

**GRASSTREE RIDGE PROJECT  
(BLACK BLUFF RANGE GROUP)  
TASMANIA  
EL38/2005**

**ANNUAL PROGRESS REPORT  
14<sup>TH</sup> JUNE 2008 TO 13<sup>TH</sup> JUNE 2009**

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**Distribution:**

Mineral Resources Tasmania  
Bass Metals Ltd  
Clancy Exploration Ltd

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The conclusions and recommendations expressed in this report / table represent the opinions of the Authors based upon the data available and provided to them. The opinions and recommendations provided from this information are in response to a request from the client and no liability is accepted for commercial decisions or actions resulting from them.

**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 Grasstree Ridge exploration licence (EL38/2005) on 14 June 2005. Work conducted on the licence for the year ended 13/06/2009 has included:

- Geological Mapping for the production of a factual map

**Expenditure** – Reporting period \$18,903.42

Total to date \$40,536.77

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## **1. INTRODUCTION**

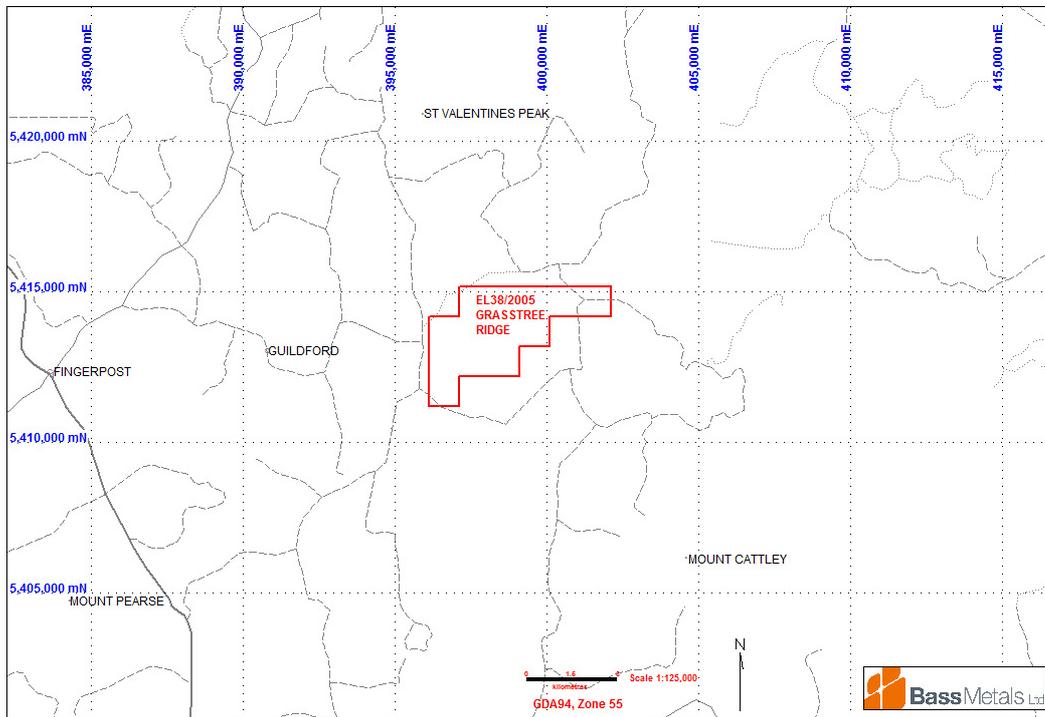
This report is a summary of the exploration activities conducted on the Grasstree Ridge exploration licence, EL38/2005 (Figure 1), for the period of 14 June 2008 to 13 June 2009. The licence covers a total area of 13 km<sup>2</sup>. The Grasstree Ridge licence is subject to an exploration joint venture agreement between Bass Metals Ltd (BSM) and Geoinformatics Exploration Tasmania Pty Ltd. BSM is currently managing exploration of the licence from a base at the Hellyer Mine site.

### **1.1 Location and Access:**

The licence is situated in the northwest corner of Tasmania and located along the interpreted northeastern continuation of the Hellyer-Que River stratigraphy. The licence was originally claimed because of this positioning in the Hellyer-Que River stratigraphy.

