HEAZLEWOOD PROJECT
(SAVAGE RIVER GROUP)
TASMANIA
EL31/2003

ANNUAL PROGRESS REPORT
23rd March 2007 – 22nd March 2008

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Note: All figures and grids are according to the AGD66 datum and AMG66 grid system.

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HEAZLEWOOD PROJECT
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TASMANIA
EL31/2003

ANNUAL PROGRESS REPORT
26th March 2007 – 25th March 2008

ABSTRACT

Bass Metals Ltd (BSM) commenced management of the Heazlewood exploration licence (EL31/2003) on 26 March 2005. Work conducted on the licence for the year ended 22 March 2008 has included:

- Line cutting and first pass multi-element soil sampling program (Wilson Prospect)
- Line cutting and infill soil sampling of the northern part of the Heazlewood soil grid (Wilson Prospect)
- Access field trips to establish pedestrian access to soil lines.
- VTEM surveying proposal
- Field trip in the vicinity of the Fentons and 19 Mile Creek workings
- Rock Chip Sampling - Western 4WD track southern lines between Lord Brassy and Caudry's, Lord Brassy/North Brassy Ni-Co-Cr anomaly, Heazlewood 4WD track to Burgess Creek Pt-Pd anomalies
- Rock Chip Sampling - Eastern Heazlewood Rd 4WD track to Wilson Anomaly

Expenditure - Reporting period $120,941.71

Total to date $315,955.46

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1. INTRODUCTION

This report is a summary of the exploration activities conducted on the Heazlewood exploration licence EL31/2003, for the period of 26 March 2007 to 25 March 2008. BSM has recently relinquished $34km^2$ allowing this licence to now cover a total area of 101 km^2. The Heazlewood licence is subject to an exploration joint venture agreement between Bass Metals Ltd (BSM) and Pioneer Nickel Ltd. BSM is currently managing exploration of the license from a base at the Hellyer Mine site.

The tenement was originally claimed because it encompasses a large ultramafic complex considered prospective for nickel mineralisation. This area is considered prospective by BSM for - nickel-skarn type mineralisation analogous to the Avebury system southwest of Zeehan.

1.1 Location:

The tenement is located approximately 10 km west of the township of Waratah, on the west coast of Tasmania (Figure 1). Access to the area is via the sealed Corinna Road. Access within the tenement is via a limited number of 4wd tracks, which require river crossings. Access to the majority of the tenement is on foot, and requires cleared gridlines in order to conduct most field work.

The northern edge of the tenement impinges on the Savage River National Park and is not available for exploration.

Topographically the area is of significant relief with limited vehicular access; however increasing pedestrian access is available in the form of cut soil lines. The most widespread vegetation community in the area is *Eucalyptus nitida* over *Leptospermum spp.*

The licence area can be found at the junction of the Savage River, Luina, Waratah and Donaldson 1:25,000 topographic map sheets or the Arthur River 1:100,000 LTIS map sheet.

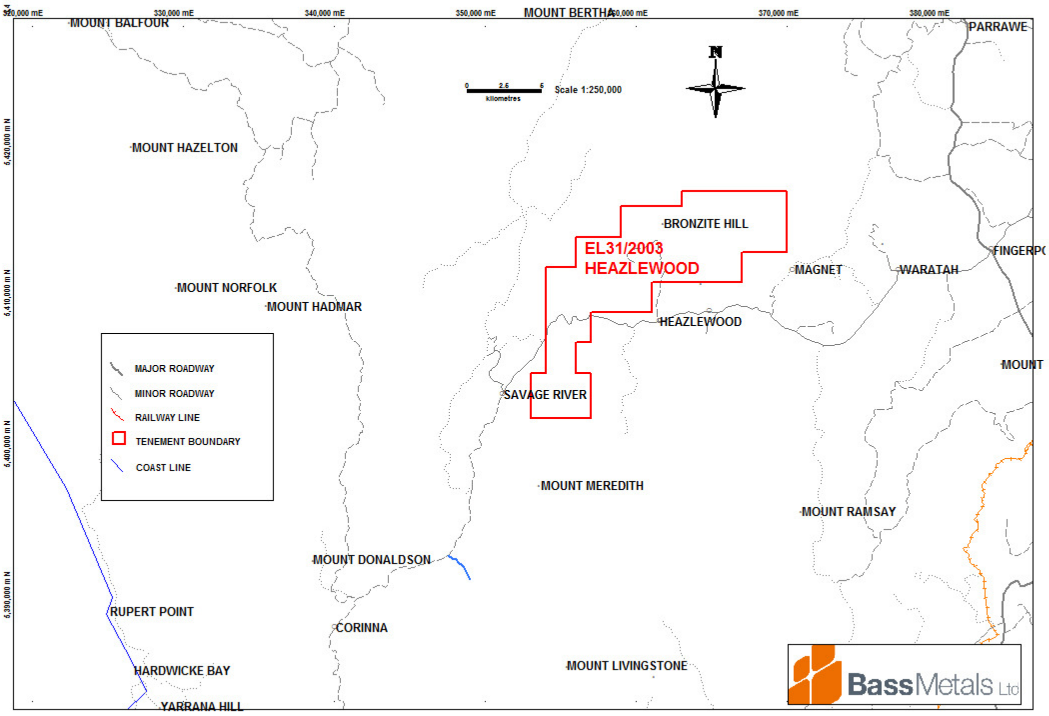


Figure 1. Heazlewood Exploration Licence (EL31/2003) is located in north-western Tasmania.

1.2 Geology Overview:

The vast majority of the tenement contains sub- and outcropping lithologies. Of greatest interest is the Heazlewood Ultramafic Complex in the central portion of the tenement, which is most prominent in locations like Brassey Hill. The complex has a basal dunite layer that has been variably serpentinised and an upper part made up of pyroxenite and harzburgite.

