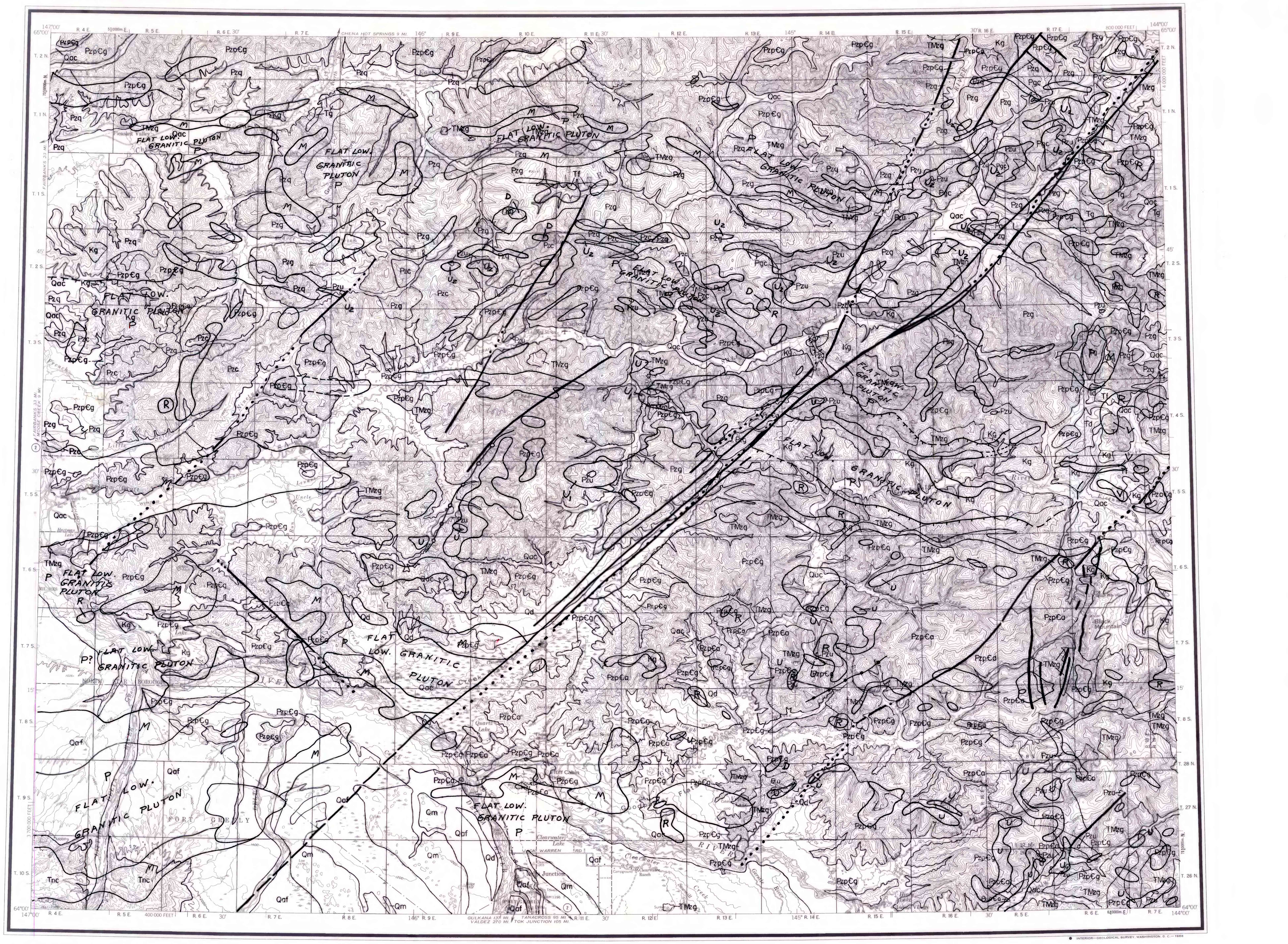
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT 78-529B

Folio of the BIG DELTA Quadrangle, Alaska



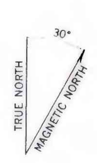
Base compiled in 1963 from U.S. Geological Survey 1:63,360 scale maps and manuscripts surveyed 1949-1958. Map not field checked.

