PASMINCO ROSEBERY MINE

BULGOBAC (Boco Siding) EL 4/2000

ANNUAL REPORT
FOR THE PERIOD ENDING 16th MAY 2002

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1. SUMMARY

This report details exploration work undertaken on EL 4/2000 Bulgobac during the period 30 March 2001 to 16 May 2002, the second year of this tenement. Work on the licence has focussed on exploring the north east striking contact between the Central Volcanic Sequence and Southwell sub-group correlates, along a strike length of some 9.6 km, for Rosebery and Hellyer style VHMS deposits. The work completed comprised a review of previous UTEM data, 4.2 line km of grid cut and(or) rehabilitated and surveyed with DGPS; geological mapping of the grid, vehicular tracks and selected creeks and collection and analysis of 567 (including duplicates and standards) 'B' horizon soil samples.

Work to date has identified three partial leach soil anomalies and a UTEM anomaly that are worthy of further follow-up. Work during the next year of tenure will focus on advancing at least two of these anomalies to drill testing and extending the partial leach soil coverage over the CVC – Southwell Subgroup contact.

2. INTRODUCTION

This report details exploration work undertaken on the Bulgobac EL 4/2000 during the period 30 March 2001 to 16 May 2002, the second year of this tenement.

Access to the tenement is Via the Murchison highway and Emu Bay Railway, in the east, and on the Boco Road, cutting through the centre of the tenement. A network of 4WD tracks, developed for logging and mineral exploration, extend from these main access points and provide excellent access to the majority of the area of interest.

Pasminco's main target on EL 4/2000 is Cambrian Rosebery or Hellyer type Zn-Pb-Cu-Au-rich VHMS mineralisation hosted by the Mount Read Volcanics (MRV). The tenement covers a generally NE striking section of the MRV including the contact between the Central Volcanic complex (CVC) and the overlying Southwell Subgroup (or lower Tyndall Group), separated in part by the Hollway Andesite (correlates of the Que-Hellyer Volcanics). Recent interpretations suggest that all economically significant VHMS Pb-Zn mineralisation in the Central Mt Read Belt occurs at this stratigraphic level and that as such the area of EL 4/2000 warrants detailed exploration. Despite a long exploration history (see Section 5) much of the prospective contact zone has not been adequately tested by modern deep search geophysical or geochemical techniques, a result of focussing on targets in the CVC (the Boco Alteration Zone) and the presence of thick glacial cover (to >100m in some areas). Pasminco plan to systematically explore the EL using a combination of geological mapping, partial leach soil geochemistry and infill ground time-domain EM, where there is no existing coverage, or the work that has been done is considered to have been ineffective.

2.1 Attribution

The following personnel were responsible for the work carried out by Pasminco Exploration/Pasminco Rosebery Mine on the EL 4/2000 Bulgobac licence area during the reporting period:

Senior Geologist: Andrew McNeill – Pasminco Exploration Rosebery

3. LAND TENURE

EL 4/2000 Bulgobac (24 sq km) was granted to Pasminco on 16 June 2000 for a period of 5 years. The location of the Tenement is shown on Figure 1. EL 4/2000 covers ground that fell vacant on the relinquishment of EL's 24/95 (Aberfoyle) in February 1998, EL 47/96 (RGC) in September 1998 and the partial relinquishment of Pasminco's EL 44/88 in November 1998. During 2001 Pasminco applied for two blocks of vacant ground adjoining EL 4/2000; ELA 9/2001 (5 sq km) and ELA 10/2001 (4 sq km). These areas were granted on 9th August 2001 and were immediately incorporated into an enlarged EL 4/2000 (33 sq km).

Land covered by EL 4/2000 is all crown land designated as State Forest, informal reserves, parts of the Sawmill Creek, Boco Creek, Burns Peak and Mackintosh Forest Reserves and some HEC land all of which are available for exploration under the Mineral Resources Development Act 1995.

4. REGIONAL GEOLOGY

Basement in western Tasmania is Precambrian age, comprising predominantly greenschist facies meta-sediments with minor basalts and dolerites. Higher-grade amphibolite and eclogite facies are also present within the Precambrian. This Precambrian basement is exposed to the east of the Bulgobac licence (Figure 2).

