RGC EXPLORATION PTY. LIMITED
(on behalf of Renison Ltd)

EXPLORATION LICENCE NO.'S 102/87, 55/89 & 12/92

("Queenstown", "Mt Darwin" & "Queenstown South")

West Sedgwick & Garfield/Clark Valley

Annual Report April 1994- March 1995

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SUMMARY

Exploration Licences 102/87 Queenstown, 55/89 Mt Darwin and 12/92 South Queenstown cover a 30km N-S trending exposure of Cambrian Mt Read Volcanics from Lake Margaret to Mount Darwin. E.L.'s 102/87 and 55/89 are held by BHP Minerals Ltd and explored by RGC Exploration under a joint venture agreement entered into on 29th November, 1991. RGC acquired an adjoining area as E.L. 12/92 on 12th October 1992, and this was also included in the joint venture. The total area covered by these licences was reduced from 249 sq km to 130 sq kms in March 1994 as part of a compulsory relinquishment.

During 1994/95, most of the exploration carried out was at the Garfield Cu-Au Prospect. Five diamond drillholes were completed at Garfield, with two of these intersecting significant mineralization. A mineralized zone with approximate surface dimensions of 400m by 100m has been defined. Potential exists to find additional mineralized zones beyond this one.

Another diamond drillhole was completed at the West Sedgwick prospect to follow-up on the intersection of a silica, sericite, pyrite alteration zone in WS007. The results of WS008 were disappointing and no further work is planned in the West Sedgwick area.

The Penghana Propect is an andesite body near Queenstown with similar whole rock geochemistry to the Garfield andesite and with a magnetic anomaly similar to the Garfield mineralization. The overlying sequence contains large barite veins at the Madam Howards Prospect. The Penghana area has been covered by a 100m spaced grid and has been mapped at 1:1000 scale, soil sampled and surveyed with ground magnetics.

A brief review of previous exploration at the Beatrice Prospect, on the southern side of Mount Sedgwick, was completed. This area was remapped at 1:2500 and a drillhole was proposed to test for

a possible extension of the mineralized zone to the south. The Moxon Saddle area was also reviewed and remapped, and a hole was planned here to test an IP anomaly adjacent to the Henty Fault.

During February 1995 a detailed Helimag survey was flown over all of RGC's tenements south of Henty. This survey employed a stinger-mounted sensor, rather than a towed bird, and with real-time corrected differential GPS navigation accurate to +/- 2m, this survey will most likely be the best magnetic data available for the next ten to twenty years. At the time of writing, processing of the data had not been completed and the results were not available for inclusion in this report.

1. INTRODUCTION

Exploration Licences 102/87 - Queenstown and 55/89 Mt Darwin are held by BHP Minerals Ltd. (BHPM) and an adjoining licence, E.L. 12/92 is held by RGC. These licences are explored by RGC Exploration Ltd under the terms and conditions of a joint venture agreement. Approval was granted allowing the joint reporting of the exploration work because the tenements form a single coherent geological block.

The tenements currently occupy a total area of 130 sq kms surrounding Queenstown extending to the north, in part, some 30 kms to Moxon Saddle and to the south some 20 kms to Slate Spur (Figure 1). They cover a significant portion of the Cambrian Mount Read Volcanics. These rocks host a variety of significant mineral occurrences.

(i) Zinc - volcanic-hosted massive sulphide deposits, eg. Hellyer, Que River, Rosebery, Hercules and Tasman Crown
(ii) Copper - Mt Lyell style mineralisation
(iii) Gold - Henty style mineralisation.

Much of the previous work in this area targeted copper-gold mineralisation of the Mt Lyell style. More recently BHPM covered selected areas with blanket UTEM looking for VMS mineralisation. This was supported by some geological mapping and rock chip/stream sediment geochemistry.

RGC is also exploring these EL's for Rosebery-style VMS mineralisation. The exploration approach which has been applied involves detailed geological mapping in an attempt to identify Cambrian growth faults, possible mineralised horizons and alteration zones. This mapping is supported by multi-element soil and rock geochemistry. Any alteration zones thus identified can be tested by deep drilling and down-hole

geophysics.

