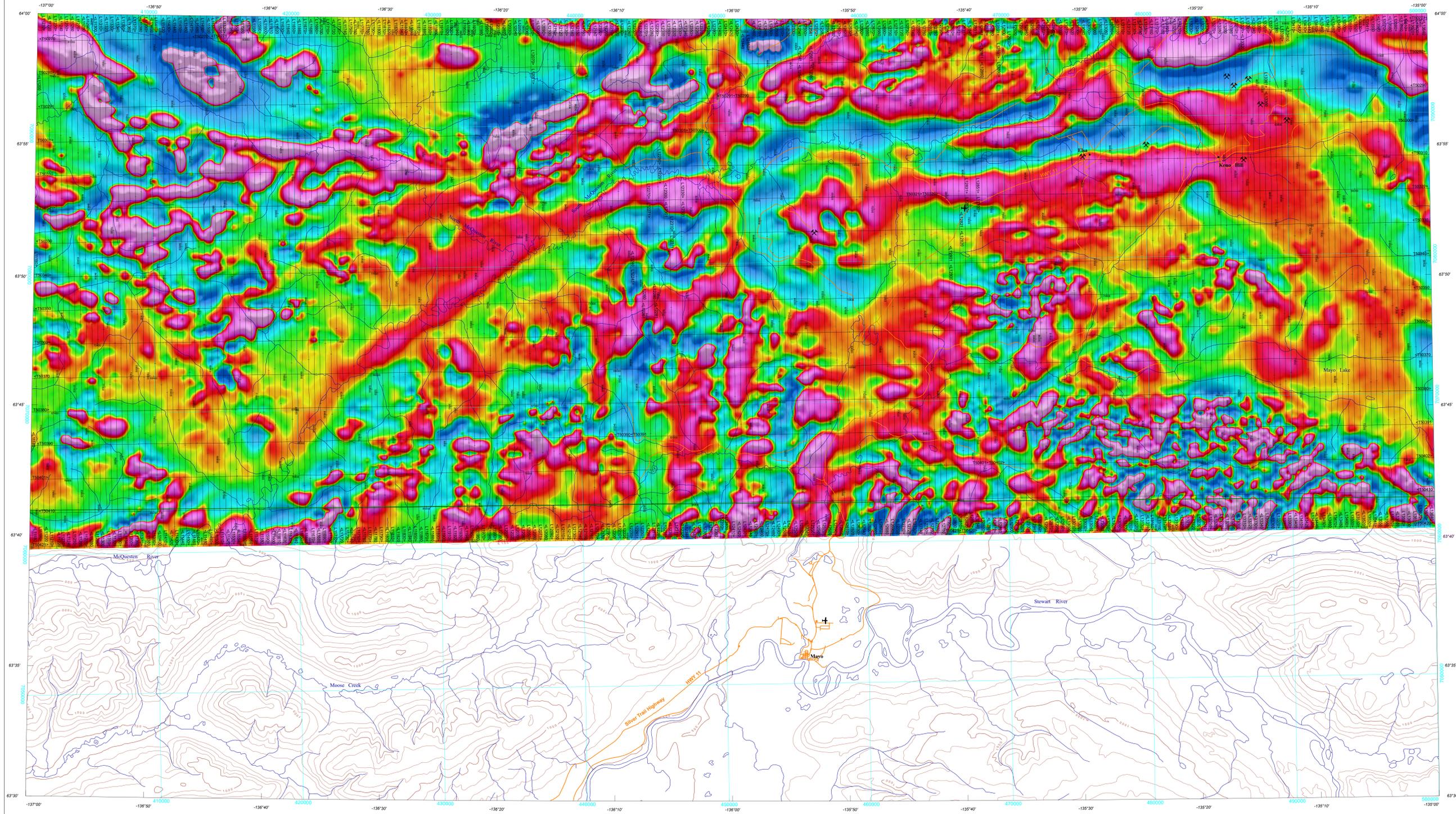


FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD



First Vertical Derivative of the Magnetic Field
 This map of the First Vertical Derivative of the Magnetic Field was derived from data acquired during an aeromagnetic survey carried out by Geo Data Solutions (GDS) Inc. from January 19, 2020 to March 28, 2020. The data were recorded using a soft-beam cesium vapour magnetometer (sensitivity ± 0.005 nT) mounted in the tail boom of a Beechcraft King Air aircraft (CF-140). The nominal traverse and control line spacings were, respectively, 400 m and 200 m, and the aircraft flew at a nominal terrain clearance of 150 m. Traverse lines were oriented N45°E with orthogonal control lines. The flight path was recovered following post-flight differential corrections to the 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 leveled set of flight-line magnetic data. The leveled values were then interpolated to a 100 m grid. The International Geomagnetic Reference Field (IGRF) defined at the average GPS altitude of 150 m for the year 2020.2 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.

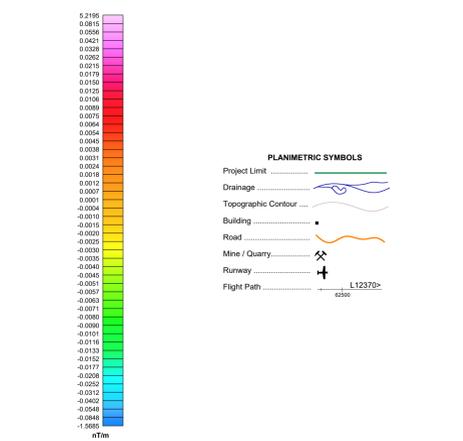
The first vertical derivative of the magnetic field is the rate of change of the magnetic field in the vertical direction. Computation of the first vertical derivative removes long-wavelength features of the magnetic field and significantly improves the resolution of closely spaced and suppressed anomalies. A property of first vertical derivative maps is the coincidence of the zero-value contour with vertical contacts at high magnetic latitudes (Hood, 1965).

