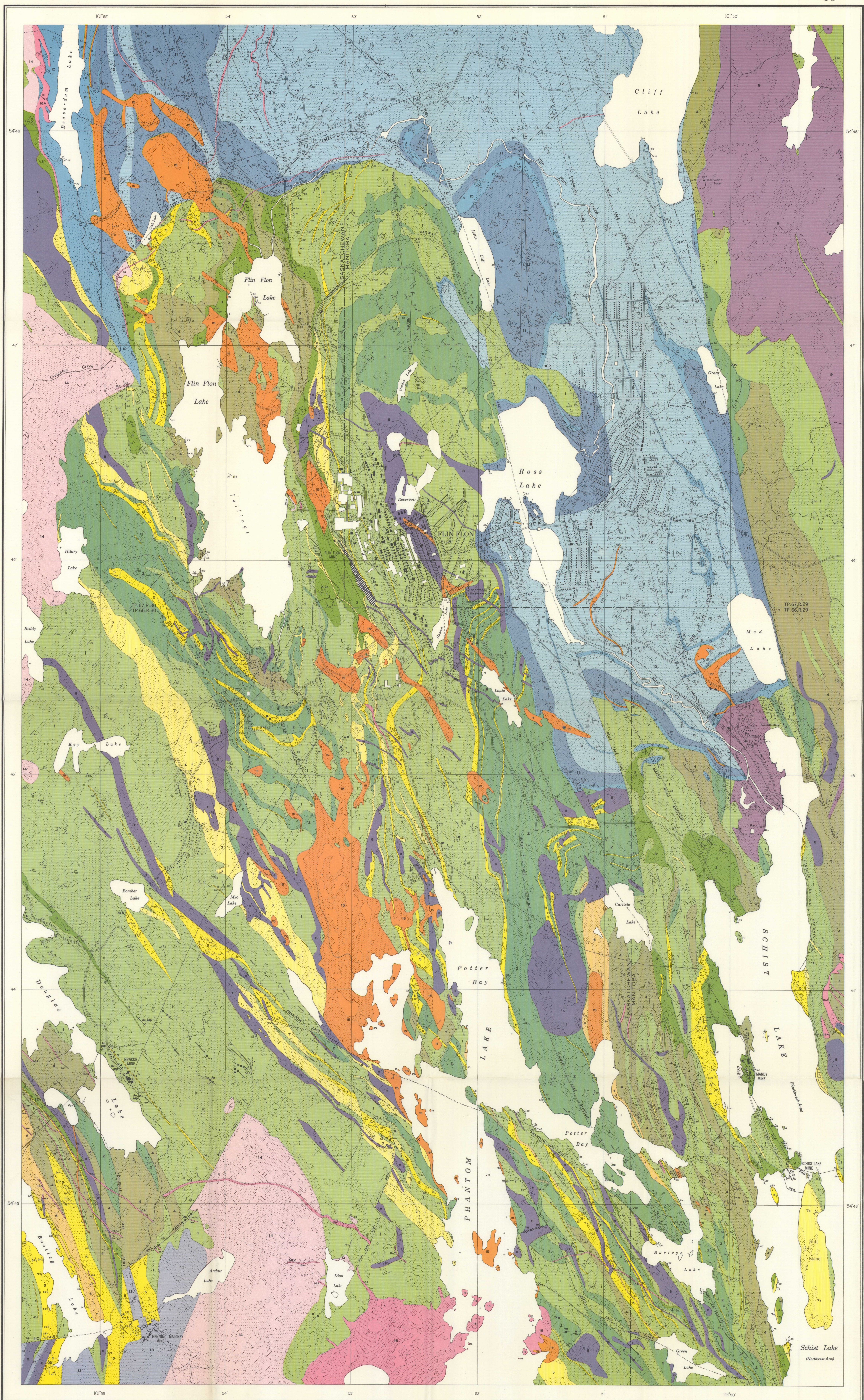


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DESCRIPTIVE NOTES

The oldest rocks of the area belong to the Aniak group and consist of lava flows with associated pyroclastic breccias, tuffs, and mudflows. The Aniak group is subdivided into the Aniak, Mandy, and Cliff Lake formations. The Aniak formation consists of massive to micaceous andesite and basaltic flows, pyroclastic breccias, and tuffs. The Mandy formation consists of massive to micaceous andesite and basaltic flows, pyroclastic breccias, and tuffs. The Cliff Lake formation consists of massive to micaceous andesite and basaltic flows, pyroclastic breccias, and tuffs.

