

RESIDUAL TOTAL MAGNETIC FIELD

COMPOSANTE RÉSIDUELLE DU CHAMP MAGNÉTIQUE TOTAL

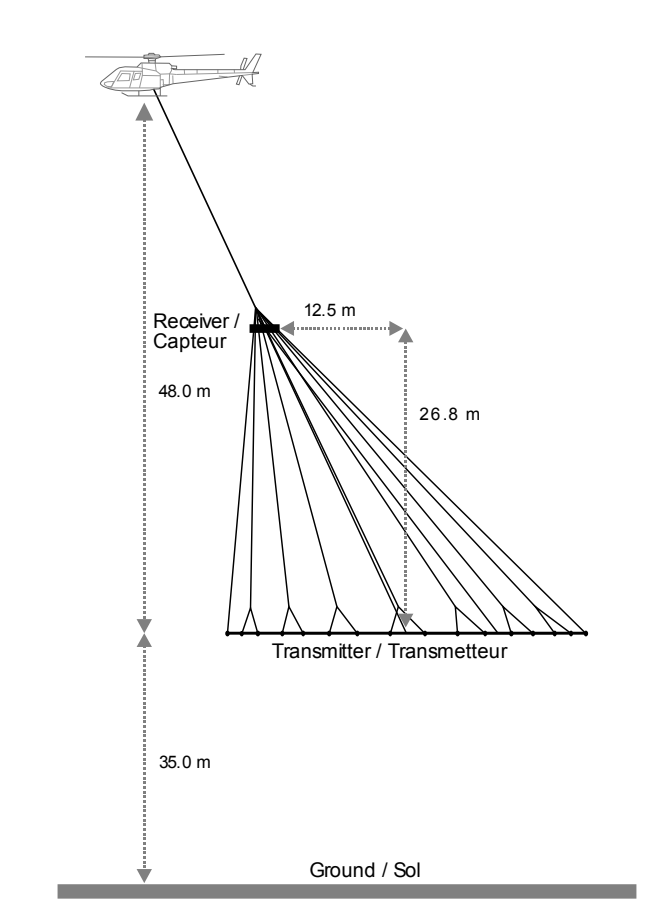
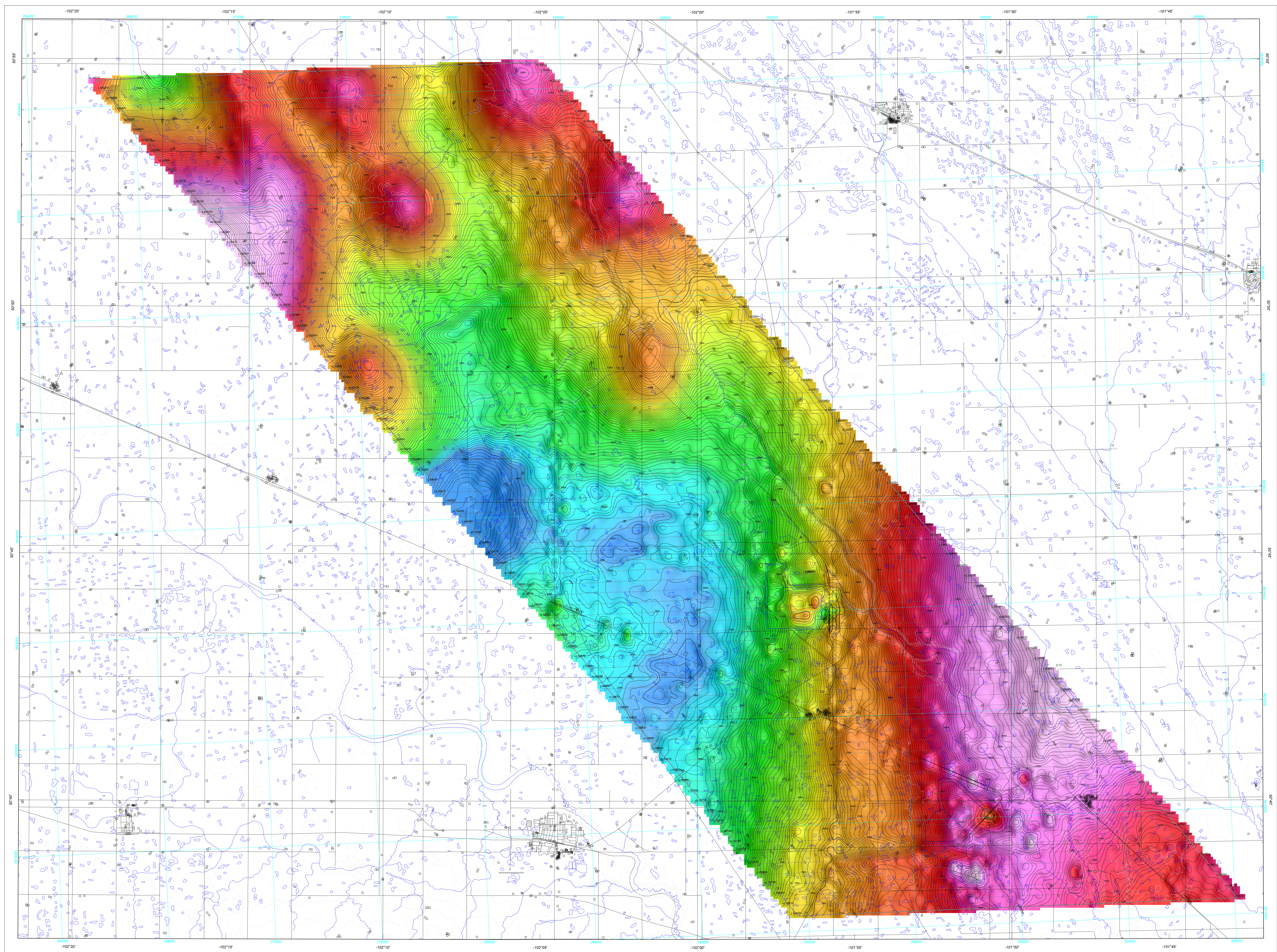
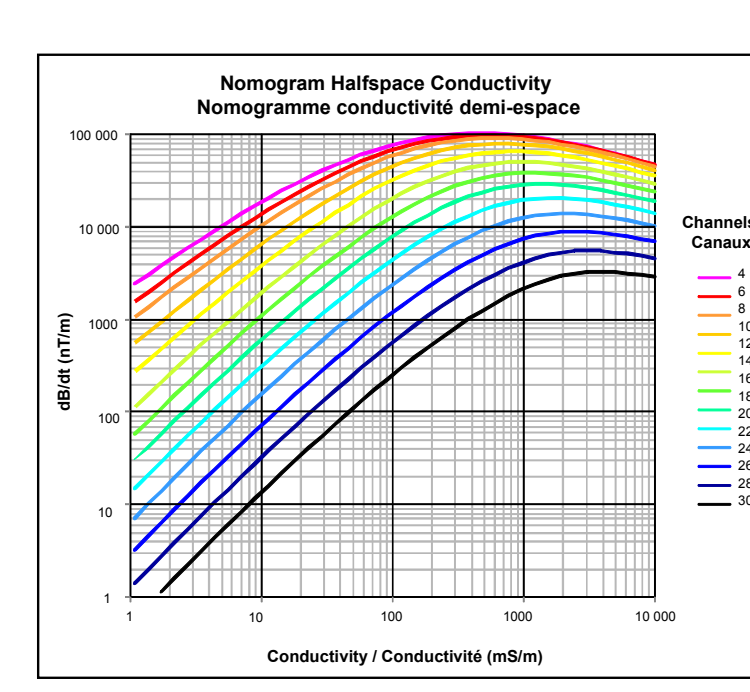