2. LAND TENURE

E.L. 102/87 - **Queenstown** was granted to BHPM on 22nd April, 1988. The tenement initially covered 95 sq kms in three separate parts (Figure 1)

Part (i) - Queenstown of 74 sq kms
Part (ii) - Garfield of 19 sq kms
Part (iii) - Moxon Saddle of 2 sq kms

Part (i) totally enclosed the Mt Lyell Mine Lease, 30M/80. In 1988 Mining Lease Application areas (MLA's) were cancelled by Mt Lyell increasing the area of Part (i) to 79 sq kms. Again in early 1992 additional MLA's were relinquished further increasing Part (i) to 84 sq kms. This tenement covered 105 sq kms and was due for 50% reduction on or before 22nd April, 1993. A meeting with representatives of the Department of Mines Tasmania (DMT) was held on 15th April, 1992 where RGCE expressed its interest in postponing the reduction date by 12 months due to its recent entry into the Agreement with BHPM.

E.L. 55/89 - **Mt Darwin** was granted to BHPM on 5th May, 1990. This tenement covered 78 sq kms and links Parts (i) and (ii) of E.L. 102/87 (Figure 1) resulting in a continuous exposure of Mt Read Volcanics over a strike length of 40 kms which is explored as a single coherent block. Because of this BHPM was successful in gaining approval from the DMT to jointly report on exploration activities (15th March, 1991).

E.L. 12/92 - **South Queenstown** was granted to RGC on 12th October 1992. This tenement forms a narrow strip partly enclosing the other E.L.'s. It was divided into 3 parts:

Part (i) - 49 sq kms on the eastern side of the West Coast Range
Part (ii) - 15 sq kms over Mt Sorell and Mt Strahan
Part (iii) - 2 sq kms south of Lake Margaret.

A significant portion of E.L.'s 102/87 and 55/89 was within the South-West Conservation Area (SWCA) and considered to be environmentally sensitive. Despite the revocation of Conservation Area status in areas north of Macquarie Harbour exploration activities in the Garfield/Clark Valley are still subject to approval from the Mineral Exploration Working Group.

In March 1994 as a result of a compulsory partial relinquishment the total area covered by the three E.L.'s was reduced to 130 sq kms. This is made up of:

E.L. 102/87	Part (i)	Queenstown -	56 sq kms
	Part (ii)	Garfield -	18 sq kms
	Part (iii)	Moxon Saddle -	2 sq kms
E.L. 55/89	Part (i)	Mt Darwin -	28 sq kms
E.L. 12/92	Part (i)	West Coast Range -	16 sq kms
	Part (ii)	Mount Sorell -	8 sq kms
	Part (iii)	Lake Margaret -	2 sq kms

3. WORK COMPLETED

3.1 Garfield

Diamond Drilling Tas were contracted to drill GAR002 in March 1994 and to drill 4 more holes during the 1994/95 summer. All of the drilling was helicopter supported. A Longyear 38 rig was flown in from near the surge pond on Mount Jukes. All core samples were analysed for Cu, Pb, Zn and Ag by AAS at Analabs in Cooee, and were also assayed for Au by fire assay. Details of the holes are given in table 1.

Table 1

HOLE	GAR002	GAR003	GAR004	GAR005	GAR006
DRILLED BY:	DIAMOND DRILLING TAS	DIAMOND DRILLING TAS	DIAMOND DRILLING TAS	DIAMOND DRILLING TAS	DIAMOND DRILLING TAS
START	16/3/94	17/11/94	29/11/94	11/1/95	26/1/95
FINISH	9/4/94	27/11/94	17/12/94	25/1/95	9/2/95
TRICONE TO HQ TO: NQTO:	3M 35.5M 334.5M	1M 80.9M 250.3M	1.6M 89.5M 264.9M	2M 83.8M 235.2M	2M 77.8M 259.2M
SAMPLED FROM - TO	154 TO 264M	77 TO 184M	157 TO 165M 173 TO 183M 207 TO 214M	180 TO 200M	44 TO 50M 176 TO 193M
ASSAYED FOR:	Cu,Pb,Zn,Ag Au	Cu,Pb,Zn,Ag Au	Cu,Pb,Zn,Ag Au,Mn,Ba	Cu,Pb,Zn,Ag Au,Mn,Ba	Cu,Pb,Zn,Ag Au

