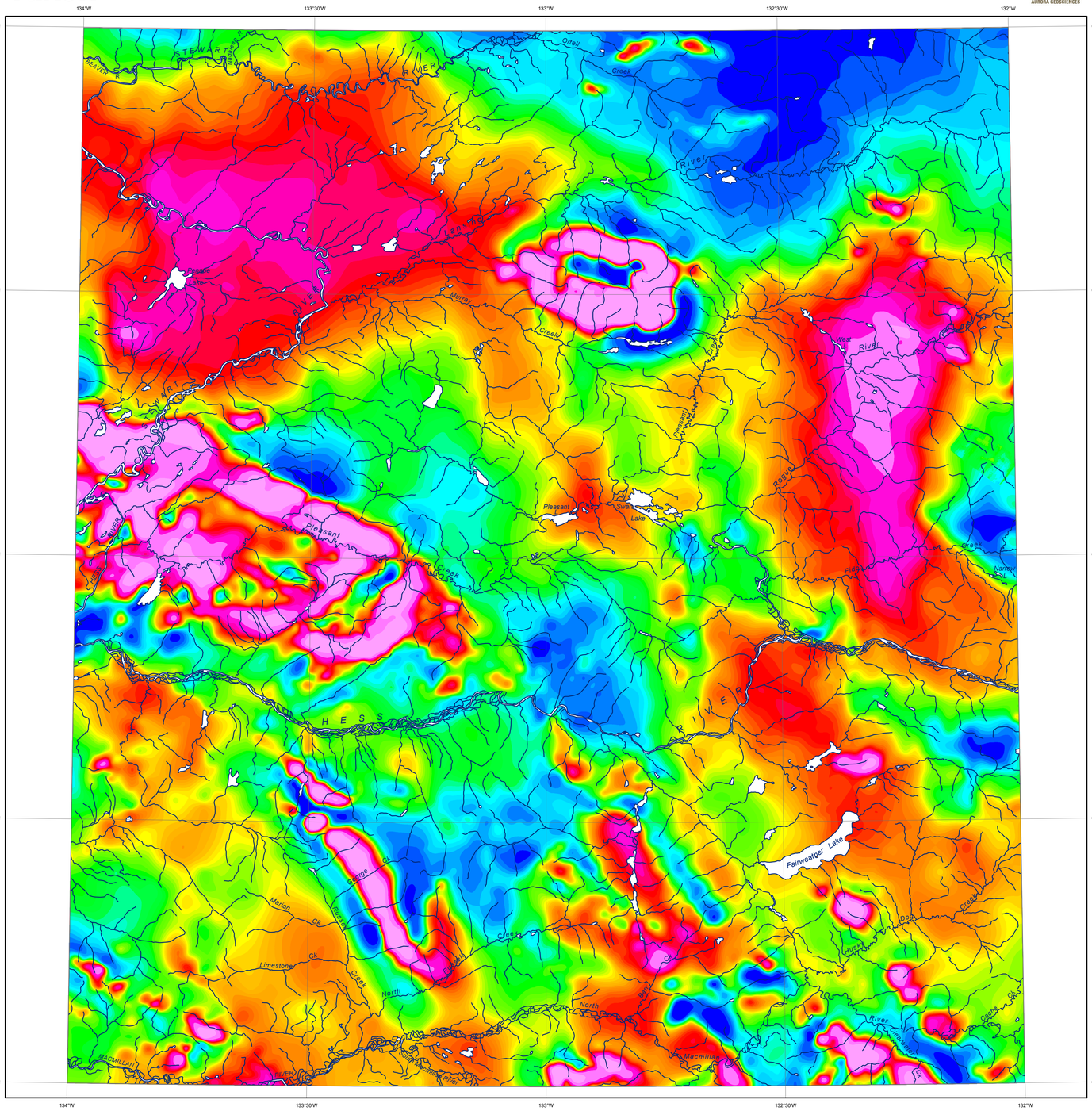
Yukon

AURORA GEOSCIENCES

Canadian Northern Economic Development Agency | Agence canadienne de développement économique du Nord



76.7
29.6
10.0
2.8
-2.3
-7.7
-12.1
-16.0
-19.4
-22.6
-25.4
-27.8
-29.8
-31.7
-33.3
-34.9
-36.5
-38.1
-39.6
-41.1
-42.6
-44.2
-45.7
-47.4
-49.3
-51.2
-53.1
-55.0
-57.0
-59.4
-62.0
-64.9
-68.3
-72.0
-76.0
-81.0
-87.2
-98.9
nT

watercourse
waterbody

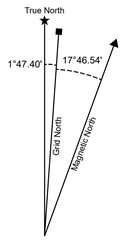
REDUCED-TO-POLE MAGNETIC FIELD
LANSING RANGE (NTS 105N)
YUKON

SCALE 1:250 000

0 5 10 15 20 25
kilometres

1:250 000-scale topographic base data produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA

