

**WHYTE RIVER PROJECT  
TASMANIA  
EL36/2003**

**ANNUAL PROGRESS REPORT  
FOR PERIOD ENDED 30<sup>TH</sup> JULY 2007**

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**Distribution:**  
Mineral Resources Tasmania  
Bass Metals Ltd  
Pioneer Nickel Ltd

**Note: All coordinates are according to the AGD66 Datum and AMG66 Grid System.**

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**ABSTRACT**

Bass Metals Ltd commenced management of the Whyte River exploration licence (EL36/2003) in April 2005. Work conducted on the licence for the year ended 30/07/2007 has included:

- Review of historical exploration reports and data
- Target generation and ranking of exploration targets
- Field visit
- Grid line cutting

.A geochemical soil programme over an interpreted ultramafic unit within the Whyte River licence has been postponed shortly after commencement due to access difficulties crossing the Whyte River.

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## **1. INTRODUCTION**

This report is a summary of the exploration activities conducted on the Whyte River exploration licence EL36/2003, for the period of 31 July 2006 to 30 July 2007. The licence covers a total area of 44 km<sup>2</sup>. The Whyte River licence is subject to an exploration joint venture agreement between Bass Metals Ltd and Pioneer Nickel Ltd. Bass is currently managing exploration of the license from a base at the Hellyer Mine site.

The licence is situated in the northwest corner of Tasmania and was acquired through a joint venture with Pioneer Nickel Ltd. The tenement was originally claimed because of its reputation for alluvial gold. However this area is also considered prospective by Bass for iron ore and nickel-skarn mineralisation.

### **1.1 Location:**

The tenement is located approximately 30 km southwest of the township of Waratah and 10km south of the Savage River township 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 the most basic field work.

Topographically the area is of severe relief with limited vehicular access; however increasing pedestrian access is available in the form of cut soil lines. The most common vegetation communities in the area are rainforest and related scrub, and wet eucalyptus forest. No listed Threatened Native Vegetation Communities are known to occur within the study area; however the majority of the licence area south of the Whyte River lies within the Meredith Range Regional Reserve. The remainder of the licence is covered in state forest.

The licence area can be found on the Meredith and Livingston 1:25,000 topographic map sheets.

