



**EXPLORATION LICENCE 20/2002  
ANNUAL REPORT**

**DECEMBER 2008 – DECEMBER 2009**

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## **FOREWORD**

### **Function of the Annual Report**

This Annual Report has been prepared as a public document for submission to Mineral Resources Tasmania (MRT). The report provides a summary of the exploration activities undertaken by ZZ Exploration Pty Ltd (ZZE is a 100% owned subsidiary of Creart Resources Holdings Limited) within Exploration Licence 20/2002 (EL 20/2002) during December 2008 - December 2009.

### **Role in the Regulation Process**

This document fulfils the role of an Annual Report for EL 20/2002 during December 2008 - December 2009, as required under Section 28 of the *Mineral Resources Development Act 1995*.

### **Datum**

Geodetic Datum AGD66 has been used throughout for this report.

## **ABSTRACT**

ZZ Exploration Pty Ltd (ZZE) currently holds exploration licence 20/2002 (EL20/2002), which is primarily of interest to the company for the potential to host economic Irish-Style lead-zinc deposits in the Gordon Limestone areas, and for gabbro-hosted nickel-PGE deposits of the Cuni-Melba Flats style in the north of the licence area.

During the period December 2008 – December 2009 Zeehan Zinc has had a company name change to Creat Resources Holdings Limited (CRHL). This name change follows the Chinese Creat Group acquiring approximately 70% ownership of CRHL, and better reflects the Company's business interests in a wider array of commodities and locations, both in Australia and overseas.

The exploration highlight of the year was a \$350,000 airborne SkyTEM geophysical survey, flown in January 2009, covering the entire licence area. The airborne survey produced a large number of strong responses which have been split into six levels of interest. The Tenth Legion prospect was selected as the focus of our exploration efforts in 2009.

Also of note was the completion of a \$75,000 geological interpretation by SRK Consultants of the seismic survey undertaken by the Company in 2007. At least one of the seismic lines transects EL20 (please refer to Appendix A for details).

Geological field work in the licence has centred on the Melba Flats region to the west of Mount Razorback.

Field work undertaken as part of the SkyTEM follow-up has largely involved soil geochemistry carried out over resultant areas of interest.

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## **1 INTRODUCTION**

### **1.1 Purpose of This Document**

This document fulfils the role of an Annual Report for EL 20/2002 during December 2008–December 2009 as required under Section 28 of the Mineral Resources Development Act 1995.

### **1.2 The Proponent**

ZZ Exploration Pty Ltd is a wholly owned subsidiary of Creat Resources Holdings Ltd ZZE currently holds Exploration Licence 20/2002, which includes several known mineral deposits, including the Oceana and Mariposa deposits. Creat Resources Holdings Ltd's long term objective is to grow through success in nickel exploration within the Zeehan area, and through mineral acquisition opportunities both in Australia and overseas.

### **1.3 Exploration Licence Location and Operations**

#### **1.3.1 Site Location and Mineral Exploration Area**

EL 20/2002 covers approximately 71km<sup>2</sup>, and is located 1km southeast from Zeehan, Western Tasmania (Figure. 1). The Murchison Hwy, Zeehan Hwy, and Henty Rd provide road access to EL 20/2002. The Emu Bay Railway and the Murchison Highway connect the township of Zeehan with the Port of Burnie, located approximately 140km to the north.

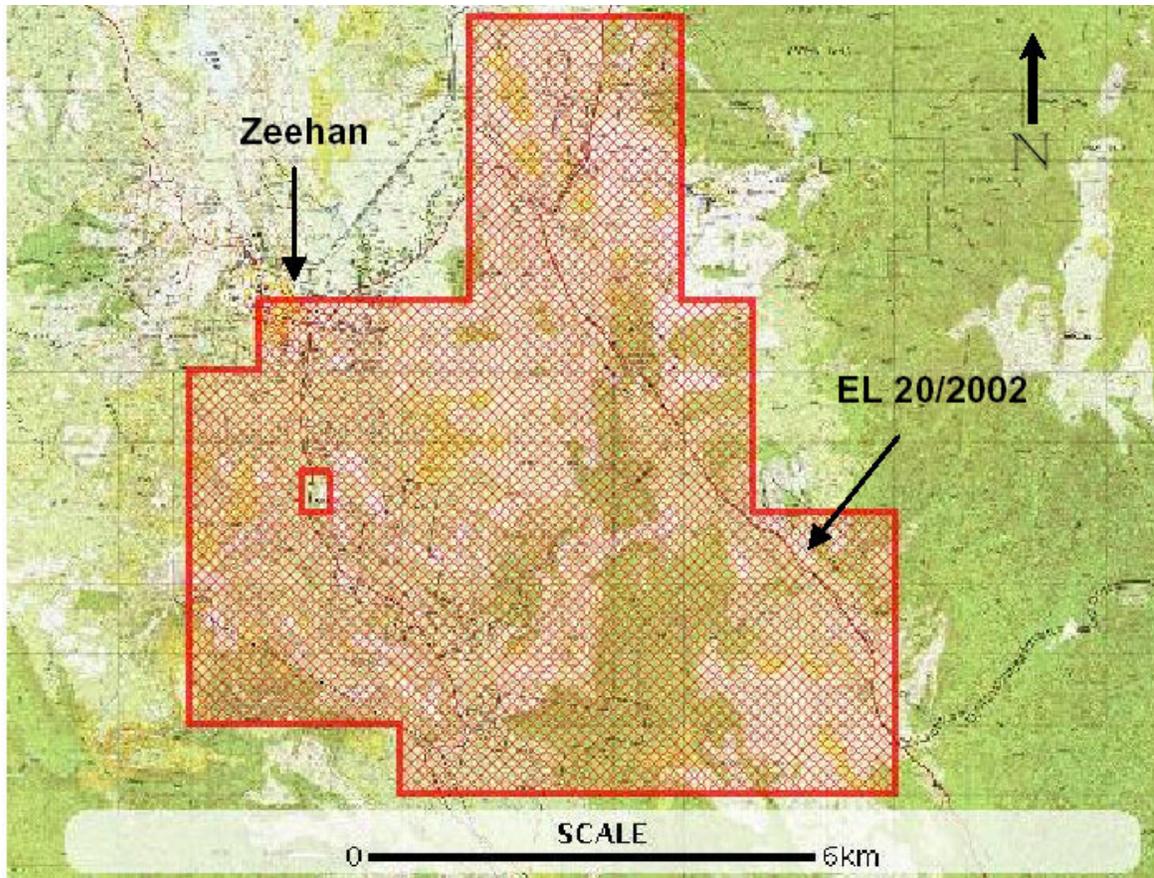


Figure 1: Location of EL 20/2002

Vegetation cover is generally sparse over EL 20/2002, dominated by button grass on ridges and in valleys, with dense tea-tree and eucalypt scrub occurring along creek lines.

