

**RESIDUAL MAGNETIC FIELD**

**Serpentine Map Area**

(NTS 12B/16 and part of 12B/15)

MAP 2009-36  
OPEN FILE NFLD/3058

G.J. Kilfoil and L.A. Cook

**Residual Magnetic Field**

This map was derived from data acquired during an aeromagnetic survey carried out by Geo Data Solutions GDS Inc. The survey was from during the period November 25, 2008 to March 30, 2009, using a Piper PA-31 Navajo aircraft C-600A. The aircraft was equipped with three Geometrics cesium vapour magnetometers with a sensitivity of 0.005 nT, installed in the tail boom and wing pods. Total field data were sampled at 10 Hz. The nominal traverse and control-line spacings were, respectively, 200 m and 2000 m, and the aircraft flew at a nominal terrain clearance of 90 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 control and traverse lines. These differences were computer-analyzed to obtain a mutually levelled set of flight-line magnetic data. The levelled values were then interpolated to a 50 m grid.

The International Geomagnetic Reference Field (IGRF) defined at an altitude of 500 m for January 21<sup>st</sup> 2009 was then removed. Removal of the IGRF, representing the magnetic field of Earth's core, produces a residual component related essentially to magnetizations within the Earth's crust.

Digital versions of this map can be downloaded, at no charge, from the Newfoundland and Labrador Resource Atlas (<http://gis.gov.nf.ca/>), and from the Geological Survey of Newfoundland and Labrador On-Line Open File page (<http://www.nr.gov.nl.ca/mines/eng/geo/survey/publications/openfiles/>). 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, N.L., Canada, A1B 4X6.

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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
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Bay of Islands (12C/01)	Map 2009-38	Map 2009-39
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Lomond (12H/05)	Map 2009-42	Map 2009-43