To the east of the ultramafic complex the Burnie and Oonah Formation predominates, and to the west the Crimson Creek Formation mafic volcanic and volcaniclastics predominate. Refer to the Regional Geology Map in Figure 2.

1.2.1 Early Cambrian Ultramafics

In the early phases of the Tyennan Orogeny, the east-facing Tasmania passive margin collided with an oceanic arc, resulting in the obduction of mafic-ultramafic complexes across much of Tasmania. The original shallow-dipping geometry of the allochthanous sheets has been substantially disrupted by later Cambrian and Devonian deformation, so that the present surface occurrences are typically steeply dipping and fault bounded. Three ultramafic-mafic rock associations are commonly in fault juxtaposition within the complexes: layered Pyroxenite-Dunite, layered Dunite-Harzburgite and layered Pyroxenite-Peridotite and associated Gabbro (Seymour *et al*, 2006).

1.2.2 Crimson Creek Formation

The Crimson Creek Formation represents a correlate of the Upper Neoproterozoic-Lower Cambrian Togari Group sedimentary and mafic volcanic succession. The group can be subdivided into four main phases of sedimentation; a lower dolomitic succession with basal siliceous conglomerate-sandstone, a phase of mafic rift volcanism and associated volcaniclastic sedimentation, renewal of shallow-marine carbonate sedimentation, and at the top, a Cambrian phase of deep-water siliciclastic sedimentation (Seymour *et al*, 2006).

1.2.3 Burnie and Oonah Formation

The Burnie and Oonah Formation is a thick, polydeformed Proterozoic quartzwacke turbidite succession, widespread in western Tasmania. The formation comprises of two lithological associations. The dominant quartzwacke turbidite association, which includes minor alkaline dolerite intrusions and lavas, consists of interbedded quartz sandstone, quartzwacke, siltstone and pelite. The secondary lithological association is predominately pelite and/or carbonate including mafic volcanics and conglomerate in some places. Near Zeehan this association is host to a number of Devonian vein, skarn and replacement-tin deposits, and at Mt Bischoff a dolomitic unit hosted major Devonian tin lodes (Seymour *et al*, 2006).

1.2.4 The Meredith Granite

World-class tin and tungsten ore bodies, as well as many lead, silver, gold, zinc, copper and bismuth deposits of different styles, are genetically and spatially related to the emplacement of high-level Middle Devonian to Early Carboniferous granitoids in Western Tasmania. The major bodies are the Housetop, Granite Tor, Grassy, Dolcoath, Meredith, Heemskirk and Interview granites, and these include both I and S types. Styles of mineralisation associated with the Devonian granitoids include stratabound carbonate replacement cassiterite-massive sulphide, silicate and magnetite skarns, and disseminated and vein deposits.

Economically, the stratabound carbonate-replacement cassiterite-massive sulphide mineralisation forms the most important Devonian ore type, with major deposits at Renison Bell, Mt Bischoff, Queen Hill, Montana, Cleveland and Razorback (MRT Report, 2005).

1.2.5 Tertiary Basalts

Radiometric dates from basalts across Tasmania indicate an age range of between 16.4Ma and 64.5Ma (Everard *et al.*, 2004).

