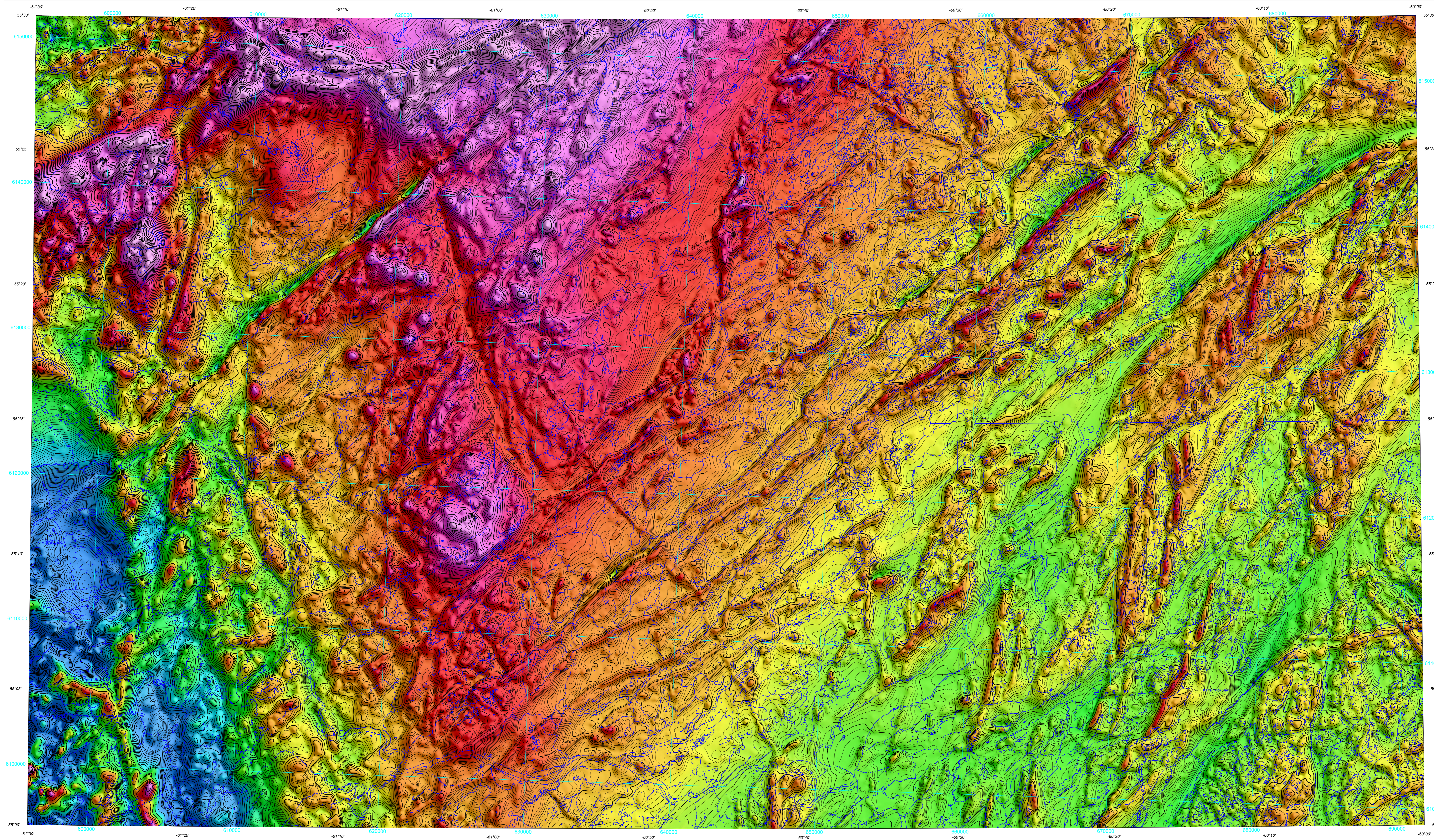


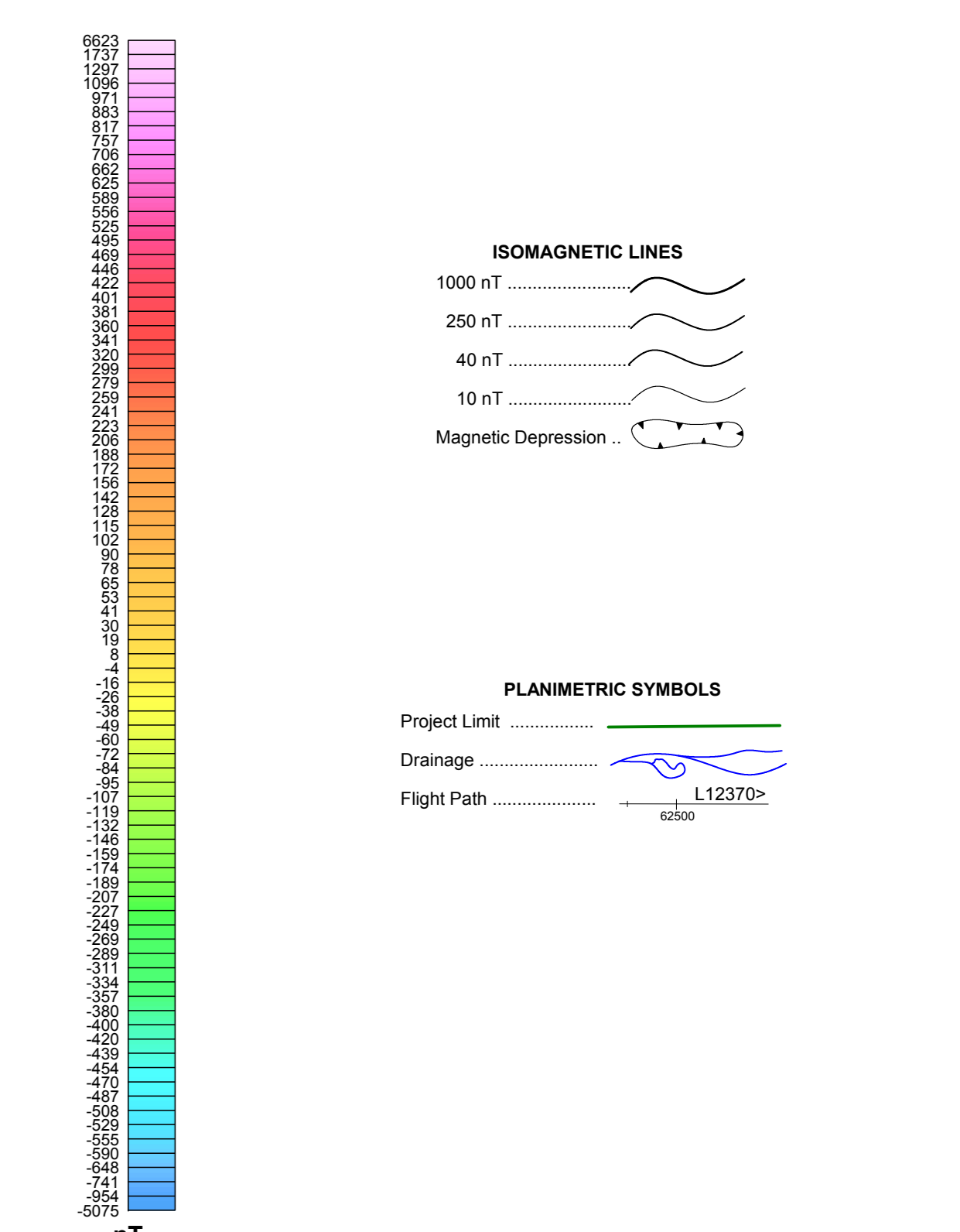
RESIDUAL TOTAL MAGNETIC FIELD



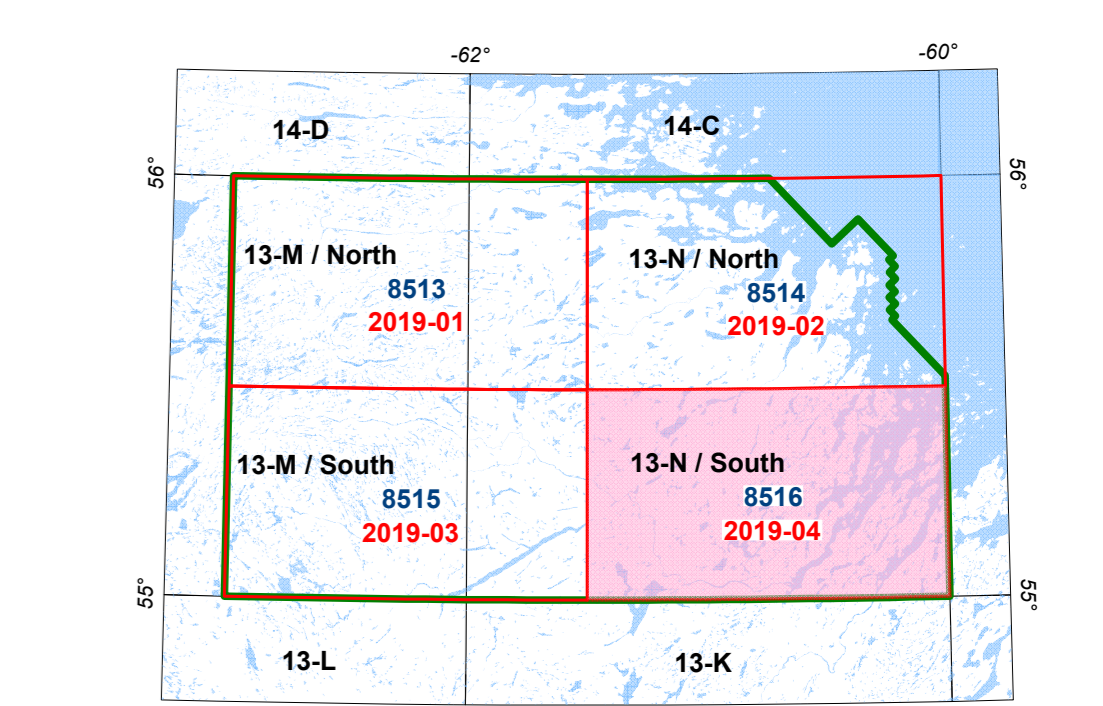
**Residual Total Magnetic Field**  
 This map of the residual total magnetic field was derived from data acquired during an aeromagnetic survey carried out in the Hopedale area, Labrador by EDN Geosciences Inc. (EON), from January 15, 2018 to August 12, 2018 with two Piper Navajo aircraft (CF10M and CF10N) and a Piper Cheyenne II aircraft (CF10N). The data were recorded using 300-beam cesium 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 3200 m, and the aircraft flew at a nominal terrain clearance of 100 m. Traverse lines were oriented N135°E with orthogonal control lines. The flight path was recovered 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-analysed 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 