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# WARATAH PROJECT
# (BLACK BLUFF RANGE GROUP)
# TASMANIA
# EL64/2004

## FINAL REPORT
## 10TH AUGUST 2008 TO 9TH AUGUST 2009


**Tenement Holder/Manager**
Bass Metals Ltd.
Suite 5, 2 Richardson St
West Perth, WA, 6005

**Geologist:**
Travis Murphy, *B.App.Sc (Geol.), PhD*
Senior Exploration Geologist
Hellyer Exploration Base, TAS

**Prepared By:**
Sally Bates, *B.App.Sc (Geol)*
Tenement Geologist
Hellyer Exploration Base, TAS


**Distribution:**
Mineral Resources Tasmania
Clancy Exploration Ltd
Bass Metals Ltd

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**Note: All figures and grids are according to the GDA94, Zone 55 datum.**

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## ABSTRACT

Bass Metals Ltd (BSM) commenced management of the Waratah exploration licence (EL64/2004) in August 2005. Work conducted on the licence for the year ended 9/08/2009 has included:

- Completion of a further 4 holes out of an 8 hole diamond drilling program giving total of 612.10m
- Review for relinquishment

**Expenditure -** Reporting period $182,647.39

Total to date $466,498.43

The Waratah tenement is part of the Black Bluff Range Group; the total expenditure up to the 31st May 2009 for this group is $836,065.16 against a required group expenditure of $650,258.31.

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## 1. INTRODUCTION

This final report is a summary of the exploration activities conducted on the Waratah exploration licence, EL64/2004 (Figure 1), for the period of 10 August 2008 to 9 August 2009, and for the time that BSM has managed the licence. The licence now covers a total area of 48km$^2$ due to a recent relinquishment of 56km². The Waratah licence is subject to an exploration Joint Venture agreement between Bass Metals Ltd (BSM) and Geoinformatics Exploration Inc. BSM is currently managing exploration of the licence from a base at the Hellyer Mine site.

The licence is situated in northwest Tasmania and located over an area containing the prospective Magnet Mine and Mt Bischoff Mine stratigraphies. The licence was claimed primarily because it is considered prospective by BSM for further carbonate-replacement mineralisation.

### 1.1 Location & Access:

The Waratah licence is located approximately 55km southwest of Burnie via Waratah township, on the west coast of Tasmania (Figure 1). The 104km$^2$ tenement encloses the Mt Bischoff Mining Lease and the adjacent small township of Waratah. The licence area can be found on the Inglis and Arthur River (1:100,000) LTIS map sheets.

Topographically the area is of highly variable relief with the majority of the licence area classified as state forest. In general, vehicular access is limited due to topography and thick rainforest vegetation. In the southern portion of the licence various tracks run off the Murchison Hwy and Magnet Rd between Magnet and Waratah. In the north-east the Belmont and Wandle Roads run off the Murchison Hwy, and in the north there is limited access via Flannel Rd.

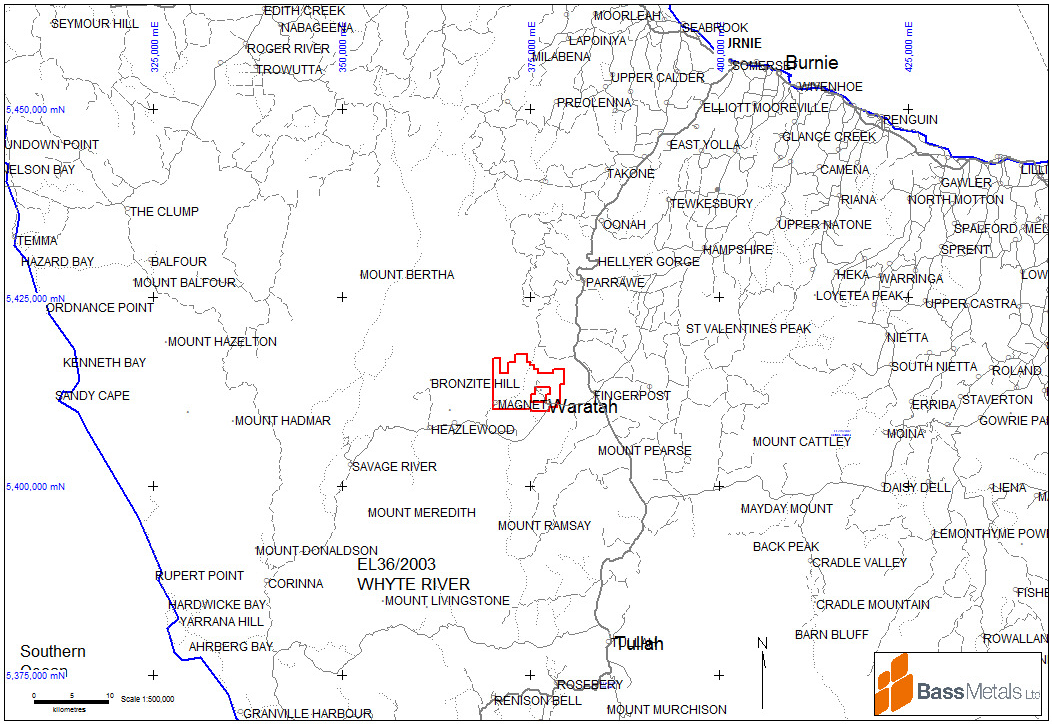



**Figure 1. Waratah Exploration Licence (EL64/2004) location map**

## 1.2 Geology Overview:

A number of geological units are present within the Waratah licence area; however the units of interest in terms of prospectivity for significant mineral deposits are chiefly the Burnie and Oonah Formation, Early Cambrian carbonates of the Crimson Creek Formation and Cleveland-Waratah Association, Cambrian Ultramafics and the Devonian Meredith Granite. Obviously it is the relationship between the Meredith Granite and the earlier sedimentary successions that provides the mineral prospectivity of the area. Regional geology is found below in Figure 2.

### 1.2.1 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).

### 1.2.2 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 Cleveland-Waratah Association

Considered as emplacement products of the Early Cambrian Tyennan Orogeny, the Cleveland-Waratah association consists of lithicwacke, red mudstone, chert, mafic volcanics with Ocean Floor Basalt characteristics, and rare carbonate rocks which host mineralization at the Cleveland Mine (Seymour *et al*, 2006).

### 1.2.4 Cambrian Ultramafics

In the early phase of the Tyennan Orogeny, the east-facing Tasmanian passive margin collided with an oceanic arc, resulting in obduction of mafic-ultramafic complexes across much of Tasmania. The original geometry of the allocthanous sheets has been substantially disrupted by later deformation so that the present surface occurrences are typically steeply dipping and fault bounded (Seymour *et al*, 2006).

### 1.2.5 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).

### 1.2.6 Parmeener Supergroup

Sediments of the Parmeener Supergroup represent Late Carboniferous to Late Triassic intrabasinal lithologies deposited unconformably on top of Late Devonian granites and older folded rocks. The Lower Parmeener Supergroup consists of mostly glacial and glaciomarine rocks, while the Upper Parmeener Supergroup consists of mostly fluvial and lacustrine sedimentary rocks (Seymour *et al*, 2006).

### 1.2.7 Tertiary Basalts

Radiometric dates from basalts across Tasmania indicate an age range of between 16.4Ma and 64.5Ma. These basalts cover the majority of the licence.

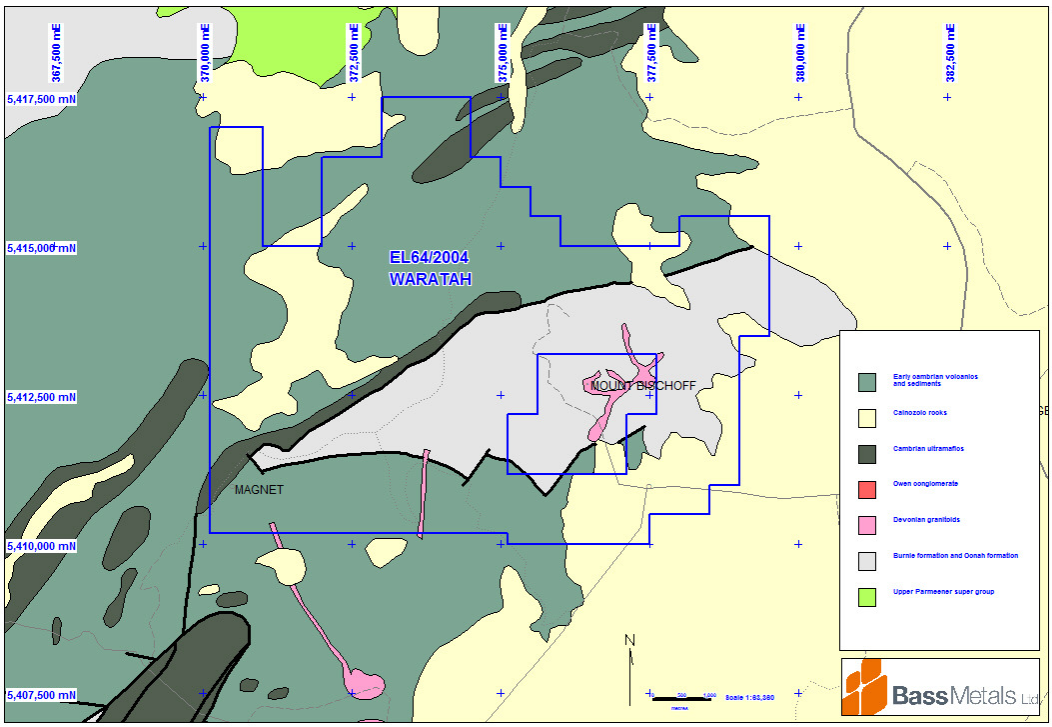



**Figure 2. Regional Geology showing licence area boundary**

### 1.3 Exploration Rationale:

The Waratah tenement was acquired because it overlays the interpreted subsurface extent of the Meredith Granite and potentially contains carbonate units within the Burnie and Oonah Formation and base of the Crimson Creek Formation.

