

PASMINCO EXPLORATION

MT. CHARTER EL 10/98

ANNUAL REPORT
FOR THE PERIOD ENDING 30TH JUNE 2001

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1. SUMMARY

This report details exploration work undertaken within the Mt. Charter EL 10/98 for the period ending the 30th of June 2001.

EL 10/98 was granted to Pasmaenco Exploration in 1998 for a period of 5 years. The tenement area spans 17km² and is partially overlain by CML's 103M/87 (Hellyer) and 68M/84 (Que River) and easement 10W/80 (covering the Que River Mine access Road) all of which are held by Western Metals Resources.

The tenement is underlain, at a depth of 100-300m, by the highly prospective Que-Hellyer Volcanics, which are relatively under-explored. During the third year of tenure, exploration work consisted of Griding, DGPS surveying and partial leach soil sampling (175 samples including duplicates and standards). No significant anomalies worthy of follow-up were located.

2. INTRODUCTION

This report details exploration work undertaken, during the third year of tenure, on the Mt. Charter EL 10/98 during the period July 1 2000 to June 30 2001.

The location of the tenement is shown in Figure 1. It covers part of the Que-Hellyer Volcanics (QHV) and associated sequences of the Mount Read Volcanics. The QHV are a highly mineralised package which hosts the Hellyer (discovered in 1983; 17 mt @ 13.8% Zn, 7.2% Pb, 0.3% Cu, 167 g/t Ag and 2.5 g/t Au), Que River (Discovered in 1974; 3.3 mt @ 13.3% Zn, 7.4% Pb, 0.7% Cu, 195 g/t Ag and 3.3 g/t Au) and Mt Charter (10mt @ 1.0 g/t Au) VHMS deposits. The presence of this mineralisation led to sustained and extensive exploration by Aberfoyle Resources over a 27-year period (1970-1997). The results of this exploration have been summarised in detail by McNeill et al. (1998) and Anon (1986).

3. TENURE

EL 10/98, 17 sq. Km, was granted to Pasminco Exploration for a period of 5 years, as a result of a competitive tender for the former EL 106/87, relinquished by Aberfoyle Resources on 5 February 1998. The area granted to Pasminco is partially overlain by CML's 103M/87 (Hellyer) and 68M/84 (Que River) and easement 10W/80 (covering the Que River Mine access Road) all of which are held by Western Metals Resources.

4. REGIONAL GEOLOGY

The following description of the setting and geology of the Mt. Charter licence area, as shown in figure 2, is a modified version of that presented in McNeill et al. (1998).

The prospective volcanic package, underlying the majority of the licence form part of the Mt. Charter Group (as defined by Corbett, 1992). The economically significant unit of the Mt Charter Group is the Que-Hellyer Volcanics (QHV) which host the Hellyer, Que River and Mt. Charter VHMS bodies. Published descriptions of the volcanology, stratigraphy and primary lithogeochemistry of the QHV include Waters and Wallace (1992), Corbett (1992) and Crawford et al (1992).

The QHV are a sequence of marine calc-alkaline mafic to felsic volcanics and volcanoclastics deposited/erupted into an extensional basin interpreted to develop as a result of movement on regional synvolcanic faults such as the Henty, Mt. Charter and Mt. Cripps Faults. The QHV can be broadly subdivided into a lower sequence of basalt and feldspar phyric andesite lava and volcanoclastic (geochemical suite 1 of Crawford et al. (1992)) separated from an upper sequence of dominantly basaltic rocks (geochemical suite 3) by a complex interval known as the Mixed Sequence. The Mixed Sequence

marks a relatively quiescent period dominated by polymict epiclastics and numerous small volume dacitic lava/breccia bodies. The thickness of the Mixed Sequence varies from a few centimetres to more than 300m whilst the total thickness of the QHV can vary from around 20m (in the NW) to more than 1.5 kilometres in the vicinity of the orebodies.

