



**STELLAR RESOURCES LIMITED**  
Columbus Metals Ltd

**EL 6/2014 STONEHENGE CREEK**  
**ANNUAL REPORT FOR THE PERIOD**  
**15 SEPTEMBER 2014 – 14 SEPTEMBER 2015**

**Compiled by: R.K. Hazeldene**

**DATE: August 2015**

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**Mineral Resources Tasmania, a Division of the**  
**Department of State Growth - Hobart**  
**Stellar Resources Ltd - Melbourne**

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## ABSTRACT

This first Annual Report for EL6/2014 Stonehenge Creek covers the period from 15th September 2014 to 14th September 2015.

Exploration Licence 6/2014 is held by Columbus Metals Pty. Ltd. a wholly owned subsidiary of Stellar Resources Limited. It encompasses an area of 6.9 km<sup>2</sup> centred 4km southwest of the Zeehan post office, in NW Tasmania. Refer to Figure 1. RL5/1997 (also held by Columbus), which covers the Heemskirk Tin Project, is located immediately north of EL6/2014.

ML32/2014, McLean Creek, (held by Columbus), which was enclosed by EL6/2014, was consolidated into the EL on 7/07/2014 and is included in this report.

The EL covers part of the historical South Heemskirk Mineral Field including an area of prior silver-lead mining at the Spray Mine, the Colonel North, the Grubb's mines and the old Sunshine Mine. RL5/1997 includes the Queen Hill, Severn and Montana tin orebodies.

The district has been subject to exploration activity since the 1870's. It contains numerous old silver-lead-zinc fissure-lode prospects most of which were worked in the period 1882-1910. The EL area was left largely untouched from 1919 until 1946 except for occasional, sporadic, relatively low-intensity exploration activity. During the 1980's and 1990's the Stonehenge area was targeted for stanniferous sulphide-rich carbonate replacement (Renison-Bell style) mineralisation by RGC and for Proterozoic shale-hosted zinc deposits by CRAE.

In 2007 Stonehenge Metals drill tested the area for nickel (Avebury model) and zinc mineralisation (Sunshine & Swansea prospects). No nickel mineralisation was found, and insufficient economic zinc mineralisation was defined. A SkyTEM survey was carried out in 2008. Moonraker Minerals (RMG) undertook further drilling at Sunshine (within the ML32/2014, now part of the EL). Again insufficient economic zinc mineralisation was defined.

The geology of EL6/2014 is considered by Stellar to be similar to RL5/1997. A granite body underlies it, and it has some similar geology and base metals +/- tin mineralisation, which may represent a similar mineralogically zoned geological/ mineralisation model as that on RL5/1997.

Stellar's principal target of interest is carbonate-hosted tin deposits, which in a zoned mineralisation environment may occur beneath historically mined shallow base metals/silver deposits in the north, centre and east of the licence. The area's main magnetic anomaly is possibly due to Devonian granite, with shallow apophyses, which would be prime exploration targets. Stellar has reviewed the modelling and interpretation of aeromagnetic and SkyTEM survey data undertaken by Stonehenge Metals.

During the 2014 -15 reporting period Stellar completed the capture of historical exploration data, its review and incorporation into a computer database. Tim Callaghan has developed a 3D computer model of the historic mine and drilling data and recent geophysical data has been re-modelled with parameters to suit the Devonian granite / Queen Hill model.

Stellar Resources expenditure on EL6/2014 during 2014/15 totalled \$50,611.

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3. T. Callaghan Model Files (Digital)
4. Geophysics Model Files (Digital)
5. Maps Files (Digital)

# 1. INTRODUCTION

## 1.1. EXPLORATION RATIONALE

Stellar noted a number of similarities between the geological setting and observed mineralisation on the EL6/2014 and that on RL5/1997 to the north. While the tenor of tin mineralisation at surface (& at depth) at Queen Hill on RL5/1997 is significantly greater than that recorded from the EL, the geology, geophysics and base-metal mineralisation are indicative of similar mineralising events.

The Zeehan tin deposits on RL5/1997 are Devonian granite related cassiterite-pyrite-pyrrhotite-basemetal stockwork and replacement style deposits hosted in Proterozoic and Cambrian sediments and volcanoclastics. The stratabound mineralisation is structurally controlled on fold/fault dilation zones between lithologies of contrasting rheology. Tin occurs principally as cassiterite with minor stannite and base metal sulphides located towards the top and periphery of the deposits. Three steeply dipping and moderately plunging tabular deposits have been delineated over an area of 600m by 500m to 500m depth - the Severn, Queen Hill and Montana deposits.

Stellar's view is that the main magnetic anomaly on EL6/2014 is possibly due to a Devonian granite, with shallow apophyses that may be valid exploration targets. Stellar questions the modelling and interpretation of Stonehenge's aeromagnetic survey, and notes that their two deep diamond holes do not appear to have sufficiently tested the apophyses they targeted. The drill holes did not intersect ultramafic rocks and the anomaly remains untested.

While Stellar's focus is on tin mineralisation, the potential for nickel in the southwest of the licence is noted. A prominent magnetic feature is believed to be an ultramafic body, which may host Avebury-style mineralisation. The anomaly has not been drill tested and may be followed-up in due course.

## 1.2. GEOLOGICAL SETTING

The geology of EL6-2014 is complex but comprised principally of a slice of Precambrian Oonah Formation rocks thrust over younger Cambrian rocks of the Dundas Group by the Tenth Legion Thrust. Refer to Figures 4 & 8. Exposure within the licence area is poor. The Oonah Formation limestones and shales, which drilling indicates form a major proportion of the stratigraphy, rarely outcrop.

The Precambrian Oonah Formation rocks (quartzites, micaceous quartzites, siltstones, shales, graphitic shales and dolomitic units) are highly deformed and metamorphosed. Five sets of folds have been identified in the Oonah rocks. The folds trend northwest with an inferred wavelength of approximately two kilometres. North trending and east trending faults transect the tenement, crenulation cleavage, with variable orientation, is visible in outcrops of phyllite and slate along several of the track cuttings

The Cambrian Dundas Group rocks, comprising interbedded volcanoclastics, basalts, mudstones and shales, are associated with older Cambrian McIvor Hill mafic-ultramafic rocks which appear to be structurally emplaced into the sequence but stratigraphic and structural relationships are complex.

The Devonian age Heemskirk Granite outcrops about three to four kilometres to the northwest of the EL. Through gravity interpretation, Stonehenge Metals inferred the granite to underlie the EL at a depth of 1-2 kilometres, while RGC inferred the granite top to lie at approximately 400m depth.

Fault trends are generally west-northwest and north-northwest to north-northeast with the major WNW striking, north dipping, Balstrup Fault forming the northern boundary of the block of Oonah rocks on the northern edge of the tenement. In the south the Oonah Formation is fault bounded by the low angle Tenth Legion Fault that has overthrust the younger Cambrian sequence (Stonehenge 2008, reviewed TC). This has been confirmed by conductivity depth slice interpretation of SkyTEM data.

A large aeromagnetic high is a feature of the EL. Refer to Figures 5, 10 & 11.

Various geophysicists have attributed the anomaly to:

- a granite cupola with peripheral sulphide or magnetite skarn bodies
- a very large pyrrhotite-rich orebody
- a Cambrian ultrabasic high magnesian basalt (the McIvor Hill Complex rocks).

### 1.2.1. Tin Mineralisation

Anomalous surface tin geochemistry on EL6/2014 is sporadic, however is noted to be often coincident with mapped structures and lode zones (e.g. Grubb's, in the south-east of the EL). Anomalous tin on RL5/1997 also appears to be commonly associated with mapped lodes. Eight rock chip samples Sn>100ppm are noted (to a maximum of 1050ppm) mostly associated with high Pb, Zn and sometimes WO assays. Six soil samples Sn>100ppm, are noted (to a maximum 760ppm) some associated with high base metal values. Tenneco reported in their 1971 Spray Mine evaluation program that "Vertical zoning of the mineralisation is not strongly evident although there is an increase in pyrite and chalcopyrite content with depth". Two samples from the lowest level of the Spray (No. 6) assayed 0.12% Sn whereas no tin was detected in the few samples assayed for it from the upper levels. C. Loftus-Hills (1947) suggested there was a drastic change in ore type at No 4 level where "the galena rich ore changed to jamesonite ore with little or no galena" (and high antimony).

RGC drilled six holes (170 to 599m) from 1983 to 1985 in the area from the Spray Mine to approximately 900m southwest of the mine, to test for replacement-style tin hosted by dolomite horizons within the faulted Upper Oonah Formation. Highly anomalous base metal zones were encountered. Tin assays for selected zones were very low except in hole TH16 near the Spray Mine, where a decrease in Pb, Ag & Zn was noted with a corresponding increase in Sn, As & Cu, indicating mineralisation zoning (as seen at Queen Hill). Sn assayed 0.07% at 333m and 0.10% at 382m. Hole TH13, 600m south southwest of the Spray Mine intersected 6m of an arsenic bearing pyritic breccia, which was surmised to represent the possible upper or lateral limit of a zoned, tin-mineralised system.

CRAE drilled three holes (231 to 251m) approx. 900m southwest of the Spray Mine in 1992 to test for stratiform mineralisation. Highly anomalous base metals were encountered. Tin assays within the base metal zones were mildly elevated (25 - 41ppm) including one at 510ppm.

### 1.3. LICENCE

Tenement number: EL 6/2014

Tenement name: Stonehenge Creek

Tenement location: Centred four kilometres south-west of the Zeehan post office, access is gained by vehicle from Zeehan via the sealed Trial Harbour Road which passes north of the licence, thence through a locked gate along an unsealed track through the Comstock mine area at the north-west of the licence. Access is also gained from the town past the golf course, through a locked gate, and past the Spray mine in the northeast of the licence. Old exploration tracks provide access to the north and east of the licence with other areas requiring foot access. The untracked southwest is somewhat swampy, while the untracked southeast has hilly and well-drained terrain (see Figure 1).

The licence covers an area of 6.9km<sup>2</sup>, which extends west 3.5 km from between Manganese Hill and Mt Zeehan, to as far as the Comstock mine workings. The whole of the EL area is gazetted Crown Land, with the majority under DPIPWE, and a 250m north-south strip on the east being under Parks & Wildlife (see Figure 1).

Reporting period: 15 September 2014 to 14 September 2015.

Tenement holder: Columbus Metals Ltd., a wholly owned subsidiary of Stellar Resources Ltd.