This relationship is of interest as carbonates at the base of the Crimson Creek Formation host the sulphide skarn mineralisation at the Renison Bell Mine (24.54Mt@1.41%Sn). Locally, Early Cambrian rocks of the Cleveland-Waratah association also contain rare carbonates which host Devonian skarn mineralisation at the Cleveland Mine (12.4Mt@0.61%Sn, 0.25%Cu) located only 8.5km south-west of the Magnet workings.

The tenement also encloses the world-class Mt Bischoff deposit (10.54Mt@1.1%Sn) and contains the small, but rich Magnet Mine (0.63Mt@7.3%Zn, 7.3%Pb, 427g/tAg). Most of the known mineral occurrences in the licence area are intrusion-related tin or base metal mineralisation, with a number of historic placer tin deposits down stream of the Mt Bischoff Mine.

## 2. SUMMARY OF WORK COMPLETED FOR LIFE OF TENURE

### 2.1 Historic Mining:

The Mt Bischoff tin deposit was discovered in 1871 and during the following decade earned a reputation as being the richest tin mine in the world. Mt Bischoff went on to produce a total of 10.54Mt@1.1%Sn, however for the purpose of this report no further discussion of exploration within the vicinity of the mine will be detailed as the mining lease is excluded from the current exploration licence.

Of more relevance is the Magnet lead-zinc-silver deposit first noted around the same time as Mt Bischoff in 1877. The noted gossan was revisited some time later and in 1895 then Magnet Silver Mining Co NL was founded. Mining commenced with extraction of high-grade silver-lead until 1900 when the installation of a tramway allowed lower-grade ore to be exploited until the mine closure in 1933.

No further mining activity has occurred on the site, however in 1973 the zinc-rich tailings were removed by Electrolytic Zinc for treatment at Rosebery.

### 2.2 Exploration Prior to Current Licence Area:

Exploration in the Waratah licence area has generally concentrated in the areas adjacent to the Magnet Mine as reflected in the open file data. Modern exploration activity commenced in 1956 (Figure 3). A summary of this work is presented below.

**Date**: 1956-1960
**Company**: Rio Tinto Australian Exploration P/L (EL4/59)
**Exploration Philosophy**: Exploring for large-scale regional targets.
**Work Completed**: Airborne EM survey, airborne magnetic survey, gravimetric profiling, air photograph interpretation and geological mapping.
**Results and Conclusions**: No significant results. No further work recommended (59_0269).

**Date**: 1951(?) -1963
**Company**: Electrolytic Zinc Co
**Exploration Philosophy**: Exploring for extension to Magnet orebody. Mineralisation interpreted to be open to south.
**Work Completed**: Literature review, surface mapping and two diamond drill holes (WP83 & WP84) southwest of Magnet Mine. Technical report not viewed.
**Results and Conclusions**: Both drill holes intercepted interpreted hangingwall veins of limited width. Best results were; WP83 0.7%Pb, 3.9%Zn, 1.2oz Ag and WP84 2.35%Pb, 2.3%Zn, 3.45oz Ag. No further work recommended.

**Date**: 1963-1968
**Company**: Aberfoyle Tin NL (Cleveland Tin NL)
**Exploration Philosophy**: Magnet Mine mineralisation lies in a similar stratigraphic position to the Cleveland Mine mineralisation. Possibility for extension.
**Work Completed**: Geochemical sampling, magnetometer traverses, geological mapping, diamond core re-logging (EZ holes WP83-84) and petrology.
**Results and Conclusions**: Previous exploration was not adequate to test for repetition of similar ore bodies to the south. Current exploration produced 3 geochemical anomalies interpreted to represent similar ore bodies to the south. These anomalies are recommended for drill testing.

**Date**: 1971-1988
**Company**: Comstaff P/L (EL5/63)
**Exploration Philosophy**: Exploring for repetition of the Magnet Mine mineralisation; Assessment of the Arthur River alluvial tin prospect north-east of Mt Bischoff; Exploration for Mt Bischoff-style tin mineralisation at Ramsay prospect south of Mt Bischoff and Deep Gully Creek to the north-east.
**Work Completed**: Magnet Mine: Soil geochemical sampling, ground magnetic survey, geological mapping, diamond drilling and DIGHEM survey.
Arthur River: Heavy concentrate sampling, stream sediment sampling, geological mapping.
Ramsay Prospect: Geological mapping, geochemical sampling, magnetic survey.
Deep Gully Creek: Heavy concentrate sampling, geological mapping, airborne magnetic survey, DIGHEM survey, percussion drilling (DGC1-5), down-hole SIROTEM surveys, soil geochemistry, rock chip sampling.
**Results and Conclusions**: Drilling around Magnet (MAG1 & MAG2) yielded disappointing results, as did hole BAB1 to the northeast. The Ramsay prospect contains coincident Cu Sn W & ground magnetic anomalies. Deep Gully Creek drilling best result from DGC4 returned 65ppm Sn over 25.5m. Deep Gully Creek is considered prospective for a tin deposit akin to Renison Bell or Mt Bischoff (85_2411).

**Date**: 1989-1990
**Company**: Billiton Australia (EL46/88)
**Exploration Philosophy**: Follow-up previously defined anomalies. Stone Dam aeromagnetic anomaly has similar characteristics to Mt Bischoff. Deep Gully Creek has same stratigraphic host rocks and encouraging rock chip results from Ethol Creek outcrop. Targeting Mt Bischoff style mineralisation.
**Work Completed**: Stone Dam Creek: Magnetometer survey, geological mapping, rock chip sampling, UTEM survey and diamond drill hole.

**Results and Conclusions**: UTEM and ground magnetic results indicate that Stone Dam anomaly not due to Tertiary basalt, and not inconsistent with massive sulphide (pyrrhotite) source. WD89-1 drilled into UTEM anomaly, however no anomalous geochemistry encountered, and the UTEM anomaly subsequently re-interpreted to be weathering feature in Tertiary basalt. No further work recommended. Tenement relinquished (90_3092).

**Date**: 1988-1989
**Company**: Placer Exploration Ltd (EL47/88)
**Exploration Philosophy**: Test Magnet Creek area for gold mineralisation.
**Work Completed**: Data review, stream sediment sampling, rock chip sampling, air photograph interpretation and petrology.
**Results and Conclusions**: Weak gold anomalism in Magnet Creek unexplained. No further work recommended. Tenement relinquished (90_3070).

**Date**: 1990-1993
**Company**: RGC Exploration (EL12/90 & EL15/90)
**Exploration Philosophy**: Explore for gold associated with mafic (boninitic) volcanics.
**Work Completed**: Historic data compilation, stream sediment sampling and bulk leach sampling.
**Results and Conclusions**: Weak gold anomalism in Magnet Creek probably shed from small base metal workings in the area. No further work recommended. Tenement relinquished (90_3070).

**Date**: 1994-1998
**Company**: Mining Project Investors P/L (EL17/93) JV Pasminco Exploration
**Work Completed**: Data review, stream sediment sampling, rock chip sampling, air photograph interpretation and petrology.
**Results and Conclusions**: Drill hole (NMM-1) into Magnet anomaly in Magnet Creek intersected zone of disseminated magnetite alteration that accounted for magnetic anomaly. No further work recommended.
Literature review and rock chip sampling of Magnet Mine concluded that the mine area is under explored by modern exploration techniques. Further work recommended. Tenement relinquished (98_4226).

## 3. DURING CURRENT TENEMENT

### 3.1 2005 – 2006 (BSM)

*TERRA Satellite (ASTER Data) -*
Still interested in the idea of using a remote sensing system to map wall rock alteration on a more regional basis. BSM managed to source some ASTER data over the northwest corner of Tasmania. It was decided that the data would be used in a more regional sense than had originally been anticipated.

ASTER is an acronym for 'Advanced Spaceborne Thermal Emission and Reflection Radiometer' and it is an instrument that flies on the Terra Satellite. It collects a similar radiation spectrum to the HyMap instrument but at a lower resolution (4x4m pixels versus 30x30m pixels). BSM had this ASTER data forwarded to Bob Agars at AGARSS.

BSM realised that because of the lower resolution of the ASTER data and the issue of vegetation shielding radiation reflected from the ground surface that the data would be more useful for targeting 'active zones' rather than providing the bullseye targets that had originally been hoped for from the HyMap data.

In terms of alteration within the Waratah tenement, the concentration of alteration occurs within the central part of the licence north of Waratah township. The scattered alteration is dominated by $SiO_2$ with lesser carbonate alteration adjacent to Mt Bischoff in the Oonah and Burnie Formation. North of Mt Bischoff into the andesitic terrain argillic alteration predominates. Further north again within the volcanic sediments occurs a zone of discreet carbonate alteration. Sericite and phyllic alteration have a strong spatial association and are scattered throughout. These alteration relationships appear to superficially map changes in broad lithological associations, but do not appear to highlight any particular structural features or known mineral occurrences.

In regards to historic mine development is the licence area, there is very little alteration mapped around the Magnet Mine and there is no distinguishable character to the alteration adjacent to Mt Bischoff.

Interpretation methodology employed in processing the ASTER data was included in Appendix 2 of the report for the reporting period 10/8/2006 – 9/8/2007.

