

**PARADISE RIVER PROJECT  
(PIEMAN RIVER GROUP)  
TASMANIA  
EL36/2005**

**ANNUAL PROGRESS REPORT  
27<sup>TH</sup> FEBRUARY 2009 TO 26<sup>TH</sup> FEBRUARY 2010**

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**Distribution:**

Mineral Resources Tasmania  
Bass Metals Ltd  
Clancy Exploration 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 Paradise River exploration licence (EL36/2005) on 26th February 2007. For the year ended 26<sup>th</sup> February 2009 work conducted on the licence has included -

- Follow up at Lucy Spur has suggested a relationship between Proterozoic granite and gold mineralisation in both geological and geophysical data sets. This relationship is being investigated further.
- Investigation of aeromagnetic data in relation to buried granitoids.
- Research pertaining to IOCG potential of the Arthur Lineament is being directly applied to this tenement.

**Expenditure** – Reporting period \$9,587.71

Total to date \$21,982.

The Paradise River tenement is part of the Pieman River Group; the total expenditure up to the 31<sup>st</sup> December 2009 for this group is \$29,183 against a required group expenditure of \$30,400.

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## **1. INTRODUCTION**

This report is a summary of the exploration activities conducted on the Paradise River exploration licence, EL36/2005 (Figure 1), for the period 27 February 2009 to 26 February 2010. The licence covers a total area of 17 km<sup>2</sup>. The Paradise River licence is subject to an exploration joint venture agreement between Bass Metals Ltd ("BSM") and Clancy 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 Paradise River licence is located on the west coast of Tasmania, 6.5km South East of Corinna. Access to the area is via the sealed Waratah to Savage River Road then via an unsealed road to Corinna. Within the tenement access is via a limited number of 4wd tracks, which can be accessed mainly during dry weather, and tend to deteriorate rapidly when not maintained or during wet weather. Access to the majority of the tenement is on foot. Walking tracks and cleared gridlines are required in order to conduct the most basic field exercises.