SCALE 1:250000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

CONTOUR INTERVAL 200 FEET
DOTTED LINES REPRESENT 100 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



1958 MAGNETIC DECLINATION AT SOUTH EDGE OF SHEET VARIES FROM 29° TO 30°30' EAST

GENERALIZED GEOLOGY AND AEROMAGNETIC INTERPRETATION

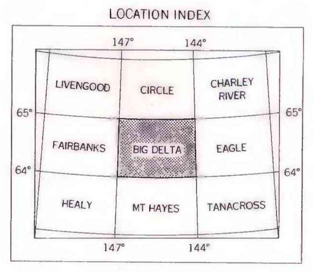
AEROMAGNETIC INTERPRETATION OF THE BIG DELTA QUADRANGLE, ALASKA

By

Andrew Griscom

1979

QUADRANGLE LOCATION



This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

EXPLANATION

GEOLOGY GENERALIZED FROM WEBER, FOSTER, AND OTHERS (1978)

CORRELATION OF MAP UNITS

UNCONSOLIDATED DEPOSITS

Qac, Qaf, Qd, Qm — QUATERNARY

SEDIMENTARY ROCKS

Tnc, Td — TERTIARY

IGNEOUS ROCKS

Tg — TERTIARY

Tf — TERTIARY(?)

TMzg — TERTIARY OR MESOZOIC

Kg — CRETACEOUS

METAMORPHIC ROCKS

Pgc — PERMIAN

Pzu, Pzc, Pzg, Pzq — PALEOZOIC

Pzp€a, Pzp€g — PALEOZOIC AND (OR) PRECAMBRIAN

DESCRIPTION OF MAP UNITS

UNCONSOLIDATED DEPOSITS

- Qac — ALLUVIUM, COLLUVIUM, AND MINOR GLACIAL AND EOLIAN DEPOSITS
- Qaf — ALLUVIAL FAN AND GLACIAL OUTWASH DEPOSITS
- Qd — DUNE SAND
- Qm — MORAINAL DEPOSITS

SEDIMENTARY ROCKS

- Tnc — NENANA GRAVEL AND COAL-BEARING FORMATION
- Td — DETRITAL ROCKS

IGNEOUS ROCKS

- Tg — GRANITE AND QUARTZ MONZONITE
- Tf — FELSIC TUFF AND LAVA
- TMzg — UNDIVIDED GRANITIC AND DIORITIC ROCKS
- Kg — UNDIVIDED GRANITIC AND MINOR DIORITIC ROCKS

METAMORPHIC ROCKS

- Pgc — GREENSTONE AND CHERT
- Pzu — ULTRAMAFIC ROCKS
- Pzc — CATACLASTIC SCHIST AND GNEISS
- Pzg — GREENSCHIST, QUARTZITE, MARBLE, COARSE META-ARENITE GREENSTONE, AND META-TUFF
- Pzq — QUARTZITE, SLATE, CALC-PHYLLITE, AND MARBLE
- Pzp€a — AUGEN GNEISS AND MINOR AMOUNTS OF OTHER GNEISSIC ROCKS
- Pzp€g — GNEISS, SCHIST, AUGEN GNEISS, AMPHIBOLITE, AND MARBLE

GEOLOGIC SYMBOLS

- CONTACT, APPROXIMATELY LOCATED
- FAULT OR PROBABLE FAULT, DOTTED WHERE CONCEALED

AEROMAGNETIC INTERPRETATION SYMBOLS

- Fault inferred from aeromagnetic data; dashed where approximately located
- Boundary between magnetic and less magnetic rocks
- Boundary between magnetic and less magnetic rocks; teeth on less magnetic side
- Axis of magnetic high
- Axis of magnetic low
- R — Magnetic anomaly caused by rocks with reverse remanent magnetization
- V — Magnetic anomaly believed to be caused by volcanic rocks
- P — Magnetic low or flat area believed to be caused by plutonic rocks
- M — Magnetic anomaly believed to be caused by contact-metamorphosed rocks
- D — Magnetic anomaly believed to be caused by dioritic or gabbroic rocks
- U — Magnetic anomaly believed to be caused by serpentinized ultramafic rocks. Subscript is a label for discussion purposes