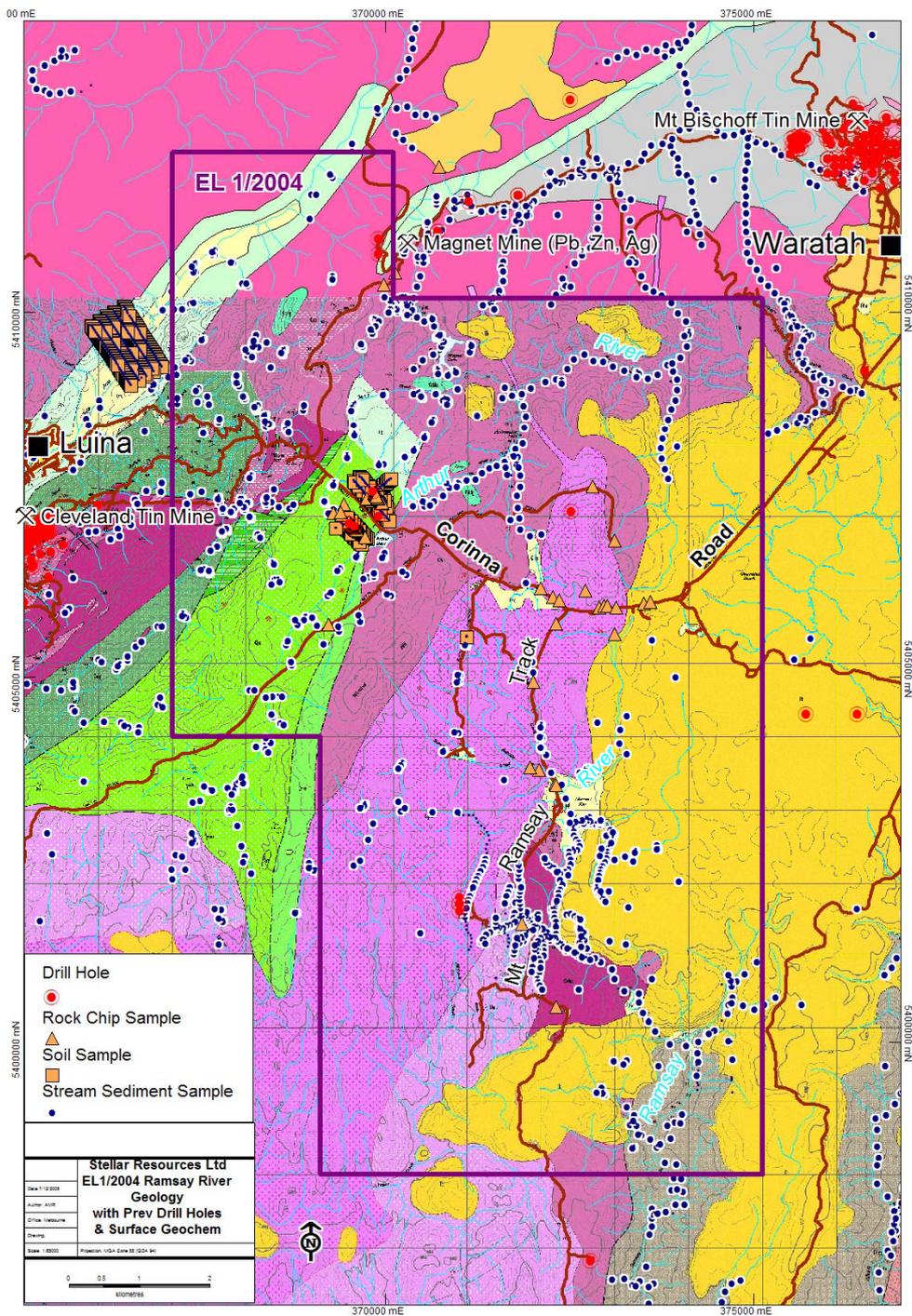


- Public Land Classification
- State Reserves
  - State Forests
  - Public Reserves
  - Regional Reserves

Figure 2  
 Ramsay River EL1/2004  
 Land Tenure Map.  
 Courtesy: LIST.

## **2 REVIEW OF PREVIOUS WORK**

During the licence area consideration and selection process, historic mineral exploration data research, geological data compilation, analysis, commentary and advice was produced by Mr C H Young of Chris Young Consulting. This was done in conjunction with consideration and advice on appropriate geophysical characteristics of the area from Dr David Isles of tGT Consulting.



**Figure 3**  
**Ramsay River EL1/2004**  
**MRT Geology,**  
**with digital data holdings for previous drill holes,**  
**and surface geochemical sampling sites.**  
**Courtesy: Mineral Resources Tasmania.**

### **3 EXPLORATION COMPLETED DURING THE REPORTING PERIOD**

#### **3.1 REGIONAL EXPLORATION ACTIVITIES**

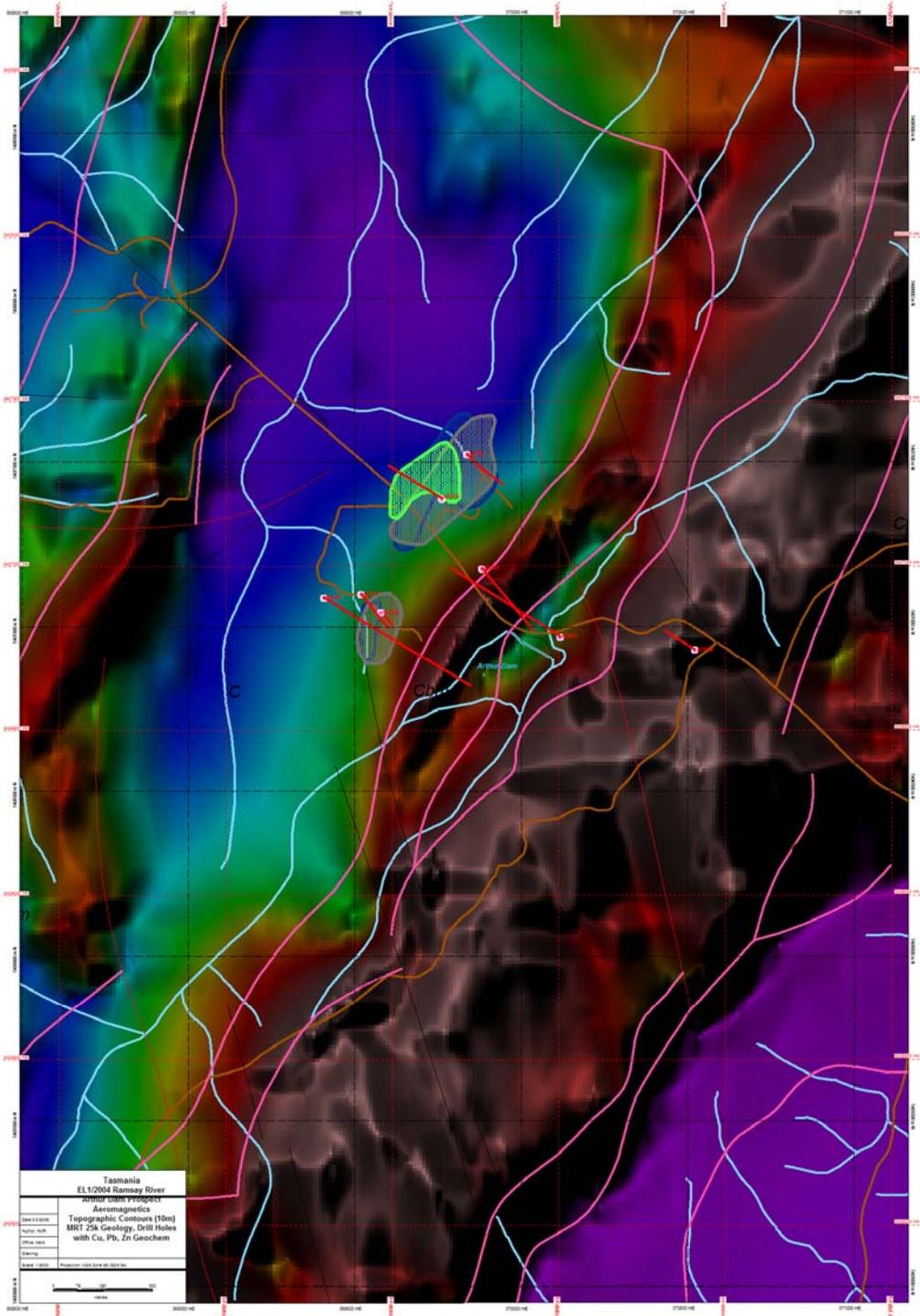
##### **DATA ACQUISITION, MAPPING & ANALYSIS**

MRT digital geology and geophysics datasets, DPIWE topographic data as well as data captured from open-file company reports have been used to produce various maps at 1:25k, 1:10k and 1:5k scale. Exploration data from Aberfoyle, Cleveland Tin, Comstaff,, Geopeko, MPI, MRT, Pasminco, Renison and RGC has been further digitised and captured from MRT open-file reports.