450 m for the year 2018.323 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 <https://doi.org/10.1155/1.2019-01>. Digital products from this airborne survey are also available from the GSNL Geoscience Atlas at <https://geoscan.gov.nl.ca/Default.htm>.

**Acknowledgements**  
 The field crew chiefs, Richard Bailey and Khorram 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.



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

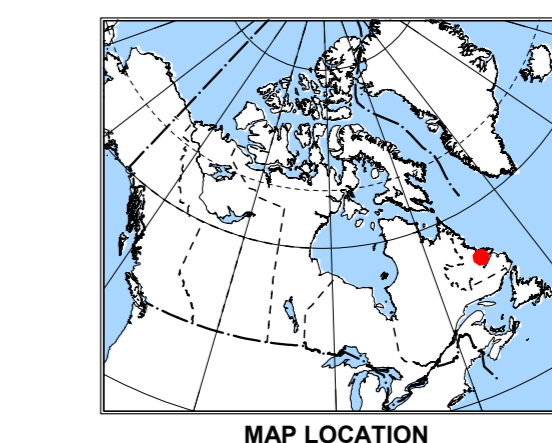
**OPEN FILE DOSSIER PUBLIC 8516**

Publications in this series have not been edited; they are submitted by the author.

Publications de cette série n'ont pas été révisées; elles sont soumises par l'auteur.

Geological Survey of Canada / Commission géologique du Canada, 2019

Newfoundland and Labrador Department of Natural Resources / Geological Survey Open File LAB/1737, Map 2019-04