In the south and southeast of the licence the QHV are conformably and gradationally underlain by the Animal Creek Greywacke, micaceous (chromite-bearing) siliciclastic greywacke and siltstone intruded by rare dolerites (geochemically similar to the suite 3 hangingwall basalts and andesites) and dacitic dykes. To the east the Henty Fault Zone juxtaposes the QHV against quartz-phyric volcanoclastics and intrusive (Tyndall Group or Southwell Subgroup equivalents) and overlying siliciclastic conglomerates and sandstones (Owen Conglomerate). To the west, around the Murchison Highway, the QHV are conformably overlain by the Que River Shale, black carbonaceous and pyritic shale and siltstone, and the basal part of the Southwell Subgroup, polymict quartz-phyric mass flows with minor shale and rhyolitic intrusives.

A strong Cambrian structural control was recognised by Aberfoyle for the formation and morphology of the QHV basin and associated VHMS mineralisation (Richardson, 1992). A network of syndepositional NE (mine grid) trending normal faults linked by NW trending transfer faults has been interpreted, by Aberfoyle, from facies and thickness variations, magnetics, gravity etc. In addition, a major NNE half graben like structure extends at least from Que River to Hellyer, hosting the two orebodies and localising strong footwall alteration. This structural zone is interpreted to relate to oblique extensional reactivation of a deep tapping, basement structure. Compressional structures are thought to largely reflect reactivation of these syndepositional structures during the ?Late Cambrian, Devonian and Mesozoic events.

5. PREVIOUS EXPLORATION

Previous exploration prior to the granting of EL 10/98 has been summarised in Anon (1986), McNeill et al. (1998) and McNeill and Simpson (2000), and the reader is referred to these reports for a detailed summary.

Following the granting of EL 10/98 in 1999 Pasminco Exploration carried out a compilation of previous exploration data and incorporated this information into Pasminco's databases. A review of potential targets on the EL was also conducted based largely on structural targets defined by Aberfoyle. One area (the Amoeba Zone and Bronco prospects) was followed up by refurbishment and extension of existing gridding and partial leach soil sampling. To test the Amoeba Zone and Bronco prospects a total of 10.25 line km of existing 200m spaced Aberfoyle grid was refurbished and 2.5 line km of new grid was cut. This gridding was then located using DGPS (60 stations) and 'B' horizon soil samples were collected at 25m spacings. A total of 535 soil samples (including standards and duplicates) were submitted to Amdel for analysis of

Cu, Pb, Zn, Ba, As, Au, Ag, Cd, Co, Bi, Mo, Ni, Sb, La and Sm by method Deepleach 37. Based on the results of this survey there are no base metal targets worthy of follow-up on the Amoeba Zone - Bronco grid, although the interpretation was complicated by considerable cultural contamination (McNeill, 1999).

During 2000, the second year of tenure, exploration work consisted of 3.6 line km of grid cutting over the Bronco area with subsequent DGPS surveying and PL soil sampling (133 samples, including standards and duplicates). This gridding and sampling work was designed to cover and identify buried and blind mineralisation at the prospective Que-Hellyer ore position. No significant targets worthy of follow-up were located (McNeill and Simpson, 2000).

6. WORK COMPLETED DURING THE 2000-2001 REPORTING PERIOD

Exploration work during the reporting period involved the following:

- Griding & DGPS surveying of 4.6 line kilometres was completed during November 2000. The area grided was designed to cover the buried Que-Hellyer ore position, where it is interpreted to be within 500m of surface, in the Mt Charter North area, extending south from the Amoeba Zone grid to the northern boundary of Western Metal's RL 9711 and east to the HEC transmission line corridor..
- Partial leach soil sampling (175 samples including duplicates and standards) was completed during December 2000.

6.1 Results

Randomised sample numbers were used to reduce the effect of analytical variations. The partial leach 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 then 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 300 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 leachate, after digestion, was also determined. Results are included as Appendix 1 and sample locations are shown on Figure 3.

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.

A review of the raw data indicated that one sample (349088) adjacent to the Murchison Highway had abnormally elevated Pb and Zn and was probably, 14 samples, 3.5% of the data set, have a $\text{pH} < 8.0$. At these 'low' pH's the speciation of reagents in DL42 may change and the resulting assays may be unreliable. These 6 samples were therefore removed from the data set prior to interpretation.

