



**RAYNE EL 49/2004**  
**ANNUAL REPORT**  
**FOR THE PERIOD ENDING 02<sup>nd</sup> January 2012**

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## **1. SUMMARY**

RYN001 was drilled to 644.2m to test the Dunkley Anomaly during the period of tenure. Two gabbro intrusions were intersected with trace sulphides occurring at the contact. Further work is proposed however current results are disappointing.

Environmental activities undertaken during this period included track cutting, a flora and fauna assessment, and excavation to upgrade the existing track to an all-weather track. Rehabilitation will be conducted in the following reporting period.

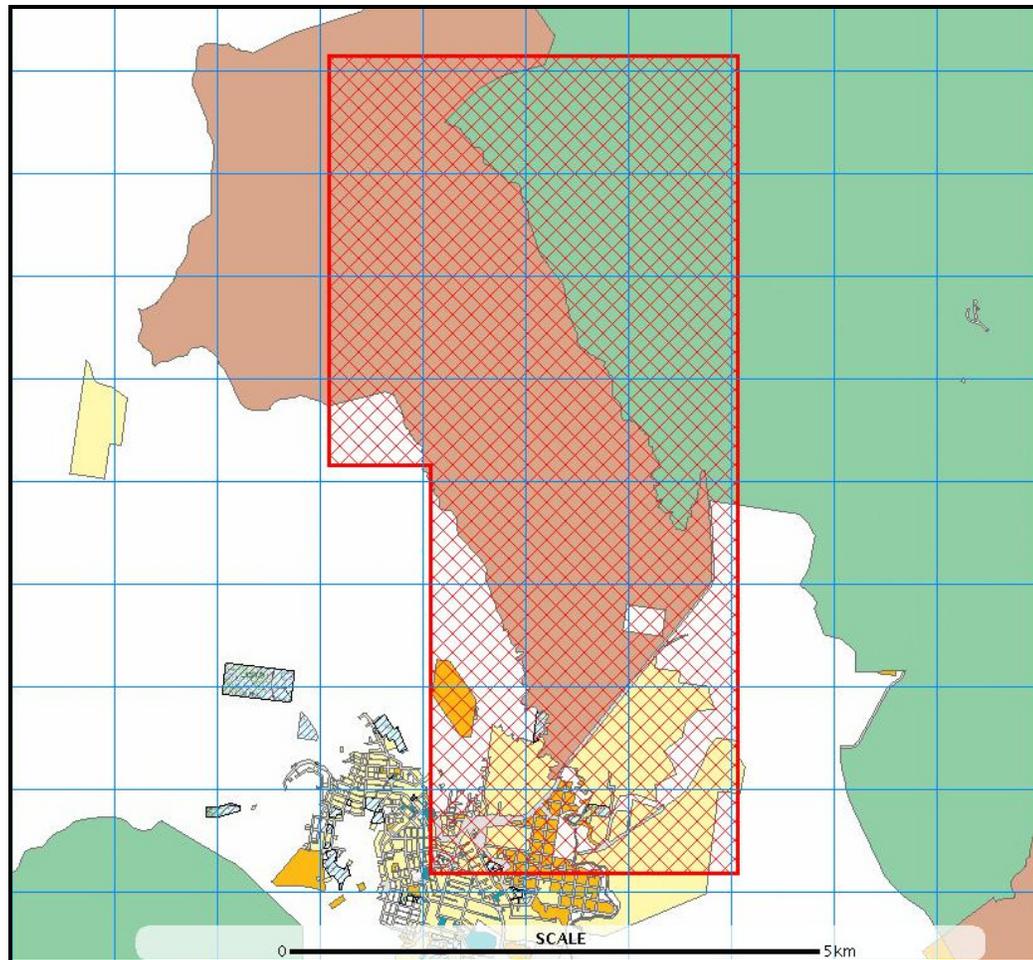
## 2. INTRODUCTION

The licence area is positioned to cover a large low order aeromagnetic anomaly (the Dunkley Magnetic Anomaly [DMA]) located 8km to the NE of Zeehan. The magnetic anomaly is situated immediately south of the Renison Bell Mining Lease and also immediately west of Allegiance Mining's Melba Flats prospects where massive sulphides of nickel and copper occur in thin lenses associated with gabbro dykes and amphibolites. Further eastwards there is a significant outcrop of ultramafic rocks at Serpentine Hill.

