



ABN 31 109 933 995

**BULGOBAC RIVER  
TASMANIA  
EL24/2004**

**ANNUAL PROGRESS REPORT  
30<sup>TH</sup> JULY 2013 TO 29<sup>TH</sup> JANUARY 2014**

**Tenement Holder/Manager**  
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**Distribution:**  
Mineral Resources Tasmania  
Bass Metals Ltd

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

## EXECUTIVE SUMMARY

Bass Metals Ltd (BSM) commenced management of the Bulgobac River exploration licence EL24/2004 on the 30<sup>th</sup> July 2005.

From January 2012, as a result of adverse circumstances at its' Fossey Mine operation, expenditure by Bass on all exploration was curtailed, to preserve cash flow. Following an asset sale in February 2013, Bass recommenced exploration on its' Que-Hellyer Volcanic tenements. However, shortly thereafter ongoing exploration activity was again stalled pending the outcome of an external geological consultant's review, immediately followed in October by a spill of Bass' Board of Directors. A new board is now directing the company and they are committed to rebuilding the financial strength of Bass, which will in-turn renew exploration activities on Bass' Tasmanian tenements. The current board has set aside funds to carry out exploration activities in the short term. These available funds are at an appropriate level for the company's current financial position and are projected to increase as the Board rebuilds the financial strength of the company.

For the current six month reporting period, ending 30<sup>th</sup> January 2014, EL24/2004 was part of an external consultant's review of Bass' Que-Hellyer Volcanic tenements. This review has not highlighted any anomalous area on EL24/2004. However, the review demonstrated the potential to extend pathfinder geochemistry to hangingwall stratigraphy, as a method to detect deeply buried mineralisation. It is therefore intended to sample hangingwall rocks from historic drill core, largely in the southwest corner of the EL.

At the time of writing, EL24/2004 is the subject of an application to Mineral Resources Tasmania to be consolidated with adjacent EL48/2003 Mt Block.

<b>Expenditure –</b>	Reporting period	\$15,582
	Total to date	\$876,875

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## **1. INTRODUCTION**

**This report is a summary of the exploration activities conducted on the Bulgobac River exploration licence EL24/2004, for the period of 30th July 2013 to 29th January 2014.**

### **1.1 Tenure**

The licence is located in Tasmania's northwest and was acquired as part of a package of tenements in the Hellyer-Que River area from Intec Ltd in March 2005. This tenement has an area of 32km<sup>2</sup>.

The licence area excludes the Hellyer Mining Lease CML 103M/1987 held by Ivy Resources Ltd.

The Bulgobac River licence comprises:

- CAR Reserve System Informal Reserve
- Land vested to the Hydro Electric Corporation
- Reynolds Falls Nature Recreation Area
- Private Property
- State/Multiple Use Forest

### **1.2 Location & Access**

The tenement is located 15 km north-northeast of the township of Tullah, on the west coast of Tasmania (Figure 1). Access to the area is via the Murchison Highway or the Cradle Mountain Link Road and tracks which access the 220kv transmission lines which traverse the area. Access within the tenement is via a limited number of 4wd tracks and ATV-only tracks.

The licence area can be found on the Charter (#3839) 1:25,000 map sheet and the Sophia (#8014) 1:100,000 map sheet.

