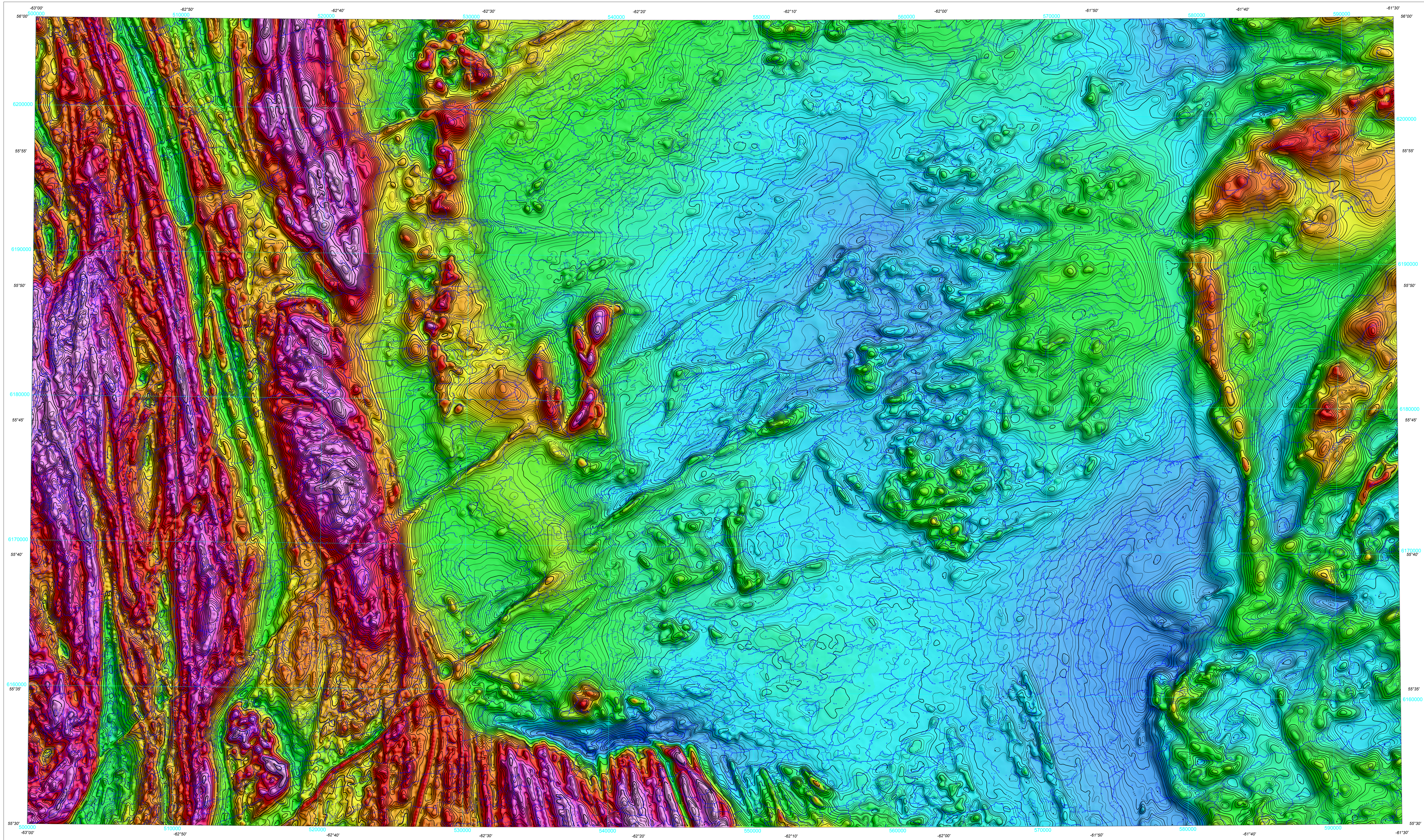


RESIDUAL TOTAL MAGNETIC FIELD



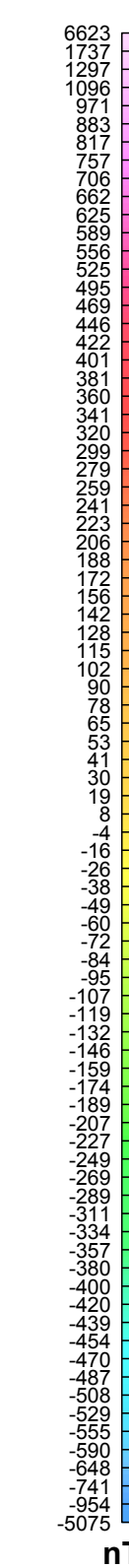
Residual Total Magnetic Field

This map of the residual total magnetic field was derived from data acquired during an aeromagnetic survey carried out in the Hopedale area, Labrador by EON Geosciences Inc. (EON), from January 15, 2018 to August 12, 2018 with two Piper Navajo aircraft (C-FEOM and C-FION) and a Piper Cherokee II aircraft (C-GRON). The data were recorded using Spill-beam vacuum vapour magnetometers (sensitivity = 0.005 nT) mounted in each of the tail booms of these aircraft. The nominal traverse and control line spacings were, respectively, 200 m and 1200 m, and the aircraft flew at a nominal terrain clearance of 100 m. Traverse lines were oriented N133°E with orthogonal control lines. The flight path was reconstructed following post-flight differential corrections to the raw Global Positioning System (GPS) 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 the average GPS altitude of 490 m for the year 2018.329 was then removed. Removal of the IGRF, representing the magnetic field of the Earth's core, produces a residual component related almost entirely to magnetizations within the Earth's crust.

This publication is available for free download through GEOSCAN (<http://geoscan.nrcan.gc.ca/>). Corresponding digital profile and gridded data as well as similar data for adjacent airborne geophysical surveys are available from Natural Resources Canada's Geoscience Data Repository for Aeromagnetic Data at [http://gdr.nrcan.gc.ca/index\\_e.html](http://gdr.nrcan.gc.ca/index_e.html). Digital products from this airborne survey are also available from the GSNL Geoscience Atlas at <http://geosatis.gov.nl.ca/Default.htm>.

Acknowledgements

The field crew chiefs, Richard Bailey and Khuram Khan (EON), are thanked for their cooperation and their technical assistance during the start-up phase of this survey. We also thank Marc Richard (EON) for his cartographic design expertise.



