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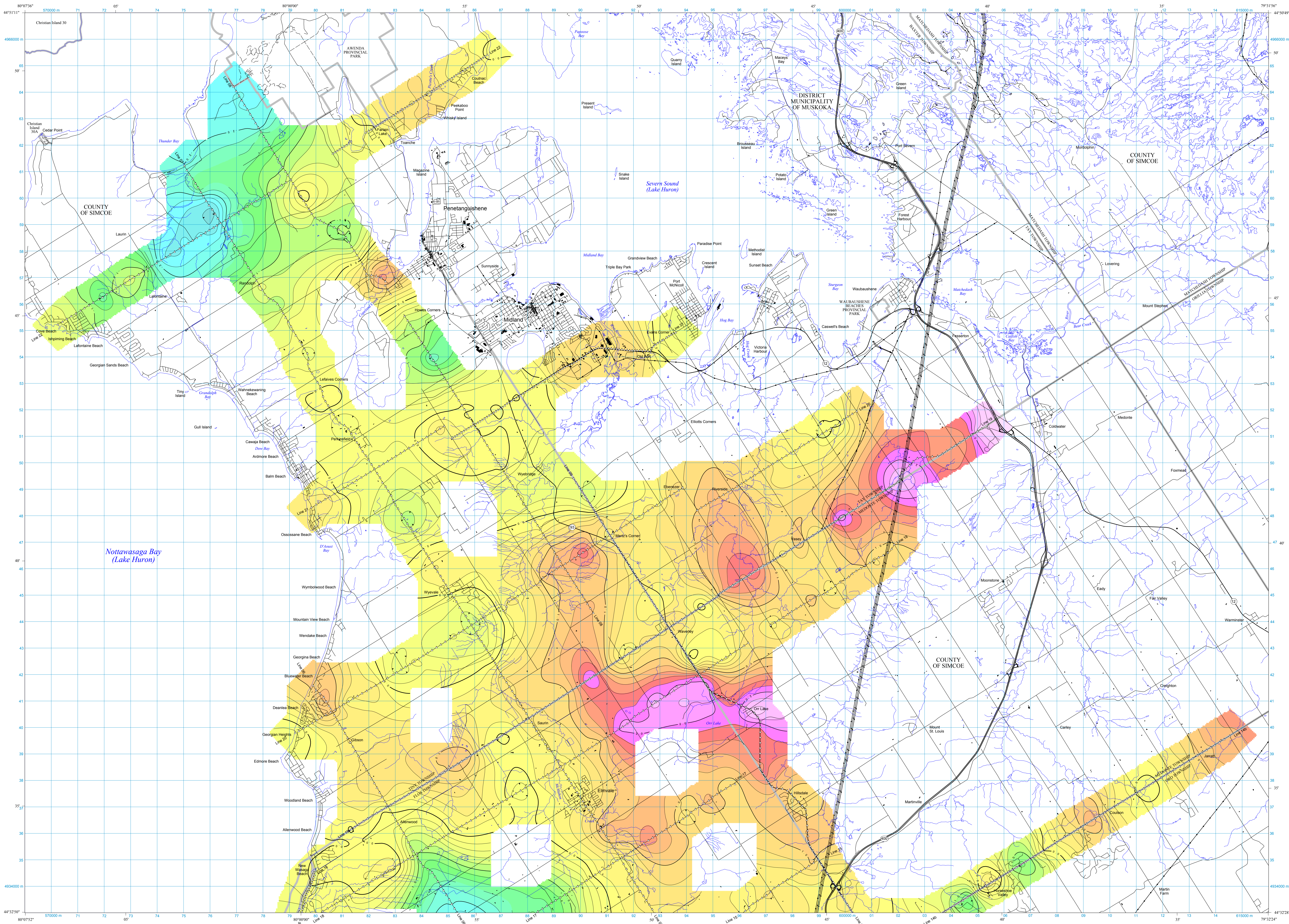
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Ontario Geological Survey 2015. Ground gravity survey, residual of the Bouguer anomaly, central Simcoe County area; Ontario Geological Survey, Map 82 770, scale 1:50 000.

