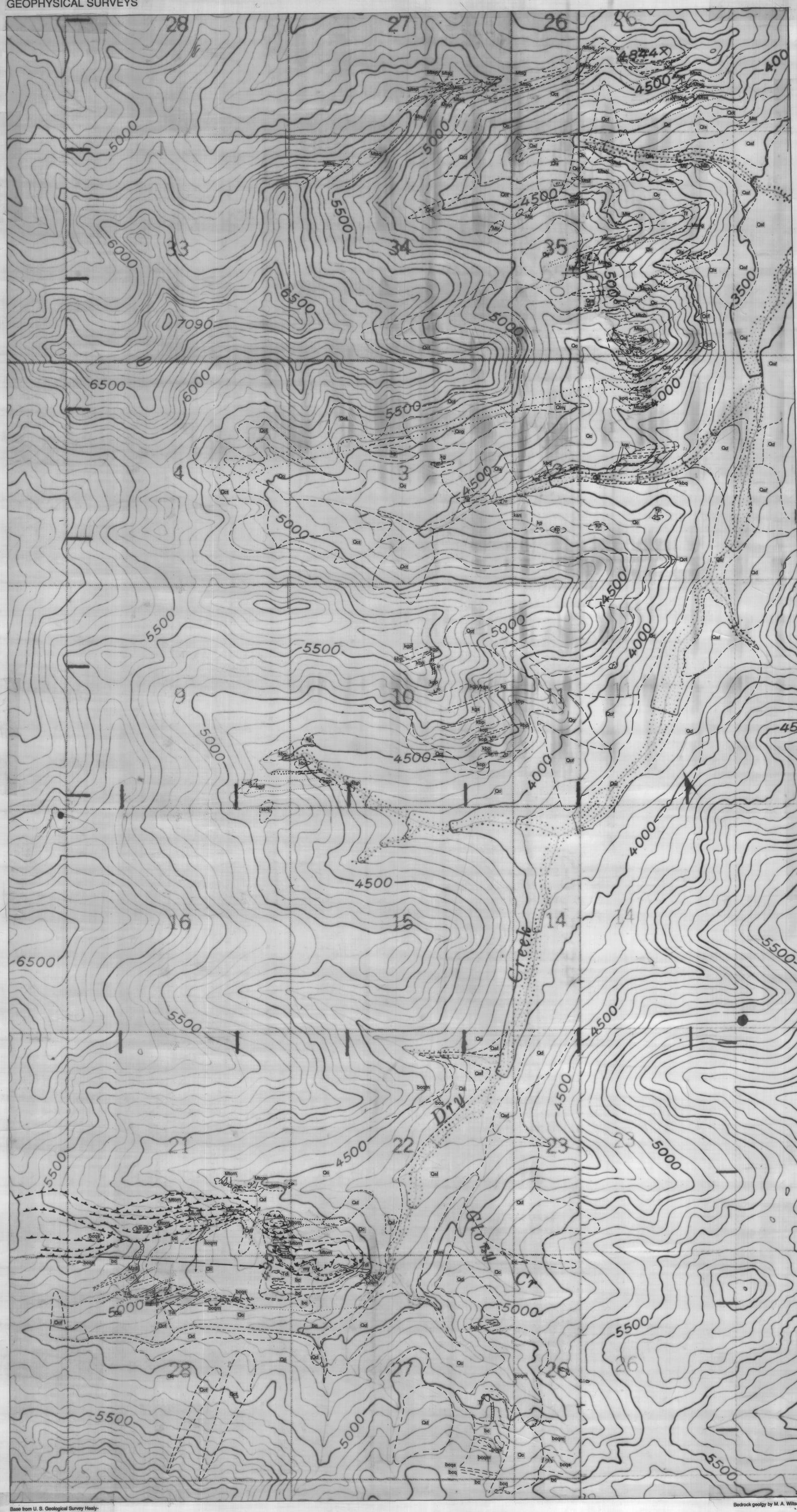
ALASKA DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS



Base from U. S. Geological Survey Healy-D1, D2 (1951) Quadrangles, Alaska, Universal Transverse Mercator projection

Bedrock geolgy by M. A. Wiltse, 1989

DETAILED GEOLOGIC RECONNAISSANCE TRAVERSE OF UPPER DRY CREEK, HEALY QUADRANGLE, ALASKA

By
Milton A. Wiltse, 1990

SCALE 1:12,000
0 1000 2000 3000 FEET

CONTOUR INTERVAL 100 FEET
DATUM MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1990

EXPLANATION

QUATERNARY

Qal — Alluvium

Qaf — Alluvial-fan deposits

Qcf — Fluvial-colluvial fan deposits

Qct — Talus

Qc — Colluvium undifferentiated

Qls — Landslide deposits

Qcg — Rock glacier

Qd — Till undifferentiated

Qtm — Lateral moraine deposits

TERTIARY

Tf — Felsite porphyry
Felsite quartz-porphyry sills and dikes

Tdi — Diabase dikes
Dark olive-gray, fine-grained, occaisionally porphyritic diabase

MESOZOIC

Mzdi — Hornblende - biotite monzodiorite
Fine-grained, porphyritic hornblende - biotite monzodiorite with plagioclase phenocrysts 0.25 cm in diameter

Mtr — Rhyolite schist
Foliated - to - weakly schistose aphanitic rhyolite porphyry sills, dikes, and stocks. Quartz phenocrysts commonly have beta-quartz outlines.

