



ZINIFEX
ROSEBERY
MINE

HENTY RIVER - EL 7/2001
FINAL REPORT
FOR THE PERIOD ENDING 27th JUNE 2007

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1. SUMMARY

This report details exploration work undertaken on EL 7/2001 Henty River during the period 27th June 2005 to 27th July 2007, year five and a further one year extension of the tenement.

During the period work continued on the Henty Gorge area with 6.0 km of the 1997-1998 Aberfoyle grid re-opened, 4.5 km of extensions cut and pegged and 6.15 km of EM loop lines cut. Most of this grid was partial leach soil sampled and surveyed with GPS and four loops of ground EM data were collected. The entire Henty Gorge area grid was geologically mapped. Minor geochemical anomalism was identified within the Henty Adits sequence in the southeastern part of the gridded area, which has been historically tested by five diamond drillholes. An additional geochemical anomaly was identified at the base of the Halls Rivulet Track Sequence, which remains untested.

A moderate to strong EM anomaly identified on the western part of the gridded area was tested with a single diamond drillhole (HGW1) which intersected serpentinitised, variably sheared ultramafic lithologies to EOH at 511.5m. No hydrothermal alteration or sulphide mineralisation was observed. A subsequent DHEM survey indicated that the EM anomaly is likely to be sourced from several zones of strongly disrupted serpentinite and no additional work is recommended.

2. INTRODUCTION

This report details exploration work undertaken on Henty River EL 7/2001 during the period 27 June 2005 to 27th July 2007, the fifth and sixth year of this tenement (a one year extension to EL 7/2001 was granted to allow interpretation of downhole EM data collected late in the 5th year of tenure).

Zinifex's main target on EL 7/2001 is Cambrian Rosebery or Hellyer type, Zn-Pb-Cu-Au-rich VHMS mineralisation hosted by the Mount Read Volcanics (MRV). The tenement covers the Henty Fault Wedge, a "misfit" block of Cambrian volcanics, the central portion of which is considered VHMS prospective (see Section 4 below).

Zinifex plans to systematically explore the EL using a combination of geological mapping, partial leach soil geochemistry and infill time-domain ground EM, where there is no existing coverage, or the work that has been done is considered to have been ineffective.

Access to the tenement is via the Zeehan highway (A10), in the west, and the Anthony Road (B28), to the east. These two roads are joined by Howards Road, which traverses the northern part of the tenement. Howards Road is gated at the HEC White Spur Dam and is also blocked to vehicular access at approximately 375200mE (the western end of the HEC White Spur Canal). A network of 4WD tracks, developed for logging and mineral exploration, extends south from Howard's Road and provides some access to the main area of interest, however, much of the tenement is heavily forested, rugged and difficult to access.

1.1 Attribution

The following personnel were responsible for the work carried out by Zinifex Rosebery Mine on the EL 7/2001 Henty River licence area during the reporting period:

Senior Geologist:	Andrew McNeill
Senior Exploration Geologist:	Mick Skirka
Contract Geophysicist:	Jovan Silic
Contract Geologist:	Bronwyn Turner
Contract Geologist:	Lloyd David

2. LAND TENURE

EL 7/2001 Henty River (25 sq km) was granted to Pasminco on 27 July 2001 for a period of 5 years. The location of the tenement is shown on Figure 1. EL 7/2001 covers ground that fell vacant on the relinquishment of EL 4/96 (Western Metals/Aberfoyle) in February 2001. On April 5th 2004 the name of Pasminco Australia Limited was changed to Zinifex Australia Limited as part of a float of some Pasminco assets. A one year extension of the license was granted in February 2007.

Land covered by EL 7/2001 is all crown land designated as Multiple Use State Forest, Unallocated Crown Land, part of the Mt Dundas Regional Reserve and some HEC land all of which are available for exploration under the Mineral Resources Development Act 1995.

3. GEOLOGY

The regional geology of the tenement area is shown on Figure 2, which is derived from the mapping of Corbett (1986). More recent regional mapping of the tenement was completed by Poltock (1992b) and an updated interpretation of the area was presented in Corbett (2002).