The source of the DMA is conjectural but analysis suggests it may be due to hornfelsing associated with a granite apophyses. Renison traced the Renison Mine Sequence to this area prior to the 1984 collapse of the tin price. They drilled one drill hole (S1200), which intersected only Crimson Creek Formation sediments and no significant mineralization. The magnetic anomaly remains untested.

### 3. LAND TENURE

EL49/2004 is located within the district of Montagu, in the vicinity of Zeehan, and in the municipality of the West Coast. The lease covers an area of 28km<sup>2</sup> and contains areas of private property, Crown Land, Multiple-use State Forest and the Parting Creek Regional Reserve.



**Figure 1: EL49/2004 Rayne Land Tenure Map**

#### 4. GEOLOGY

The majority of the Rayne licence (SW segment) is underlain by Ordovician Gordon Limestone (including quartz sandstone and minor siltstone) and Silurian Eldon Group sediments comprising sandstone, siltstone and mudstone. These rocks strike NNW and comprise the eastern limb of a gently folded syncline.

The Gordon Limestone is overthrust on its eastern contact by Cambrian Crimson Creek Formation rocks along the Boodecker Fault. The Crimson Creek Formation is a thick sequence of tuffaceous siltstones, greywackes and clastic sediments. The base of the Crimson Creek is marked by a mixture of haematitic agglomerates, cherts, tuffs, sandstones and thin carbonates known as the Red Rock Member. This averages 20m thickness and is overlain by a dolomite horizon 5-15m thick called the No.1 at Renison Bell where it hosts replacement style pyrrhotite cassiterite mineralisation. A small section of the Lower Cambrian Success Creek Group abuts the Crimson Creek along the SW trending Dunkley Fault in the northern part of the licence area. The Success Creek Group comprises sandstones and polymict conglomerate, quartz sandstone and siltstone. The upper part of the Success Creek Group in this region includes two major dolomite-siderite carbonate horizons, 10-20m thick, which are the Nos 2 and 3 dolomites at Renison Bell.

Immediately to the east of the licence, at the Cuni prospect area and within the Crimson Creek Formation, are a series of north trending Cambrian pyroxenite and gabbro sill/dykes over a 2-3km strike length. Thin lenses (1m) of massive nickel and copper sulphides generally occur along the footwall contact of the dykes or within the underlying sediments.