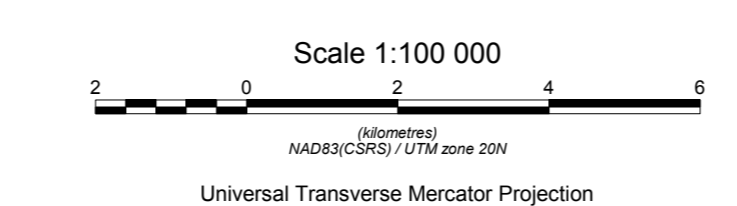
MAP LOCATION

GEOLOGICAL SURVEY OF CANADA OPEN FILE 8516  
 NEWFOUNDLAND AND LABRADOR DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY OPEN FILE LAB/1737, MAP 2019-04

RESIDUAL TOTAL MAGNETIC FIELD

AEROMAGNETIC SURVEY OF THE HOPEDALE AREA  
 NEWFOUNDLAND AND LABRADOR  
 PART OF NTS 13-N/SOUTH

**Author: M. Coyle**  
 Data acquisition and data compilation by EDN Geosciences Inc., St-Laurent, Quebec.  
 Contract and project management by the Geological Survey of Canada, Ottawa, Ontario.  
 Digital cartography by M. Richard, EDN Geosciences Inc.  
 Permanent link: <https://doi.org/10.4095/313298>



Universal Transverse Mercator Projection  
 North American Datum 1983

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 Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications

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