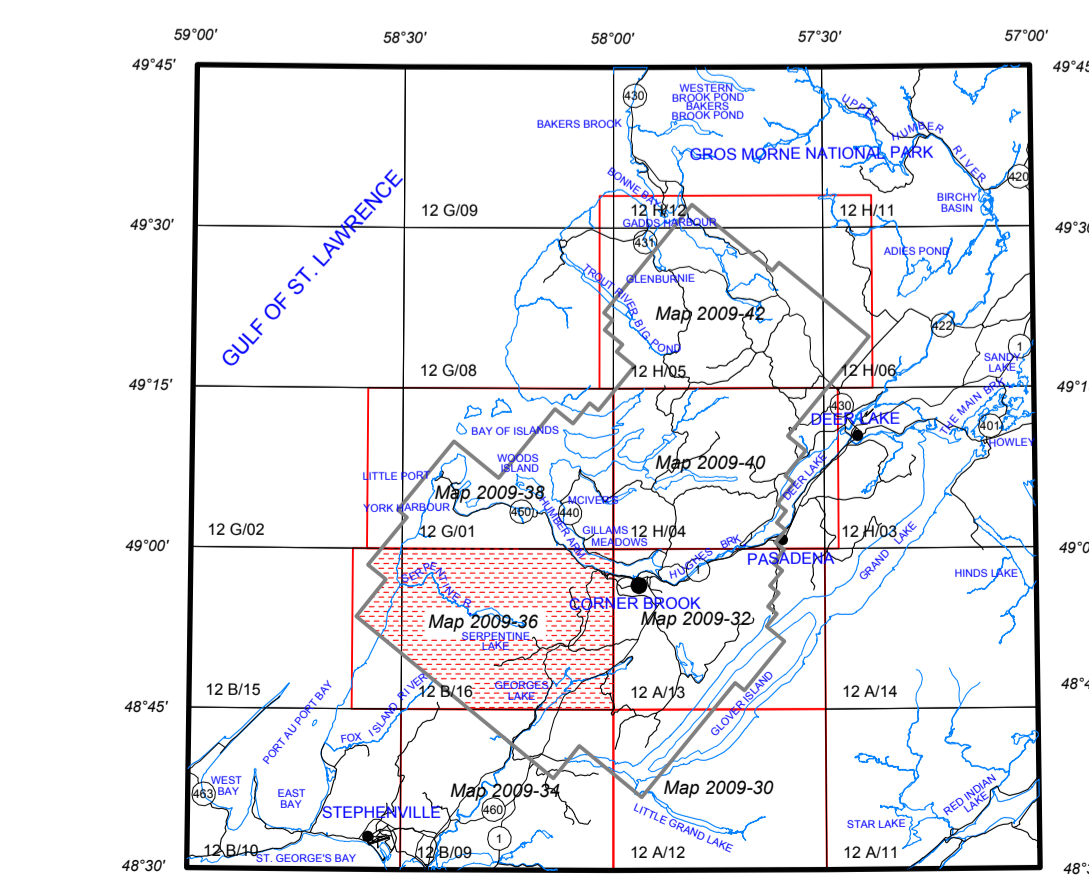
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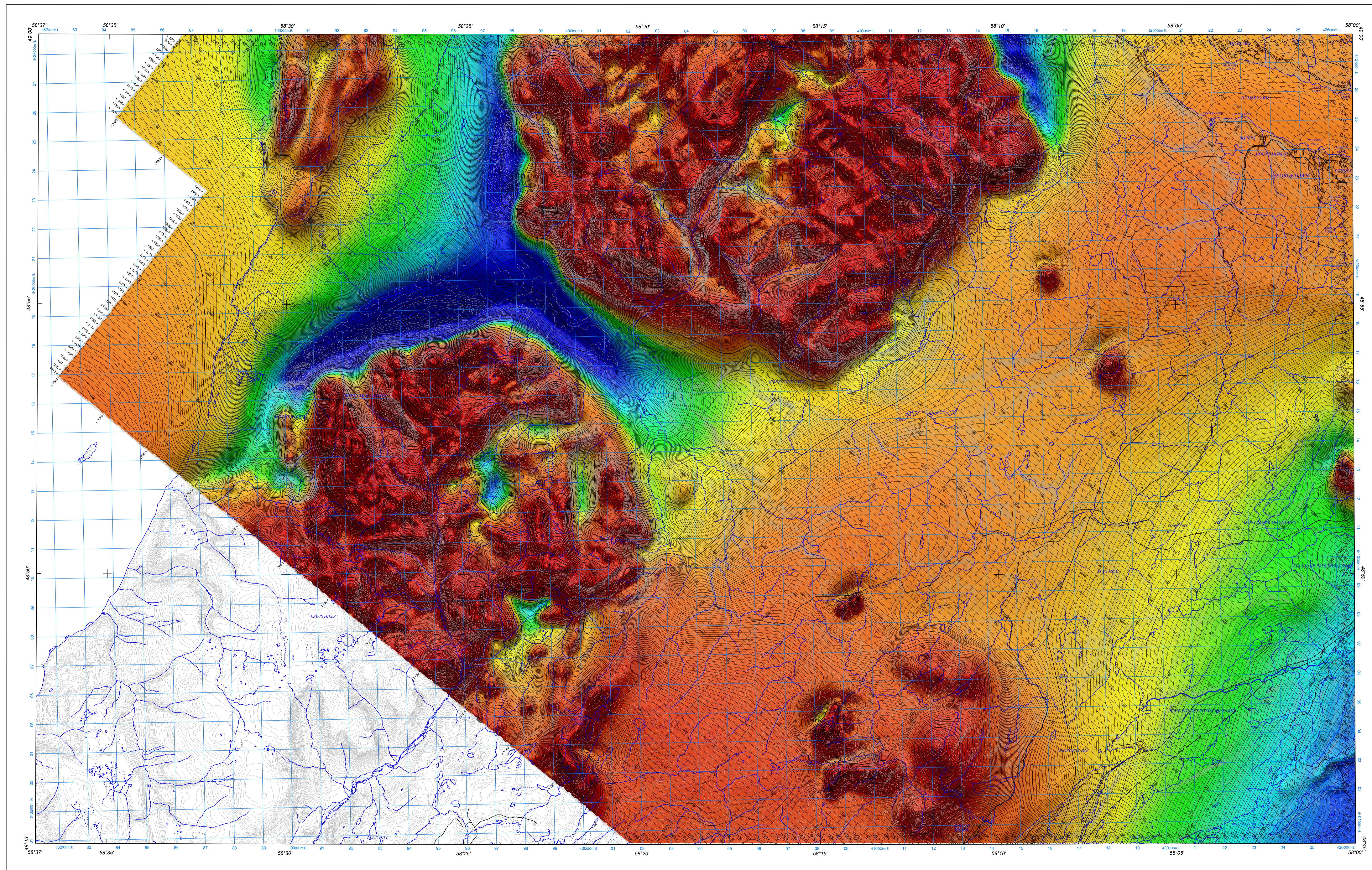
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ISOMAGNETIC LINES	PLANIMETRIC SYMBOLS
250 nT	Topographic Contour
50 nT	Power Line
2 nT	Drainage
Magnetic Low	Road
	Flight Line



AEROMAGNETIC SURVEY - CORNER BROOK AREA



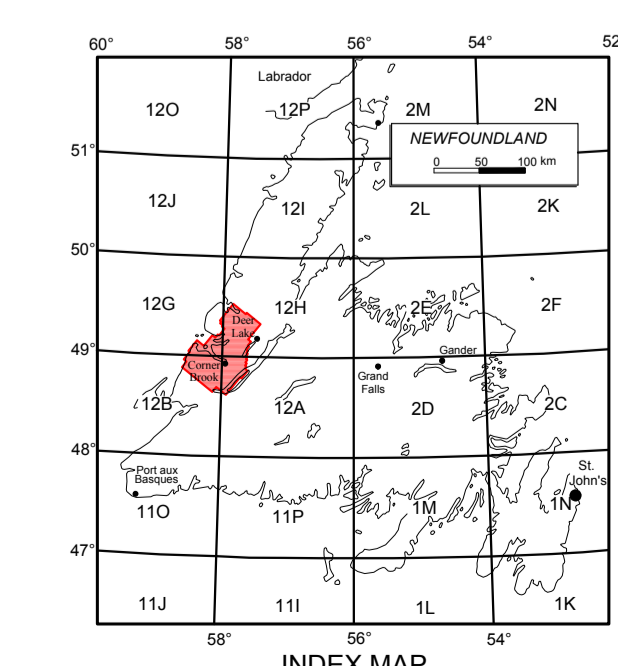
MAP 2009-36  
SERPENTINE - NTS 12B/16  
and part of 12B/15

Scale 1:50 000  
kilometres 1 0 1 2 3 4 5 kilometres

NAD83 / UTM zone 21N

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