Cambrian volcanism and sedimentation developed on this Precambrian continental crust, and is subdivided into the Eco-Cambrian tholeiitic Crimson Creek Formation (CCF) and, the mid to late Cambrian predominantly calc-alkaline, Mt Read Volcanics (MRV).

The CCF was deposited in shallow but rapidly subsiding basins (Brown, 1986). The CCF consists of basaltic lavas and volcaniclastics, turbidites, carbonates, chert and minor evaporites. This formation is exposed west of the licence.

Ultramafic cumulates and volcanic equivalents were thrust onto the CCF in the mid Cambrian (Crawford and Berry 1991). These rocks generate strong magnetic anomalies and outcrop within the Huskisson Syncline, to the west of the licence. The ultramafics are interpreted at depth beneath the licence (Leaman, 1992).

The MRV form a 200km long by 20km wide north-south trending belt along the eastern side of the Dundas Trough, adjacent to and in some areas on lapping and intruding the Precambrian basement. The volcanics include intermediate to felsic lavas, sub-volcanic porphyries and granites, volcaniclastics and basement-derived sedimentary rocks. The MRV host six economically significant volcanic hosted massive sulphide deposits.

Equivalents of the MRV underlie the entire Bulgobac licence, and vary from massive

felsic lavas, volcaniclastics and subvolcanic intrusives of the Central Volcanic Complex (CVC) in the east and south. This package is overlain, in part, by a thin micaceous greywacke and shale sequence, correlated with the Animal Creek Greywacke, and the Hollway andesite, a package of feldspar-phyric dacitic to basaltic lavas and hyalocalstic lava breccias with a geochemical signature suggesting a correlation with the Que-Hellyer Volcanics (Coutts, 1990).

Poorly mapped mixed provenance fine to coarse grained sediments (including volcanic quartz-rich volcaniclastics) with minor quartz-feldspar porphyry intrusives and lavas, probable correlates of the Southwell Subgroup (or lower Tyndall Group) overly the Hollway Andesite and define a synclinal structure in the north and west of the tenement (Reid, 1990; McKibben, 1993).

Regional structures that subdivide the MRV are the Rosebery Fault, west of the licence, and the Henty Fault, which is located 5km east of the licence.

Cambrian volcanism and sedimentation was followed by predominantly basement derived late Cambrian to Devonian age sedimentation, which includes siliciclastic conglomerate, sandstone and limestone. None of these sequences occur within the licence.

At least two phases of regional compression were associated with the mid Devonian Tabberabberan Orogeny (Keele, 1991). The development of folding, cleavage and regional thrusts in lower Palaeozoic rocks were associated with this event. Fold trends in the licence are N to NE.

Deformation was followed by the extensive intrusion of Devonian to Carboniferous granitoids. The Meredith Granite and associated hornfels aureole outcrop west of the licence area (Brown, 1986). The Devonian granites are associated with carbonate replacement Sn mineralisation at Renison Bell and Mount Bischoff, and the Pb Zn Ag vein deposits of Zeehan and, possibly, the Tullah Fields.

After substantial erosion of this terrane extensive Tertiary flood basalts and subvolcanic sediments were deposited. Remnants of the basalt flows are preserved to the north of the licence. In the Quaternary extensive unconsolidated glacial and fluvioglacial deposits up to >100m thick accumulated in the Boco Plain area and the Valley of Boco Creek to the west (Augustinius and Nichol, 1999). These deposits now obscure much of the Palaeozoic geology in the eastern and central part of the tenement.

No economically significant mineralisation is known from the licence area, however a large sericite-pyrite alteration zone has been located as isolated outcrops, and by drilling, on the Glacially covered Boco Plain. This zone, the Boco Alteration Zone has been extensively explored, as discussed below.