There has been extensive geological, geochemical and geophysical survey programme coverage since the 1960's especially in the north-west along the Cleveland-Magnet trend and environs, with other specific programme areas in the east and south. Tin has been the focus for much of the prior exploration in the north-west and central parts of the licence, with exploration for base metals at Arthur Dam and in the south. Geochemical assaying has been for only four elements (Sn, Cu, Zn, Pb) in most areas, although some areas have had a wider range of assays. Untested base metal assays of interest occur in areas of heavy tin exploration, some warranting further attention. Again untested nickel assays of interest occur in ultramafic rock areas in the north-west, also warranting follow-up.

The 1996 Pasminco Waratah aeromagnetic survey (100m fls) covers all but the east and south-east of the licence. This dataset has been analysed by Dr David Isles. He has produced a geological interpretation based upon the magnetics and has better defined a number of targets. There are a number of co-incident magnetics/EM anomalies. Other prospective targets include the untested eastern side magnetic anomalies adjacent to the Meredith granite. The most detailed aeromagnetic coverage here is the 2002 MRT WTRMP data at 200m fls. This is too coarse for detailed target definition. Subject to the availability of an instrument, Stellar has been considering flying a 50m fls aeromagnetics survey to cover the licence area, especially where flight line density is greater than 50m in the eastern side of the licence.

Two magnetics anomalies on the eastern side of the Meredith granite have drawn stronger attention. RY03, an intense broad anomaly, is approximately 500m north-west of the Corinna Road/Champion Heath south track junction. AB47, is centred on the Ramsay River, 2km south-east of the old South Bischoff Tin Mine. The anomaly, over tholeiitic basalt, is a stronger anomaly and lies along strike of a series of intense magnetic highs, and is not mapped as being covered by the tertiary basalt as are the others. Stream sediment sampling from the AB47 area has assayed mildly elevated levels of base metals and tin.



**Figure 4**  
**Ramsay River EL1/2004**  
**Arthur Dam/Betts Track area**  
**Aeromagnetics (Pasminco, Waratah 1996, 100m fls)**  
**Showing Cu, Pb, Zn soil geochemical anomalies**  
**& MRT, Pasminco and Stellar diamond drilling.**



**Betts track south of Arthur Dam**



**South-east of Betts Track, south of Arthur Dam  
Geological mapping**



**North-west side of Wombat Hill near Betts Track  
Geological mapping traverse terrain and vegetation**



**Junction of Corinna Road and Betts Track  
Site of Arthur Dam project drill hole AD008**



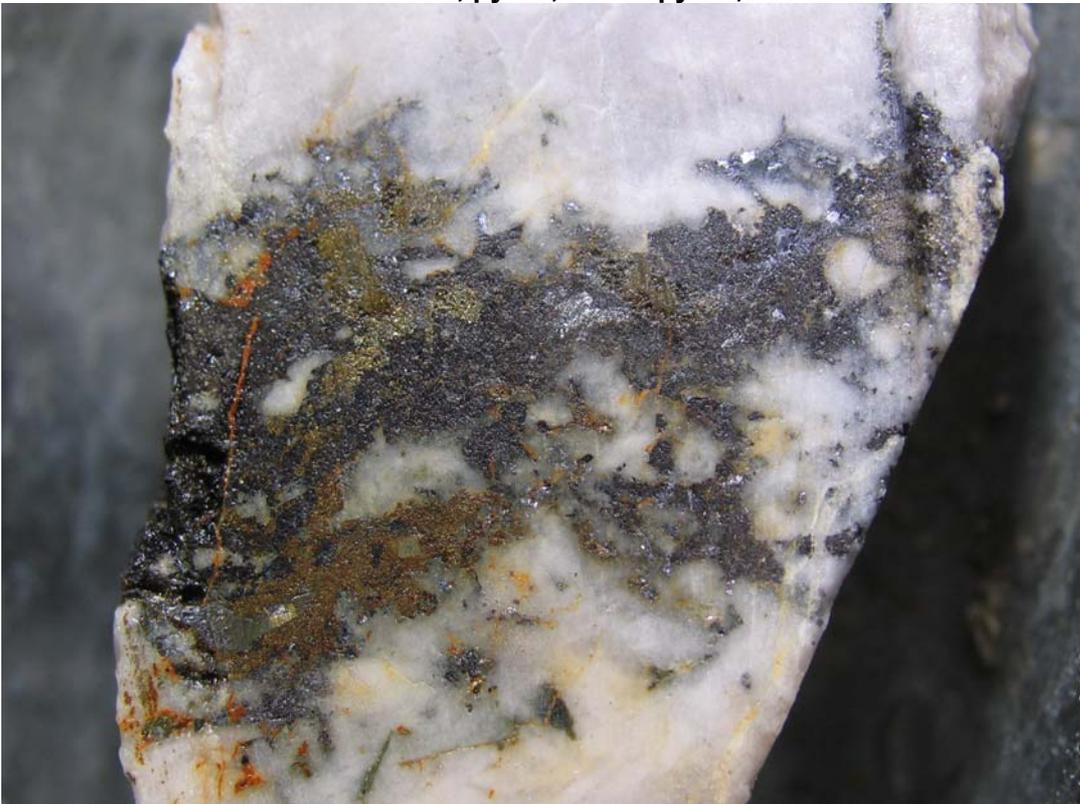
**Arthur Dam project  
Drilling hole AD007**



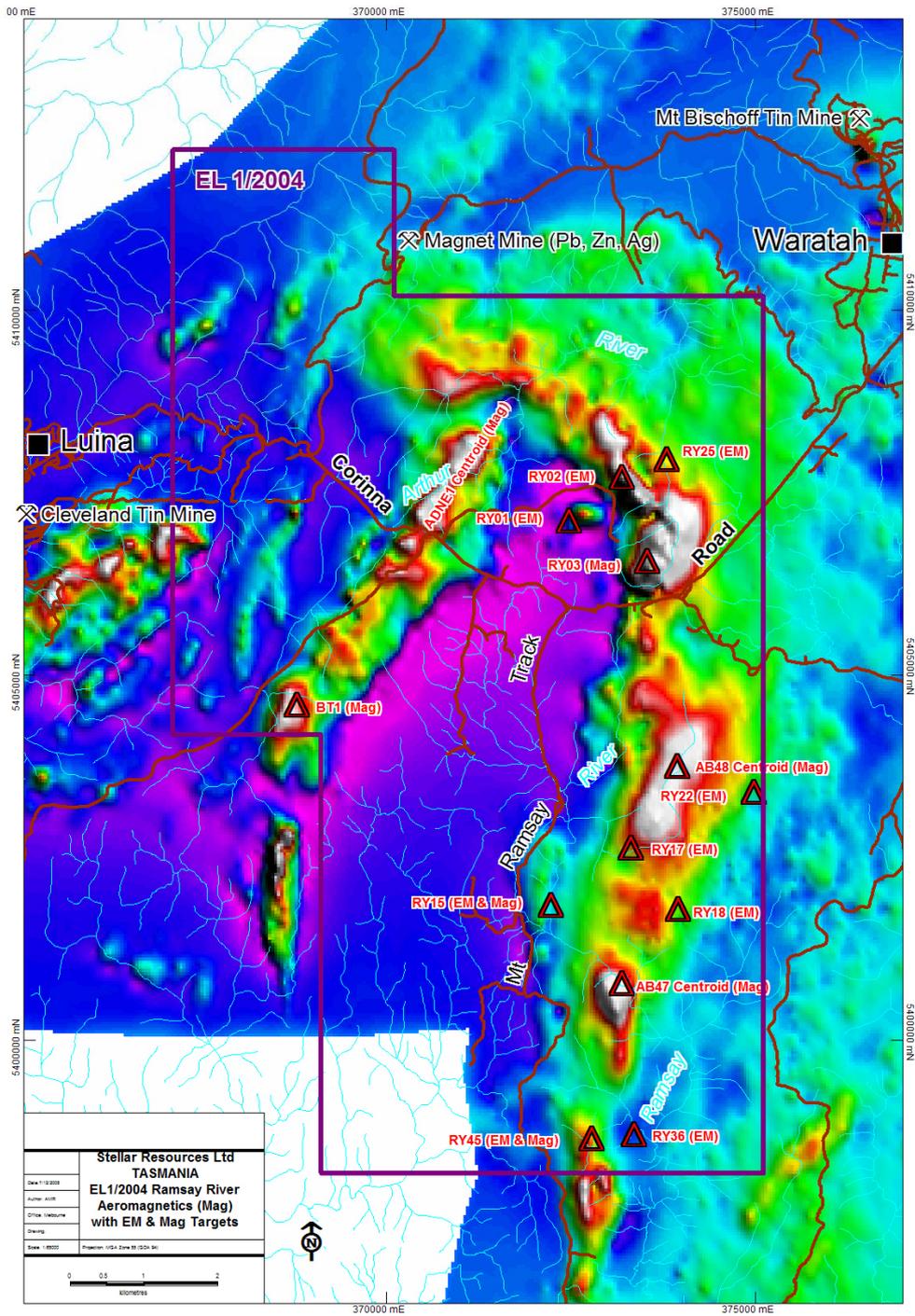
**Arthur Dam project  
DH AD005 core logging**