Table with 3 columns: Parameter, Bloc 1a, Bloc 1b, Bloc 2b. Lists survey parameters like transmitter line azimuth, line spacing, and sensor clearances.

Electromagnetics: The TDEM system transmits a 2 ms time-varying signal from a two-turn, 708 m² horizontal loop, mounted approximately 45 m above and 10 m below the aircraft. The configuration provides a loop moment of 1.0 x 10⁷ Am².

The EM response may include both natural and cultural contributions. The data have not been edited for cultural sections. The data presented in this chart have not been further processed in the following GSC publications: O'Brien, G.A., Sharpe, D.R., Pugin, A.J.M., and Haines, H.A., Jr., in prep. Helicopter time-domain electromagnetic data over parts of the Eastern Harlequin valley aquifer system, Saskatchewan, Canada, Geological Survey of Canada, Current Research.

Table with 2 columns: Parameter, Value. Lists system specifications like base frequency (90 Hz), pulse width (2 ms), and transmitter current (708 A).



Acquisition: The apparent conductivity values were derived from the full channel spectrum (on-time and off-time of the 2-coil data), using a halfspace conductivity model. The algorithm corrects for the apparent conductivity in the apparent resistivity, on-time or off-time into an apparent conductivity. This is performed using a look-up table that contains the response over a range of half-space conductivities and altitude heights. The individual channel results are then averaged proportionally to their calculated skin depth.