### 1.3.2 Exploration Licence Tenure

EL 20/2002 was granted to ZZ Exploration on February 7, 2003 for a period of 5 years, and applies to all Category 1 minerals. The licence covers approximately 71km<sup>2</sup>, with excluded areas including:

- Retention Licence 3/1996 and CRHL Retention Licence RL1/2008 Mariposa;
- CRHL RLA3/2009 Oceana
- Any land owned or leased by the Commonwealth of Australia;
- Mining Leases; and
- Crown reservations.

The current land tenure in and around EL 20/2002 is provided in Figure 2.

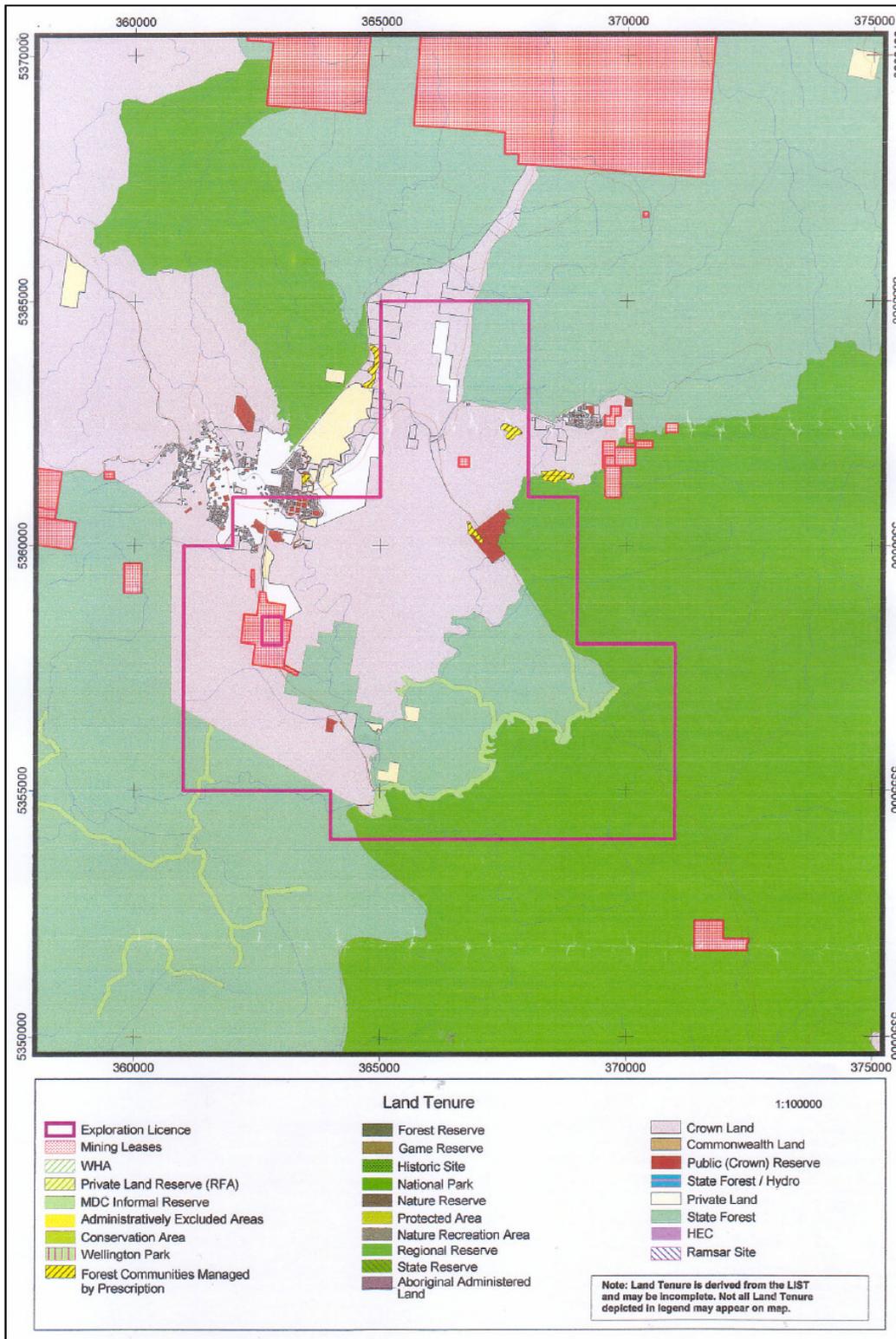


Figure 2: Land tenure for EL20/2002

## **2 SUMMARY OF PREVIOUS WORK**

### **2.1 Previous Mining and Exploration within EL 20/2002**

A series of limestone-hosted base metal prospects are located around Zeehan and have been subjected to substantial previous mineral exploration. The Oceana lead/zinc deposit provided much of the impetus for such exploration to be undertaken over all the known areas of Gordon Limestone in the general Zeehan area (SMG Consultants, 2005).

The known mineral deposits within EL 20/2002 have been subjected to various phases of mineral exploration which date back to the 19th century.

The regional geology of the area has been described in Blissett (1962), Taylor (1983), Jones (1988), and McGilvray (2003), and also provided in previous Creat Resources Holdings Ltd Annual Reports for EL 20/2002.

## **3 EXPLORATION UNDERTAKEN DURING 2009**

A summary of exploration activities undertaken is presented below.

- Airborne electromagnetic (EM) and magnetic survey
- Geochemical Soil survey completed in the northern area of EL 20/2002
- Completion of Seismic survey report

### **3.1 Melba Flats Soil Survey**

The following section outlines the key features that Creat Resources Holdings Ltd geologists have used to base their nickel exploration approach during 2009.

#### **3.1.1 Historical Mining and Exploration**

The Cuni (Cu=copper, Ni=Nickel) or Melba Flats deposits were first pegged out at the Nickel Reward prospect in 1893, with the first ore being extracted from the region in 1909. The field was then worked intermittently between 1909 and 1943 when production ceased. In that time 6500 tonnes of Cu-Ni ore was extracted at an average grade of 9.7% Ni and 4.7% Cu (Williams 1958; Blissett, 1962; and Greenhill, 1995). For a more detailed description of the history of the Melba Flats/Cuni field refer to Blissett, 1962; and Greenhill, 1995.

Further exploration for Ni in the region was undertaken in the area during the early to mid-1990's by CRA, including and honours thesis by Greenhill and at the same time as exploring the Avebury area. They reported that despite an 800m long soil geochemistry survey identified and significant Ni-Cu anomaly around the North Cuni/Genets Winze area (See Fig 5), the potential for Ni sulphides was downgraded due to the lack of response from the geophysical surveys completed (CRAE 1995 Annual report).

In recent years Allegiance Mining NL and now OZ Minerals have been granted a mining lease over large areas of the Melba Flats region, directly to the north of Creat Resources Holdings Ltd's EL20, due to good drilling intercepts.