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

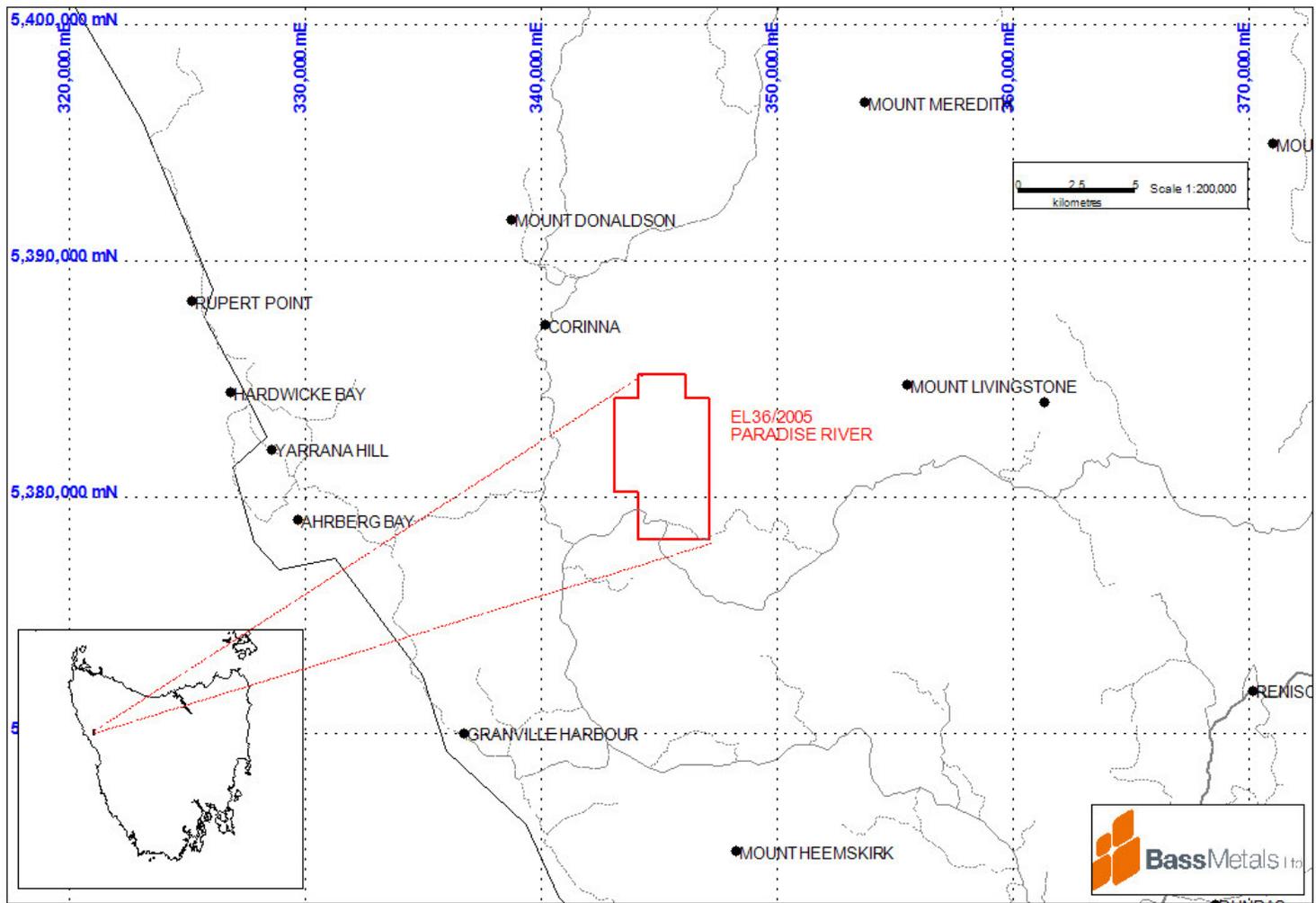


Figure 1. Paradise River Exploration Licence (EL36/2005) is located in north-western Tasmania.

## 1.2 Geology Overview

The Paradise 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 Paradise River area is primarily composed of a sequence of Proterozoic meta-sediments which is common throughout the north-west of the state.

### 1.2.1 Tyennan Metamorphics (Bowry Formation)

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 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).