The geology of EL 7/2001 Henty River can be divided into three domains, separated by major regional faults:

1. The White Spur Formation (WSF) NW of the North Henty Fault (in the NW of the tenement).
2. The Henty Fault wedge sequence between the North and South Henty Faults in the Central part of the tenement.
3. The Yolande River Sequence and Central Volcanic Complex (CVC) south and east of the South Henty Fault.

Of these three, domains 1 and 2 are considered VHMS prospective and will be discussed in more detail.

1. The WSF is a regionally significant unit extending south from the Rosebery Fault, near the Hercules Mine, to be truncated against the North Henty Fault, in the NW corner of the Henty River tenement. The White Spur Formation comprises mixed terrigenous and volcanoclastic sediments with intrusive feldspar-quartz-phyric rhyolite and quartz-feldspar porphyry bodies at different levels in the sequence. To the north, at Rosebery and Hercules, the WSF forms the hangingwall to the orebodies and the base of the WSF/top of the Central Volcanic Complex is considered to be a highly prospective horizon. On the area of EL 7/2001 the base of the WSF does not crop-out, being truncated by the North Henty Fault, however, it is likely to be present at explorable depths (<500m) beneath north-south trending folds.

2. The Henty Fault Wedge has been described as a “misfit” sequence that can be subdivided into three structural/lithological domains in the area of EL 7/2001 (Poltock, 1992b).

The geology of the northern part of the fault wedge is dominated by the Henty Valley Sequence, tholeiitic basalts, cherts and hematitic greywackes, that are interpreted to have formed from the early Cambrian (contemporaneous with the Crimson Creek Formation) through to mid-Cambrian (contemporaneous with the MRV) (Poltock, 1992b). This lithological domain is not considered prospective for VHMS mineralisation.

The Henty Valley Sequence is conformably overlain by the calc-alkaline Henty Adits and Halls Rivulet Track sequences (lithological domain 2). The Henty Adits Sequence comprises plagioclase-phyric basaltic andesite lavas and volcanoclastics and siltstone units. The andesites have been correlated with the Que-Hellyer footwall andesites (suite 1) by Crawford et al. (1992). However, Poltock (1992b) indicates significant differences and suggests the sequence is transitional between calc-alkaline and tholeiitic and compositionally overlaps suites 1, 3 and 4 (of Crawford et al., 1992). The volcanoclastics and siltstones, at the base of the sequence, host the Henty Adits mineralisation (best intersection; 6 m @ 2.88% Pb, 1.61% Zn, 15 g/t Ag [Meares, 1980]) and have been the target of most intensive exploration in the area (see Section 5). Away from the main mineralisation the siltstones are variably pyritic with lesser pyrrhotite.

The overlying west dipping and facing Halls Rivulet Track Sequence comprises volcanoclastic conglomerate, sandstone and siltstone and plagioclase-augite-phyric basaltic andesite lavas (MRV Suite 1) that have been correlated with the Tyndall Group (Poltock, 1992b).

On the basis of the correlations indicated above, the Henty Adits and Halls Rivulet sequences are considered to be VHMS prospective, however, no significant mineralisation or alteration is known outside the Henty Adits area.

The Halls Rivulet Sequence is truncated by a N-W trending fault (the Howards Tramway Fault of Poltock [1992b]). West of this fault an ophiolitic sequence (lithological domain 3) has been mapped and comprises (from east to west) slivers of cumulate gabbro, dunite and pyroxenite, overlain by an intrusive complex of gabbro and dolerite, with minor intrusive plugs of andesite and tonalite, which pass into extrusive andesitic lavas, and at the western boundary of the current tenement, volcanoclastic siltstone and greywacke. Geochemically the ophiolite complex has both tholeiitic and calc-alkaline affinities and is unlike the earlier allochthonous Cambrian MUC. The complex was interpreted to be Mid-Late Cambrian in age by Poltock (1992b), i.e., contemporaneous with the MRV, and may be VHMS prospective.

