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ANNUAL REPORT 1996/97

TASMANIAN BASE METALS

ELS 102/87, 55/89 AND 12/92

*"Queenstown", "Mt Darwin" &
"Queenstown South"*

**Vol 1 of 1
Text and Appendices**

HELD BY: BHP Minerals

MANAGER & OPERATOR: RGC Exploration

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PROSPECTS: Garfield, Slate Spur, Beatrice, Moxon Saddle

MAP SHEETS: 1:100,000: Franklin, Sophia

| | | |
|--------------------------|-----------------------------|-----------------------------|
| GEOGRAPHIC COORDS | Min East: 3750000mE | Max East: 3870000mE |
| | Min North: 5320000mN | Max North: 5368000mN |

COMMODITY(s): Cu, Pb, Zn, Au, Ag

KEY WORDS: Cu-Au Mineralization, Western Tasmania

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SUMMARY

Exploration Licences 102/87 Queenstown, 55/89 Mt Darwin and 12/92 South Queenstown cover a 30km N-S trending exposure of Cambrian Mt Read Volcanics from Lake Margaret to Slate Spur. E.L.'s 102/87 and 55/89 are held by BHP Minerals Ltd and explored by RGC Exploration under a joint venture agreement entered into on 29th November, 1991. RGC acquired an adjoining area as E.L. 12/92 on 12th October 1992, and this was also included in the joint venture. The total area covered by these licences is 130 sq kms.

An infill soil sampling was completed at Slate Spur where the target is the possible seafloor position equivalent to the top of the Garfield Cu-system. The survey failed to produce any anomalies worthy of additional followup.

At the Beatrice Prospect diamond drillhole MS6 was drilled to test a prospective shale horizon to the south of existing drilling and adjacent to interpreted synvolcanic structure. Based on poor assay results and the absence of encouraging alteration no further work is recommended for this portion of the Beatrice Prospect. A reinterpretation of the prospect geology was completed. The interpretation shows a broad asymmetric fold with a north-south trending axis. Interpretation shows the continuation of the prospective horizon on the western limb of the broad syncline which forms part of this fold.

A diamond drill hole is in progress at Moxon Saddle.

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|-----------------|---|----------------|--------------|
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1. INTRODUCTION

Exploration Licences 102/87 - Queenstown and 55/89 Mt Darwin are held by BHP Minerals Ltd. (BHPM) and an adjoining licence, E.L. 12/92 is held by RGC. These licences are explored by RGC Exploration Ltd under the terms and conditions of a joint venture agreement. Approval was granted allowing the joint reporting of the exploration work because the tenements form a single coherent geological block.

The tenements currently occupy a total area of 130 sq kms surrounding Queenstown extending to the north, in part, some 30 kms to Moxon Saddle and to the south some 20 kms to Slate Spur (Figure 1). They cover a significant portion of the Cambrian Mount Read Volcanics. These rocks host a variety of significant mineral occurrences.

Much of the previous work in this area targeted copper-gold mineralisation of the Mt Lyell style. More recently BHPM covered selected areas with blanket UTEM looking for VMS mineralisation. This was supported by some geological mapping and rock chip/stream sediment geochemistry.

RGC is also exploring this area for Rosebery-style VMS mineralisation. The exploration approach which has been applied involves detailed geological mapping in an attempt to identify possible mineralised horizons and alteration zones. This mapping is supported by multi-element soil and rock geochemistry. Any alteration zones thus identified can be tested by deep drilling and down-hole geophysics.

This report documents the work completed by RGC during the period March 1996 to February 1997.

2. LAND TENURE

E.L. 102/87 - **Queenstown** was granted to BHPM on 22nd April, 1988. The tenement initially covered 95 sq kms in three separate parts (Figure 1)

| | | |
|------------|---|--------------------------|
| Part (i) | - | Queenstown of 74 sq kms |
| Part (ii) | - | Garfield of 19 sq kms |
| Part (iii) | - | Moxon Saddle of 2 sq kms |

Part (i) totally enclosed the Mt Lyell Mine Lease, 30M/80. In 1988 Mining Lease Application areas (MLA's) were cancelled by Mt Lyell increasing the area of Part (i) to 79 sq kms. Again in early 1992 additional MLA's were relinquished further increasing Part (i) to 84 sq kms. This tenement currently covers 105 sq kms and was due for 50% reduction on or before 22nd April, 1993. A meeting with representatives of the Department of Mines Tasmania (DMT) was held on 15th April, 1992 where RGCE expressed its interest in postponing the reduction date by 12 months due to its recent entry into the Agreement with BHPM.

E.L. 55/89 - **Mt Darwin** was granted to BHPM on 5th May, 1990. This tenement covers 78 sq kms and links Parts (i) and (ii) of E.L. 102/87 (Figure 1) resulting in a continuous exposure of Mt Read Volcanics over a strike length of 14 sq kms which is explored as a

single coherent block. Because of this BHPM was successful in gaining approval from the DMT to jointly report on exploration activities (15th March, 1991).