5. PREVIOUS EXPLORATION

The area of EL 4/2000 Boco Siding (Bulgobac) has had a long history modern of exploration, most of which has been completed in two areas; the Boco Alteration Zone and the Hollway Andesite. In this report the term Hollway Andesite Prospect will be used for the Hollway andesite itself and the volcano-sedimentary sequence overlying the andesite and forming the syncline east of the Pinnacles Rhyolite. Outside these areas exploration has largely been restricted to geological mapping, at various scales, and stream sediment sampling. The tenement area has also been mapped at various scales by MRT (Barton et al., 1966; Collins, 1981; Corbett and McNeill, 1986). Tables 1 and 2 summarise the previous exploration over the Hollway Andesite (including the Summit Prospect) and the Boco Alteration Zone, respectively. Work on the Boco Alteration Zone has also been summarised in detail by Herrmann (in Elliston (1998a)) and Taylor (1987). Table 3 summarises work completed on EL 4/2000 by Pasminco.

Table 1 Previous exploration over the Hollway Andesite Prospect on EL 4/2000

Year & Reference	Activities
1975 Butt et al. (1975)	Completion of an Airborne EM survey (INPUT); no significant anomalies.
1977-1978 Hall (1978)	Establishment of the EAB grid (two lines of which extend onto the area of EL 4/2000); geological mapping, A0 soil sampling, SP and ground magnetics.
1978 Beamish (1978)	Orientation –80# stream sediment survey over the EAA grid area.
1978-1979 Hall, D.B. (1979)	The EAA grid was cut (22.8km) north of the Boco Road. Mapping, rock-chip sampling, A0 horizon total digest soil sampling (1024 samples) and a ground magnetic survey were completed; no significant anomalies were located.
1980 Hall and Pigott (1980)	Extend EAB grid east by three lines; geological mapping, ground magnetics, SP and IP, A0 soil sampling (listed as planned work – can't find report of this work at MRT, but appears to have been completed).
1981-1982 Anderson (1982)	EAB grid extended further to NW (ECE extension Grid), soil sampling (C Horizon), and geological mapping.
1983 Shaw (1983)	Drilling of DDH EAB4 (178.0m); results not reported in detail.
1983 Dvorak (1983)	Completion of DIGHEM III survey over area. No outstanding EM responses were located (Trussell, 1984)
1985-1986 Anon (1986)	Line cutting preparatory to UTEM survey, stream sediment sampling, minor rock-chip sampling.
1986-1987 Anon (1987)	Review of previous soil geochemical coverage; line cutting, UTEM III survey (no significant anomalies) and interpretation of stream sediment sampling (BCL & -80#).
1987-1988 Anon (1988)	Completion of UTEM III survey – no significant anomalies
1988-1989 Rosenhain and Mathison (1989)	"limited field observations"; re-logging DDH EAB4; description of geophysical and geochemical anomaly tested by EAB4.
1989-1990 Lorrigan (1990)	Regional aeromagnetic and gravity surveys and preliminary interpretation; collection of magnetic susceptibility data from drill core; rock-chip sampling along the Boco Road and other tracks; two lines of wacker sampling (and 65.5m of DDH) over glacials south of the Boco Road

Table 1 Previous exploration over the Hollway Andesite Prospect on EL 4/2000 cont..

Year & Reference	Activities
1990 Coutts (1990), Reid (1990)	BSc (Hons) theses completed on the Hollway Andesite (Coutts) and the Burns Peak – Boco Road areas (Reid). Work included geological mapping, petrography and whole-rock geochemistry; results indicate the Hollway andesite has geochemical affinities with the Hellyer Basalt.
1990-1991 Kirsner et al. (1992)	Photogrammetry and production of new base maps; re-processing of the 1990 aeromagnetic survey; digitisation of previous IP data; "brief" reconnaissance mapping.
1991-1992 Kirsner (1992)	Re-logging and sampling of DDH EAB4, geological mapping, compilation of soil data, contstruct8ion of semi-regional cross sections, reprocessing of UTEM data.
1992-1993 Poltock et al. (1993)	Drilling BPD77 472.3m (collared just outside current EL); intersected volcaniclastic with massive sulphide clasts (to 36% Pb, 16.5% Zn); DHEM completed. Review of previous IP data.
1993-1994 Poltock and Saxon (1994)	Geological mapping, rock-chip sampling whole-rock geochemistry and petrology (largely outside the area of EL 4/2000). Drilling of BPD80 (469.7m) to test down-dip extension of sequence in BPD77; best intersection 6m @ 0.9% Zn, 0.2% Pb; DHEM completed. Review of UTEM and IP data.
1994-1995 Saxon (1995)	Geological mapping, rock-chip sampling and petrology (largely outside the area of EL 4/2000). Interpretation of regional gravity and magnetic data.
1995-1996 Quayle and Dibben (1996)	The EAB grid was refurbished and additional lines (1220E-1600E) cut to the east. Dipole-dipole IP and ground magnetic data collected. Compilation of existing mapping and further 1:5,000 scale mapping. A combined IP/soil target defined at the upper contact of the Hollway Andesite (Summit Prospect).
1996-1997 Weber et al. (1997)	Prospectivity Review; compilation of previous exploration data.
1997-1998 Murphy and Denwer (1998)	Diamond drilling (2xDDH for 410.2m) to test Pb-Zn soil (DDH BPD88; 199.8m) and IP (DDH BPD89; 210.3m) anomalies at the 'Summit' Prospect; weak Pb-Zn mineralisation was intersected.