4. PREVIOUS EXPLORATION

The area of EL 7/2001 Henty River has a long history of ‘modern’ exploration commencing in the 1960s, as part of ELs 9/66, 42/71, 5/85 and 4/96. Previous exploration has been reviewed in detail by several authors (Purvis et al., 1983; Hicks, 1997) and is summarised in Tables 1 and 2 below:

Table 1 Previous exploration on the area of EL 7/2001 Henty River

Reporting Period	Work Completed
1967-1968 (Newnham, 1968)	West Tyndall: gridding and extending roads, IP surveys with lesser mapping, soil and rock-chip sampling (only 2 lines on current EL area). Recommended extending mapping and soil coverage.
1968-1969 (Newnham, 1969)	West Tyndall: mapping, ground magnetics, soil sampling. Work located ultramafic bodies with Ni soil anomalies. Recommend follow-up for Ni potential.
1971-1972 (McKibben, 1972; Sheppard, 1972)	West Tyndall: Detailed mapping and rock-chip sampling for Ni (max. 1140 ppm). No further work recommended. Henty River: Reconnaissance mapping relocated old adits.
1972-1977	No field work; review of IP in 1974 (Wells, 1974).
1977-1978 (Meares, 1978)	Henty River: Gridding, mapping, sampling and mapping old workings, detailed soil sampling located major Cu-Pb-Zn-Ag anomaly.
1978-1979 (Drake et al., 1979)	Henty River: Extended grid, detailed mapping, IP, ground magnetics located 3 major anomalies. Detailed soil and rock-chip sampling defined major Ag-Pb-Zn anomalies. Orientation stream sediment and water sampling. 2 x DDH (HR1 and HR2; 602m) intersected Pb>Zn mineralisation. Downhole IP in HR1.
1979-1980 (Hutton et al., 1980)	Henty River: Further grid extensions and mapping, IP and magnetics (no further anomalies); further rock-chip and soil sampling. 1 x DDH (HR3; 617m) intersected minor mineralisation. Completion of MSc thesis on Henty Adits area (Meares, 1980).
1980-1981 (Hutton et al, 1981)	Henty River: 2 drill holes completed (HR4 & 5; 733m total) to test combined soil/IP/mag. anomalies at favourable stratigraphic position; minor mineralisation intersected. Minor rock-chip sampling completed. West Tyndall: re-open grid, mapping, IP and minor soil (data not presented in report) and rock-chip sampling on lines 10 and 12N to follow-up 1968 IP anomaly; conclude some Sn potential.
1983. (Purvis et al., 1983)	Reviewed previous exploration over West Tyndall- Henty River area
1983-1984 (Fitzgerald and McNaught, 1984)	Halls Rivulet area; re-open old “West Tyndall” grid, mapping, rock-chip and soil sampling, ground magnetics one line of airborne EM; no significant Sn or base metal anomalies.
1985 (Jones, 1985)	Drafting of base maps, re-clearing of part of the RGC Henty Adits grid; EM-37 survey; no significant targets.
1985-1986 (Mathison, 1986)	Cutting of the Henty Valley Grid (extending south from RGC Henty Adits grid); stream sediment and rock-chip sampling and geological mapping.
1986-1987 (Mathison and Ferguson, 1987)	geological mapping, rock-chip and ‘C’ horizon soil sampling and trial VLF-EM and ground magnetic surveys on the EZ Henty Valley Grid.
1987-1988 (Poltock, 1988)	Reconnaissance mapping and stream sediment sampling (-80#) at Henty Valley; no significant anomalies.
1989-1990 (Jenkins, 1990)	Henty River Adits and Henty Valley; re-open access tracks, line cutting; mapping, rock-chip sampling; re-assaying (HR2), Pb isotopes (drill core), 2 lines of wacker sampling. New high resolution airborne magnetic /radiometric survey, aerial photography and photogrammetry. Lithogeochemical study.

Table 1 Previous exploration on the area of EL 7/2001 Henty River cont..