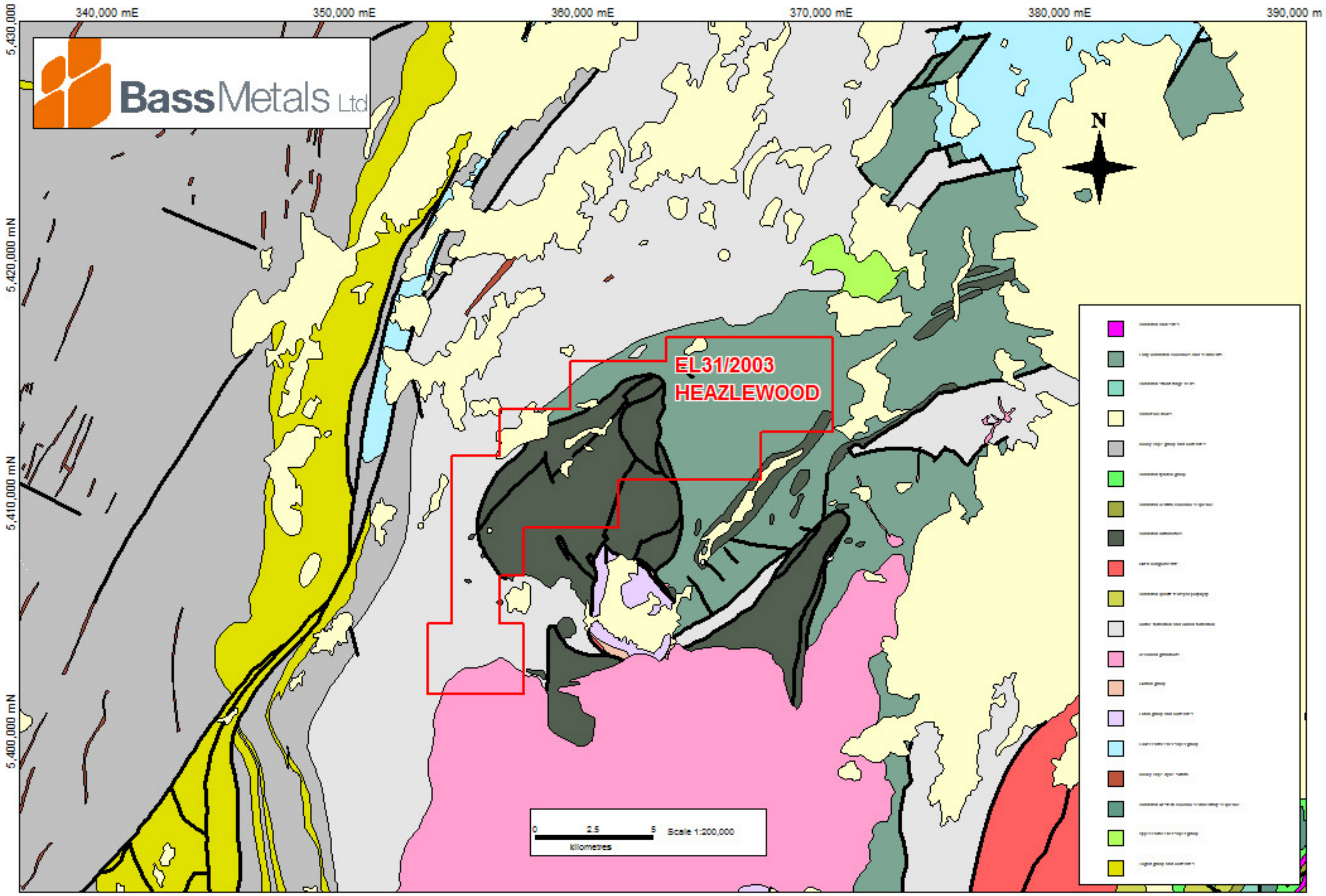


Figure 2. Regional geology showing licence area boundary

1.3 Exploration Rationale:

The Heazlewood licence was acquired through a joint venture arrangement because of the perceived nickel potential of the large ultramafic complex that makes up the central third of the tenement. Due to the close proximity of the Meredith Granite to the ultramafic complex the potential for Avebury-style nickel-skarn/remobilised mineralisation is considered high.

There are a number of known mineral occurrences within the tenement, most directly related to, but not limited to the ultramafic lithology and include Ni, Cr and Os, plus Pb, Zn, Au and Cu.

2. REVIEW OF PREVIOUS WORK – Prior to current tenement

2.1 Historical Mining:

Mineralisation was first discovered in the area in the late 1800's with the discovery and working of the Lord Brassey Ni Mine, the Jasper Hill Cu/Au mineralisation and a number of minor Pb-Zn occurrences as well as the Osmiridium workings. The Heazlewood Complex was the world's largest supplier of osmiridium won from minor alluvial and bedrock workings. Total recorded production from the entire field was of the order of 15,526oz of osmiridium (naturally occurring alloy of osmium and iridium).

Small scale nickel mining comprising approximately 300m of underground development was undertaken at the Lord Brassey Mine within EL31/2003. Nickel mineralisation consists of Heazlewoodite and Pentlandite. The mineralisation is hosted in three shear zones striking northeast. Cu and Au were mined from the Jasper Hill and Duffs Hill Mines to the south of the tenement, where mineralisation is associated with a quartz and jasper gangue hosting stringer-style chalcopyrite veins. Gold and Ag tellurides occur as isolated inclusions within the chalcopyrite. The lodes are thought to represent Cambrian hydrothermal mineralisation that was remobilized during Devonian deformation and the intrusion of the Meredith Granite.

2.2 Exploration Prior to Current Licence Area:

The area has been the focus of a number of exploration companies since the 1960s, the most notable work being carried out by the following companies:

<u>Comstaff – 1968 to 1983 (EL1/1968, EL5/1963)</u>

Target: Osmiridium, Tin, VHMS and Gold.

- Conducted a large volume of work over the 20 year period, however very little hard data was reported and little factual information can be derived from the reports.
- Assessed all Os workings with gridding, mapping sampling and trenching.
- No new Os mineralisation was discovered.
- Completed regional drainage sampling over most of the area underlain by the Crimson Creek Formation.
- Followed up anomalous areas with gridded soil sampling, most notably in the Friday Creek area (anomalous Cu, Zn, Ni, Ag, and Sn).

- No geochemical anomalism was located on the follow up grids, or ridge and spur sampling.
- Completed an aerial DIGHEM survey, 13 potential targets defined. Data from the survey is unavailable. An interpretation of the DIGHEM was included in a report, without a grid by which to locate it.
- A number of the DIGHEM anomalies were followed up with soil geochemistry, ground EM.
- 2x EM conductors were drilled (both outside EL31/2003), with the target response being explained by the presence of black shales.
- No mineralisation of any form was located in the course of the work.
- The quality of the work is difficult to assess as the details were not reported; it is possible that further follow up might be worthwhile in the Friday Creek area.

<u>Metals Exploration – 1985 to 1989 (EL21/1985)</u>

Target: Pt and Ni Bedrock mineralisation within the Heazlewood Complex.

- Compiled previous work, noted problems with Comstaff data.
- Conducted significant mapping and sampling programs over known mineralisation and some EM and ground magnetic surveys.
- Best results at Fenton's from costean sampling were; 4m @ 1.03ppm Pt, 6m @ 6.7ppm Pt, 9m @ 4.0ppm Pt, 6m @ 5.8ppm Pt. They tended to repeat poorly and were ascribed to surface weathering related nugget effects.
- Best rock chips collected at Brassy Hill;
    - 2.5% Cu, 4.3g/t Au.
    - 8.0% Cu, 18.3 g/t Au
    - 15%Pb, 3.9% Zn
    - 4.7% Ni

- Made stratigraphic correlations for mineralisation.
- Os, Ir, Ru, Pt - associated with chromite rich dunites (Fentons).
- Pt, Ru, Rh – associated with inter-layered dunite/peridotite.
- Ni, S, Pt, Au, Pd – epigenetic mineralisation crosscut by recent structures (Lord Brassey).
- Drilling at Caudry's and Lord Brassey failed to locate economic mineralisation.
- Drilling of the NiS breccia at Fenton's failed to intersect mineralisation at depth.

<u>Billiton – 1987 (EL20/1985)</u>

Target: Sulphide replacement Tin deposits and vein hosted tin/tungsten deposits.