The sequence of rocks overlying the copper prospect at Garfield was remapped at 1:2500. This included an area along the Garfield River and up the side of the ridge north of Mount Sorell. Previous soil sampling in this area was at 50m intervals on 400m spaced lines. The soil sampling was infilled

to 25m interval on 200m spaced lines, particularly near the Yolande River Sequence - Tyndall Group contact. The purpose of this work was to investigate a possible exhalite horizon in the sequence above the Garfield Prospect.

3.2 Penghana Prospect

Following the discovery of the mineralization at Garfield some common features of mineralized systems south of Henty were recognised. Most of the Cambrian alteration systems in this area can be related to andesitic to basaltic volcanics belonging to the "suite 2" of Crawford et al., (1992). The alteration at Garfield also included a magnetite-rich zone similar to Prince Lyell. As a result of these observations, the open file aero-magnetic data was overlaid on the regional geology to see if any other "suite 2" andesites had a magnetic signature similar to the Garfield andesite. The most obvious area was the "Horse Paddock Andesite" at Penghana Hill near the Lake Margaret turnoff. Furthermore, this andesite occurs in the stratigraphic footwall of the Madam Howards Barite prospect and a hydrothermal system related to the andesite might provide an explanation to these enigmatic veins.

The original West Sedgwick grid had a line spacing of 200m. Infill lines were cut over the Penghana area to close the line spacing to 100m. Ten km of new lines were cut. The grid was soil sampled at a 25m spacing. Two hundred and seventeen soil samples were collected. they were assayed for Cu, Pb, Zn, and Au.

The Penghana Grid was surveyed with ground magnetics. Readings were taken on every line at 5m intervals. The data was processed by RGC geophysicist Sam Roberts in Perth, and presented as a contour plan and a series of stacked profiles. The grid was mapped at 1:1000 scale and compiled as a 1:2500 interpretation.

3.3 WEST SEDGWICK

Drillhole WS008 was drilled from the same site as WS007. It was designed to the the bedded pyrite unit and pyritic alteration zone intersected in drillhole WS007. The alteration appeared to die out to the south, and to the north was probably terminated against an interpreted E-W growth fault. Therefore it was decided to follow-up WS007 with a hole through the same sequence, 200m down-dip.

The hole was drilled with a Longyear 44 rig which was flown in by helicopter from the old West Lyell workshop area on the Mount Lyell Mine Lease. The drillers walked in and out each day from the Lake Margaret Road. The hole was commenced on 1/6/1994 and finished on 19/8/1994. It was drilled in HQ to 92.5m and to 652.1 in NQ. Thirty-eight half core samples were assayed for Cu, Pb, Zn, Ag and Au.

3.4 MOXON SADDLE

Previous exploration in the Moxon Saddle area was reviewed by Graduate Geologist, David Boyd. In particular, David looked at a chargeability anomaly along the Henty Fault that was detected in an IP survey by BHP. Soil sampling was conducted in a restricted area over the anomaly. The Moxon Saddle area was remapped at 1:2500 scale and drillhole HFZ 1, which was drilled beneath an old pit in pyrite-chalcopyrite mineralization, was reassayed for gold.

3.5 BEATRICE

The Beatrice area was also reviewed by David Boyd. His work in this area included 1:5000 mapping, relogging drillholes MS1 to MS5, a compilation of the past exploration and some stable isotiope analyses.

4. RESULTS AND DISCUSSION

4.1 Garfield

Garfield Geology

The Garfield prospect occurs in an andesite unit within the Yolande River sequence. It is a hornblende-phyric andesite texturally and compositionally similar to the Crown Hill and Anthony Road andesites. The andesite is conformable with the stratigraphy and may be either a lava or a sill. Its sharp contacts with the enclosing rocks would favour an intrusive origin. The southern end of the andesite is offset to the west by a SW-NE trending fault.