Reporting Period	Work Completed
1990-1991 (Poltock and Fitzgerald, 1991)	Report on wacker sampling (see above); Mapping located massive pyrite (to 0.7% Zn, 1.2% Pb) outcrops at Henty Valley Prospect. Mapping, minor stream sediment and rock-chip sampling at Henty River Adits; existing drill holes (HR1-5) all found to be blocked preventing proposed DHEM surveys following review of historical EM data. Collection of physical properties data from HR1-5 core.
1991-1992 (Poltock, 1992a, b)	Gridding, geological mapping, soil and rock chip sampling and UTEM at the Henty Valley Prospect; no significant anomalies. Completion of an M.Econ.Geol. thesis on the "Geology of the Henty Fault Wedge, Western Tasmania" (Poltock, 1992b).
1992-1993 (Quayle, 1993)	DDH YHV1 (65.7m) drilled to test geochemically anomalous gossan associated with andesitic lavas at Henty Valley; mapping around massive pyrite outcrops in the Henty River; further lithogeochemical and physical property sampling completed.
1993-1994 (Quayle, 1994)	Massive pyrite outcrops at Henty Valley Prospect; followed-up by 2.3 line km of pole-dipole IP; results indicate mineralisation continues to N and S; recommend drill testing.
1994-1995 (Quayle, 1995)	Drilling of DDH YHV2 (163.5m) at the Henty Valley Prospect to test beneath massive pyrite and an IP anomaly; no significant mineralisation was intersected.
1996-1997 (Hicks, 1997)	Review previous exploration, core samples (HR2) submitted for Pb Isotopes – gave Cambrian "Rosebery" signature, commenced stream sediment survey.
1997-1998 (Richardson, 1998)	Stream sediment survey abandoned; re-open and extend 1992 Pasmenco grid, partial leach and total digest B horizon soil sampling (277 samples); no significant anomalies
1998-2001 (Hespe, 1999; Henry, 2000)	No further fieldwork; brief review of gold potential indicated further sampling/re-assaying was needed but this was not done; partial relinquishment in April 1999 (Hespe, 2000).

Table 2 Previous exploration on EL 7/2001 Henty River

Reporting Period	Work Completed
2001-2002 (McNeill, 2002)	A single 1 km grid line was cut, surveyed with DGPS and B horizon soil sampled (43 samples collected and analysed, including duplicates) as part of a much larger soil survey on the adjacent EL 5/1996 to the north. A significant multi-element anomaly was located on this line and warrants follow-up by infill sampling to the north and south.
2002-2003 (McNeill, 2003)	2.65 km of new grid line was cut, surveyed with DGPS, geologically mapped and B horizon soil sampled (108 samples, including duplicates, collected and analysed) to follow-up an anomaly on line 5357800mN. 32 previously collected soil samples were re-assayed. Interpretation of the data indicates that there is no significant anomaly in the area sampled and no further work was recommended.
2003-2004 (McNeill, 2004)	Due to resource constraints no exploration fieldwork was completed during the third year of the licence, although some work on weed control to facilitate access to the Henty Gorge area was initiated.
2004-2005 (McNeill, 2005)	6.55 km of the 1997-1998 Aberfoyle grid re-opened, 2.1 km of extensions cut and pegged and 3.35 km of EM loop lines cut. 300 partial leach soil samples were collected and a 3 loop, 7.9 line km ground EM survey completed. A minor Pb-Zn anomaly was identified on the southern two lines of the soil sampling survey and an EM anomaly was identified to the west of the survey area

5. WORK COMPLETED 2005-2007 REPORTING PERIOD

During the period, work continued on the Henty Gorge area with 6.0 km of the 1997-1998 Aberfoyle grid re-opened, 4.5 km of extensions cut and pegged and 6.15 km of EM loop lines cut (Figure 3). Most of this grid was partial leach soil sampled (537 samples) and surveyed with GPS and six loops of surface FLEM data were collected. The entire Henty Gorge area grid was geologically mapped. A moderate to strong EM anomaly identified on the western part of the gridded area was tested with a single diamond drillhole (HGW1) and a subsequent DHEM survey was completed on HGW1.

5.1 Partial Leach Soil sampling

Soil samples were collected at 25m intervals at or near a grid peg and involved digging a hole with a pick, removing the organic rich A-horizon and collecting approximately 500g of sample from the nominal B horizon. The samples were placed in ziplock plastic bags and once returned to the field office the bags were stored open to prevent anaerobic reactions. When a batch of 200 samples was collected, the sample bags were sealed and the samples despatched to Amdel in South Australia for analysis by partial leach technique DL42. Elements determined were Ag, As, Au, Ba, Bi, Cd, Cu, Co, Mo, Ni, Pb, Ni, Y, Zn, Zr and the rare earth elements Ce, Eu, Gd, La and Sm. The pH of the soil sample and of the analytical leachate, after digestion, was also determined.