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DESCRIPTIVE NOTES

Introduction
The data on this map represent new ground gravity measurements. Data from a total of 4380 stations were collected during the fall of 2014. The data were processed and checked by Abitibi Geophysics Inc. All station locations are indicated on the map by symbols.

Data Reduction
The raw gravity observations were processed according to the standards set forth by the International Gravity Standardization Network 1971 (IGSN71) and the Geoidetic Reference System 1957 (GRS57), see Woodland 1979. This included the application of standard Earth tide, instrumental drift, latitude, free air and Bouguer corrections. A density of 2.40 g/cm³ was used for the Bouguer correction. Near zone terrain corrections were applied to the Bouguer gravity to a distance of 50 m from the gravity stations. The near zone correction was derived from field observations of ground slope and calculated using Hammer's (Hammer 1939) formula for zones B and C.

Residual Anomaly Map
The residual anomaly field was calculated by subtracting the regional gravity field from the Bouguer or (reduced observed) gravity values. The regional field was estimated by upward continued at height of 5.0 km of the Bouguer values. This surface was then subtracted from the Bouguer anomaly to create the residual anomaly.

SURVEY PARAMETERS

GPS ACQUISITION
Rapid real-time kinematic surveying using dual-frequency GPS receivers.

Instrumentation: Leica® Viva® GS15 (3 units)
Five (5) SmartNet™ RTK base stations surrounding the project area were used.
RTK GPS surveying from 5 geodetic points (E73117, 2801313R, GURSDA, 841123 and MGS009; Natural Resources Canada) were used in areas with poor SmartNet™ RTK coverage.

Average precision: 1.0 cm horizontally and 2 cm vertically
Re-occupied stations: 5.5% of the stations were repeated with an average repeat of 1.0 m and a standard deviation of 1.75 cm.

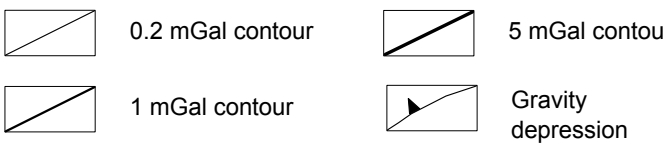
GRAVITY ACQUISITION
Instrumentation:
Type: Scripps® CG-5 Autograv™ (2 units)
Reading resolution: 0.001 mGal
Calibration: As a quality check, the instrument scale factor for each of the 2 gravity meters was confirmed against the Canadian Gravity Standardization Network (CGSN).
Tie-in: The gravity survey is tied to CGSN gravity base station Durnroon 9023-1991, located in central Simcoe County area.
The secondary base station #6999 was established using the ABASA sequence. The average absolute drift for the 2 gravity meters during production were 0.055 and 0.024 mGal after total and instrument height corrections.
Re-occupied stations: 5.2% of the stations were repeated with an average repeat of 0.008 mGal and a standard deviation of 0.018 mGal. Based on these statistics, typical reading error is estimated to be 0.015 mGal (maximum 0.039 mGal).
Typical error on the Bouguer values is estimated to be better than 0.026 mGal.

SURVEY SPECIFICATIONS
Survey dates and details:
September 30 to November 5, 2014: Geodetic tie-in, gravity meter calibrations, base station establishment and reading of 4380 stations.
Nominal station separation: 100 m and 200 m.