### **3.1.2 Geology and Structure**

The Cu-Ni mineralisation at Melba Flats is typically hosted within the footwall of the Cambrian aged gabbroic (also described by Blissett, 1962 as a pyroxenite) dykes and sills (Greenhill, 1995). The emplacement of the dykes are believed to be structurally controlled along a major north-south fault zone, essentially parallel to the strike of their host rocks, striking slightly to the west of north, dipping vertically or steeply to the east. Further to the north of the known mineralisation the beds and dykes bend to the northeast with steep southeast dips (Blissett, 1962).

Despite the fact that that in the areas around the North Cuni and Genets Winze several gabbroic bodies are recognised (Ellis 1987; Maher 1995; Greenhill 1996 and Allegiance reports) only two have been shown to be mineralised and extend south along strike of the North Cuni/Genets Winze area (see Fig 6). These 2 mineralised bodies are known as the Eastern and Western Gabbros, they are compositionally similar, and have both been intensely hydrothermally altered and metamorphosed, but the mineralisation differs between the two with the eastern body hosting the majority of the massive sulphide mineralisation and the western body hosting lower-grade disseminated mineralisation. The gabbros are also discontinuous over more than 2kms, and varying in thickness along strike, with the eastern body up to 10m thick and the western body up to 12m (Greenhill, 1995)

The gabbro dykes are hosted within interbedded mudstones, siltstones, volcanoclastics, lithic-wackes, quartz-wackes and green to purplish shale (CRAE, 1995 Annual Report and Blissett 1962) that have been both attributed to the Cambrian aged Crimson Creek Formation (CCF) (i.e. Blissett, 1962) and also as correlates but a distinct suite from the CCF (Greenhill, 1995), but either way as at Avebury the Cambrian aged, ultramafic intrusive hosts have been intruded into slightly older early to mid-Cambrian sediments.

**Melba Region - Geology and Aero-Magnetics**

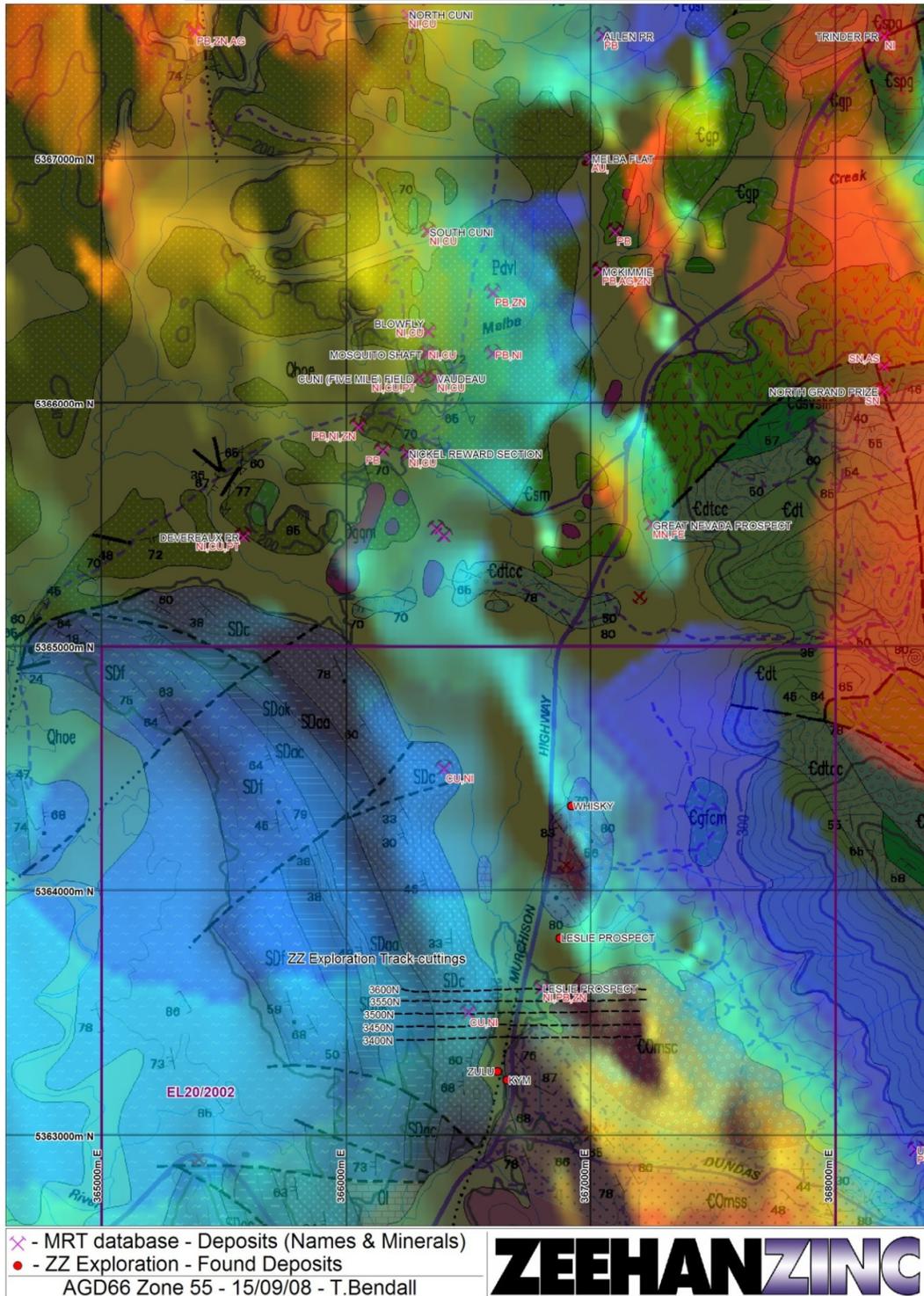


Figure 3: Location of Melba Flats grid showing geology and aero-magnetics.

### **3.1.3 Mineralisation**

The Nickel and Copper mineralisation in the Melba Flats area has been reported by Allegiance Mining NL as “Melba Flats is rated as a highly prospective target” with their North Cuni-Genets prospects being estimated with an open-cuttable resource of 95,000 tonnes at 0.8% Ni and 1.0% Cu to a depth of 100m (17<sup>th</sup> Jan 2008 Targets statement by Allegiance NL). Unlike Avebury, the mineralisation is considered to consist of small, high grade pods of sulphides, rather than Ni-skarn type mineralisation, suggesting a separate, although possible syn-genetic deposition model to Avebury. The Melba Flats deposits, whilst also having a more extensive history of mining and exploration, also contains much higher copper contents in relation to the fairly high grade but low tonnages reported so far, along with the presence of anomalously high gold and platinum-group element (PGE) enrichment within the ore zones. For example at OZ Minerals’ Devereaux Prospect (their most southerly prospect, and closest to Creat Resources Holdings Ltd EL20/2002) Cu actually exceeds the Ni content in some instances with historical mining reporting average grades of the ore produced there averaging 18% Cu, 5-9% Ni and 0.03 oz/t Au, and 0.13 oz/t PGE’s.