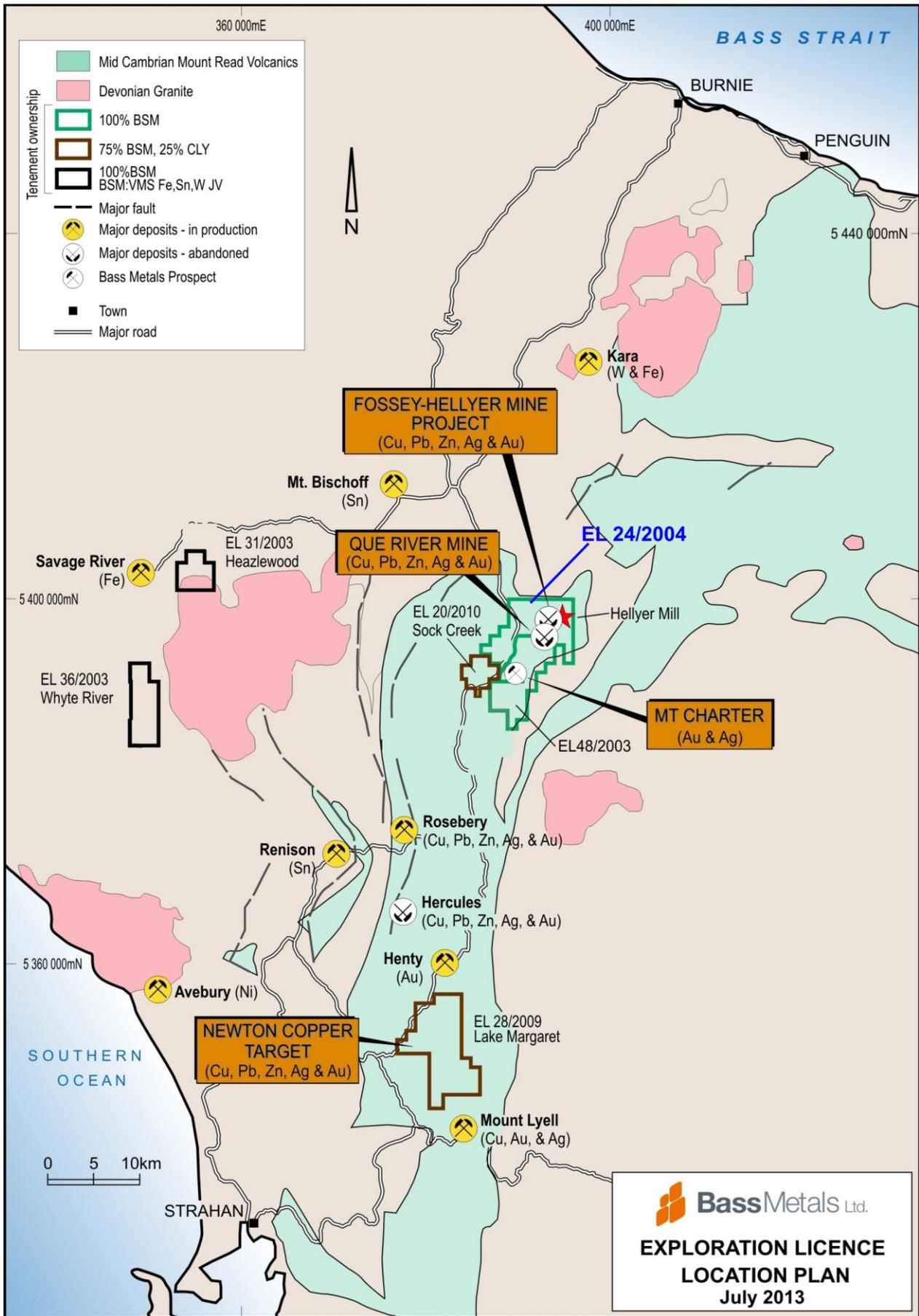


Figure 1. Bulgobac River Exploration Licence (EL24/2004) location map

### 1.3 Geology Overview

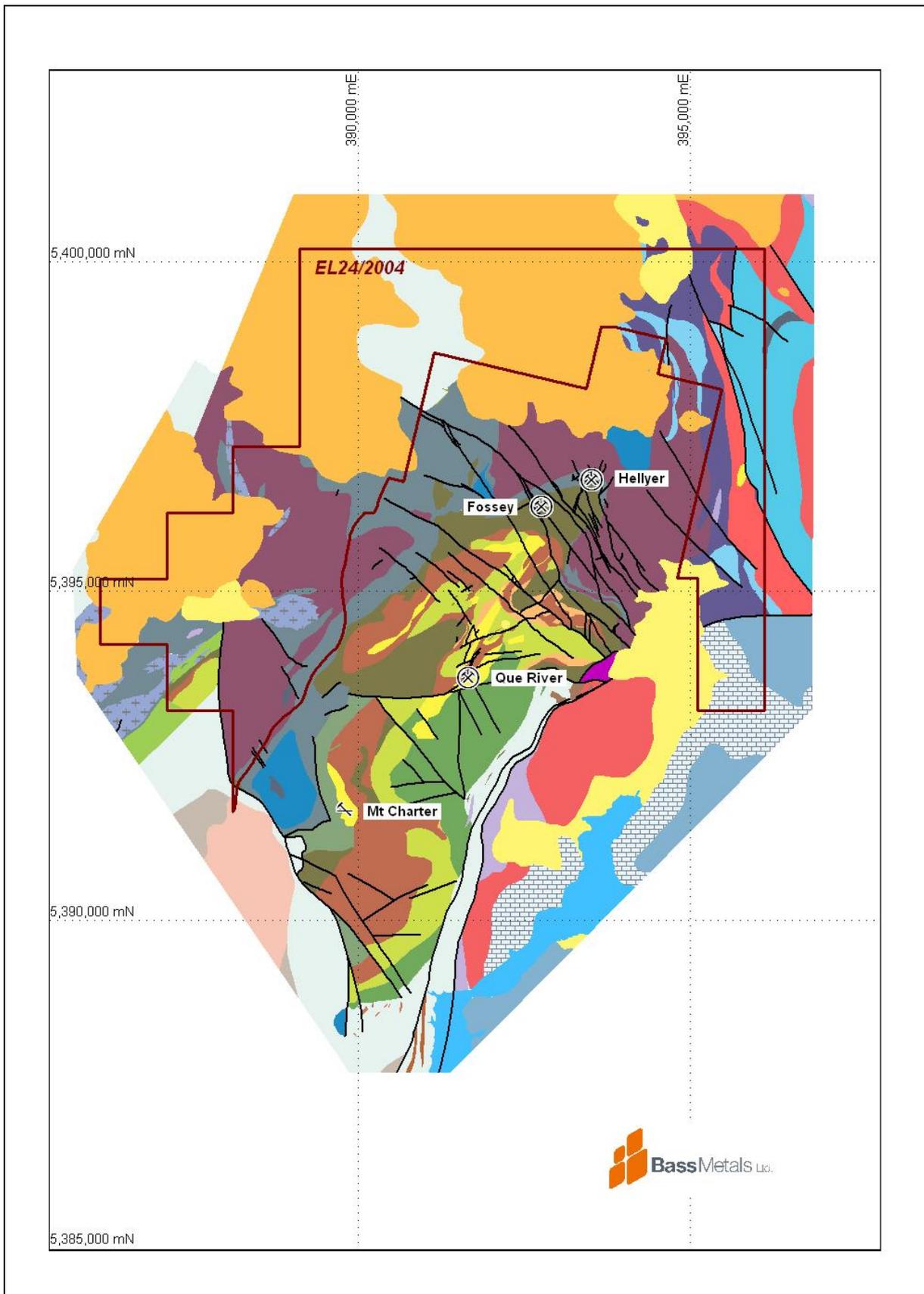
The prospective rocks on EL 24/2004 are the Que-Hellyer Volcanics (QHV), a package of dominantly mafic to intermediate volcanics, near the top of the Middle Cambrian Mt Read Volcanics (see Figures 2 and 3).

