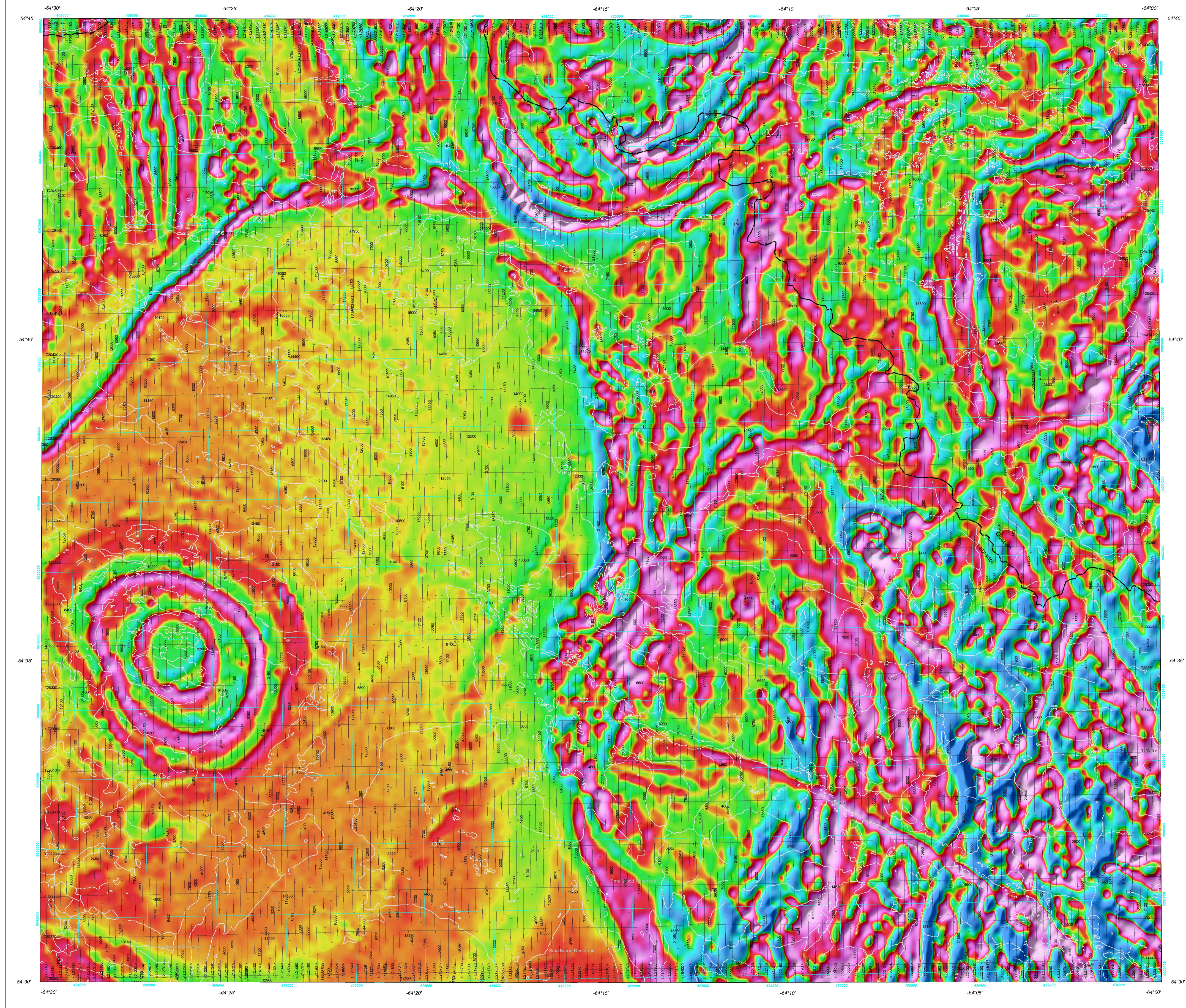


GEOPHYSICAL SERIES / SÉRIE DES CARTES GÉOPHYSIQUES

DÉRIVÉE PREMIÈRE VERTICALE DU CHAMP MAGNÉTIQUE



A quantitative gamma-ray spectrometric and aeromagnetic airborne geophysical survey was completed by Fugro Airborne Surveys east of Schefferville, over areas located in Newfoundland and Labrador and Québec. The survey was flown from May 24th to Aug 20th, 2009 using two Cessna 208B Caravan aircraft (C-GNCA and C-GFV) and one Cessna 404 Titan aircraft (C-FYAU).

The gamma-ray spectrometric data was collected using ten (C-GFV and C-FYAU) or fourteen (C-GNCA) 102 x 102 x 406 mm NaI (TI) crystals. The main detector array consisted of eight (C-GFV and C-FYAU) or twelve (C-GNCA) crystals (total volume 33.6 litres and 50.4 litres, respectively).

The potassium is measured directly from the 1460 keV gamma-ray photons emitted by K<sup>40</sup>, whereas uranium and thorium are measured indirectly from gamma-ray photons emitted by daughter products (Bi<sup>214</sup> for uranium and Th<sup>232</sup> for thorium). Although these daughters are far from their respective decay chains, they are assumed to be in equilibrium with their parents.

The magnetic field was sampled 10 times per second using a split-beam cesium vapour magnetometer (sensitivity = 0.005 nT) rigidly mounted to the aircraft. Differences in magnetic values at the intersections of control and traverse lines were computer-analysed to obtain a mutually leveled set of flight-line magnetic data.