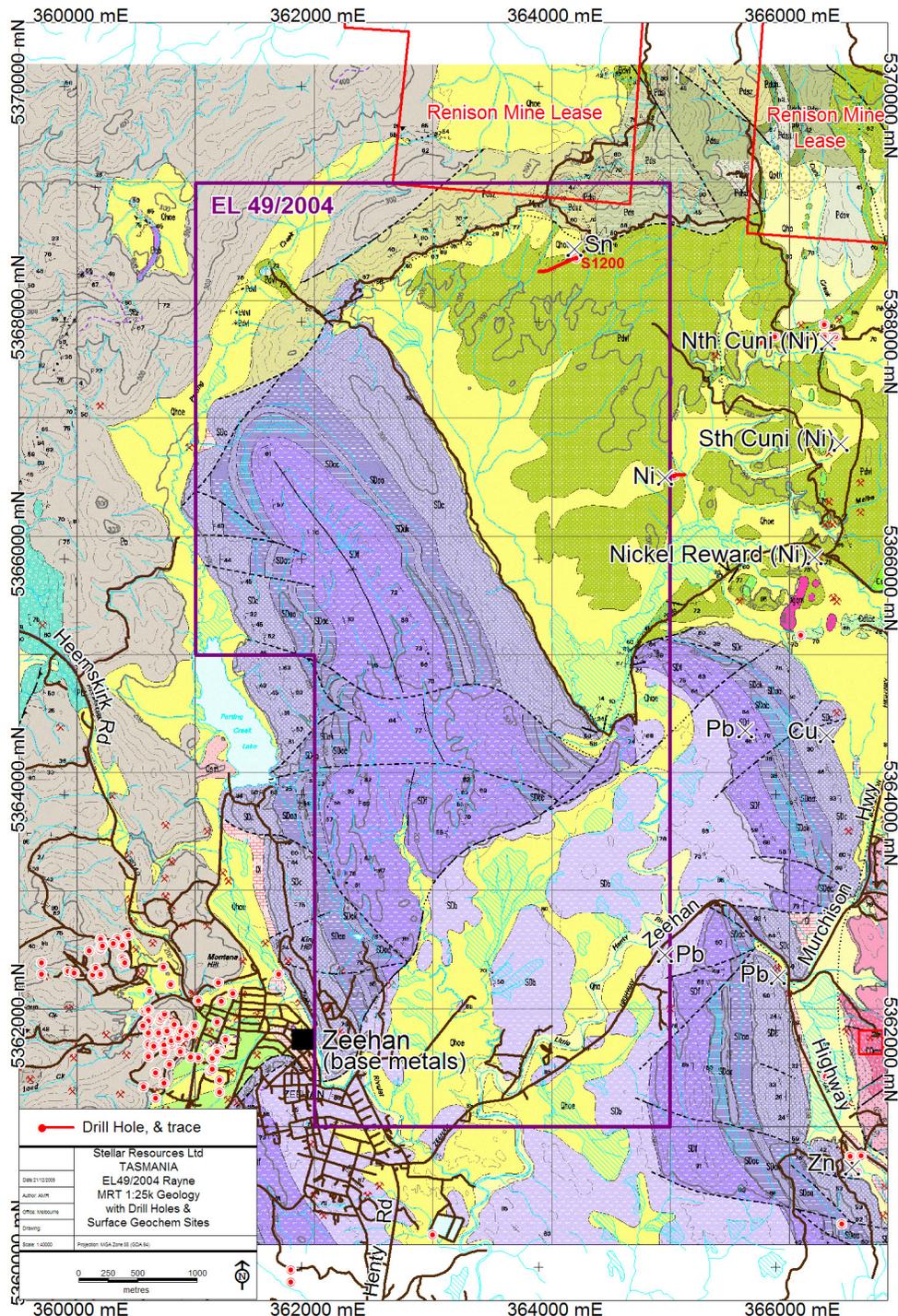


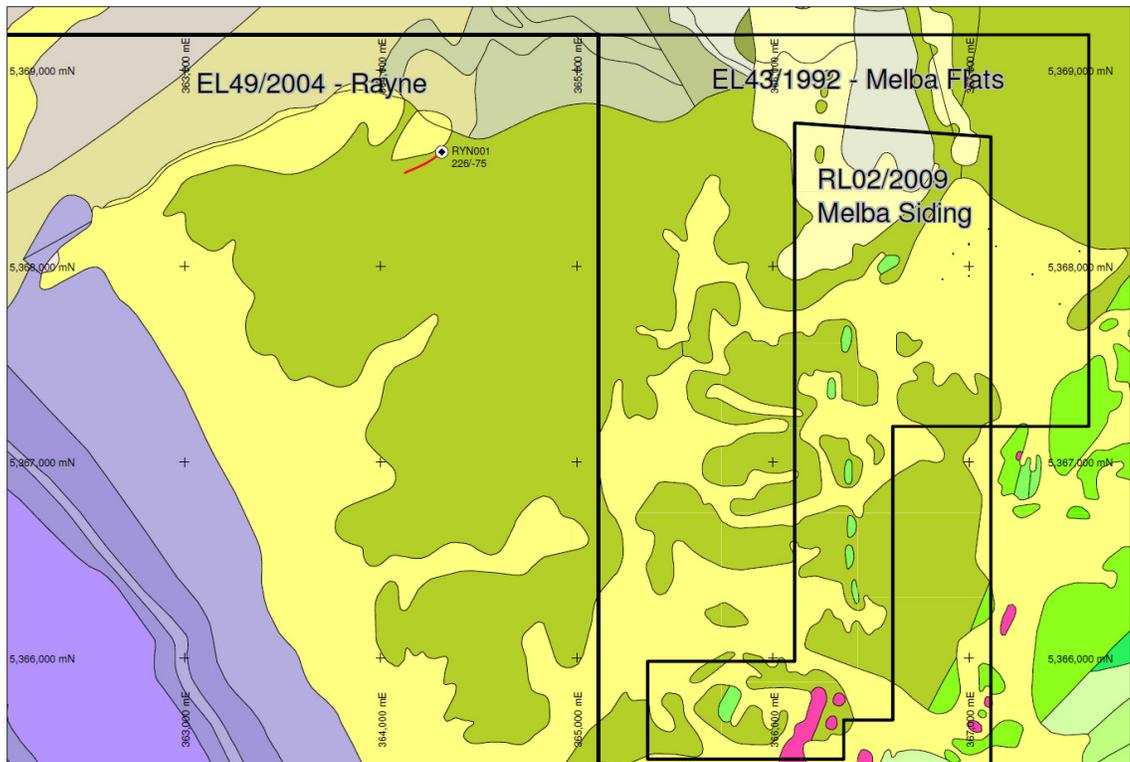
Figure 2: Geology of EL49/2004 Rayne (from Hazeldene & Rigg 2011)