The Mt Read Volcanics are a belt of calc-alkaline volcanics which extend from Elliott Bay on Tasmania's west coast around to Deloraine in the central north and host a number of Volcanic Hosted Massive Sulphide (VHMS) and precious metal deposits including the Rosebery, Mt Lyell and Hellyer deposits (Figure 1).

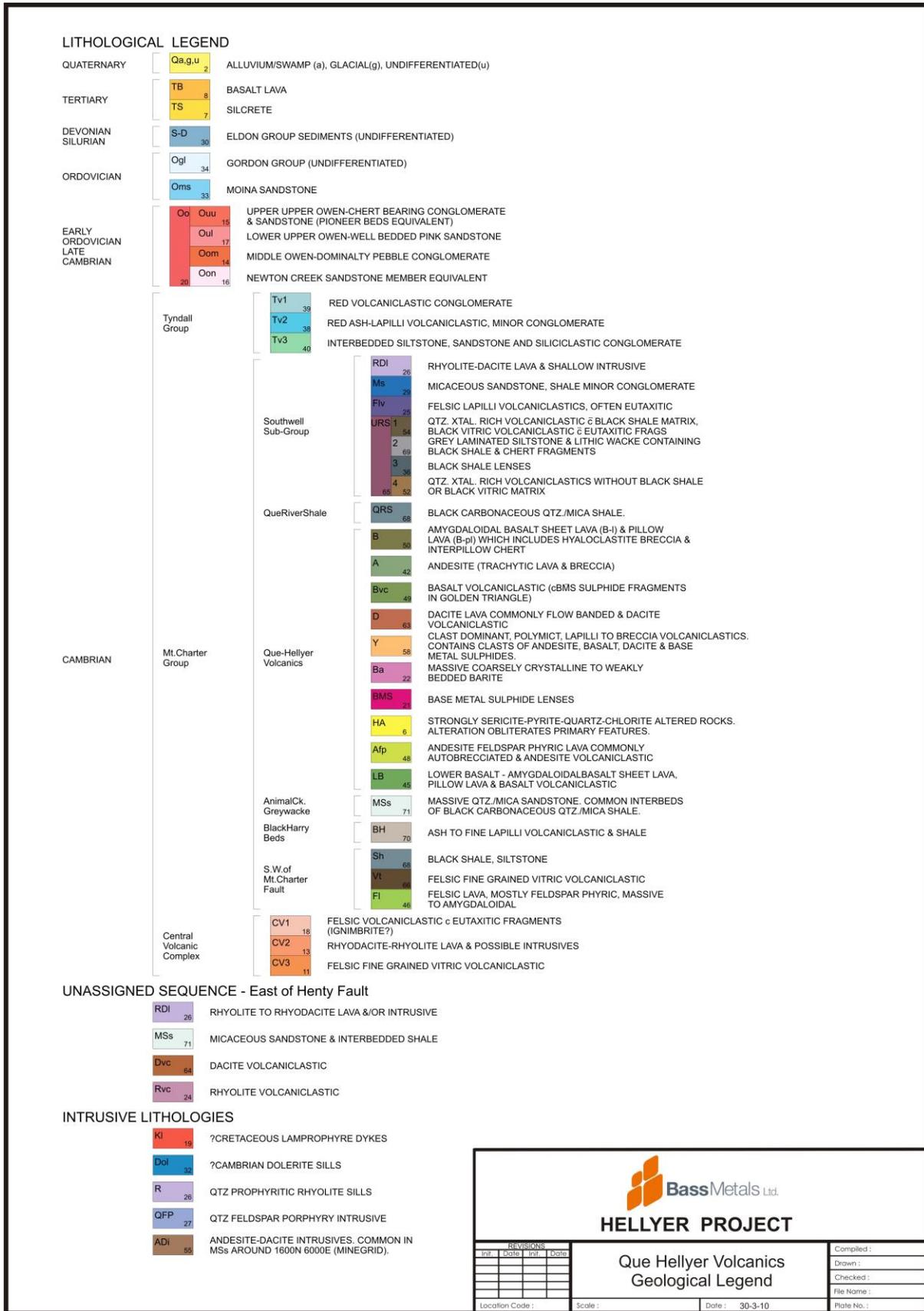
The Bulgobac River area is prospective for similar deposits and it is this style of mineralisation which has been the target for exploration within the area.