# LOCATION OF LICENCE

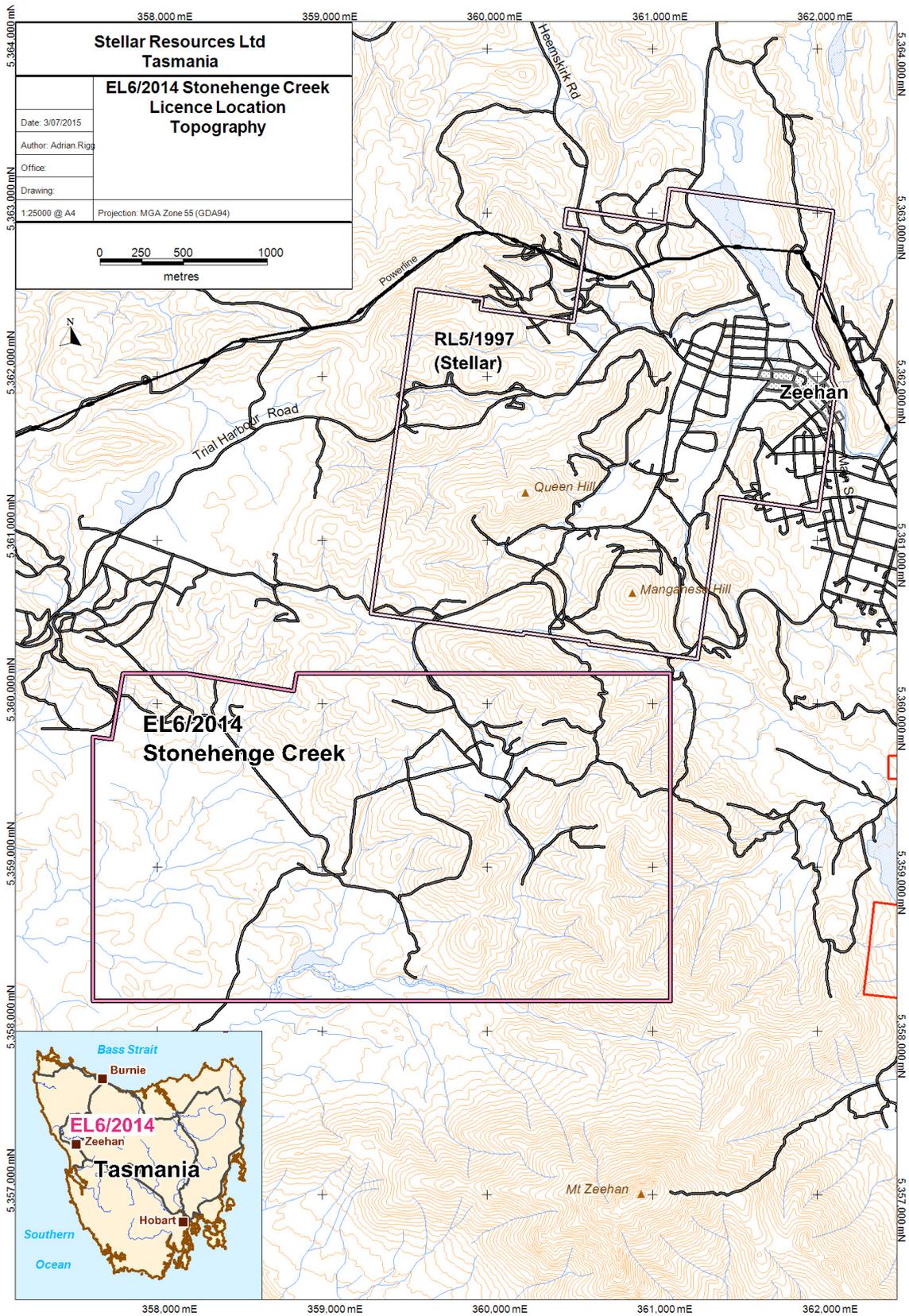


Figure 1. EL6/2014, Stonehenge Creek: Location Map

## 1.4. LAND TENURE

### 1.4.1. Schedule

LAND DISTRICT OF MONTAGU  
VICINITY OF ZEEHAN  
MUNICIPALITY OF WEST COAST  
EXPLORATION LICENCE 6/2014 6.9 SKM

COLUMBUS METALS LTD

#### Schedule 1: The Licence Area

The area shown surrounded by magenta lines on the attached map of the Licence Area.  
Total area of the Licence Area: 7 sq.km.

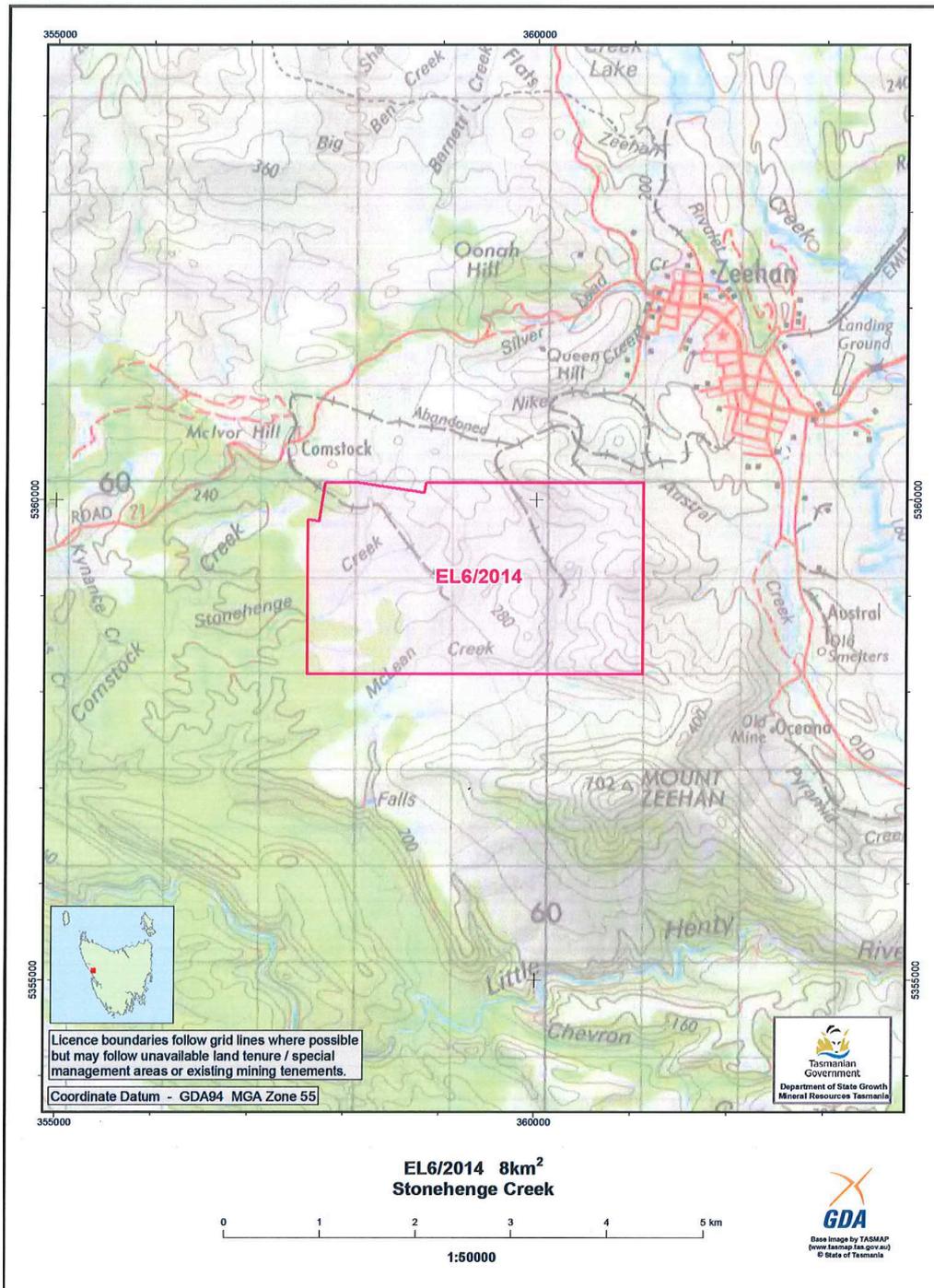


Figure 2. EL6/2014, Stonehenge Creek: MRT Licence Area

### 1.4.2. Land Tenure

The area comprises: Crown Land.

#### EXCLUSIONS:

The area covered by this licence does not include:

- (a) All forms of mineral tenements including mining leases, retention licences and exploration licences, which were applied for or in force prior to the date of application for this licence.
- (b) Land exempt from the provisions of the *Mineral Resources Development Act 1995*.
- (c) Land reserved under the *National Parks and Wildlife Act 1970* including National Parks, Historic Sites, Nature Reserves, Game Reserves and State Reserves shown on the Schedule.
- (d) 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*.

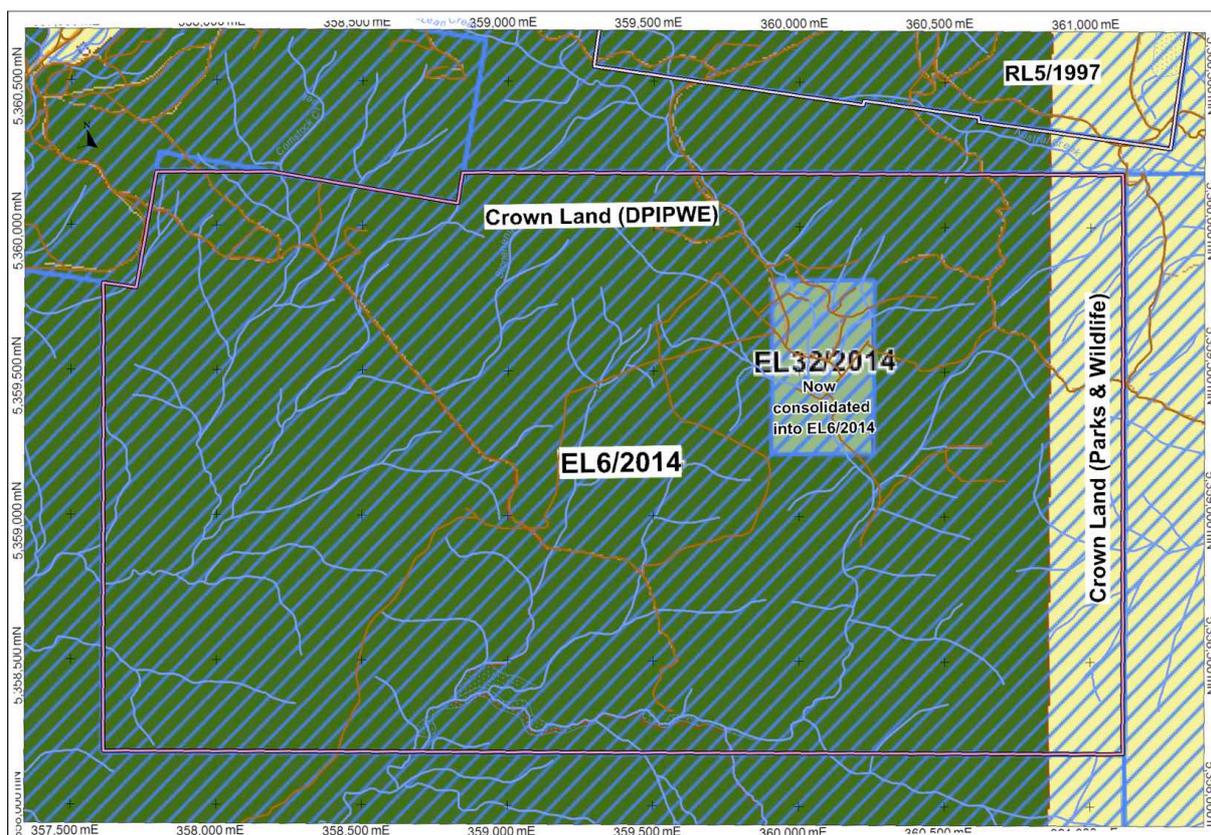


Figure 3. EL6/2014, Stonehenge Creek: Land Tenure

## 2. REVIEW OF PREVIOUS WORK

EL 6/2014 is located within the historical South Heemskirk Mineral Field. The general area has been subjected to rather sporadic exploration activity since the 1870s. It contains numerous old silver-lead-zinc fissure-load prospects most of which were worked in the period 1882-1910. From 1919 until 1946 the field was relatively untouched except for occasional, sporadic, relatively low-intensity exploration activity. Refer to Figure 6.

Between 1946 and 1960 Zeehan Explorations Pty Ltd (a joint venture between North Broken Hill and Broken Hill South) carried out ground surveys to determine the continuity of the Spray – Nubeena lode zone and initiated the BMR managed magnetic, gravity, and electrical, surveys. The Mines Dept. drilled 4 holes in the area, 3 at the old Tasmanian Mine.

From 1966-1970 Placer Prospecting Pty Ltd focussed their attention on the Spray Mine conducting a TURAM EM survey over the main lode. Minops Pty Ltd farmed into the project and drilled several holes. This work was largely to the north of EL 6/2014.