*Geoinformatics Geological Modelling & Targeting -*
<u>Regional Targets</u>
BSM utilised Joint Venture partners Geoinformatics Exploration Inc to compile a 3-dimensional spatial database (GIS).

Models were developed for targeting VHMS, intrusive related tin systems (e.g. Renison and Mt Bischoff) and intrusive related nickel skarn systems (e.g. Avebury). Targets were identified and ranked according to probabilistic Monte Carlo analysis of best-available 2D and 3D geoscientific data and allowed an assessment of exploration risk and uncertainty.

At Waratah, using Monte-Carlo Ranking analysis, Geoinformatics generated a total of 10 intrusive-related, carbonate-replacement targets, 7 Hellyer-Rosebery VHMS targets and 1 nickel skarn-related target for a total of 18 targets.

Attention was focused on the Magnet mine area, represented by the three co-incident targets in the south west corner of the EL. It is intended that in the 2007-08 period that more attention will be given to the other Geoinformatics targets in the tenement.

The Geoinformatics process methodology was included as Appendix 3 for the reporting period 10/8/2005-9/8/2006.

### 3.2 2006 – 2007 (BSM)

The main thrust of the work to date has been to produce a 3D model of the Magnet mine workings, combined with a review of literature to produce a near mine exploration plan. The near mine environment has not been the subject of recent exploration and presents an attractive target for BSM.

### 3.3. 2007 – 2008 (BSM)

*Proposal and commencement of a diamond drilling program -*

A proposal for a series of seven short holes (25-50m) to be drilled in the footwall position along the existing magnet access track was approved by MRT. These holes were designed to test for remnant mineralization along the extent of the old mine workings, and test for new Pb-Zn-Ag strike extensions to the north. Figure 3 shows the extent of the shallow program, excluding the southernmost hole indicated. Fig 4 shows a plan view of proposed works and drill hole locations.

**Figure 3. Longitudinal Projection of the Magnet Mine with schematic drill-hole pierce points (red) as part of the ongoing exploration program.**

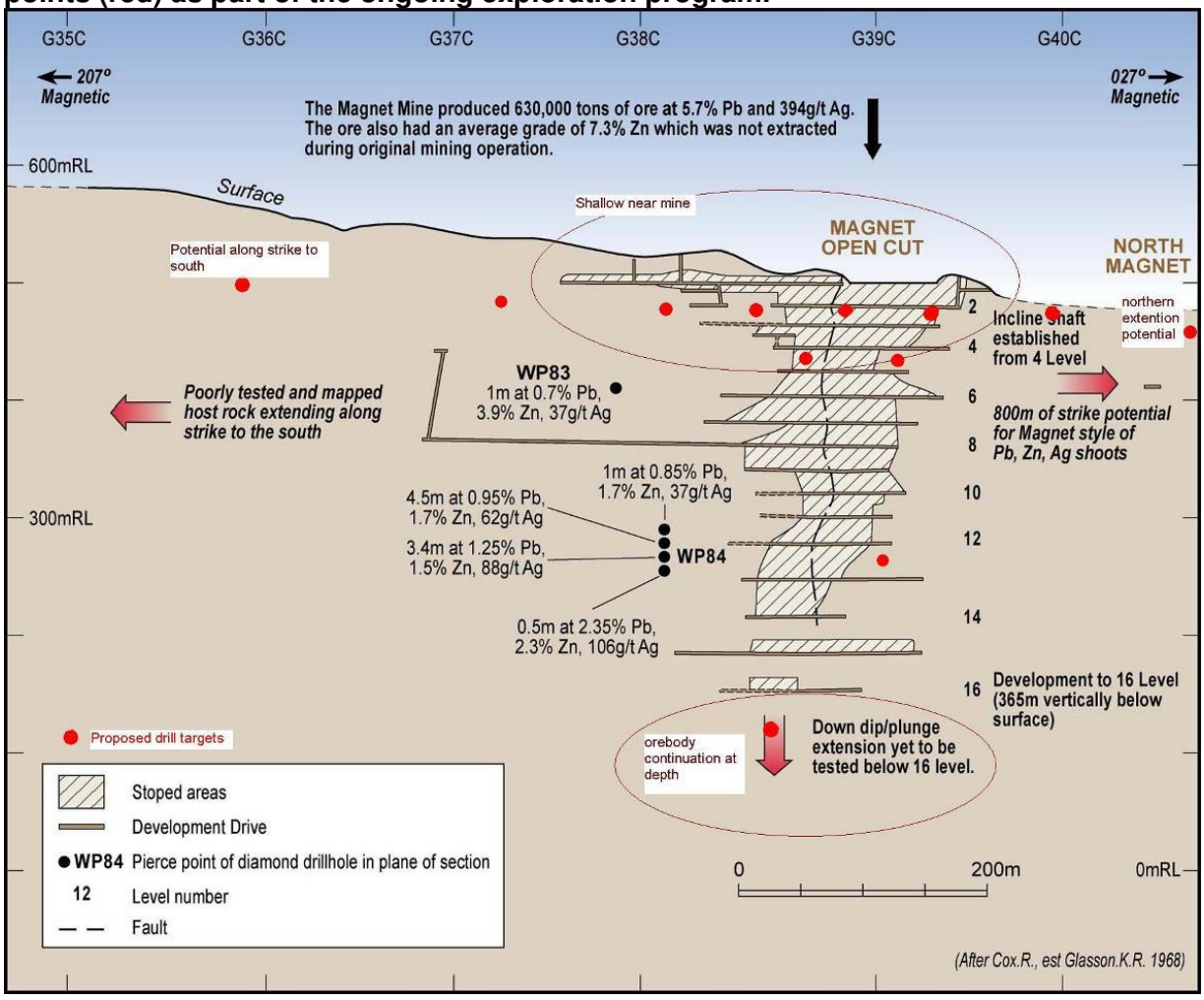
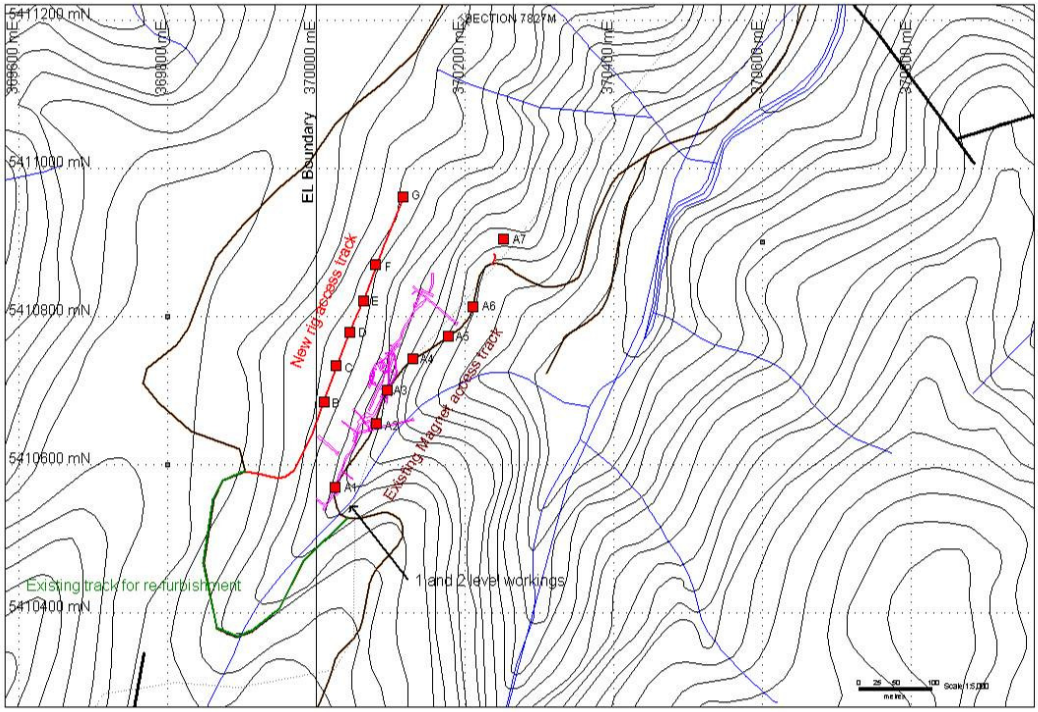