In the northern and westernmost parts of the licence the Mt Read Volcanics are unconformably overlain by a relatively thin veneer of Tertiary basalt and gravels. There are also some minor areas overlain by Quaternary alluvium. The other (approximately) half of the licence covers outcropping Mt Read Volcanics from units (predominantly Southwell Sub-Group and Que River Shale) stratigraphically higher than the prospective Que-Hellyer Volcanics.

The exception to this is ~1km<sup>2</sup> area on the western side of the Mt Charter Fault where a relatively thinned sequence of QHV correlates is present.



**Figure 2: Regional Geology Map (Legend is in Figure 3 on following page)**



**Figure 3: Geological legend for Figure 2**

## 1.4 Exploration Philosophy

Bass Metals Ltd is targeting polymetallic VHMS or hybrid associated precious metal deposits in the Que-Hellyer Volcanics.

The prospective QHV underlie younger cover rocks to varying depths over the whole of the licence area. In areas where the cover rocks are Que River Shale the depth to prospective stratigraphy is a few hundred metres at most. In areas where the Southwell Sub-Group is the outcropping cover rocks this depth would exceed 1km.

Exploration on the tenement to date has been driven by EM or conceptual deep drilling at combined structural and/or geophysical (gravity/magnetic) targets.

Bass Metals Ltd has completed a systematic lithogeochemical and Short Wavelength Infra-Red (SWIR) study of the “footwall” part of the QHV in drill holes on EL24/2004, in order to examine whether drilling to date may have been proximal or distal to potential hydrothermal systems.

Ultimately, because of the depth to prospective stratigraphy, exploration on EL24/2004 will require deep diamond drilling and will probably also need to incorporate structural and / or geophysical concepts.

## 2. EXPLORATION HISTORY

Historic exploration over EL 24/2004 has been summarised by Bates, 2009.

EL 24/2004 Bulgobac River is one licence of a series of contiguous exploration licences and mining leases. Bass Metals exploration over this landholding was largely carried out as a single project, with the group of tenements referred to as the Lake Mackintosh Group.

In 2009/2010 Bass carried out a number of systematic programs over the tenements in the area.

In particular this work consisted of:

1. Trace element lithogeochemical and Short Wavelength Infra-Red spectral analysis of existing diamond drill core from rocks from the “footwall” part of the host sequence. Existing soil data was also interpreted on the basis of results from drill core.
2. Compilation and appraisal of existing geophysical (Ground EM, magnetic, gravity) datasets with further processing (inversion) of existing IP data.
3. 88.3 line kilometre helicopter-borne VTEM survey, processing and interpretation.