Three duplicate and two standard samples were collected per 100 samples. The field duplicates were also analysed in duplicate to allow assessment of both the sample and laboratory variance. Additionally at each sample site a small amount of soil was collected and stored in a chip tray for reference and to allow soil colour to be recorded. Soil colour was assigned from a Munsell Colour chart with 19 colours.

The 537 samples (including duplicates and standards) from this program were analysed as part of three batches (SDS 4556, SDS4557 and SDS4558).

No samples were obviously contaminated, however, 88 samples, 16% of the data set, have a low (pH<8.0) post-digest pH. At these 'low' pHs the speciation of reagents in DL42 may change and the resulting assays may be unreliable. Many of the low-pH samples had high Pb and Zn results that could be important in the interpretation of the dataset. However, Test work at Amdel indicated that decreasing the sample:liquid from 10:1 (method DL42) to 5:1 (method DL43) could buffer the solution to a higher, acceptable, final pH (for samples with a post-digest pH of >7.2) and not significantly affect the precision of the analysis. Accordingly, the 35 samples with low post-digest pH were re-assayed with the new protocol. Of the low pH samples, six had DL43 post-digest pH's of <8.0. For the interpretation discussed below, the low (pH <8.0) samples from the original dataset have had their assay results replaced by the re-assayed data and the low (pH <8.0) samples from the re-assayed (DL43) dataset were discarded.

Assay results are presented in Appendices 1 and 2 and sample locations are shown on Plan 1. Gridded images of the raw partial leach soil data are presented on Plan 2 (including data collected during the previous reporting periods).

Several features are apparent in the raw images.

The main anomalous feature is a moderate to strong, coincident Ag-As +/- Pb-Cu-Zn anomaly located in the southeastern part of the gridded area. This anomaly occurs within the Henty Adits Sequence of Poltock (1992b), near the contact between the andesite lavas and the underlying siltstone and shale units. This anomaly is likely to be related to subeconomic mineralisation identified at the Henty Adits prospect and subsequently tested by drillholes HR3, HR4 and HR5.

There is also a moderate, spiky Cu-Pb +/- Zn anomaly extending from approximately 376850mE on line 6200N to approximately 377350mE on line 5000N. The northern part of this anomaly is characterised by several samples returning moderate to strongly anomalous Zn (response ratios 10 - 25) with the main part of the anomaly comprising spiky coincident Cu-Pb anomalism (response ratios 5 - 15). This anomalous feature is hosted within mixed sediments and volcanoclastics at the base of the Halls Rivulet Track Sequence of Poltock (1992b), between the two main andesitic units.

There are apparent batch effects for the Au results and the relatively elevated Au values on line 5000N is assumed to be artificial.

5.2 Geological mapping

The entire Henty Gorge area grid was geologically mapped at 1:5,000 scale. Fact geology details are presented on Plans 3a and 3b and a geological interpretation is presented on Plan 4.

The geological scheme of Poltock (1992b) was utilised and no major changes to the current interpretation were required (See Section 4).

5.3 Fixed Loop EM Survey

During January 2006 a four loop, 13.7 line km Fixed Loop ground EM survey was completed by contractors Zonge Engineering. The aim of the survey was to provide EM coverage over the southern part of the Henty Gorge area and also to follow up a conductive anomaly identified on the western part of the grid during the previous year (the Henty Gorge West anomaly).

Survey parameters, loop designs and results for this survey are presented in Appendix 3 and an interpretation report from consultant geophysicist Jovan Silic is included as Appendix 4.

No anomalous responses were observed in data collected from the southern part of the Henty Gorge area however the Henty Gorge West anomaly was confirmed and a drill target identified on line 5355600N.

5.4 Diamond Drilling

The Henty Gorge west EM anomaly was identified during a fixed loop EM survey in the previous reporting period. The anomaly had at that time not been adequately delineated and the survey area was extended to the west and surveyed during the January 2006 survey outlined in Section 6.3 above. Subsequent geophysical modelling of the EM data by consultant geophysicist Jovan Silic identified two conductive bodies (Appendix 4):

1. A shallow, formational, poor conductor; and
2. A strong, steeply dipping deep conductor near the western edge of the formational conductor.

