



Dérivée verticale première de l'anomalie de Bouguer

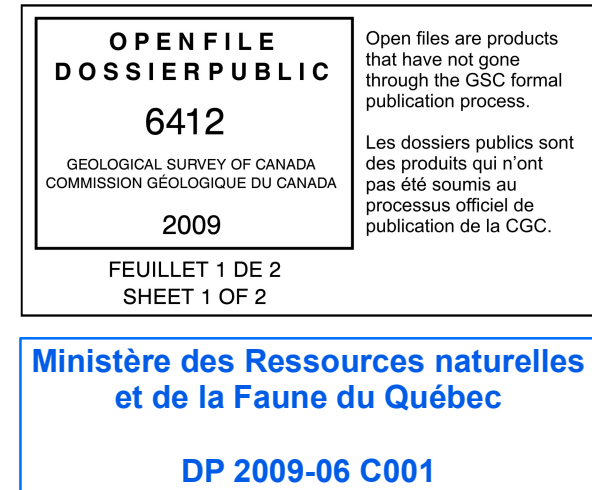
DESCRIPTIVE NOTES

Bouguer anomaly

The Bouguer gravity anomaly data show subtle variations caused by the density distribution in the underlying rocks. It is particularly sensitive to lateral density variations. Note that even within a particular rock type density can vary. This is due to the different grain sizes and textures and the degree of metamorphism and deformation history. For example, metamorphism has an effect on density, and so has fracturing. Generally, sedimentary rocks are less dense than metamorphic and igneous ones, but their density may vary significantly depending on rock porosity, and depth of burial. It should be noted that the maximum variation in rock density in the Earth's crust is about a factor of two. Gravity data may be used to identify areas of low density and hence of geological formations that have a density contrast relative to their surroundings and therefore, contribute to exploration programs when used to map geology and structures that may favour the presence of ore deposits.

First vertical derivative of the Bouguer anomaly

The first vertical derivative of the Bouguer anomaly was calculated using the Fast Fourier Transform and upward continuing the data to a height of 200 m to reduce noise. Vertical derivative anomalies are narrower than corresponding Bouguer anomalies and provide better spatial resolution. Signatures relating to near-surface geological units are enhanced relative to those of deeper units. Composite signatures produced by proximal geological units may be resolved into separate elements thereby permitting identification of individual units.



Notation bibliographique conseillée :

Jobin, D., Keating, P., Lefebvre, D., 2009
Série des cartes géophysiques, parties des SNRC 32 E/9, 32 E/16, 32 F/11, 32 F/12, 32 F/13, et 32 F/14, Levé géométrique de Matagami, Québec. Commission géologique du Canada, Dossier public 6412; Ministère des Ressources naturelles et de la Faune, Québec. DP 2009-06, 7 pages, 2 cartes, échelle 1:50 000.

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Geophysical Series, parts of NTS 32 E/9, 32 E/16, 32 F/11, 32 F/12, 32 F/13, and 32 F/14, Matagami Gravity Survey, Québec.
Geological Survey of Canada, Open File 6412; Ministère des Ressources naturelles et de la Faune, Québec. DP 2009-06, 7 pages, 2 maps, scale 1:50 000.

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Openness, surdité : D. Debie, Objets de la diffusion des données (ODD)

Fond de carte numérique : Géométrie Canada

du Canada les erreurs ou omissions de nature géologique qu'ils auront pu constater.

DOSSIER PUBLIC 6412 DE LA CGC/GSC OPEN FILE 6412
DP 2009-06 DU MRNF

SÉRIE DES CARTES GÉOPHYSIQUES / GEOPHYSICAL SERIES

Parties des SNRC 32 E/9, 32 E/16, 32 F/11, 32 F/12, 32 F/13 et 32 F/14

LEVÉ GRAVIMÉTRIQUE DE MATAGAMI, QUÉBEC
MATAGAMI GRAVITY SURVEY, QUEBEC

ANOMALIE DE BOUGUER / BOUGUER ANOMALY

A digital version of this map and the corresponding digital and gridded geophysical data may be downloaded, at no charge, from Natural Resources Canada's Geoscience Data Repository for Geophysical and Geochemical data at <http://dpr.nrcan.gc.ca>

The map and the digital data are also available, for a fee, from the Geophysical Data Centre, Geological Survey of Canada, 615 Booth Street, Ottawa, Ontario, K1A 0E8, Tel: (613) 995-5326; email: infogcd@agg.nrcan.gc.ca

This map and the digital geophysical data may also be obtained from the Centre de service des mines

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Any evidence, or additional geological information known to the user

would be welcomed by the Geological Survey of Canada

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Digital cartography by R. Bolvin, Data Dissemination Division (DDC)

Any revisions or additional geological information known to the user

Elevations in metres above mean sea level, except for the western sea