

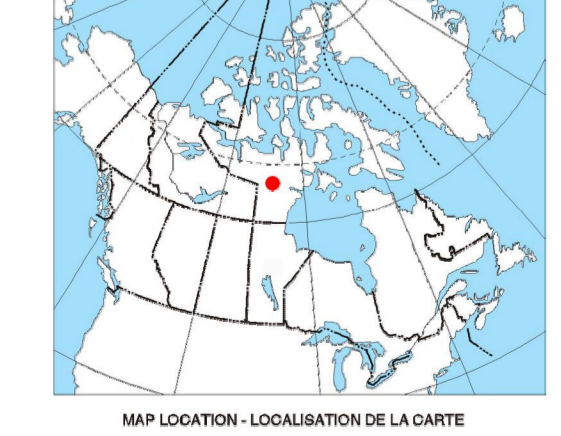
NORTHEAST THELON BASIN GEOPHYSICAL SURVEY. Introduction: A gamma-ray spectrometric and aeromagnetic airborne geophysical survey of the northeast Thelon Basin area, Nunavut, was completed by Geotek Airborne Surveys. The survey was flown from August 2nd to September 10th, 2004 using three Piper PA-31 Navajo aircraft (C-GJBA, C-GJBB, C-GJBG). The terrain elevation and control line spacing were, respectively, 400 m and 2400 m, and the aircraft flew at a nominal terrain clearance of 120 m as stippled between 200 and 270 km/h. Traverse lines were oriented 130° with orthogonal control lines. The flight path was recovered by post-flight differential corrections to raw data recorded by a Global Positioning System. The survey was flown on a pre-determined flight surface to minimize differences in magnetic values at the intersections of control and traverse lines.

Table 1. Gamma-Ray spectrometer sensitivities for each aircraft. Table 2. Gamma-Ray spectrometer sensitivities for each aircraft. Table 3. Sensitivities des spectromètres de chacun des aéronefs.

Magnetic Data: The magnetic field was sampled 10 times per second using a split-beam cesium vapour magnetometer (sensitivity = 0.005 nT) rigidly mounted to the aircraft. Differences in magnetic values at the intersections of control and traverse lines were analysed to obtain a mutually corrected magnetic data. The resulting values were then interpolated to a 100 m grid. The International Geomagnetic Reference Field (IGRF) defined at the average GPS altitude of 287 m for the year 2000.64 was then removed. Removal of the IGRF leaves the magnetic field of the Earth's core, produced as a result of dynamo action within the Earth's core. The first vertical derivative of the magnetic field is the rate of change of the magnetic field in the vertical direction. Computation of the first vertical derivative removes long wavelength features of the magnetic field and significantly improves the resolution of closely spaced and suppressed anomalies. A property of first vertical derivative maps is the coincidence of the zero-value contours with vertical contours of magnetic units at high magnetic latitudes (Kodv, 1965).

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GSC OPEN FILE 6522 / DOSSIER PUBLIC 6522 DE LA CGC
GEOPHYSICAL SERIES / SÉRIE DES CARTES GÉOPHYSIQUES
AIRBORNE GEOPHYSICAL SURVEY OF THE NORTHEAST THELON BASIN, NUNAVUT
LEVÉ GÉOPHYSIQUE AÉROPORTE DE LA PARTIE NORD-EST DU BASSIN DE THELON, NUNAVUT
NTS 66 G/7 et 66 G/8 / SNRC 66 G/7 et 66 G/8



Department of Economic Development and Transportation / Ministère du Développement économique et des Transports
Canada GEM

Authors: Harvey, B.J.A., Coyle, M., Buckle, J.L., Carson, J.M. and Hefford, S.W.

