

**PASMINCO EXPLORATION**

**LAKE BEATRICE EL 20/98**

**ANNUAL AND FINAL REPORT FOR THE PERIOD  
ENDING 23<sup>rd</sup> SEPTEMBER 2001**

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**Date:** 11 September 2001

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## 1. SUMMARY

This report details exploration completed on the Lake Beatrice licence (EL 20/98) during the first three years of tenure of the licence.

Work completed on the Lake Beatrice Licence during the reporting period has included:

- Compilation of previous exploration data.
- A helicopter supported reconnaissance visit to re-locate the Aberfoyle grid and start cutting a helipad.

A proposed partial leach sampling program over the most prospective stratigraphy has been postponed for two field seasons. A review of Pasminco's ground holdings in Western Tasmania has led to the conclusion that the Lake Beatrice area is of low-prospectivity for Rosebery or Hellyer type VHMS and the area is therefore being relinquished.

## 2. INTRODUCTION

This report details exploration activities completed by Pasminco Exploration on the Lake Beatrice (EL20/98) tenement during the first three years of tenure.

The Lake Beatrice licence covers a portion of the Mount Read Volcanics to the north and east of Queenstown in Western Tasmania (Figures 1 and 2). The Licence covers the steep south and east facing slopes of the Tyndall range and part of Lake Beatrice and the Dante Rivulet in the east. The principal exploration targets sought within the licence area are Rosebery or Hellyer-type volcanogenic Pb-Zn-Cu-Ag-Au massive sulphide deposits. The area is heavily vegetated, rugged and poorly accessible. Access into the area is provided by 4WD tracks from the Mt Lyell Mining leases along the Sedgwick Valley to Lyell Comstock Creek and then by foot for 1.5 km to the base of the range. Alternatively, helicopter support is required.

Exploration activities undertaken during the reporting period have focussed on:

- A review and compilation of previous exploration.
- Planning for a partial leach soil sampling program to cover the most prospective part of the stratigraphy. A reconnaissance visit was completed to re-locate the Aberfoyle grid and start cutting a helipad, however, the sampling program was delayed for two summers due to budgetary constraints.

This report summarises the results of all work done on this tenement since granting in 1998 and previously included in the Queenstown North Project Annual reports (Denwer et al., 2000a and 2000b).

### **3. LAND TENURE**

Lake Beatrice covers an area of approximately 10.5 square kilometres immediately east of Pasminco's Beatrice (EL 6/98) and south of Pasminco's Walford Peak (EL 24/96) tenements; Figure 1. The tenement was granted to Pasminco Australia Ltd. on 23 October 1998 for a period of five years and is due to expire in October 2003.

EL 20/98 Lake Beatrice has formed part of Pasminco's Queenstown North Project. The project was initially formed by the amalgamation of reporting and expenditure commitments for EL 24/96 Walford Peak, EL 6/98 Queenstown and EL 20/98 Lake Beatrice on 23<sup>rd</sup> March 1999. EL's 10/99 Lake Margaret and EL 13/99 Linda were subsequently amalgamated after their granting on 27<sup>th</sup> July 1999 and 12<sup>th</sup> July 1999 respectively.

The Lake Beatrice tenement area has been previously held under a number of other exploration licences, which include MLMRC/RGC's EL 9/66 (1966-1984), Aberfoyle/CRAE's EL 5/85 (1985-1993) and CMT's EL 3/96 (1996-1997). Land tenure includes the Tyndall Range Regional Reserve and the Lake Beatrice Conservation area. Much of the area is classified as High Quality Wilderness (as defined in the Regional Forest Agreement); all these classifications are available for mineral exploration.

### **4. GEOLOGY**

The Lake Beatrice (EL 20/98) tenement covers the eastern part of one of three VHMS prospective geological environments that occur around a core of Owen Conglomerate, forming the West Coast Range, in the area covered by the Queenstown North Project (Figure 2; derived from the published 1:25,000 scale government geology maps).

The Lake Beatrice area lies on the steep southern and eastern slopes of Mt Sedgwick and the Tyndall Plateau, where the prospective volcanics are exposed beneath the Owen Conglomerate cover. A lava dominated package, interpreted to be part of the Central Volcanic Complex (CVC; Corbett and Jackson, 1987; Noonan, 1990) forms a prominent knob, the "Beatrice Rhyolite Dome", at the eastern edge of the tenement and is flanked by feldspar-phyric lapilli to breccia, with minor ash-grade, volcanoclastics (becoming quartz-phyric to the east) with minor shale and quartz-feldspar±biotite-phyric lavas and intrusives (Noonan, 1990). These lithologies can be correlated with the Itat Creek sequence at the Beatrice Prospect on the adjacent EL 6/98, and may therefore have the potential to host a repetition of the Beatrice mineralisation. Volcanic sandstones and conglomerates of the Tyndall Group (correlates of the Zig Zag Hill Formation) and the Cambro-Ordovician Owen Conglomerate unconformably overlie these units.