Table 2 Previous exploration over the Boco Prospect on EL 4/2000

Year & Reference	Activities
1972-1977 Hanson (1977)	INPUT AEM survey (1975); gridding (57.5 line km), gradient array IP, ground magnetics, grid based mapping and regional mapping, soil sampling (no significant anomalies); diamond drilling (BBP207-209; 475m) to test IP anomalies; alteration and weak base metal mineralisation intersected.
1977-1978 Mill (1978)	New access track and cutting of the Boco Extension grid, regional 1:10,000 scale mapping, gradient array IP (no significant anomalies), ground magnetics.
1978-1979 Mill (1979)	Minor infill gridding and geological mapping, dipole-dipole IP, and soil sampling on the infill lines.
1979-1980	No work.
1980-1981 Mill (1981)	Review of geophysics and geology.
1981-1982 Sainty and McDonald (1982, 1982a)	Boco extension grid pegged (35.76 line km), geologically mapped, soil sampled and covered with Dipole-Dipole IP and ground magnetics.

Table 2 Previous exploration over the Boco Prospect on EL 4/2000 cont..

Year & Reference	Activities
1982 Sainty (1982)	Geological mapping, trial percussion drilling program (7 holes for 226.0m).
1982-1983 Sainty (1983)	Completion of three percussion holes (305.8m); petrology on samples from percussion drilling.
1983 Sainty (1983a)	Completion of four DDH (BBP242 and 246-248; 1899.7m) and two percussion holes (180.2m); core and chip geochemistry and some petrology; commencement of UTEM III survey.
1984 Sainty (1984, 1984a)	Downhole SIROTEM completed – no anomalies; UTEM survey completed – 3 subtle anomalies; diamond drilling of four holes (BBP250-251, 253-254; 1689.5m) – two holes testing UTEM features – no significant mineralisation intersected.
1985 Williams (1985)	CSR farmed in to EL. Diamond Drilling (BBP278-280; 1601m) – no significant mineralisation intersected; petrology, drill core geochemistry and some sulphur Isotopes done; magnetic susceptibility data collected from drill core.
1986-1987 Taylor (1987)	CSR withdraw from JV; Pancontinental farm-in; review previous exploration and geology; petrological and geochemical study; UTEM survey over the extended Boco grid – no significant anomalies; Pancontinental withdraw from JV and tenement is relinquished.
1988-1989 Howland-Rose (1989)	Re-establish grid, RMIP and follow-up of 5 RMIP anomalies with gravity; no results warranting further follow-up. Tenement relinquished.
1990 Randell (1991)	Review of previous exploration, including stable isotopes and lithogeochemistry.
1990-1992 Kirsner (1992a)	Pasminco farm-in; Photogrammetry to produce base maps, high resolution helimagnetic survey, infill gravity survey and interpretation, regional scale geological mapping.
1997-1998 Elliston (1998a)	Review of previous exploration, re-interpretation of helimagnetic data, minor 1:5,000 scale geological mapping, rock-chip sampling and a detailed evaluation of the volcanic facies and hydrothermal alteration at the Boco Prospect. No significant targets worthy of follow-up and the tenement was relinquished (Elliston, 1998b).