The mineralisation is typically found in the immediate footwall side of the gabbroic dykes, that can be traced for over 2000m, (Taylor and Burger, 1952; Maher, 1995) with the higher grade intercepts typically occurring close to the thicker sections of the intrusive bodies (Greenhill, 1995). Like the gabbro bodies themselves, the mineralised sections have been reported in the past as also being discontinuous with the massive sulphide lenses in the Eastern Gabbro ranging in size from 0.5-2m thick, 6.5-60m wide and 10-75m in length along strike (CRAE Annual Report, 1995; Greenhill, 1995) and regularly >15% combined Ni +Cu content. However recent drilling in the Melba Flats area by Allegiance Mining NL has suggested that the mineralisation extends to at least 220 vertical metres depth, twice as much as previous estimates, and are also expected to maintain the elevated gold and PGE concentrations seen in past mining and shallow drill hole intercepts. Allegiance has also uncovered the presence at depth of a second (eastern) mineralised dyke which is important as it significantly increases the available tonnes of mineralisation per vertical metre and thus enhances the project economies. (Allegiance ASX release 10-01-08).

In the northern areas of Melba Flats there are several gabbro dykes over ~200m, however historically there are only two main dykes that are mineralised and extend along strike for more than a couple of hundred meters and are termed the Western and Eastern Gabbros, although as above there has been a recent discovery of a second mineralised eastern dyke in the North Cuni area. Of these two main dykes only the eastern dyke, containing high-grade massive sulphides has been exploited in the past, with the western dyke, consisting of lower grade disseminated sulphides, has in the past being considered uneconomic.

There is also variation within the mineralisation of the deposits in the northern area to those closer to Creat Resources Holdings Ltd’s licences. In the northern areas around Genets Winze, North Cuni, South Cuni and Vaudeau deposits the sulphide mineralogy has been reported as high-grade pentlandite-pyrrhotite with pyrite consisting of up to 20% of total sulphides and the presence of chalcopyrite (CuFeS<sub>2</sub>) (Williams 1958). This makes pentlandite the main Ni-producing ore mineral, although this is most often supergene altered along with the pyrrhotite to form violarite (Fe Ni<sub>2</sub>S<sub>4</sub>)

along with iron sulphides. The pyrrhotite content was also reported by Williams, 1958; and Blissett, 1962 as being elevated at the Vaudeau Prospect.

In the southern areas of the Melba Flats region the Cu content of the sulphides as well as that of gold and PGE's also have been reported both historically and in recent drilling by Allegiance as being elevated at both the Nickel Reward and Devereaux prospects, with the copper content at Devereaux outstripping the nickel content in past workings (Blissett, 1962). The sulphide mineralogy at these two prospects also varies from those to the north, with elevated chalcopyrite and pyrite (25-60% of total sulphides) and millerite (NiS) being the primary Ni-bearing sulphide in the area, and is often intergrown with chalcopyrite.

Allegiance Mining NL, and now OZ minerals recent drilling and exploration at both Nickel Reward and Devereaux has produced very promising results for the further exploration, and definition of extractable resources. At Nickel Reward prospect Allegiance reported that whilst their resources were initially rated at 30,000 tonnes of ore @3% Ni to a depth of 100m, recent drilling has uncovered intercepts as high as 10.8% Ni and 3.81% Cu at up to 220m depth, twice the depth that had been previously drill tested, and assay results also returning average grades of 1-2g/t Au and 2-3g/t combined Pt and Pd (Allegiance ASX announcement 10-01-2008). Two recent drill holes in the area (DDHMF90 and DDHMF91) were completed to show the depth extension of the Ni-Cu mineralisation at the Nickel reward prospect, and "the results suggest mineralisation extends to at least 250m depth, with a dip length of 300m" (Allegiance Mining NL exploration and development update to ASX)

The Devereaux prospect, 800m to the west due to being offset by a fault, also shows substantial promise with historic working reporting past grades of 0.1-0.16oz/t PGE's, 0.02-0.04oz/t Au, 1-1.4oz/t Ag, 13-18% Cu and 5-9% Ni (Blissett, 1962, Greenhill, 1996). 2 recent drill holes completed at Devereaux by Allegiance also "identified a significant new zone of Ni-Cu mineralisation" with one intercept reporting 4.7m @ 0.94% Cu and 1.3% Ni (Allegiance ASX release 10-01-2008).

### **3.1.4 Geophysics**

Unlike at Avebury, Allegiance has reported no significant airborne magnetic signature associated with the mineralisation in the Melba Flats region. The trend of the magnetic signatures seen in Figure 3 can be seen to extend into the northern extensions of EL20 however, suggesting the trend of the mineralised host units also continues in this area. Also no detailed magnetic surveys have been undertaken in the region, either in Creat Resources Holdings Ltd's tenements or OZ Minerals' tenements, providing the opportunity for further, more detailed work in the region to help delineate both the geological and mineralisation patterns at Melba Flats.

### **3.1.5 Mineralisation Model and Relevance to EL20/2002**

The whole rock geochemistry analysis of the host gabbro bodies at Melba Flats suggests that the intrusive suite correlates to the mafic Henty Dyke swarm and Henty fault wedge in the surrounding area, with their emplacement being as a result of extension related, tholeiitic magmatism during the

late Cambrian, late in the volcanic history of the Mt Read volcanic magmatic event (CRAE Annual Report, 1995)

The preserved primary sulphide mineral textures suggest an epigenetic origin for mineralisation (CRAE), however mineralogy in gabbros suggests a hydrous parental magma, incompatible with significant sulphide formation (CRA), along with allegiance suggesting that the underlying granite ridge has remobilised the mineralisation from a source or sources at depth.

There is no indication of structural concentration of the nickel mineralisation by later tectonic events and the host intrusive body is not considered the intrusion-type normally associated with a classical magmatic sulphide body (Tear, 2007).

Blissett, 1962 also reported that “Mineralisation has been historically reported as typically small (<50m) in strike length and down dip with mineral continuity observed but at lower grades, with suggestions made that coalescence could produce larger ore bodies at depth”. Other models for the production of the mineralisation at Melba flats include:

The mineralisation type bears similarity to that recorded from large magmatic nickel, copper, cobalt, platinum and palladium deposits (such as Voisey Bay), with OZ Minerals committing to two distinct, but related economic targets of mineralization at Melba Flats:

- shallow high to medium grade nickel, copper, cobalt, platinum and palladium remobilised from depth and the subject of the present mining lease;
- Substantial deposits akin to Voisey Bay at depth.