This publication is available for free download through GEOCAN (<http://geocan.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 Geospatial Data Repository for Aeromagnetic data at <http://gdr.nrcan.gc.ca>. For more information about this survey, please contact the Geospatial Data Centre, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8. Telephone: (613) 995-5256, email: nrcan-Info@nrcan.gc.ca.

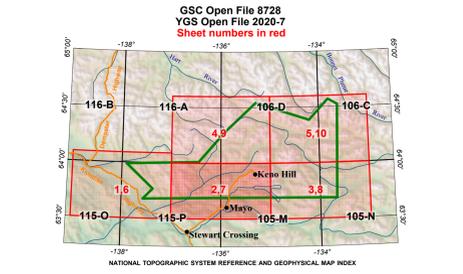
Copies of this map may also be obtained from the Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, P.O. Box 2703 (K-152), Whitehorse, Yukon, Y1A 2C6. Telephone: (867) 667-3201, email: geology@gov.yk.ca, website: <http://www.geology.gov.yk.ca>.

Reference
 Hood, P.J., 1965. Gradient measurements in aeromagnetic surveying; Geophysics, v. 30, p. 891-902.

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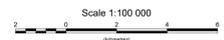
- MAP SHEET SUMMARY**
- Sheet 1: Residual Total Magnetic Field, parts of NTS 115-P (north half) and 115-A (south half)
 - Sheet 2: Residual Total Magnetic Field, parts of NTS 105-M (north half) and 115-P (north half)
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AEROMAGNETIC SURVEY OF THE NASH CREEK AREA YUKON

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AEROMAGNETIC SURVEY OF THE NASH CREEK AREA YUKON
 PARTS OF NTS 105-M, N, 106-C, D, 115-P AND 116-A
FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD
 PARTS OF NTS 105-M (NORTH HALF) AND 115-P (NORTH HALF)

Author: F. Kiss
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Scale 1:100 000
 Universal Transverse Mercator Projection
 North American Datum 1983
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 Base map of the scale of 1:250 000 from Natural Resources Canada, with modifications
 Elevations are in metres above sea level

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