## 5. CURRENT EXPLORATION

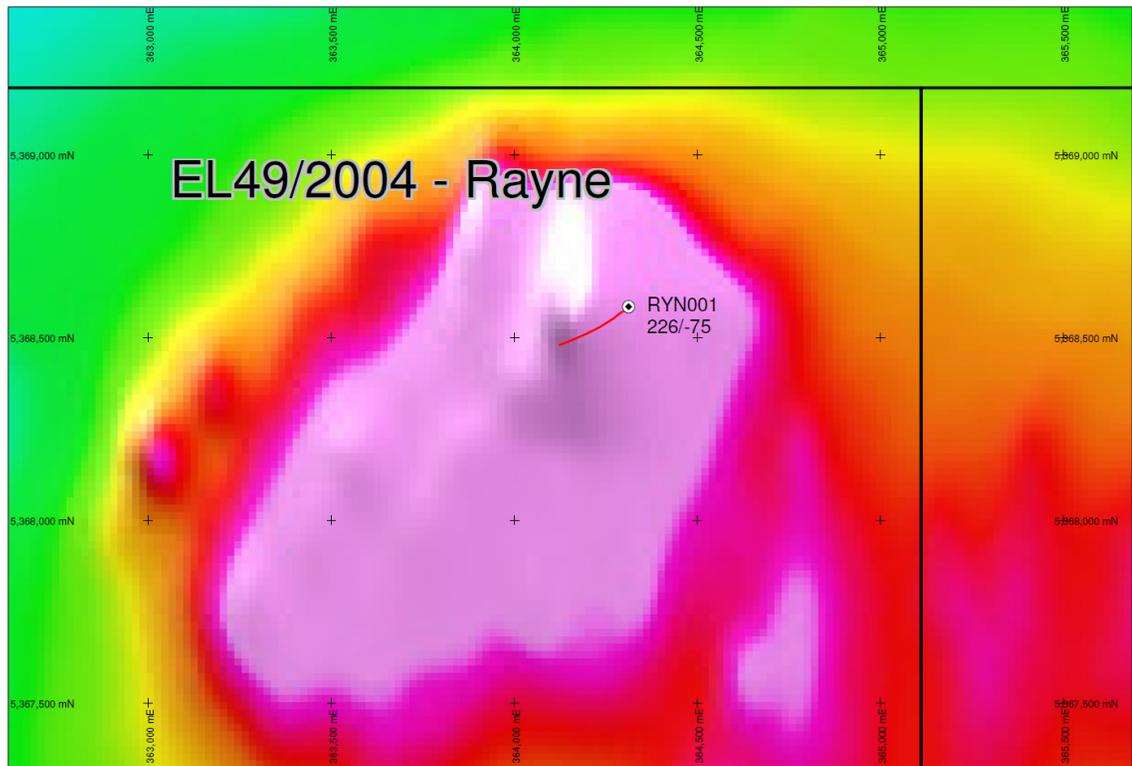
### Work Completed in the 2011-2012 Period