The andesite sits within a package of rhyolitic volcanics. The rhyolites are all pervasively sericitised and strongly foliated, making it difficut to recognise the volcanic facies. It appears to be a lava dominated sequence. The most abundant rock type contains about 10% quartz phenocrysts up to 4mm uniformly distributed through a fine grained sericitic groundmass. In places, it contains irregular domains of stronger sericitic alteration that give the rock a vague clastic appearance. The uniform fine grained groundmass and the phenocryst distribution suggests that this is a lava. The apparent clastic texture is probably a result of hetrogeneous alteration of an autobreccia or hyaloclasite. However, there are parts of the rhyolite sequence that are clearly volcanic sandstones, grading into siltstones.

In the sequence above the andesite there is a massive lava with sparse feldspar phenocrysts. Chemically and texturally it is similar to the CVC. It is intruded by a number of andesite dykes that are quite distinct from the main andesite unit. They are characterised by a high content of feldspar and chloritised ferro-mag phenocrysts. The top of the Yolande River Sequence is dominated by volcaniclastics rather than coherent facies, with mappable sandstone-siltstone units, crystal rich

volcaniclastics, and both inrusive and extrusive quartz-feldspar-biotite phyric rhyolites. The contact between the YRS and the Tyndall Group locally appears to be conformable.

The mineralization at Garfield is largely confined to the main andesite unit. The style of mineralization is very similar to Prince Lyell, occurring as a stockwork of fine pyrite-chalcopyrite-calcite veins along with disseminated pyrite and chalcopyrite. Pervasive chlorite-sericite alteration is associated with the mineralization. Chlorite is generally dominant over sericite in the best mineralized zones. Parts of the mineralization are associated with an earlier magnetite-apatite event (eg., in GAR001). Most of the magnetite-apatite occurs in veins or as an alteration around fractures, but some is also disseminated. The magnetite is commonly partly retrogressed to hematite. The mineralized zone is cut by late veins of calcite and purple fluorite. Disseminated sulphides do not extend more than 20 or 30m into the rhyolites enclosing the andesite.

Drillhole GAR003 was located 200m north of GAR001 and was designed to test the continuation to the north of the IP chargeability anomaly associated with the stockwork and disseminated Cu-Au mineralization intersected in holes GAR001 and 002. It intersected disseminations and veinlets of pyrite and chalcopyrite from 77m to 184m. Sulphides were most abundant in the same andesite unit that contained most of the mineralisation in the first two holes. Overall the pyrite content was lower than in the first two holes, but there is a higher chalcopyrite to pyrite ratio. The mineralized interval averaged 0.24% Cu and 0.078ppm Au. Within this, there was a 21m zone from 142 to 163m averaging 0.89% Cu and 0.29% Au. Copper and gold have a very consistent Cu(%):Au(ppm) ratio of 3:1. At the surface above this intersection, the copper values in soils were around 8ppm. The first three drillholes consistently

returned Cu values an order of magnitude greater than soil and rock-chip results.

A re-examination of the IP data in light of this drilling intersection indicates that mineralisation could continue for at least another 300m to the north. Although it is likely to be low grade, it shows that the system is larger than was indicated from the original mapping.

Drillhole GAR004 was designed to test the magnetic anomaly associated with the andesite south of the Garfield Fault. It intersected a sequence of interbedded rhyolitic volcaniclastics and andesite lavas. The magnetic anomaly that this hole was designed to test was due to disseminated magnetite in the andesite. Minor disseminated pyrite occurred in the volcaniclastic unit. No significant mineralisation was intersected.

If it was possible to recognise the original seafloor position at the time the Cu-Au mineralisation was forming, it would be a prime VMS target horizon. Although Prince Lyell - Garfield style mineralization may involve a component of magmatic hydrothermal fluid, they are still seawater-dominated hydrothermal systems that were presumably depositing exhalative mineralization where the fluids discharged onto the seafloor.