CO-ORDINATE SYSTEM
Projection: Universal Transverse Mercator
Datum: NAD83 CSRS
Central meridian: 81°00' W (UTM zone 17N)
Central scale factor: 0.9996
False easting: 500 000 m
False northing: 0 m
Ellipsoid: WGS84
Geoid model: HTX2.0

LEGEND

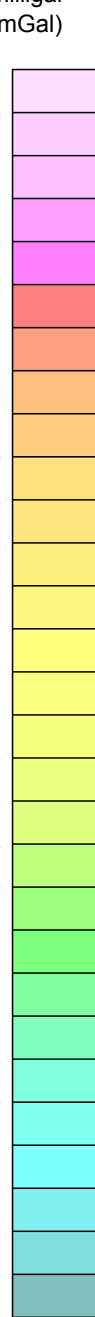
RESIDUAL BOUGUER GRAVITY CONTOURS



STATION LOCATIONS



RESIDUAL BOUGUER GRAVITY GRID



Ontario Geological Survey

MAP 82 770

GROUND GRAVITY SURVEY

Residual of the Bouguer Anomaly

CENTRAL SIMCOE
COUNTY AREA

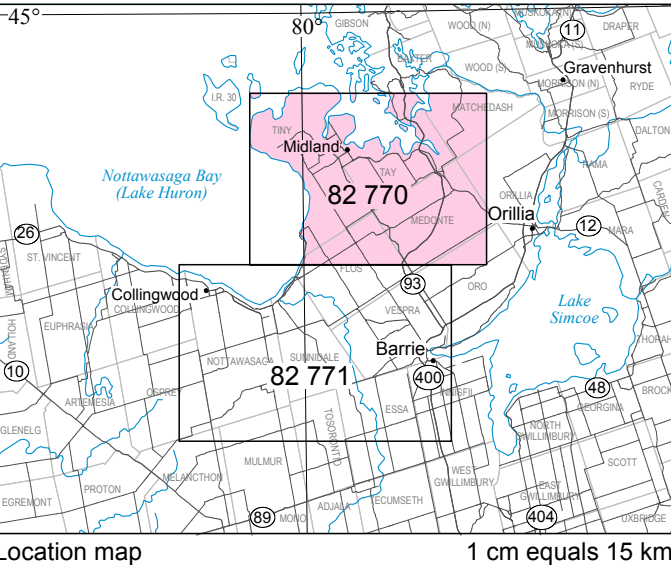
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NTS References: 31 D/12, 13; 41 A/9, 16

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SOURCES OF INFORMATION

Base map information derived from the Land Information Ontario Data Warehouse, Land Information Ontario, Ministry of Natural Resources and Forestry, scale 1:20 000.

DEM information derived from 10 m DEM 2.0 grids from Land Information Ontario, Ministry of Natural Resources and Forestry.
Magnetic declination for the centre of the map area was approximately 12°24' W in 2015.

REFERENCES

Hammer, S. 1939. Terrain corrections for gravimeter stations. Geophysics, v. 4, p. 184-194.

Woodland, G.P. 1979. The new gravity system-changes in international gravity base values and anomaly values. Geophysics, v. 44, p.1352-1366.

CREDITS

Data acquisition, data compilation and map production by Abitibi Geophysics Inc., Val-d'Or, Quebec.

Base maps and map surrounds by the Ministry of Northern Development and Mines, Sudbury, Ontario.

Contract management, base maps and map surrounds by the Ministry of Northern Development and Mines, Sudbury, Ontario.

Quality assurance and quality control by Desmond Rainsford, Ontario Geological Survey, Sudbury, Ontario.

Every possible effort has been made to ensure the accuracy of the information presented; however, the Ministry of Northern Development and Mines does not assume liability for any errors that may occur. Users should verify critical information.

Corresponding digital data for this survey are available from the following Ontario Geological Survey publication:

Ontario Geological Survey 2015. Ontario geophysical surveys, ground gravity data, grid and point data (ASCII and Geosoft® format) and vector data, central Simcoe County area. Ontario Geological Survey, Geophysical Data Set 1080.

Issued 2015.

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Users of OGS products are encouraged to contact those Aboriginal communities whose traditional territories may be located in the mineral exploration area to discuss their project.