Drillhole RYN001 was drilled to 644.2m depth at azimuth 226 and dip -75°. Drilling was designed to test a magnetic anomaly referred to as the Dunkley Anomaly for potential to host Nickel sulphide mineralisation. The drillhole was entirely contained within monotonous sequences of the Crimson Creek Formation and intersected fine-grained magnetite-phyric, mafic dykes (gabbro pending petrogenetic analysis) at 447m and 595.8m. Trace to weakly disseminated pyrite and pyrrhotite was observed throughout the drillhole with an increase in volume proximal to dyke contacts (Appendix A – Drill Log).

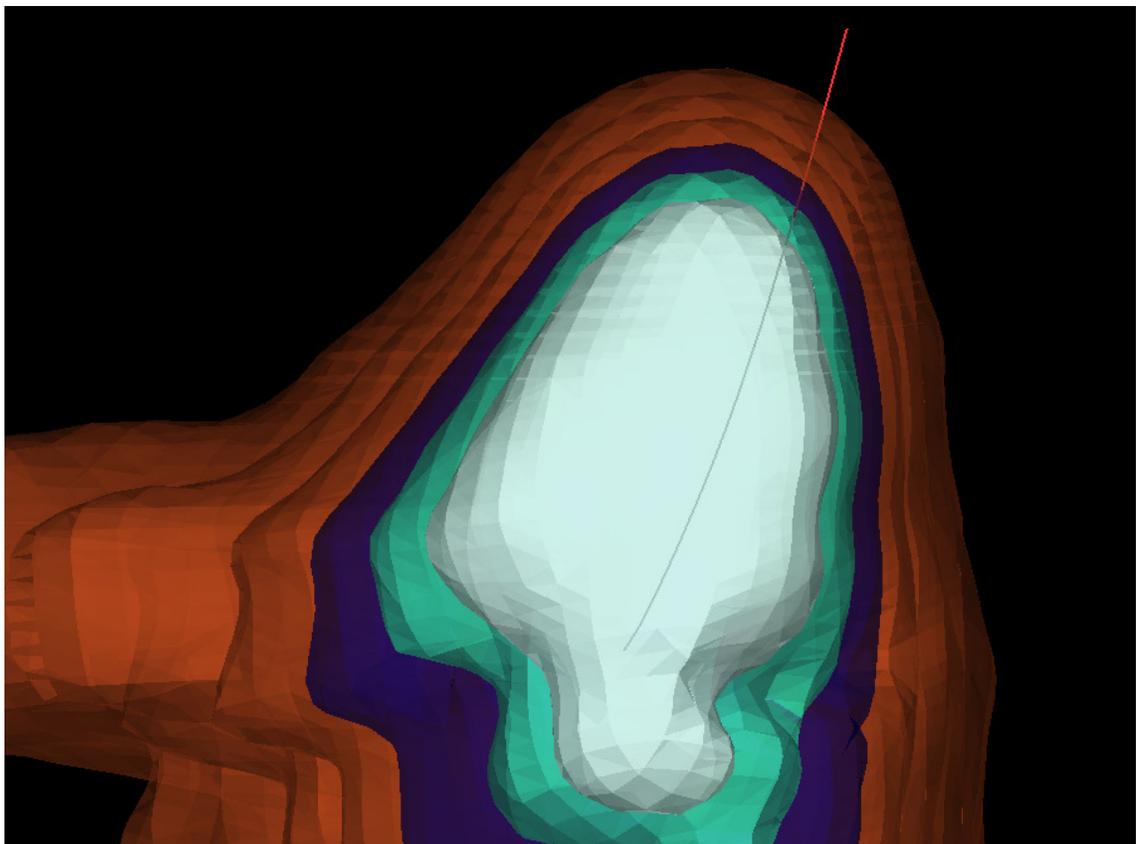
Samples were collected and dispatched to ALS Chemex (Brisbane) for wholerock litho-geochemistry assay (Appendix B - Assay). The Nickel Suite and Granitic Suite of elements were mildly anomalous and do not require an extension to the existing geochemical assessment. The most anomalous result in assay was Strontium, reaching 5450ppm in a fault zone at 446.6m depth.