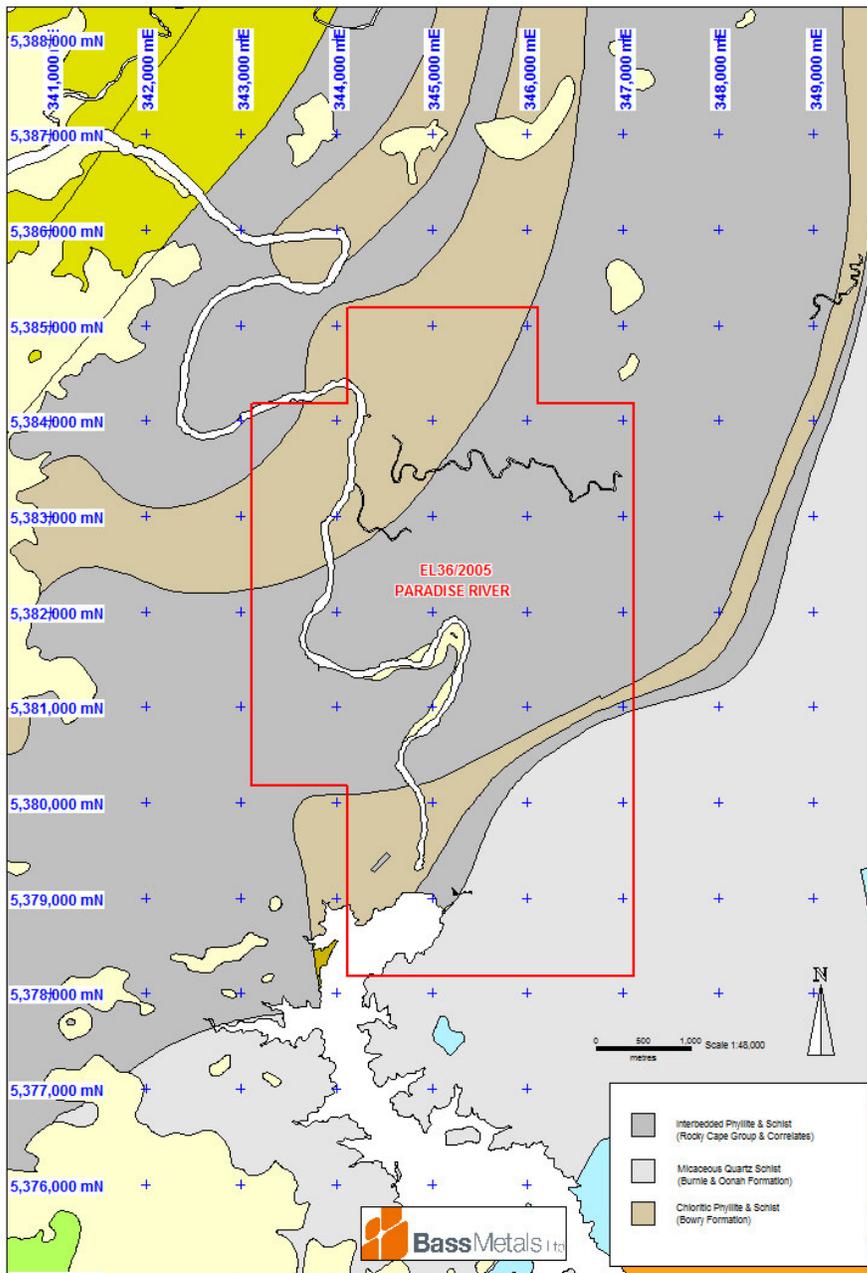


Figure 2. Regional geology showing licence area boundary

### **1.3 Exploration Rationale**

Although well prospected for alluvial gold and displaying a small amount of mining; this region was firstly regarded as un-prospective due to the fact that the majority of the lithology was Oonah quartzite and slate.

## **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 Paradise River tenement. By 1881 workings at Nancy Creek, Lucy Creek and Paradise River were all reporting the discovery of coarse gold.

In 1882 a 7.5kg gold nugget was recovered from 5-6 feet of gravel from Rocky River to the North. This area produced further finds of coarse gold until 1900 with notable nuggets of 30 and 39 ounces being unearthed. After the turn of the century (1900) small scale alluvial mining has been ongoing in the area until the present day. Historic hard-rock mining has been small scale and scattered with the largest mine being the Rocky River Mine which operated between 1895 and 1900. Modern day sampling conducted by a Goldstream-Titan JV showed the mineralization at the Rocky River Mine to be quite low grade.

### **2.2 Exploration prior to current licence area**

Mineralisation was first discovered in the area in 1879 with alluvial gold found at Middleton's Creek to the west of the current Paradise River tenement. The Paradise River area has historically been explored by several companies;

#### **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. The Rocky River prospect is located on the Whyte River tenement to the north of Paradise River.
- Savage Resources 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 un-encouraging, 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, and northern part of the Paradise 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.

