

unit which has been offset along these faults. The faults may also have been responsible for the mineralisation which has produced the geochemical anomaly zone on Mt. Selina and soil anomalies on the western ends of lines 136N and 132N. In this context it is significant to note that in DDH's LS4, 5 and 6 the Ag content of the pyrite increases to the north, approaching one of these faults.

#### 10. Mineralisation

Disseminated pyrite in quartz-sericite-chlorite schists was found to continue north from line 184N, 450 mE, where it was tested by DDH LS8, to line 248N, 070 mW. Outcrops were also found at 200N, 380 mE and 240N, 090 mE. This makes the known strike length of the Eastern Pyrite Zone at least 3.3 km. If the Western Pyrite Zone and the pyrite on the Rolleston Grid are parts of the one mineralised unit then the total strike length is more than 6 km.

Eastoe (1981) concludes that the Selina pyrite-magnetite mineralisation is related to granitic intrusives deep in the volcanic pile, and that the same event was the heat source for hydrothermal solutions which precipitated the Rosebery-Hercules and similar deposits near the seafloor-volcanics interface. The quartz-sericite-chlorite schists, in this model, would have been permeable channelways for the hydrothermal solutions, hence the disseminated nature of the pyrite. In the more impermeable lavas, however, the mineralisation tends to occur along fractures. Several outcrops of granitic intrusives have been found east of both the Western and Eastern Pyrite Zones.

Within the Mt. Selina Geochemical Anomaly Zone the mineralisation consists of disseminated grains of magnetite and stringers of hematite, which may be altered from magnetite. The only sulphide found so far in the zone is rare disseminated grains of pyrite. To date no source for the Pb-Zn-Ag anomalies has been found but microprobe scanning of rocks containing high Pb-Zn-Ag values is planned.

#### 2.2.4. Geochemistry

##### 1. Introduction

During 1981-82 532 soil samples were taken from the northern grid extension and 245 soil samples were taken from the Mt. Selina Geochemical Anomaly Zone. 65 rock chip samples, including 53 from the Mt. Selina Geochemical Anomaly Zone were submitted for assay. 17 stream sediment samples, collected in 1980-81 were also assayed.

Further Pb-Zn-Ag soil and rock chip anomalies were detected in the Mt. Selina area (Figure 16) with rock chip assays ranging up to 340 ppm Cu, 1600 ppm Pb, 6700 ppm Zn and 11 ppm Ag. Only minor soil anomalies were detected elsewhere.