

**Bouguer Anomaly**

These data were acquired during a helicopter-borne gravity survey carried out by Sander Geophysics Limited between November 26 and December 13, 2008. The data were acquired with an AIRGrav gravimeter installed in an Astar helicopter (C-GSGH). The nominal traverse line spacing was 2 000 m with control line spacing of 10 km. The nominal aircraft altitude was 150 m above ground. The traverse lines were orientated N132° and control lines were flown at an orthogonal angle (N42°) to the traverse lines. The flight path was recovered with post-flight differential GPS. The survey was carried out according to a predetermined drop surface in order to minimize the differences in altitude between the traverse and control lines. All gravimetric measurements were referenced to the International Gravity Standardization Network 1971 (IGSN71). The theoretical values of gravity are based on the Geoidetic Reference System of 1980 (GRS80). The Bouguer anomaly was obtained after the application of corrections for Earth's free air curvature of the Earth and topography. A vertical gradient of 0.3086 mGal/m was used for the free air correction and a density of 2.670 t/m<sup>3</sup> used for the Bouguer correction. A low-pass filter of a half-wavelength of 3000 m with a gain of 0% at 2250 m and 100% at 4500 m was applied to the gridded data. The precision of the Bouguer anomaly is estimated at ±0.5 mGal. The differences at the intersections of the traverse and control lines were computer analyzed to obtain leveled Bouguer anomalies along the flight line. These leveled values were then interpolated to a 400 m grid. The values of the Bouguer anomaly were calculated at a frequency of 2 Hz along the traverse lines corresponding to a data spacing of approximately 20 m.

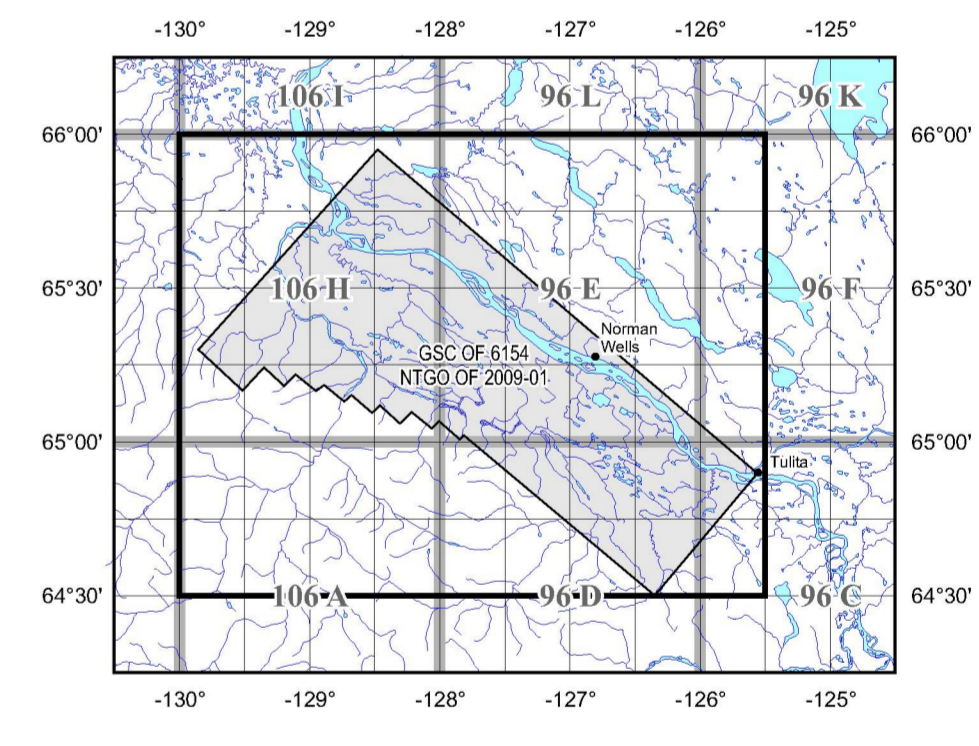
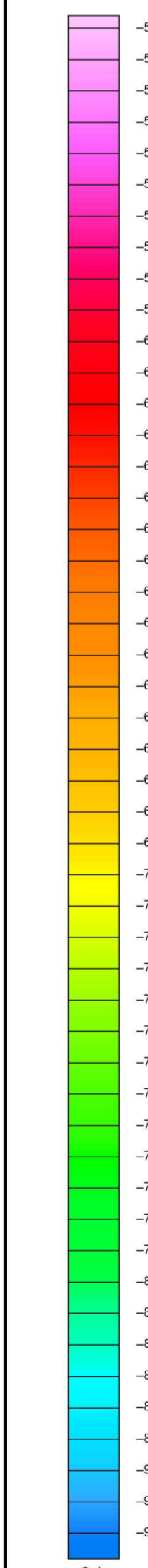
Digital versions of this map, can be downloaded, at no charge, from Natural Resources Canada's Geoscience Data Repository (MRAGE) at <http://gdr.nrcan.gc.ca>. The digital data may also be downloaded, free of charge, from Natural Resources Canada's Geoscience Data Repository for Gravity Data at <http://gdr.nrcan.gc.ca/gravity/> and from the Northwest Territories Geoscience Office's publications portal at <http://gateway.nwtgeoscience.ca/browseA.php>. The same products are also available, for a fee, from the Geophysical Data Centre, Geological Survey of Canada, 615 Booth Street, Ottawa, Ontario, K1A 0E8. Telephone: (613) 995-5329, email: [info@ag.nrcan.gc.ca](mailto:info@ag.nrcan.gc.ca).

