

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., 2009) originates from a survey flown by Fugro Airborne Survey Corp. and represents the new survey data in block C. Data from all survey blocks were recorded using split-beam cesium vapour magnetometers (model 11022-1) mounted in each of the boom of two GDS Tiger Hawk and a Cessna 441 aircraft operated by Fugro Airborne Surveys Corp.

Survey project specifications

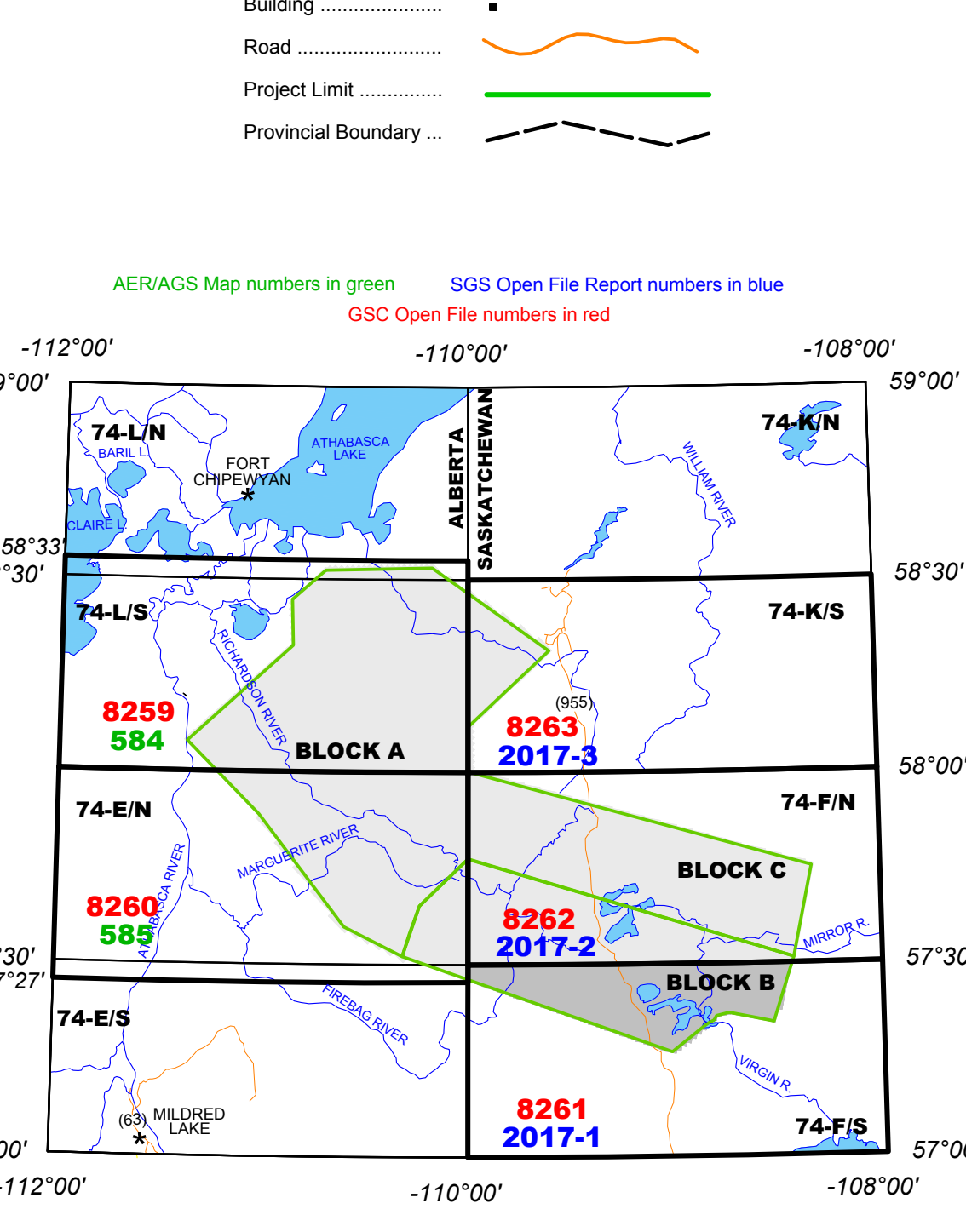
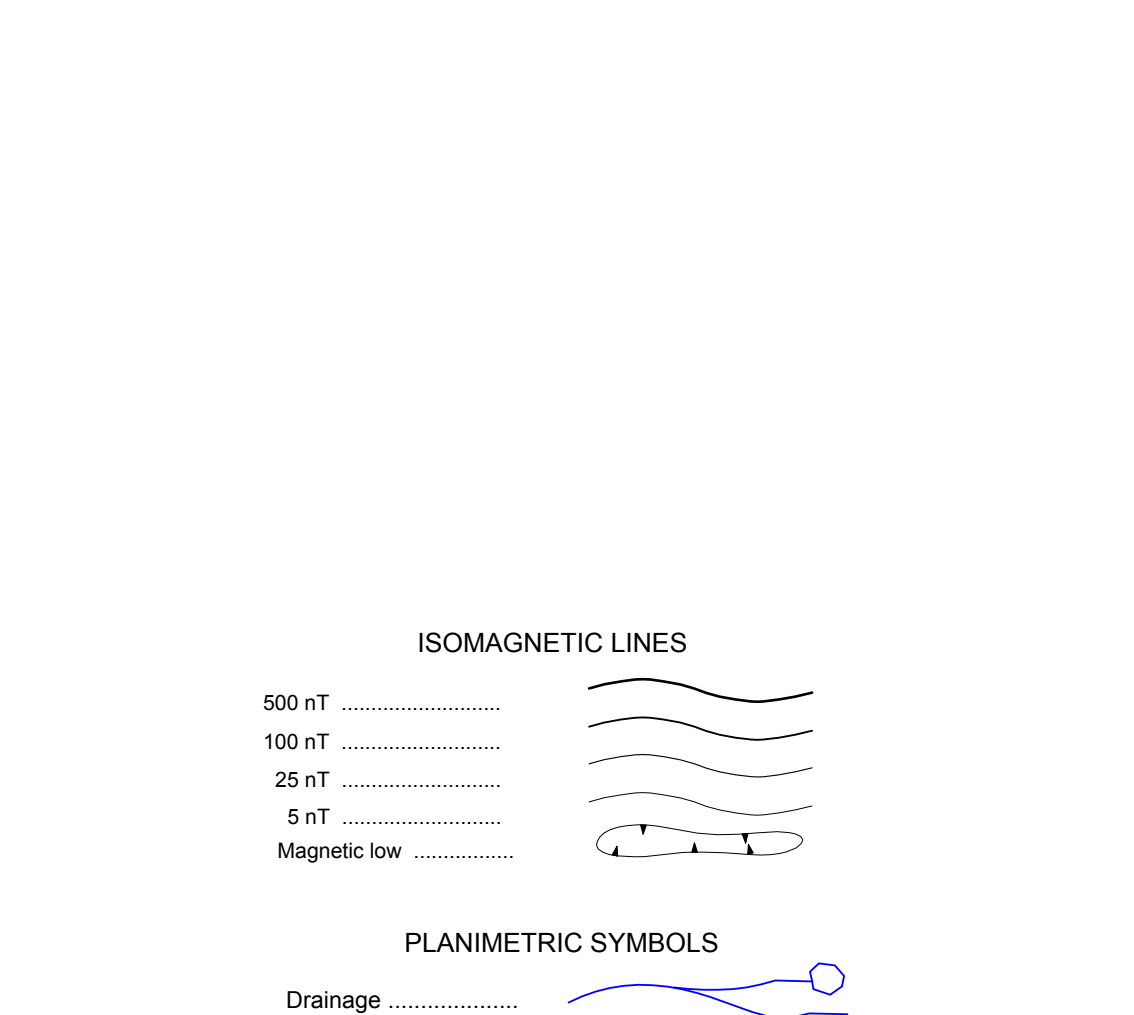
Survey year	Block A	Block B	Block C	Block C (in-fill)
2017	2017	2017	2017	2017
Aircraft registration	C-FVUG	C-FVUG	C-FVUG	C-FVUG
Flight height	Draps, 100 m	Draps, 100 m	Draps, 100 m	Draps, 100 m
Line spacing	250 m	250 m	400 m	400 m
Line direction	45° / 225°	150° / 210°	100° / 280°	100° / 280°
Tie line spacing	1200 m	1200 m	2400 m	2400 m
Tie line direction	135° / 315°	10° / 190°	10° / 190°	10° / 190°