**Figure 4. Plan view of the Magnet Mine upper levels with proposed drilling.**



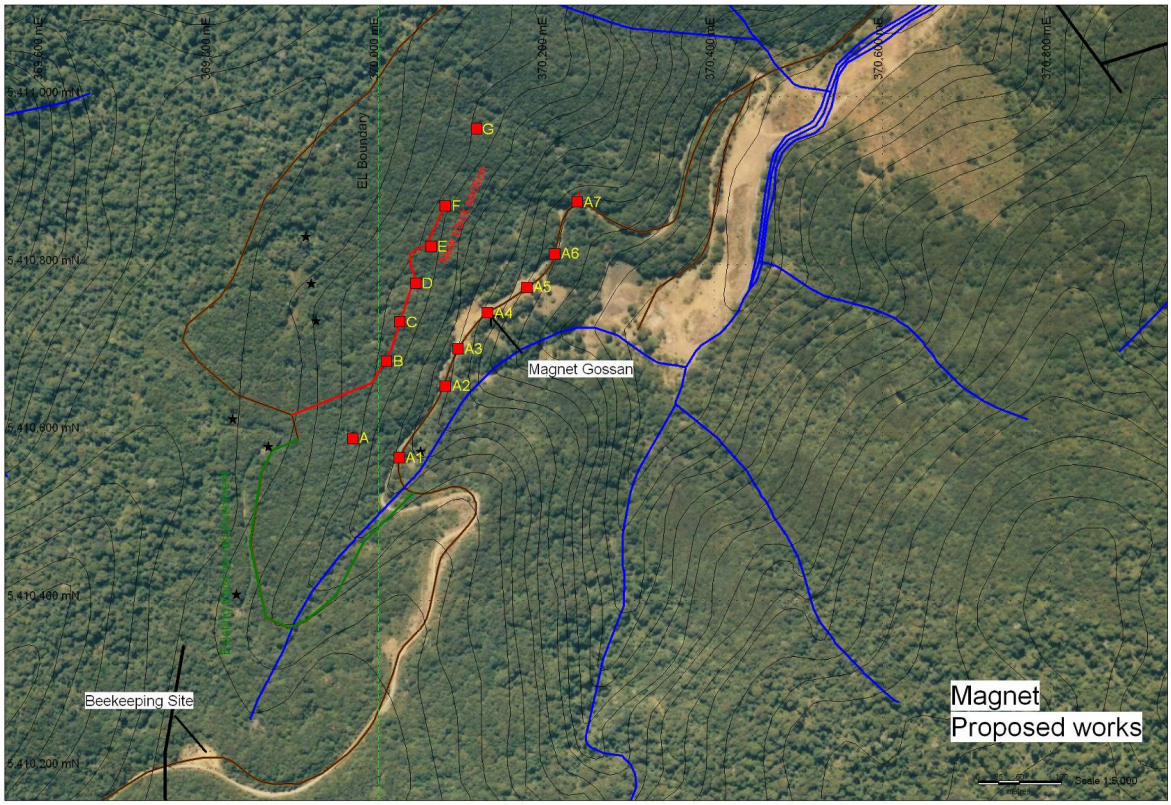

A further seven holes were proposed to be drilled from the mine hanging-wall position to test for the presence of the 'new lode' at shallow depths, as it may not be possible to test this position with the foot-wall hole due to the presence of stopes. Preparation for drilling in the hanging-wall position required the construction of a new Access track which was granted and prepared. These works were subject to the completion of an archaeological survey which was completed by consultant archaeologist Dr Tony Webster.

Drilling commenced on diamond hole MGD001 at site A7 (table 1 and figure 5) and was designed to intercept the Magnet ore position to the north of known workings. This hole had a planned depth of 100m, and was successfully drilled to 97m but encountered no significant mineralisation. Ground conditions were found to be poor, and drill progress was slow due to conventional drilling methods, and collapsing ground around faults, resulting in short runs and extended reaming time. Drilling has been postponed pending a review of the planned program and acquiring a more appropriate drill-rig. This drill hole was considered to have successfully tested the target (interpreted to be around 70m), with sub-economic vein related sphalerite present at the target position. This result leaves open the possibility of finding economic mineralisation along strike, particularly to the south adjacent to known workings. 28 samples were submitted for assay.

## Table 1. Magnet Mine area Drill Planning

| ID | AMGE | AMGN | Dip | AZ MAG | Plan Depth | Target |
|---|---|---|---|---|---|---|
| | | | | | | |
| **Drill-holes along Magnet access road** | | | | | | |
| A1 | 370025 | 5410570 | -30 | 277 | 30 | footwall breccia mineralisation |
| A2 | 370080 | 5410655 | -30 | 277 | 30 | footwall breccia mineralisation |
| A3 | 370095 | 5410700 | -30 | 277 | 30 | footwall breccia mineralisation |
| A4 | 370130 | 5410743 | -12 | 277 | 55 | footwall breccia mineralisation |
| A5 | 370177 | 5410773 | 7 | 277 | 95 | footwall breccia mineralisation |
| A6 | 370210 | 5410813 | 7 | 277 | 90 | mineralised breccia outcrop |
| A7 | 370237 | 5410875 | 0 | 300 | 100 | footwall breccia mineralisation |
| | | | | | | |
| **Current Plan western access track** | | | | | | |
| B | 370010 | 5410685 | -55 | 97 | 110 | Hangingwall 'new lode' + remnant |
| C | 370026 | 5410732 | -55 | 97 | 115 | Hangingwall 'new lode' + remnant |
| D | 370045 | 5410778 | -55 | 97 | 115 | Hangingwall 'new lode' + remnant |
| E | 370063 | 5410822 | -55 | 97 | 130 | Hangingwall 'new lode' + remnant |
| F | 370080 | 5410870 | -55 | 97 | 130 | Hangingwall 'new lode' + remnant |

## Figure 5. Plan view of proposed collar locations on aerial photograph



*VTEM program –*
A total of 173.6 line-km was flown over the Waratah tenement. This program was aimed at detecting Pb-Zn-Ag Magnet-deposit analogues which are blind from surface as well as tin mineralization in the immediate vicinity of the recommissioned Mt Bischoff Tin Mine. Potential VHMS targets interpreted by Geoinformatics was also flown as part of this program. (Figure 6)

Preliminary results of the VTEM work indicated one possible conductor detected by the method to be situated adjacent to the Mt Bischoff Tin Mine. (Figure 7) The western part of the survey in the vicinity of the Magnet Mine is devoid of response and the intense response on the eastern side of the survey is consistent with mapped Tertiary basalt; hence these are included in the partial relinquishment review.

**Figure 6. Plan of the Waratah EL with planned VTEM survey area (light blue) and Stage 1B GXL target polygons (yellow).**

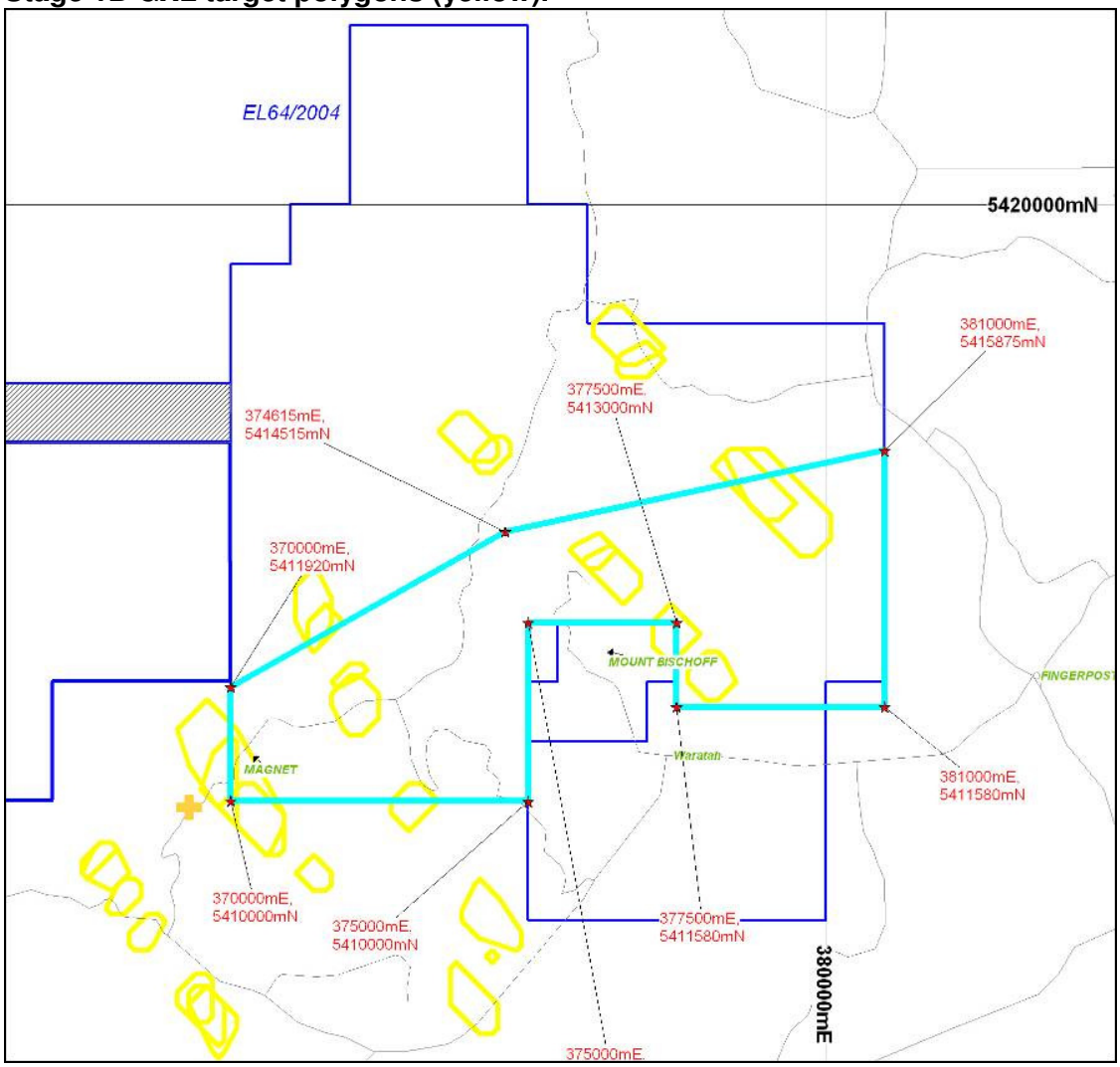
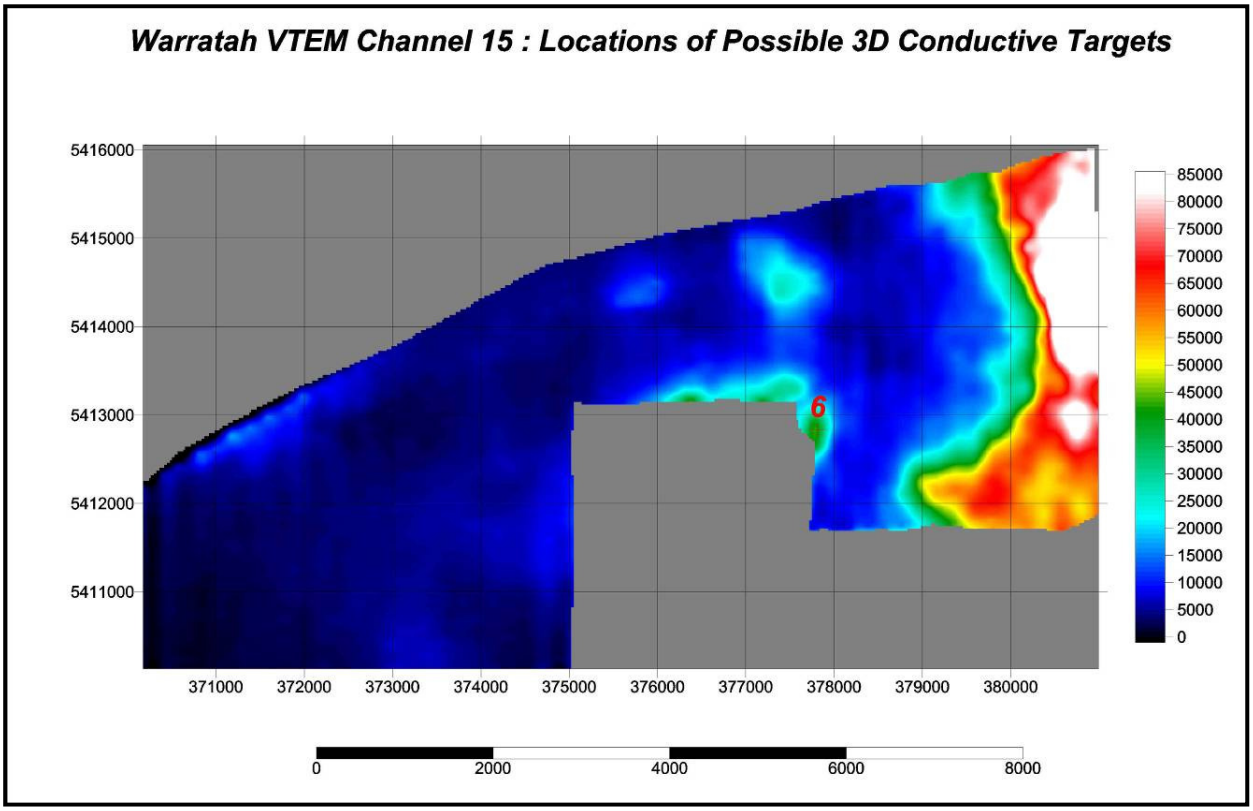


