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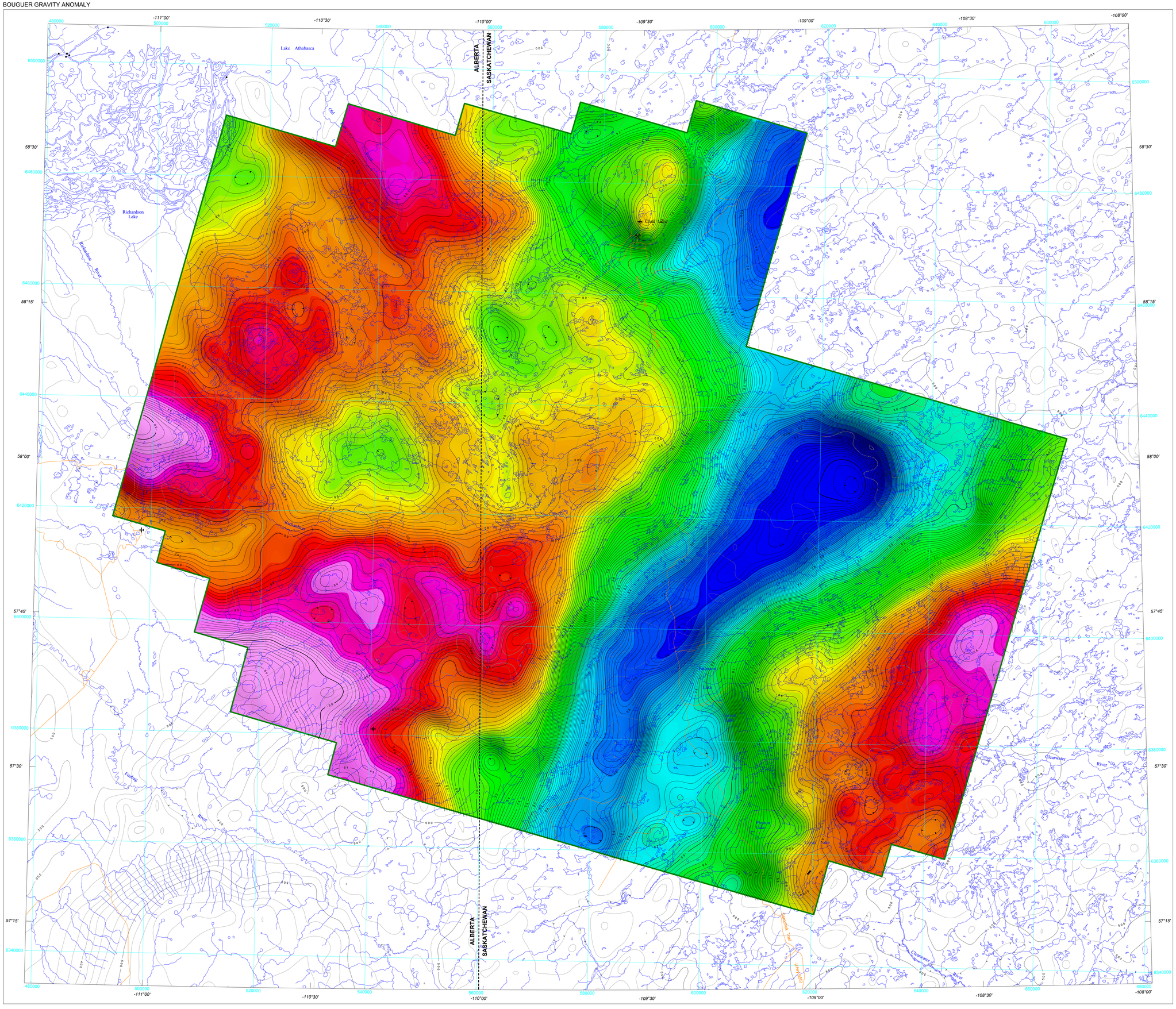
BOUGUER GRAVITY ANOMALY



-52.8
-55.1
-55.9
-56.6
-57.3
-58.1
-58.7
-59.2
-59.7
-60.1
-60.6
-61.1
-61.7
-62.3
-62.9
-63.5
-64.0
-64.7
-65.2
-65.7
-66.2
-66.8
-67.4
-68.2
-69.5
-71.0
-72.5
-74.2
-76.3
-78.5
-80.5
-82.0
-83.5
-85.2
-87.7
-89.9
-92.9
-95.9

mGal

PLANIMETRIC SYMBOLS

Drainage.....