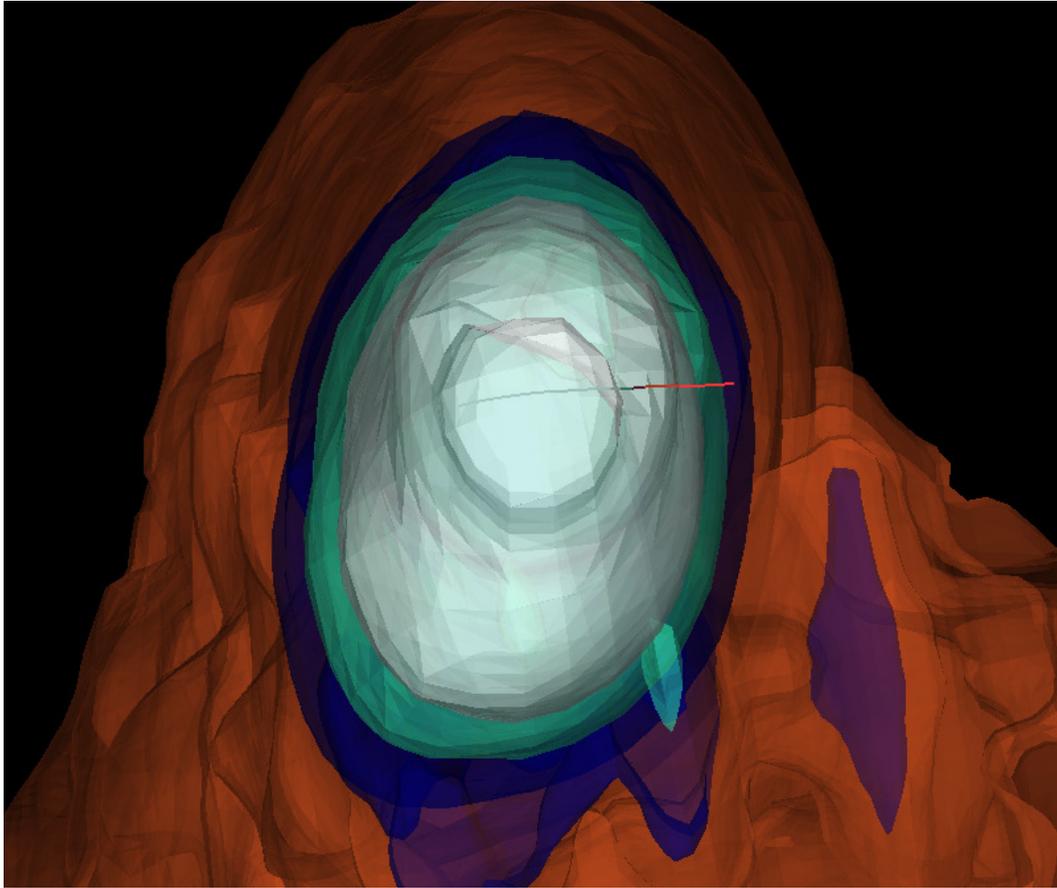
**Figure 3: RYN001 Collar on 1:250,000 Geology Map (GDA94)**



