

3.3.5 Henty-Yolande Area

This area was flown with Dighem airborne E.M. during 1979-80 and only low-order anomalies were located. A regional stream sediment survey of the area to assist evaluation of the E.M. anomalies and to explore the remainder of the area will be conducted.

- (a) Geochemical assay charges for 400 stream sediment samples and 50 rock chip samples \$1,125
- (b) Helicopter charter to assist access to western section of area \$5,000
- TOTAL** \$6,125

3.4 ALTERATION STUDY - MT. READ VOLCANICS

This field and laboratory study of the application of alteration patterns as an indicator of mineralisation in the Mt. Read Volcanics is being conducted by Dr. C. Eastoe in association with the University of Tasmania. The objectives of the study are to:

- (i) Recognise and identify the characteristic hydrothermal alteration styles associated with West Coast volcanogenic deposits - in particular to identify characteristic hangingwall and footwall styles of alteration so that favourable host horizons can be recognised and explored.
- (ii) Prepare a map of the Mt. Read Volcanics in the Mount Lyell and E.Z. licence areas, showing alteration types and their trends in the vicinity of known deposits - such a map will greatly assist the recognition of areas and key horizons associated with favourable hydrothermal alteration patterns.

To date the study has involved extensive detailed mapping and sampling traverses both around the Rosebery and Hercules deposits, and at regular intervals across the volcanic belt. Within E.L. 9/66, areas investigated include the Selina-Dora belt, Howard's Road-White Spur area, Howard's Anomaly-Bradshaw's Road, Mt. Sedgwick-Beatrice grid, Mt. Huxley, King River gorge - Jukes Pty. Mine, and the Jukes-Darwin area.

Preliminary results from orientation studies around the Hercules and Rosebery deposits suggest that footwall alteration consists of intense sericitic alteration associated with a sheared texture, while hanging wall alteration is limited to the calcic alteration of plagioclase and the abundance of glassy textures. In addition, laboratory studies of samples from the Hercules deposit suggest that increasing Mn and decreasing Mg/Mg+Fe ratios in chlorites may be useful indicators in footwall alteration approaching the Hercules deposit. Using the above alteration model in the field, Dr. Eastoe has located a favourable sedimentary lens with contrasting footwall and hangingwall alteration styles extending from Mt. Huxley to Whip Spur, south of Queenstown. Minor pyrite and barite occurrences are present along this contact.

The field work for this programme has been completed during the 1980-81 year and a report covering the field results and an alteration map are in preparation. This programme was funded fully by Getty Oil up to November, 1980, and since then has been funded equally between the Mount Lyell-G.O.D.L.-C.G.F.A. and E.Z.-G.O.D.L. joint ventures. The full cost of the programme since November, 1980, has been \$5,777.