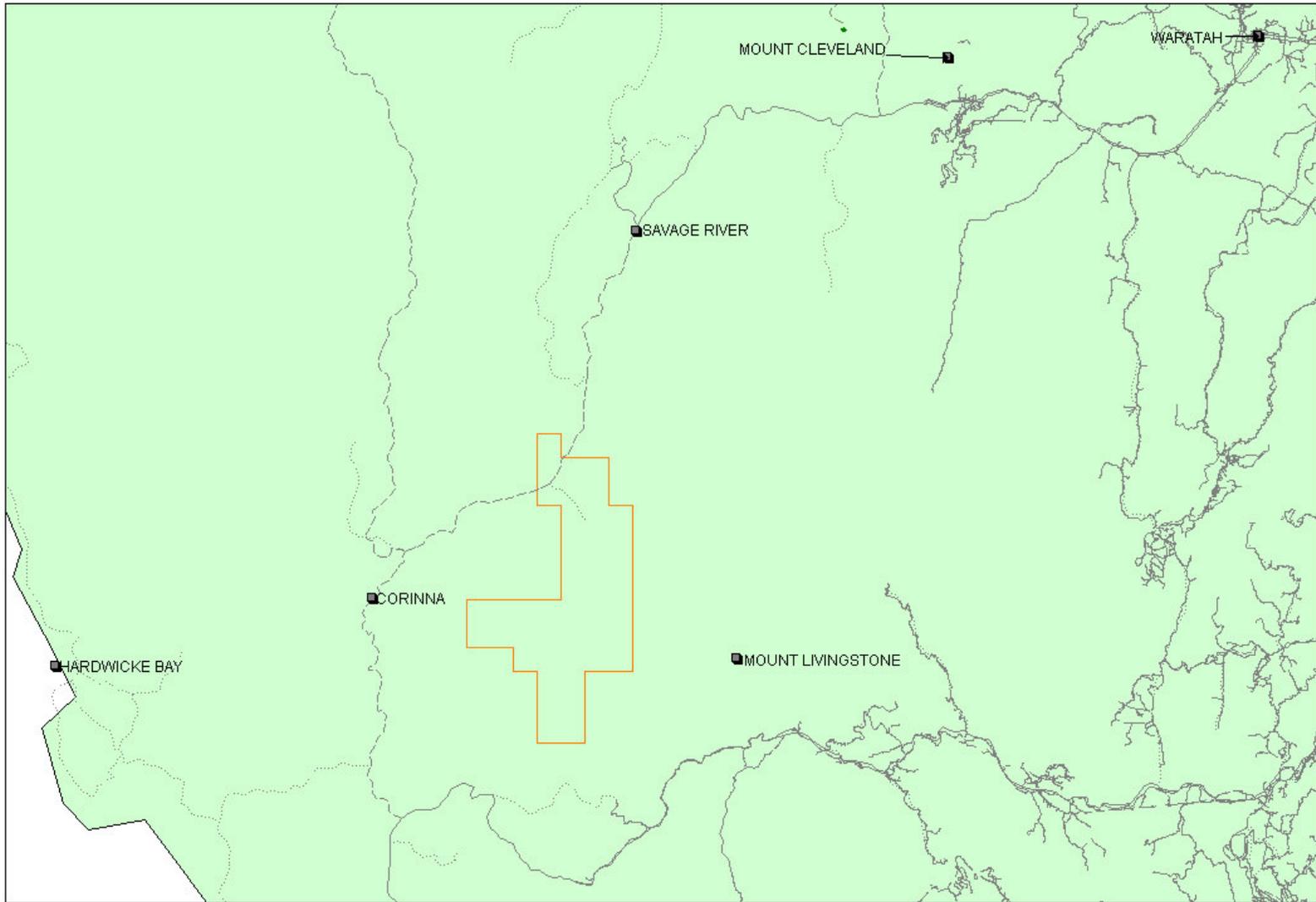


Figure 1. Whyte River Exploration Licence (EL36/2003) with localities and roads.

## **1.2 Geology Overview:**

The Whyte River tenement is located in an area generally referred to as the Corinna Goldfields. The Corinna Goldfields are historically an area of significant alluvial gold production in north-western Tasmania. The Whyte River area is primarily composed of a sequence of Proterozoic metasediments which is common throughout the north-west of the state. Refer to the Regional Geology Map in Figure 2.

### **1.2.1 Tyennan Metamorphics**

The constituent Proterozoic polydeformed metamorphic rocks of the Tyennan region are considered to comprise a complex stack of two metamorphic assemblages (one allochthonous), typically in mutual fault contact:

- a) A low-grade (up to greenschist facies) assemblage of metaquartzite and graphitic and chloritic metapelite
- b) A high-grade assemblage of garnetiferous schist-quartzite-(amphibolite), including mafic meta-igneous rocks with metamorphic grades up to eclogite.

The high-grade metamorphism is attributed to the Early Cambrian Tyennan Orogeny which was probably also responsible for some of the low-grade assemblage (Meffre *et al*, 2000).

### **1.2.2 Rocky Cape Group**

The Rocky Cape Group is considered to represent a block of autochthonous basement lying west of the limit of allochthon emplacement during the Tyennan Orogeny. It comprises a 10km thick sequence of cross-bedded quartz sandstone, laminated siltstone, pyritic shale, and minor dolomite, deposited in an open marine shelf environment varying from low-energy below storm wave base, to relatively high-energy above storm wave base.

### **1.2.3 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 Husetop, 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 (MRT Report, 2005).

### **1.2.4 Tertiary Basalts**

Tertiary gravels are widespread throughout the tenement as remnant deposits on ridge tops. Thin basalt flows are commonly associated with these gravels and are a potential source for the alluvial gold occurring within the tenement.