In block C, the in-fill flight lines and tie lines for the current 2017 survey were added to provide the denser coverage of 200 m line and 500 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 drap surface to minimize differences in magnetic values at the intersections of the lines and traverse lines. The drap surface for the 2009 survey in block C was lowered and the magnetic data were downward continued to the new surface level of the 2017 survey above and below the flight drap surface. Corrections were computed and applied to correct magnetic values of flight line magnetic data. The revised magnetic data were then interpolated to a 62.5 m grid. The International Geomagnetic Reference Field (IGRF) defined at the average GPS altitude of 524 m for the current 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 magnetizations within the Earth's crust.

This publication is available for free download through GEOCAN (<http://geocan.nrcan.gc.ca/>). Corresponding digital profiles and gridded data as well as similar data for adjacent airborne geophysical surveys are available from Natural Resources Canada's Geospatial Data Repository for Aerogeophysics data at <http://gdr.nrcan.gc.ca/geophysics/>. 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: zhang@gsa.nrcan.gc.ca.

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References
 Buckle, J.L., Coyle, M., Cannon, J.M., Harvey, G.J.A., and Delaney, G., 2009. Geophysical Series, Southern Athabasca Basin Geophysical Survey, Saskatchewan, parts of NTS 74-F and 74-E. Geological Survey of Canada, Open File 6017, Saskatchewan Ministry of Energy and Resources, Open File 2009-1, scale 1:250 000. <https://doi.org/10.4095/247265>



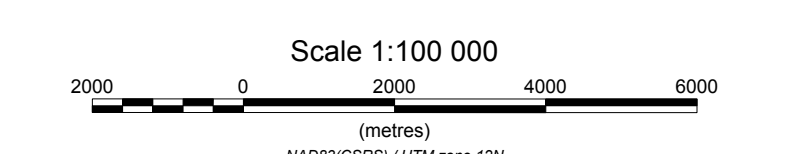
GEOLOGICAL SURVEY OF CANADA OPEN FILE 8261
 SASKATCHEWAN GEOLOGICAL SURVEY OPEN FILE REPORT 2017-1

RESIDUAL TOTAL MAGNETIC FIELD

AEROMAGNETIC SURVEY OF THE MARGUERITE RIVER AREA

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SASKATCHEWAN
 Part of NTS 74-F South



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