**Figure 7. Plan of the contoured Waratah VTEM data and anomalies considered worthy of follow-up.**




*Location of old adits & traverse sampling -*
A traverse was made to locate two adits noted in MPI's 1987 report by S.Chaku. These workings were exploration adits to the north of the main Magnet Mine workings along the line of strike, driven to intercept the ore position and according to Nye, 1923, 'to test at depth an outcrop of gossan, which occurs on the north boundary of the section.

Noted at the 'upper adit, rock types included gossan, altered mafics, siliceous material, and nodular mafics.

Magnet creek was traversed to check for the presence of possible limestone, evidenced by geoinformatics interpretation of this target area. Lithoogies were found to agree closely with Placer's geological fact map from Chaku 1997, consisting of red siltstones and light brown volcaniclastic sandstone and blue grey sandstone of the Crimson Creek Formation outcropping in Magnet Creek. Float samples noted to the west of Magnet Creek Formation outcropping on the traverse in from 370000mE were all red siltstone. Samples obtained from Magnet Creek variable contain 1-3% vein related fine pyrite.

A traverse was made west from the central area of the Magnet mine workings with the view of sampling a section through the immediate stratigraphy, which strikes N-S and dips steeply west. Samples collected are listed in table 2 below.

**Table 2. Rock chip sample details in the Magnet area.**

| Site Description | sample type | sample no | AMGE | AMGN |
|---|---|---|---|---|
| behind vent rise, sth of gossan | chip | 1 | 370081.5 | 5410676 |
| adit | chip | 2 | 370022.5 | 5410613 |
| water race near adit | chip | 3 | 370017 | 5410610 |
| water race near proposed drill track | Mineralised chip 3% cpy | 4 | 370005 | 5410645 |
| break in slope near rock pile | chip | 5 | 369970 | 5410743 |
| water race junction | chip | 6 | 369940 | 5410810 |

A traverse was made along North Valley Road to the north east of Mt Bischoff to investigate a potential geoinformatics target. The North Valley road was found to be in good condition to 377100mE, 5412100mN, but is impassable by vehicle from that point with washouts and numerous small trees fallen across. The track was traversed by foot. The rocks traversed included grey siltstone, cream sandstone, pyritic sandstone hornfels of the Bischoff Series, and float evidence of quartz porphyry. Gossanous quartz-pyrite-sulphide veining can be seen cross cutting some sandstone hornfels outcrops along the track.

Another traverse was made along the Mathews Creek to investigate the geology in this area and assess access to a Geoinformatics target on the top of the Magnet Range. Variolitic mafic volcanic and volcaniclastics were sampled. No mineralisation was encountered, though a shallow working by the creek was found. Samples were collected and are listed in table 3 below.

**Table 3. Sample sites**

| Site Description | sample type | sample no | AMGE | AMGN |
|---|---|---|---|---|
| along creek bed | chip | fl1 | 370940 | 5411400 |
| along creek bed | chip | fl2 | 371035 | 5411460 |
| along creek bed | chip | fl3 | 371050 | 5411480 |
| along creek bed | chip | fl4 | 371085 | 5411515 |
| along creek bed | chip | mc1 | 371100 | 5411530 |
| eastern side of creek | chip | mc2 | 371150 | 5411555 |
| along creek bed | chip | mc3 | 371095 | 5411590 |

In total from all the traverses completed 17 samples were submitted for analysis. Refer to appendix 2 for assay results.

*Water sampling regime* -

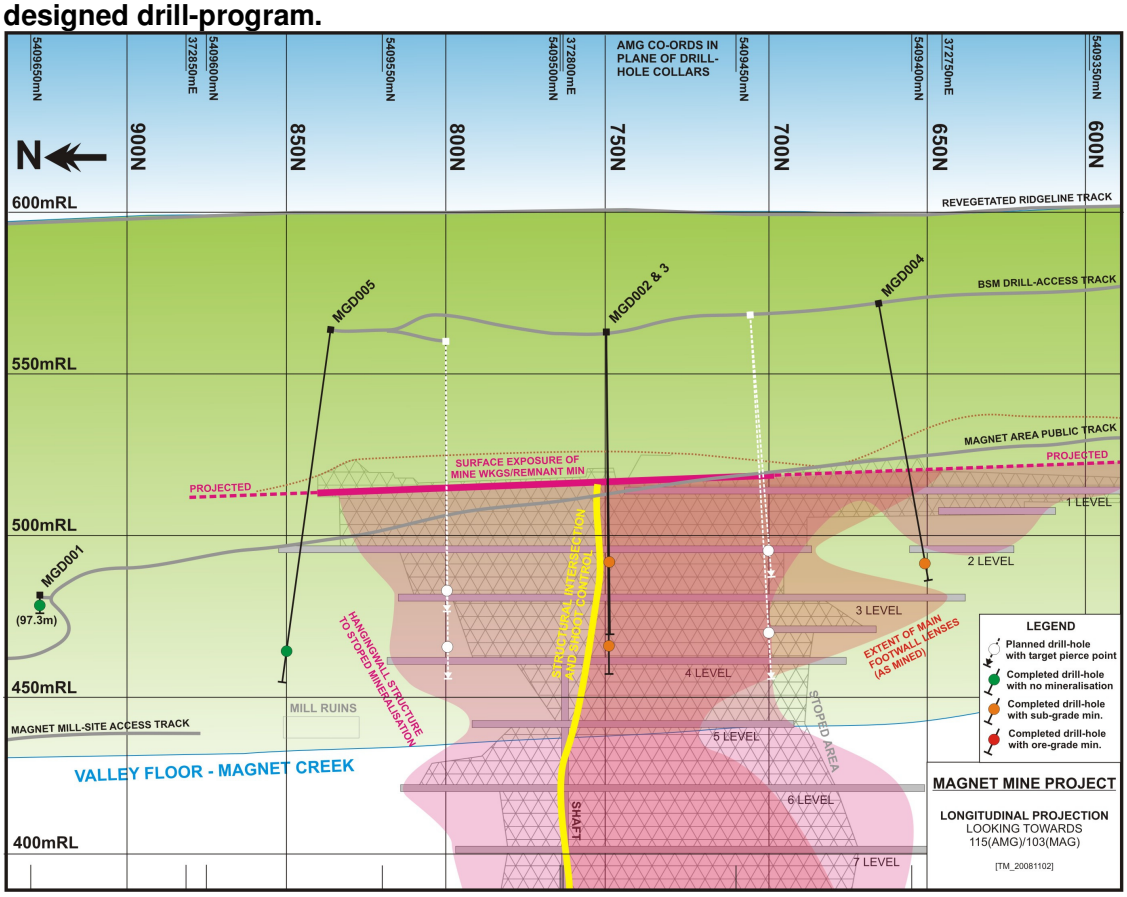
A monthly water sampling regime has been designed to cover a number of BSM's exploration areas taking into consideration the environmental factors whilst drilling in remote areas. A total of 3 areas were sampled around the Waratah exploration licence (access permitting). This program ceased during early 2009 due to consistency of results to date.