From 1970-1972 Tenneco Pty Ltd dewatered, sampled, and drilled the Spray Lodes. They cut a jamesonite lode (0.2m at 16.8% Pb, 0.08% Zn, 8.8% Sb, 1.4% Cu, and 271 oz/t Ag.) but it was of very limited extent. A TURAIR airborne EM survey covered much of the Gordon Limestone outcrop. Follow up gravity, Turam ground EM, and SP surveys, produced mixed results. Again this work concentrated mainly to the north of the EL.

During the 1980's and 1990s the Stonehenge area was targeted for stanniferous sulphide-rich carbonate replacement (Renison-Bell style) mineralisation by RGC (drilled 6 DD holes at the Stonehenge & Sunshine prospects) and for Proterozoic shale-hosted zinc deposits by CRAE. Refer to Figures 7, 8 & 9.

CRAE entered a joint venture arrangement with Allegiance Mining NL during the 1990s; this work resulted in the discovery of the Avebury nickel deposit. CRAE also drilled 3 DD holes and 27 AC holes at the Sunshine Mine. When CRA withdrew from the JV in 1996, Allegiance gained title to the entire area and in 2000 drilled 2 DD holes at Sunshine. Allegiance relinquished the eastern half of EL 28/88 and 7km<sup>2</sup> of it was taken up by the McDermott brothers, as EL 17/2003. Refer to Figures 10 & 11.

McDermott's holding was subsequently sold to Stonehenge Metals Limited in December 2006. Stonehenge conducted a significant amount of work on the Stonehenge (EL17/2003) and Sunshine (20M/2001) leases from 2007 to 2010 including:

- Drilling 7 RC drill holes and 16 DD holes at Sunshine,
- Drilling 10 DD holes at Swansea and
- Drilling 2 DD holes at the Stonehenge nickel project (one located in the Swansea area).

As a result of this work Stonehenge estimated an Inferred Resource of 287,600 tonnes grading 2.8% zinc, 1.5% lead and 31g/t silver (8,000 tonne of zinc, 4,200 tonnes of lead and 291,000 ounces of silver) at the Sunshine deposit.

Moonraker Minerals P/L (RMG Ltd) purchased EL17/2003 and RL02/2012 from Stonehenge early in 2012. During 2012 Moonraker drilled 3 DD holes at the Sunshine Prospect and 3 DD holes at the "CRA Zinc Zone" Prospect. The licences were surrendered in 2013. Site rehabilitation was completed in 2015. Refer to Figure 12 for drill hole locations.

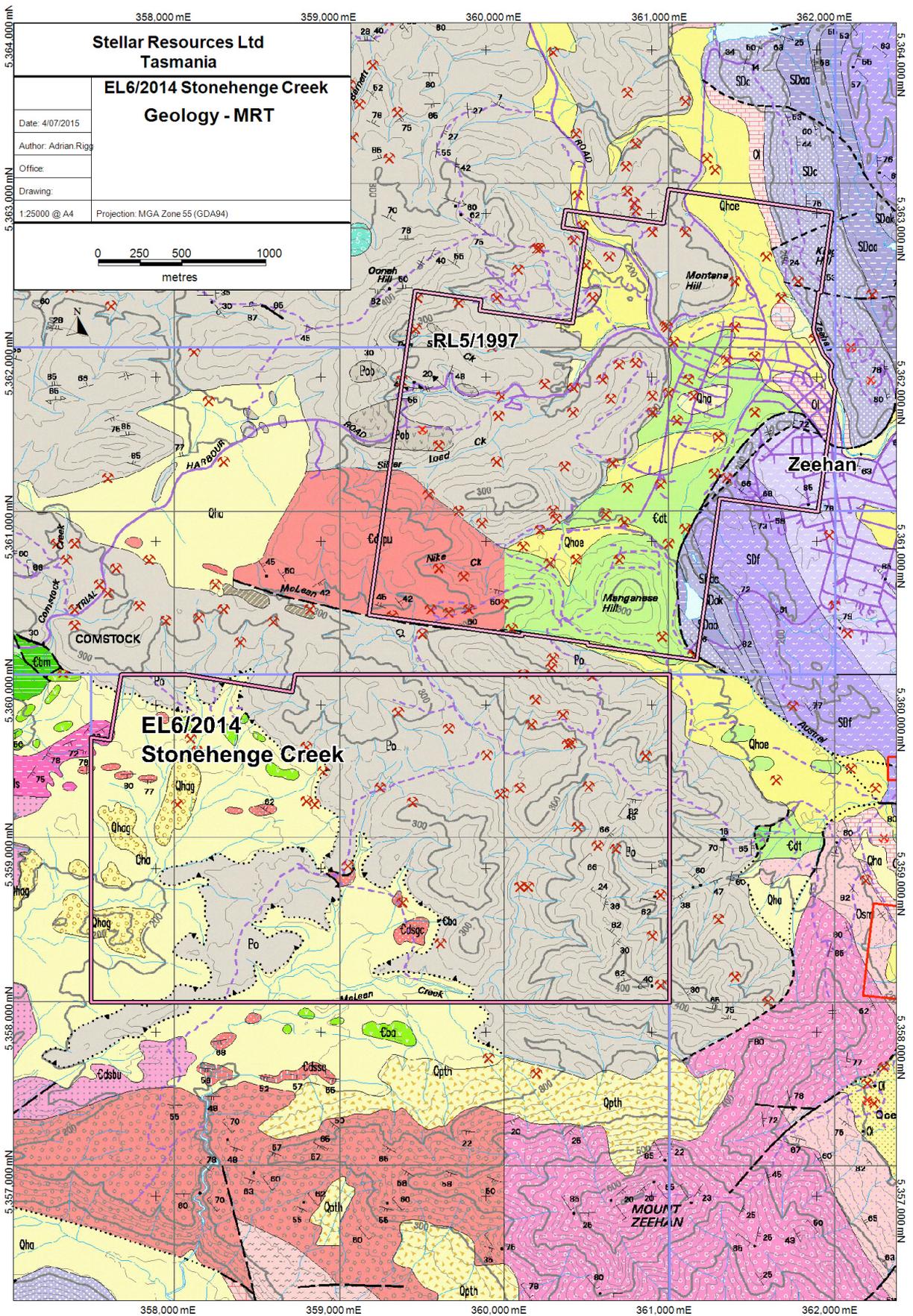
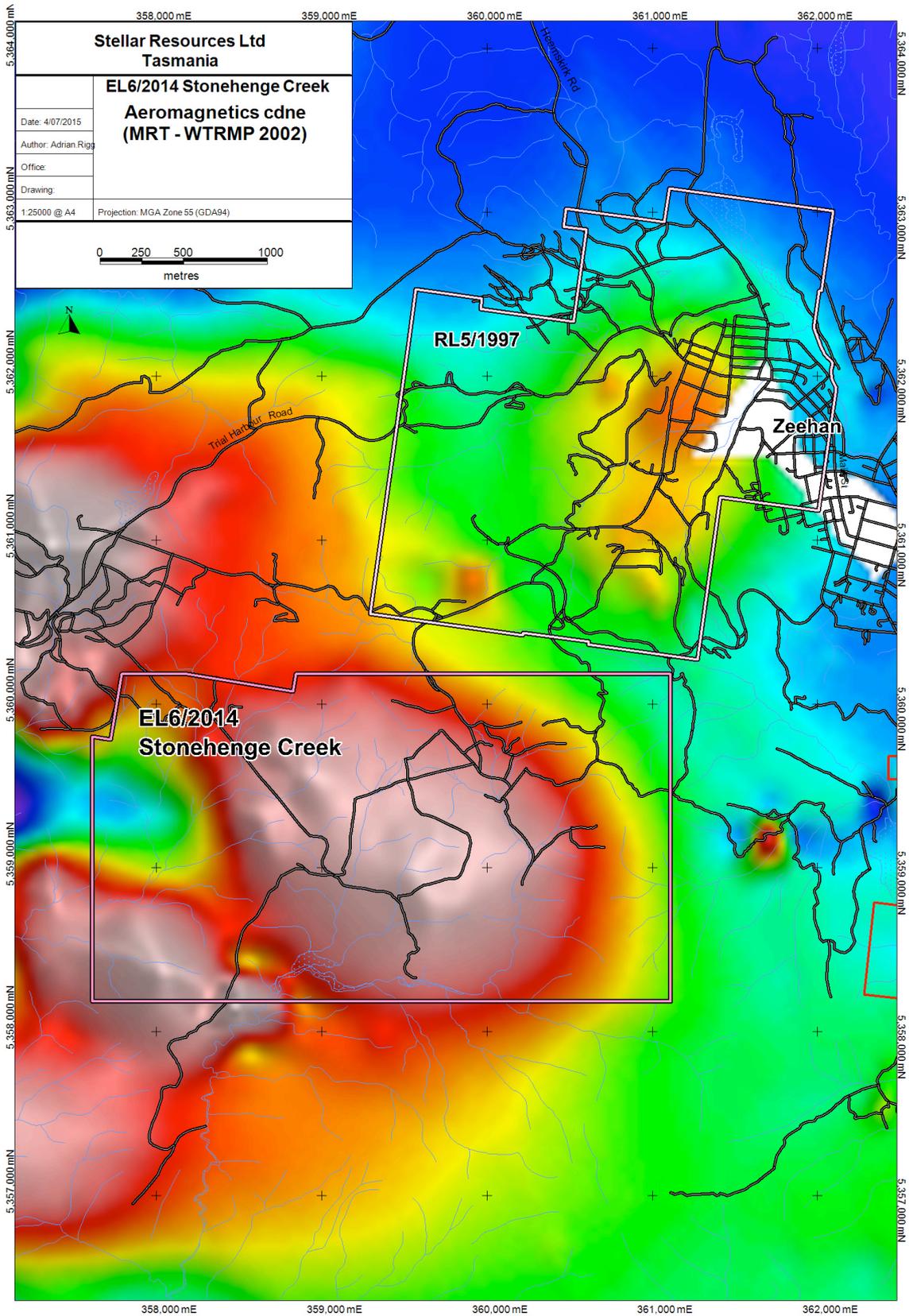


Figure 4. EL6/2014 & RL5/1997: MRT Geology Map.



**Figure 5. EL6/2014 & RL5/1997: Aeromagnetics.**

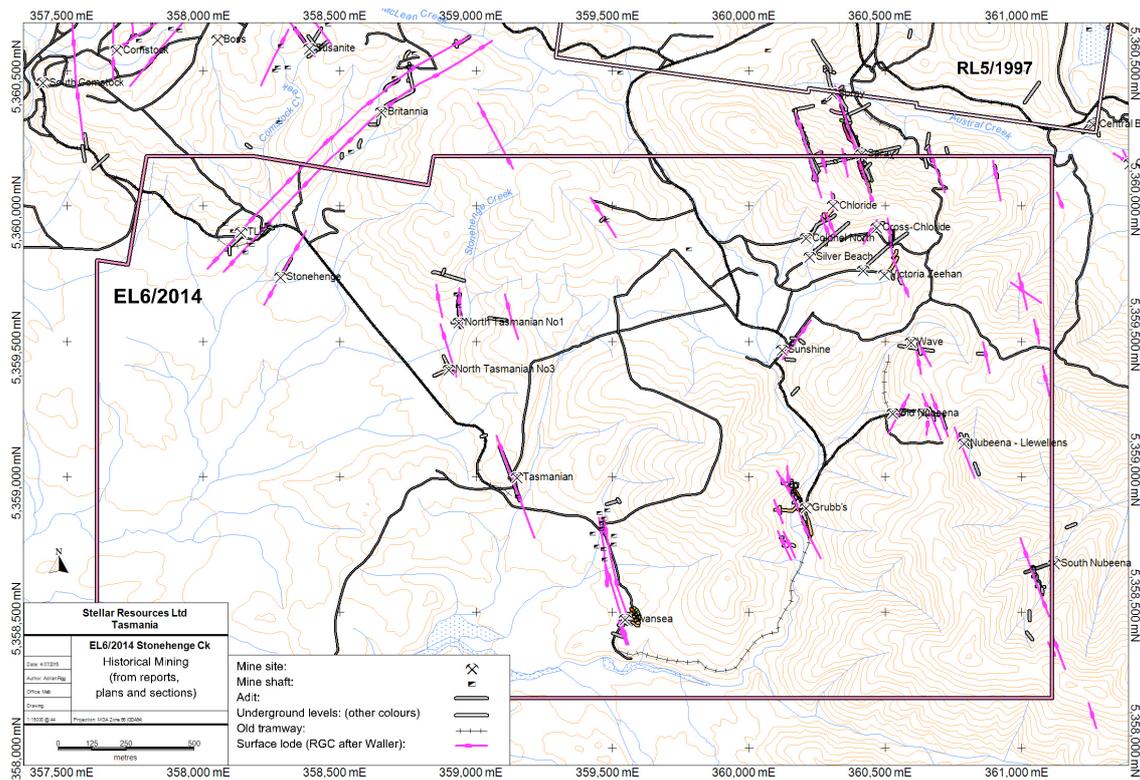


Figure 6. EL6/2014: Historical Mines and Surface Lodes (Waller 1904).