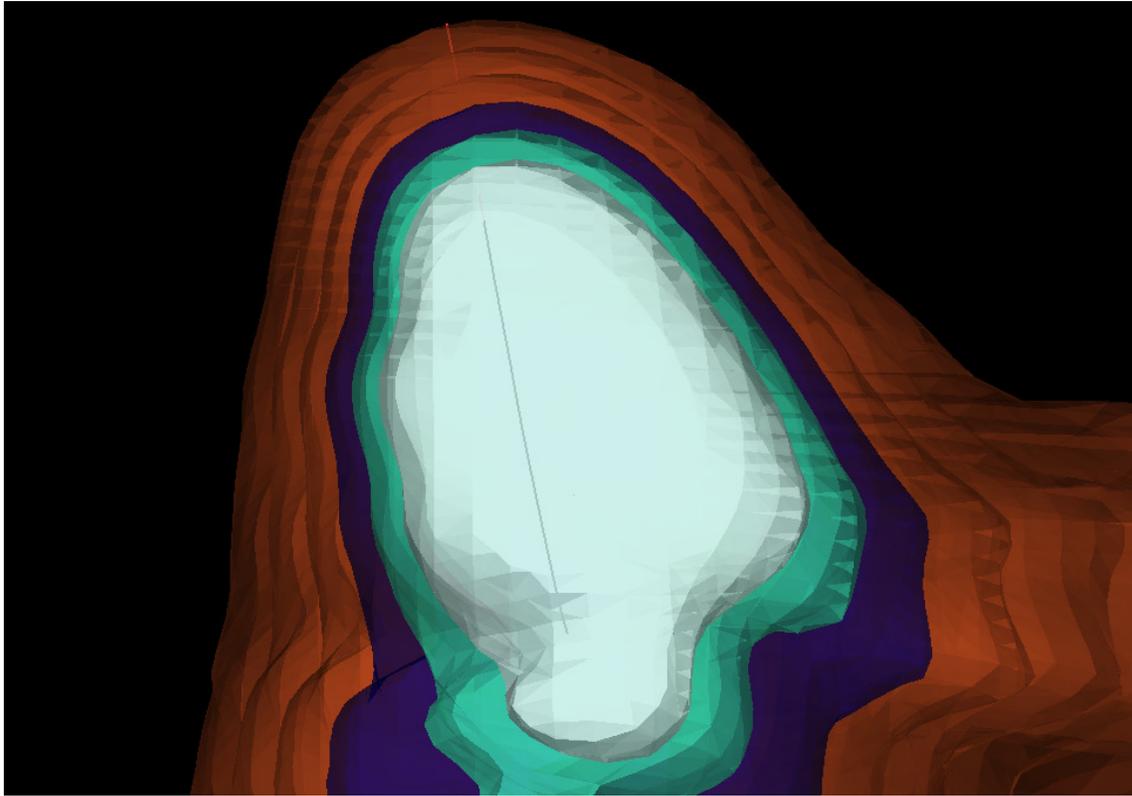
**Figure 4: RYN001 drill trace on Dunkley TMI Anomaly (GDA 94)**



**Figure 5: RYN001 drill trace with transparent Magnetic Susceptibility Shells from 20000 to 45000 (section looking North).**



**Figure 6: RYN001 drill trace with transparent Magnetic Susceptibility Shells from 20000 to 45000 (Plan Section).**



**Figure 7: RYN001 drill trace with transparent Magnetic Susceptibility Shells from 20000 to 45000 (section looking East).**

## 6. PREVIOUS EXPLORATION

MRT digital geology and geophysics datasets, as well as DPIWE topographic data continue to be imported into MapInfo, from which further maps have been produced. Previous exploration data from EZ, Renison, CSR and CRAE was digitised and captured from MRT open-file reports.

