

## Geophysical Surveys

Magnetometer and VLF-EM surveys were carried out along 13.14 kilometres of line. These surveys were conducted on lines which were spaced at a nominal distance of 200 metres. Three additional lines were surveyed along old roads designated Road 1, 2 and 3.

The VLF-EM survey employed the transmitting station at Lualualei, Hawaii along the nominally east-west lines. Readings were taken facing Az. along the lines at 20 metre intervals. Cross-overs are therefore in the sense of positive to negative as one traverses east along the lines. Positive values are plotted on the north side of the profile plot. The Seattle, Washington transmitter was used for 2 1/2 of the road lines as the Hawaii transmitter was off the air.

Magnetometer readings were taken at 10 metre stations and corrections for diurnal changes were made by use of a base station recording magnetometer.

## Equipment Used

TOSHIBA  
The VLF-EM survey employed a Geonics EM-16 which used the Lualualei (NPM, 23.4 kHz) and the Seattle (NLK 24.8 kHz) transmitting stations. VLF readings were entered onto disk in a Zenith laptop portable computer. The stored data was transferred to a Sun computer system for final plotting and processing.

TOSHIBA  
The magnetometer survey was conducted using two Geometrics G-856 portable proton magnetometers. One was used in the field mode while the other was used in a base station mode. The internal clocks were synchronized before commencement of the survey and subsequent daily readings were dumped out to disk in a Zenith laptop portable computer. The data from the two magnetometers was merged and corrected for diurnal drift from an established base station value. The corrected results were stored on disk for eventual transfer to a Sun computer system for final plotting and processing.

## Survey Results

The VLF-EM survey results were plotted as stacked In-phase, Quadrature and Fraser Filter profiles at a scale of 1:5000. The Fraser Filter data was calculated as per the method put forth by D.C. Fraser (1969, Contouring of VLF-EM Data: Geophysics, v.34, p. 958-967). See map in the folder at the back of report.

The magnetometer survey results were plotted as plan maps of stacked profiles and contoured data at a scale of 1:5000. See maps in folder at the back of report.

## Discussion of Results

### VLF-EM Survey

Numerous north northeast trending conductors were detected by the survey.

### Magnetic Survey

The majority of the main grid was extremely flat magnetically. A small sized anomaly was located as follows on the southwest corner of the grid.

L 5400 N      3100-3650 E

L 5200 N      3200-3900 E

L 5100 N      3250-3900 E

Nothing of significance was detected on the three road lines.