It is located 42km southwest of Burnie (80km by road), and less than 16km northeast of the Hellyer exploration base, in the west coast region of Tasmania (Figure 1). The tenement adjoins the northwest boundary of the Leven River tenement also held by BSM. Access from the Hellyer exploration base is via private roads running off the Murchison Hwy or Cradle Mountain Link Road. The licence area can be found on the Inglis 1:100,000 topographic map sheet.

Topographically the area is of moderate relief with the majority of the licence area divided between silviculture (timber plantations), Buttongrass moorland and dry Eucalypt forest and woodland. Discreet regions of rainforest and wet Eucalypt forest also occur. Vehicular access is good due to an abundance of private and forestry tracks. The licence area does not encroach on any conservation areas however three small populations of threatened non-forest vegetation have been mapped (refer to reporting period 14<sup>th</sup> June 2005 to 13<sup>th</sup> June 2006).



**Figure 1. Grass Ridge Exploration Licence (EL38/2005) is located in north-western Tasmania.**

## 1.2 Geology Overview:

The majority of the tenement is covered in a extensive veneer of Tertiary basalt with two discreet inliers of Owen Group and WVS lithologies. Beneath the basalt veneer the Owen Group is interpreted to young to the northwest and is followed by the Ordovician Gordon Group which in turn is overlain by the Silurian-Devonian Eldon Group. To the southeast, the WVS is interpreted to represent the possible extension of the Hellyer-Que River stratigraphy in an anticlinal position. Refer to the Regional Geology Map in Figure 2.

### 1.2.1 Western Volcano-Sedimentary Sequence (Mt Read Volcanics)

The Western Volcano-Sedimentary Sequence (WVS) of the Mt Read Volcanics (MRV) outcrops in the eastern portion of the tenement. At a regional scale, the MRV are a belt of volcanic, volcanoclastic and sedimentary rocks of Mid- Cambrian age. The belt is famous for hosting Tasmania's world-class polymetallic VHMS deposits (eg Rosebery, Hellyer, Que River).

The Grass Ridge licence occurs along strike to the northeast from the Que River and Hellyer deposits and is mapped as containing the northern continuation of the Que-Hellyer stratigraphy.

### *Western Volcano-Sedimentary Sequence*

This unit is coeval with the Central Volcanic Complex of the MRV though older than the Tyndall Group. It is described as including beds of lithicwacke turbidite, mudstone (commonly rich in shards), siltstone and shale. It also contains subordinate intrusive and volcanic rocks, which are commonly andesitic (Seymour *et.al.*, 2006).

#### **1.2.2 Owen Group**

The Owen Group is Cambrian to Ordovician in age and sits unconformably on the MRV. The unit typically includes large volumes of coarse siliclastic conglomerate composed dominantly of metaquartzite clasts derived from the Tyennan Metamorphics. It also includes turbidite and shallow marine sandstone units (Seymour *et. al.*, 2006). It is not likely to host any exhalative styles of mineralisation such as Taylor and Mathison (1990) report for the younger Gordon Group. However, it could potentially host mineralisation associated with intrusion of Late Devonian–Early Carboniferous granitoids.

#### **1.2.3 Gordon Group**

The Ordovician Gordon Group above the Pioneer Sandstone is a shallow-marine to peritidal, platform succession of predominately micritic, dolomitic limestone. The Gordon Group carbonate sequence is an important ore host for skarn mineralisation associated with intrusion of Late Devonian–Early Carboniferous granitoids (Seymour *et. al.*, 2006).

#### **1.2.4 Eldon Group**

The Silurian-Devonian Eldon Group is locally disconformable and erosional on the Gordon Group. The lower part of the succession is dominated by shallow-marine quartz sandstone (Crotty and Florence Formations); the upper by a thick, shelf-facies shale unit with minor limestone identified locally as the Bell Shale and correlates (Seymour *et. al.*, 2006).