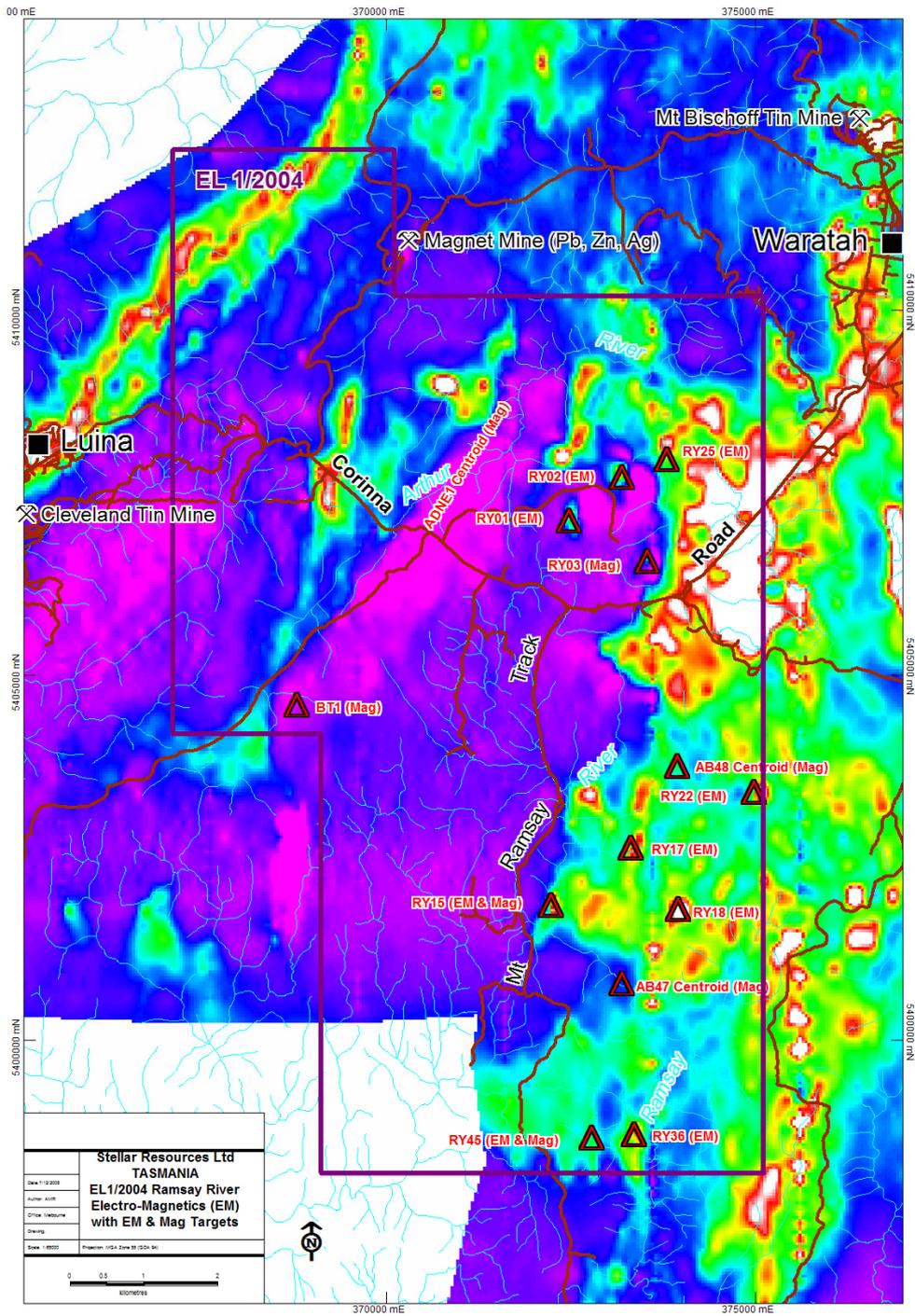
**Arthur Dam project  
DH AD005 core, pyrite, chalcopyrite, haematite**



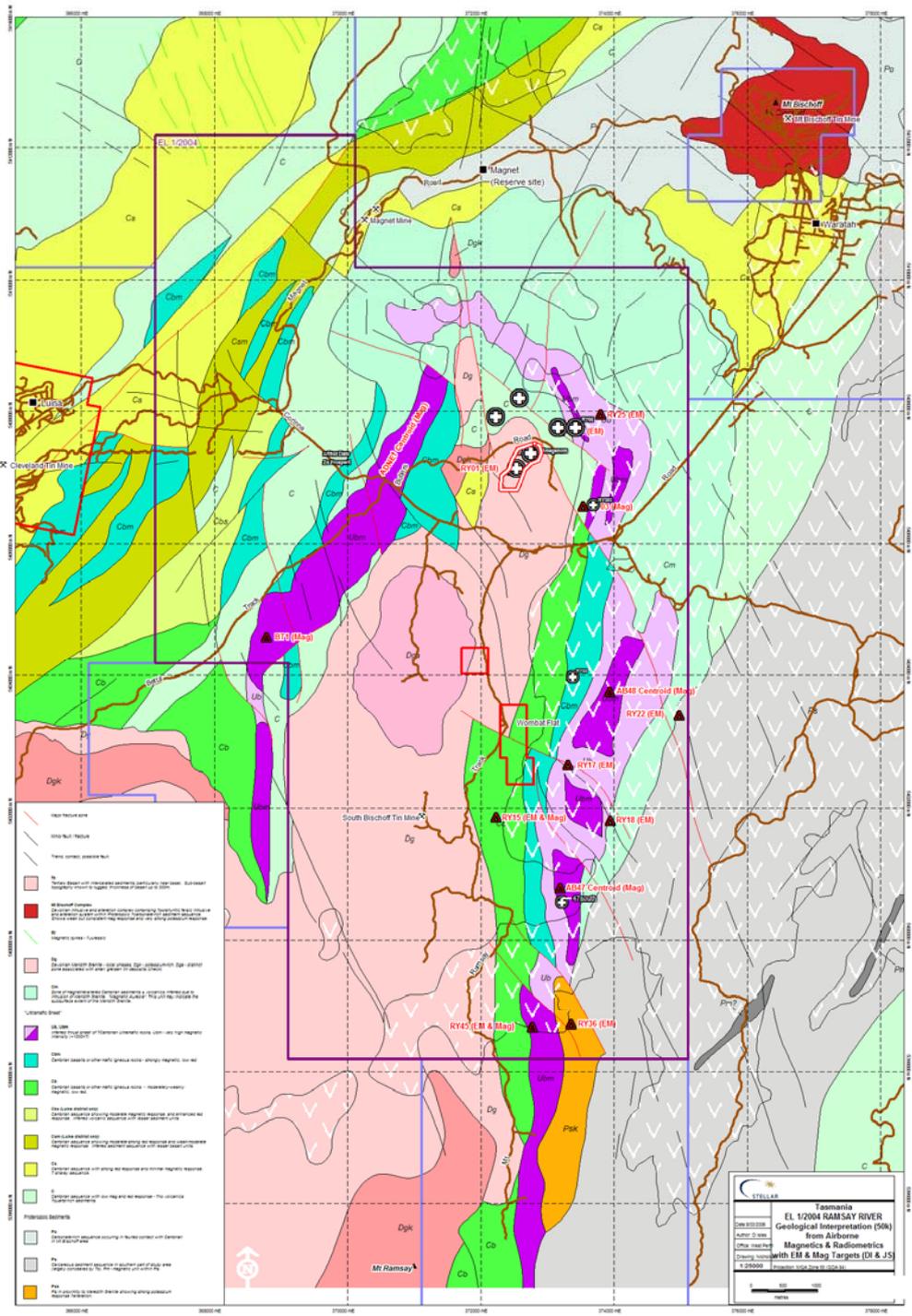
**Arthur Dam project  
DH AD005 core, pyrite, chalcopyrite, sphalerite in quartz**