Drillhole GAR005 was designed to test this idea. This hole intersected the base of the Tyndall Group adjacent to the projected position of the Garfield Fault. Although it was not possible to trace the Garfield Fault across the valley to the Tyndall Group contact, there are marked changes in the stratigraphy across the projected position of the fault. A thick unit of feldspar-phyric dacitic lavas on the northern side of the fault is not present to the south. The package of

sediments along the Garfield River appears to be significantly thicker on the northern side of the fault. A distinctive package of volcaniclastics, some with exceptionally coarse quartz phenocrysts, is present only on the southern side of the fault. The base of the Tyndall group was considered a probable exhalite horizon because it is mineralized in a number of other localities, these being; (i) the Henty - Howards Anomaly - Comstock horizon, (ii) massive pyrite clasts in the basal mass flow unit on the Cradle Link Road, (iii) a possible carbonate exhalite overlying a sphalerite-galena stockwork at Mount Jacob, (iv) the Beatrice prospect which is overlain by a quartz-phyric lava, probably a correlate of the Tyndall Group.

The target area was remapped remapped in detail and the soil sampling was infilled to 25m spacing. The target horizon at the contact between the Yolande River Sequence and the Tyndall Group is not well exposed, in most places being covered by an Owen conglomerate scree. In the few places where it is exposed, the base of the Tyndall Group has sericite-pyrite-hematite alteration. A cherty silica-pyrite rock occurs at the contact in the Garfield River near line 2600N. Acidic Fe-hydroxide seepages occur in the scree below the inferred position of the contact.

At the very least it was hoped that a distal exhalite or manganese enrichment or an asymmetry to the alteration at the seafloor position could be recognised in GAR005. as being the exhalite horizon. Unfortunately, the contact between the Yolande River Sequence and the Tyndall Group was faulted. Weak sericite-pyrite alteration extended from the Yolande River Sequence into the base of the Tyndall Group, but it was not possible to positively confirm the model. GAR005 was ended at 235m without intersecting any mineralisation.

Following the good result from GAR003, another hole was planned

(GAR006) 200m north of GAR003 where there is still a significant IP chargeability anomaly. The andesite unit that hosted the mineralisation in holes 001, 002 and 003 was not intersected in hole 006, although it has been mapped further north. The andesite had not been mapped on the surface above GAR006, but this was thought to be a result of lack of outcrop. It is now recognised that the andesite has pinched out around line 2500N, before reappearing at the same level in the stratigraphy further north. In the position where mineralisation was expected in GAR006, there was a weak stockwork of pyrite veinlets with traces of sphalerite and galena, within strongly sericitised rhyolites. This confirms the base metal zonation that was suggested by the soil geochemistry. Hole 006 limits the size of the mineralised zone to about 400m x 100m, although other lenses could still occur further north.

4.2 PENGHANA

Regional Geology

The Penghana Grid is located on the western end of the Lake Margaret Road, approximately 4 km north of Queenstown. The geology of the grid is dominated by the Yolande River sequence, which consists of interbedded tuffaceous massflow deposits, turbiditic sandstones, shard-rich tuffaceous mudstones, micaceous siltstones and black graphitic shales (Corbett, 1992).

Several andesitic bodies have been mapped near the western end of the grid and these have a distinct magnetic signature similar to those at the Garfield Prospect. Two barite prospects are located about 500m west of the main andesite body and are hosted within Yolande River Sequence sediments. The relationship of these to the magnetic andesite bodies is unknown but is considered to be a favourable exploration indicator.

The Yolande River Sequence is intruded by several large tabular felsic (quartz-feldspar±biotite, pyroxene, hornblende) porphyry bodies, one of which lies near the eastern edge of the Penghana

Grid. These bodies may be associated with extrusive lavas and pyroclastic rocks (Corbett, 1979; Calver et al, 1987).

Grid Geology

Andesite (Ca)

1:1000 geological mapping of the Penghana Grid has shown that the main andesite body (commonly called the "Horse paddock" Andesite) has a strike length of about 1.6 km and is locally offset by two faults trending approximately NW and NE-N (see Plans 8,9 and 10). The andesite varies from hornblende-feldspar phyric porphyritic andesite to equigranular andesite. Other textural varieties include aphyric andesite and amygdaloidal andesite with pink carbonate vesicles. In areas of poor outcrop the andesite can be detected by weathering to a yellow limonitic soil. Several smaller andesite bodies have been mapped within the grid.