#### **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). These basalts cover the majority of the licence.

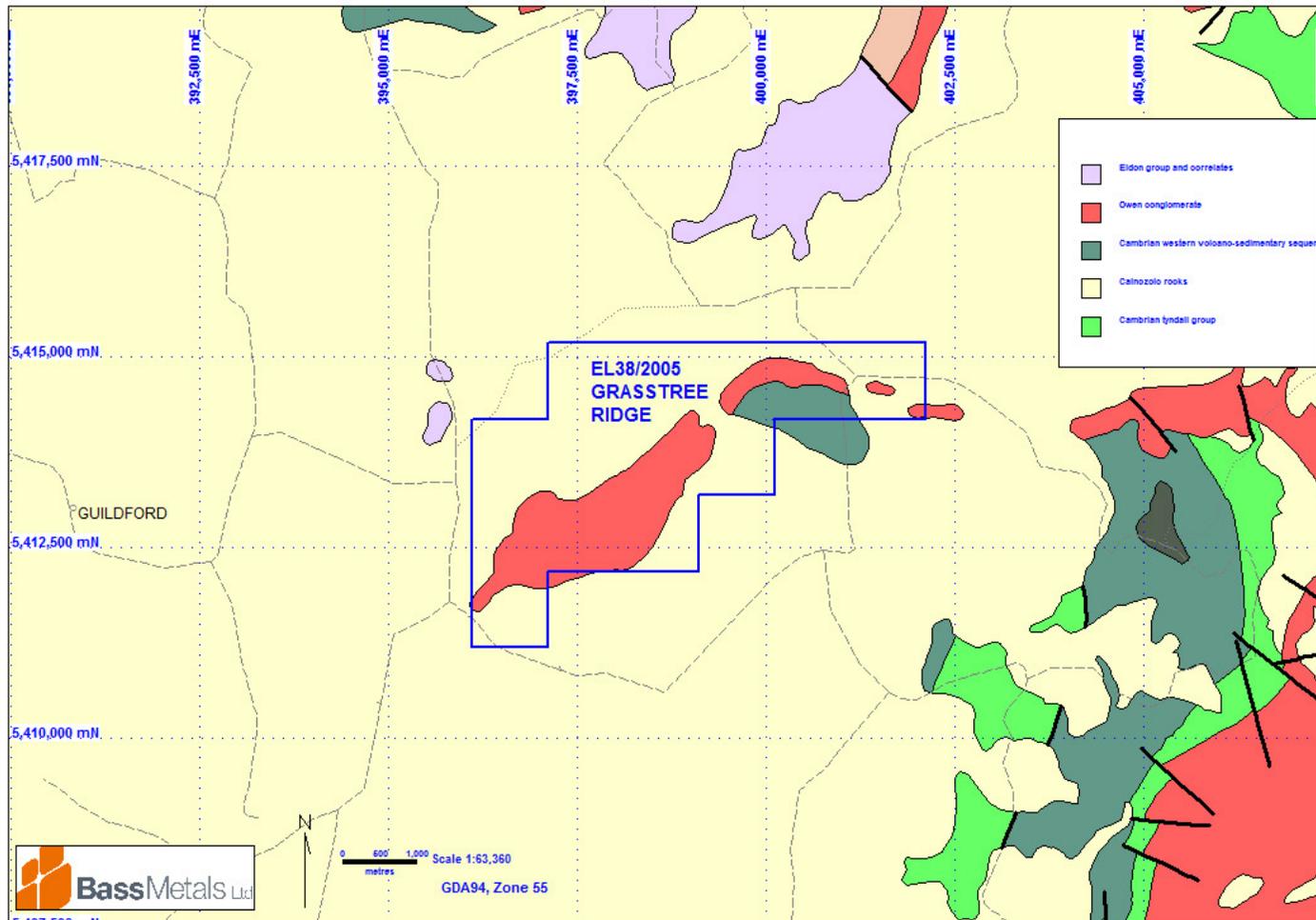


Figure 2. Regional geology showing licence area boundary.

### **1.3 Exploration Rationale:**

A northwest trending fault cross-cuts the Hellyer-Que River stratigraphy through the centre of the licence and passes into the prospective Gordon Group. This relationship is considered prospective for carbonate-replacement mineralisation.

There are no known mineral occurrences within the tenement and only limited field work due to the veneer of Tertiary basalt covering the majority of the tenement.

## **2. REVIEW OF PREVIOUS WORK – Prior to current tenement;**

### **2.1 Historical Mining:**

No records exist in the public domain for work done on the Grass Ridge licence prior to 1977.

### **2.2 Previous Exploration:**

Modern exploration efforts in the Grass Ridge region have primarily concentrated on the exposed MRV southeast of the current licence area. However, some work has been completed over the WVS inlier in the eastern part of the licence. A summary of this work is taken from the open file data available and is presented below.

**Date:** 1976-1977

**Company:** Geopeko Limited (JV EZ) EL2/76

**Exploration Philosophy:** Exploring MRV inliers for Rosebery-style VHMS deposits.

**Work Completed:** Soil geochemistry and geological mapping.

**Results and Conclusions:** Mt Read Volcanic inlier is weakly anomalous for Cu, Pb and Zn. Peak values are 100ppm Cu, 650ppm Pb and 820ppm Zn. No further work done [77\_1239].