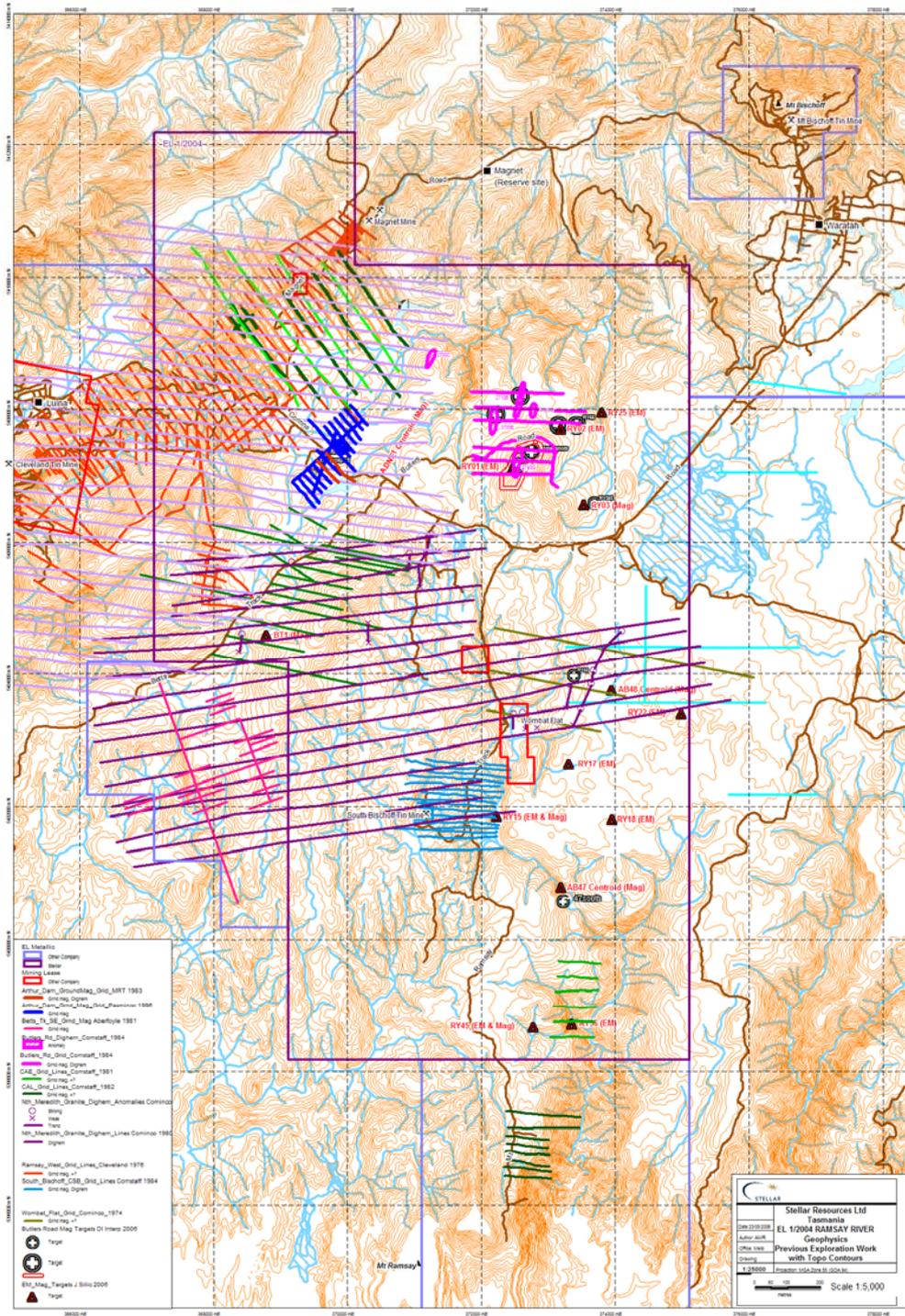
**Figure 5**  
**Ramsay River EL1/2004**  
**Aeromagnetics with Stellar Mag & EM Targets.**  
**Data Courtesy: Mineral Resources Tasmania.**



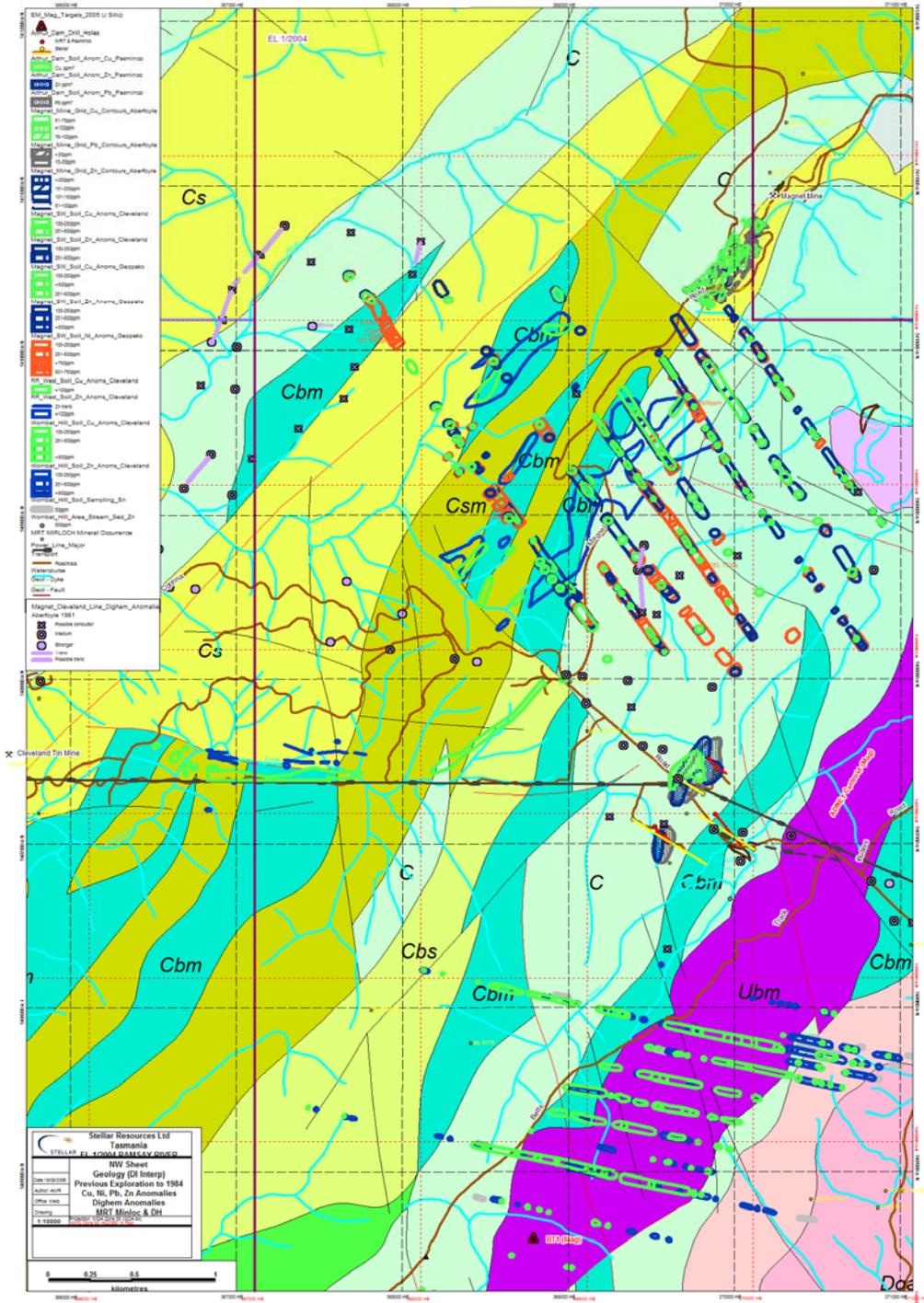
**Figure 6**  
**Ramsay River EL1/2004**  
**Electromagnetics with Stellar Mag & EM Targets.**  
**Data Courtesy: Mineral Resources Tasmania.**



**Figure 7**  
**Ramsay River EL1/2004**  
**Geological interpretation based upon magnetics**  
**with Stellar Mag & EM Targets.**  
**Produced by David Isles.**  
**Data Courtesy: Mineral Resources Tasmania.**



**Figure 8**  
**Ramsay River EL1/2004**  
 Topographic map showing all previous exploration grids/lines,  
 for geology, geophysics & geochemistry,  
 with Stellar Mag & EM Targets.  
 Data Courtesy: Mineral Resources Tasmania.



**Figure 9**  
**Ramsay River EL1/2004**  
**North-west 10k sheet**  
**Geological map (David Isles interpretation),**  
**with Cu, Ni, Pb, Zn soil geochemistry.**