- The Comstaff DIGHEM data was reviewed, and follow up work recommended at the Rachel Anomaly.
- Two lines of Ground magnetics and auger sampling were carried out.
- No significant anomalism was discovered.
- None of the remaining DIGHEM anomalies were considered to be related to a bedrock pyrrhotite source.
- No further work was carried out.

Geopeko – 1990 to 1993 (EL45/1989)

Target: VHMS Base Metals and Gold Mineralisation.

- Carried out a regional water sampling program utilizing new CSIRO techniques to define geochemically anomalous areas.
- Delineated some anomalous areas, in the Crimson Creek Formation but found the results difficult to repeat, the work may have been of limited value.
- Followed up some anomalous areas with ridge and spur auger sampling and rock chip sampling.
- The project was considered to be a low priority and the work was not pursued to completion.

CRA – 1992 to 1996 (EL36/1992)

Target: Bedrock Ni and Cu/Au mineralisation.

- Compiled previous work, noted problems with Comstaff data.
- Carried out a regional sediment sampling program.
- Followed up several anomalous areas with infill sediment sampling and rock chip sampling.
- Reviewed the Cu/Au mineralisation at Duffs Hill.
- Determined Ni mineralisation to be consistent with silicate Ni sources.
- Cu/Au mineralisation to be confined to remobilized, low tonnage deposits hosted in faults of Devonian Age.

Allegiance Mining NL – 2001 to 2002 (EL14/2001)

Target: Avebury Style Ni Sulphides

- Interpreted regional magnetics/gravity data, did not conduct any field work.
- Concluded that the Heazlewood complex underlies much of the EL at relatively shallow depths.
- The interpretation suggested that the Meredith granite was of the order of 6km deep under the Heazlewood Complex.
- Concluded that the southern portion of the EL better fitted their exploration model.
- Relinquished the northern portion of the EL containing the outcropping Heazlewood complex which was subsequently picked up by Pioneer. Allegiance's EL did not cover the area which now comprises the NE portion of EL31/2003 (Rachel and Friday Creek area), containing the Crimson Creek rocks.

Pioneer Nickel Ltd – 2003 to 2004 (EL31/2003)

Target: Bedrock Ni and Cu/Au mineralisation.

- In preparation for field work, all available digital data was collated in MapInfo format and reprocessed. The geophysical data was then used to complete new interpretations for target identification.

3.CURRENT WORK

3.1 <u>Bass Metals Ltd – 2005 to 2006 (EL31/2003)</u>

Target: ***Bedrock Ni, PGEs, Au and nickel-skarn mineralisation***.

- Compilation of historical exploration reports and data
- Acquisition and processing of ASTER satellite data
- Validation and review of existing data and capturing of data in a proprietary Geoinformatics Exploration Inc database system named FracSIS
- Carrying out three-dimensional modeling of the captured data
- Target generation and ranking of exploration targets using further proprietary software and Monte Carlo probabilistic algorithms.

3.2 <u>Bass Metals Ltd – 2006 to 2007 (EL31/2003)</u>

Target: ***Bedrock Ni, PGEs, Au and nickel-skarn mineralisation***.

- Compilation of historical exploration reports and data
- Target generation and ranking of exploration targets
- Field visits
- Botanical flora survey
- Grid line cutting and soil sampling

3.3 Bass Metals Ltd – 2007 to 2008 (EL31/2003)

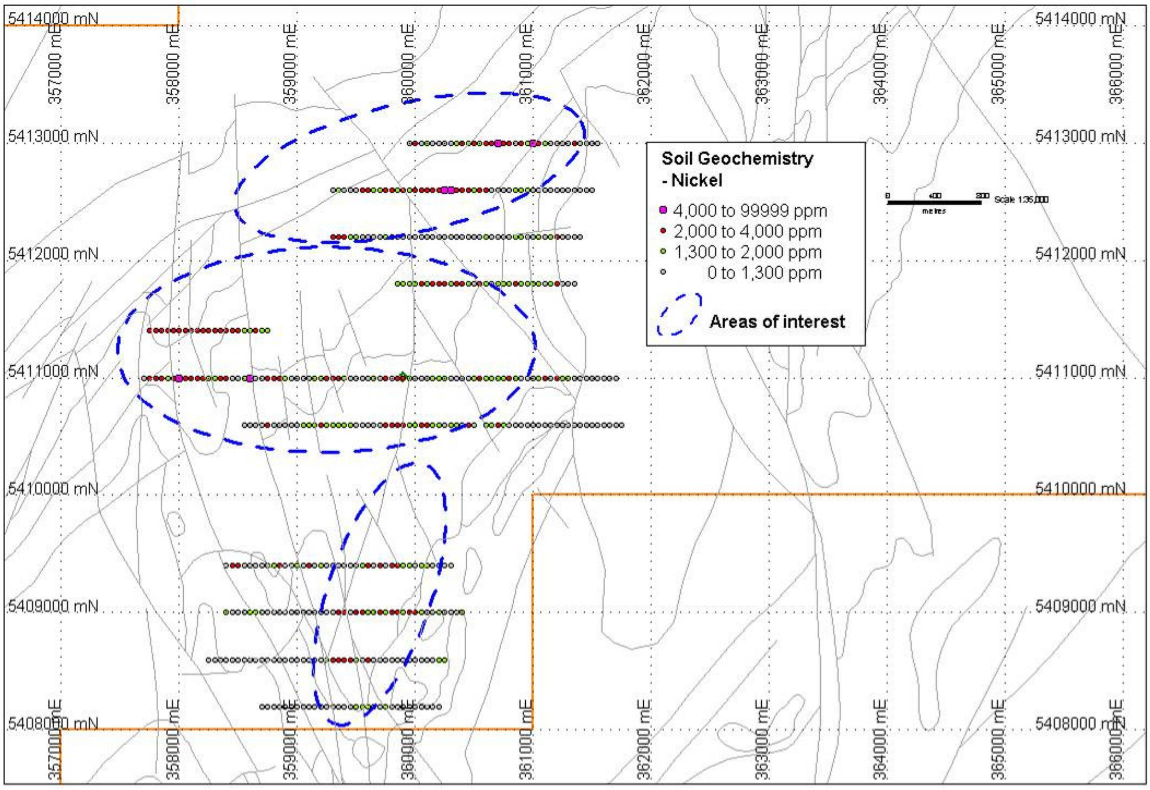
The section below reports on exploration activities between 26th March 2007 and 25th March 2008.