In February/March of 2011 a series of geochemical (Ni, Cu), geological and geophysical maps were produced as part of a data review by Dr Tom Whiting aimed at establishing drilling target sites.

Renison's historic interpretation of the Dunkley Magnetic Anomaly and the geology was of a magnetic body at about 350 metres depth. Based on this they drilled diamond drill hole S1200 which did not explain the anomaly.

William's study (2008) suggested that the Precambrian basement is at depths of greater than 500 metres; that the source of the anomaly is a magnetic body within the basement which is about 2.5 km north-south x 2.9 km east-west and that it is probably an intrusive magnetic Devonian granitoid.

The "peak anomaly" has been modelled as a 100m x 100m x 100m magnetic body at a depth of about 300 – 400 metres but it could also be a flat body at a depth of 600 – 700 metres below surface. This deep body would correspond with the interpreted depth of the Renison Mine Sequence.

Based on this reinterpretation of the magnetic data it appears that historic drill hole S1200 did not test the target. It was too shallow but the lack of alteration and/or veining in the core from the deepest sections of the hole is difficult to explain. Considering the proximity of S1200 to the modelled magnetic and granitoids some alteration and/or veining would be expected.

The Dunkley Magnet Anomaly is a prime target for Renison style mineralisation.

Stellar's consultant Dr Tom Whiting also reviewed all data on EL49/2004 and neighbouring exploration licences, in particular EL43/1992 and RL5/2009 immediately east of EL49/2004. Historic narrow intersections of high grade Ni, Cu and PGE's by CRAE and Allegiance, hosted within basaltic dykes on EL43/1992, are considered to be indicative of processes similar to those giving rise to the formation of the Voiseys Bay Ni, Cu, PGE deposit in Canada.

This leads to the alternative hypothesis that the intensive magnetic anomaly (Dunkley Magnetic Anomaly – DMA) centred in the northeast of the licence is likely due to ultramafic rocks rather than granites. Dr Whiting has completed a risking and ranking exercise on all of Stellar's ground holdings in Tasmania. This has highlighted the DMA as a very high priority drill target.

## **7. ENVIRONMENTAL**

As part of drilling operations during the period of tenure, the access track was upgraded to ensure annual access was achievable. A flora and fauna survey was conducted by GHD (John Davies; James Woods) to assess for impacts on the immediate area when re-opening sections of the main access track, and re-clearing the drill pad (as used by Renison to drill S1200). The Flora and Fauna Survey Report is included in Appendix C. Access and excavation approvals were provided by MRT Environmental Officer David Gatehouse.

## **8. CONCLUSIONS AND RECOMMENDATIONS**

Drillhole RYN001 tested the Dunkley Anomaly to the satisfaction of supervisory staff however the anomaly remains unexplained to date. The principal purpose was to intersect either host rocks similar to mineralized host rocks at Melba Flats, or the Renison sequence which could host greisen or skarn hosted Sn mineralization. Whilst gabbros similar to those seen at Melba Flats were intersected, there was little indication of sulphide mineralization or proximity to possible sulphide mineralization.

Further work would include a downhole EM survey to test for any off-hole conductors and, depending on results, an aerial EM survey to assess if further potential exists for sulphide mineralization in the tenement.

Additionally, a further drillhole is recommended approximately 100m east of the RYN001 collar to test 100m to 200m below that intersected by RYN001.

**9. EXPENDITURE**

MMG Expenditure during the period of tenure is \$257,594.

Stellar Resources Expenditure during the period of tenure is \$71,609

**Total Expenditure for EL49/2004 Rayne is \$329,203**

## 10. REFERENCES

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## 11. APPENDIX A – DRILL LOG



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Melba District\EoCaml

## 12. APPENDIX B – ASSAY



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### 13. APPENDIX C – FLORA AND FAUNA ASSESSMENT



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