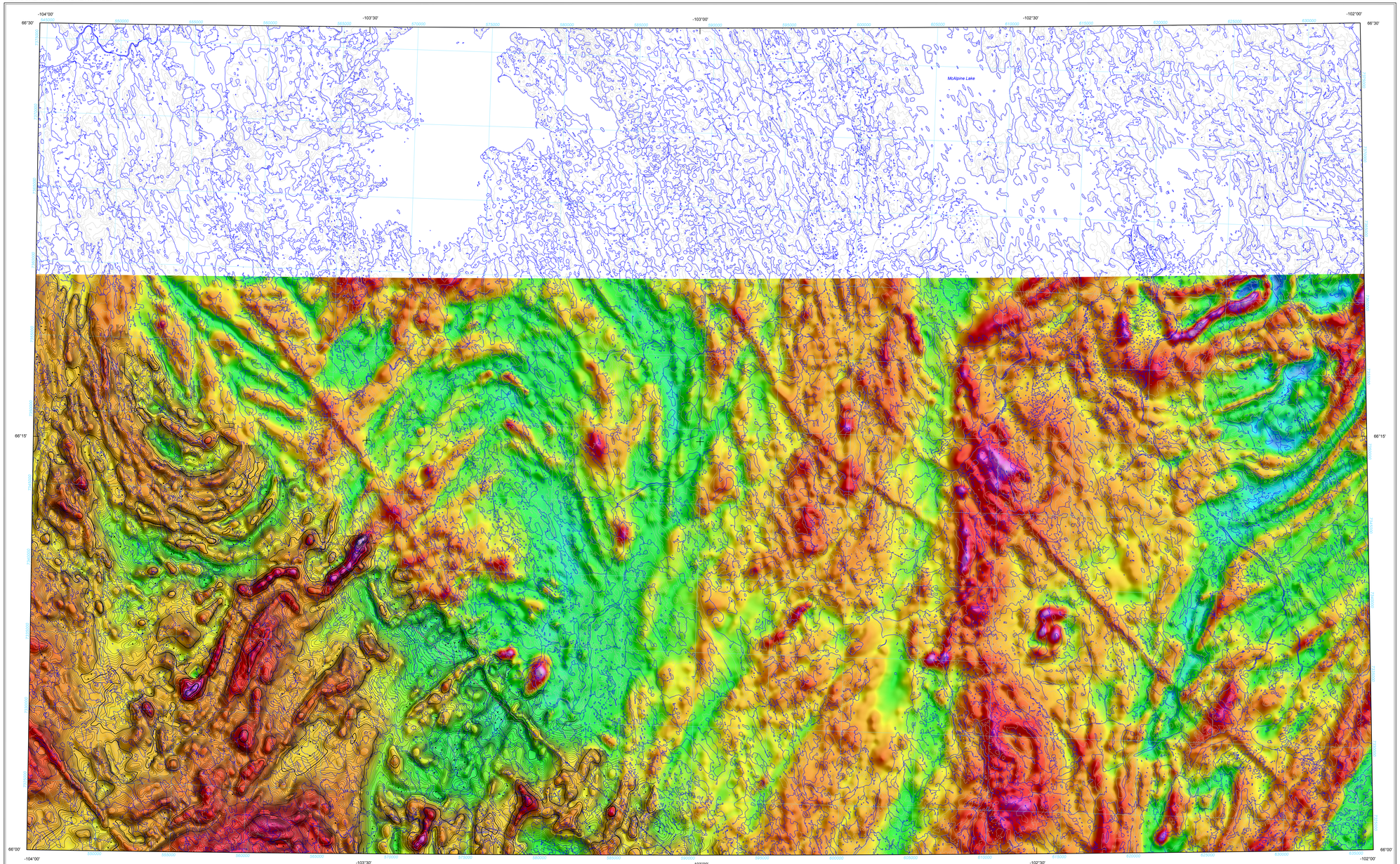
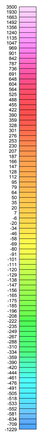
Natural Resources Canada | Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA

RESIDUAL TOTAL MAGNETIC FIELD



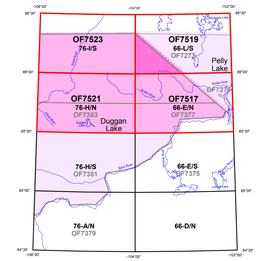


ISOMAGNETIC LINES

- 1000 nT
- 250 nT
- 50 nT
- 10 nT
- Magnetic low

PLANIMETRIC SYMBOLS

- Topographic contour
- Drainage
- Road
- Survey boundary



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX

AEROMAGNETIC SURVEY OF THE DUGGAN LAKE AREA

Residual Total Magnetic Field

This map of the residual total magnetic field was derived from data acquired during an aeromagnetic survey carried out by Geo Data Solutions GDS Inc. and Oracle Geoscience International from September 21, 2012 to September 26, 2013. The data were recorded using split-beam cesium vapour magnetometers (sensitivity = 0.005 nT) mounted in each of the tail booms of two Piper Navajo aircraft (C-GSVM and C-FQCB). The nominal traverse and control line spacings were, respectively, 400 m and 2400 m, and the aircraft flew at a nominal terrain clearance of 150 m. Traverse lines were oriented E-W 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 100 m grid. The International Geomagnetic Reference Field (IGRF) defined at the average GPS altitude of 432 m for the year 2013.23 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.

A digital version of this map can be downloaded, at no charge, from Natural Resources Canada's Geoscience Data Repository (MIRAGE) at http://apps1.gdr.nrcan.gc.ca/mirage/mirage_index_e.php. 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.agg.nrcan.gc.ca/index_e.html. The same products are also available, for a fee, from the Geophysical Data Centre, Geological Survey of Canada, 615 Booth Street, Ottawa, Ontario K1A 0E9. Telephone: (613) 995-5326, email: infogdc@agg.nrcan.gc.ca.

TOPOGRAPHIC CONTOUR INTERVAL: 30 METRES

This aeromagnetic 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 7519

RESIDUAL TOTAL MAGNETIC FIELD

AEROMAGNETIC SURVEY OF THE DUGGAN LAKE AREA

Part of NTS 66-L/S

NUNAVUT

Scale 1:100 000

2 0 2 4 6 kilometres

NAD83 / UTM zone 13N

Universal Transverse Mercator Projection
North American Datum, 1983

Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

MAP LOCATION

Author: F. Kiss

Data acquisition, data compilation and map production by
Geo Data Solutions GDS Inc., Laval, Quebec.
Contract and project management by
the Geological Survey of Canada, Ottawa, Ontario.

GEM
Canada

OPEN FILE
DOSSIER PUBLIC
7519
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA
2014

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

Les publications de cette série n'ont pas été révisées; elles sont publiées telles que soumises par l'auteur.

Recommended citation:
Kiss, F., 2014.
Residual total magnetic field,
Aeromagnetic Survey of the Duggan Lake Area,
Part of NTS 66-L/S, Nunavut;
Geological Survey of Canada, Open File 7519,
scale 1:100 000.