Greenhill, 1995 proposed a model similar to other mafic-hosted Cu-Ni deposits, known as Gabbroid-type deposits, which include intrusive mafic/ultramafic complexes and large layered intrusions. This model was suggested largely on the basis of the low Ni:Cu ratio of the Melba Flats deposits, and their increased PGE concentrations, as witnessed at the gabbro-hosted Ni-Cu deposits at Jinchuan, China; and the Vammala Nickel belt in Finland. Conversely there has been no record of Ni-Cu deposits forming within a gabbro body that is not related to an associated large scale mafic/ultramafic intrusive, suggesting a link between the Avebury and Melba Flats deposits. The low-tonnage but high-grade mineralisation within such small gabbro dykes also makes the deposits somewhat unique, and suggesting a secondary source of the Ni, as the small gabbro bodies could not have been the only source for such large amounts of Ni.

Whatever the true genetic model for the Ni mineralisation at Melba Flats may be, the close proximity of the known deposits, and historical reports of Ni-occurrences with EL20 makes the area highly prospective for nickel. This statement is backed by anomalous nickel handheld XRF analyses of up to 0.27% Ni being recorded by Creat Resources Holdings Ltd geologists (see section 3.2.2). The north-south striking line of the Melba Flats mines has previously been reported as terminating just north of EL20; however the reported nickel occurrences within the licence area and the known existence of related mafic units within the same geological trends as the mineralised gabbros to the north defy this theory. There has also been very little modern exploration for any form of nickel mineralisation in the northern area of EL20.

## **3.2 Geophysics and Geochemistry In 2009**

### **3.2.1 Geochemical Soil Sampling**

In August 2008, ZZ Exploration began work on a ground magnetics survey and soil sampling program at the Melba Flats region on their EL 20/2002 exploration lease (Figure 6).

Grid cutters were brought into the South Melba Flats area to cut a grid as most of the ground was inaccessible to the ground crew undertaking the survey. Five 1000 metre east-west lines were cut with a spacing of 50m. A marker was placed every 20 meters with the corresponding GPS coordinate and a soil sampling number. For each line there were 51 soil samples taken.

A two metre long auger was used in conjunction with a 75mm head-piece to collect the soil samples. The auger was wound down as far as possible and the sample was brought to the surface and bagged for later interpretation. Depths the auger would pick up from were variable due to the inconsistency of the underlying ground, whether it would be hitting solid rock at shallow depth or large quantities of water. There were many occasions where 5 or 6 attempts were made in the general radius. Where the ground was too hard to auger, appropriate rock chip samples were taken of the nearby area. Samples were brought back to the exploration shed, checked and put aside to be dried before being retagged and shipped for in-house (Hand-held XRF) and laboratory assaying.

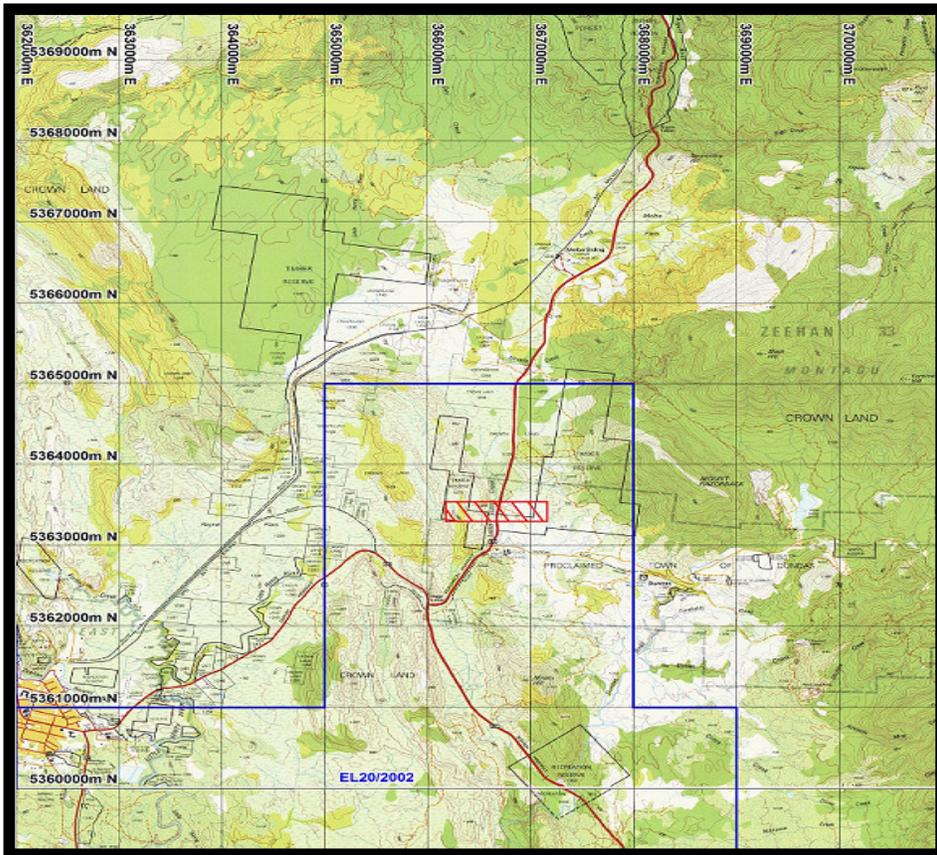


Figure 4: Map showing the northern section of EL20/2002. Red shading is the location of the magnetic and soil sampling survey locations



Figure 5: Soil augering at Melba Flats

Results from the Analysis were then inputted into Surfer to identify any correlations between the data, as you can see in the below in fig 6 it appears to be a small anomaly located at

366720E/5363449N and this is shown in lead, zinc and nickel readings. These readings correspond to a gossan/ironstone outcrop in the same area, and this is probably the source of the slightly elevated readings. More investigation is required to determine the underlying rock-type in the vicinity of the iron stone, and whether it is reasonable to suggest the existence of a small concealed gabbro occurrence.

The readings to the west of the highway are very bare, this is expected as all of this ground was weathered sandstone with very little outcrop, no outcrop of other rock types were mapped on the western side of the road in the area of the grid.

Combining soil samples geochemistry with geological mapping and airborne magnetics/EM will be used for target generation. It is expected that the grid will be extended to the east of the Murchison Highway to cover areas of mapped gabbroic intrusives.

