



PASMINCO ROSEBERY MINE

MT SALE EL 14/1998

**FINAL REPORT FOR THE PERIOD
ENDING 11th AUGUST 2003**

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1. SUMMARY

This report details exploration completed on the Mt Sale licence (EL 14/1998) during the fifth year of tenure.

Fieldwork during the reporting period focused on evaluating the significance of massive sulphide clasts at the Bastyan Dam. The drill hole, proposed to test partial leach soil 'Anomaly 1', was not completed following a negative assessment of drilling data from the adjacent ML 28M/93.

Previous exploration has failed to locate any additional high priority targets for follow-up and it is concluded that the most prospective are outside the current tenement (on the adjacent ML 28M/93). It is therefore recommended that the tenement be relinquished.

2. INTRODUCTION

This report details exploration activities completed by Pasminco Exploration on the Mt Sale (EL14/1998) tenement during the final year of tenure.

The Mt Sale licence covers a portion of the Mount Read Volcanics to the north and east of the Rosebery Mine lease (28M/93) in Western Tasmania (Figures 1 and 2). 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 in the western portion, and by boat from lake Rosebery in the northern portion.

Exploration activities undertaken during the reporting period have focussed on sampling massive sulphide (pyritic) clasts from the Bastyan Dam area.

2.1 Attribution

The following personnel were responsible for the work carried out by Pasminco on the Mt Sale EL 14/1998 licence during the reporting period:

Senior Geologist: Andrew McNeill – Pasminco Rosebery Mine

3. LAND TENURE

Mt Sale EL 14/1998 (Figure 1), initially 39 sq km was granted to Pasminco Australia Ltd. on 10th October 1998 for a period of five years. The tenement area has since been voluntarily reduced to 18 sq km (McNeill and Simpson, 2001b). EL 14/1998 overlaps with and lies immediately to the east and north of the Rosebery Mine Lease (28M/93), and has its northern boundary abutting Goldfield's EL 35/2000 (previously Pasminco's Burns Peak EL [44/1988]). The area of the Mt Sale tenement area has been previously held under a number of other exploration licences, which include Mt Black EL 1/62 and EL 12/88.

Land tenure is a mixture of land vested in the HEC (Predominantly the area around the Bastyan Dam and power station), unallocated Crown Land, Informal Forestry Reserves, State Forest and Forest Reserves.

4. GEOLOGY

The Mt Sale tenement covers an area of largely Cambrian Central Volcanic Complex (CVC) rocks, which form part of the central north-south trending axis of the Mt Read Volcanic belt (MRV), Figure 2. The western edge of the tenement is situated to the east the Rosebery mine sequence, while the eastern margin of the licence lies west of the

NNE trending Henty Fault. The Mt Sale licence is centred on the Mt Black Volcanics, part of the CVC, which form the central axis of the MRV in the Rosebery area.

Geology of the Mt Sale licence is dominated by the Mt Black Volcanics, a thick sequence of mafic to intermediate dacite and andesite lavas, lava breccias and related intrusions which are separated by relatively minor horizons of fine to coarse grained volcanoclastic sediments (Gifkins, 2001).

The Mt Black Volcanics structurally overlie the Rosebery mine sequence, east of the Rosebery orebody. They have strong chemical similarities to the feldspar-phyric pumice breccias in the Rosebery Footwall sequence and have therefore have been correlated with them by a number of authors. The most significant difference between the Mt Black Volcanics/Rosebery mine Footwall sequence and Host/Hangingwall sequence is the absence of volcanic quartz in both the Footwall and Mt Black Volcanic sequences. The contact between the Rosebery Hangingwall and Mt Black Volcanics dips to the east at 45 degrees sub parallel to the Rosebery Fault. This contact is interpreted to be a thrust fault (the Mt Black Fault), which has emplaced the Mt Black Volcanics west over the Rosebery Mine sequence.

5. PREVIOUS EXPLORATION

Part of the current Mt Sale tenement area has been previously explored under the Mt Black EL 1/62 held by the Electrolytic Zinc Co. of Australasia and various JV partners between 1962-1988, and Mt Black EL 12/88 between 1988-1995 (Austmin Resources/Climax Mining JV and Austmin Resources/Pasminco Australia Ltd JV). Table 1, partly derived from Saxon (1995), provides a summary of work undertaken specifically within the Mt Sale area.