In the eastern part of the tenement the Cambrian siliciclastic Sticht Range Formation (SRF) appears to unconformably overly Precambrian metamorphics and underlie the Zig

Zag Hill Formation correlates (as observed at Lake Dora-Spicer to the north [Denwer et al., 2000a]). Glacial cover obscures the stratigraphic relationship between the SRF and the pre-Zig Zag Hill Formation volcanics.

A tongue of Permian tillite, exposed on the SE flank of Mt Sedgwick, occurs in the western part of the tenement and the tillite is intruded by Jurassic dolerite approximately 300m west of the EL boundary. Glacial deposits of varying thickness occur on the lower slopes of the range and in the Valley of the Dante Rivulet.

## **5. PREVIOUS EXPLORATION**

The Major prospect on EL 20/98 is the East Beatrice; defined as the area between the Beatrice Lava Dome, in the west and Lake Beatrice in the East. The geology in this area (see Corbett and Jackson, 1987) can be interpreted to be a repetition of that seen in Itat Creek (on the adjacent EL 6/98) on the eastern limb of a major anticlinal structure. The rocks of interest, shales and volcanoclastics, are underlain by CVC lavas of the Beatrice Dome, to the west, and are unconformably overlain by upper Tyndall Group volcanoclastic conglomerates to the north and east.

Previous exploration in this area has been completed by RGC (as part of EL 9/66), Aberfoyle (as part of EL 5/85) and CMT (as part of EL 3/96).

Initial work by RGC in the period 1978-1980 (Meares et al, 1980) included establishment of a grid (the eastern part of the MSAZ grid) followed by regional geophysics (gradient array IP), soil sampling and mapping. The mapping located minor occurrences of sphalerite and galena in shales closely associated with spotty highs in soil geochemistry (up to 440 ppm Pb and 710 ppm Zn, in separate samples).

No further serious work was conducted until 1990 when Aberfoyle established a new grid (on AMG) and completed a combined UTEM and mapping program, with limited soil geochemistry in the area of the sphalerite-galena occurrences (Noonan, 1990). No significant UTEM responses were located and mapping failed to re-locate the sulphide occurrences, however, soil sampling repeated, but failed to expand, the soil anomaly located by RGC. Additionally three samples were submitted for Pb Isotope analysis (Noonan, 1990). It was concluded that the samples had an initial Pb-isotopic composition close to that of Rosebery, but, that the samples, which all had low Pb contents, had been affected by addition of radiogenic Pb.

CMT held the area for 1 year, during which time they reviewed previous exploration data (particularly the UTM and IP surveys) and completed reconnaissance mapping, stream sediment survey and rock chip sampling. Results were considered to have downgraded the prospectivity for volcanic-hosted base metal-gold deposits. There was thought to be some remaining potential for low-sulphide gold mineralisation in the SW corner of the licence, but, the tenement was relinquished (Morrison, 1997).

## **6. WORK COMPLETED 1998-2001**

Work completed during the reporting period has included:

1998-1999 (Denwer et al., 2000a): No work reported.

1999-2000 (Denwer et al., 2000b): Compilation of previous exploration data. A combined mapping and partial leach soil sampling program was planned for the east Beatrice area, but, apart from a reconnaissance visit, to assess the state of the 1990 Aberfoyle grid lines and to establish a helipad (at 5346520mN, 388020mE), no work was completed due to budgetary constraints. It was planned that the proposed work be completed during January-February 2001.

2000-2001: the planned partial leach sampling program was again deferred and no fieldwork was completed.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

Work completed on EL 20/98 during the first three years of tenure has been minimal and has comprised compilation of previous exploration and a reconnaissance field visit. The results of work on nearby tenements has downgraded the potential for Rosebery or Hellyer style VHMS deposits on EL 20/98 Lake Beatrice and this, combined with the cost of exploring the area (relying on helicopter support), has led to the decision to relinquish the tenement.



## 8. EXPENDITURE

Expenditure on the Lake Beatrice Licence during the reporting period (23<sup>rd</sup> October 1998 to 31 August 2001) totalled \$12,950. A summary of the expenditure distribution is tabulated below:

Personnel	\$6,151
Travel and Accommodation	\$435
Geoscience Consultants	\$25
Geochemical Consultants & Assays	\$0.00
Drilling	\$0.00
Other Consultants	\$1,912
Stores & Supplies	\$441
Vehicles Plant & Equipment	\$64
Land	\$2,264
Computing	\$59
Office	\$422
Administration Fee 10%	\$1,177
<b>Total Tenement Expenditure</b>	<b>\$12,950</b>

## 9. KEYWORDS AND LOCALITY

### Keywords

Lake Beatrice, CVC, previous exploration

### Locality

1:250K SK55-5

1:100K Sophia 8014, Franklin 8013

## 10. REFERENCES

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