Electromagnetic Decay Constant: Decay constant (tau) values are obtained by fitting the amplitude data from channels 14 to 18 of the 2-coil response of the transmitter (approximately 200 to 1000 Hz) to a theoretical model. The decay constant is a function of the relative strength of the conductor. In simple terms, the slope of this function will reflect the decay rate of the transient field and therefore the strength of the conductivity. A steep slope of decay, reflecting a high conductivity will be represented by a high decay constant value.

Magnetics: The magnetic field was sampled 10 times per second using a self-biased caesium vapour magnetometer (sensitivity = 0.001 nT) mounted alongside the EM receiver. The magnetic field was sampled at 10 Hz. Corrections in magnetic values at the receiver and control were made using a magnetic field control system. Corrections in magnetic values at the receiver and control were made using a magnetic field control system. Corrections in magnetic values at the receiver and control were made using a magnetic field control system.

Processing: The magnetic field data were processed using a 3-component induction coil (X, Y, Z). The data were processed using a 3-component induction coil (X, Y, Z). The data were processed using a 3-component induction coil (X, Y, Z).

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This airborne geophysical survey and the production of this map were funded by the Circumwater Geoscience Program of the Earth Sciences Sector, Natural Resources Canada.

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Des données géoscientifiques de cette carte proviennent des géophysiciens aéroportés effectués par le programme géoscientifique des Ressources naturelles Canada - Données géophysiques à l'aéroporté (GSC/Geophysics Airborne Data). Les données géoscientifiques proviennent également des géophysiciens aéroportés effectués par le programme géoscientifique des Ressources naturelles Canada - Données géophysiques à l'aéroporté (GSC/Geophysics Airborne Data). Les données géoscientifiques proviennent également des géophysiciens aéroportés effectués par le programme géoscientifique des Ressources naturelles Canada - Données géophysiques à l'aéroporté (GSC/Geophysics Airborne Data).

Authors: Hefford, S.W., Miles, W.F., Oldenborger, G.A., and Pugin, A.J.M. Data acquisition and map production by: Hélie, M., Hefford, S.W., Miles, W.F., Oldenborger, G.A., and Pugin, A.J.M. Cartographie et production de la carte par: Hélie, M., Hefford, S.W., Miles, W.F., Oldenborger, G.A., et Pugin, A.J.M.

Scale 1: 50 000 - Echelle 1: 50 000

Universal Transverse Mercator Projection North American 1983

Projection Transverse Universelle de Mercator Système de référence géodésique nord-américain, 1983

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Des versions numériques de cette carte peuvent être téléchargées sans frais depuis l'Entrepôt de données géoscientifiques de Ressources naturelles Canada (NERD) à l'adresse <http://gdr.nrc.ca>. Les données géoscientifiques peuvent également être téléchargées sans frais depuis l'Entrepôt de données géoscientifiques de Ressources naturelles Canada - Données géophysiques à l'adresse <http://geopy.nrc.ca>. Les mêmes produits sont également disponibles moyennant des frais, en s'adressant au Centre de données géophysiques, Commission géologique du Canada, 615, rue Booth, Ottawa, Ontario, K1A 0E8; téléphone: (613) 995-5326; courriel: geopy@nrc.ca.

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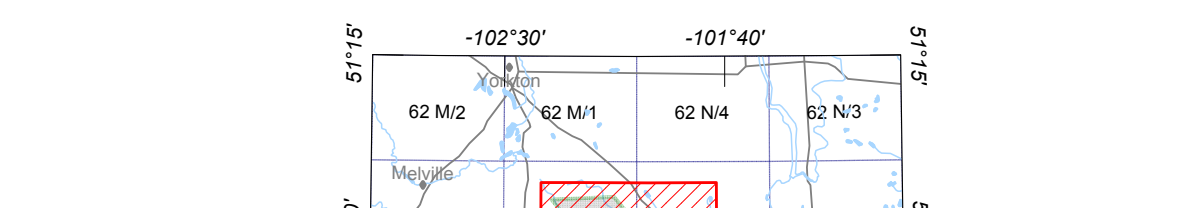
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Table with 2 columns: Symbol, Description. Lists symbols for project limits, drainage, roads, and buildings.

Table with 2 columns: Line Style, Description. Lists line styles for magnetic depression, contour lines, and topographic contours.



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND GEOGRAPHICAL MAP INDEX

SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOGRAPHIQUES

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