First pass soil sampling program – Wilson Prospect

A first pass multi-element soil program was completed to test several Geoinformatics conceptual targets, and anomalous historical surface sample locations. The program consisted of a total of 20.2km of line cutting giving 512 geochemical samples. These were dispatched for multi-element analysis (Au, Pd and Pt by Fire Assay Lead Collection (FA5MS), and Ag, As, Co, Cr, Cu, Ni, Pb & Zn by method B/OES. (Refer to appendix 1 for assay results – Sample Numbers 300601 - 301117).

These results mapped a broad coincident Ni, Cr, Co anomaly (+1300ppm Ni) which indicates olivine cumulates trending broadly NE-SW. Within this broad zone of olivine cumulates three nickel anomalies were defined striking >400m in length.

Figure 3. Areas of Interest



Infill soil sampling program – Wilson Prospect

In response to these generated areas of interest an infill geochemistry program was undertaken extending the soil lines to total 10.8km giving an extra 200 samples submitted for assay. (See figure 4 below and appendix 2 for assay results – Sample Numbers 134051 - 134260).

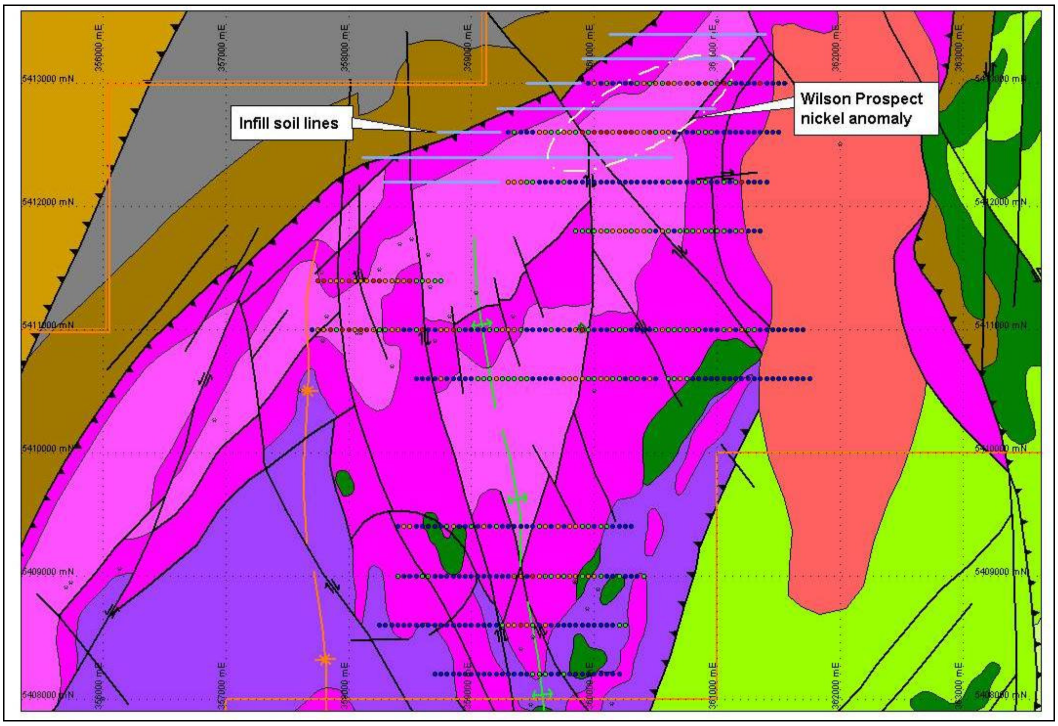


Figure 4. Location of Wilson prospect infill soil lines

The above encouraging results increase the Wilson prospect anomaly to 1.5km strike length with an average width of 400m in a northeasterly orientation. (See Figure 5) The anomaly continues to remain open to the northeast and appears to possibly continue to the southwest towards the Fentons workings under Tertiary basalt cover.