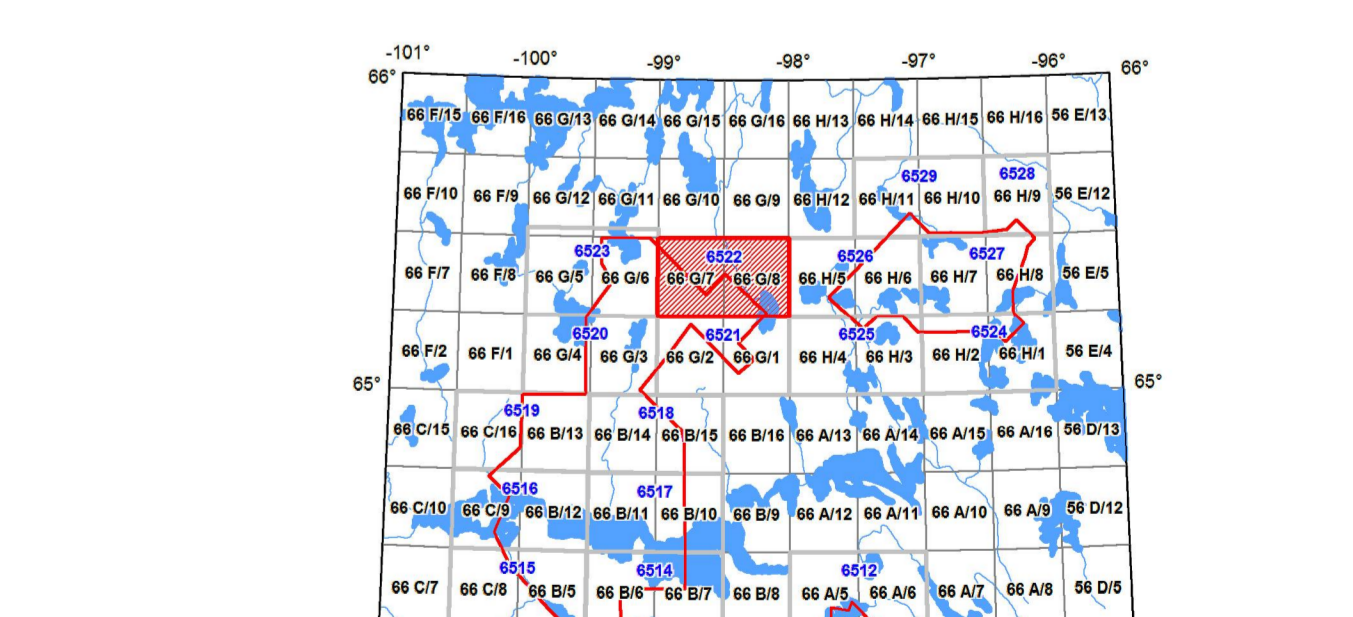
THORIUM / POTASSIUM
Scale 1:50 000 - Échelle 1/50 000
1:500 0 1000 2000 3000 mètres

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L'acquisition, la compilation des données ainsi que la production des cartes furent effectuées par Geotek Airborne Surveys, Siskiwitovik, Saskatchewan. La production et la supervision de projet furent effectuées par la Commission géologique du Canada, Ottawa, Ontario.

Digital versions of this map, corresponding digital profile and gridded data, and similar data for adjacent aeromagnetic and gamma-ray spectrometric surveys can be downloaded, at no charge, from Natural Resources Canada's Geoscientific Data Repository at http://gdr.nrc.ca/gdr. The same products are available, for a fee, from the Geophysical Data Centre, Geological Survey of Canada, 615 Booth Street, Ottawa, Ontario, K1A 0E8. Telephone: (613) 969-3326, email: info@gsdapp.nrcan.gc.ca. On peut télécharger gratuitement, depuis l'Entrepôt de données géoscientifiques de Ressources naturelles Canada à l'adresse Web http://gdr.nrc.ca/gdr, des versions numériques de cette carte, des données numériques correspondantes en format profil et en format grille, ainsi que des données similaires issues des levés aéromagnétiques et spectrométriques adjacents. On peut aussi procurer les mêmes produits, moyennant des frais, en s'adressant au Centre de données géophysiques de la Commission géologique du Canada, 615, rue Booth, Ottawa (Ontario) K1A 0E8. Téléphone: (613) 969-3326, courriel: info@gsdapp.nrcan.gc.ca.

MAP SHEET SUMMARY / SOMMAIRE DES FEUILLETS
1. Natural Air Absorbed Dose Rate
2. Potassium
3. Thorium
4. Thorium / Potassium
5. Uranium / Potassium
6. Thorium / Potassium
7. Uranium / Potassium
8. Terrain Relief/Relief Map
9. Residual Total Magnetic Field
10. First Vertical Derivative of the Magnetic Field



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SHEET 7 OF 10 / FEUILLET 7 DE 10
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Nomenclature géométrique: Harvey, B.J.A., Coyle, M., Buckle, J.L., Carson, J.M. et Hefford, S.W., 2011. Levé des cartes géophysiques aériennes de la partie nord-est du bassin de Thelon, Nunavut, Canada. Série des cartes géophysiques 6522, Commission géologique du Canada, Dossier public 6522, feuille 7 sur 10.