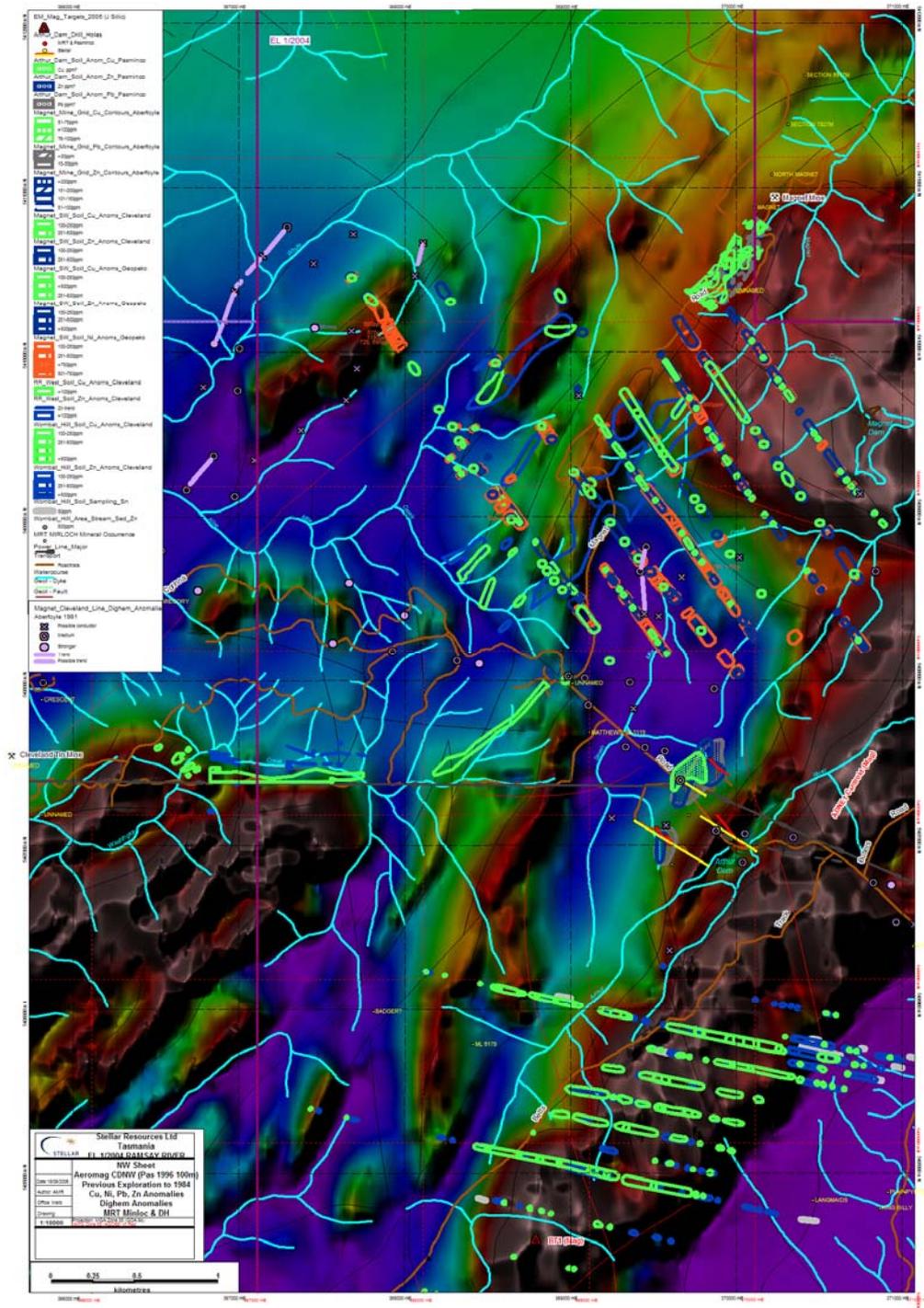
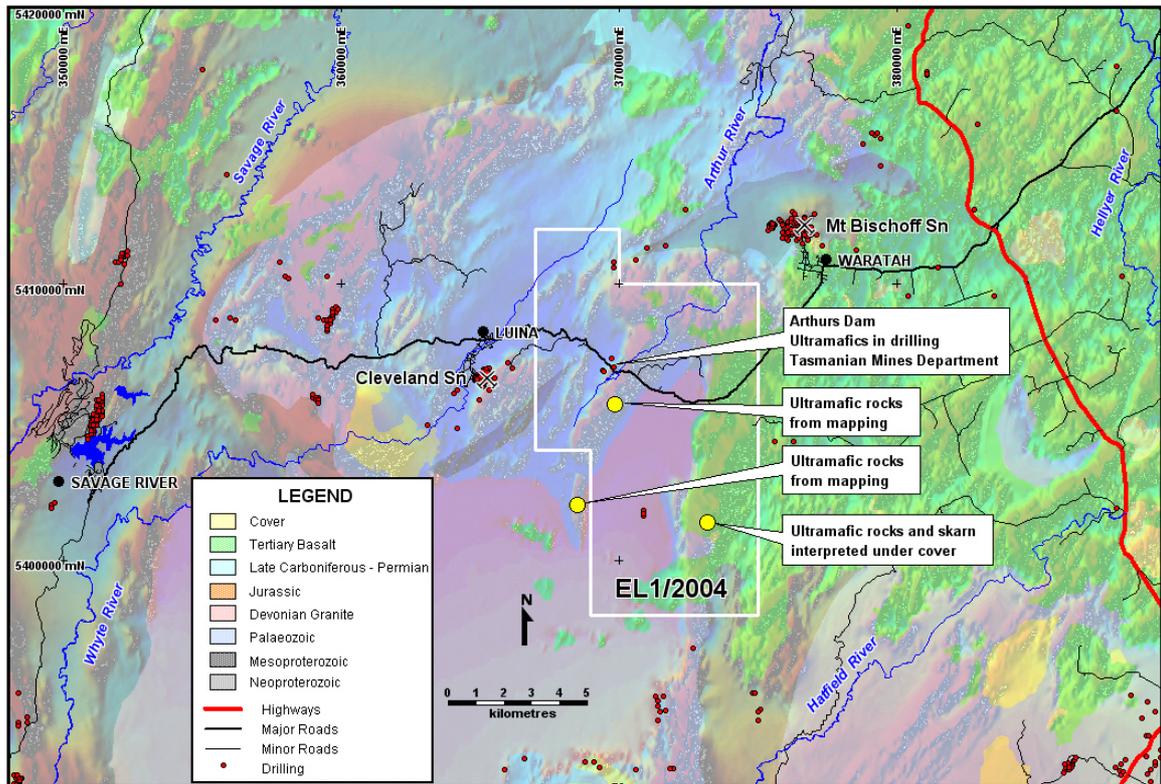


Figure 10  
 Ramsay River EL1/2004  
 North-west 10k sheet  
 Aeromagnetics (Pasminco 1996, 100m fls)  
 with Cu, Ni, Pb, Zn soil geochemistry.

## GEOLOGICAL SETTING

Ramsay River is focussed on a major magnetic anomaly flanking the north-eastern corner of the Devonian Meredith Granite. Apart from the Meredith Granite, underlying lithologies comprise Neoproterozoic and Palaeozoic rocks of the Dundas Trough together with allochthonous Cambrian ultramafic bodies.

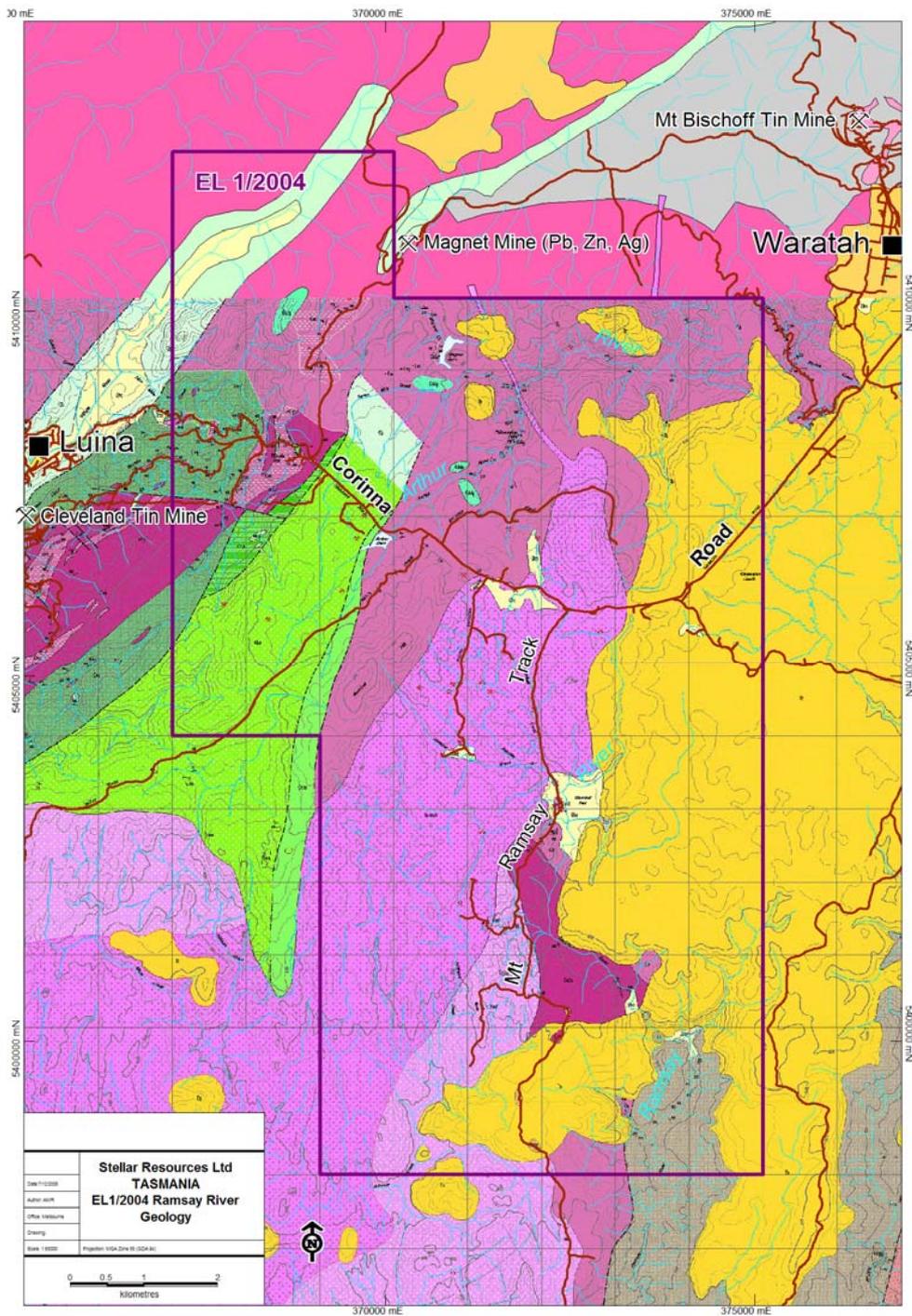
A block of Oonah Formation sediments surrounds the Mt Bischoff Mine and extends beneath Tertiary basalt to the east. The Neoproterozoic Oonah formation is composed of pale grey quartz sandstones, siltstones, shales, dolomites and minor lavas and volcanoclastics. A high degree of deformation often allows distinction from younger rocks.



