

(NTS 12B/09)

MAP 2009-35
OPEN FILE NFLD/3058

G.J. Kilfoil and L.A. Cook

This map was derived from data acquired during an aeromagnetic survey carried out by Geospatial Data Solutions GDS Inc. The survey was flown during the period November 25, 2008 to March 30, 2009, using a Piper PA-31 Navajo aircraft C-GKSCA. The aircraft was equipped with three Geometrics cesium vapour magnetometers with a sensitivity of 0.05 nT, installed in the tail boom and wingtip pods. Total field data were sampled at 10 Hz. The nominal traverse and control-line spacing was 25 m. Traverse lines were oriented N50°W with orthogonal control lines. The flight path was recovered following post-flight differential corrections to the raw Global Positioning System data and inspection of ground images recorded by a vertically mounted video camera. The survey was flown on a pre-determined flight surface to minimize differences in magnetic values at the intersections of the traverse and control lines. The resulting data were vertically levelled to a common levelled flight line magnetic data. The levelled values were then interpolated to a 50 m grid.

The first vertical derivative of the residual 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 superimposed anomalies. A property of the first vertical derivative maps is the coincidence of the zero-value contour with vertical contacts at high magnetic latitudes (Hood, 1965).

Digital versions of this map can be downloaded, at no charge, from the Newfoundland and Labrador Resource Atlas (<http://gis.geosurv.gov.nl.ca/>), and from the Geological Survey of Newfoundland and Labrador On-Line Open File page:

Corresponding digital profile and gridded data for this survey, as well as for airborne surveys flown over adjacent areas, are also available from the Newfoundland and Labrador Resource Atlas.

Printed copies of this map may be obtained from the Geoscience Publication and Information Section, Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NL, Canada, A1B 4J6.

Department: <http://www.nr.gov.nl.ca/nr/>
Geological Survey: <http://www.nr.gov.nl.ca/mines&en/geosurvey/>
E-mail: pub@gov.nl.ca

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PUBLISHED 2005

Reference

Hood, P.J.
1965: Gradient measurements in aeromagnetic surveying. *Geophysics*, vol. 30, p. 891-902

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2009: First Vertical Derivative of the Residual Magnetic Field, Harry's River Map Area (NTS 12B/09), Aeromagnetic Survey - Corner Brook Area. Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, Map 2009-35, Open File NFLD/3058, scale 1:50 000.

Maps released as part of Open File NFLD/3058 are (refer to index map below)

Map Area (NTS)	Residual Magnetic Field	First Vertical Derivative of the Resid. Mag. Field
Little Grand Lake (12A/12)	Map 2009-30	Map 2009-31
Corner Brook (12A/13)	Map 2009-32	Map 2009-33
Harry's River (12B/09)	Map 2009-34	Map 2009-35
Serpentine (12B/16)	Map 2009-36	Map 2009-37
Bay of Islands (12G/01)	Map 2009-38	Map 2009-39
Pasadena (12H/04)	Map 2009-40	Map 2009-41
Lomond (12H/05)	Map 2009-42	Map 2009-43

Note

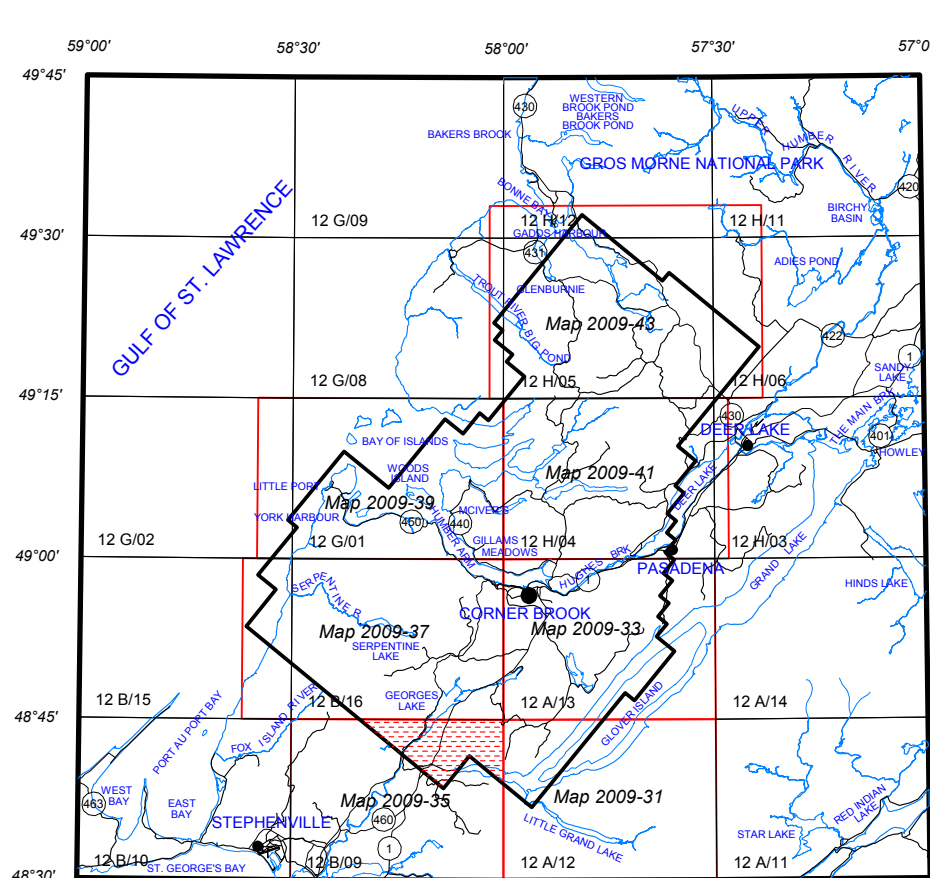
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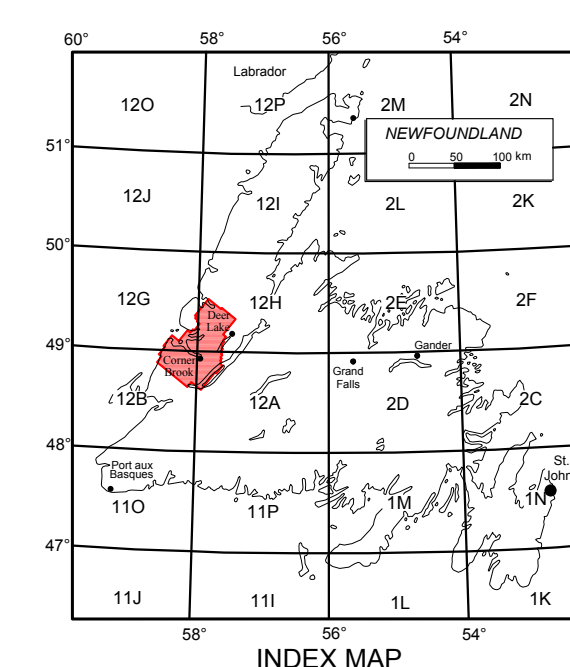
PLANIMETRIC SYMBOLS

Topographic Contour
Power Line
Drainage
Road
Flight Line < 14104



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX

AEROMAGNETIC SURVEY - CORNER BROOK AREA



MAP 2009-35
HARRY'S RIVER - NTS 12B/09

Scale 1: 50 000

NAD83 / UTM zone 21N

Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

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Geo Data Solutions GDS Inc., Laval, Quebec.
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