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

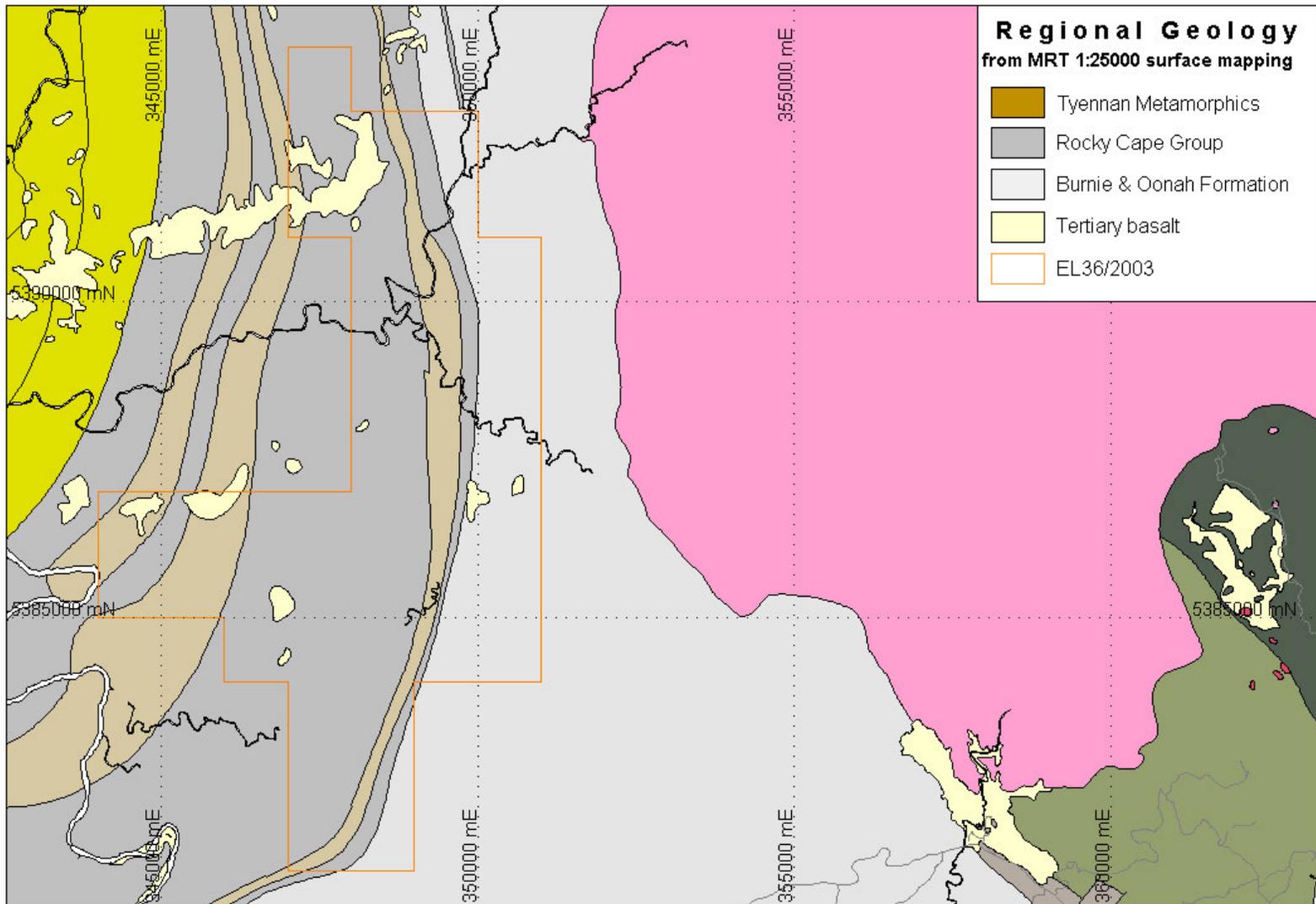


Figure 2. Regional Geology showing Licence boundaries and drainage.

### **1.3 Exploration Rationale:**

The Whyte River licence was acquired through a joint venture arrangement because of the perceived gold, iron-ore and nickel potential within the tenement.

Hard rock results to date do not explain the level of alluvial gold reported. Gold grain morphology studies conclude a local source for the gold grains studied. Previous companies have systematically explored the tenement area; however they do not appear to have followed up the low level soil anomalies generated in sampling programmes on the Lucy Spur, Lefroy Ridge East and Rocky River prospects.

A large magnetic feature within the Tyennan Metamorphics which host the Savage River Iron ore deposit is of a similar size and intensity to other iron ore resources known along strike. The iron ore target is less than 20km via road from Savage River Mine.

Also of interest is an interpreted ultramafic unit identified as a nickel-skarn target by Geoinformatics. The interpreted unit is located adjacent to a major belt-parallel structure in the vicinity of the Meredith Granite.