The conductive response is in the order of 1km in strike length but has not been closed off to the north and south.

Geological mapping in the area together with available aeromagnetic data suggests that the weak formational conductor is coincident with a NNW trending slice of ultramafic with the deep strong conductor likely to be proximal to the ?faulted western contact of the ultramafic body.

Diamond Drillhole HGW1:

Diamond drillhole HGW1 was collared at 376190mE, 5355650mN (AGD66_55) on 16/5/2006 and completed at 511m on 14/8/2006. The hole was drilled utilising Boart Longyear LF70 drill rig, mobilised to site using helicopter support. Penetration rate was slow due to unfavourable drilling conditions caused by the soft, intensely sheared ultramafic lithologies encountered. Drillhole collar and survey data are contained in Appendix 5, sampling and assay data are contained within Appendix 6 and a detailed geological drill log is included in Appendix 7.

The major lithology intersected by the drillhole was moderately to strongly magnetic serpentinite possibly after olivine-pyroxenite. Cumulate zones from 0.1m to 1m thick are common as are chrysotile veinlets. Magnetite is ubiquitous as small blebs, veinlets and very fine “hair like” stockworks.

The serpentinite is intruded by leuco-gabbro dykes generally 0.3m to 3m wide that are typically fine to medium grained, often with chilled margins and stoped intrusive contacts. A wide (14 metres thick) very coarse grained leuco-gabbro dyke occurs at 344 metres depth and contains large (1 – 2cm across) anhedral to euhedral pyroxene (?augite) phenocrysts. The serpentinite appears hornfelsed for about 30 metres below this dyke.

Coarse grained pyroxenite dykes also intrude the serpentinite with the first one appearing at 238 metres depth (1.5 metres thick) and several more down hole. From 475 metres depth to EOH, pyroxenite predominates with minor leuco-gabbro intervals. No chilled margins occur in either lithology. Serpentinite is absent. Narrow talc zones occur near the end of hole.

There was no evidence of hydrothermal alteration or mineralisation apart from the minor hornfelsing of the serpentinite associated with the leuco-gabbro dyke at 344m.

5.5 Down Hole EM Survey

In December 2006 Outer Rim Exploration Services completed a Down Hole EM survey on drillhole HGW1. A single transmitter loop was utilised (Henty Gorge Loop 8) and three component data was collected over the entire length of the drillhole. Station spacing was generally 12.5m with 25m spaced readings for the top 125m and bottom 125m of the drillhole. Survey details and results are contained within Appendix 8.

The survey data was reviewed and modelled by consultant geophysicist Jovan Silic and Jovan's report is included as Appendix 9.

6. CONCLUSIONS & RECOMMENDATIONS

During the period of tenure of EL 7/2001, exploration activities have been focussed on two areas.

The northern area, north of the North Henty Fault, has tested the lower part of the White Spur Formation by a program of partial leach soil sampling. No significant coherent anomalies were identified.

The main area of exploration activity focused on the Henty Gorge area where a program of Fixed Loop EM surveying and partial leach soil sampling was completed across the Henty Fault Wedge sequence that includes the Henty Adits Sequence.

Weak to moderate Ag-As +/- Cu-Pb-Zn anomalism was returned from partial leach soil samples across the Henty Adits Sequence in the southeastern part of the gridded area, which has been historically tested by five diamond drillholes. An additional Cu-Pb +/- Zn geochemical anomaly was identified at the base of the Halls Rivulet Track Sequence, which remains untested and is recommended for follow-up.

A strong conductor identified from surface FLEM surveys across the western part of the area was tested by drillhole HGW1, which intersected variably sheared serpentinised ultramafic lithologies. No mineralisation or alteration was intersected and a subsequent DHEM survey significantly downgraded the strength of the conductor, which is interpreted to be sourced by two separate poor-moderate conductors sub-parallel to and below HGW1. Given the lack of any alteration or mineralisation in HGW1, the conductor is interpreted to be sourced by zones of more intense disruption of the ultramafic body and no additional work is recommended.

