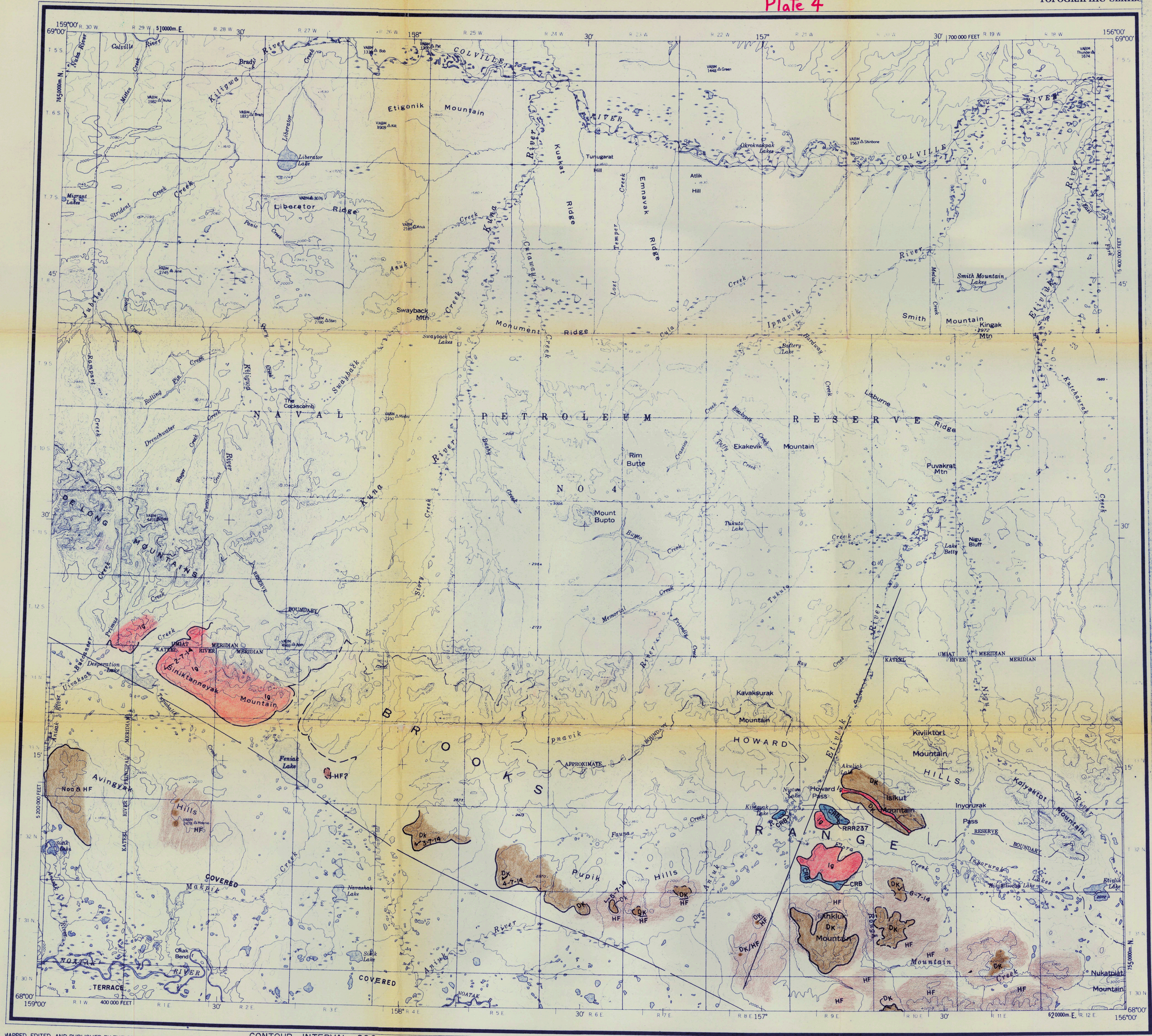
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HOWARD PASS

CF 711007 0035
Plate 4

ALASKA
TOPOGRAPHIC SERIES



MAPPED, EDITED, AND PUBLISHED BY THE GEOLOGICAL SURVEY

CONTOUR INTERVAL 200 FEET

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1967

LEGEND

SEDIMENTARY ROCKS

(Eagle Pencil No.)

CRETACEOUS

K — 738
Late Cretaceous
quartz-rich pebble and cobble conglomerate and sandstone

Cret J-K K — 739 1/2
Early Cretaceous
lithicwache sandstone and cobble conglomerate

TRIASSIC–PERMIAN

Ŧsh — 745 1/2
Shublik-Siksikpuk
varicolored siliceous shale & chert

MISSISSIPPIAN

Ml — 740 1/2
Lisburne
bioclastic packstone (limestone) with dark gray chert

Mk Utu. — 746
Kayak-Utukok
black shale & quartz rich sandy limestone

? DEVONIAN

Noa. Dk — 756
Noatak-Kanayut
quartzose sandstone with minor conglomerate

HF — 746 1/2
Hunt Fork
Gray shale and siltstone

GCRB, BCRB CRB, SK — 741
Devonian Carbonate
Graylimestone with reef structures

METAMORPHIC ROCKS

PRECAMBRIAN? — SILURIAN?

Mets — 752
Metamorphic Basement Complex
phyllite, slate, marble, quartzite and schist

MCRB — 755
Metamorphic Basement Complex
primarily marblized limestone

Mets MCRB — 752 & 755
Undifferentiated Metamorphic Basement Complex

Blk. Phyl. — 747
Black Phyllite
dark gray to black graphitic phyllite

IGNEOUS ROCKS

Ig — 745
primarily basic igneous intrusive rocks

Ig. w/ Seds. — 745
basic igneous intrusive & extrusive rocks with associated sedimentary rocks

GRN. GR. — 745
includes granite and granite gneiss

BEDDING

strike and dip of beds from aerial observation

strike & dip of steep beds (35-60°)

strike of near vertical to vertical beds (85-90°)

10 strike and dip of beds measured in the field

FAULTS

U / D — ? —
faults with nearly vertical plane

low angle thrust fault with teeth on overriding plate

formation contact

RRR310
X Sample locality with number of sample taken

√3-7-10
location of a field stop where no sample was taken. Numbers in order of appearance indicate stop number, month of the year, and day of the month.

⊙2 location and number of pebble count taken in Cretaceous conglomerate of the Waring Mountains

Scale

All plates are 1:250,000

5 0 5
MILES