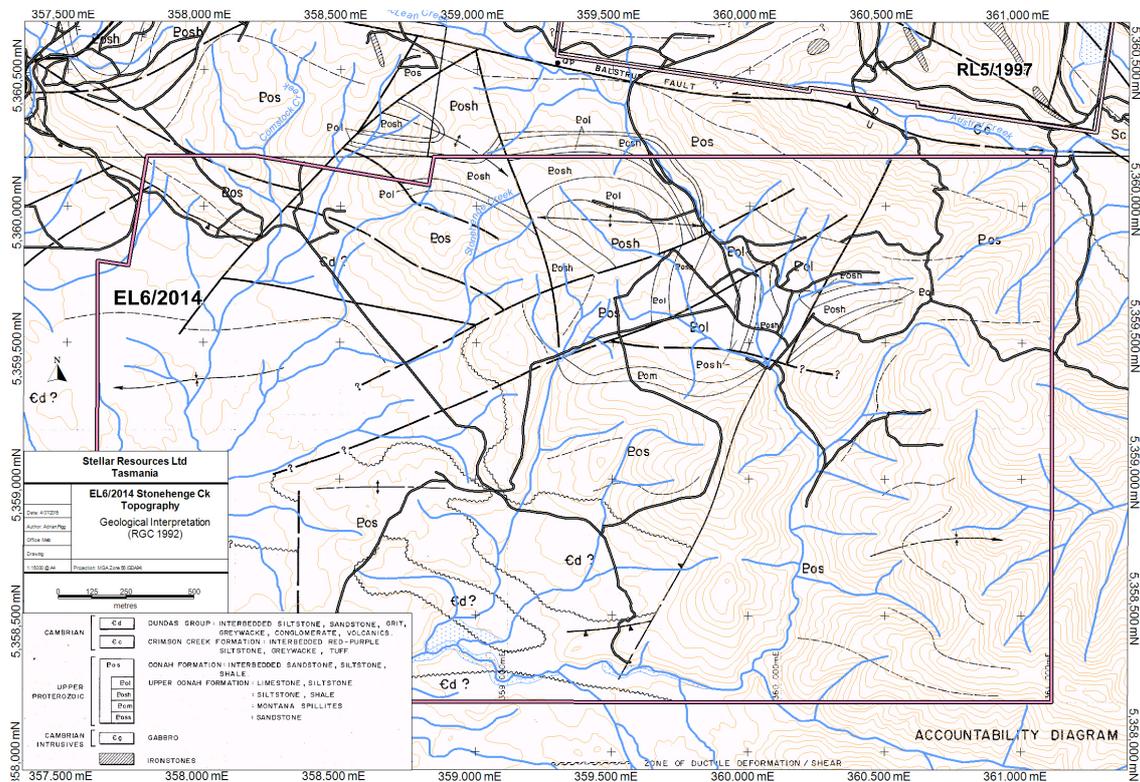


Figure 7. EL6/2014: Geological Interpretation (RGC 1992).

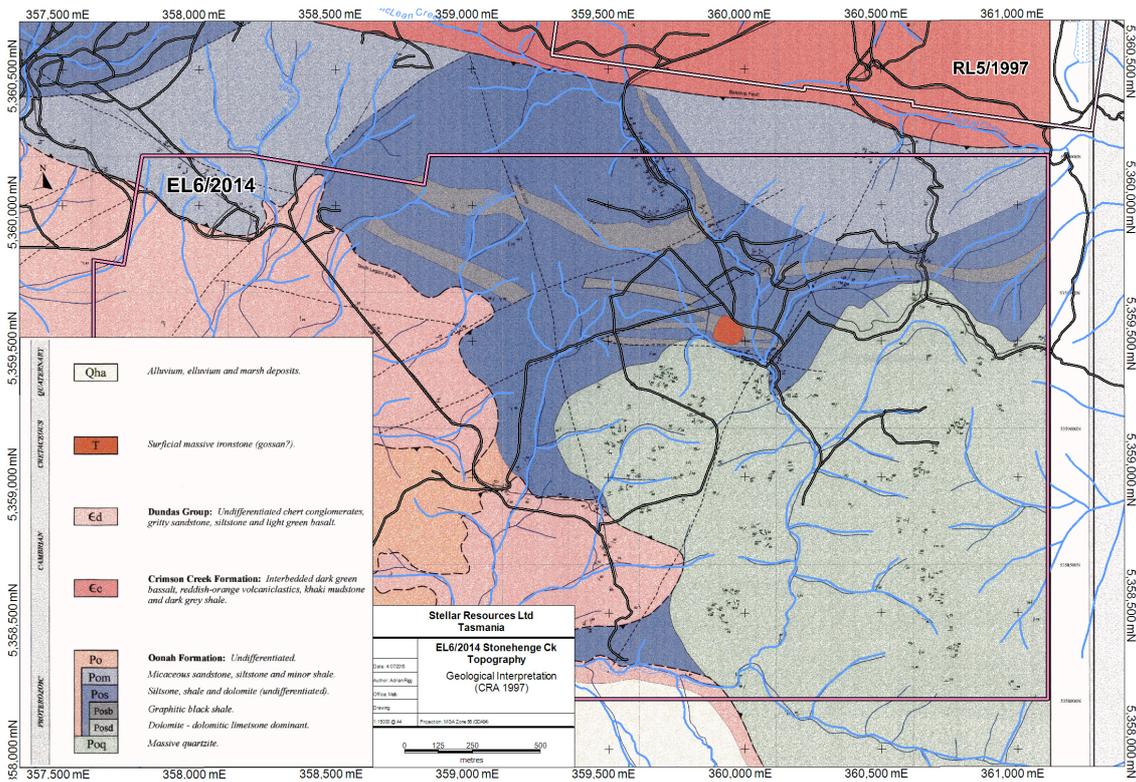


Figure 8. EL6/2014: Geological Interpretation (CRA 1997).

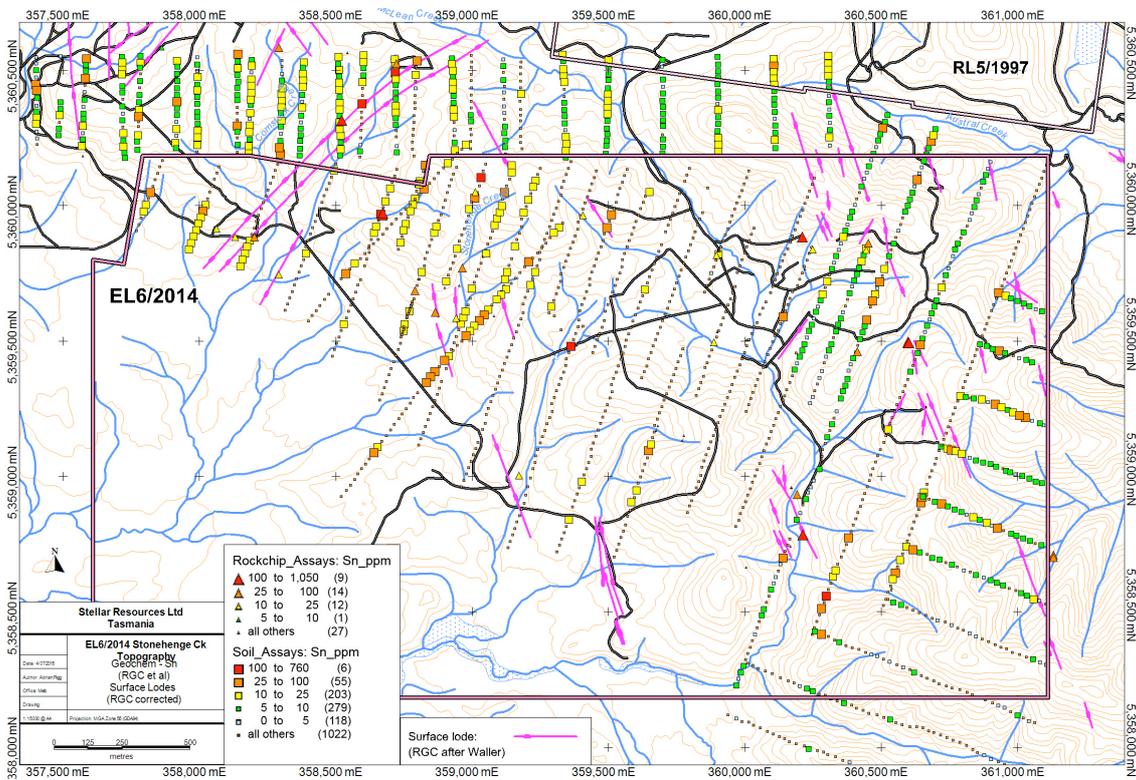


Figure 9. EL6/2014: Tin Soil & Rock Geochemistry (RGC et al) & Surface Lodes (Waller, 1904).

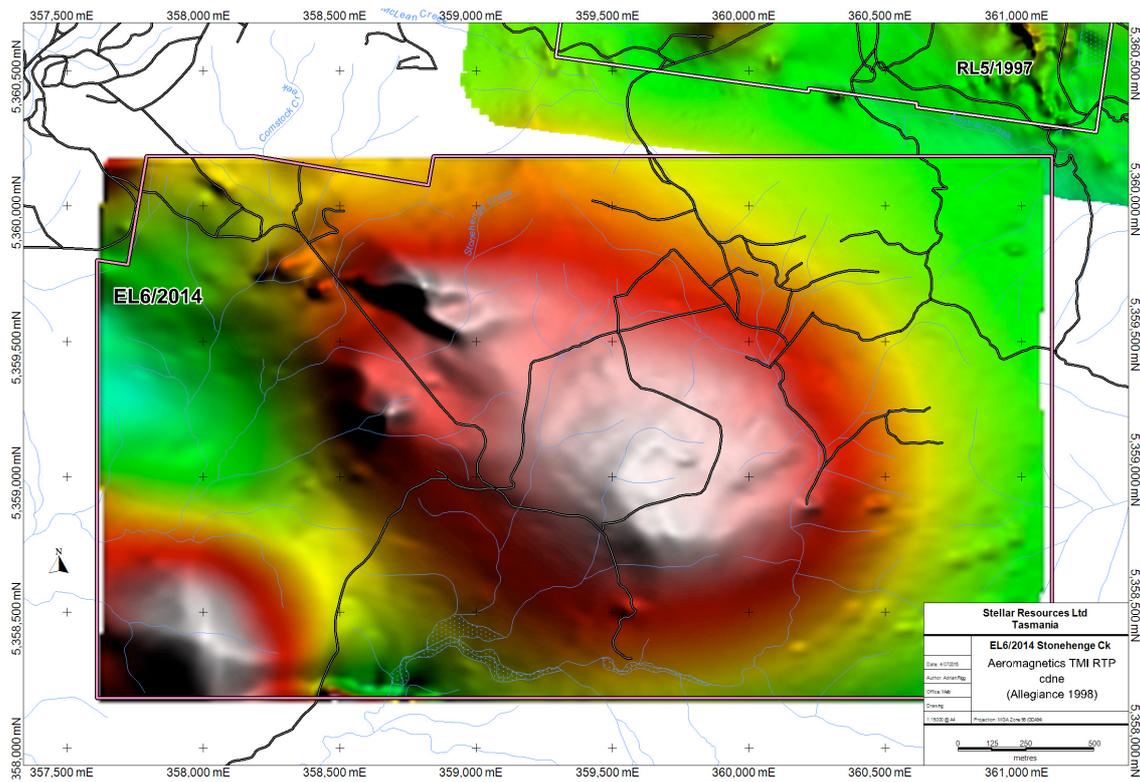


Figure 10. EL6/2014: Aeromagnetics TMI RTP (Allegiance 1998).