## **2. WORK COMPLETED**

### **2.1 Historical Mining:**

There are no accurate historical records for the Corinna Goldfield as it is thought that most of the gold found was taken directly to Victoria. The first known gold discovery from the area was in 1879 with alluvial gold found at Middleton's Creek to the west of the current Whyte River tenement. By 1881 workings at Nancy Creek, Lucy Creek and Paradise River were all reporting the discovery of coarse gold. All the above areas are roughly covered by the current mining lease (7M/1997).

In 1882 a 7.5kg gold nugget was recovered from 5-6 feet of gravel from Rocky River. This area produced further finds of coarse gold until 1900 with notable nuggets of 130 and 39 ounces being unearthed. After the turn of the century (1900) small scale alluvial mining has been on-going in the area until the present day. Historic hard-rock mining has been small scale with the largest mine being the Rocky River Mine which operated between 1895 and 1900. Modern sampling conducted by the Goldstream -Titan JV showed the mineralisation at the Rocky River Mine to be low grade.

### **2.2 Exploration Prior to Current Licence Area:**

The Whyte River area has historically been explored by several companies, most notably;

#### **Rio Tinto Exploration – Pre 1961**

- Conducted regional airborne magnetic surveys.
- Examined regional airborne magnetic anomalies identified as massive magnetite-pyrite mineralisation within the Bowry Member. Drilling of these targets resulted in the conclusion that the targets were of no further interest.

### **Savage Resources – 1961 to 1988 (formerly Industrial and Mining Investigation)**

- Continued to examine the magnetic anomalies identified by Rio Tinto.
- Following the discovery of the Savage River Mine (Magnetite-Pyrite) exploration focused on similar deposits which resulted in the generation of some possible Fe resources (non-JORC compliant) in the area. The first being 30 Mt grading 28% Fe at Long Plains South and the other being the Rocky River Deposit of 4 Mt at 10-15% Fe. Only the Rocky River prospect is located on the Whyte River tenement.
- As Savage Resources the company continued to explore the area for a wide range of commodities including gold, diamonds and base metals.
- Some drilling of gold targets was conducted. Results from the drilling was generally unencouraging, however a close association between magnetite and gold was noted.

### **Outokumpu Exploration – 1991**

- Conducted exploration over the southern half of the current Whyte River tenement.
- Work carried out included geological mapping, soil and rock chip sampling and limited amounts of stream sediment sampling.
- Minor anomalous gold and copper results were identified on the eastern boundary of the Bowry formation, whilst on the western boundary of the same formation magnetite-pyrite lenses return low values for gold and copper but up to 70% Fe.

### **Fodina – 1993**

- Conducted eight profile traverses detailing geology between Rocky River and the Owen Meredith River.
- Information collected during these traverses included mapping geology, sampling rock chips and the B/C soil horizon and recording ground magnetic measurements.
- The sampling returned isolated anomalous value for both arsenic and gold.

### **Goldstream/Titan Joint Venture – 1993 to 2002**

- During this period Titan Resources and Goldstream Mining commenced work under a joint venture agreement which cover most of the present Whyte River tenement.
- The exploration conducted during this JV is the first systematic search for the source of the alluvial gold present within the area.
- Initially stream sediments were investigated using a panned concentrate and a minus 80 mesh sieved sample from every site. The panned concentrate was to provide information on gold grain morphology, fineness and provide the variation in the abundance of gold through the surveyed area. The grain morphology studies indicated a proximal source for the alluvial gold.
- Some coarser gold grains were used in polished section studies to investigate inclusions in the grains.
- The inclusion and fineness studies both confirm the morphology studies results for a localized source for the alluvial gold.

- Helimag surveys at 50m line intervals were conducted, however the results of these surveys have only had minor initial processing.
- Later close-spaced (50m spacing) stream sediment sampling was conducted to determine prospect boundaries.
- Reconnaissance diamond drilling, C horizon soil sampling and rock chip sampling from the southern adits and hydraulic workings from Lucy Spur were also completed by Goldstream/Titan.
- From stream sediment sampling south of the Owen Meredith River it was determined that this area of the Bowry Formation is not prospective for gold.

### 3. EXPLORATION COMPLETED 31 JULY 2006 TO 30 JULY 2007

The section below reports on exploration activities between 31 July 2006 to 30 July 2007. A reconnaissance field trip was undertaken to assess vehicle access into the licence area. Two rockchip samples were collected from the area of the magnetite target. Then using the captured data and targeting assembled by Geoinformatics during the previous year a soil geochemistry program was designed to test the interpreted ultramafic unit identified by Geoinformatics as a nickel-skarn target.

