GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS

SHEET 75 I

LEGEND

- < 2000 gammas
- 2000 — 2300 gammas
- 2300 — 2600 gammas
- 2600 — 3000 gammas
- 3000 — 4000 gammas
- > 4000 gammas

Isomagnetic Lines (total field)

500 gammas . . . . . .
100 gammas . . . . . .
Magnetic depression . . . . . .

Flight altitude 1000 feet above ground-level

Boundary between magnetic zones A, B and C . . . . . .
Individual or groups of positive or negative magnetic anomalies . . . . . (a) – (h)

This is a composite aeromagnetic map compiled from sixteen aeromagnetic maps previously published by the Geological Survey on a scale of one inch equals one mile. On this map, flight line traces are eliminated and base - map detail is generalized and reduced to a minimum.

No correction has been made for regional variation which, according to Dominion Observatory Map, "F-isodynamic chart Canada 1955.0" increases at the rate of 2.0 gammas per mile in the direction S 20° E

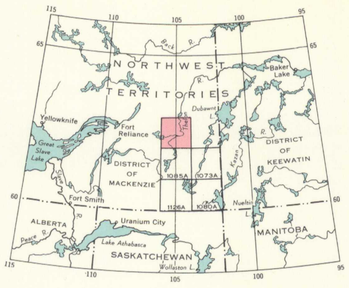
58,600 gammas should be added to each contour value to tie into the absolute value of the earth's field. This is not necessary for interpretation purposes but would assist in the standardization of magnetic data.

Aeromagnetic-Geologic Correlation by A. S. MacLaren

Cartography by the Geological Survey of Canada, 1961

Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario.

Mean magnetic declination 24° 36′ East, decreasing 5.3′ annually. Readings vary from 21° 54′ E in the S E corner to 27° 18′ E in the N W corner of the map-area.



INDEX MAP

106° 00′ 30′ 105° 00′ 30′ 104° 00′
63° 00′ 45′ 30′ 15′ 62° 00′

Adjoins Map 1085A, "Firedrake Lake"

DESCRIPTIVE NOTES

Previous geological work in this area was a helicopter survey by Wright (Geological Notes on Eastern District of Mackenzie, Northwest Territories; Geol. Surv., Canada, Paper 56-10, 1956).

MAIN MAGNETIC FEATURES

Without reference to geology, the area may be divided into three zones — A, B, and C — each having a distinctive magnetic pattern or character. Each zone may consist of one or more parts.

Zones A are characterized by a low magnetic intensity, chiefly between 1,600 and 2,000 gammas. Within this area, anomalies of small to large extent have a slightly preferred orientation in a northeasterly direction. The magnetic intensity of these anomalies is generally 100 or 200 gammas higher than that of the surrounding area, but locally it is 1,000 gammas higher than that of the background intensity over adjacent acidic gneisses. These two zones are underlain by granitic and dioritic gneisses, and minor massive granite.

Zones B have a slightly higher average magnetic intensity than zones A. They contain both small and large positive magnetic anomalies, which are oriented chiefly in a northeasterly direction. These positive anomalies are interspersed with negative anomalies of low intensity. Areas B coincide with paragneisses derived from sedimentary rocks, meta-volcanic rocks, granitic and granodioritic gneisses, some basic intrusive rocks, and Dubawnt sandstone.

Zone C is the most prominent magnetic feature in the map-area. It consists of a series of magnetic anomalies with greater than 4,000 gammas intensity, trending north-northeast. Calculated maximum depth to the bodies causing these anomalies ranges from 2,100 to 4,100 feet. These anomalies are thought to be caused by a series of basic intrusions.

MINOR MAGNETIC FEATURES

ANOMALY	INTENSITY ABOVE BACKGROUND (GAMMAS)	ROCK TYPE INTERPRETED
a, b, and c	300 to 700	diorite or gabbro
d	1,000	meta-gabbro or diorite; anorthosite in negative areas to north and west
e	500 to 1,000	plagioclase-pyroxene-hornblende gneiss or basic intrusive rocks
f	300	meta-gabbro or diorite
g	2,000 to 2,700	basic intrusive rocks
h	600 to 1,400	basic gneisses or basic intrusive rocks

PUBLISHED, 1962
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MAP 1127A

AEROMAGNETIC MAP

BEAVERHILL LAKE

DISTRICT OF MACKENZIE
NORTHWEST TERRITORIES

Scale: One Inch to Four Miles = $\frac{1}{253,440}$

4 2 0 4 8 12 Miles