*Partial Relinquishment review -*
A review for a partial relinquishment of this tenement was undertaken in conjunction with the VTEM results and the lack of Geoinformatics targets and minor historic exploration 61.2km² has been relinquished resulting in a 53% reduction overall reducing the licence to 42.8km².

**4.CURRENT WORK**
**Exploration completed for the reporting period 10th Aug 2008 to 9th Aug 2009**

The above mentioned drilling program that began during the last reporting period continued during this period completing a further 4 holes out of an 8 hole program giving total of 612.10m. (Figure 8) This program was designed to test for remnant mineralization along the extent of the old mine workings, and test for new Pb-Zn-Ag strike extensions to the north. Unfortunately the program was terminated after hole number MGD005 given the disappointing results to date (Table 1) and the down-graded prospectivity of defining near surface mineralisation amendable to open-cut mining.

**Figure 8. Longitudinal projection of the upper part of the Magnet Mine and the designed drill-program.**




MGD002 was collared in variolitic basalt (Figure 9) and passed through a thick sequence of medium-grained mafic (dolerite?) before intersecting a gossan in the immediate hangingwall to the Magnet Mine workings. Several small voids were intersected and core recoveries were low in the highly oxidised gossanous material. The gossan was

intersected from approximately 88.3m to 95.7m at which point a ca. 11.0m interval of mixed rubble was intersected and this is interpreted as stope fill and collapse material. A sequence of strongly foliated and variably fuchsite altered ultramafic rocks (largely serpentinite) were then intersected to the end of the hole. Within this ultramafic sequence sporadic ankerite-quartz-sphalerite-(minor galena) veins and breccia were intersected. The most strongly mineralised of these zones was from approx. 112 to 113.5m where the estimated grades are 4%Zn and 1%Pb. This zone is located up-dip of mined footwall mineralisation. It is highly unlikely that this intersected veining represents ore-grade material.

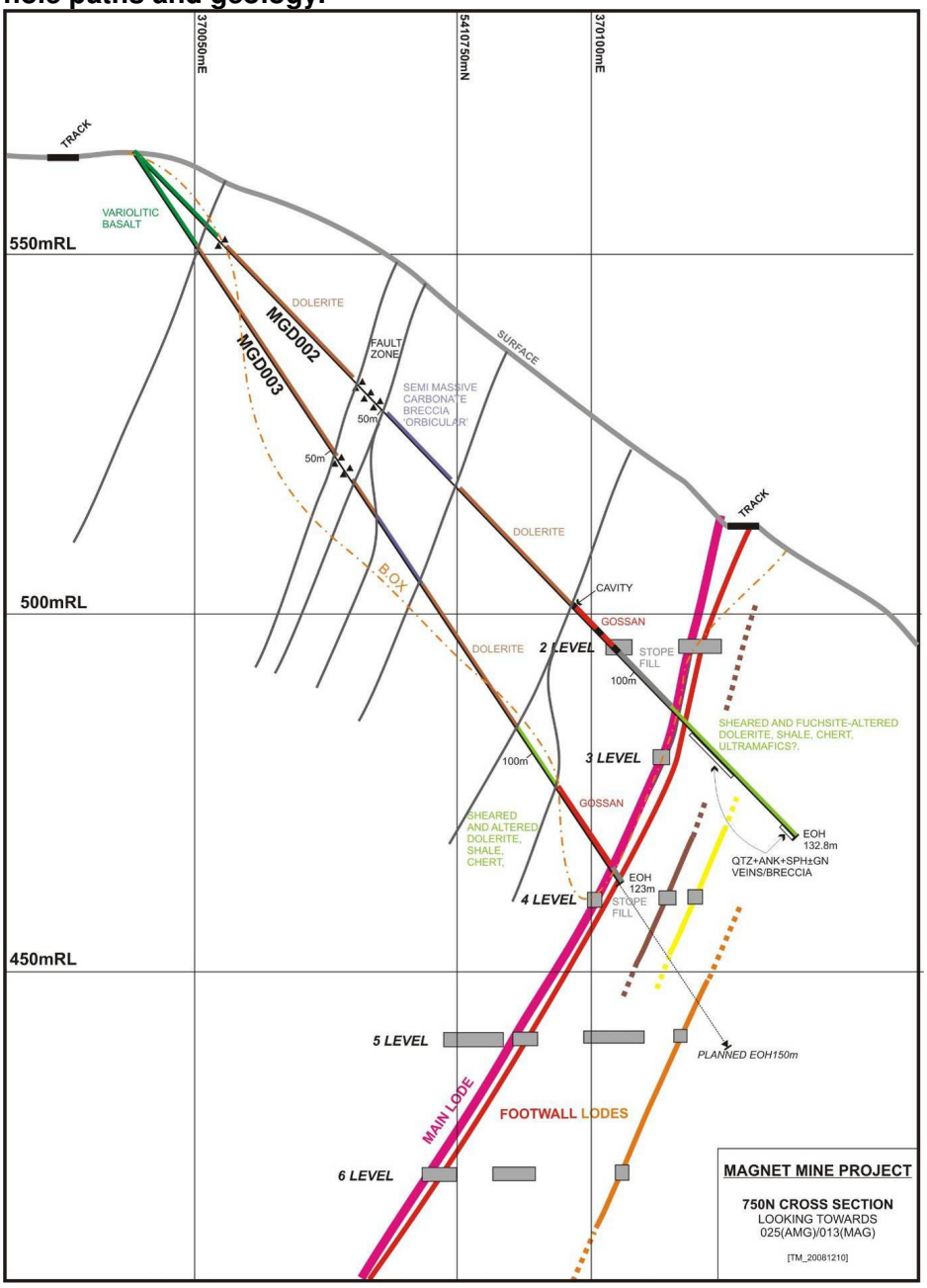
The target position in the immediate hangingwall in this drill-hole was strongly oxidised and the gossan gave Niton results in the order of 2% Zn (highest of 5%) and insignificant Pb results. From 107.2m to the end of hole the rock was not oxidised. This indicates an asymmetrical oxidation profile where the hangingwall to the mine and orebody is highly oxidised. Given the tightness of the Magnet Valley and incised topography, it is inferred that glaciation and stripping of the weathered profile has not occurred to any great extent here hence the deep (30m below surface) gossan development and leaching of metals. This may have significant implications on any potential open-cut opportunities at Magnet. However, sulphide bearing rock has been found on the scree slope/dump at around the 2 level RL suggesting that not all of the mineralisation is oxidized at this level. This will be closely monitored and may result in a significant reduction in the drilling metres planned here.

MGD003 (750N, Figure 9) intersected gossan in the immediate hangingwall of the mine workings. The gossan was observed over an 11.8m interval although core recovery was very poor. Traces of sulphide (galena, sphalerite) were noted. It was disappointing to intersect gossan at this depth (approx. 50m below surface) and the deep oxidation profile impacts on the prospectivity of defining open-cut resources in the immediate vicinity of the Magnet Mine. MGD003 was terminated in the stope fill due to drilling difficulties.

| From (m) | To (m) | Drilled Interval (m) | Zn (%) | Pb (%) | Cu (%) | Ag (g/t) | Au (g/t) |
|---|---|---|---|---|---|---|---|
| **MGD002 (at a 1% (Pb+Zn) cutoff)** | | | | | | | |
| 88.3 | 94.8 | 6.5 | 1.8 | 0.9 | 0.01 | 72 | NA |
| 109.8 | 113.3 | 3.5 | 3.3 | 0.5 | 0.01 | 71 | NA |
| ***Incl. (at a 5% (Pb+Zn) cutoff)*** | | | | | | | |
| *112.75* | *113.3* | *0.55* | *5.5* | *1.1* | *0.01* | *120* | *NA* |
| 115.3 | 116.2 | 0.9 | 6.9 | 1.0 | 0.01 | 96 | NA |
| 119.2 | 120 | 0.8 | 2.4 | 0.4 | 0.01 | 26 | NA |
| **MGD003 (at a 1% (Pb+Zn) cutoff** ) | | | | | | | |
| 107.4 | 119.2 | 11.8 | 3.1 | 1.4 | 0.01 | 189 | NA |
| ***Incl. (at a 5% (Pb+Zn) cutoff)*** | | | | | | | |
| *107.4* | *110.4* | *3.0* | *4.1* | *3.4* | *0.02* | *348* | *NA* |
| **MGD004 (at a 1% (Pb+Zn) cutoff** ) | | | | | | | |
| 90 | 95 | 5.0 | 1.1 | 0.5 | 0.00 | 68 | NA |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 98.3 | 99.35 | 1.05 | 9.3 | 1.8 | 0.02 | 373 | 0.02 |
| 102 | 103 | 1.0 | 1.3 | 0.2 | 0.00 | 23 | NA |
| **MGD005 (at a 1% (Pb+Zn) cutoff )** | | | | | | | |
| 119 | 120 | 1.0 | 1.8 | 0.8 | 0.00 | 23 | NA |