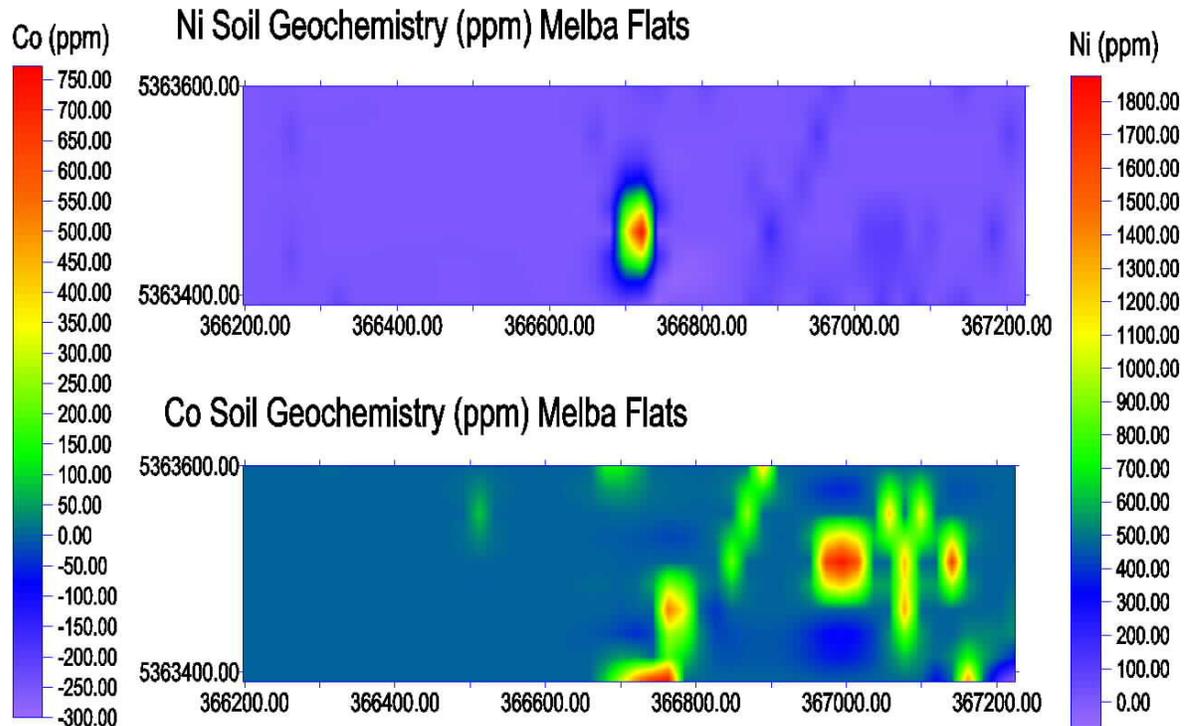


Figure 6: Nickel and Cobalt Soil Geochemistry results for Melba Flats

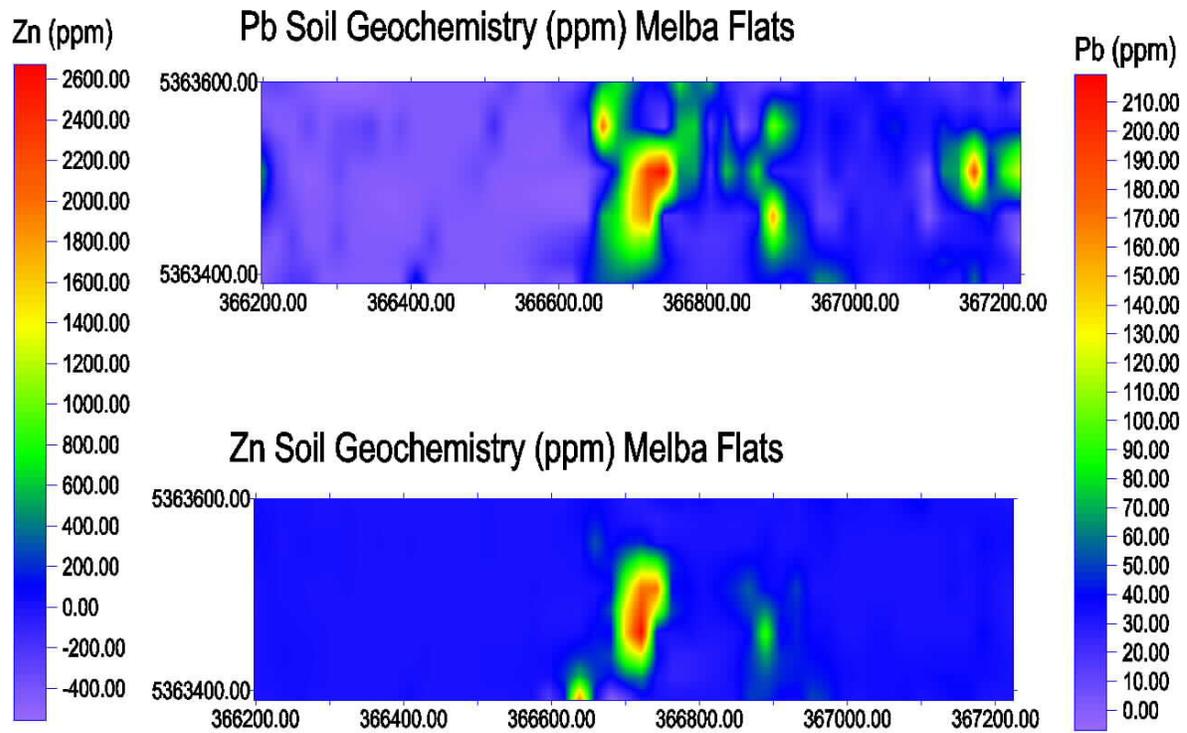


Figure 7: Lead Zinc Soil Geochemistry results for Melba Flats

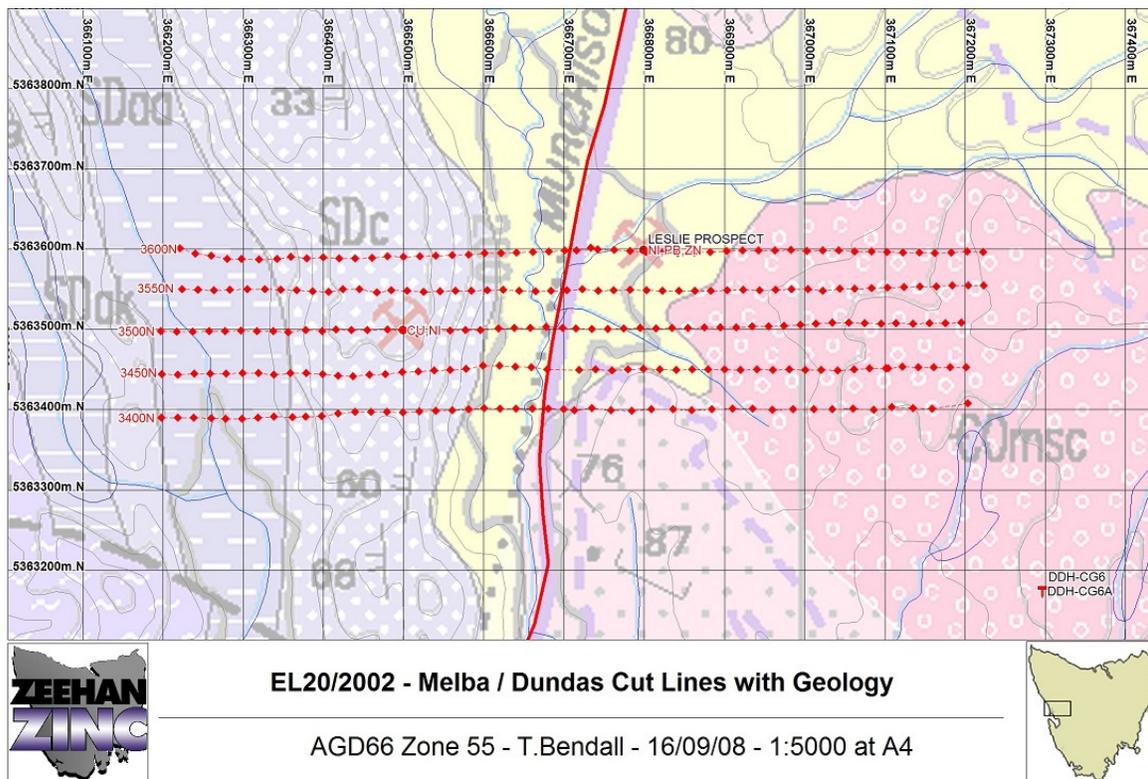


Figure 8: Map showing the northern end of the EL20/2002 licence. Red lines show the location for the magnetic survey and soil sampling.

### **3.2.2 Airborne electromagnetic (EM) and magnetic survey**

From the 20th to the 31st of January 2009, a helicopter borne time-domain electromagnetic (EM) survey was flown for Crear Resources Holdings Limited (CRHL). The survey was centred on the town of Zeehan, and included the entire area held under tenements EL18/2003, EL30/2002, and EL20/2002 (Figure 10).

The EM data acquisition system was SkyTEM, with a Scintrex CS-2 magnetometer attached to the frame. The survey was flown by Geoforce Pty Ltd for CRHL. The aim of the survey was to detect anomalous conductive response in the EM data that could be directly targeted for base metal and nickel mineralisation.

The primary advantage of airborne EM is that it enables rapid, systematic coverage over large areas for relatively low cost (certainly when compared to surface exploration), without causing ground disturbance. Two qualifications, however, must be applied when interpreting the results. First, the airborne platform means that airborne EM has trade-off in spatial resolution, near surface vertical resolution, and depth of penetration against the best possible ground based data. Secondly, not all styles of economic sulphide mineralisation give a recognisable EM response (e.g. broadly disseminated deposits can give no response), and some geological conditions produce anomalous EM responses that are not associated with economic sulphides. In this area particularly, economic mineralisation may be dominated by sphalerite, a sulphide mineral unresponsive to EM.



Figure 9: SkyTEM survey flown with EM and Magnetics sling below