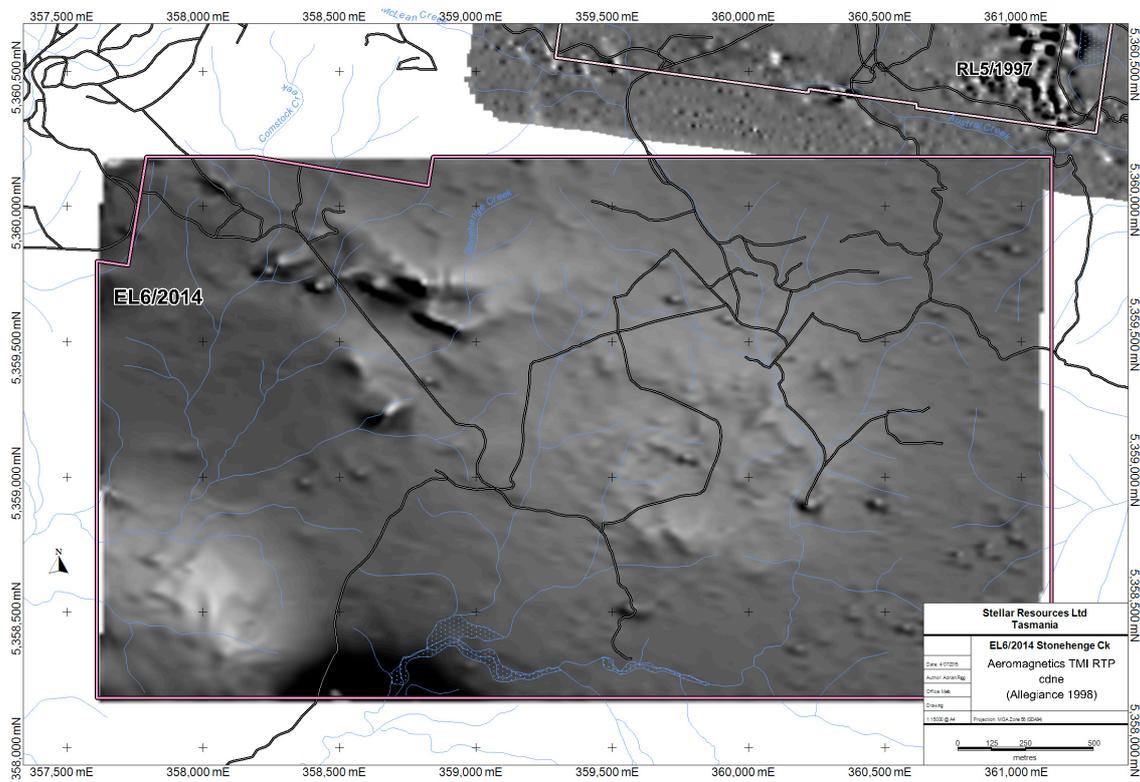
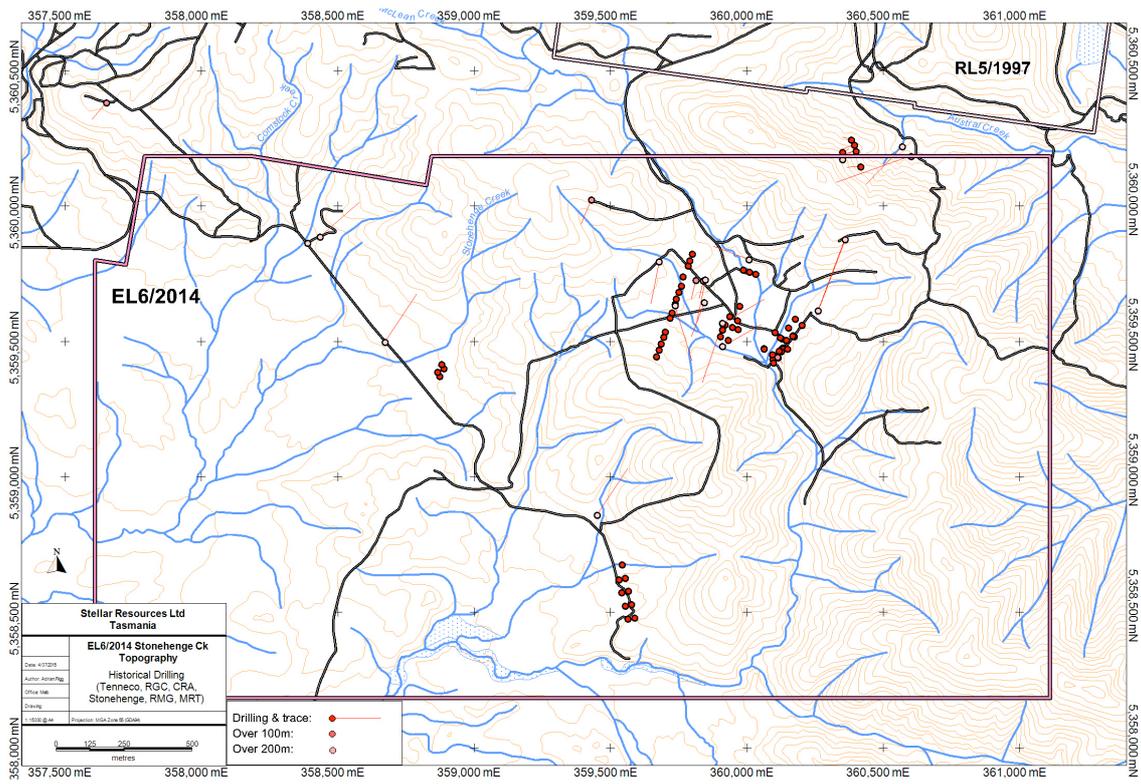


Figure 11. EL6/2014: Aeromagnetics TMI 1vd (Allegiance 1998).



**Figure 12. EL6/2014: Historical Drilling.**

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

#### **3.1. DATA COLLATION & REVIEW**

Stellar personnel have reviewed prior holder's data and conclusions, with particular attention to Stonehenge Metals aeromagnetic survey, drilling data and recorded tin mineralisation. This work has been used to generate a series of maps, which are presented digitally in Appendix 5. Refer to Figure 13 for an example.

#### **3.2. DRILLING DATABASE**

Historic diamond and RC drilling on and around EL6/2004 has been compiled into a relational database (Access) suitable for use in GIS and mine modelling software by consultant Tim Callaghan. Drill data was derived from historic company reports, standardised on excel spreadsheets and uploaded to the database. Drilling data was validated for overlaps, spurious hole surveys and other errors using Surpac software. A total of 67 historic drillholes (8 RC and 59 diamond holes) for 8611.4m have been compiled. Aircore holes drilled by CRA in the 1990's were not been included as these are considered to be C-horizon soil samples, similar to Auger holes. Aircore and geochemical data will be captured and added to the database next year. Geochemistry data has been standardised to common units (% or ppm)

Historic geology codes have been standardised to those used by Stellar Resources on the Heemskirk Project.

Drillhole data compilation is approximately 80% complete and further data entry and validation is required. Drill data and logs from the 8 RC holes drilled by Stonehenge Metals in the Swansea Mine area have yet to be included in the database. Downhole logs and data for Nth Tasmania Mine area have also yet to be captured. Drill data from RGC's Sylvester project require addition to the database.

This work is reported separately in Appendix 1 and the database digitally in Appendix 2.

#### **3.3. MODELLING**

Utilising Lands Dept. maps and drill collar surveys imported into SURPAC software Tim Callaghan has created a digital terrain model (DTM) of EL 6/2014.

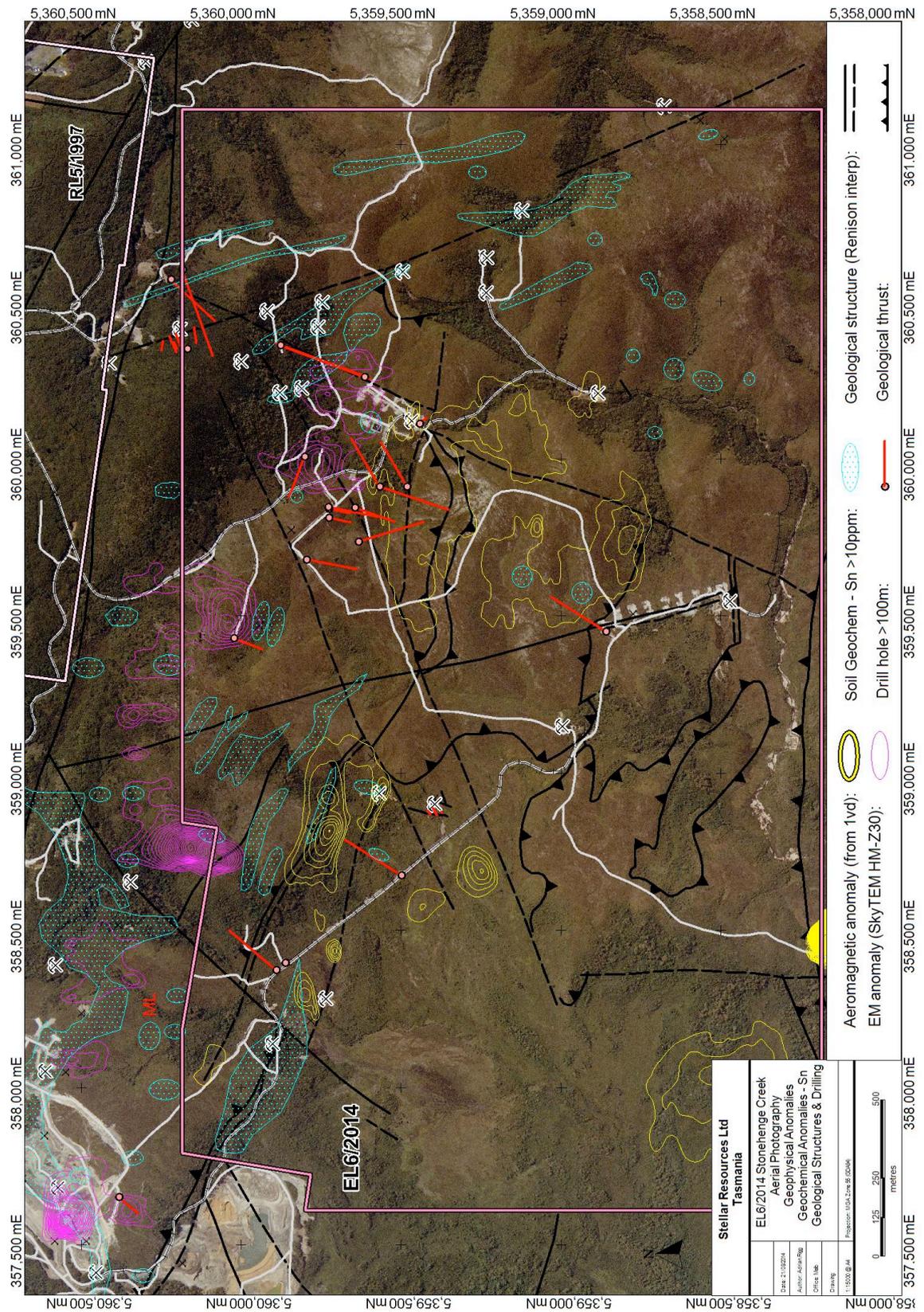
Using old mine plans of the Spray, Nubena, Britannia, Montagu, Silver Foam and Swansea mines Tim has created three dimension models of these historic workings in SURPAC.