Gridded images of the raw data are presented as Figures 4 to 13. Major features evident in the data are:

- A spot high in Cu, Pb, Zn, Cd, Ba, and As at 6000N 3100E, in the western part of the grid (sample 349080). This sample lies close to a creek and the MC13 drill collar. It is unclear if the sample has been affected by cultural contamination (two samples closer to the Murchison Highway have "normal" metal contents) or reflects an unusual single point anomaly.
- Ba, Co and Ni are strongly elevated (response ratios for Co of up to 26 x background) over the northern extension of the Mt Charter Dolerite in the SW part of the grid (a similar signature was seen over Tertiary basalt on the Mt Charter Fault grid [Parfrey and McNeill, 2000]).
- A NE-SW linear feature present in Cu, Pb, Zn, Cd, Bi and As on the eastern part of the area. This trend is only weakly defined (Cu, Pb Zn and Co are all 2-5 x background) and appears to follow the mapped extent of the Hangingwall Andesite. The anomaly is therefore considered to be lithological, although the association with Pb and Zn, suggests there may be some mineralisation component. However, the low tenor of the anomaly does not provide encouragement for further follow-up.

On the basis of these results there are no anomalies worthy of any further follow-up.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 North Mt Charter – Amoeba Zone/Bronco

Based on the current interpretation of the partial leach soil data collected during the reporting period, there are no strong, coherent multi-element anomalies in the north Charter area that are not potentially related lithological variations. The most obvious anomaly train appears to be related to a lithological unit (the Hangingwall Andesite). No further work can be recommended on the basis of these results.

All the soil geochemical data from EL 10/98 should now be reviewed in conjunction with the results of programs on the adjacent EL 37/89 and 19/94 to determine if there are any semi-regional targets that may warrant more detailed follow-up.

7.2 Other Prospects

The intersection of the Que - Cripps and Henty Faults, all interpreted to have long movement histories (from Cambrian to Devonian), lie ESE of the Que River mine in an area of complex geology, that, because it did not fit a classical VHMS model, was not explored in great detail by Aberfoyle. Results of previous exploration include spotty Au, As, Ag soil anomalism; Anomalous wacker samples from over Cripps fault in an area of thick (>30m) glacial cover (up to 925 ppm Zn, 6000 ppm Ba and 210 ppm As) and the delineation of the most prominent magnetic anomaly in the QHV. The 1995-1996 Aberfoyle ground EM survey (using a ZONGE GDP-16 system) covered the majority of the area, but, no partial leach soil sampling was completed. However, the eastern extension of the area of interest lies outside EL 10/98 and if any mineralisation was sufficiently connected, and EM loops were in the correct position to couple, then the area has been sterilised to a depth of 100-150m for a Que River size and conductivity target. Data from this prospect should be reviewed in detail prior to committing to any on-ground work.

8. EXPENDITURE

Total expenditure for all work undertaken by Pasminco Exploration within Mt. Charter EL 10/98 for the twelve month period ending 30 June 2001 was \$19,160.15. A detailed expenditure statement is given below.

Computing	\$114.58
Geochemical/Assays	\$3,468.40
Geoscience Consultants	\$106.68
Land & Environment	\$526.28
Depreciation, Office, Sundry	\$1,268.93
Other Contractors	\$3,963.75
Personnel Costs	\$7,401.95
Stores & Supplies	\$142.27
Travel & Accommodation	\$342.59
Vehicles, Plant & Maintenance	\$82.89
Administration Fee 10%	\$1,741.83
Total Tenement Expenditure	\$19,160.15

9. KEYWORDS & LOCALITY

Keywords

ZINC, LEAD, COPPER, GOLD, STRUCTURE, ALTERATION, GEOCHEMISTRY, MOUNT READ, QUE HELLYER VOLCANICS, PARTIAL LEACH, SOILS, MMI

Location

BURNIE SK55-3

QUE RIVER, HELLYER, MT CHARTER

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