**Date:** 1979-1989(?)

**Company:** CRA Exploration (JV Shell) EL36/79

**Exploration Philosophy:** Exploring MRV for VHMS deposits.

**Work Completed:** UTEM survey, diamond drilling and geological mapping.

**Results and Conclusions:** CRA Exploration drilled two holes PD85TH1 and PD85TH2 into the WVS inlier just south of the licence area. The drillholes were planned based on an earlier UTEM survey and were located within the southern half of the Geopeko soil grid. Neither hole intersected mineralisation and further downhole SIROTEM produced no significant conductors. The holes intercepted altered tuffs, minor black shale and weakly altered rhyolite. No further work recommended [87\_2652].

### **3. CURRENT WORK**

#### **3.1 Bass Metals Ltd - 14th June 2006 to 13th June 2007**

The section below reports on exploration activities carried out between 14<sup>th</sup> June 2006 and the 13<sup>th</sup> June 2007. Following execution of the Joint Venture Agreement with Geoinformatics Ltd, BSM actively sought any datasets of potential value for targeting VHMS and carbonate-replacement deposits in the Grass Ridge licence area. The MRT topographic, geophysical and 1:100,000 scale digital geological map series were used as base maps for presenting other historical company datasets. Various company datasets were captured into FracSIS and MapInfo format.

#### **Geoinformatics Geological Modelling & Targeting**

BSM utilised consultant geologists Geoinformatics Exploration Inc to compile a 3-dimensional spatial database (GIS).

At Grass Ridge, Geoinformatics generated a single intrusive-related, carbonate-replacement target. The target is located on a regional scale fault believed to cross-cut both the interpreted Hellyer host horizon and the Gordon Group.

A summary report on the Geoinformatics process methodology was included in the 2006/2007 reporting period.

### **3.2 Bass Metals Ltd – 14<sup>th</sup> June 2007 to 13<sup>th</sup> June 2008**

Within close proximity to the Hellyer Mine site this licence is considered to represent a possible extension of the Que-Hellyer stratigraphy with several NW trending faults cross-cutting. The target generated by Geoinformatics lies within the Gordon Group of rocks which have been previously considered prospective for carbonate replacement mineralization. This target is located on a regional NW trending fault believed to cross cut both the Hellyer host horizon as well as the Gordon Group.

75 line kilometers of VTEM survey were proposed for the licence extending the existing Hummingbird EM coverage completed by the MRT. With an EM anomaly already identified, the survey was proposed to provide better information of the existing anomaly as well as testing for further targets deeper under cover.

A field visit was undertaken to assess accessibility to the area. Fortunately majority of this licence has previously been cleared by forestry which would enable easy access for ground EM. It was decided that the airborne EM proposal would be rejected and a proposal would be designed for a ground EM program following up on the already existing anomaly and reassessing targets identified by the Monte Carlo ranking method.

Once undertaken a more precise evaluation can be made in conjunction with the adjacent Leven River project.

### **3.3 Bass Metals Ltd – 14<sup>th</sup> June 2008 to 13<sup>th</sup> June 2009**

Understanding the lithologies of Hellyer and its geological setting is vital in planning exploration programs looking for VMS type deposits. Most of the tenement is contained on Gunns land. Currently they have up graded and added new roads and closed others so the 1:25000 topographic maps are often not consistent with current infrastructure. Where roads have been upgraded or new roads added there is room for further mapping as a lot of the culverts have freshly exposed outcrops.

A factual map is underway which will be the basis of a revised interpretation of the geology on both Grasstree Ridge and Leven River tenements. Minor mapping has been undertaken for this project to date. Sinosteel has drilled two 500m – 600m holes adjacent to the Leven River tenement. The core was processed at Bass Metals core shed, and much information was gained about the stratigraphy of the area. This information will be useful in planning further exploration programs on both the Grasstree Ridge and Leven River tenements.

## **4. PROPOSED EXPLORATION**

Proposed exploration over the next year will be focused on the Hummingbird anomaly. As this ground contains Hellyer Stratigraphy, BSM will apply the results from the spectral-geophysical-geochemical study being completed in the Hellyer Mt Charter area.

