

DESCRIPTIVE NOTES FOR VERTICAL GRADIENT MAPS - LYNN LAKE

This map has been compiled from digitally-recorded high-sensitivity aeromagnetic data obtained by two self-orienting cesium vapour magnetometers installed in twin tail booms mounted on the GSC Beechcraft B80 aircraft. The magnetometers are vertically separated by a distance of 2.05 metres with each measuring the total magnetic field to a resolution of 0.005 gammas.

Flight altitude was 150 m above ground at 300 m average flight line spacing. Double control lines were flown at an average spacing of 7.5 kilometres.

The vertical gradient values, which approximate closely to the first vertical derivative of the earth's total field, are obtained by dividing the difference between the total field readings of the two magnetometers by their vertical separation.

The vertical gradient data was filtered with a digital operator to remove instrument noise. The vertical gradient data from the control lines was not used in the compilation of the map. The data was edited, compiled, levelled and gradient values for contouring interpolated onto a square grid (0.25 cm grid spacing at 1:25,000 map scale) by automatic computer processes. The final data grid was then contoured and plotted at 1:25,000 scale. The survey data used to compile this map is available in digital form from the Geological Survey of Canada on a cost recovery basis.

Airborne survey and digital compilation was carried out by Resource Geophysics and Geochemistry Division, Geological Survey of Canada. The survey operations which took place in August 1982, using Beechcraft Queenair 65-B80 aircraft C-FWZG, were funded by the Geological Survey of Canada and the Manitoba Department of Energy and Mines.

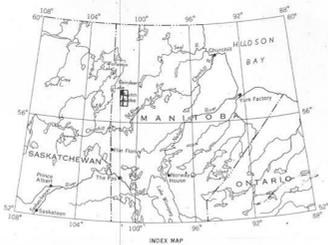
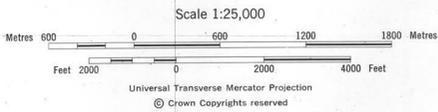
MAGNETIC CONTOUR LINES

- +5 gamma/metre . . . . .
  - +1 gamma/metre . . . . .
  - +0.25 gamma/metre . . . . .
  - 5 gamma/metre . . . . .
  - 1 gamma/metre . . . . .
  - 0.25 gamma/metre . . . . .
- (1 gamma = 1 nanotesla in SI units)
- Flight lines . . . . .
- Flight altitude: 150 m above ground level

GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES  
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

64 C/14h  
MANITOBA  
VERTICAL GRADIENT



OPEN FILE  
DOSSIER PUBLIC  
889  
December 1982  
GEOLOGICAL SURVEY  
COMMISSION GÉOLOGIQUE  
OTTAWA

Canada