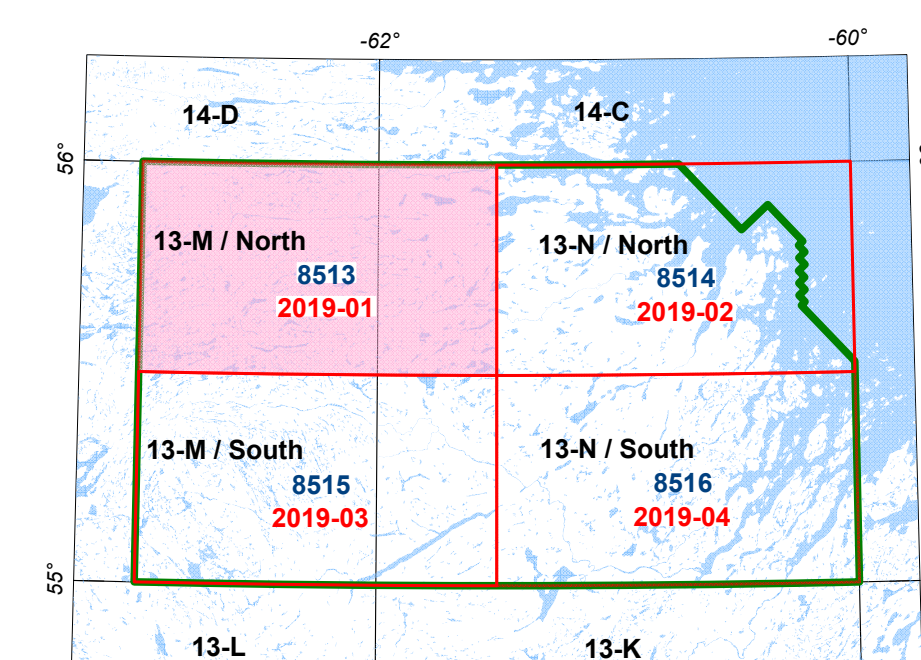
ISOMAGNETIC LINES

- 1000 nT
- 250 nT
- 40 nT
- 10 nT
- Magnetic Depression

PLANIMETRIC SYMBOLS

- Project Limit
- Drainage
- Flight Path

NTS map sheet numbers in black  
GSC Open File numbers in blue  
GSNL Open File numbers in red



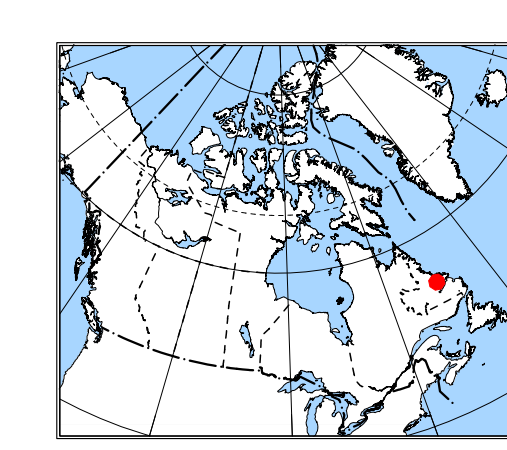
NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX

AEROMAGNETIC SURVEY OF THE HOPEDALE AREA

**OPEN FILE DOSSIER PUBLIC**  
**8513**  
GEOLOGICAL SURVEY OF CANADA  
COMMISSION GÉOLOGIQUE  
DU CANADA  
2019

Publications in this series have not been reviewed and are submitted by the author.  
Les publications de cette série ne sont pas revues; elles sont publiées telles qu'elles sont soumises par l'auteur.

Newfoundland and Labrador Department of Natural Resources  
Geological Survey Open File  
LAB/1737, Map 2019-01



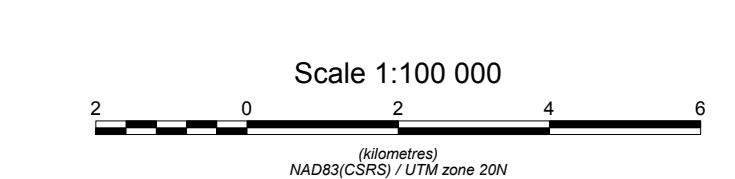
MAP LOCATION

**Author: M. Coyle**  
Data acquisition and data compilation by EON Geosciences Inc., St-Laurent, Quebec.  
Contract and project management by the Geological Survey of Canada, Ottawa, Ontario.  
Digital cartography by M. Richard, EON Geosciences Inc.  
Permanent link: <https://doi.org/10.4095/313295>

GEOLOGICAL SURVEY OF CANADA OPEN FILE 8513  
NEWFOUNDLAND AND LABRADOR DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY OPEN FILE LAB/1737, MAP 2019-01

RESIDUAL TOTAL MAGNETIC FIELD

AEROMAGNETIC SURVEY OF THE HOPEDALE AREA  
NEWFOUNDLAND AND LABRADOR  
PARTS OF NTS 13-M/NORTH AND 13-N/NORTH



Scale 1:100 000  
Universal Transverse Mercator Projection  
North American Datum 1983  
© Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2019  
Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications

This aeromagnetic survey and the production of this map were funded by phase 2 of the Geo-Mapping for Energy and Minerals program (GEM-2) of the Lands and Minerals Sector, Natural Resources Canada.