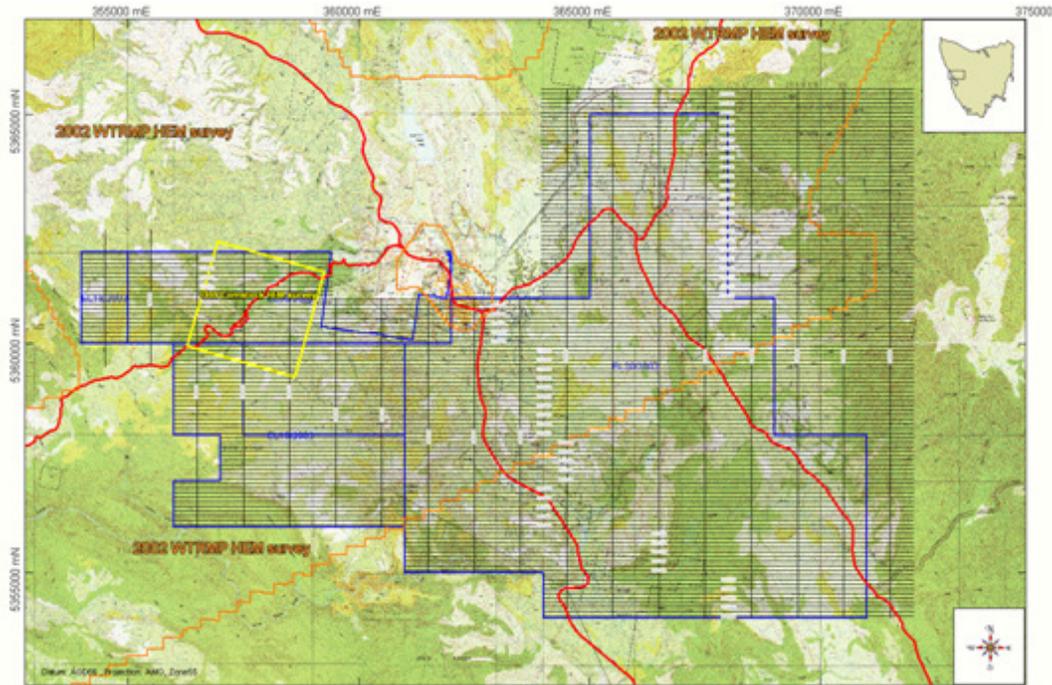


Figure 10: Map of Crear Resources tenements showing SkyTEM lines flown by Geoforce

The reported improvement in detection capabilities over the last five years, and ease of application led to the decision to fly helicopter time-domain EM (HTEM) over CRHL's tenements.

The aim of the HTEM survey was to delineate anomalous EM responses that could be attributed to massive sulphide mineralisation, in particular sulphides associated with nickel mineralisation in the west and northern part of the survey area, and sulphides associated with Pb-Zn mineralisation in the central and south eastern area.

The region features rugged topography and difficult weather patterns which impeded the logistical aspects of data acquisition. The town of Zeehan, isolated buildings, power lines and the railroad caused strong cultural anomalies that were easily identified and accounted for. A total of 1572 kilometres were flown at 100m line spacing and 30m nominal terrain clearance, with 1000m spaced north-south tie lines (required to level the magnetic data). Data were sampled at 4Hz equating to 4-10m interval dependent on the helicopter ground speed. Total cost for data acquisition and processing was approximately \$175/line kilometre.

The average depth of penetration was 150-250m in area with moderate ground conductivity, and up to 350m in the most resistive zones. Depth of penetration was only significantly degraded below very strong near surface conductors such as the Comstock conductor.

The airborne survey produced many strong responses, but none of these could be attributed unequivocally to economic sulphides due to the confounding effects of highly conductive stratigraphic units. The main conductors fell into six areas named after local prospects: Tenth Legion, Comstock, Razorback, Evendine, East and Ainslie. The latter four are immediately east of Zeehan Zinc's tenements, but have many very interesting features worthy of further investigation.

