

Residual Total Magnetic Field
This map of the residual total magnetic field was derived primarily from data acquired during an aeromagnetic survey carried out by Geo Data Solutions (GDS) Inc. from March 1, 2017 to April 2, 2017. The survey area consists of three adjoining survey blocks A, B and C. Published data (Buckle et al., 2008) originating from a survey flown by Fugro Airborne Surveys Corp. supplements the new survey data in block C. Data from all survey blocks were recorded using split-beam cesium vapour magnetometers (sensitivity = 0.005 nT) mounted in each of the tail booms of two GDS Payer Wings and a Cessna Titan 404 aircraft operated by Fugro Airborne Surveys Corp.

| Survey project specifications | | | | |
|-------------------------------|--------------|--------------|--------------|-------------------|
| | Block A | Block B | Block C | Block C (in-fill) |
| Survey year | 2017 | 2017 | 2009 | 2017 |
| Aircraft registration | C-125B | C-125B | C-125B | C-125B |
| Flight height | Drape, 100 m | Drape, 100 m | Drape, 125 m | Drape, 100 m |
| Line spacing | 200 m | 200 m | 400 m | 400 m |
| Line direction | 45° / 225° | 100° / 280° | 100° / 280° | 100° / 280° |
| Line spacing | 1200 m | 1200 m | 2400 m | 2400 m |
| Line direction | 135° / 315° | 100° / 280° | 100° / 280° | 100° / 280° |

In block C, the in-fill flight line and tie line for the current 2017 survey were utilized to provide the denser coverage of 200 m line and 1200 m tie line spacing when combined with the 2009 survey.

The flight path was recovered following post-flight differential corrections to the raw Global Positioning System (GPS) data. The survey blocks were flown on a pre-determined flight drapage surface to minimize differences in magnetic values at the intersections of tie lines and traverse lines. The drapage surface for the 2009 survey in block C was based on the magnetic data were then used to continue the new survey surface level of the 2017 survey drapage surface before these intersection differences were computer-analyzed to obtain a mutually leveled set of flight line magnetic data. The leveled values were then interpolated to a 62.5 m grid. The International Geomagnetic Reference Field (IGRF) defined at the average GPS altitude of 100 m for the current in-survey date of 2017/03/17 was then removed. Removal of the IGRF, representing the magnetic field of the Earth's core, produces a residual component, related almost entirely to magnetization within the Earth's crust.

This publication is available for free download through GEOCAN (<https://open.canada.ca/en/geoproducts>). Corresponding digital profile and grid data as well as similar data for adjacent aeromagnetic surveys are available from Natural Resources Canada's Geoscience Data Repository for Aeromagnetic data at <https://open.canada.ca/en/geoproducts>. The same products are also available, for a fee, from the Geophysical Data Centre, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0S8. Telephone: (613) 993-5236; email: geodata@geoscan.gc.ca.

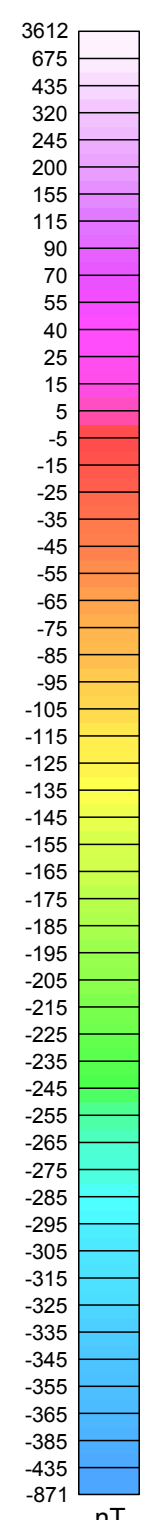
Digital versions of this map, as well as corresponding digital profile and gridded data, may also be downloaded free of charge from the Alberta Geological Survey website (<http://www.ags.ab.ca>).

Acknowledgments

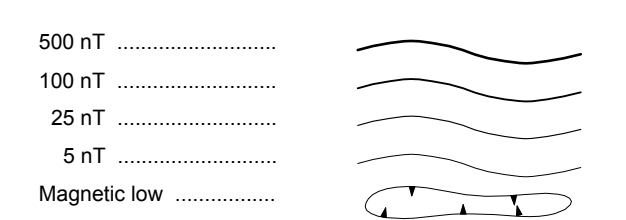
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References