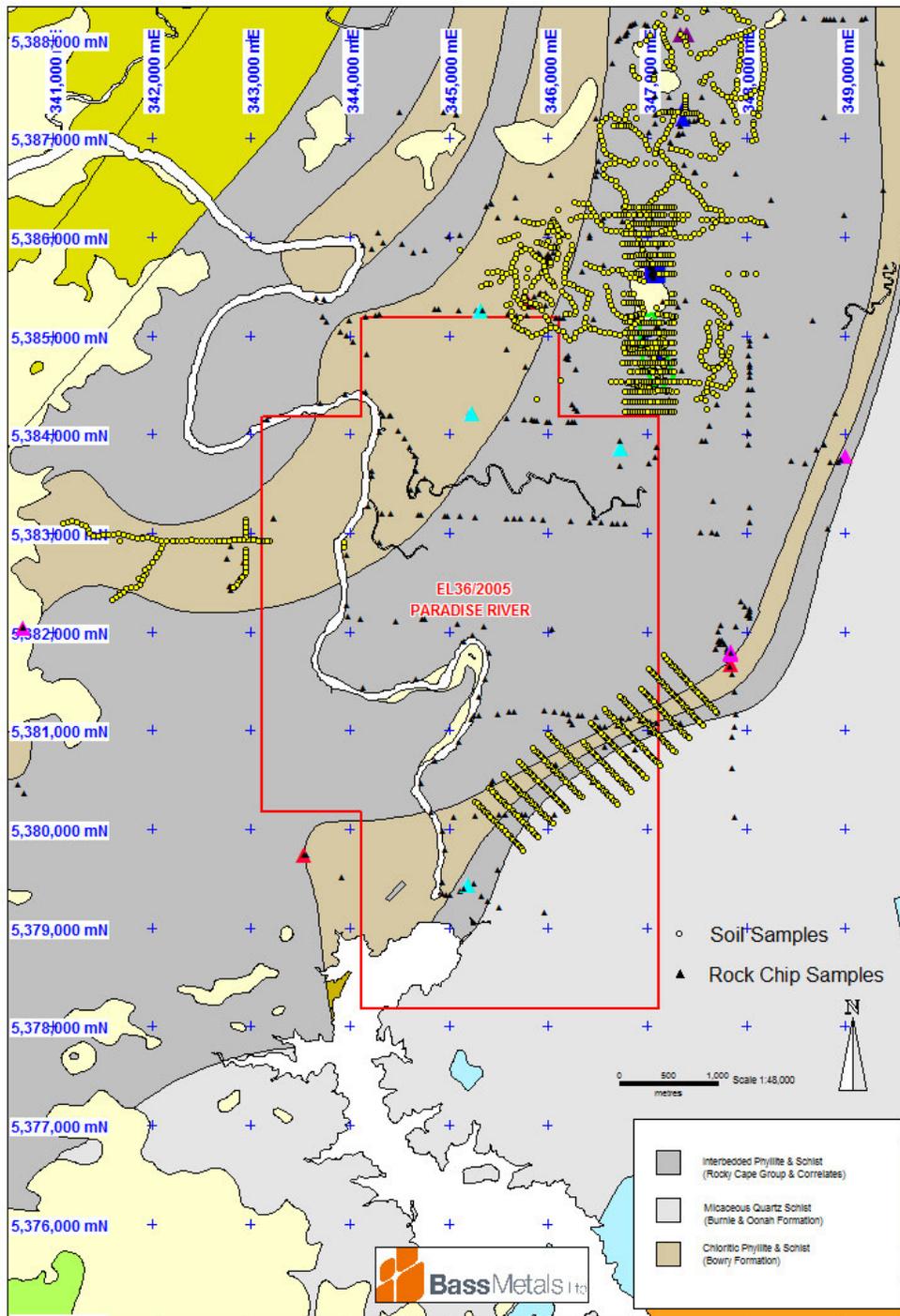


Figure 3. Historic exploration activity showing geochanical sampling

2.3 Exploration completed 27<sup>th</sup> Feb 2007 to 26<sup>th</sup> Feb 2008 (BSM)

During the reporting period BSM have undertaken the following preliminary exploration activities -

- Desktop assessment of the Lucy's Spur bedrock Au occurrence in this district of predominant alluvial gold workings.
- Paradise River was pending during the Geoinformatics 1B and Stage 2 Intervention projects (involving capture of historical data, 3D geological modeling, and probabilistic targeting using Monte Carlo analysis) and as such, no targets were generated for this area.

#### **2.4 Exploration completed 27<sup>th</sup> Feb 2008 to 26<sup>th</sup> Feb 2009 (BSM)**

- Familiarisation of area for new team member, desktop study, action plan.
- Desktop assessment of the Lucy's Spur bedrock Au occurrence in this district of predominant alluvial gold workings.