This work is reported separately in Appendix 1 and the model files digitally in Appendix 3.

#### **3.4. GEOPHYSICS INTERPRETATION**

Dr. L. Ailleres of PGN Geoscience was commissioned to undertake a review of historic geophysical data from the EL area and reinterpreted the data. He has presented his interpretation as a 3D model of the upper surface of the ultramafic rocks and the granite. Refer to figure 14 for a view of this model.

His model is presented digitally in Appendix 4.



**Figure 13. EL6/2014: Aerial Photo, with Structures & Geophysical and Tin Geochemical Anomalies.**

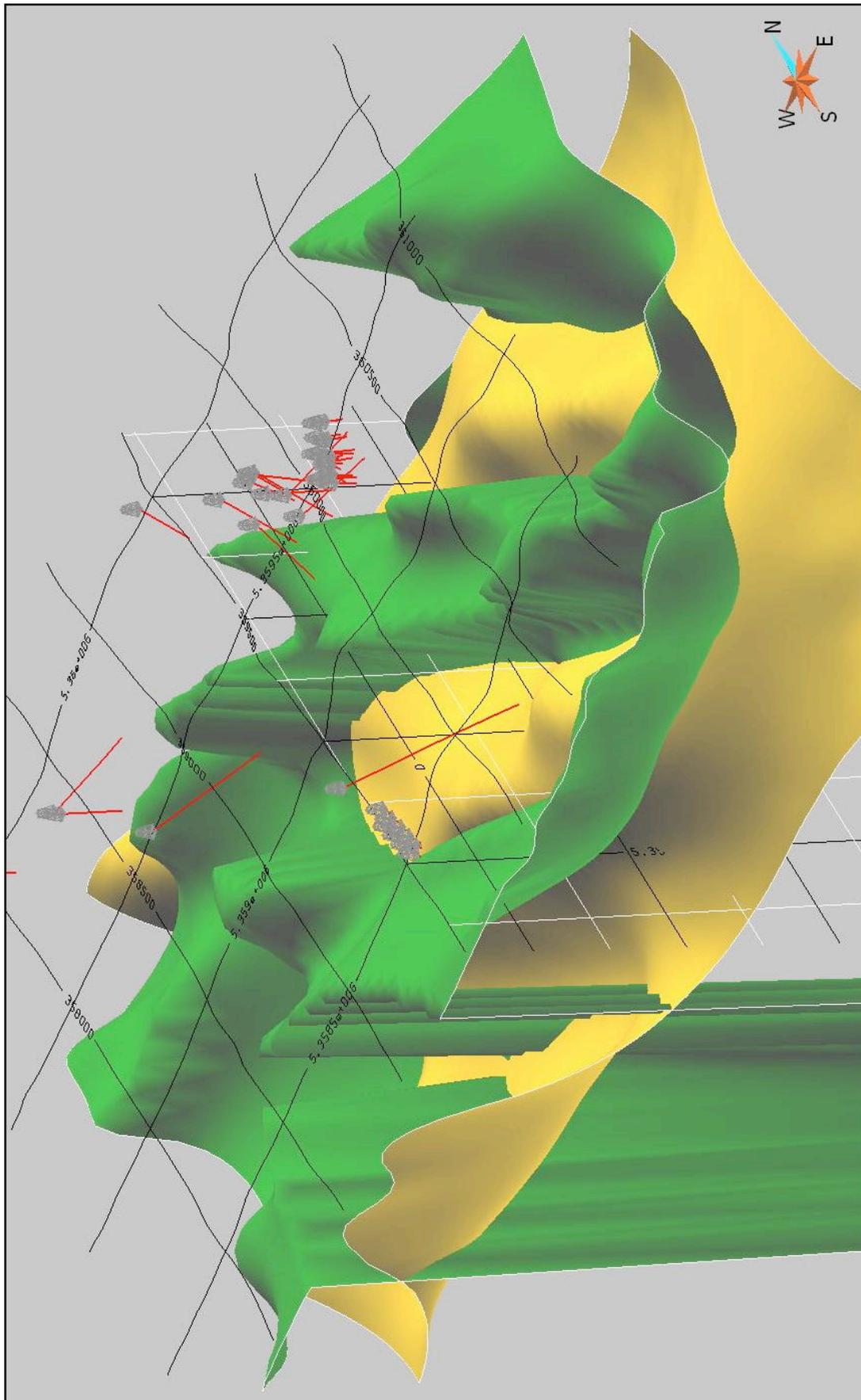


Figure 14. EL6/2014: 3D Geophysics model, viewed from SE, showing drill holes, U/M surface (green) & Granite surface (yellow)

#### **4. DISCUSSION & CONCLUSIONS**

EL6/2014 is prospective for silver rich base metal mineralisation of both fissure lode style and replacement or sedimentary-hosted style mineralisation. Significant exploration into these styles of mineralisation was completed by CRA, Minops, RGC, Stonehenge Metals, Moonraker Minerals and to a lesser extent Allegiance Metals with Stonehenge defining a small resource (though later work by Moonraker puts this in doubt).

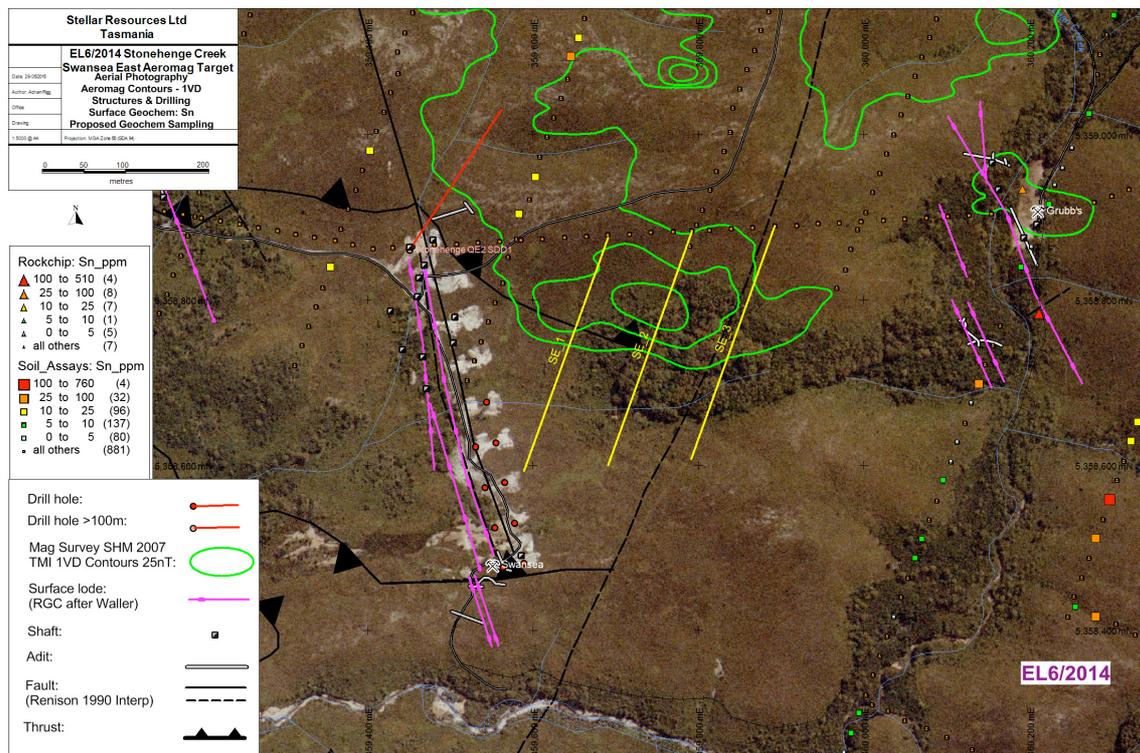
Despite the geophysical interpretation carried out by PGN Geoscience regional gravity data suggests the EL area is not proximal enough to the Heemskirk batholith for tin mineralisation nor possible Avebury type nickel skarn mineralisation although the Balstrup Fault and the Little Henty Fault are major regional structures paralleling the modelled edge of the Granite Batholith and are probably fluid pathways for the base metal mineralisation.

The intense magnetic anomaly in the southwest of the EL is in a remote location and has had little to no exploration work. Reconnaissance mapping and geochemistry is recommended.

Further data compilation, interpretation and targeting are recommended.

## 5. PROPOSED WORK

- Identify where there has been insufficient surface geochemical sampling and undertake infill or extensions to cover key areas. Refer to Figure 15.
- Capture Swansea Drillhole data
- Capture Nth Tasmania Mine Drillhole data
- Capture RGC's Sylvester drill hole data
- Re-log drillholes SDD001, SDD002 Sth1 and Sth2 and complete magnetic susceptibility log.
- Collate and standardise surface geochemistry data
- Field check and refine Interpretive Geology Maps
- Constrain the geophysical models with geology interpretation.
- Target Pb-Zn-Ag, Sn and Ni mineralisation.



**Figure 15. EL6/2014: Swansea East Magnetic Anomaly, Proposed Soil Geochemistry Lines.**

## 6. ENVIRONMENT

As no fieldwork has been carried out during the period no site rehabilitation is required at this time

## 7. EXPENDITURE

Transaction Report				
Printed At: 30/07/2015 11:51:28 AM		Columbus Metals Limited		Page: 1
			Base Currency: AUD	
Job No	Job Details	Department		
Tran. Date		Doc Ref - Description	Posting Ref	Amount
Job Code: 9002	Stonehenge Creek EL 6/2014			
	1053	Technical	Total	\$8,111.68
Phase Total	105	STAFF COSTS		\$8,111.68
	1061	Professional Technical	Total	\$13,997.50
Phase Total	106	CONTRACT PERSONNEL		\$13,997.50
	1072	Geoscientist	Total	\$15,245.00
Phase Total	107	CONSULTANT PERSONNEL		\$15,245.00
	1503	Application Fees	Total	\$159.10
	1505	Rents/ Other Utilities	Total	\$199.27
Phase Total	150	TENEMENT COSTS		\$358.37
	1651	Administration	Total	\$12,898.00
Phase Total	165	OVERHEADS		\$12,898.00
Job Total : 9002				\$50,610.55
Class 01				\$50,610.55
Report Total:				\$50,610.55

## 8. REFERENCES

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## **Keywords**

Location: Zeehan

Mineralisation environment: Sulphide Skarn

Minerals: Sphalerite, Galena, Cassiterite, Stannite, Pyrite, Pyrrhotite, Magnetite

Exploration methods: Historic Research, Database Development, Computer Modelling, Geophysical Interpretation

Mine/prospect name: Stonehenge Prospect,

Stratigraphic name: Oonah Formation, McIvor Hill Mafic-Ultramafic Complex, Dundas Group, Heemskirk Granite

Lithologic name: quartzite, volcanoclastic, basalt, siltstone, shale, limestone, dolomite, granite

Geological Province: Dundas Trough

Geological age: Lower Neoproterozoic, Palaeozoic

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## **APPENDICES**

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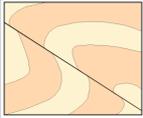
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**Appendix 1: T. Callaghan Report**



Tim Callaghan – Resource and Exploration Geology



**Tim Callaghan – Resource and Exploration Geology**

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**ZEEHAN TIN PROJECT**  
**STONEHENGE DRILLING DATABASE AND GEOLOGY INTERPRETATION**  
**EL6/2014**  
**AUGUST, 2015**

**Prepared for: Stellar Resources Pty Ltd.**

**Tim Callaghan, August 2015**

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Tim Callaghan – Resource and Exploration Geology



Tim Callaghan – Resource and Exploration Geology

### **MAP CONVENTIONS**

Coordinates in this report and in digital data associated with this report are recorded as GDA94. Relative Levels in this report are recorded as MSL + 1000m



## 1 INTRODUCTION

EL6/2014 Stone Henge is 100% held by Stellar Resources. The EL is located in Western Tasmania, 5km south of Zeehan. The EL covers rocks of the Proterozoic Oonah Formation, Cambrian sediments and volcanics of the Dundas Group, allocthonous volcanics of the Mc Ivor Hill Mafic and Ultramafic Complex, Ordovician sediments of the Owen Group and Gordon Limestone and Silurian siliciclastic sediments.