#### 3.1 Field Trip

Field trip (15/02/2007) undertaken to look at access and outcrop in region of magnetic anomaly considered prospective as Fe-replacement target. Access is via a well-known 4WD track off the Corinna Rd approximately 14km past Savage River township heading towards Corinna. This track crosses the magnetic anomaly at right angles and provides good vehicular access to a point, then access is limited to quad bike or foot access only. Off the track the terrain is steep and well forested.

Sub-cropping saprolite after sediments was visible along parts of the track. Bedding was sub-parallel to the magnetic anomaly and regional geology as expected with zones of moderate Fe-staining and some bedding parallel quartz vein boudins. Otherwise little outcrop encountered. Two rock chip samples from the area of the magnetic anomaly were collected with variable results (Table 1). For full assay results see Appendix 1.

Table 1. Rockchip samples from area of magnetite-replacement target

Sample	Easting	Northing	Au ppm	Fe %	Description
WR001	349600	5389850	0.01	37.8	Iron stone float
WR002	349500	5389860	<0.01	2.75	Quartz vein in Fe-stained sediments

#### 3.2 Soil Geochemistry Program

The programme was proposed as a first pass multi-element soil grid to test the Geoinformatics nickel-skarn target where an ultramafic sequence at the base of the Rocky Cape Group lies adjacent to the major thrust contact in the eastern part of the tenement. The ultramafic has not been mapped on surface but can be traced as a highly magnetic body east of the Tyennan Metamorphics within the Burnie and Oonah Formation (Figure 3).

The relationship between the ultramafic unit and its current location is considered prospective in regards to the ultramafic sequence (source) lying adjacent to the Meredith Granite (fluid) along a major belt parallel structure (pathway).

An initial soil program consists of 8 E-W lines at 400m spacing for a total of 3.2km with an additional 2.8km N-S base line. Grid lines will be sampled at 50m intervals for a total of 72 samples (Figure 3).

Samples are to be sent to Genalysis for multi-element analysis to cover all possible mineral occurrence styles in the area of interest including and not limited to ultramafic associated Ni-Cr-Co-PGE-Au and intrusion-related base metal systems including Ni skarn

Completion of this proposed work program will conclude with geological mapping and selective rock chipping thus allowing drill targeting if warranted by results.

Unfortunately the programme commenced too late in the field season and less than 2km of line cutting was completed before the Whyte River became impassable. It is estimated the programme will recommence in September 2007.