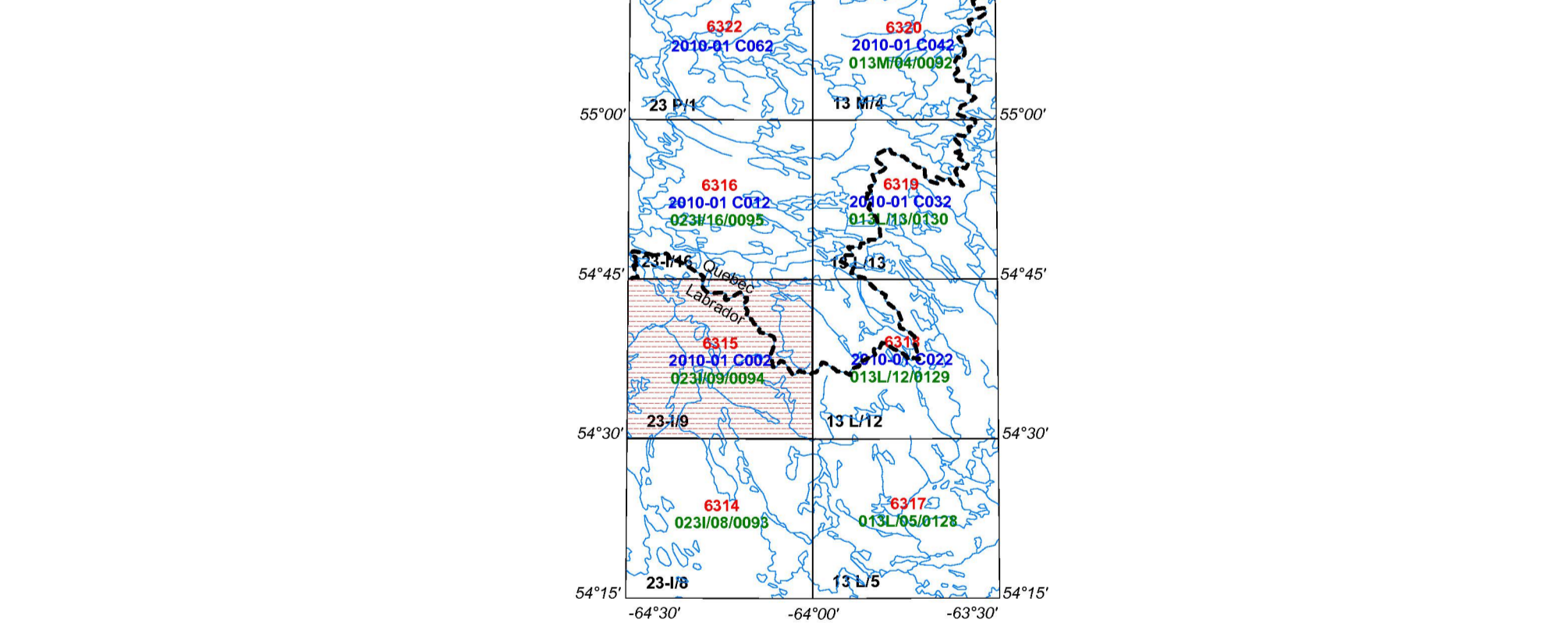
The first vertical derivative of the magnetic field is the rate of change of the magnetic field in the vertical direction. Computation of the first vertical derivative removes long-wavelength features of the magnetic field and significantly improves the resolution of closely spaced and superposed anomalies.

PLANIMETRIC SYMBOLS / SYMBOLES PLANIMÉTRIQUES table with icons for Roads, Railway, Power Line, Drainage, Flight path.

QC Open File Numbers in Red / Numéros de dossiers publics de la CGC en rouge

Newfoundland and Labrador Open File Numbers in Green / Numéros de dossiers publics de Terre-Neuve et Labrador en vert

Québec Open File Numbers in Blue / Numéros de dossiers publics du Québec en bleu



This airborne geophysical survey and the production of this map were funded by the Geomapping for Energy and Minerals (GEM) Program of the Earth Sciences Sector, Natural Resources Canada.

GSC OPEN FILE 6315 / DOSSIER PUBLIC 6315 DE LA CGC NEWFOUNDLAND AND LABRADOR DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY OPEN FILE 023109/0094

GEOPHYSICAL SERIES / SÉRIE DES CARTES GÉOPHYSIQUES NTS 23-I/9 / SNRC 23-I/9

LAKE RAMUSIO GEOPHYSICAL SURVEY SCHEFFERVILLE REGION / LEVÉ GÉOPHYSIQUE DU LAC RAMUSIO RÉGION DE SCHEFFERVILLE

FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD / DÉRIVÉE PREMIÈRE VERTICALE DU CHAMP MAGNÉTIQUE

Les versions numériques de cette carte peuvent être téléchargées gratuitement à partir du site Internet des dossiers publics du Geological Survey of Newfoundland and Labrador.

Digital versions of this map can be downloaded, at no charge, from Natural Resources Canada's Geoscience Data Repository (MIRAGE) at http://gdr.nrcan.gc.ca/mirage/.

Digital versions of this map can also be downloaded, at no charge, from the Geological Survey of Newfoundland and Labrador web site's Open File page at http://www.nrl.gov.nl.ca/mines-geosurvey/publications/openfiles/.

Map sheet summary, Open File Dossier Public 6315, and location map details.