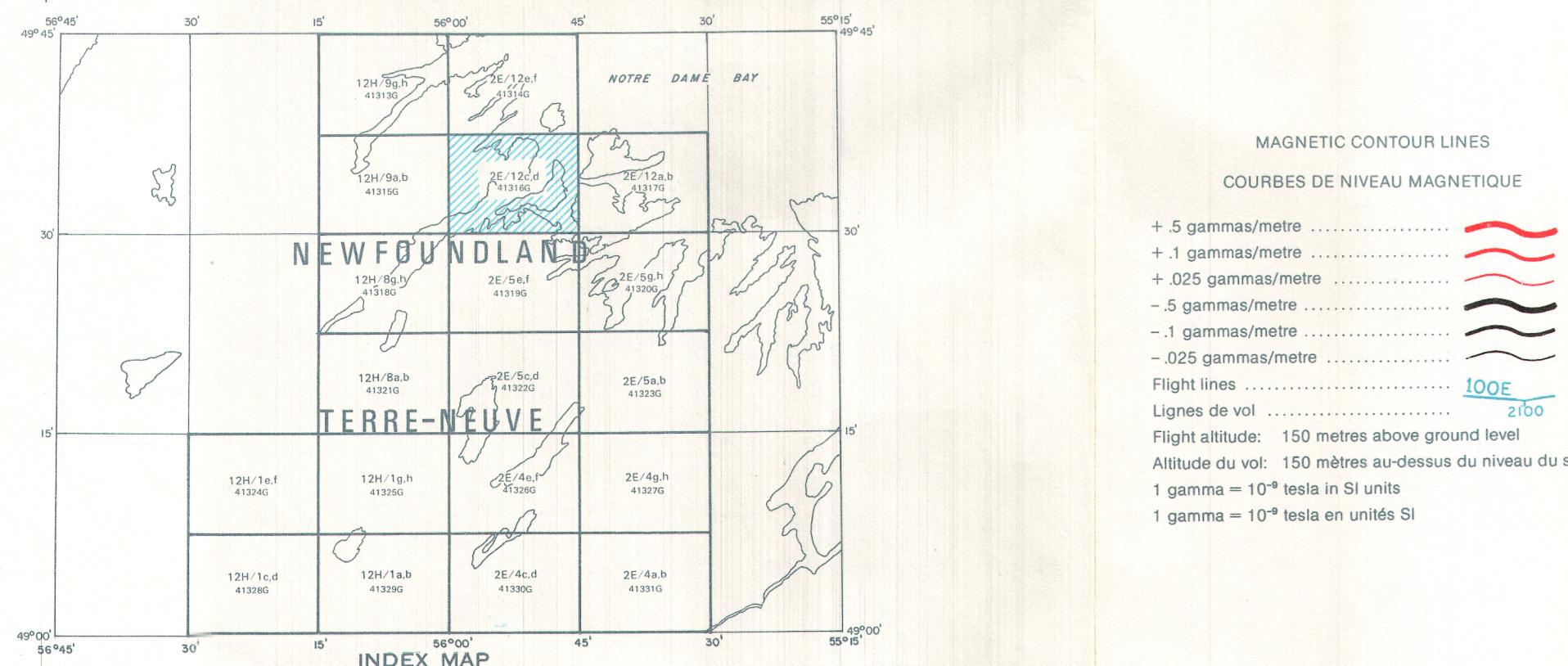


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AEROMAGNETIC VERTICAL GRADIENT MAP CARTE AÉROMAGNÉTIQUE DU GRADIENT VERTICAL

MAP 41316G CARTE

2E/12c,d
NEWFOUNDLAND
TERRE-NEUVE

SCALE 1:25 000-ÉCHELLE 1/25 000

Mètres 1000 500 0 1000 mètres

Funds for this survey were provided by the Geological Survey of Canada, under the Canada-Newfoundland Mineral Development Agreement, 1984-1989.

Cette étude a été subventionnée par la Commission géologique du Canada, en vertu de l'accord sur l'exploitation minérale entre le Canada et le Terre-Neuve, 1984-1989.

This map was compiled from data recorded during an aeromagnetic gradient survey carried out by Aerodat Limited using a rotary wing aircraft. Two oriented cesium vapour magnetometers were mounted in a bird towed 30 m below the helicopter. The magnetometers were vertically separated by a distance of 3 m with each measuring the total magnetic field. The survey was conducted in two flights, one from November 1988 to August 1989. The flight altitude of the bird was 150 m above ground. The survey lines were flown in an east-west direction at 300 m average flight line spacing. The survey lines were spaced at 1 km along the north-south direction. The lines of control availed an spacing between 5 km. The recovery of the trajectories of vol

teer lines was done using a Systech radio positioning system supplemented by a vertically mounted video camera.

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 reading at the two ends of a horizontal line by the distance between the two ends. The values of the gradient vertical are then filtered on a digital operator to remove instrument noise. The vertical gradient data from the control lines were not used in the compilation of the map. The data were edited, collated, and reduced to a digital form using a VAX 11/780 computer and a VME 3000 computer operating at the published map scale by automatic computer processes of Aerodat Limited.

The base for this map was reproduced from a 1:50 000 topographic map published by the Department of Natural Resources Canada.

Copies of this map may be obtained from the Department of Mines and Energy, St. John's, Newfoundland, or from the Geological Survey of Canada, Ottawa. The survey data used to compile this map are available in digital form from the Geological Survey of Canada at the costs of retrieval and copying.