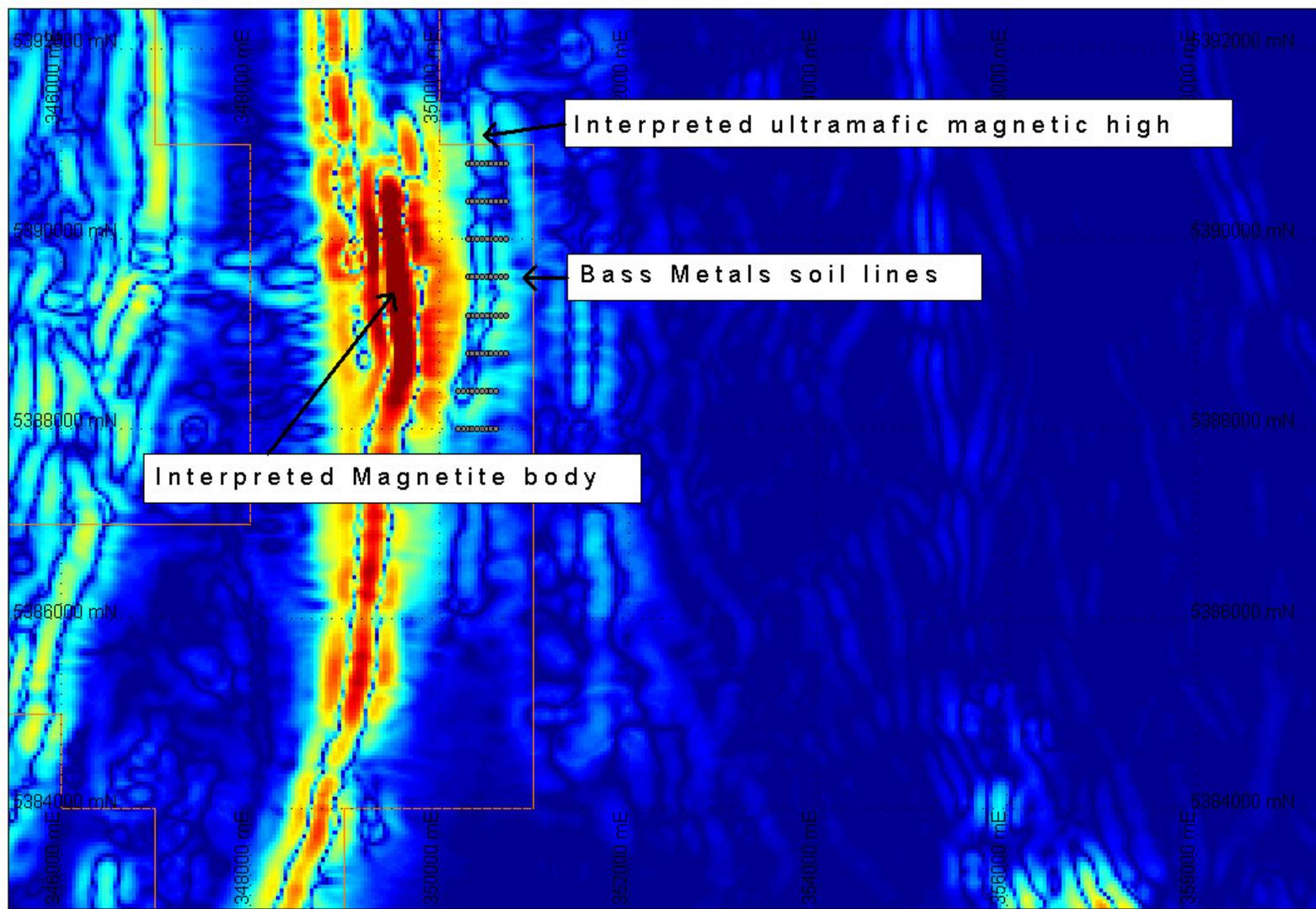


Figure 3. Soil geochemistry grid on airborne magnetic image

#### **4. PROPOSED EXPLORATION**

Proposed exploration over the next year includes; completion of the soil geochemistry program with appropriate follow-up.

If significant Ni, Cr and/or PGE anomalism can be verified by infill sampling and is considered adequately significant, a possible HEM survey is proposed to enable meaningful drill target generation.

## **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.

All line cutting and gridding activities are undertaken with minimal impact in mind. Lines are cut for pedestrian access only and grid pegs are kept to a minimum. All soil samples are taken by hand auger and are back-filled immediately.

## 6. EXPENDITURE

	<b>Jul-06 to Jul-07</b>
<b>Administration</b>	\$37.66
<b>Geology-Personnel&amp; Overheads.</b>	\$12,435.36
<b>Gridding</b>	\$2,342.45
<b>Geochemistry</b>	
<b>Geophysics</b>	
<b>Drilling</b>	
<b>Feasibility Studies</b>	
<b>Rehabilitation</b>	
<b>Safety</b>	
<b>Other – Geoinformatics costs</b>	\$12,770.04
<b>Total - Eligible</b>	<b>\$27,585.51</b>

Table 2. Expenditure 31 July 2006 to 30 July 2007.

Expenditure for the twelve months ending 30 July 2007 has split between lagging Geoinformatics costs for work completed before the reporting period and exploration completed during the current reporting period such as target generation, programme design and limited line cutting.

## 7. REFERENCES

**Kalla, J., 2006.** Exploration Licence EL36/2003 – Whyte River Tasmania, Annual Report for the Period Ended 30<sup>th</sup> July 2006, Bass Metals Ltd. Report to Mineral Resources Tasmania.

**Meffre, S., Berry, R.F. and Hall, M., 2000.** Cambrian metamorphic complexes in Tasmania: tectonic implications. *Australian Journal of Earth Sciences* 47:971-985.

**Seymour, D.B., Green, G.R., Calver, C.R., 2006.** The Geology and Mineral Deposits of Tasmania: a summary. Bulletin 72 Tasmanian Geological Survey, Mineral Resources Tasmania.

## **APPENDIX 1**