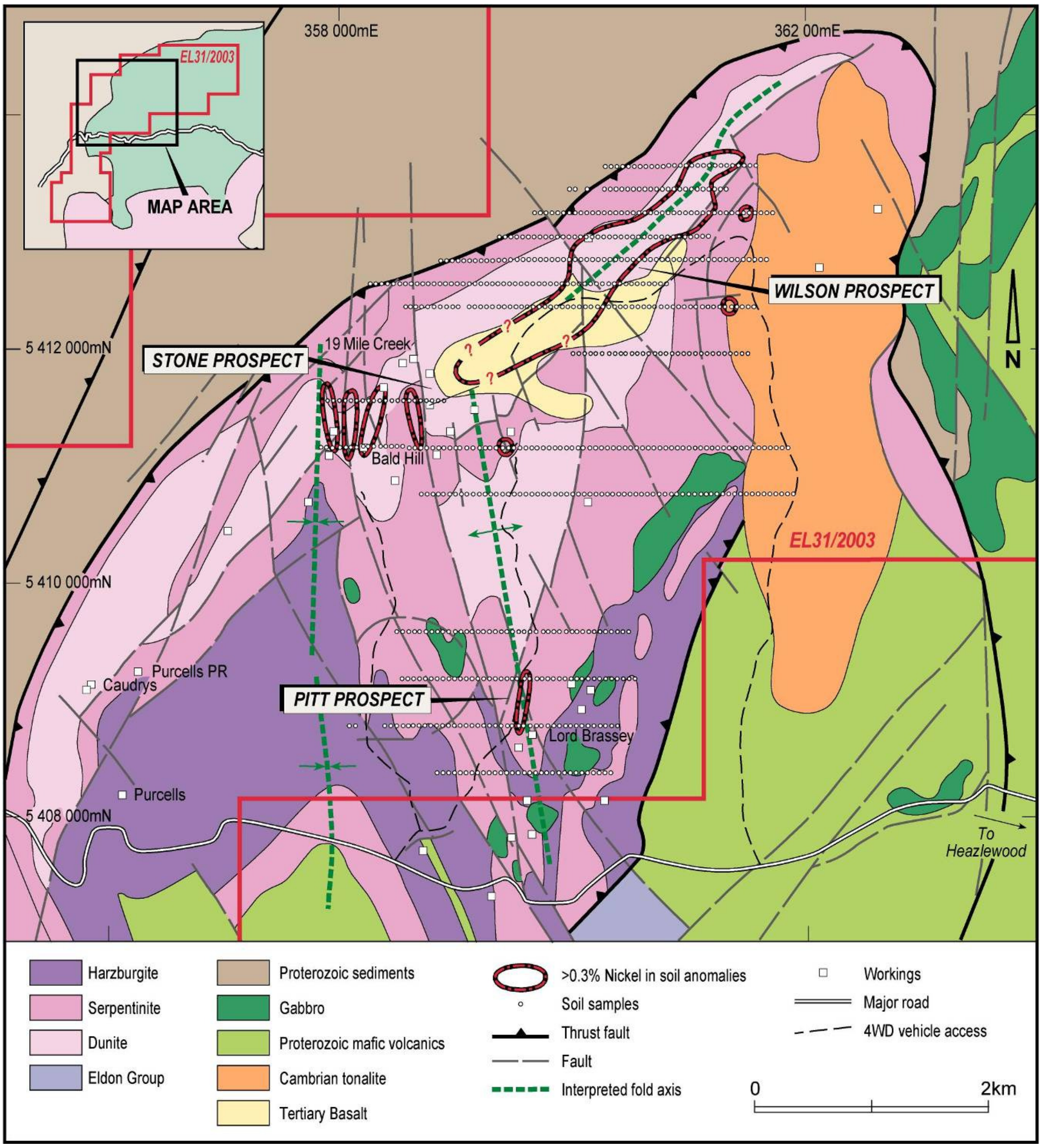


Figure 5. Location of Wilson prospect >0.3% nickel anomaly and Tertiary basalt cover

Versatile Time Domain Electro Magnetic survey (VTEM)

The proposed VTEM survey is imminent. This survey is planned for the Heazlewood Ultramafic Complex in order to detect conductive anomalies possibly associated with Nickel in soil anomalism in the complex. To cover the entire ultramafic complex on 200m space lines totals approximately 130 line km. (See figures 5 & 6 below)

Figure 6. Airborne EM lines on 200m spacing over the Heazlewood Ultramafic Complex