ONE THOUSAND METRE GRID
Universal Transverse Mercator Projection
North American Datum 1983
Zone 8



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 2020
FOR CENTRE OF MAP
Annual change 24.4' West

NOTES

Standardization of publicly available digital magnetic data from assessment reports was performed in 2019 and 2020. Residual magnetic field was calculated through removal of the IGRF. A levelled magnetic field channel was calculated by sampling the 1:250 000 compilation grid and taking the mean difference between the residual magnetic field and the overlapping points; this mean difference is applied as zero order datum shift to the residual data. This is repeated for each 1:250 000 compilation that the survey overlaps.

Up to four gridded products are produced for each survey (Residual Total Magnetic Field (TMI), Reduced-to-Pole Magnetic Field (RTP), First Vertical Derivative of the Reduced-to-Pole Magnetic Field (RTP_VD) and Tilt Derivative of the Reduced-to-Pole Magnetic Field (RTP_TDR) and these have pre-existing analogous 1:250 000 products from Open Files 2017-5 to 2017-59.

The outline of the assessment report data is extracted and eroded by a buffer, typically 200 m. The buffer is automatically reduced if it exceeds half the range of either the x or y coordinates. The eroded buffer is then windowed from each the four corresponding 1:250 000 compilations.

Each assessment report grid is then blended with the compilation grid through averaging common points between the grids. By previously windowing out the eroded assessment report outline from the compilation, both fidelity to the higher quality assessment report data and a smooth transition to avoid edge artifacts are achieved. This is an appropriate approach when the assessment report data are of higher quality than the compilation. Mostly this is true due to the higher resolution of data that is typical of a property-scale survey compared to a government regional-scale survey. However this is not universally the case and for every assessment report each of the four new blended grids are compared with the unaltered compilation. Assessment report grids which upon blending lower the quality of the compilation are manually rejected. A log file of accepted and rejected assessment reports for each 1:250 000 sheet is maintained.

The Yukon Geological Survey created georeferenced *.pdf maps of the shaded relief colour contour products for each 1:250 000 map sheet. The map data are provided as GeoTiff files.

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REFERENCES

Carson, J.M., Dumont, R., Potvin, J., Buckle, J., Shives, R. B. K., Harvey, B. J. A. and Fischer, B. 2005. Geophysical Series - NTS 105O and 105P - Sekwi Mountain, Northwest Territories; Geological Survey of Canada, Open File 5172; Northwest Territories Geoscience Office, Open File 2006-05.

Miles, W., Saltus, R., Hayward, N. and Oneschuk, D., 2015. Alaska and Yukon Magnetic Compilation, Residual total magnetic field. Geological Survey of Canada, Open File 7862.

Rockhaven Resources Inc., 2007. Assessment Report Describing Geophysical Surveys, Geochemical Sampling, Prospecting and Water Surveying at the Plata Project. Yukon Energy, Mines and Resources Assessment Report 95607.

RECOMMENDED CITATION

Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reduced-to-Pole Magnetic Field Shaded Colour Contour Map (NTS 105N). *In:* Reprocessing of Yukon magnetic data for NTS 105N. Yukon Geological Survey, Open File 2020-22, scale 1:250 000, 2 sheets.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

Paper copies of this map and the accompanying report may be obtained from the Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, Room 102-300 Main St., Whitehorse, Yukon, Y1A 2B5. Email: geology@gov.yk.ca.

A digital PDF (Portable Document File) file of this map, and available data, can be downloaded free of charge from the Yukon Geological Survey website: https://yukon.ca/en/science-and-natural-resources/geology.

106D NASH CREEK	106C NADALEEN RIVER	106B BONNET PLUME LAKE
105M MAYO	**THIS MAP**	105O NIDDERY LAKE
105L GLENLYON	105K TAY RIVER	105J SHELDON LAKE

Yukon Geological Survey
Energy, Mines and Resources
Government of Yukon

Open File 2020-22
Sheet 2 of 2

Reduced-to-Pole Magnetic Field
Shaded Colour Contour Map (NTS 105N)
(1:250 000 scale)

by
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