The Evendine Conductive Zone is a non-magnetic, moderately strong, EM anomaly on the eastern end of lines 11270 to 11230. It is clearly visible in the plan apparent conductivity (Figure 5) and

profile Z+X component data as a high amplitude anomaly in the midst of a relatively low response area.

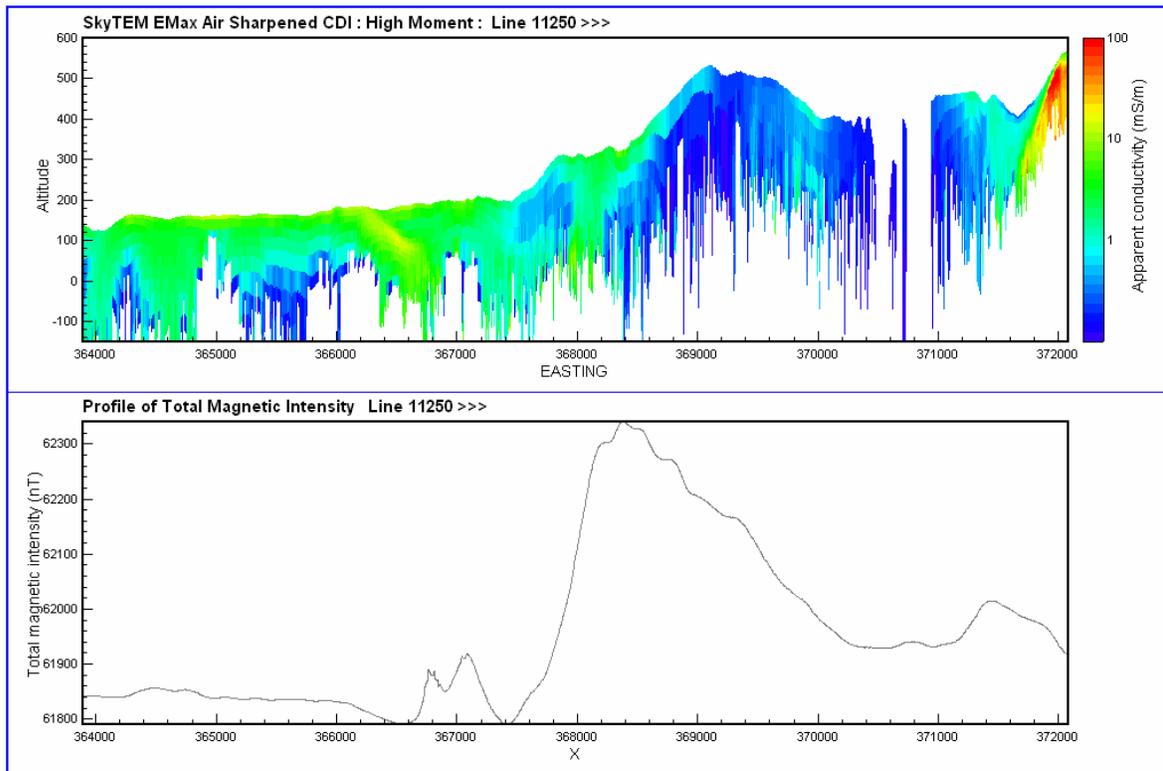


Figure 11: CDI and magnetic profile for line 11250 showing the Evendine Conductive Zone at the extreme eastern end of the line. Also of note is the east-dipping conductive stratigraphy at 366500mE.

The CDI on the section data produces a moderately strong conductive zone, shallowing towards the east (Figure 11). It is closest to the surface at 372900mE on line 11250. The Conductive Zone extends approximately north-south starting on line 11270 and terminating on line 11230. There is no associated magnetic response. The source is interpreted to be stratigraphic sedimentary (i.e. conductive shales) based on its large size, moderate apparent conductivity, lack of magnetic response, and position within a large sedimentary-volcanic sequence of the Dundas group(?). Several factors, however, elevate the priority of this target.

Firstly, the 1:25000 surface geology shows no clear explanation for such a strong change in ground conductivity (in fact, the rest of the geological unit is uniformly resistive), and secondly the Evendine Mine prospect occurs within the conductive zone. These two factors make this feature worthy of further investigation. See ID #1299 in EL18/2003 Annual Report 2009 Appendix B.

It is also worthwhile to mention the weak conductor visible around 366500mE in Figure 11. This conductor is a good example of the ability for airborne EM to map geological boundaries, rather than just ‘bump detection’. This conductive unit is delineated to nearly 200m below surface in an area of relatively poor rock outcrop exposure.

The area of sedimentary rock (Gordon Limestone, Crotty Quartzite, Moina Sandstone etc.) surveyed in the southeast portion of CRHL’s tenements produced no strong responses. The Mariposa retention licence had no responses at all, while Oceana RLA had only weak responses, though they did coincide with approximate position of the known mineralisation.

## **5 CONCLUSIONS AND PROPOSED WORK PROGRAM**

The sections of the Melba Flats soil sampling lines west of the Murchison Highway will not be investigated further. It is expected that the grid will be extended to areas east of the Murchison Highway to cover areas of mapped gabbroic intrusives.

The continuing exploration for EL20 in 2010 is currently being reviewed following the successful acquisition of neighbouring EL21/2004. The exploration program for nickel in the northern part of EL20 will now be considered in conjunction with future work planned for EL21.

It is proposed to extend previous company geochemistry soil sampling lines on the northern flanks of Mt Razorback into EL20.

The Company's EL20 nickel exploration is based on a CuNi-Style gabbro-hosted model. Stellar Resources targeted an Avebury-Style remobilised Ni model within Mt Razorback serpentinites to the east in EL21.

Stellar stated in their 2008 Annual Report that surface geochemistry showed that the serpentinised dunite has a background nickel content of approximately 0.2%. With this in mind, models will be investigated for both gabbro hosted nickel scavenging its nickel from the serpentinites, and a later remobilisation of nickel in response to granitic heat and fluids in the Devonian, more akin to Avebury.

It is expected that the current Melba Flats grid will be extended to the east of the Murchison Highway to cover areas of interpreted Cambrian gabbroic intrusives in 2010. This focus is more in line with the EL20/2002 nickel exploration model employed by the company.

## **6 ENVIRONMENT**

No environmental disturbance occurred in the licence during the reporting period.

## **7 EXPENDITURE**

Expenditure for the four quarters for 2009 is presented below.

2008	Q4	\$	23,791
2009	Q1	\$	238,036
	Q2	\$	83,641
	Q3	\$	20,404
	Q4	\$	

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## **9 APPENDICES**

**Appendix A:** SRK Consulting Seismic, Magnetic and Geological Data Interpretation

**Appendix B:** *XRF Results for Melba Flats soil grid*

**Appendix C (digital):** Melba Flats Soil Geochemistry XRF Analyses

**Appendix D (digital):** Melba Flats Sample Locations