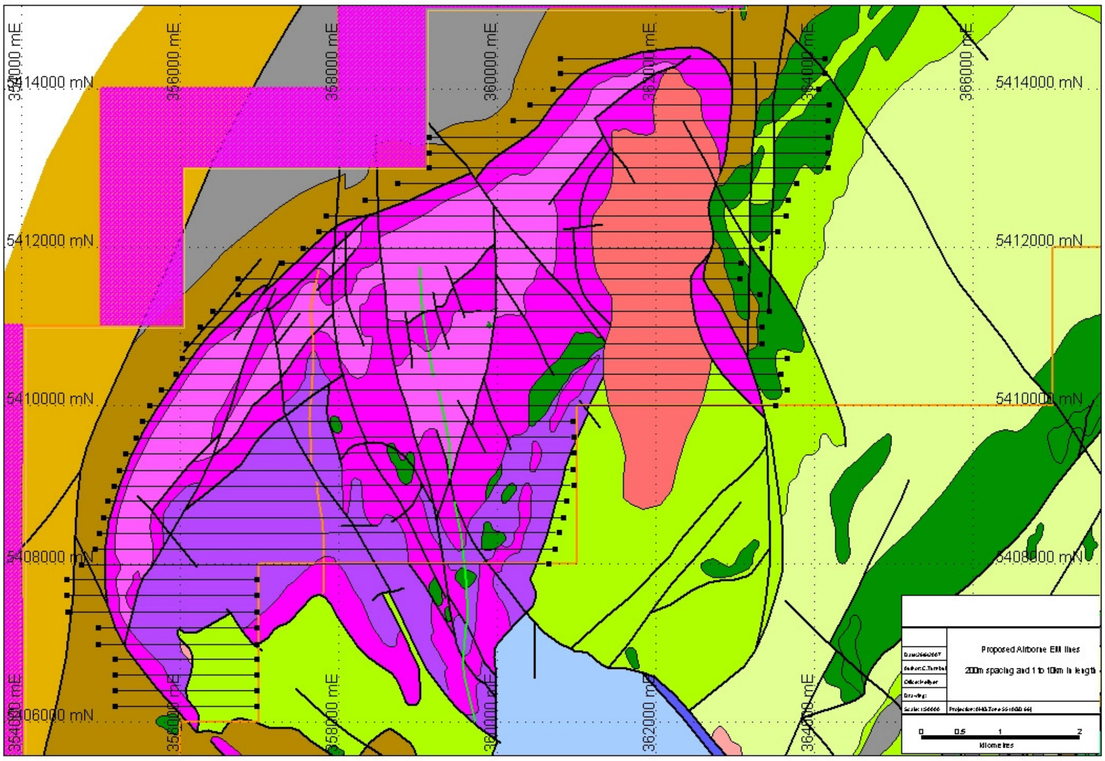
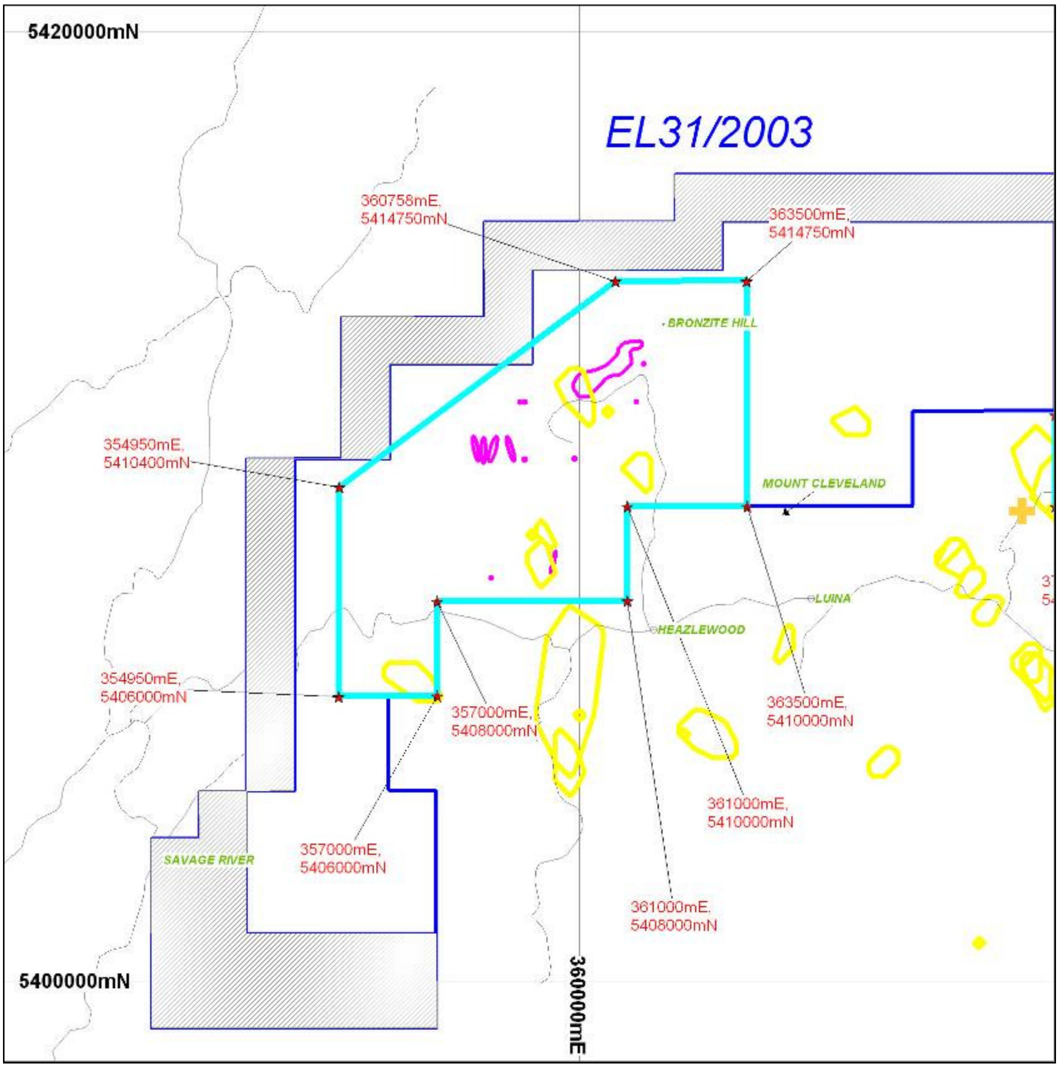


Figure 7. Plan of the Heazlewood EL31/2003 tenement with planned VTEM survey area (light blue), Stage 1B Geoinformatics target polygons (yellow).



Field Excursions / Rock Chip Sampling

Fentons and 19 Mile Creek workings -

Very little evidence of workings observed except for a distinct lack of vegetation, which is consistent with the alluvial/eluvial style of the deposits. Soil in the area of the anomaly is red with small downslope accumulations of magnetite consistent with soil developed from an ultramafic lithology. It is suggested that the water-transported heavy mineral accumulations of magnetite if selectively sampled, or panned would most probably also contain above background quantities of chromite, gold and PGEs (possibly including osmiridium) giving 'false' anomalism in regards to the hard rock lithology. (see figure 7)

Figure 8. Surficial magnetite accumulations on track around 5410600N.

Western 4WD track southern lines between Lord Brassy and Caudry's - Lord Brassy/North Brassy Ni-Co-Cr anomaly - Heazlewood 4WD track to Burgess Creek Pt-Pd anomalies -

Off the track terrain is steep and well forested. Dominated by grass with patches of rocky scree and sub-crop, this area is difficult to gain access for surface access methods. Ultramafic lithologies sub-crop in the track cuttings and float material is abundant. The majority of samples collected along the tracks are weakly magnetic serpentinite with rare course-grained pyroxenite. Two locations containing outcropping MRV were considered suitable for soil/rock chip sampling and are situated on a steep ridge of over 100m elevation. A distinct lack of historical work in this area is a testament to the problems of access. See appendix 2 for assay results – Sample Number HZ001 – HZ010

Eastern Heazlewood Rd 4WD track to Wilson Anomaly -

Once again. off the track terrain is steep and well forested, particularly in the north where the vegetation is dominated by bauera and is practically impenetrable. Two samples of medium to coarse-grained serpentinite collected along line 11 within the Wilson prospect nickel anomaly. Some intense antigorite veining and localized shearing observed and considered significant in relation to interpreted faults in that location. See appendix 3 for assay results – Sample Numbers HZ011 – HZ016

4. PROPOSED EXPLORATION

Proposed exploration over the next year includes; the proposed VTEM survey estimated at 130 line km @ 200m spacing. Following this, giving successful surveying and the marriage of geophysical and geochemical data will see a proposed 800m of diamond drilling.