Table 3 Previous exploration on EL 4/2000

Year & Reference	Activities
2000-2001 Simpson and McNeill (2001)	Previous exploration reviewed and digital data compiled. 20.8 line km of grid cut and(or) rehabilitated and surveyed with DGPS; 12 line km of this grid geologically mapped, 751 'B' and 'C' horizon soil samples collected and submitted for analysis (including duplicates and standards) and 7 rock chip samples analysed. This work has defined two partial leach soil anomalies, one on the Glacially covered Boco Plains and the second at the base of the Hollway andesite, adjacent to a total digest soil anomaly located by previous explorers.

6. WORK COMPLETED 2001-2002 REPORTING PERIOD

Work carried out by Pasminco Exploration during this reporting period has focused on review of previous exploration data, Gridding, Partial Leach Soil Sampling and Geological Mapping.

6.1 Review of previous data

The 1988 BHP ground TDEM survey over the North Pinnacles area was reviewed by consultant J. Silic (Appendix 1). No significant conductors were evident.

The review of previous UTEM surveys over the Boco Prospect indicated that anomaly C, an early time current channelling response with a strike length of 300-400m, of the 1983 EZ survey may warrant further Follow-up (Simpson and McNeill, 2001). J. Silic (Consultant) and C. Dauth (Pasminco geophysicist) have further reviewed the anomaly and have concluded that it is unlikely to be an artefact of the railway line and consider that it may reflect buried massive sulfide mineralisation at a depth of 100-150m.

6.2 Partial Leach soil sampling

The Boco partial leach soil sampling program was designed to cover the north east striking contact between the Central Volcanic Sequence and Southwell sub-group correlates, interpreted to be the time equivalent of the Rosebery host sequence, between Burns Peak, to the south west, and Animal Creek, to the north east, a strike length of some 9.6 km. Previous exploration over this area is summarised in detail in section 5**.**

The 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 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.

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 567 samples (including duplicates and standards) from this program were analysed as part of three batches (SDS 3900 and 4504).

No samples are obviously contaminated, however, 41 samples, 7.4% 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 38 samples with low post-digest pH (three samples; 350606, 350874 and 350960 were inadvertently not re-digested), were re-assayed with the new protocol. In addition to a further 10 samples, largely with post-digest pH <8.2, analysed to compare the DL42 with DL43 results. Of the low pH samples 36 had DL43 post-digest pH's of >8.0. The two samples with low post digest pHs, from the DL43 analysis, both were red-brown in colour and had high Pb and Zn contents (i.e., in the top 13% and 5%, respectively, of results from the Hollway-Boco area). In the preliminary interpretation discussed below the low (pH 6<8.0) samples from the original dataset have had their assay results replaced by the re-assayed data and those samples with low pH's after analysis by DL43 have been deleted, giving a dataset of 551 samples.

6.2.1 Hollway – Boco Plains

Sampling completed during the reporting period included infill sampling on line 1870E of the Phase 1 grid and completing sampling on the phase 2 grid (See Simpson and McNeill, 2000). Results for samples submitted during the reporting period are included as Appendices 2 and 3, sample locations are shown on Plans 1 and 2 and images of the raw gridded data are included as Figures 3-10.

Data have been interpreted by examining both the raw gridded data and data levelled (using the median as background) to soil colour group and plotted as line profiles. Significant features are:

- The infill sampling on line 1870E has confirmed the original Hollway Cu, Pb, Bi and As anomaly.
- A second anomaly, the "Sawmill Creek Track" anomaly, is obvious on lines 3100-3700E where As, Ag, Bi, Cu, Pb and Zn are variably elevated (generally > 5 x background [bg] and up to > 20 x bg). This anomaly is not closed off to the east. The area of the anomaly was partially covered by the 1986 Pancontinental UTEM survey.
- Spiky point highs occur throughout the grid (particularly for Cu) and it appears that both Ag, and to a lesser extent, Bi are strongly elevated on line 3100E – a possible analytical artefact.