Mts — Sheep Creek Member
Black and white-banded, siliceous slate, quartz-muscovite schist, feldspathic grit-schist, green-, purple-, and olive-brown phyllite, massive, medium - to -coarse-grained quartzites, and quartz - feldspar pebble conglomerates

Mtsq, *medium - to -coarse grained quartzites and quartzo-feldspathic pebble conglomerate*
Mtsp, *purple phyllite*
Mtsg, *green phyllite*
Mtso, *olive-brown phyllite*
Mtss, *quartz - muscovite schist and quartz schist*
Mtsb, *black and white-banded, siliceous slate*
Mts, *Sheep Creek Member, undifferentiated*

Mtm — Mystic Creek Member
Green, purple, maroon, and tan phyllites, tan, gray-blue, green, and maroon, thinly layered metacherts, dark green - to - black, fine-grained chlorite schist, green and maroon quartz - chlorite - muscovite schist, fine - to -medium-grained brown, and yellow megacrystic quartz - k-feldspar - muscovite augen schist

Mtmf, *fine-grained, megacrystic quartz - k-feldspar - muscovite schist*
Mtmm, *medium-grained, megacrystic quartz - k-feldspar muscovite schist*
Mtmg, *black graphitic phyllite*
Mtmp, *green, purple, maroon, and tan phyllite*
Mtmc, *tan, gray-blue, green, and maroon metachert*
Mtm, *Mystic Creek Member, undifferentiated*

Mtch — Chute Creek Member
Dark olive-green, fine - to - medium-grained metamafic dikes, sills,and flows(?) interlayered with underlying California Creek Member, and overlying Mystic Creek Member

Mtc — California Creek Member
Medium - to - fine-grained, megacrystic quartz - muscovite - k-feldspar augen schists, and minor micaceous and graphitic - micaceous phyllites

Mtcm, *medium-grained, megacrystic, quartz - muscovite - k-feldspar augen schist*
Mtcc, *coarse-grained, megacrystic, quartz - muscovite - k-feldspar augen schist*
Mtc, *California Creek Member, undifferentiated*

PRECAMBRIAN OR PALEOZOIC

Pzan — Meta-andesite
Green-gray, massive, weakly foliated greenstone

kp — Keevy Peak Formation
Quartz - muscovite schist, feldspathic grit-schist, quartzite, quartz-pebble and slate-clast conglomerate, black and green phyllite, and calcareous phyllite

kcp, *calcareous phyllite and sericitic marble*
kgbp, *mottled green and black phyllite*
kgp, *green phyllite*
kbp, *black phyllite*
kbq, *black, and gray quartzite,*
kpc, *slate-clast, and stretched-pebble conglomerate*
kg, *medium-grained grit*
kgs, *feldspathic grit-schist*
kqs, *quartzose grit schist and quartz schist*

bc — Birch Creek Schist
Fine- to medium grained quartz schists, quartz - muscovite schists, carbonate - quartz - muscovite schist, graphite - quartz - muscovite schist, quartzite, and marble

bcm, *marble*
bccm, *carbonate - quartz - muscovite schist*
bcb, *graphitic schist*
bcq, *quartzite*
bcqs, *quartz schist*
bcqm, *quartz muscovite schist*
bc, *Birch Creek schist, undifferentiated*

Totatlanika Schist

Holocene
Pleistocene
Paleocene to Oligocene

MISSISSIPPIAN(?)

GEOLOGIC MAP SYMBOLS

Contact
Dashed where approximately located or inferred, dotted where covered

Fault
Dashed where approximately located or inferred, dotted where covered

Reverse Fault
Flags on upper plate, dashed where approximately located or inferred, dotted where covered

Shear zone
Stem and ball indicate direction of dip, dashed where inferred

Trace of antiform axis
Direction of plunge shown by arrow, dashed where approximately located

40 Inclined — Vertical
Strike and dip of fracture cleavage

30 Inclined — Vertical — 20 Inclined and parallel to bedding
Strike and dip of foliation

10 Bearing and plunge of minor-fold axis — 10 Strike and dip of lithologic layering

Prospect pits