

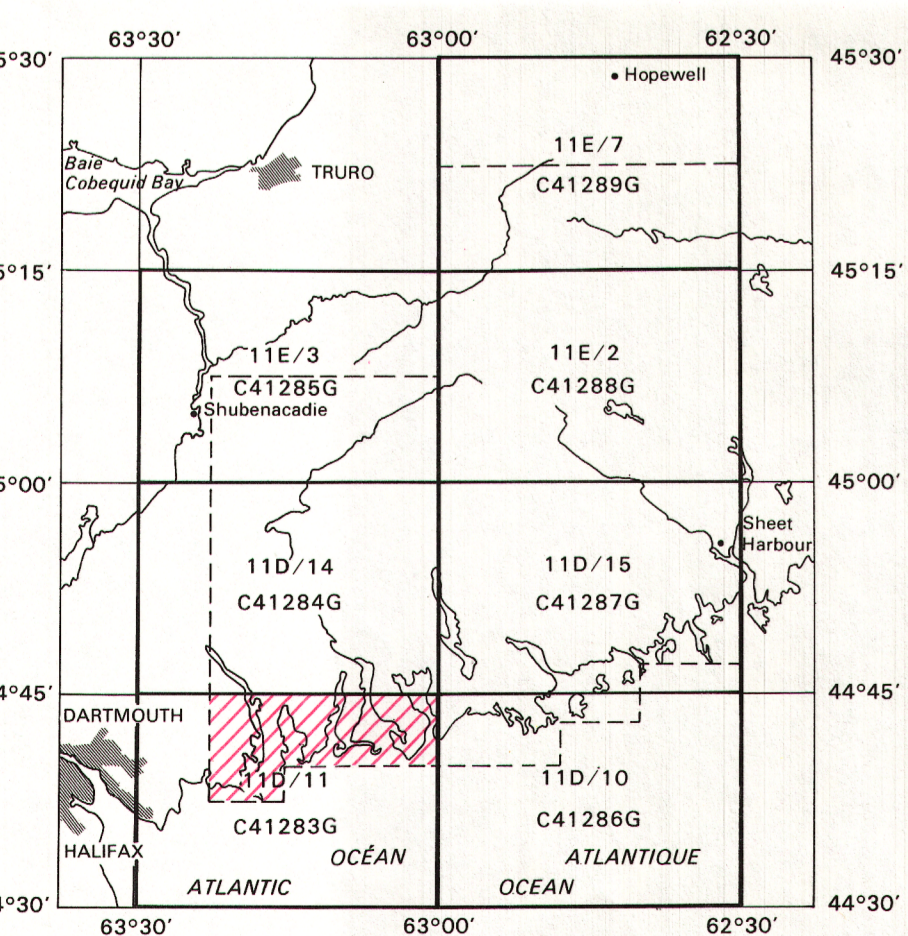
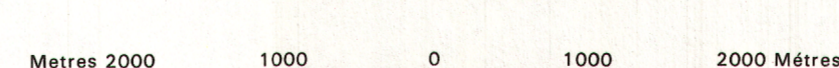
GAMMAS/METRE  
(1 gamma = 1 nanotesla in SI units)  
(1 gamma = 1 nanotesla en unités SI)