6.2.2 Boco Plains

In the previous reporting year a single orientation line was sampled across the button grass covered Boco Plains (no cutting required and all samples were located with DGPS) on 5388600mN. Results from this line indicated base metal anomalies at the eastern and western ends of the line separated by a very quiet 'background' zone. To follow this up two further lines were sampled (5388400mN and 5388800mN), however, at the time of writing the previous report assays had not been received from this sampling (Simpson and McNeill, 2001). In the current reporting year outstanding results were received and a further two lines (5388200mN and 5389000mN) of sampling completed. Sample locations are shown on Plan 1, assay results are included as Appendices 4 and 5, and gridded images of the raw assay data are presented as Figures 11-18.

Data have been interpreted by examining both the raw gridded data and data levelled (using the median as background) to soil colour group and plotted as line profiles. Significant features are:

- In the raw data high Cu, Pb, As and Ag form an anomalous zone in the western part of the grid, whereas Zn defines two anomaly trains.
- Au is strongly elevated, in both raw and levelled data on line 5388600mN (an analytical artefact?); As is strongly elevated in the levelled data, less so in the raw data, on line 5388400mN.
- When the levelled results for elements found to be anomalous over Rosebery (Edwards et al., 2001) are considered two anomaly trains, present on all sampled lines, can be defined (as indicated by the raw data for line 5388600N; Simpson and McNeill, 2001):
    - The western of anomaly is up to 200m wide and follows the Emus Bay railway line. Most elements are at <10 x bg, but with spiky high Ag, Au and As values up to 65 x bg. This anomaly is interpreted to result from wind blown contamination from concentrate haulage on the railway.
    - The eastern anomaly is also up to 200m wide and is defined by values of 4-6 x bg and lacks the spiky high Ag, Au and As seen in the western anomaly. The eastern anomaly appears to follow the projected trend of the CVC/Animal Creek Greywacke contact beneath glacial cover on the Boco plains. Given the anomaly's distance (>250m) from the Murchison Highway it is unlikely to be contamination from the haulage of Que River ore, however, the anomaly also appears to follow the poorly defined drainage network roughly paralleling the highway.
- Neither anomaly is closed off to north or south and further sampling is required to define the extent of the more prospective eastern anomaly.

6.3 Geological Mapping

Geological mapping was completed over the Hollway – Boco Plains grid, The

western part of the Hollway grid (lines 1870, 2030 and 2230), access tracks and roads and selected creeks during the reporting period. Outcrop maps are presented as Plans 3 and 4 and an interpretation is included as Plan 5. The interpretive plan is based on mapping completed during the life of EL 4/2000 and previous work including mapping and drilling by Pasminco, on the then EL 44/88 and EL 2/90, Honours theses (Coutts, 1990; Reid, 1990; McKibben, 1993) and mapping by Comstaff ("Moriarty Creek" from plan TAS/2/1097).

The new mapping has confirmed the overall regional stratigraphy and significant conclusions are

- The CVC is overlain by Black Harry Road Beds (BHB) and Animal Creek Greywacke (ACG) equivalents. North of the Boco Road the ACG and BHB can be differentiated, however, south of the Boco road, where the sediments thin dramatically, there is no obvious subdivision.
- The extent of the Hollway andesite/basalt is largely as shown on previous maps, however, two 'lenses' of basaltic hyaloclastite were located near 38050mE, 5384800mN in the overlying dacitic lavas.
- The dacite lavas are texturally similar to the Sock Creek felsic lavas rather than the Que-Hellyer dacites (a conclusion partially supported by lithogeochemistry; Reid, 1990). Although exposure is poor, it appears that the Hollway dacites are not continuous with the felsic lavas/intrusives, previously mapped as a continuation of the Sock Creek sequence, outcropping near the Railway on Boco Plains and on the Sawmill Creek track.
- The quartz-feldspar porphyry, intruding the Southwell Subgroup correlates (above the Hollway andesites and dacites), can be traced, some 7 km to the NE, to the large porphyry bodies at Sock Creek and at the junction of the Que and Bulgobac Rivers. The porphyry appears to die out at 380250mE, as shown on some previous maps (NB this section of the porphyry is mapped as volcaniclastic on Corbett and McNeill, 1986) however, recent mapping and the results from DDH BP88 and 89 indicate a porphyry body, at the same stratigraphic level, extending west from 379800mE to the previously mapped porphyry at the collar of DDH EAB1.
- The shale/siltstone unit overlying the "quartz-eye" volcaniclastic has been traced north to 5387000mN, the limit of mapping completed in the reporting period.
- Although the stratigraphy and structure of the units Boco Road syncline (as described above) are well defined, their relationship to units in the Burns Peak area remains obscure; a consistent interpretation of the geology can be made to a point between DDH BPD77 and BPD80 and extending south to approximately 200m west of the EAB1 collar. Some previous interpretations have indicated a N-NE trending fault through this area (Reid, 1990; Quayle and Dibben, 1996), however, none of these interpretations are entirely satisfactory.