5. ENVIRONMENT

The company has environmental policies in place that minimise the impact that exploration activities have on the environment. The policies include guidelines on how to reduce the risk of spreading plant diseases and weeds as a result of day-to-day exploration tasks.

Land Tenure

Heazlewood Exploration Licence comprises:

- Fossiking Area
- HEC Land
- Informal Reserve
- National Park
- Regional Reserve
- State Forest

The Environmental Activity Map in figure 9 shows the location of the exploration licence relative to conservation areas.

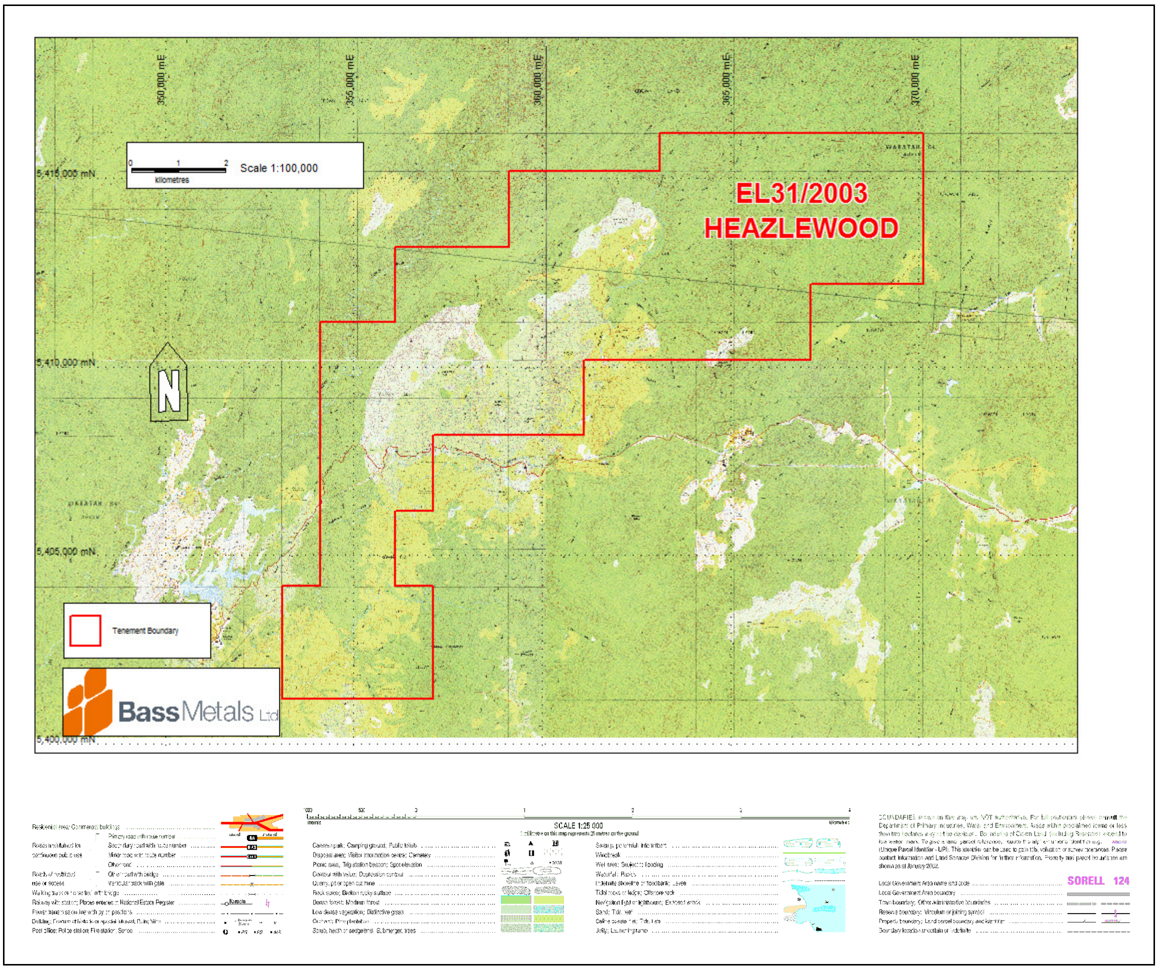


Figure 9. Environmental Activity Map

6. EXPENDITURE

January 2007 - January 2008		
Geoscientific Costs	**Geology**	36,860.52
	Geochemistry	23,970.77
	Geophysics	120.00
	Remote Sensing	
Drilling & Gridding Costs	**Gridding**	44,007.97
	Drilling	11.10
	Land Access Costs	
	Rehabilitation Costs	
	Feasibility Study Costs	
	Other Costs	8,997.01
	Admin Costs	6,974.34
	Total - eligible	**$120,941.71**

Table 1. Expenditure 26 March 2007 to 25 March 2008.

Expenditure for the twelve months between 26 March 2007 and 25 March 2008, has primarily been taken up with grid line cutting, soil sampling, and the planning of the VTEM survey.

7. REFERENCES

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Department of Primary Industries and Water, 2007. The List Land Information System Tasmania, 1:25,000 Raster Block 3 Datum GDA94, Digital Data CD-ROM

APPENDIX 1

Assay Results - Sample Numbers 300601 to 301117

APPENDIX 2

Assay Results - Sample Numbers 134051 to 134260

APPENDIX 3

Assay Results - Sample Numbers HZ011 – HZ016