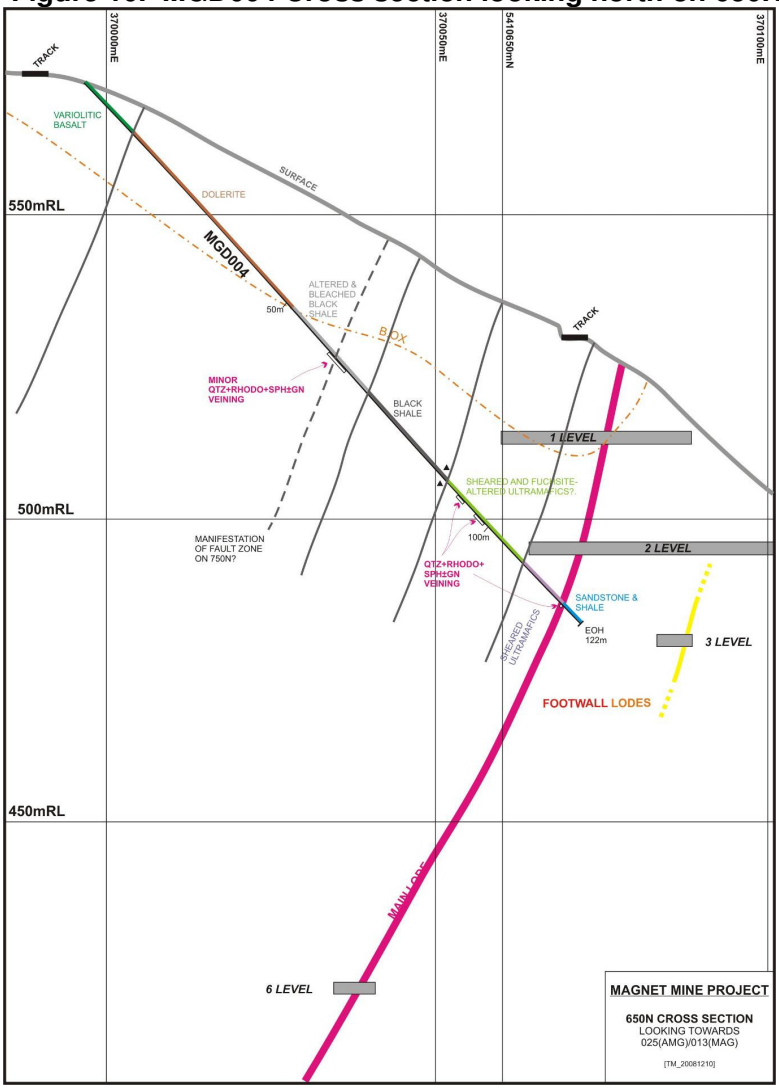
**Figure 9. Cross section on 750N (looking north) illustrating MGD002 & 003 hole paths and geology.**




MGD004 (650N, Figure 10) did not intersect any mine voids as planned. The geology differed in this hole in that a significant interval of shale/slate was intersected

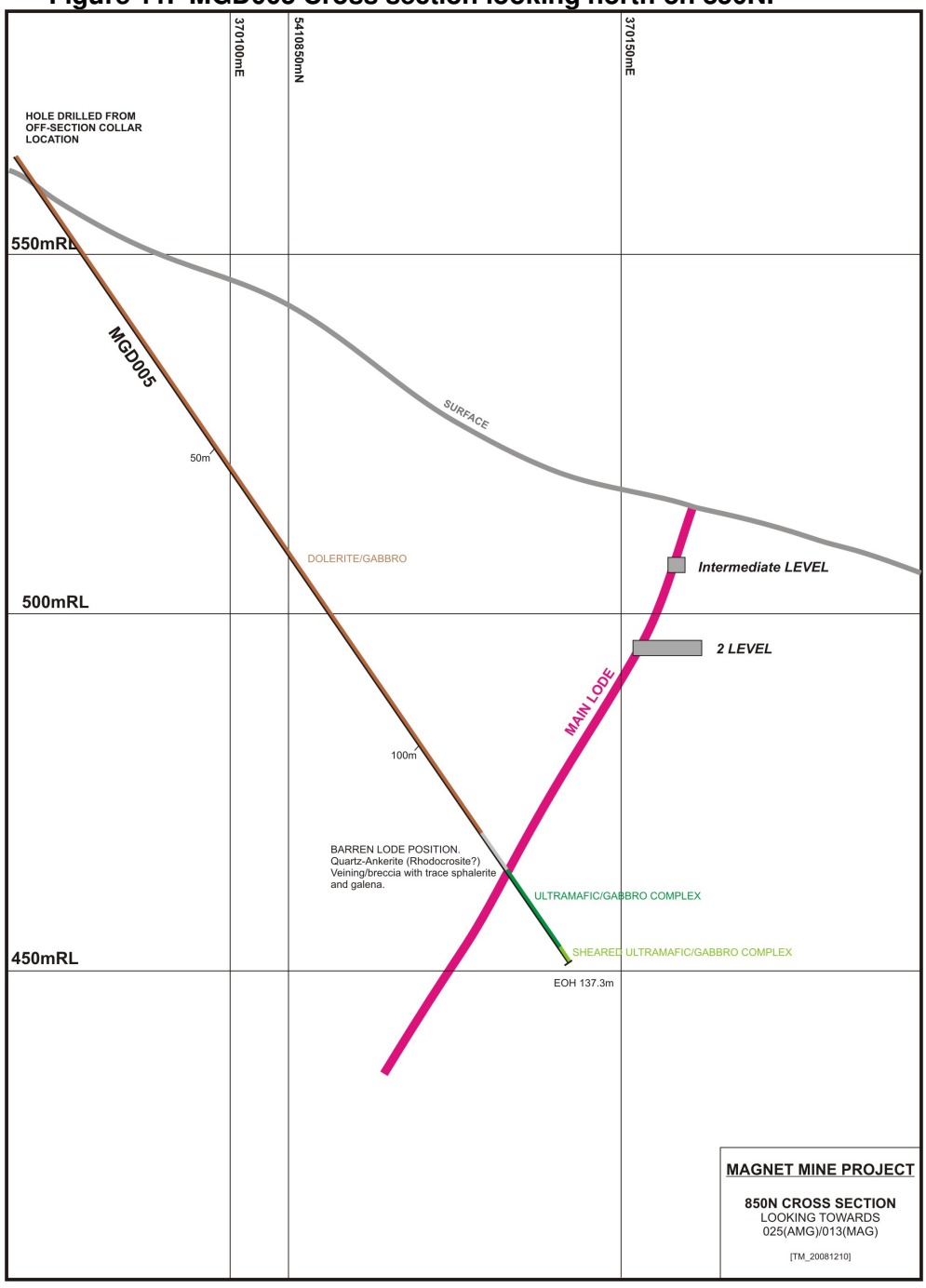
through to the immediate hangingwall of the lode material. The oxidation of the slate was low to fresh which contrasted significantly with the mafic intrusive rocks intersected to the north. The ore position was not oxidized drilled successfully and abundant brecciation and veining observed. On analysis with the Niton, the carbonate was found to be manganiferous (Rhodochrosite). Typical analyses comprised 20-25% Fe and 10-20% Mn. **It is possible that this Rhodochrosite has weathered to a pseudo-gossan as exposed at surface. Note that Niton analyses of selected parts of the gossan assay up to 30%Mn.** An interval of significant sphalerite with minor galena was intersected from 98.3 to 99.3m. This interval comprised complex and irregular veining and was estimated at 7.5% (5%Zn) sphalerite and 2% (1.5%Pb) galena. Refer to appendix 1 for assay results. The veining was intersected earlier than anticipated implying either that there is error in the georeferencing of the level development from which much of the initial geological interpretation is based or the vein intersected is a hangingwall structure.

**Figure 10. MGD004 Cross section looking north on 650N.**



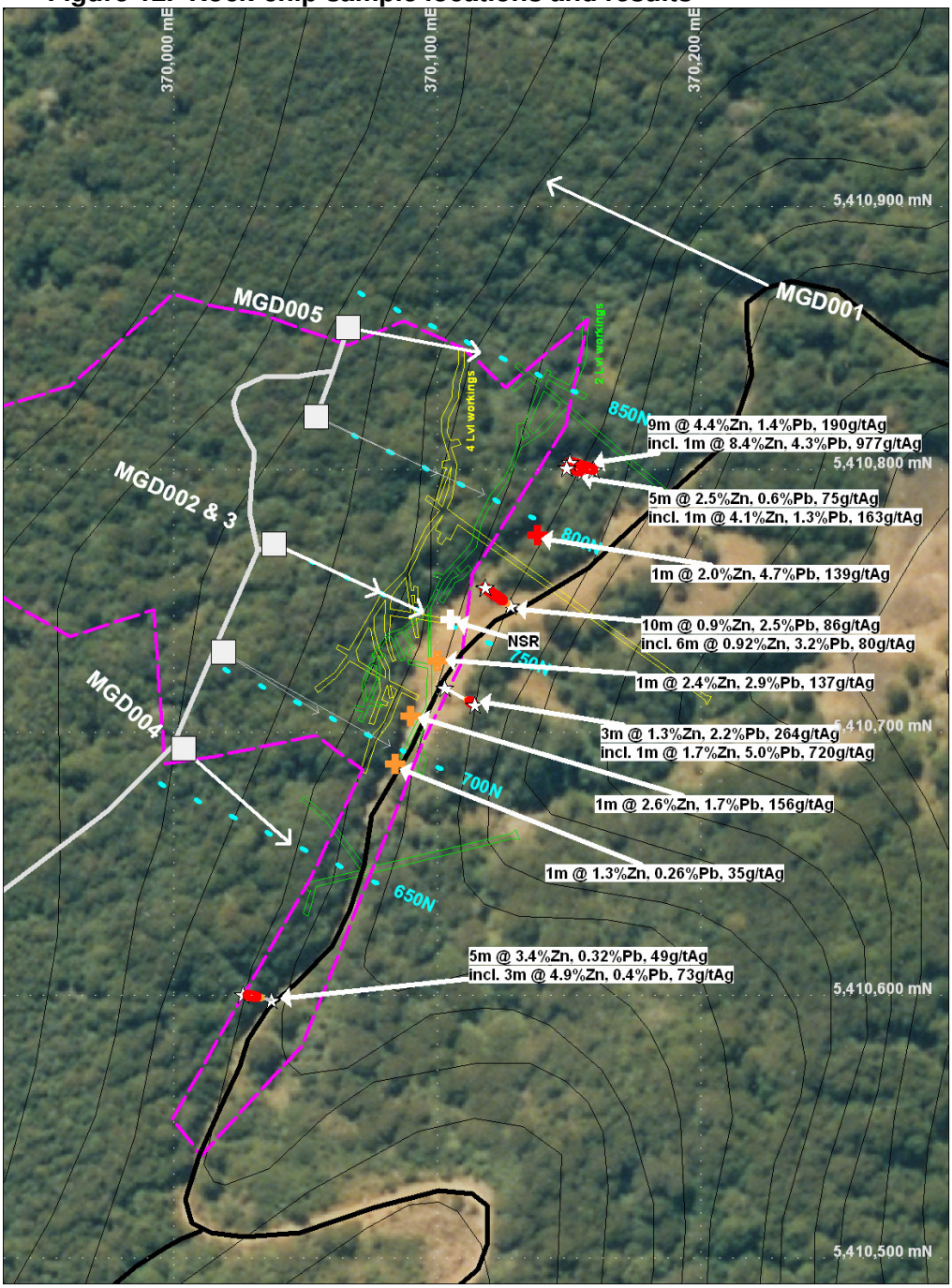
MGD005 (850N, Figure 11); this hole was steepened from -45 to -55 degrees to deepen the planned intersection point to drill below the base-of-oxidation. This drill-hole intersected the lode position where predicted, however the veining was largely barren of sulphides.