#### **2.5 Exploration completed 27<sup>th</sup> Feb 2009 to 26<sup>th</sup> Feb 2010 (BSM)**

Follow up at Lucy Spur has suggested a relationship between Proterozoic granite and gold mineralisation in both geological and geophysical data sets. This relationship is being investigated further.

The host rock to gold mineralisation at the Lucy Spur historical gold workings is a dark grey siliceous breccia (intense phyllic alteration of a precursor porphyritic granitic rock) and higher gold values are related to stockwork quartz veins containing iron oxides or having brown/red pug as a selvage; hosted within chloritic schists. Intrusive rocks occur at a smaller scale than has been captured by government mapping (Figure 4). The granitic rocks in the area have been dated at 777Ma and are interpreted to represent an intrusive event associated with the Wickham Orogeny.

Investigation of the aeromagnetic data has resulted in several magnetic highs being recognized, one of which is coincident with the historical gold working. Current interpretation is that the magnetic highs may represent buried granitoids similar to that found at Lucy Spur. (Figure 5).

Figure 4. 1:25k geology of the Lucy Spur area. All rock types are Proterozoic in age, green representing amphibolites with pyrite and magnetite occurrences and grey represents chloritic schists. Coloured dots represent soil sample locations and stars are rock-chip localities.

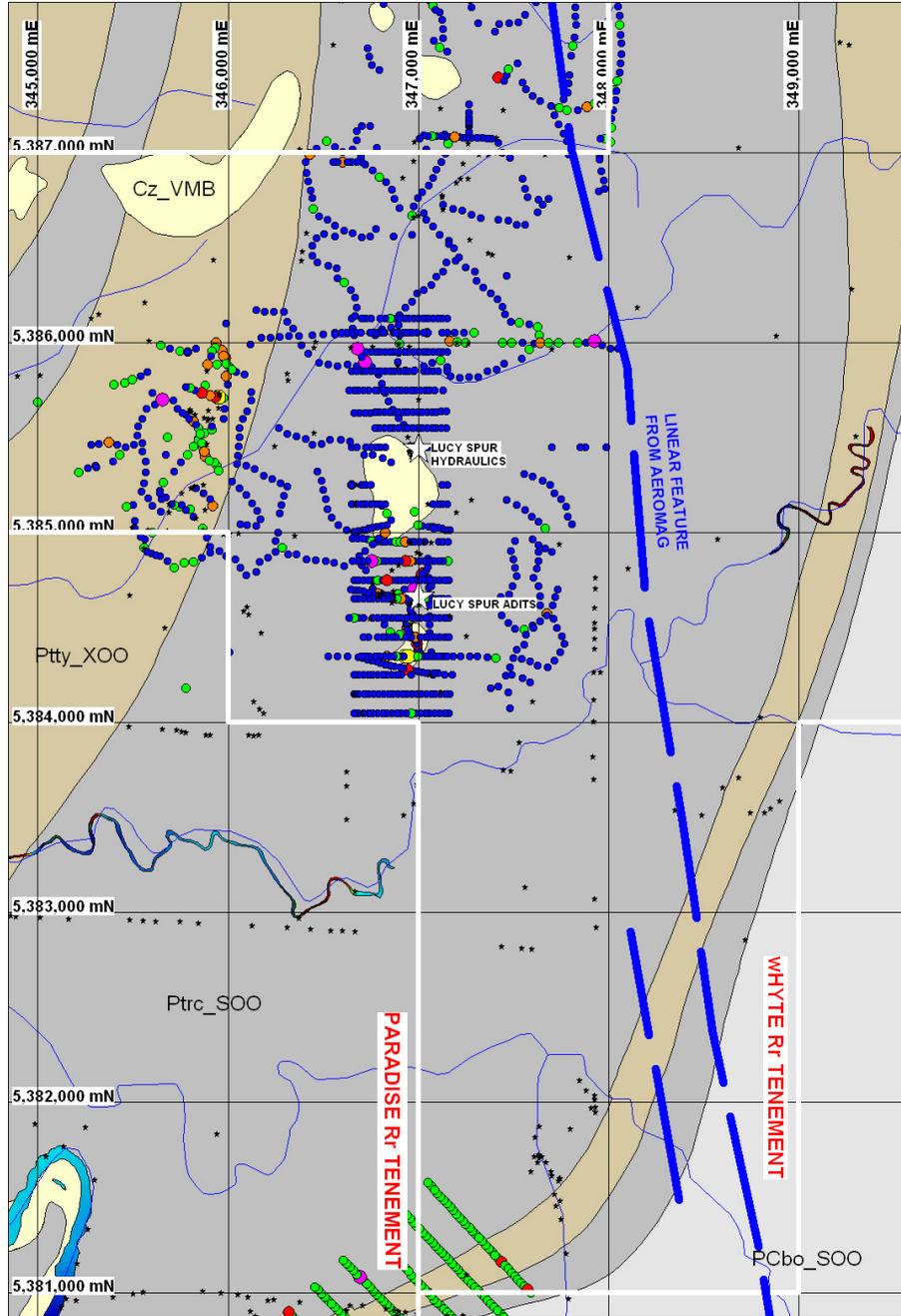
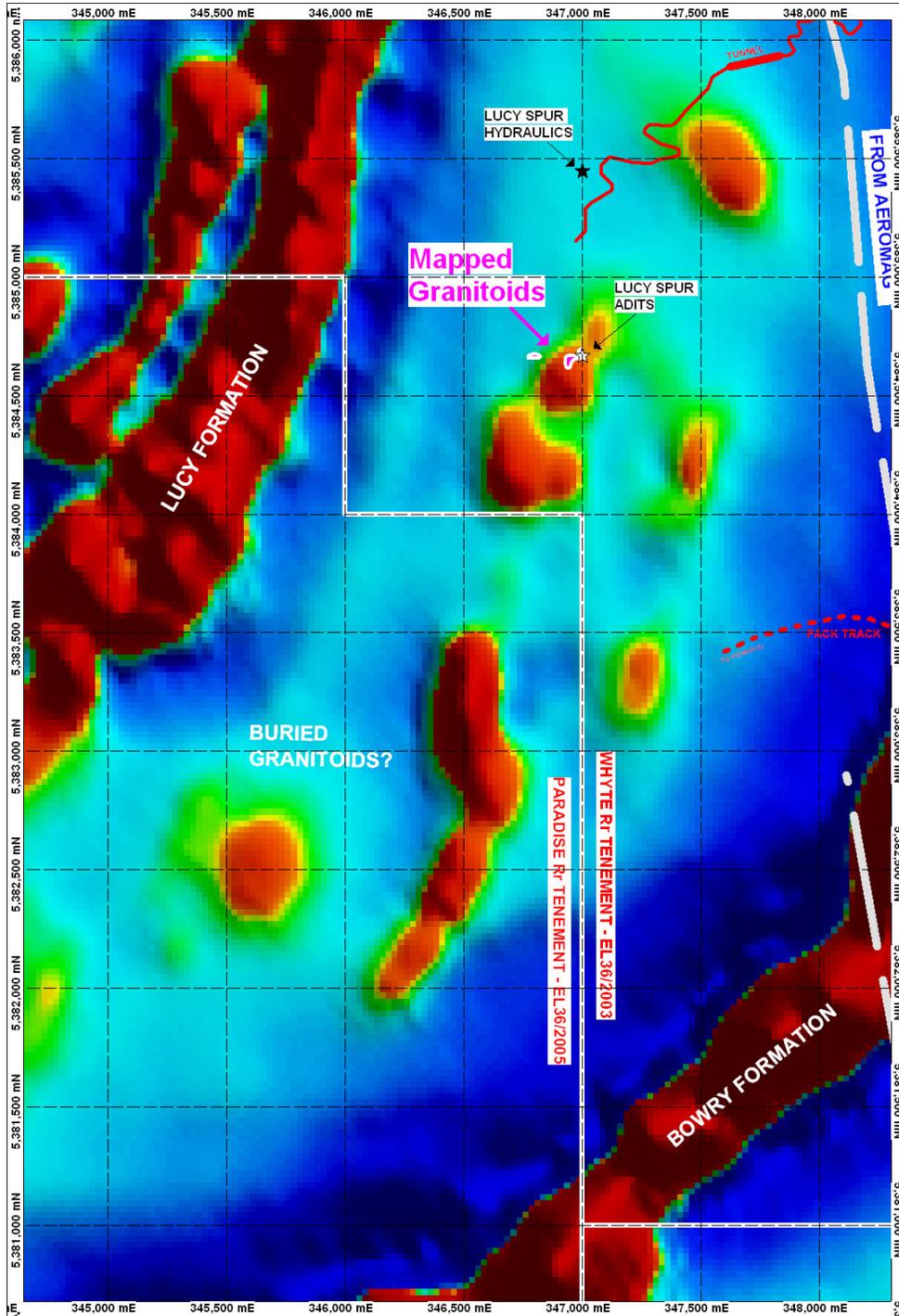