Table 1: Summary of Previous Exploration

YEAR	COMPANY	WORK COMPLETED	RESULTS
1971	EZ (Anon)	Stream sediments	On margins of tenement area
1974-75	EZ Williams (1975)	Gridding, IP, soil sampling – Bobadil area	Pb-Zn anomalism followed-up by infill sampling and pitting; no bedrock source
1979	EZ-Getty	Gradient array IP, magnetics Mt Black, Langdons, Mt Sale areas	Numerous IP responses recorded.
1979	EZ-Getty Howland-Rose (1979)	Dipole-dipole IP - Mt Black, Mt Sale areas	IP responses downgraded.
1979	EZ-Getty Mill (1980)	Aeromag, photogeol, INPUT EM, general IP, magnetics, soil geochem, mapping - Cutty Sark, Mt Sale areas	Soil anomalies, mag anomalies Cutty Sark area.
1979-80	EZ-Getty Mill et al. (1980)	Mapping, soil geochem, gradient array IP - Langdons, Mt Sale, Mt Black areas	Several anomalies outlined in Mt Sale area
1980-81	EZ-Getty McDonald (1981)	IP, soil geochem, pits - Mt Sale area	No significant anomalies recorded
1982-83	EZ-Getty Mathison and McDonald (1983)	Review of exploration over EL 1/62	Recommended follow-up Langdons and Cutty Sark for Au
1983-1984	EZ-Getty Fitzgerald et al. (1984)	DIGHEM III survey Recce gridding, mapping, VLF-EM, rock and soil sampling at Mt Black DDHs CS1 (451.4m) and BD1 (283.2m), gridding, UTEM, mapping and rock-chip sampling at Cutty Sark - Bobadil	Highlighted area of interest at Mt Black Results provided encouragement for detailed follow-up in 1984-85 Drilling failed to intersect significant mineralisation or alteration. Recommended that Cutty Sark workings be investigated for Au-Cu

Table 1: Summary of Previous Exploration (cont.)

YEAR	COMPANY	WORK COMPLETED	RESULTS
1984-1985	EZ-Getty McDonald (1985)	Drill core geochemistry and petrology and review of Au potential at Cutty Sark- Bastyan Dam Detailed gridding, mapping, VLF-EM, magnetics and soil and rock-chip sampling at Mt Black Grid cutting prior to UTEM surveys.	Work on DDH CS1 and HEC holes did not provide encouragement. Some potential for Au No significant mineralisation or anomalism located. No further work recommended
1986	EZ-Billiton Randell et al. (1986)	UTEM, mapping, rock-chip and soil sampling at Mt Black, Mt Sale and Langdons prospects. Regional BCL stream survey Mapping, rock-chip sampling, DHEM (in CS1), re-logging of core and CSAMT at Cutty Sark-Bastyan Dam	No anomalous base metal geochemistry associated with UTEM anomalies. No repeatable anomalies. Conclude that best target to north of EL; recommend extending DDH CS1
1987	EZ-Billiton Randell et al. (1987)	No further work at Cutty Sark. Tenement relinquished	N/A
1989	Austmin Hine and Scott (1989)	Diamond drillholes MBD1-4, targeting weak UTEM responses	Holes all intersected barren lavas
1990-91	Pasminco-Austmin Purvis (1991)	Diamond drillhole BY1 (562.45m) near Bastyan Dam	No significant mineralisation or host rocks were intersected. Best intersections; 0.5m @ 2.1% Zn, 0.1% As & 13.5m @ 0.5% Zn.
1991-92	Pasminco-Austmin Purvis (1992)	Diamond drillhole BY2 (412.5m), nth shore of Lake Rosebery. DHEM Survey DDH BY1 Geological mapping, litho-geochem and isotope sampling in Bastyan Dam area. Evaluate Cutty Sark magnetic anomaly and visit old workings Re-log MBD1-4	No sulphides or significant alteration zones were intersected. No off-hole conductors detected. N/A
1998-99	Pasminco Parfrey (1999)	Partial leach soil sampling, part of an orientation survey. Work Focused on the Mt Black Volcanics/Rosebery Mine host contact.	Eighty three (83) partial leach soil samples collected. No areas of significant anomalism identified.
1999-00	Pasminco McNeill & Simpson (2000)	Extended the partial leach soil sampling coverage over the prospective Rosebery and Mt Black Fault sequences.	167 PL soil samples collected. Interpretation not completed.

Table 1: Summary of Previous Exploration (cont.)

