



AEROMAGNETIC VERTICAL GRADIENT MAP
CARTE AÉROMAGNÉTIQUE DU GRADIENT VERTICAL

MAP 41217G CARTE

63L/1a,b

SASKATCHEWAN

SCALE 1:20 000 ÉCHELLE 1/20 000

Kilomètre Kilometre

0 0.5 1.0 1.5 2.0 2.5 3.0 Kilomètres

MAGNETIC CONTOUR LINES
COURSES DE NIVEAU MAGNÉTIQUE

- + .5 gamma/metre
- + 1 gamma/metre
- + 4 gamma/metre
- 4 gamma/metre
- .5 gamma/metre
- 1 gamma/metre
- 2 gamma/metre

- Flight path: 100
- Lignes de vol: 100

Flight altitude: 150 metres above ground level

Altitude du vol: 150 mètres au-dessus du niveau du sol

1 gamma = 10^{-8} tesla in SI units

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Contribution to Canada-Saskatchewan Mineral Development Agreement 1984-1989, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by Geological Survey of Canada.

Contribution à l'accord sur le développement minier Canada-Saskatchewan sur l'exploration minière 1984-1989 faisant partie de l'Entente de développement économique et régional. Ce projet a été financé par la Commission géologique du Canada.

Copies of this map may be obtained from the Geological Survey of Canada, Ottawa. The survey data used to compile this map are available in digital form from the Geological Survey of Canada at the cost of retrieval and copying.

This map was compiled from data obtained as a result of an aeromagnetic gradiometer survey carried out by Kening Earth Sciences Limited using a Piper Navajo aircraft (registration C-FFRY). Two 0.005 gamma resolution self-aligning cesium vertical gradiometers were used in the tail boom of the survey aircraft and were vertically separated by 83 mm. The survey operations were carried out from October 1985 to February 1986, at a flight altitude of 150 m mean terrain clearance. The average flight spacing was 300 m. Control lines were flown at an average spacing of 10 km. Flight path recovery was effected using a computer generated 35 mm film strip.

During the compilation of the data, the vertical gradient values, which approximate closely the first vertical derivative of the earth's total field, were obtained by dividing the difference between the total field readings of the two magnetometers by their vertical separation.

The vertical gradient data were then filtered with a digital operator to remove instrument noise and to level the data.

Then the vertical gradient values were interpolated on a 50 m grid and contoured using a computer generated 35 mm film strip.

Gridding and contouring was done using the computer facilities of DataPlotting Services Inc. The base used for this map was obtained from a 1:50 000 topographical map published by the Department of Energy, Mines and Resources, Ottawa.

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Cette carte a été compilée d'après les données enregistrées durant un levé aéromagnétique au gradiomètre, réalisé par Kening Earth Sciences Limited, au moyen d'un avion de type Piper Navajo immatriculé C-FFRY. Deux magnétomètres à vecteur vertical à alignement automatique, de résolution 0.005 gamma, sont placés dans le train arrière de l'avion de survol et sont séparés verticalement d'une distance de 83 mm, sont montés dans deux longerons (poutres) situés dans la queue de l'avion. Les opérations de survol ont été réalisées entre octobre 1985 et février 1986, à une altitude de 150 m au-dessus du niveau moyen du relief. La distance entre les vols de contrôle est de 300 m au-dessus du sol. L'écartement moyen des lignes de vol était de 300 m tandis que les lignes de vol étaient effectuées à une altitude moyenne de 150 m au-dessus du sol. Le recouvrement des trajectoires de vol a été effectué à l'aide d'une caméra de 35 mm qui prend des photographies en continu. La correction des lignes de vol a été effectuée à l'aide d'une caméra de 35 mm qui prend des photographies en continu.

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