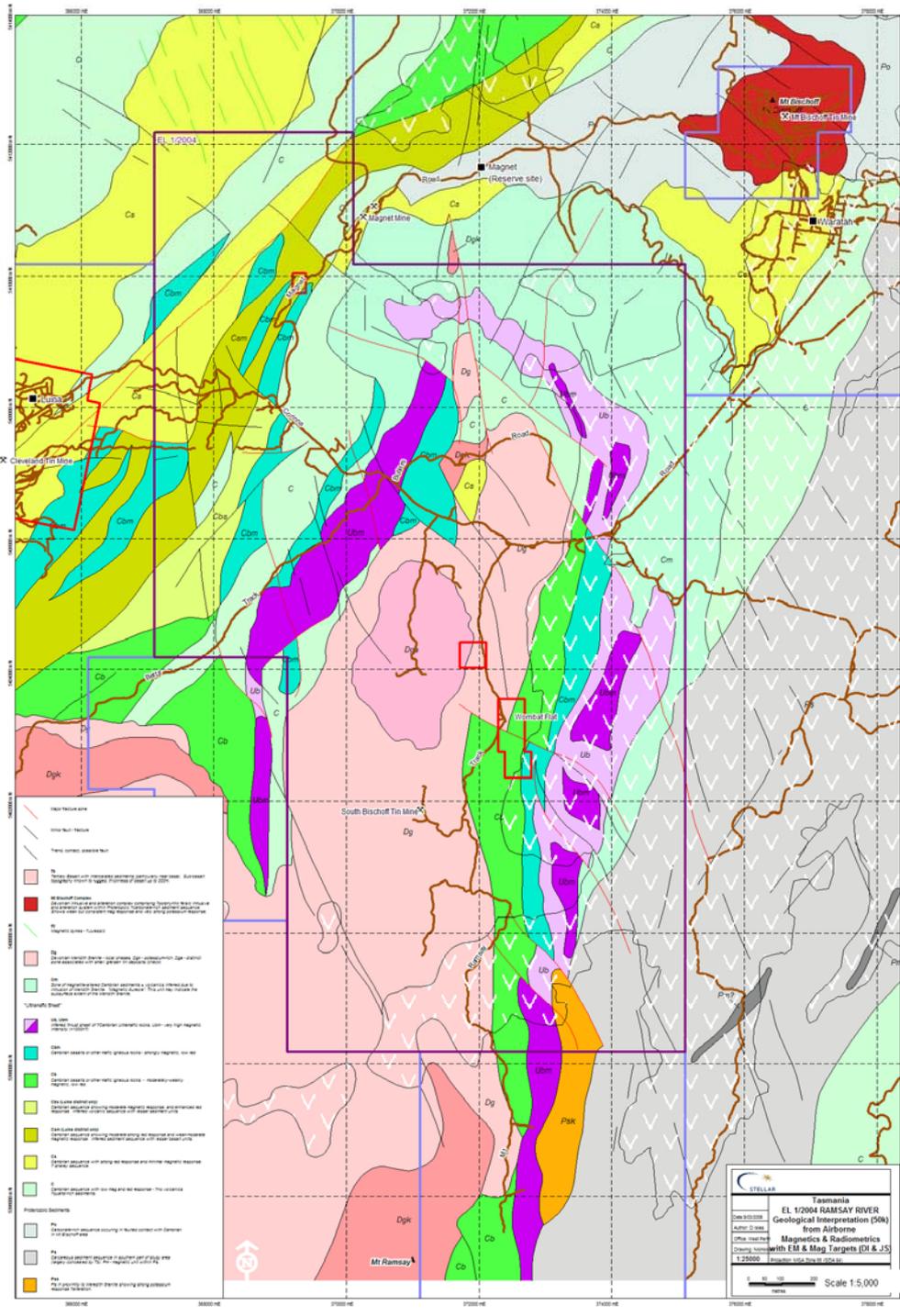
**Figure 11**  
**Ramsay River EL1/2004**  
**Geology draped over aeromagnetics.**  
**Courtesy: Mineral Resources Tasmania.**

The Crimson Creek Formation interpreted by Brown (1986) to occur to the north and east of the Meredith Granite is now termed the Cleveland–Waratah Association and not a correlate of the Crimson Creek. This Association of possible Early Cambrian age is largely composed of basalt lavas, basaltic volcanoclastics, siltstones and mudstones. The Cleveland mine sequence includes basalt, dolomite and chert units.

Mixed intermediate to mafic volcanics dominate the area to the west of Arthur Dam. These are referred to as high-magnesian andesites and low-titanium tholeiite basalts. These rocks were intersected in each of two diamond drill holes completed at Arthur Dam by Pasminco Exploration Limited (Pasminco) in 1997. Best assay result was 3m @ 2.4%Zn and 2.25%Pb in AD4. To the south of Arthur Dam, some 5km along Betts Track, boulder outcrops exhibit a matrix supported conglomerate with clasts of pyroxene-feldsparphyric, chloritic lava, volcanoclastics and red-brown sandstone.



**Figure 12**  
**Ramsay River EL1/2004**  
**1:25000 Geology.**  
**Courtesy: Mineral Resources Tasmania.**



**Figure 13**  
**Ramsay River EL1/2004**  
**1:25000 Geology.**  
**David Isles interpretation from aeromagnetics.**

This area is termed the Betts Basin and is unique to the area. It is possible the lithologies are related to the high magnesian andesites in the area.

A serpentinised ridge of ultramafic rock lies to the east of the mafic volcanic units. It extends NNE from its southern contact with the Meredith Granite near Wilson River where previously alluvial deposits of osmiridium were worked. This ultramafic body is considered to be thrust emplaced. Drilling by the Tasmanian Mines Department at Arthur Dam (Brown 1986) intersected the ultramafic in drill hole AD1 over an interval of 60m from 95m. The ultramafic is coincident with the strong magnetic anomaly that surrounds this part of the Meredith Granite. The anomaly is conventionally believed related to the granite's metamorphic aureole. However this magnetic anomaly has a similar appearance and amplitude to the anomalies defining the Heazlewood and Mt Stewart Ultramafic Complexes, located west of Ramsay River and also the Huskisson Ultramafic Complex flanking the Huskisson Syncline to the south.

Preliminary data from 3D geological modelling by a Tasmanian Government funded cooperative research project involving industry, academia, and government indicates the ultramafic body extends around the NE lobe of the Meredith Granite and then, extends southwards under shallow cover of Tertiary basalt to join with the Huskisson Ultramafic Complex. The likelihood for skarns hosted by the ultramafics to lie within this significant aeromagnetic anomaly is considered excellent.

The historic Magnet Mine located just 1km north of the Ramsay licence 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 postulated feeder structure is traceable to the south using MRT HEM (2002) data towards Wilson River within Stellar's EL.

The northwest corner of the project area covers part of the Whyte River Complex of mafic and ultramafic rocks. This NE trending belt is generally low lying and tends to be covered by Quaternary alluvials as at the former Luina townsite. Silurian-Devonian Eldon Group shallow marine sandstones and siltstones are recognised in outcrop to the NE and south of Luina.

The NE corner of the Meredith Granite is known to extend as a ridge at shallow depth and underlie the historic Mt Bischoff porphyry and skarn tin deposit. This results in a considerable area of interpreted ultramafic rock being in proximity to the mineralising granite that is highly prospective for skarn style nickel sulphide deposits.

#### **4 DISCUSSION OF RESULTS**

Please refer to the attached report by N. J. Turner.