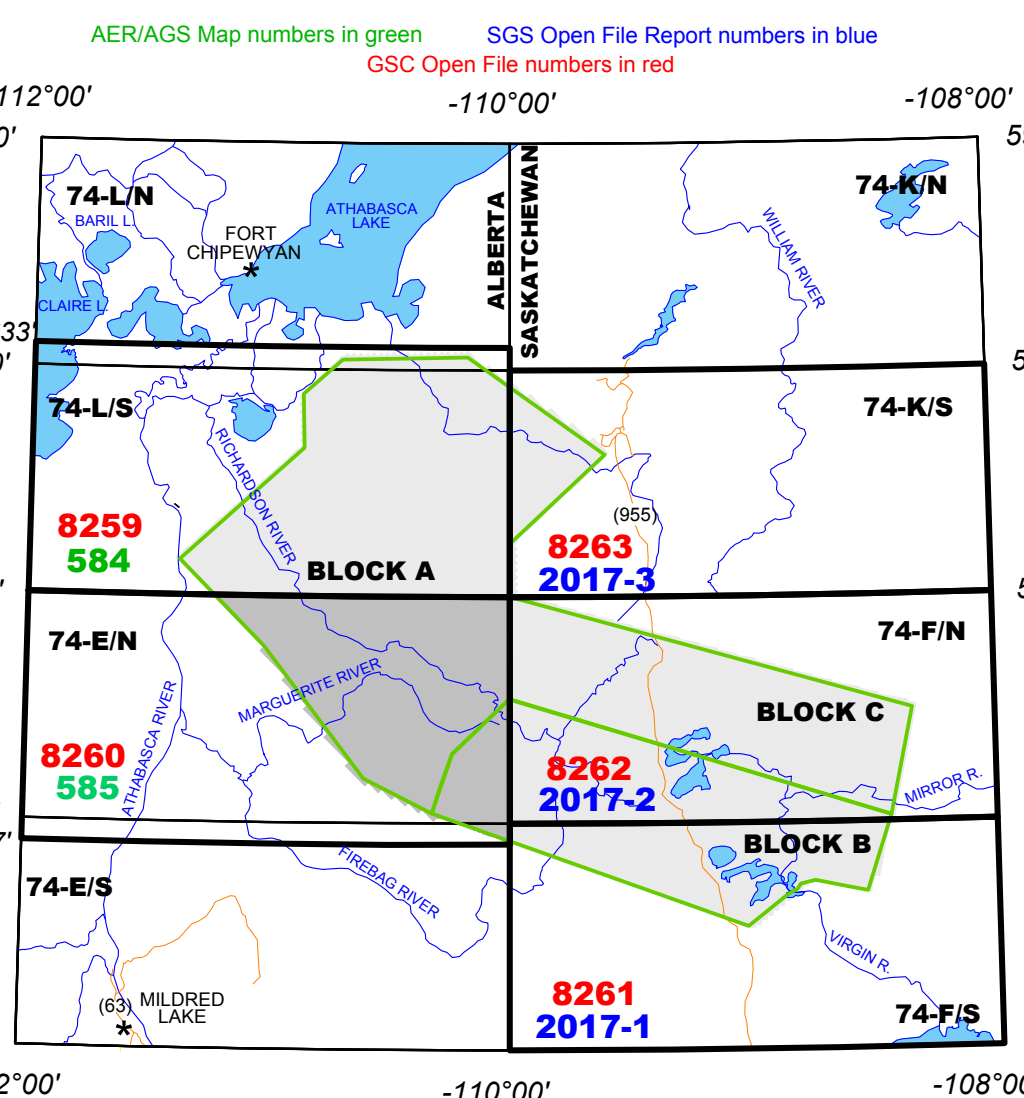
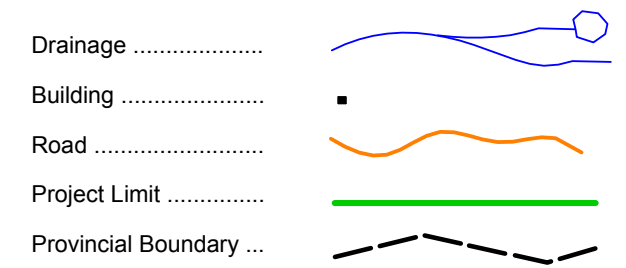
Buckle, J. L., Coyle, M., Carson, J. M., Hendry, B. J. A. and Delaney, G., 2009. Geophysical Survey, Southern Athabasca Basin Geoprobe Area, parts of NTS 74-F and 74-E. Geological Survey of Canada, Open File 6917. Saskatchewan Ministry of Energy and Resources, Open File 2009-1, scale 1:250 000. <https://open.canada.ca/en/geoproducts>.



ISOMAGNETIC LINES



PLANIMETRIC SYMBOLS

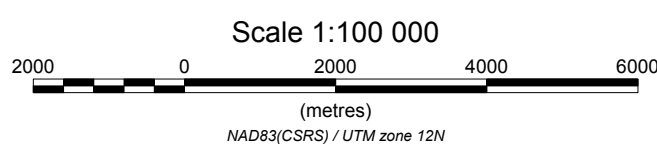


GEOLOGICAL SURVEY OF CANADA OPEN FILE 8260
ALBERTA GEOLOGICAL SURVEY MAP 585

RESIDUAL TOTAL MAGNETIC FIELD

AEROMAGNETIC SURVEY OF THE MARGUERITE RIVER AREA

ALBERTA
Parts of NTS 74-E North and 74-E South

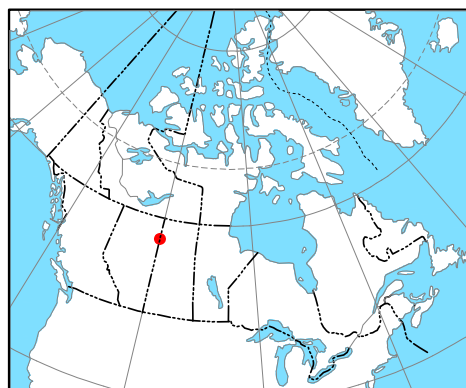


Universal Transverse Mercator Projection
North American Datum 1983

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Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications

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