- No significant alteration or mineralisation was located during the reporting period.

7. CONCLUSIONS & RECOMMENDATIONS

A program of partial leach soil geochemistry and geological mapping to explore the north east striking contact between the Central Volcanic Sequence and Southwell sub-group correlates, along a strike length of some 9.6 km on EL 4/2000 was well advanced by the end of the second year of tenure. During the reporting period 4.2 line km of grid was cut and(or) rehabilitated and surveyed with DGPS; the grid, vehicular tracks and selected creeks were geologically mapped and 495 'B' horizon soil samples (including duplicates and standards) were collected and analysed.

Major recommendations resulting from this years work are:

1. To continue gridding, mapping and sampling CVC/Southwell Subgroup contact:
   - To the SW of the existing Hollway grid (on the new additions to the original tenement) to cover the "Eastern Pyrite Zone".
   - To infill the gap between to Hollway-Boco grid and the sampling on the Boco Plains and continue sampling NE to the northern tenement boundary.
2. Follow-up the Boco UTEM anomaly 'C' by reviewing previous drilling and attempting to accurately locate the anomaly in AMG coordinates, prior to a decision on drill testing during the third year of the licence.
3. Follow-up the eastern Boco Plains partial leach anomaly. The proposed sampling (in 1 above) will further detail and close-off this anomaly, however, as the anomaly follows the drainage, there is some uncertainty as to whether it may result from a hydromorphic or topographic effect. A geophysical test may therefore be desirable. The area of the partial leach anomaly was covered by the 1986 Pancontinental UTEM survey (reviewed in Simpson and McNeill, 2001), however, this survey was designed to couple with flat lying targets and may not have coupled with the expected moderately (40-60˚) northwest dipping CVC/Animal Creek Greywacke contact. A single loop TDEM survey is therefore proposed to test the anomaly if, after further review, the existing UTEM coverage is considered ineffective.
4. Follow-up the Hollway partial leach soil anomaly by reviewing the 1988 BHP UTEM coverage with the aim of generating a drill target to be tested in the third year of the licence.
5. Follow-up the Sawmill Creek Track anomaly by infill sampling and closing off the anomaly to the east (as part of 1 above). If the further sampling confirms the anomaly then a single loop TDEM survey is proposed since the existing UTEM coverage may not be effective (i.e., it was designed to test a flat lying target and he anomaly is located close to a loop edge).

8. EXPENDITURE

Total expenditure for all work undertaken by Pasminco Exploration within Bulgobac EL 4/2000, for the period ending 01/5/01 was $36,183. A detailed expenditure statement is given below.

Personnel	$16,447
Travel & Accommodation	$0
Geoscience Consultants	$2,818
Geochemical/Assays	$10,305
Other Contractors	$0
Stores & Supplies	$0
Vehicles, Plant & Maintenance	$357
Land & Environment	$1,929
Computing	$0
Depreciation, Office, Sundry	$1,038
Administration Fee 10%	$3,289
Total	**$36,183**

9. KEYWORDS & LOCALITY

Keywords

Hollway Andesite, Boco Alteration Zone, geology, Partial Leach soil geochemistry, rock-chip geochemistry, line cutting, UTEM, geological mapping.

Locality

1:250,000	BURNIE SK55-3
1:100,000	SOPHIA 8014
1:25,000	PARSONS 3638; BLOCK 3838

10. REFERENCES

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