## **5 CONCLUSIONS**

The West Coast of Tasmania is regarded as one of the most mineralised regions on Earth. Two distinct styles of mineralisation are recognised; VHMS deposits hosted by Cambrian age volcanics of the Mt Read Volcanics Belt and major skarn related deposits associated with Devonian age granitic plutons. Well-known deposits in the Mt Read Volcanics are Mt Lyell, a world-class copper-gold deposit, and Rosebery and Hellyer, both world-class base metal deposits containing zinc, lead, copper, silver and gold. Renison Bell and Mt Bischoff are also world-class tin deposits related to Devonian granites. Other styles of mineralisation include the Proterozoic age magnetite deposit at Savage River, which is hosted by sulphide rich mafic and ultramafic rocks.

In this highly mineralised region it is not unexpected for the discovery of a new class of mineral deposit - hydrothermal nickel sulphide, exemplified by the Avebury nickel skarn. Avebury is hosted by ultramafic rocks in the aureole of the mineralising Heemskirk Granite and is located some 12km southwest of the town of Zeehan. Allegiance Mining NL (Allegiance) has published a resource of 6.4 million tonnes @ 1.2% nickel, for a contained 75,000 tonnes of nickel metal. The principal nickel sulphide mineral is pentlandite and this allows for simple beneficiation and cost effective production of a high-grade (plus 20% nickel) concentrate. The host rocks are ultramafic and the nickel sulphides are associated with magnetite and not easily distinguished from the iron sulphide pyrrhotite. The magnetite association makes targeting on the basis of aeromagnetic data possible. Allegiance reports considerable scope for extensions at Avebury and other prospects in the area, including Burbank some 4kms to the southwest. Allegiance has constructed an exploration decline into the Viking deposit at Avebury and it is anticipated this will become a production decline at an early date.

With previous exploration dominated by majors who are no longer active in the region and a dominant focus on tin and the base metals zinc, lead and copper and gold, very little assaying for nickel was undertaken.

Drilling at the Arthur Dam prospect under the supervision and management of Nic Turner was carried out in 2006. Low level base metal values were encountered around Arthur Dam and follow up work is under consideration.

Please refer to the attached report by N. J. Turner.

## **RECOMMENDATIONS**

Please refer to the attached report by N. J. Turner.

Elsewhere, Stellar is examining the highly magnetic zones on the eastern side of the magnetic/geological arc. In particular, ground examination is required to ascertain the presence (or not) of local basalt cover.

Work in 2006 has also been elevated in priority areas in the north western portion of the EL, where much ground work has been conducted, but with little drilling.

## **6 ENVIRONMENT**

For field work please refer to the attached report by N. J. Turner.

Field visits within EL 1/2004 during the 2006 - 2007 period have been restricted to vehicular and foot travel on passable roads, forestry tracks and old mineral exploration tracks. No environmental disturbance was associated with this activity and no rehabilitation was required.

The drill access and pads for the Arthur Dam programme were rehabilitated soon after drilling was completed, apart for the access and collar pad for holes AD005 and AD006 (one pad). This area remains open for follow up drill testing.

## EXPENDITURE

Printed At: 15/01/2007 5:18:16 PM		Progress Report Rubicon Limited	
Code	Description	Actual 01/01/2006 to 31/12/2006	YTD Actual
<b>Dept Code: D1</b>			
<b>Rubicon</b>			
Job Code: 6502	EL 1/2004 Ramsay River	422,813.30	369,156.69
<b>Group Totals for: D1</b>		<b>422,813.30</b>	<b>369,156.69</b>
<b>Report Totals:</b>		<b>422,813.30</b>	<b>369,156.69</b>

**KEYWORDS**

BASIC VOLCANICS, BRECCIA, GRANITE, CARBONATE, BASE METALS, TIN, GOLD, NICKEL, REPLACEMENT, STOCKWORKS, VEINS, SKARN, PRECAMBRIAN, CAMBRIAN, DEVONIAN, ORDOVICIAN, TERTIARY, GEOLOGY, GEOCHEMISTRY, BURNIE SK5503, WARATAH, LUINA, RAMSAY, AVEBURY.

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**EL1/2004 RAMSAY RIVER  
REPORT ON 2006 PROGRAM**

Volume 1 of 1

Prepared by N. J. Turner Geological Services Pty Ltd  
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9<sup>th</sup> November, 2006

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Figure 2 Drill section AD009

Figure 3 Drill section AD007

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Appendix 1 Soil samples 2006

Appendix 2 Rock chip samples 2006

Appendix 3 Logs for AD001, AD002, AD005-009

### LIST OF PLANS

Plan 1 Regional geology – northern Betts Track, Arthur Dam

Plan 2 Soil geochemistry - Arthur Dam

Plan 3 Aeromagnetism – northern Betts Track, Arthur dam

## 1. Summary

- 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.

## 2. Introduction

Mineral exploration licence EL1/2004 Ramsay River is located about 10 km south west of Waratah in western Tasmania and is operated by Stellar Resources Ltd. During 2006 Stellar has carried out a regional mapping program 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 has also carried out a five hole, 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.

## 3. Regional mapping

The regional mapping delineated two widespread lithological units that are separated by a north east striking fault (Plan 1). This fault extends along Betts Track before jogging to the northwest and continuing along the western edge of Arthur Dam. To the west of the fault there is a formation of coarse grained volcanoclastic breccias and lavas with an intercalated unit of mainly greywacke sandstone with siltstone and shale. Andesitic compositions appear to predominate over basaltic compositions in the occurrences of volcanoclastics and lavas delineated in Plan 1. These andesitic and basaltic rocks are boninitic (Everard, 2003). The intercalated sandstone is quartz-poor and likely to be of volcanic derivation.

East of the fault there is an extensive formation of mainly medium grained, quartz-poor, greywacke sandstone with subordinate siltstone and minor dark grey, graphitic shale. Rare basalt is present. A lens of sheared serpentinite that is some 1700 m long by 350 m wide is contained in the greywacke formation at Betts Track while west of Arthur Dam a smaller sheared serpentinite lens occupies part of the faulted contact with the volcanic formation to the west. Relict, coarse to very coarse grains of pyroxene occur widely in both serpentinite bodies, which are regarded as altered pyroxenite. Magnetite is common in the serpentinite, but sulphide is uncommon. Coarse grained dolerite that occurs in the greywacke formation in the Arthur River north of the Waratah Road contains common sulphide in places.

An Early to Middle Cambrian age is assigned to the western andesitic-basaltic formation, to the eastern greywacke formation, the serpentinite and the dolerite. On Wombat Hill the greywacke formation is intruded by an equigranular to porphyritic phase of the Devonian Meredith Granite and there is related thermal metamorphism. This thermal metamorphism is widespread and is pronounced in hornfelsed greywacke just west of the entrance to Betts Track where there is a strong aeromagnetic anomaly (Plan 3). The hornfels in this locality gets a strong response from the hand magnet due to the presence of substantial magnetite in disseminated form and in relatively minor veinlets. Marked responses from the hand magnet to rocks elsewhere in the thermally metamorphosed greywacke formation are common, but the response can also be nil. No pattern that could be mapped was established by this method.

#### **4. Soil samples and rock chips**

Lines of soil samples were collected at three localities (Plan 1). Line 1 was across the serpentinite body on Betts Track and returned mildly elevated values of nickel and zinc from the eastern margin of the serpentinite (Appendix 1).

Because outcrop is poor in much of the area of interest, Line 2 was used to test part of the serpentinite distribution of Everard (2003) who shows a body that is continuous from the southern boundary of the area of interest to Arthur Dam. No zone of elevated nickel values was delineated on Line 2 and it is thought that the serpentinite bodies identified in this round of work do not have the suggested continuity. Mildly elevated values of lead, zinc and arsenic were found just east of the fault that separates the western andesitic/basaltic formation from the eastern greywacke formation. Soil anomalies occur in the same structural position near Arthur Dam.

Line 3 sampled across the strong aeromagnetic anomaly just west of the entrance to Betts Track. A relatively high background level of tin was found while the background level of sulphur is low. Consistently, rock chips from the same locality (140801, 140816 – Appendix 2) returned elevated tin values and low sulphur. Other rock chip samples collected during mapping program returned low to elevated metal values. The best nickel value of 1360 ppm was returned from the eastern margin of the serpentinite body on Betts Track.

## 5. Diamond drilling

### a. Operational aspects

Saturated clay soils of 0.5-1 m thickness hampered drill site preparation and access, particularly in respect of the site for AD005 and AD006 (Plan 1). It is likely that operations in such areas would be much more effective in late Summer-early Autumn.

Slow drilling rates were obtained in each of the five holes that were drilled. The log for AD005 (Appendix 3) gives the depths of the drillers' blocks and the core recoveries achieved. It shows that a very large proportion of the drill runs were much shorter than the 3 m that was available with the core tube that was generally used. This was attributed primarily to a tendency for the close jointed rocks to 'wedge' in the core tube. Clay-filled seams in otherwise hard rock, and talc, also caused problems in some intervals.

### b. Data

Lithological logs and assay logs for the five holes (AD005-AD009) drilled by Stellar Resources Ltd are presented in Appendix 3. The assay work was done at Burnie Research Laboratory and analytical methods and sensitivities are given in the logs. Lithological logs for the previous drill holes AD001 and AD002 are also given in Appendix 3. The core from these holes is stored at Mineral Resources Tasmania's store at Mornington. Cross sections for AD005, AD006, AD007 and AD009 are shown in Figures 1-3.