Stellar Resources acquired the EL in 2014. The first year of work required a collation of existing drillhole and geological data and modelling of historic workings. This brief report covers work completed.

## 2 DRILLING DATABASE

Historic diamond and RC drilling on and around EL6/2004 has been compiled into a relational database (Access) suitable for use in GIS and mine modelling software. Drill data was derived from historic company reports, standardised on excel spreadsheets and uploaded to the database. Drilling data was validated for overlaps, spurious hole surveys and other errors using Surpac software. A total of 67 historic drillholes, 8 RC and 59 diamond holes for 8611.4m have been compiled. Aircore holes drilled by CRA in the 1990's have not been included as these are considered to be C-horizon soil samples, similar to Auger holes. Aircore and geochemical data will be captured and added to the database in the following year.

Geochemistry data has been standardised to common units (% or ppm). A summary of basic statistics is listed in Table 1.

Table 1. Stonehenge Database Assay table summary statistics.										
Variable	Au ppm	Ni %	Pb %	Sol_Sn %	Sb ppm	Sn %	Zn %	Ag ppm	As ppm	WO <sub>3</sub> %
Number of samples	586	1296	1395	3	907	71	1469	1153	694	21
Minimum	0	0.00	0.00	0.01	0	0.01	0.00	0	1	0.01
Maximum	0	0.06	48.00	0.01	930	0.10	34.60	540	990	150.00
Mean	0	0.00	0.54	0.01	47	0.02	0.88	13	77	18.60
Variance	0	0.00	5.96	0	11895	0.00	8.08	1460	16547	2031.65
Standard deviation	0	0.00	2.44	0	109	0.00	2.84	38	129	45.07
Skewness	23	7.36	13.08	0	5	3.58	6.51	8	4	2.19
Curtosis	543	88.22	225.96	0	27	16.60	55.50	85	22	6.11
Coefficient of variation	0	0.00	4.51	0	2	0.00	3.24	3	2	2.42

The historic drilling has not been systematically assayed for Sn or WO<sub>3</sub> as most exploration has targeted Pb-Zn-Ag mineralisation. Most Sn analyses were below detection with the exception of some deep drilling near the Spray Mine with a maximum of 0.1% Sn. A few similar results were recorded from channel samples taken from the 5 level of the Spray Mine in 1971 (Besley, 1971).

Historic geology codes have been standardised to those used by Stellar Resources on the Heemskirk Project.

Drillhole data compilation is approximately 80% complete and further data entry and validation is required. Drill data and logs from the 8 RC holes drilled by Stonehenge Metals in the Swansea Mine area have yet to be included in the database. Downhole logs and data for Nth Tasmania Mine area have also yet to be captured. Drill data from RGC's Sylvester project require addition to the database.



### 3 GEOLOGY INTERPRETATION

A compilation of interpretive geology has been collated from historic mapping, particularly mapping from company reports by CRA, RGC and Allegiance Metals as well as detailed mapping of the Comstock Mine by Zeehan Zinc. Geology maps have been merged with Stellar Resources Interpretive geology from the Heemskirk Project. Further refinement of the geology mapping is required with field checking of outcrop and relogging of historic diamond Drilling.

The RL is dominated by geology of what has been interpreted to be Dundas Group volcanoclastic and siliciclastic sediments and basaltic volcanics and an overlying thrust slice of the Proterozoic Oonah Formation (Figure 1). The Oonah Formation is dominated by multi-deformed and metamorphosed interbedded slate and quartzite. A sequence of folded calcareous sediments, slate and black shale is located to the north of the EL adjacent to the Balstrup Fault. The Balstrup Fault is a major WNW north dipping normal fault. The proximity of the carbonate rocks to the Balstrup Fault and the significant Basemetal mineralisation at Comstock and the Spray Mine suggest this a good target area for replacement and lode style Pb-Ag mineralisation. Although no deposits of significant size have been identified, this model has been tested with some encouraging results by RGC, CRA and Zeehan Zinc.

Cambrian Mclvor Hill Mafic-Ultramafic Complex are intimately associated with the younger Dundas Group sediments and are probably structurally emplace into the sequence as an obducted slice of ophiolite in the late Cambrian. Stratigraphic and structural relationships are complex. The ultramafic and some of the high magnesian basalt (bonninite) and gabbro contain (appreciable magnetite and consequently have high magnetic susceptibility.

The EL is dominated by a large aeromagnetic high lying beneath the non-magnetic thrust slice of Oonah Formation (Figure 2). Two holes were drilled by the Tasmanian Department of Mines into the northern edge of the Anomaly (Brown, 1989). The holes were collared in what have been interpreted to be Dundas Group polymict conglomerates, a correlate of the Razorback conglomerate at Dundas before passing into interbedded bonninite and low Ti tholeiitic basalts of the Mclvor Hill Ultramafic complex. A further two holes (SDD01 and SDD02) were drilled by Stonehenge Metals Pty Ltd who were targeting Avebury Style Nickel mineralisation hosted in ultramafic skarn. Both holes intersected similar Cambrian basaltic rocks as the Department of Mines holes to the northwest suggesting much of the Oonah Formation thrust slice is overlying Cambrian basalt (Figure 3). The basalt is a likely source of the aeromagnetic anomaly. It is recommended that the drillholes be relogged including magnetic susceptibility logging if it has not already been completed.

A larger more intense aeromagnetic high is located in the southwest corner of the EL, along strike from the serpentinised ultramafic hosting the Avebury Nickel deposit. The intensity of the anomaly and the location suggests the presence of a similar intrusion. Very little geological information is available from this remote location. This target is potentially prospective for Avebury Nickel skarn style mineralisation.

It is recommended that the geology interpretation be used to constrain geology modelling



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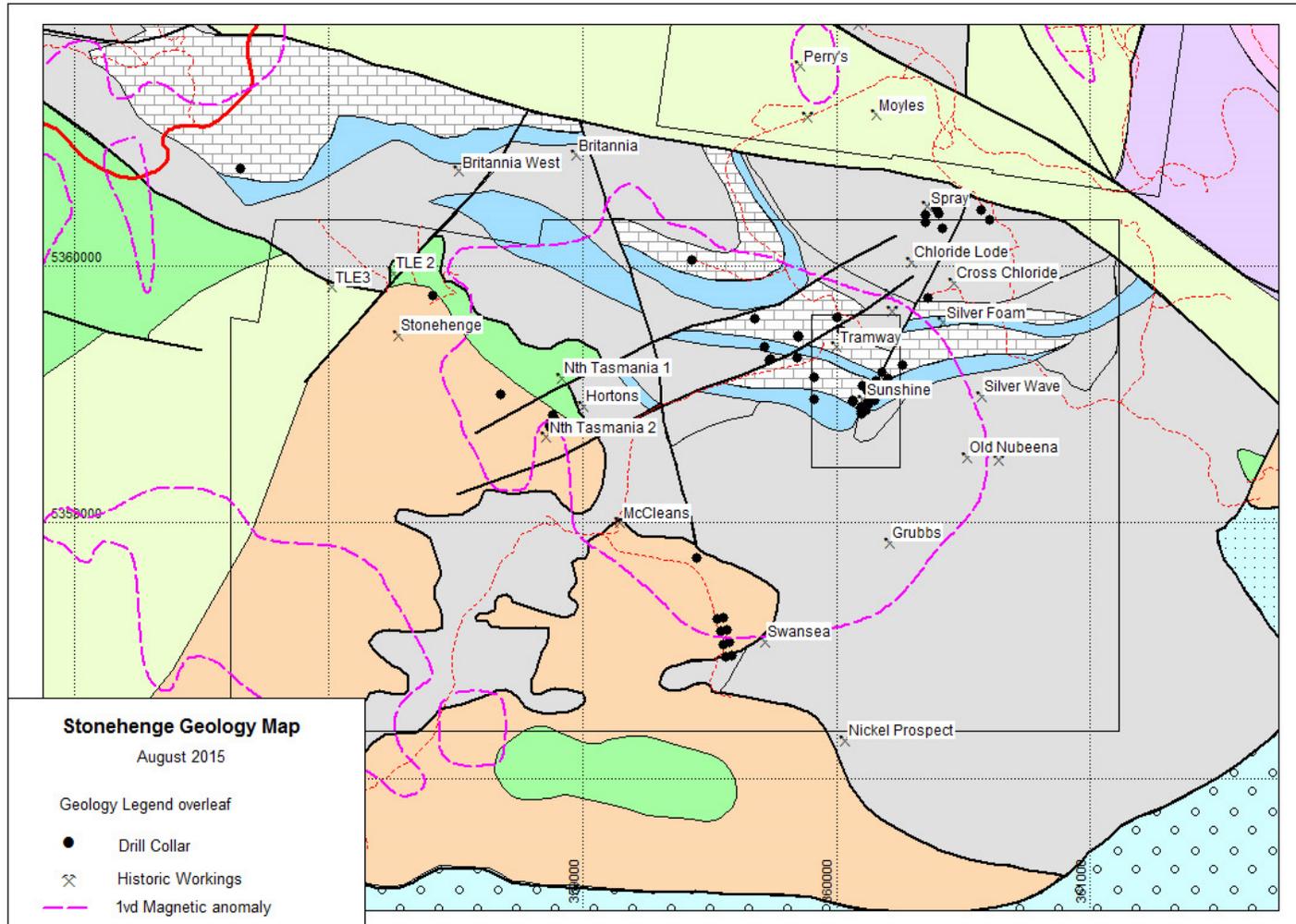


Figure 1. EL6/2014 Stonehenge Interpretive Geology, historic workings, drill collars and major faults.