**Figure 11. MGD005 Cross section looking north on 850N.**



Rock-chip sampling comprising 56 samples was undertaken and results were received during November (Figure 12). These were generally disappointing and are consistent with Niton analyses of the gossan intersected in the drilling. Typical analyses of the gossan are 2-4% Zn and negligible Pb although the rock-chip results do indicate some relict galena (analyses ~4-5%Pb). The best rock chip results occur on outcropping breccia at 825N and comprised 9.0m @ 4.4%Zn, 1.4%Pb, 190g/t Ag; incl. 1.0m @ 8.4%Zn, 4.3%Pb, and 977g/t Ag.

**Figure 12. Rock-chip sample locations and results**



In Conclusion it was decided that this tenement would go under review for full relinquishment. Many factors were considered during this review; including the lack of mineralisation and poor drilling conditions during the recent drilling program. The implications on potential areas to open cut. Poor access to areas of interest, and the lack of anomalous grab samples.

## 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.

The attached Environmental Activity Map in Figure 14 shows the location of the licence relative to conservation areas. It is a condition of the Licence that the Company observe the request by the Tarkine National Coalition Inc. to adopt strict entry protocols to prevent the spread of *Phytophor Cinamomi* and/or Myrtle Wilt. BSM have appropriate hygiene measures in place to comply with these requests as outlined in the Mineral Exploration Code of Practice.

**LandTenure**
The Waratah Exploration Licence comprises:

- Crown Land
- Private Property
- State / Multiple Use Forest
- Savage River Regional Reserve
- MDC Informal Reserve
- Deep Gully Forest Reserve

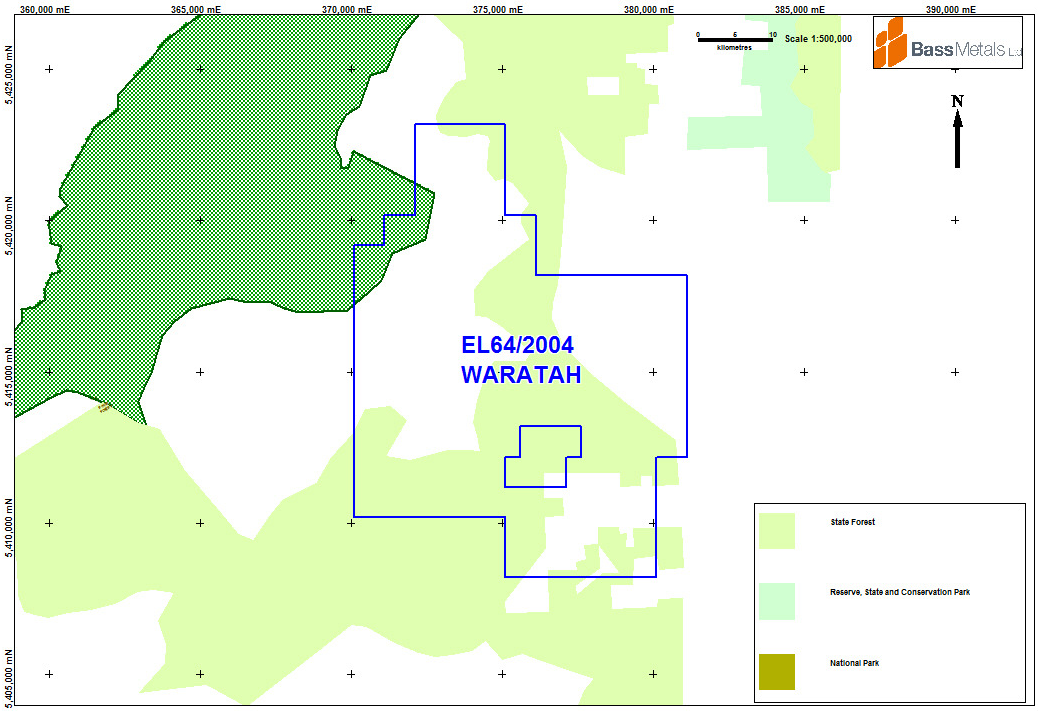



**Figure 13. Environmental Activity Map**

Due to the weather conditions rehabilitation of the recent drilling program has been postponed until spring. See figure 15 below for area to be rehabilitated.

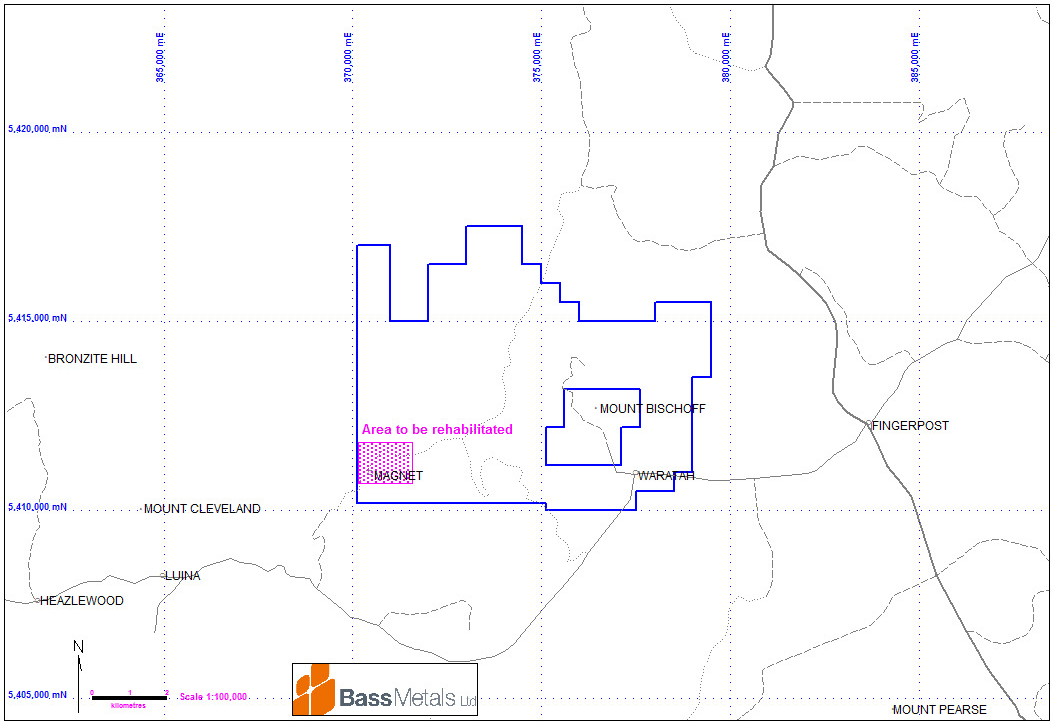



**Figure 14. Map displaying area to be rehabilitated**

## 6. EXPENDITURE

| August 2008 - August 2009 | | |
|---|---|---|
| Geoscientific Costs | **Geology** | 60,956.97 |
| | **Geochemistry** | 9,845.5 |
| | **Geophysics** | 9,091.56 |
| | **Remote Sensing** | |
| Drilling & Gridding Costs | **Gridding** | 365.25 |
| | **Drilling** | 98,252.55 |
| | **Land Access Costs** | |
| | **Rehabilitation Costs** | |
| | **Feasibility Study Costs** | |
| | **Other Costs** | 4,135.56 |
| | **Admin Costs** | |
| | **Total - eligible** | **$**182,647.39 |

**Table 4. Expenditure 10 August 2008 to 9 August 2009**
**Expenditure reported is up to and including 31st May 2009*

The Waratah tenement is part of the Black Bluff Range Group; the total expenditure up to the 31st May 2009 for this group is $836,065.16 against a required group expenditure of $650,258.31.

## 7. REFERENCES

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**APPENDIX 1**
**Drill Hole Summary Report (MGD001 – MGD005)**

**APPENDIX 2**
**North Valley Road & Matthews Creek Rock Chip Sample Assay Results**