**PLANIMETRIC SYMBOLS**

Topographic contours	
Drainage	
Wetland	
Mining Area	
Power Line	
Road	
Flight Line with fiducial	

**ISOGRAVIMETRIC LINES**

10 mGal	
5 mGal	
2.0 mGal	
0.5 mGal	
Gravimetric depression	



**CENTRAL MACKENZIE VALLEY AIRBORNE GRAVITY SURVEY, NORTHWEST TERRITORIES**

This project was administered by the Northwest Territories Geoscience Office (NTGO) through the Department of Industry, Tourism and Investment, Government of the Northwest Territories. The project was partly funded by the Strategic Investments in Northern Economic Development (SINED) program of India and Northern Affairs Canada as well as the Geo-mapping for Energy and Minerals (GEM) program of Natural Resources Canada.

Contract specifications and technical standards developed by the NTGO, Yellowknife, Northwest Territories and the Geological Survey of Canada (GSC), Ottawa, Ontario. Data quality control procedures performed at the GSC, Ottawa, Ontario.

Operational procedures, data acquisition, processing, compilation and map production carried out by Sander Geophysics, Ottawa, Ontario.

Map design by NTGO, GSC and Sander Geophysics.



GSC OPEN FILE 6154 / NTGO OPEN FILE 2009-01

**GEOPHYSICAL SERIES**

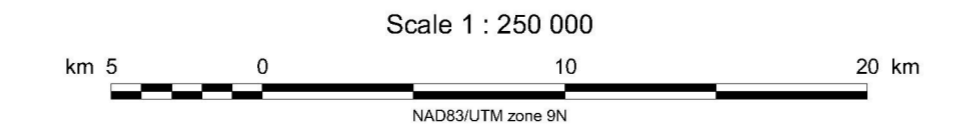
**NTS 96 E, 106 H AND PARTS OF 96 C, 96 D, 96 F, AND 106 A**

**CENTRAL MACKENZIE VALLEY AIRBORNE GRAVITY SURVEY**

**NORMAN WELLS**

**NORTHWEST TERRITORIES**

**BOUGUER ANOMALY**



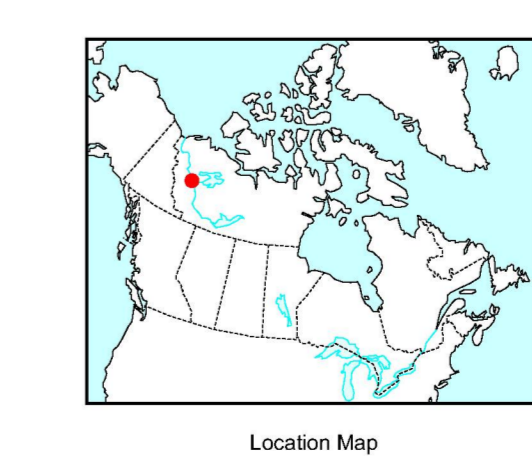
Paper and digital copies of this map and the other maps in the Open File, digital geophysical and navigation data, digital elevation model, and the contractor's report are available from:

Northwest Territories Geoscience Office  
4614-82 Avenue, Box 1500, Yellowknife, NT, X1A 2R3  
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Digital copies of the maps and data from this project can be downloaded from either NTGO or GSC web sites at <http://www.nwtgeoscience.ca> or <http://gdr.nrcan.gc.ca/geomap/>



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