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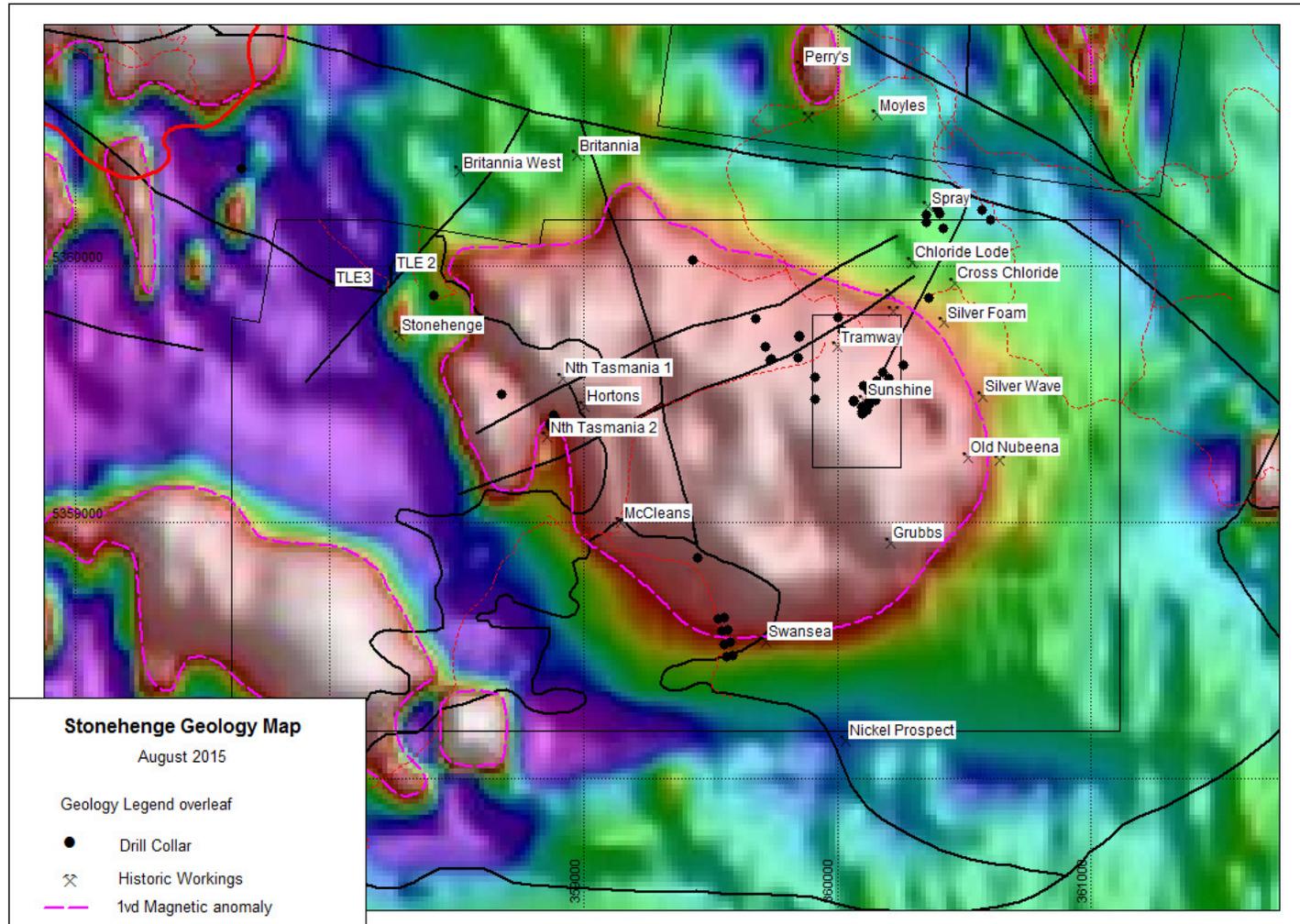


Figure 2. EL6/2014 Stonehenge 1vd TMI image, historic workings, drill collars and major faults.



Heemskirk Tin Project Stratigraphy		
DEVONIAN	STRATIGRAPHY	LITHOLOGY
 Fe	Gossan	Fe/Mn Gossan
 MS/HA	Mineralisation	Semi Massive Sulphide Py-ser-cb alteration
 Db	Bell Shale	Shale
 Df	Florence Quartzite	Quartzite
<b>SILURIAN</b>		
 Sc	Crotty Quartzite	Quartzite
<b>ORDOVICIAN</b>		
 Og	Gordon Limestone	Limestone
 Om	Moina Sandstone	Sandstone
<b>CAMBRIAN</b>		
 Edg	Dundas Group	Volcanic and Clastic Sediments
 Eum	Mc Ivor Hill Ultramafic-Mafic	Mc Ivor Hill Ultramafic-Mafic
 Evc	Crimson Creek Formation	Volcaniclastic Turbidite
 Ebsh		Black Shale
 Eb		Basalt/Gabbro
 Ec	Montana Beds	Dolomite-siltstone
 Es		Sandstone/siltstone
<b>PRECAMBRIAN</b>		
 Posp	Oonah Formation	Black shale/sandstone
 Poss		Quartzite
 Posh		Black Shale
 Posl		Siltstone
 Pod		Dolomite/Limestone
 Pom	Montana Basalt	Basalt
 Pomt		Basaltic volcanoclastics

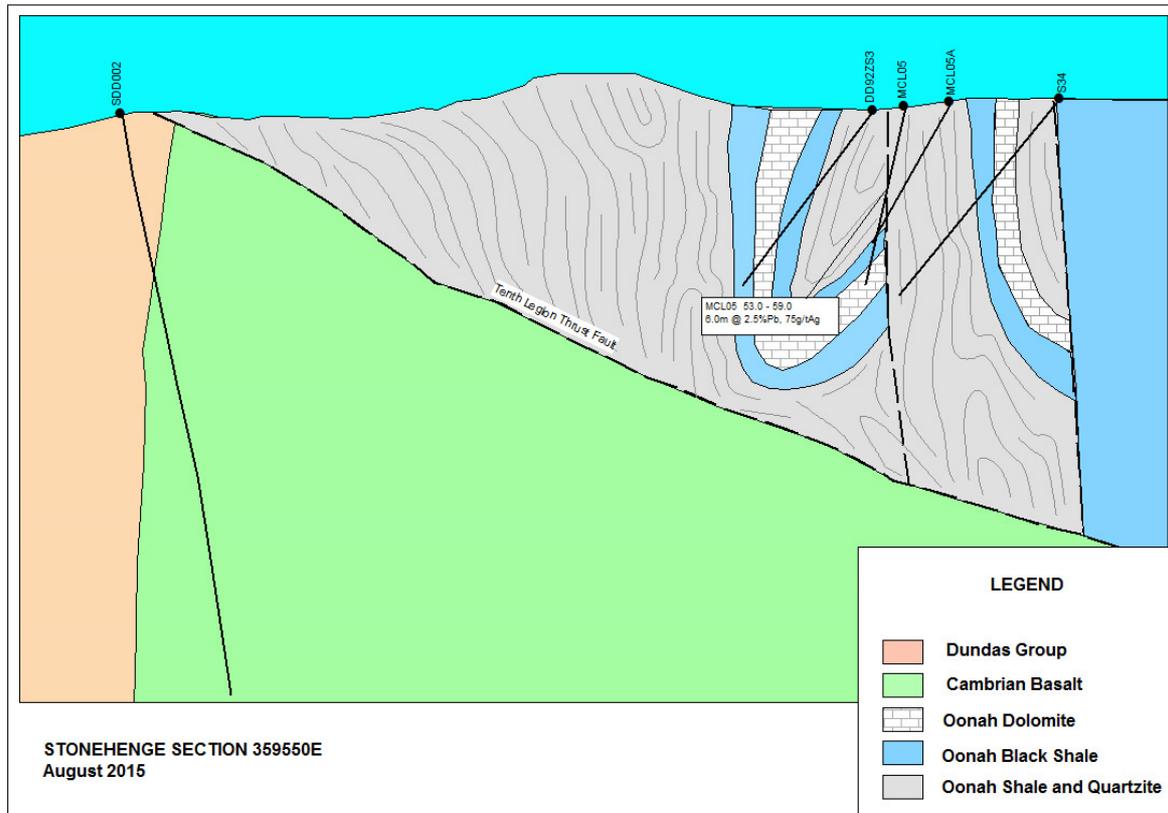


Figure 3. Interpretive Section 359550E



#### 4 TOPOGRAPHIC DIGITAL TERRAIN MODEL

A digital terrain model has been created from lands department maps and drill collar surveys. 2D 10m contour lines were imported into Surpac and assigned a Z value. The contours and drill collars were then used as control points for the DTM.

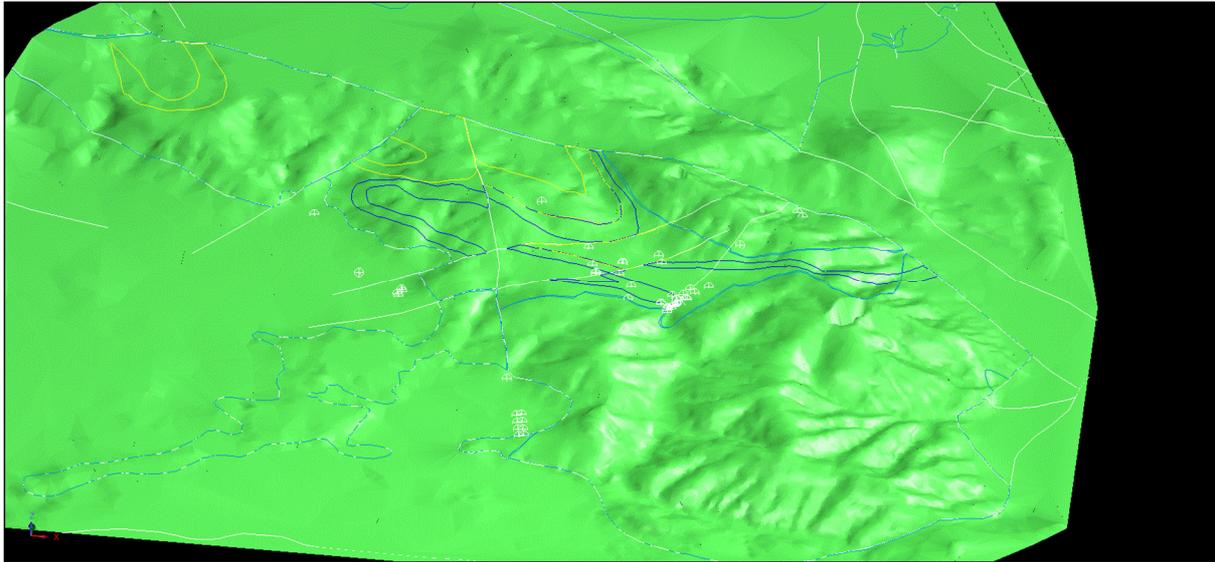


Figure x. Stonehenge DTM and geology contacts

#### 5 HISTORIC MINE MODELLING

Three dimensional models of historic workings on the EL were created from old mine plans in Surpac software. The Spray, Nubeena, Britannia, Nubeena, Montagu, Silver Foam and Swansea mines were modelled. Most mines were fairly small with the exception of the Spray which is located just north of the EL.

#### 6 DISCUSSION

EL6/2014 is prospective for silver rich Basemetal mineralisation of both fissure lode style and replacement or sedimentary hosted style. Significant exploration into these styles of mineralisation were completed by CRA, Minops, RGC, Stonehenge Metals and to a lesser extent Allegiance Metals.

Regional gravity data suggests the EL is not proximal enough to the Heemskirk batholith for Sn mineralisation and possible Avebury Ni Skarn Mineralisation although the Balstrup Fault and the Little Henty Fault are major Regional structures paralleling the modelled edge of the Granite Batholith and are probably fluid pathways for the Basemetal mineralisation.

The intense magnetic anomaly in the southwest of the EL is in a remote location and has had little to no exploration work. Reconnaissance mapping and geochemistry is recommended.

Further data compilation, interpretation and targeting is recommended.

#### 7 RECOMMENDATIONS

- Capture of Swansea Drillhole data
- Capture of Nth Tasmania Mine Drillhole data
- Capture of RGC's Sylvester drill hole data



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- Re-log drillholes SDD001, SDD002 Sth1 and Sth2 and complete magnetic susceptibility log.
- Collation and standardisation of surface geochemistry
- Field checking of Interpretive Geology Maps
- Refinement of Interpretive Geological Maps
- Constrain geophysical models with geology interpretation.
- Targeting of Pb-Zn-Ag, Sn and Ni Targets.



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