A T L A N T I C O C E A N

AEROMAGNETIC VERTICAL GRADIENT MAP  
CARTE AÉROMAGNÉTIQUE DU GRADIENT VERTICAL

MAP C41283G CARTE  
WEST CHEZZETCOOK  
NOVA SCOTIA  
NOUVELLE-ÉCOSSE

SCALE 1:50 000 - ÉCHELLE 1/50 000



This map was compiled using the following computer automated techniques: Aeromagnetic digital data values were interpolated from the flight line data at the nodes of the regular grid covering the survey area. The gridded data (50 m) was reinterpolated to a cell size of 0.4233 cm at the coloured map scale. A colour code was assigned to each cell according to the amplitude of the aeromagnetic value within the cell using the colour scale shown in the legend. The data matrix was output on an IRIS colour jet plotter to produce a colour field map identical to the one above. To permit colour printing, colour separations were made with the plotter to produce the red, yellow and blue components of the map on separate sheets.  
La présente carte a été réalisée au moyen de techniques automatisées informatiques. Les données numériques aéromagnétiques ont été interpolées à partir de données de lignes de vol, aux nœuds d'une grille régulière couvrant la zone de levé. Les données tracées sur la grille (50 m) ont été interpolées de nouveau pour correspondre aux carrés de 0.4233 cm de côté à l'échelle des cartes en couleurs. Un code de couleurs est attribué à chaque carré selon la valeur aéromagnétique de celui-ci, conformément à l'échelle des couleurs de la légende. La matrice de données a été placée sur un traceur à jet de couleurs IRIS afin de donner une carte en couleurs identique à celle qui figure ci-dessus. Pour faciliter l'impression des cartes en couleurs, une séparation des couleurs a été réalisée automatiquement avec le traceur, ce qui a permis d'obtenir les composants rouge, jaune et bleu de la carte sur les coupures distinctes.

This map was compiled from data recorded during an aeromagnetic gradiometer 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 to a resolution of 0.002 gammas. The survey operations were carried out from October 1988 to February 1989. The flight altitude of the bird was 150 m above ground. The survey lines were flown in a north-south direction at 300 m average flight line spacing. Control lines were flown at an average spacing of 10 kilometres. Flight path recovery was effected using a Syledis radio positioning system supplemented by a vertically mounted 35 m 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 of the two magnetometers by their vertical separation. The vertical gradient data were filtered with 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, compiled, levelled and gradient values for contouring interpolated onto a square grid (0.25 cm grid spacing at the published map scale) by automatic computer processes of Aerodat Limited. The base for this map was reproduced from a 1:50 000 topographical map published by the Department of Energy, Mines and Resources, Ottawa.  
Copies of this map may be obtained from the Department of Mines and Energy, Halifax, Nova Scotia, 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 cost of retrieval and copying.  
The profile data shown on the back of this map represent the VLF quadrature component of the vertical anomalous field generated by currents induced in near surface conductive material. The data was measured with a Herz Industries Totem 2A VLF receiver. The VLF receiving coils were installed in the magnetic gradiometer towed bird. The two primary electromagnetic fields recorded were the VLF transmissions from NAA Cutler, Maine, operating at 24.0 kHz and NSS Annapolis, Maryland, operating at 21.4 kHz. The VLF data have been filtered to produce a smoothed estimate of the horizontal derivative, thus centering the anomalies over conductors and removing any diurnal effect. For each profile, the datum utilized is the flight track of the survey aircraft.  
Ce type de présentation est utilisé pour permettre de comparer directement les données VLF aux données aéromagnétiques sur une table lumineuse.

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Des exemplaires de cette carte sont disponibles au ministère des Mines et de l'Énergie à Halifax, Nouvelle-Écosse, ou à la Commission géologique du Canada à Ottawa. Les données du levé utilisées au dressage de cette carte sont disponibles sous forme numérique à la Commission géologique du Canada au coût du recouvrement et de reproduction des données.  
Les profils au verso de cette carte représentent les composantes en quadrature de très basses fréquences (VLF) du champ vertical anormal généré par les courants induits aux matériaux conducteurs près de la surface du sol. Les données ont été mesurées à l'aide d'un récepteur Totem 2A VLF de la Herz Industries. Les serpents de réception VLF étaient installés à l'intérieur du bâti suspendu. Les deux champs électromagnétiques primaires utilisés pour le levé étaient les transmissions VLF de NAA Cutler au Maine, émettant sur une fréquence de 24.0 kHz, et les transmissions de NSS Annapolis au Maryland, émettant sur une fréquence de 21.4 kHz. Les données ont été filtrées, afin de fournir une évaluation régulière de la dérivée horizontale centralisant ainsi toutes les anomalies au-dessus des conducteurs et éliminant tout effet diurne. Pour chaque profil, la ligne de repère utilisée est la trajectoire de l'hélicoptère.  
Ce type de représentation est utilisé pour permettre de comparer directement les données VLF aux données aéromagnétiques sur une table lumineuse.