## 5. ENVIRONMENT

The company has environmental policies in place that minimize 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 4 shows the location of the licence relative to conservation areas. Three small populations of Threatened Non-Forest Vegetation encroach on the Grass Ridge licence. These populations shall be strictly avoided where possible.

### Land Tenure

The Grasree Ridge Exploration Licence comprises:

- Private Parcel

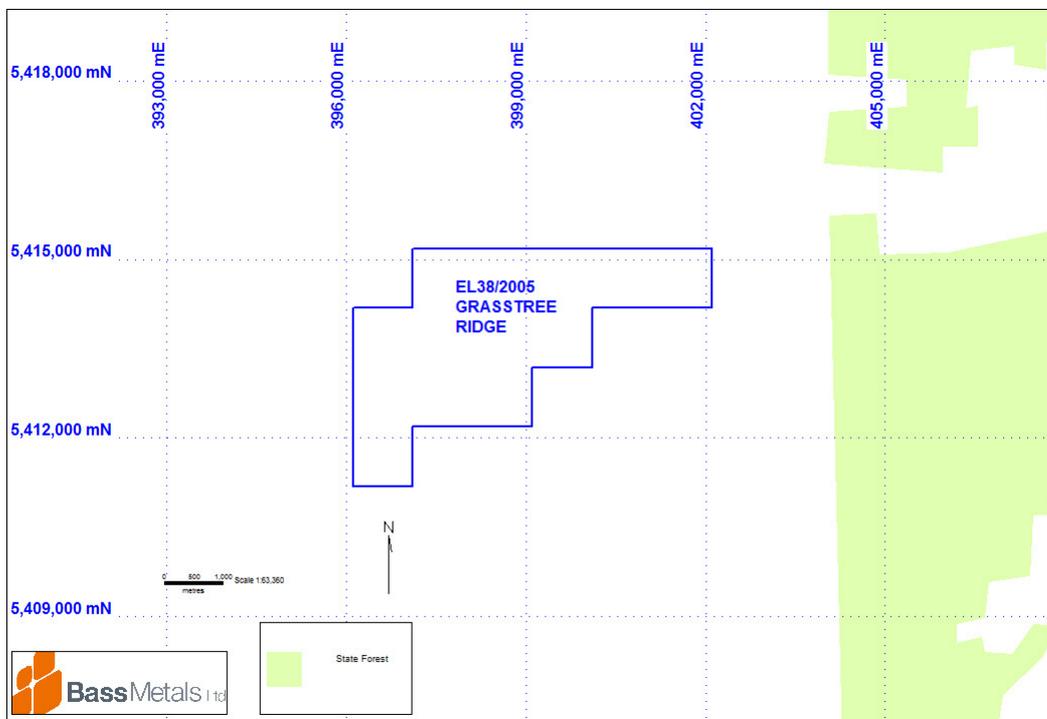


Figure 3. Environmental Activity Map

## 6. EXPENDITURE

June 2008 - June 2009		
<b>Geoscientific Costs</b>	<b>Geology</b>	18,415.92
	<b>Geochemistry</b>	
	<b>Geophysics</b>	
	<b>Remote Sensing</b>	
<b>Drilling &amp; Gridding Costs</b>	<b>Gridding</b>	
	<b>Drilling</b>	
	<b>Land Access Costs</b>	
	<b>Rehabilitation Costs</b>	
	<b>Feasibility Study Costs</b>	
	<b>Other Costs</b>	
	<b>Admin Costs</b>	487.50
	<b>Total - eligible</b>	<b>\$18,903.42</b>

**Table 1. Expenditure 14 June 2008 to 13 June 2009**

*\*Includes expenditure up to 30<sup>th</sup> April 2009*

The Grasstree Ridge exploration licence is part of the Black Bluff Range Group. Total expenditure for this group up to 31<sup>st</sup> March 2009 was \$1,020,764.08 against a required group expenditure of \$788,576.

## **7. REFERENCES**

**Buckland, G.L., 1977.** Loongana Area, Tasmania, Progress Report EL2/76, Joint Venture Geopeko Ltd – E.Z. Company of Australia Ltd, Geopeko Ltd. Report to the Tasmanian Mines Department. **(77\_1239)**

**Von Storkirch, T., 1987.** Loongana EL36/79, Report on Exploration for 12 months to 1 April 1987, CRA Exploration P/L. Report to the Tasmanian Mines Department. **(87\_2652)**