7. ENVIRONMENT AND REHABILITATION

Surface disturbance activities during the reporting period comprised the cutting of gridlines and the clearing of a single drill site for HGW1. On completion of drilling, drill cuttings were transported out from the site by helicopter and the site has been covered with ti-tree slash.

8. EXPENDITURE

Expenditure on EL 7/2001 during the 2 year period ending 27th July 2007 was \$. A detailed breakdown of this expenditure is presented below.

Personnel	
Travel & Accommodation	
Consultants & Contractors	
Geological Consultants	
Geochemical Consultants & Assays	
Geophysical Surveys & Contractors	
Drilling	
Stores & Supplies	
Vehicles Plant & Equipment	
Land	
Computing	
Office	
Administration Fee	
Total Tenement Expenditure	\$

9. KEYWORDS & LOCALITY

Keywords

Henty River Prospect, White Spur, geology, geophysics – EM, soil geochemistry.

Locality

1:250,000	QUEENSTOWN SK55-5
1:100,000	SOPHIA 8014; PIEMAN 7914
1:25,000	OCEANA 3635

10. REFERENCES

- Corbett, K.D., 1986. Geology of the Henty River – Mt read area. Mount Read Volcanics Project Map 3. Mineral Resources Tasmania, Hobart.
- Corbett, K.D., 2002. Updating the geology of the Mount Read Volcanics Belt; WTRMP Mt. Read Volcanics Compilation. Tasmania Geological Survey Record 2002/19, Mineral Resources Tasmania, Hobart.
- Crawford, A.J., Corbett, K.D., Everard, J.L., 1992. Geochemistry of the Cambrian Volcanic-Hosted Massive Sulphide -rich Mt Read Volcanics, Tasmania, and some tectonic implications. *Econ. Geol.* 87 (3): 597-620
- Drake, G., Hutton, M.J., Meares, R.M.D., Reid, K.O., and Walter, A.C., 1979. Exploration Licence 9/66. Annual Report, 1978-79. Unpub. Getty Oil Development Company Limited and Mt Lyell Mining and Railway Company Limited Report (TCR79-1384).
- Fitzgerald, F.G., and McNaught, I.S., 1984. EL 9/66 Tyndall - Tasmania, Report of Work Conducted During Period August 1983 to May 1984. Unpub. Getty Oil Development Company Limited Report (TCR84-2317C).
- Henry, R.L., 2000. EL 4/96 Henty River Final Report to June 2000. Unpub. Western Metals Report TAS0043-09/00 (TCR00-4485).
- Hespe, A.M., 1999. EL 4/96 Henty River Progress Report for the period May 1998 to April 1999. Unpub. Western Metals Report TAS0026-4/99 (TCR99-4311).
- Hespe, A.M., 2000. Report on the area to be relinquished August 1999, EL 4/96 Henty River. Unpub. Western Metals Report TAS041 (TCR00-4421).
- Hicks, D.J., 1997. EL 4/96 Henty River, progress report for the period May 1996 – May 1997. Unpub Aberfoyle resources Ltd. Report (TCR97-4011).
- Hutton, M.J., Komyshan, P., and Meares, R.M.D., 1981. Exploration Licence 9/66, Tasmania. Annual Report, 1980-81. Unpub. Consolidated Goldfields Australia Limited and Getty Oil Development Company Limited Report (TCR81-1660).
- Hutton, M.J., Meares, R.M.D., and Walter, A.C., 1980. Exploration Licence 9/66 Annual Report, 1979-80. Unpub. Consolidated Goldfields Australia Limited and Getty Oil Development Company Limited Report (TCR80-1519).
- Jenkins, G.W., 1990. EL 11/85 Yolande JV Annual Report to 20 July 1990. Unpub. Pasmenco Mining, Rosebery report (TCR90-3159).
- Jones, P.A., 1985. Yolande Joint Venture EL 11/85, report on activities to end October 1985. Unpub. Cyprus Report No. 476.
- Mathison, I.J., 1986. Geochemical sampling of part of the Henty Fault Zone. Unpub. EZ Company Report T218 (TCR86-2577).