In planning its drill holes Stellar has made use of soil geochemistry (Plan 2) generated in previous programs at Arthur Dam by the Tasmania Department of Mines (Collins, 1983) and by Pasminco (McGunnigle and Basford, 1997).

McGunnigle and Basford (1997) give best assays from drill hole AD002 as being in the interval 100-123.1 m and including:

12 m @ 5% Zn, 1% Pb, 0.6 gpt Au  
3 m @ 9.21% Zn, 8.34 % Pb, 0.5 gpt Au  
3 m @ 1.52% Zn, 0.75% Pb, 0.65 gpt Au

However, an overall average for the interval 103-123.9 m in AD002 that was derived from Poltock (1995) is shown in Figure 1:

20.9 m @ 3.1% Zn, 1.47% Pb, 40.6 gpt Ag, 0.53 gpt Au

An overall average for the interval 164.3-179.05 m in Stellar's AD005 is also shown in Figure 1:

17.2 m @ 1.33% Zn, 0.48% Pb, 16 gpt Ag

This average is strongly influenced by the sub-intervals 164.3-164.9 m and 174.45-179.05 m, which respectively returned:

0.6 m @ 13.9% Zn, 0.54% Pb, 45 gpt Ag, 1.37 gpt Au

4.6 m @ 2.11% Zn, 1.1% Pb, 34 gpt Ag

Poltock (1995) gives the best assay intervals in AD001 as 169-196 m and 217-224 m. These intervals respectively returned:

27 m @ 0.16% Cu

7 m @ 0.6% Cu

They included a best gold assay at 221.5-222.5 m of:

1 m @ 0.54 gpt

Drill holes AD001 and AD002 were selectively sampled with only the obviously mineralised sections being assayed. Stellar's holes were also selectively sampled, but with the inclusion of substantial intervals on either side of the zones of interest.

Structural data incorporated into Figures 1-3 include plots of the traces of bedding and foliation as measured by alpha angles in mostly un-oriented core. The symbols have been plotted below the core axis, which may not always be the actual case. However, the consistency with the lithological correlations between drill holes in Figure 1 and the consistency of orientation between drill holes in Figure 3 indicates that the plotting is probably generally satisfactory.

#### c. Discussion of drill holes AD005, AD006, AD009

Drill hole AD005 was drilled beneath drill hole AD002 (Figure 1), which was put down by the Tasmania Department of Mines in 1985. AD005 intersected the same band of mineralisation as AD002, but at a distance of 50 m down-dip from the intersection in AD002. The mineralisation in both holes is dominantly of stock-work vein style.

The mineralised vein system in AD005 is primarily developed in a unit of greywacke sandstone that is bounded above and below by volcanoclastic breccia and lavas. In AD002 the situation appears to be similar though the lower boundary of the mineralised interval is obscured by oxidation and repeat sampling. Together, the two drill holes provide the dip of the mineralised zone and of the host sandstone. Drill hole AD006 was drilled to further test these combined features, which were intersected at the predicted depth at a distance of 80 m down-dip from the intersection in AD005. However, the mineralised vein system is only weakly developed in the sandstone in this position.

The situation up-dip of AD002 was tested by drilling and costeaning carried out by Pasminco (McGunnigle and Basford, 1997). Their drill hole AD004 intersected patchy mineralisation 70 m up-dip from the AD002 intersection, but did not intersect the sandstone unit. Also, weak

mineralisation, but not sandstone, was intersected in a costean located a further 60 m up-dip.

The superior intersection in AD002 may have resulted from the relatively brittle, fractured sandstone being more porous and permeable than the enclosing volcanoclastics and lavas such that the structurally higher part of the sandstone unit formed a trap site for the migrating, mineralizing fluids. Possible lateral continuity of such a trap site could be a target for further drilling.

Drill hole AD009 tested the same mineralised feature as drill holes AD005 and AD006, but it is located 400 m along strike to the northeast (Plan 2). AD009 intersected the same sequence of andesitic/basaltic breccia and lava followed by greywacke sandstone and siltstone (Figure 2). However, there is only weak development of the mineralised vein system in the sandstone. The structural position of AD009 is more akin to AD006 than to AD002 and it is likely that a trap site corresponding to the AD002 intersection would plunge to the southwest.

#### d. Discussion of drill hole AD007

Drill hole AD007 was designed to further test known vein style, pyrrhotite-chalcopyrite mineralisation that occurs on the eastern side of the serpentinite lens at Arthur Dam (Plan 2). The drill hole had the double purpose of continuing through this mineralisation and into the serpentinite to test for possible nickel mineralisation.

The pyrrhotite-chalcopyrite mineralisation was intersected by AD007 at the expected, general depth (Figure 3) with the veins mostly developed in the interval 211.95-303.5 m. They are most abundant in two subintervals with about 3% by volume of vein material at 225.4-239 m and about 5% by volume of vein material at 274.3-290.1 m. Through the overall interval the veins display varied orientations, mostly in the range of alpha 0°-60°, which is strongly oblique to the dominant veins in drill hole AD001. These latter are parallel to the core axis. Thus, the previous interpretation of a sheeted vein system that was based on the parallel vein orientations in AD001 is supplanted by a stock work model.

The serpentinite body was not intersected by AD007 and a possible explanation for this is illustrated in Figure 3. It appears that the serpentinite bodies around Arthur Dam and Betts Track can have restricted vertical extent as well as restricted lateral extent.

#### e. Discussion of drill hole AD008.

Drill hole AD008 tested the strong aeromagnetic anomaly that is centred just west of the entrance to Betts Track (Plan 3). The drill hole

intersected a uniform sequence of greywacke sandstone and siltstone. The sandstone throughout the drill hole generates a strong response from the hand magnet due to substantial disseminated magnetite. Magnetite is also present in sparse, thin veinlets with quartz, chlorite, epidote and chalcopyrite.

Short sections of whole core were sampled at intervals of about 10 m in order to provide a check on the visual logging (Appendix 3). A few elevated values of copper and zinc were returned. The background level of tin is elevated, as was indicated by earlier soil and rock chip sampling, while the background level of sulphur is low.

## **6. Conclusions**

The regional mapping that has been carried out around Betts track and Arthur Dam has shown that the serpentinised pyroxenite bodies have restricted width and length. Drill hole AD007 indicates that the bodies can also be restricted vertically. The serpentinite is extensively sheared and the bodies appear to be structurally emplaced lenses. Metal values in the serpentinite are within the range of background though with some evidence of mildly elevated values at the eastern margin of the body on Betts Track.

The identification of widespread and substantial, disseminated magnetite in the hornfelsed eastern greywacke sandstone formation, combined with the demonstration by drill hole AD008 that this material extends to depth, makes the hornfelsed sandstone a likely source of the strong aeromagnetic features that are present around the northern part of Betts Track.

To date, a total of six drill holes and two costeans have tested the belt of anomalous (Zn, Pb, Ag) soils in the western part of the Arthur Dam prospect (Plan 2). Little encouragement has been forthcoming from the two drill holes and costean on the northern side of the Waratah Road. However, there is potential for further drill testing to the south of the road, along strike to the south of AD002 and AD005.

Surface sampling and results from drill holes AD001 and AD007 indicate the presence of vein style copper mineralisation over a vertical extent of 200 m on the eastern side of the serpentinite body at Arthur Dam, but the presence of potentially commercial grades has not been demonstrated.

## **7. Environmental matters**

Rehabilitation requirements for the 2006 field program in EL1/2004 have been completed in respect of drill sites AD007, AD008 and AD009 and associated access tracks. The access track and drill site for AD005 and AD006 will remain open pending the company's decision in respect of further drilling. Additionally, the ground around AD005/AD006 needs to dry out prior to rehabilitation being undertaken. No rehabilitation is required by the soil sampling lines.

## **8. References**

Collins P L F, 1983. Luina and Wombat Flat exempt areas: a review of previous exploration and a reconnaissance survey of an aeromagnetic anomaly. Tasmania Department of Mines Unpublished report No 1983/35.

Everard J L, 2003. Digital Geological Atlas 1:25,000 Series. Luina. Tasmanian Geological Survey.

McGunnigle M K and Basford P W, 1997. Luina EL17/93 Joint Venture. Annual Report April 1996-March 1997. Pasmaenco Exploration, MPI gold Pty Ltd.

Poltock R, 1995. Annual technical report to April 1995. EL17/93 Luina. MPI Gold Pty Ltd.

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## **FIGURES**

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**Appendix 1:** Soil sample numbers, locations (AMG) and assay data. Analyst:  
Burnie Research Laboratory

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**Appendix 2:** Rock chip sample numbers, locations (AMG) and assay data.  
Analyst: Burnie Research Laboratory

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**Appendix 3:** Lithological logs for diamond drill holes AD001 and AD002;  
lithological and assay logs for diamond drill holes AD005 – 009.  
Analyst: Burnie Research Laboratory

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# **PLANS**