This work program was described in Bates, 2011. As a result of this work no new targets were generated on EL24/2004.

### **3. WORK COMPLETED DURING THE CURRENT REPORTING PERIOD**

No field work was completed on EL24/2004 during the current reporting period.

From January 2012, as a result of adverse circumstances at its' Fossey Mine operation, expenditure by Bass on exploration was curtailed to help preserve cash flow. In February 2013, Bass Metals sold its' wholly owned subsidiary Hellyer Mill Operations Pty Ltd (HMO) to Ivy Resources Ltd and with the newly available funds recommenced exploration on its' QHV tenements. Shortly thereafter ongoing field work again stalled, pending the outcome of an external geological consultant's review, immediately followed in October by a spill of Bass' Board of Directors. A new board is now directing the company and they are committed to rebuilding the financial strength of Bass, which will in-turn renew exploration activities on Bass' Tasmanian tenements. The current board has set aside funds to carry out exploration activities in the short term. These available funds are at an appropriate level for the company's current financial position and are projected to increase as the Board rebuilds the financial strength of the company.

During 2013 the Bulgobac River exploration licence area was part of an external consultant's review of the current geological model and exploration strategy for the QHV. The scope of the review was to assess the current geological model and identify targets comprising alteration signatures that may be indicative of undiscovered mineralisation. The work was undertaken as a collaboration between Dr Scott Halley (Mineral Mapping Pty Ltd) and Dr Jun Cowan (Orefind) with consultants from JigSaw Geoscience; Dr Brian Krapez and Mr Carl Young, together with Bass' geologists.

Final reports from Jigsaw Geoscience and Mineral Mapping are attached to this report as Appendices 1 and 2 respectively. Note that coordinates used in these reports are AGD66 Zone 55.

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

One of the important methods for exploring the QHV in recent years has been multi-element ICP-MS/OES soil and rock geochemistry, in combination with SWIR spectroscopy. Where it has been applied this technique has proven very successful for:

- mapping bedrock geology from trace elements
- mapping footwall alteration through detection of pyrite-hosted trace elements and defining alteration minerals,
- defining target areas (some of which have been drilled up to 2012) from the coincidence of anomalous pathfinder elements and alteration with prospective stratigraphy.

Up until now, multi-element soil and drill core sampling for pathfinder elements, has focused on footwall rocks. However, in early 2013 an orientation soil survey was undertaken over hangingwall basalt on top of the Hellyer and Fossey orebodies as well as hangingwall drill core sampling across the orebodies. This survey showed that pathfinder elements were anomalous in hangingwall alteration above these deposits, allowing the orebodies to be detected by the method up to 200m away.

It is therefore planned to extend the lithogeochemistry and SWIR spectrometry program, previously only undertaken on footwall rocks, to the hangingwall basalt and the base of the Que River Shale. Historic holes, which intersect deep Que Hellyer Volcanics in the SW corner of the exploration licence will be the focus. This program will seek to detect signs of a hangingwall plume around any existing hydrothermal system.

At the time of writing, EL24/2004 is the subject of an application to Mineral Resources Tasmania to be consolidated with adjacent EL48/2003 Mt Block.

#### **5. ENVIRONMENT**

No work has been carried out on the tenement which has had any environmental impact.

## 6. EXPENDITURE

Expenditure on EL24/2004 up to 30<sup>th</sup> January 2014 is summarised below in Table 1.

<b>Expenditure –</b>	Reporting period	\$15,582
	Total to date	\$876,875

July 2013 - January 2013		
<b>Geoscientific Costs</b>	<b>Geology</b>	13,130
	<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>	2,452
	<b>Admin Costs</b>	
	<b>Total - eligible</b>	<b>\$15,582</b>

**Table 1. Expenditure 30th July 2013 to 29th January 2014**

*\*Expenditure reported is up to and including 30th December 2013*

## 7. REFERENCES:

**Bates, S., 2009.** Bulgobac River, Tasmania, EL24/2004. Annual Progress Report, 30<sup>th</sup> July 2008 – 29<sup>th</sup> July 2009. Unpublished Report to Mineral Resources Tasmania.

**Bates, S., 2011.** Bulgobac River, Tasmania, EL24/2004. Annual Progress Report, 30<sup>th</sup> July 2010 – 29<sup>th</sup> July 2011. Unpublished Report to Mineral Resources Tasmania.

## **APPENDIX 1**

**(Note – all coordinates used in the following report  
are AGD66 Zone 55)**

## **APPENDIX 2**

**(Note – all coordinates used in the following report  
are AGD66 Zone 55)**