

DESCRIPTIVE NOTES FOR VERTICAL GRADIENT MAPS

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 form 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 automated computer processes. The final data grid was contoured and plotted at 1:25,000 scale using the automatic contouring program and digital plotter facilities of Dataplotting Services Ltd. The survey data used to compile this map is available in digital form from the Geological Survey of Canada on a cost recovery basis.

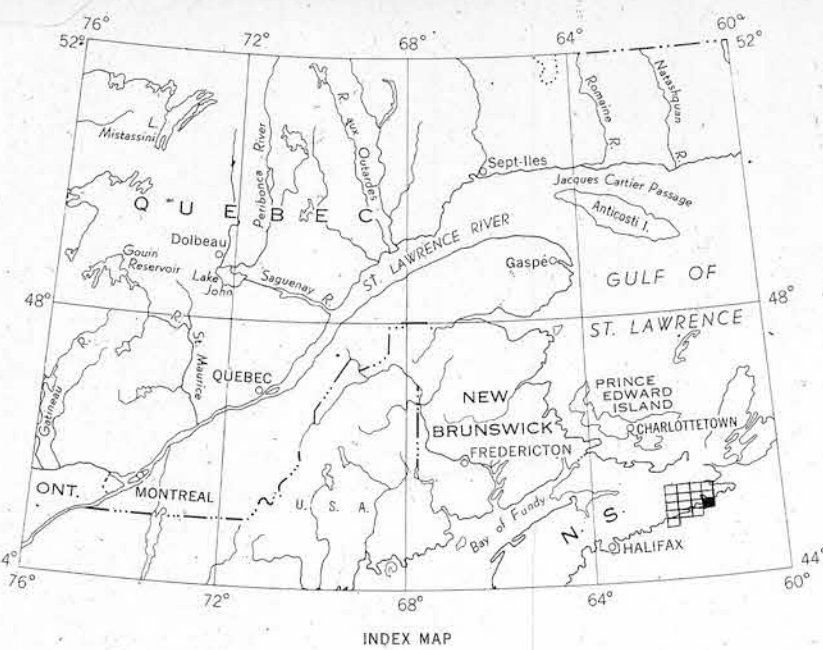
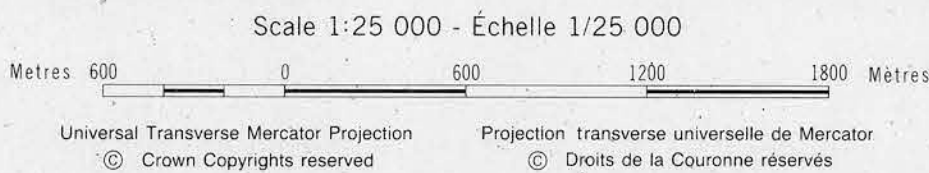
Airborne survey and digital compilation was carried out by Resource Geophysics and Geochemistry Division, Geological Survey of Canada. The survey operations which took place between October 1982 and July 1983 using Beechcraft Queenair 65-B80 aircraft C-FWZG, were funded by the Canada-Nova Scotia Co-operative Mineral Program 1981-1984.

MAGNETIC CONTOUR LINES

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



11 F/4 a,b  
NOVA SCOTIA  
VERTICAL GRADIENT



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GEOLOGICAL SURVEY OF CANADA  
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1984