YEAR	COMPANY	WORK COMPLETED	RESULTS
2000-01	Pasminco McNeill & Simpson (2001a)	Review previous exploration over the eastern part of the tenement and digital compilation of data. Interpretation of previous years Partial Leach Soil Sampling. Sample prospects in the northern part of the tenement for Pb-isotope analysis.	No significant targets, recommend that eastern 21 sq km of tenement be relinquished. Confirmed continuation of Anomaly 1; one further line of infill sampling required. Results not received.
2001-02	Pasminco McNeill (2002)	Sample prospects in the northern part of the tenement for Pb-isotope analysis. Infill partial leach soil sampling completed on ML 28M/93	All samples had the less favourable 'Devonian' signature. Confirmed continuity of Anomaly 1; recommended drill testing.

6. WORK COMPLETED 2002-2003 REPORTING PERIOD

6.1 Rock Chip geochemistry

As Lake Rosebery was at abnormally low levels in early January 2003, an attempt was made to relocate the Zn-rich (35.5%) Bastyan Dam massive sulphide clasts, previously described by Purvis (1991). These clasts were not found (still probably underwater) but a 4m wide zone with abundant (1-10 modal%) massive pyrite clasts was located and sampled. The massive pyrite clasts, up to 60cm x 20cm but generally <10 cm diameter, were hosted by a coarse quartz (to 5-8mm diameter)-feldspar-phyric mass flow unit with, in addition to the sulphide clasts, quartz-phyric rhyolite and sericite-chlorite altered shard-rich siltstone clasts to 5 cm diameter.

Four samples of the massive sulphide clasts and two samples of the host mass-flow unit were submitted, as part of SDS 4533, to Analabs for assay. All samples were analysed for Au (by F614), Cu, Pb, Zn, Fe and Mn (by A102), As, Ba, Mo, Sb, Sn and Tl (by X401). Sample locations and assay results are presented in Appendix 1. The clasts had significant Zn grades (2-8% Zn) with anomalous base (310-1500 ppm Cu and 380-1800 ppm Pb) and precious (0.4-0.9 g/t Au and 11-106 g/t Ag) metals. The two highest Pb samples were submitted for Pb-isotope analysis to confirm the mineralisation is Cambrian VHMS type (the previously analysed sample of a small (<1 cm clast) from this area gave a Devonian signature).

6.2 Pb Isotopes

As indicated above two samples (167694 and 167696) were submitted to SIROTPE for Pb analysis. Results are presented as Appendix 2. Surprisingly the data define a heterogeneous population, spanning both the Cambrian and Devonian fields. However, “the results do not preclude the presence of a Cambrian signature, however, with albeit small sampling statistics, a Devonian overprint dominate” (G. Carr, Appendix 2).

7. CONCLUSIONS AND RECOMMENDATIONS

Minimal fieldwork was completed by Pasminco on EL 14/1998, Mt Sale, in the period August 2002 to 11th August 2003. Sampling of massive sulphide clasts in the Bastyan Dam area indicated the apparently pyritic clasts also had appreciable Zn (2-8%). However, their isotopic signature was not typical of Cambrian VHMS (although possibly a result of a Devonian overprint).

Previously it had been recommended that partial leach soil ‘Anomaly 1’ be drill tested (McNeill, 2002). However, a review of previous drilling and a recent interpretation of vectors to mineralisation in these holes, on the adjacent ML 28M/93, indicate it is unlikely the anomaly results from deeply buried mineralisation and the proposed hole was not drilled.

Previous exploration has failed to locate any additional high priority targets for follow-up and it is concluded that the most prospective areas are outside the current tenement (on the adjacent ML 28M/93). It is therefore recommended that the tenement be relinquished.

8. EXPENDITURE

Expenditure on the Mt Sale, EL 14/1998, Licence during the reporting period totalled \$5,231. A summary of the expenditure distribution is tabulated below:

Personnel	\$2,153
Travel and Accommodation	\$0
Geoscience Consultants	\$0
Geochemical Consultants & Assays	\$1,109
Drilling	\$0
Other Consultants	\$525
Stores & Supplies	\$0
Vehicles Plant & Equipment	\$0
Land	\$227
Computing	\$742
Office	\$0
Administration Fee 10%	\$475
Total Tenement Expenditure	\$5,231

9. KEYWORDS AND LOCALITY

Keywords

Mt Sale, Mt Black, Bastyan Dam, Pb-isotopes, geochemistry-rock chip.

Locality

1:250,000 SK55-3 Burnie

1:100,000 Sophia 8014

1:25,000 Rosebery 3637; Tullah 3837

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