The Cliff Lake granite porphyry (9) is an oligoclase granite characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence. The Cliff Lake granite porphyry is a massive to micaceous granite with a coarse to medium-grained texture. It is characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

The boundary intrusions (15) are post-Mandy in age and consist of a variety of rock types ranging from fairly acid to ultrabasic. At some localities they are composed of orthopyroxene, plagioclase, and quartz. The boundary intrusions are massive to micaceous and are characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

The Kamnis granite (16) is porphyritic with distinct phenocrysts of quartz (10) and is probably older than the Mandy group because of its position in the sequence. The Kamnis granite is a massive to micaceous granite with a coarse to medium-grained texture. It is characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

The structural geology of the area is complex. The rocks of the Aniak group were folded and deeply eroded before the Mandy sediments were deposited. The Mandy group is folded and is characterized by a variety of rock types ranging from fairly acid to ultrabasic. The boundary intrusions are massive to micaceous and are characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

Regional schistosity and lineation extend without change in attitude across contacts between the Aniak and Mandy groups. The schistosity is characterized by a variety of rock types ranging from fairly acid to ultrabasic. The boundary intrusions are massive to micaceous and are characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

The Mandy mine is a base-metal producer from 1917 to 1980 and again in 1983 and 1984. The mine is located in the Mandy area and is characterized by a variety of rock types ranging from fairly acid to ultrabasic. The boundary intrusions are massive to micaceous and are characterized by abundant, large, euhedral quartz (10) and is probably older than the Mandy group because of its position in the sequence.

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LEGEND

- 16 16A KAMNIS GRANITE: porphyritic granite in part related to 15, in part may be related to 14
- 15 BOUNDARY INTRUSIONS: gabbro, diorite, quartz diorite, hornblende, olivine gabbro, syenite
- 14 Granite, granodiorite, quartz diorite
- 13 Diorite, gabbro
- MISSISSIPPI GROUP (10-12)
- 12 Gneiss, schist, andesite
- 11 Gneiss and schist, with pebbles beds
- 10 Conglomerate
- 9 CLIFF LAKE GRANITE PORPHYRY: quartz-rye granite, sheared granite
- 8 Meta-diorite, meta-gabbro
- MISSISSIPPI GROUP (10-12)
- 7 Quartz porphyry, quartz porphyry breccia, 7a, derived sericite-carbonate schist
- 6 Rhyolite
- 5 Banded tuff and breccia, in part with abundant interbeds of andesite
- 4 Porphyritic andesite breccia
- 3 Andesite breccia
- 2 Porphyritic andesite
- 1 Cherty andesite, basalt, dacite, and flow breccia

- DIFF-COVERED AREA
- Rock outcrop, outcrop area
 - Budding (inclined, overturned)
 - Budding (vertical, top of bed unknown)
 - Budding (top of bed known, dip unknown)
 - Budding (top of bed known, dip known)
 - Schistosity (inclined, vertical)
 - Lineation (inclined, plunge known, unknown)
 - Drag fold (arrow indicates plunge of axis)
 - Shear zone, fault (indicated, assumed, dip as indicated)
 - Anticline trace and dip of axial plane, bearing and plunge of axis
 - Syncline trace and dip of axial plane, bearing and plunge of axis
 - Clinal strike (direction of ice movement known)
 - Overthrust (surface above missing)
 - Ground pit
 - Rock dump
 - Mineral occurrence
 - Shaft

- MINERAL SYMBOLS
- Amethystite
 - Copper
 - Gold
 - Pyrite
 - Tungsten
 - Zinc

Geology by C. H. Stoddard, 1943, 1944, 1945, revised 1954

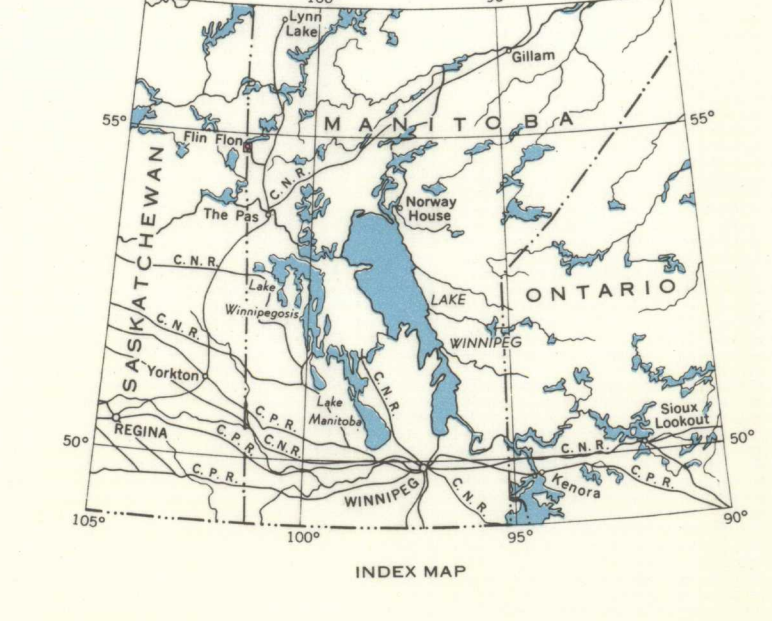
Main highway, other roads, water roads, trail or path, power transmission line, building, international boundary, intermittent stream, reef

Cartography by the Geological Cartography Unit, 1950

Base-map prepared by the Survey and Mapping Branch

Approximate magnetic declination, 1960 East

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



GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS

MAP 1078A

FLIN FLON - MANDY
WEST OF PRINCIPAL MERIDIAN
MANITOBA AND SASKATCHEWAN

Scale: One Inch to 1,000 Feet = 1:125,000

1000 500 0 500 1000 2000 3000

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