GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

57° 15' 00"
105° 45' 00"
105° 30' 00"
57° 07' 30"

VERTICAL GRADIENT

DESCRIPTIVE NOTES

This map is based on in-flight digitally recorded high sensitivity aeromagnetic data obtained with two self-orienting Rubidium vapour magnetometers installed in twin tail booms inboard a Beechcraft B80 aircraft. The magnetometer heads are separated by a distance of 2.08 metres with each measuring the total magnetic field to a resolution of 0.02 gammas.

Flight altitude was 500 feet above ground at 1000 feet average flight line spacing and double control lines were flown at an average spacing of 4 miles.

The data was edited, compiled, levelled and gradient values for contouring interpolated on a square grid (0.1" grid spacing at the published map scale) by automatic computer processes.

The vertical gradient data was filtered with a digital operator to remove noise spikes and instrument hash. The vertical gradient data from the tie lines was not used to compile the map, instead each line was individually adjusted as required.

The final grid was contoured and plotted using the automatic contouring program and digital plotter facilities of the Department of Energy, Mines and Resources, Computer Science Centre.

Airborne survey was carried out in 1977 and digital compilation by Resource Geophysics and Geochemistry Division, Geological Survey of Canada. The Queenair aircraft of the Geological Survey of Canada was flown under contract to Kenting Earth Sciences Ltd.

The photo and map base for this map was compiled by Surveys and Mapping Branch, Department of Energy, Mines and Resources.

EQUIPOTENTIAL LINES (vertical gradient field)

.5 gammas/meter.....

.1 gammas/meter.....

.025 gammas/meter.....

Magnetic depression.....

Flight altitude: 500 feet above ground level

Contour interval: .1 gammas/meter

Intermediate contour interval between +/-1.0 gammas/meter
:0.025 gammas/meter

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