Figure 5. Aeromagnetic image of the Lucy spur area illustrating the isolated magnetic highs, one of which is coincident with mapped granite at the Lucy Spur Adits. Narrow black line represents approximate outline of a potential Proterozoic pluton at deeper level.



Research pertaining to IOCG potential of the Arthur Lineament is being directly applied to this tenement. The Arthur Lineament has historically been explored and has hosted small high-grade copper and gold mines hosted in chloritic schists adjacent to stratigraphy preferentially hosting magnetite Fe deposits of which Savage River is the most significant.

Recent work by MRT geologists (in press) suggest that the Savage River Fe deposit has strong IOCG affinities including:

- Magmatic fluid associated with mineralisation
- Deposits are replacive in nature
- Albite alteration on the margins of the deposit
- Anomalous Copper geochemistry.

The Savage River area was initially prospected for copper and has historically mined high-grade gold mineralisation to the south at Golden Ridge and north at Specimen Hill.

Ca. 100 year-old government geological reports of the Corinna-Long Plains-Savage River district comment on the spatial coincidence of Fe-enrichment, alluvial gold, and minor chalcopyrite veining.

### **3. PROPOSED EXPLORATION**

Proposed exploration over the next year on the Paradise River license includes;

- Follow up on a possible extension onto the Paradise River tenement of magnetic anomalies within the Bowry Formation identified by Venture Minerals on the Whyte River tenement.
- Ongoing research on the possible relationship between Proterozoic granite and gold mineralisation.
- Ongoing research on the IOCG potential.

### **4. 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.

No field work has been conducted at the Paradise River exploration licence by BSM at this point in time.

The attached Environmental Activity Map (Figure 5) shows the location of the Exploration 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 *Phytophthora 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.

#### **Land Tenure**

The Paradise River Exploration Licence comprises:

- CAR Reserve System Informal Reserve
- Hydro Electric Corporation Land
- Regional Reserve
- State/Multiple Use Forest
- Tasmanian Community Forest Agreement Area