Topographic Contours ...
(Contour Interval = 20 m)

Building .....

Road .....

Project Limit .....

Provincial Border.....

Mine / Quarry.....

Airport.....

Bouguer Gravity Anomaly

These data were acquired during an airborne gravity survey carried out by Sander Geophysics Limited from September 16, 2018 to October 9, 2018. The data were measured with an AIRGrav gravimeter installed in a Cessna 208B Grand Caravan (C-GSGV). The nominal traverse and control line spacings were, respectively, 2000 m and 10000 m. The nominal aircraft altitude was 150 m above ground. The traverse lines were orientated N105°E with orthogonal control lines. The flight path was recovered following post-flight differential corrections to the raw Global Positioning System (GPS). The survey was flown on a pre-determined flight surface to minimize altitude differences between the traverse and control lines. All gravimetric measurements were referenced to the International Gravity Standardization Network 1971 (IGNS71). The theoretical values of gravity were based on the Geodetic Reference System of 1980 (GRS80). The Bouguer anomaly was obtained after Eötvös and free air corrections, and a complete topographic correction using a 3D mass prism forward modeling with a density of 2.67 g/cm^3. This topographic correction is equivalent to the traditional three step correction: Simple Bouguer, curvature of the Earth (Bullard) and terrain. A low-pass filter of a half-wavelength of 3000 m with a pass 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 ±0.26 mGal. The differences at the intersections of traverse and control lines were computer analysed to obtain levelled Bouguer anomalies along the flight line. These levelled values were then interpolated to a 500 m grid. The calculation of the first vertical derivative of the Bouguer anomaly was performed on the grid using a fast Fourier transform.

Digital versions of this map are available for free download through GEOSCAN (https://geoscan.nrcan.gc.ca) and the Alberta Geological Survey website (https://www.ags.aer.ca). Corresponding digital profile and gridded data as well as similar data for adjacent airborne geophysical surveys can be downloaded, at no charge, from Natural Resources Canada's Geoscience Data Repository for Geophysical 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, 601 Booth Street, Ottawa, Ontario K1A 0E8. Telephone: 613-995-5326, email: infogdc@nrcan.gc.ca.

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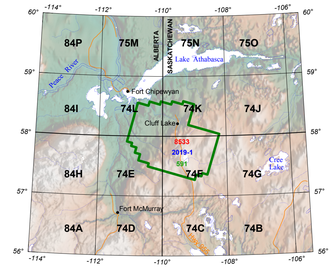
NTS map sheet numbers in black GSC open file number in red

SGS open file report number in blue AER/AGS map number in green



NATIONAL TOPOGRAPHIC REFERENCE SYSTEM AND GEOPHYSICAL MAP INDEX

AER/AGS MAP
591
ALBERTA ENERGY REGULATOR
ALBERTA GEOLOGICAL SURVEY
2019

OPEN FILE REPORT
RAPPORT DE DOSSIER PUBLIC
2019-1
SASKATCHEWAN GEOLOGICAL SURVEY
COMMISSION GÉOLOGIQUE DE LA SASKATCHEWAN
2019

OPEN FILE DOSSIER PUBLIC
8533
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2019

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

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

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Alberta Energy Regulator / Alberta Geological Survey, AER/AGS Map 591;
Saskatchewan Geological Survey, Open File Report 2019-1;
Scale 1:250 000. https://doi.org/10.4095/313525

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GEOLOGICAL SURVEY OF CANADA OPEN FILE 8533
ALBERTA GEOLOGICAL SURVEY MAP 591
SASKATCHEWAN GEOLOGICAL SURVEY OPEN FILE REPORT 2019-1

BOUGUER GRAVITY ANOMALY

AIRBORNE GRAVITY SURVEY OF THE PATTERSON LAKE AREA ATHABASCA BASIN

ALBERTA AND SASKATCHEWAN
PARTS OF NTS 74-E, F, K AND L

Scale 1:250 000

5 0 5 10 15
(kilometres)
NAD83/CSRS / UTM zone 12N

Universal Transverse Mercator Projection
North American Datum 1983

Base map at the scale of 1:250 000 from Natural Resources Canada, with modifications
Elevations are in metres above sea level

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MAP LOCATION

Canada