- Mathison, I.J., and Ferguson, N., 1987. Geological mapping and sampling of the EZ Henty Grid. Unpub. EZ Company Report T228 (TCR87-2710).
- McKibben, J.P., 1972. Annual Report Mt. Tyndall E.L. 9/66 1971-72. Unpub. Mt Lyell Mining and Railway Company Limited report (TCR72-0882).
- McNeill, A.W., 2002. Henty River EL 7/2001, Annual report for the period ending 27th June 2002. Unpub. Pasmaenco Rosebery Mine Report Y32.
- McNeill, A.W., 2003. Henty River EL 7/2001, Annual report for the period ending 27th June 2003. Unpub. Pasmaenco Rosebery Mine Report Y33.
- McNeill, A.W., 2004. Henty River EL 7/2001, Annual report for the period ending 27th June 2004. Unpub. Pasmaenco Rosebery Mine Report Y34.
- McNeill, A.W., 2005. Henty River EL 7/2001, Annual report for the period ending 27th June 2005. Unpub. Pasmaenco Rosebery Mine Report Y35.
- Meares, R.M.D., 1978. E.L. 41/71 Henty-Yolande Annual Report 1977/78. Unpub. Getty Oil Development Company Limited and Mt Lyell Mining and Railway Company Limited Report (TCR78-1296).
- Meares, R.M.D., 1980. Geology, Mineralisation & Alteration of the Henty Gorge Pb-Zn Prospect. Unpub. MSc thesis, James Cook University, Townsville.
- Newnham, L.A., 1968. Progress Report on Mt Tyndall Lease EL 9/66 Up to June 1968. Unpub. Mt Lyell Mining and Railway Company Limited report (TCR68-0527).
- Newnham, L.A., 1969. Report on Mt Tyndall Lease, EL 9/66 Up to June 1969. Unpub. Mt Lyell Mining and Railway Company Limited report (TCR68-0569).
- Poltock, R.A., 1988. Progress report twelve months to June 1988, Yolande EL 11/85 Tasmania. Unpub. Cyprus Report 594 (TCR88-2837).
- Poltock, R.A., 1989. Progress report twelve months to August 1989, Yolande EL 11/85 Tasmania. Unpub. Cyprus Report 671 (TCR89-3024).
- Poltock, R.A., 1992a. EL 11/85 & EL 25/91 Yolande JV Annual Report to June 1992. Unpub. Pasmaenco Exploration Report No. T92/11 (TCR92-3376).
- Poltock, R.A., 1992b. Geology of the Henty Fault Wedge, Western Tasmania. Master of Economic Geology Thesis Univ. Tas.
- Poltock, R.A., & Fitzgerald, F.G., 1991. EL 11/85 Yolande JV Annual Report to for 12 months to July 1991. Unpub. Pasmaenco Exploration Report No. T91/5 (TCR91-3278).
- Purvis, J.G., Jones, M.T., Fitzgerald, F.G., and Poltock, R., 1983. A Geological Review of the Tyndall Exploration Licence 9/66, Western Tasmania. Unpub Rep Goldfields Exploration Pty Ltd (TCR83-1995).
- Quayle, P.M., 1993. Annual Report Yolande EL 11/85 & Yolande River EL 25/91.

Pasminco Exploration Report No. T93/7 (TCR93-3477).

Quayle, P.M., 1994. Annual Report Yolande EL 11/85 & Yolande River EL 25/91. Pasminco Exploration Report No. T94/4 (TCR94-3590).

Quayle, P.M., 1995. Annual and Final Report, August 1985-August 1995, Yolande EL 11/85. Pasminco Exploration Report No. T95/9 (TCR95-3754).

Richardson, S.M., 1998. EL 4/96 Henty River, Progress report for the period May 1997 to May 1998. Unpub. Aberfoyle Resources Ltd. Report (TCR98-4149).

Sheppard, N.W., 1972. Annual Report on Henty-Yolande E.L.41/71, 1971-72. Unpub. Mt Lyell Mining and Railway Company Limited Report (TCR72-0880).

Wells, K., 1974. Annual Report Mt Tyndall E.L. 9/66 1973-74. Unpub. Consolidated Goldfields Australia Limited report (TCR74- 1046).