E.L. 12/92 - **South Queenstown** was granted to RGC on 12th October 1992. This tenement formed a narrow strip partly enclosing the other E.L.'s. It was divided into 3 parts:

- Part (i) - 49 sq kms on the eastern side of the West Coast Range
- Part (ii) - 15 sq kms over Mt Sorell and Mt Strahan
- Part (iii) - 2 sq kms south of Lake Margaret.

A significant portion of E.L.'s 102/87 and 55/89 was within the South-West Conservation Area (SWCA) and considered to be environmentally sensitive. Despite the revocation of Conservation Area status in areas north of Macquarie Harbour exploration activities in the Garfield/Clark Valley are still subject to approval from the Mineral Exploration Working Group.

Following the partial relinquishment in 1995 the total area covered by the three E.L.'s was reduced to 130 sq kms. This is made up of:

- E.L. 102/87
 - Part (i) Queenstown - 56 sq kms
 - Part (ii) Garfield - 18 sq kms
 - Part (iii) Moxon Saddle - 2 sq kms
- E.L. 55/89
 - Part (i) Mt Darwin - 28 sq kms
- E.L. 12/92
 - Part (i) West Coast Range - 16 sq kms
 - Part (ii) Mount Sorell - 8 sq kms
 - Part (iii) Lake Margaret - 2 sq kms

3. WORK COMPLETED

3.1 Previous Work

Previous exploration work completed by BHP is summarised by Cameron and Read (1991). The work completed by RGC since entering the joint venture is documented by Halley (1992), Halley (1993), Halley (1994), Halley, Vicary and Boyd (1995) and Halley, Vicary, Corlett and Wyman (1996). The most significant outcome of this work was the discovery of the Garfield Prospect, a Prince Lyell style of disseminated and veinlet Cu-Au mineralisation.

3.2 1996/97 Field Season

- | | |
|----------------------|--|
| a) Slate Spur area | A soil sampling program was completed. |
| b) Beatrice | A 287m diamond drill hole was completed and additional geological mapping at 1:5000 scale performed. |
| c) Moxon Saddle | A diamond drill hole MX001 is currently being drilled. |
| d) Garfield Prospect | Sam Duncan commenced an Honours Project on the Garfield Prospect at the University of Tasmania in February 1997. |

4. RESULTS AND DISCUSSION

4.1 Slate Spur Area

Figure 2 shows the Cu, Pb, and Zn distribution in the Garfield and Clarke Valley areas. The Garfield Prospect is quite obvious on the Cu map. Isotope studies at the Garfield Prospect show that the alteration system was sea water dominated and hence the seafloor position above the Cu-Au mineralisation should have the potential for Rosebery style Pb - Zn mineralisation. Two low order Pb and Zn anomalies are located along strike from the Garfield mineralisation at approximately 5326000 mN (Flannigans Flats) and 5321000 mN (Slate Spur). Both these anomalies occur in the hanging wall of the Garfield Prospect and may represent an associated phase of seafloor mineralisation. To investigate the Pb - Zn anomaly at Slate Spur an initial soil sampling program and mapping program was coordinated in late 1995 (Halley, Vicary, Corlett and Wyman (1996)). The soil sampling program was concluded in early 1996.

The results for the infill soil sampling program at Slate Spur are presented in Appendix 1. Sample locations are shown on Figure 3. In general the infill soil program reproduced the weak Pb - Zn anomalies but failed to highlight any zone worthy of additional exploration (Figures 4, 5 and 6). No further work at Slate Spur is warranted.

4.2 Beatrice Prospect

At the Beatrice Prospect diamond drillhole MS6 was drilled to test a prospective shale horizon to the south of existing drilling and adjacent to interpreted synvolcanic structure. Based on poor assay results and the absence of encouraging alteration no further work is recommended for this portion of the Beatrice Prospect. A reinterpretation of the prospect geology was completed. The interpretation shows a broad asymmetric fold with a north-south trending axis. Interpretation shows the continuation of the prospective horizon on the western limb of the broad syncline which forms part of this fold.

The results of the drilling program at the Beatrice Prospect are presented in Appendix 2.

4.3 Moxon Saddle

Geophysical modelling of IP data conducted by BHP in 1990 over Moxon Saddle indicate a shallow steeply dipping conductor. A 450m deep diamond drill hole (MX001) has been planned with two aims in mind:-

- 1) to test the IP target near the surface, and
- 2) to gain information on Tyndall Group Stratigraphy north of Henty Gold Mine.

The hole is collared within Tyndall Group rocks on the western side of Moxon Saddle. Drilling is in progress.

5. CONCLUSION

A review of the exploration within EL's 102/87, 55/89 and 12/92 will be made within the next twelve months.

There is scope for further drilling on the Henty Horizon south of drill hole MX001, however future holes will be results dependent.

A DHEM Survey will be performed at Moxon Saddle.

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