In general, the andesite is only weakly altered, usually weak chlorite alteration and minor quartz-chlorite veining may be present. No contacts with the host Yolande River Sequence were observed although the massive unbrecciated nature of the andesite bodies area more indicative of intrusions than of an extrusive lava flow. A small 3cm wide intrusive andesite(?) dyke with perlitic cracks was observed at 379385E,5344775N.

Yolande River Sequence (CYS)

During the mapping the Yolande River Sequence was subdivided into two main lithotypes. Lithotype Cys consists of interbedded ashy fine to medium grained volcaniclastic sandstones and siltstone and is commonly interbedded with Lithotype Cysm, medium to coarse grained feldspar-rare quartz phyric volcaniclastic sandstone. The coarser sandstone lithotype is commonly chloritic and can weather to a pale yellow limonite soil which superficially resembles an andesite derived soil. The interbedded relationship between Cys and Cysm is well exposed between 650E and 700E on line 5343100N. Both the Cys and Cysm units are massflow derived deposits with the Cysm units forming coarse basal zones which grade upwards into the finer Cys units. Lack of

along strike continuity has prevented showing the distribution of the two lithotypes on the interpretive geology plan (Plan 10) and both units have been designated (Cys). Minor feldspar phyric lavas(?) have been mapped within the Yolande River Sequence in the south of the grid.

Central Volcanics Complex?

A small area of feldspar phyric lava was mapped on the eastern end of line 5345000mN, and appears to be interbedded with possible Yolande River Sequence siltstones.

Soil Geochemistry

213 soil samples were collected from the Penghana grid. Only the old 200m spaced lines were sampled. The samples were analysed for Cu, Pb, Zn and Au by Analabs. The results area tabulated in Appendix 3.

Maximum values reported are:-

Cu	214 ppm
Pb	221 ppm
Zn	839 ppm
Au	0.037 ppm

Higher base metal abundances occur predominantly within the unit of andesite that crops out along the western margin of the grid.

Ground Magnetics Survey

A ground magnetic survey was conducted at the Penghana grid in April 1994. The survey was performed along a series of east-west lines spaced 100m apart with measurements made at 5m intervals. The survey extended from line 5343000mN to 5345000mN and ultised a pair of Geometrics G856 proton precession magnetometers. One of these was established as a base station recording the diurnal variation of the Earth's magnetic field at 10 second intervals.

The results of the survey are presented on the accompanying floppy disk and as stacked profiles (Plan 11) and contours of total magnetic intensity (Plan 12). In general there is a strong magnetic response in the western part of the grid that corresponds approximately to the area mapped as andesite. There is a major dislocation of the magnetic signature at 4100N which corresponds to a faulted offset to the andesite body. The northern anomaly has a step like plateau on its eastern flank and may suggest that this andesite body has variable magnetite alteration. A second dislocation to the main magnetic anomaly at 3500mN is largely unexplained.

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4.3 WEST SEDGWICK

Drill hole WS008 was collared in a pyritic felsic epiclastic unit and passed into pyritic basaltic pillow lavas. These were followed by andesitic volcaniclasics, dacite lavas and andesite lavas. The stratigraphy and the thickness of units was quite different to WS007, less than 200m above. Numerous faults were encountered, and this area is clearly quite complex structurally and stratigraphically. The lower part of the hole contained numerous pyrite veins but nowhere near the abundance of sulphide intersected in

WS007.