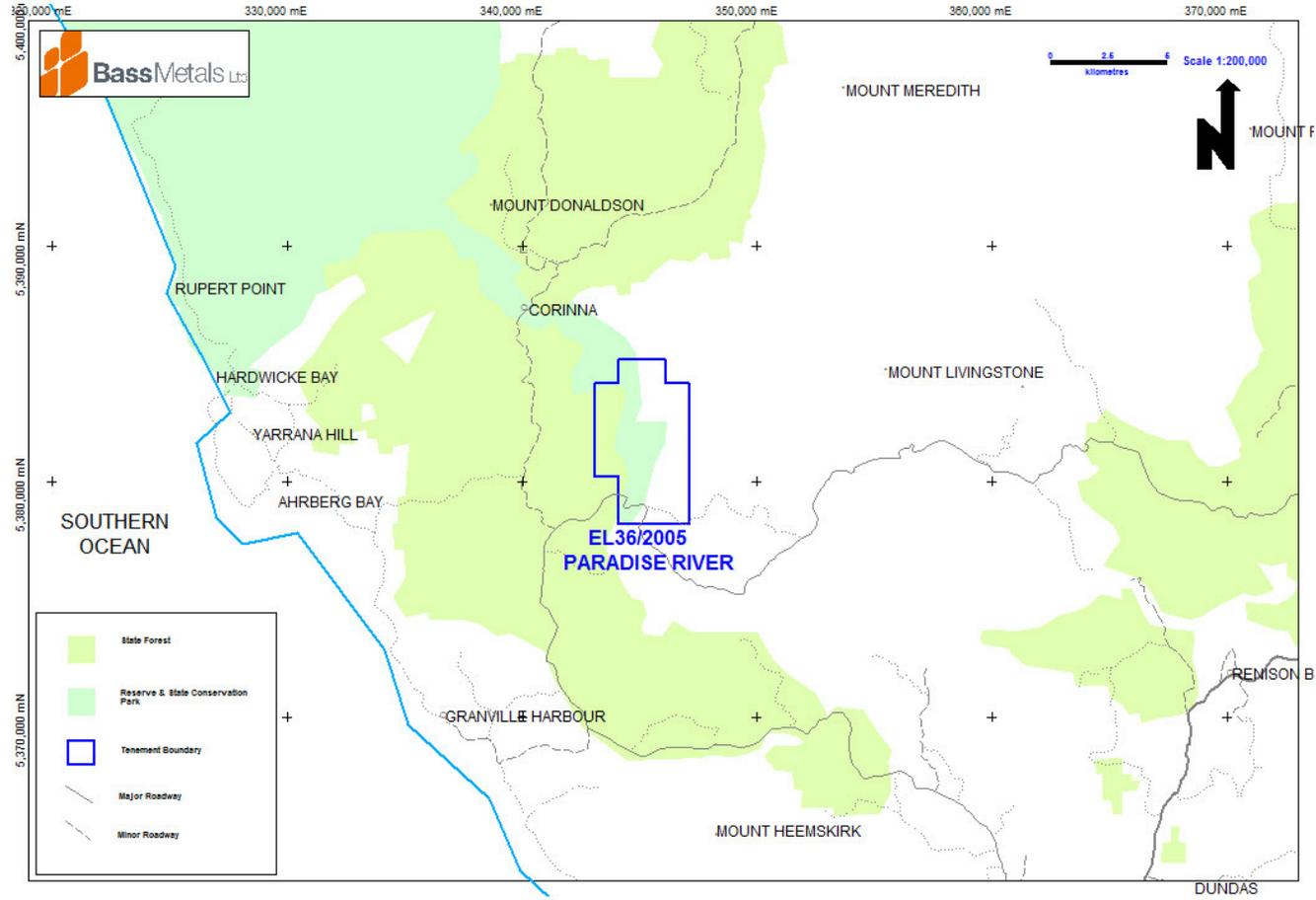


Figure 6. Environmental Activity Map

## 5. EXPENDITURE

| February 2009 - February 2010 |                         |                   |
|-------------------------------|-------------------------|-------------------|
| Geoscientific Costs           | Geology                 | 8,383.87          |
|                               | Geochemistry            |                   |
|                               | Geophysics              |                   |
|                               | Remote Sensing          |                   |
| Drilling & Gridding Costs     | Gridding                |                   |
|                               | Drilling                |                   |
|                               | Land Access Costs       |                   |
|                               | Rehabilitation Costs    |                   |
|                               | Feasibility Study Costs |                   |
|                               | Other Costs             | 1,203.84          |
|                               | Admin Costs             |                   |
|                               | <b>Total - eligible</b> | <b>\$9,587.71</b> |

**Table 1. Expenditure 27<sup>th</sup> February 2009 to 26<sup>th</sup> February 2010**  
*\*Expenditure reported is up to and including 31<sup>st</sup> December 2009*

The Paradise River tenement is part of the Pieman River Group; the total expenditure up to the 31<sup>st</sup> December 2009 for this group is \$29,183 against a required group expenditure of \$30,400.

## 6. REFERENCES

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

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