4.4 MOXON SADDLE

David Boyd's report on exploration at Moxon Saddle is presented as Appendix 1. The following is taken from his summary:

Detailed mapping of the Moxon Saddle grid has revealed a simple geology comprising north-trending fault-bounded blocks of, from east to west, feldspar-phyric dacite lava, quartz- and feldspar-phyric rhyolite lava, altered schistose silt and sandstone and feldspar-phyric volcanics. Separating the altered schistose silt and sandstone from the quartz- and feldspar-phyric rhyolite lava is the Henty Fault, over which are three large chargeability anomalies discovered by BHP Utah International in 1990 on the northern three lines of the grid. Associated with these chargeability anomalies are small Pb and Zn soil geochemical anomalies and, in the altered schistose silt and sandstone to the south is an old copper working explored in the early seventies and eighties by Goldfields Exploration. The best intersection from drillholes into the deposit yielded 14.4 m @ 0.43% Cu and 0.027 ppm Au.

A diamond hole drilled at -55° dip and roughly perpendicular to the strike of the Henty Fault should intersect the zone causing the IP anomaly at 290 m down the hole. Given the environmental sensitivity of the area, much of which is covered in sub-alpine King Billy Pine forest, the hole will need to be helicopter supported. No major site clearing will be required as a window of scrub within the forest is available.

4.5 BEATRICE

David Boyd's report on exploration at Beatrice is presented in Appendix 2 and is summarised as follows:

Detailed mapping this year at the Beatrice Pb-Zn Prospect, 10 km northeast of Queenstown in Western Tasmania has revealed a relatively complex geology comprising a seafloor sequence of black shale, coarse and ashy volcaniclastic rocks and feldspar-phyric lavas overlain conformably by flows of quartz-feldspar rhyolite porphyry lava. Trending north and dipping steeply to the west, the black shale and volcaniclastic units, which show some degree of reworking, represent the mineralised horizon in the area. Extensive exploration by Mt. Lyell in the seventies included Induced Polarisation and soil geochemistry surveys, which identified the black shale and the volcaniclastic units as the most prospective horizon. Four diamond drillholes thoroughly tested the exposed strike-length of these units as mapped in the seventies yielding promising results, the best intersection being 2 m @ 0.14% Cu, 2.65% Pb, 5.05% Zn and 22 ppm Ag. However, the rest of the drilling failed to identify any significant mineral deposit and the Prospect was abandoned in 1980.

This year, a review of the exploration conducted during the seventies, and re-mapping of the Beatrice grid identified a new, untested target. Black shale and volcaniclastic units extend about 1 km further south from the previously mapped limit of exposure and a 300 m diamond drillhole, sited on an existing road, would intersect shale at 150 m, and continue through the volcaniclastic unit. Subsequent drilling of an inferred continuation of the mineralised horizon, under glacial scree, could then be evaluated.

5. PROPOSED WORK

5.1 GARFIELD

The levels of copper recorded in the drill holes have consistently been an order of magnitude higher than the rock chip or soil values sampled at surface above the hole. This may be due to leaching of copper in the weathering profile or it may represent a primary copper distribution, analogous to Western Tharsis, where ore grade copper was not intersected until 300m below surface. To test this, a series of short diamond drill holes are proposed. The holes will be drilled with Nick Poltock's portable drilling equipment to minimise the environmental impact. The holes will be drilled into the top of the chargeability anomalies to a depth of about 10m below the base of oxidation. If it is apparent that there is a vertical zonation in the primary copper distribution, it would make a strong argument for drilling a deep hole beneath GAR001 and 002. A hole to intersect the mineralized zone between 350 to 500m downhole is envisaged.

5.2 PENGHANA

Penghana has a similar magnetic signature to Garfield. It has Pb and Zn values above a normal background, similar to the base metal zonation at Garfield. The barite veins in the overlying sequence at Madam Howards are indicative of an active hydrothermal system in this area. These features warrant drill testing of this prospect. A 300m hole should be drilled to test the main part of the magnetic anomaly.

5.3 Other Areas

Drill targets at Moxon Saddle and Beartice are outlined in the reports by David Boyd. The proposed drill hole at Moxon Saddle would test the IP anomaly along the Henty Fault and may also reach the base of the Tyndall Group east of the Henty Fault.

This would be a helicopter supported hole of about 400m. The proposed Beatrice drill hole would test for an extension of the Itat Creek base metal zone southwards towards the West Sedgwick Fault. This hole could be drilled from the old Sedgwick track.