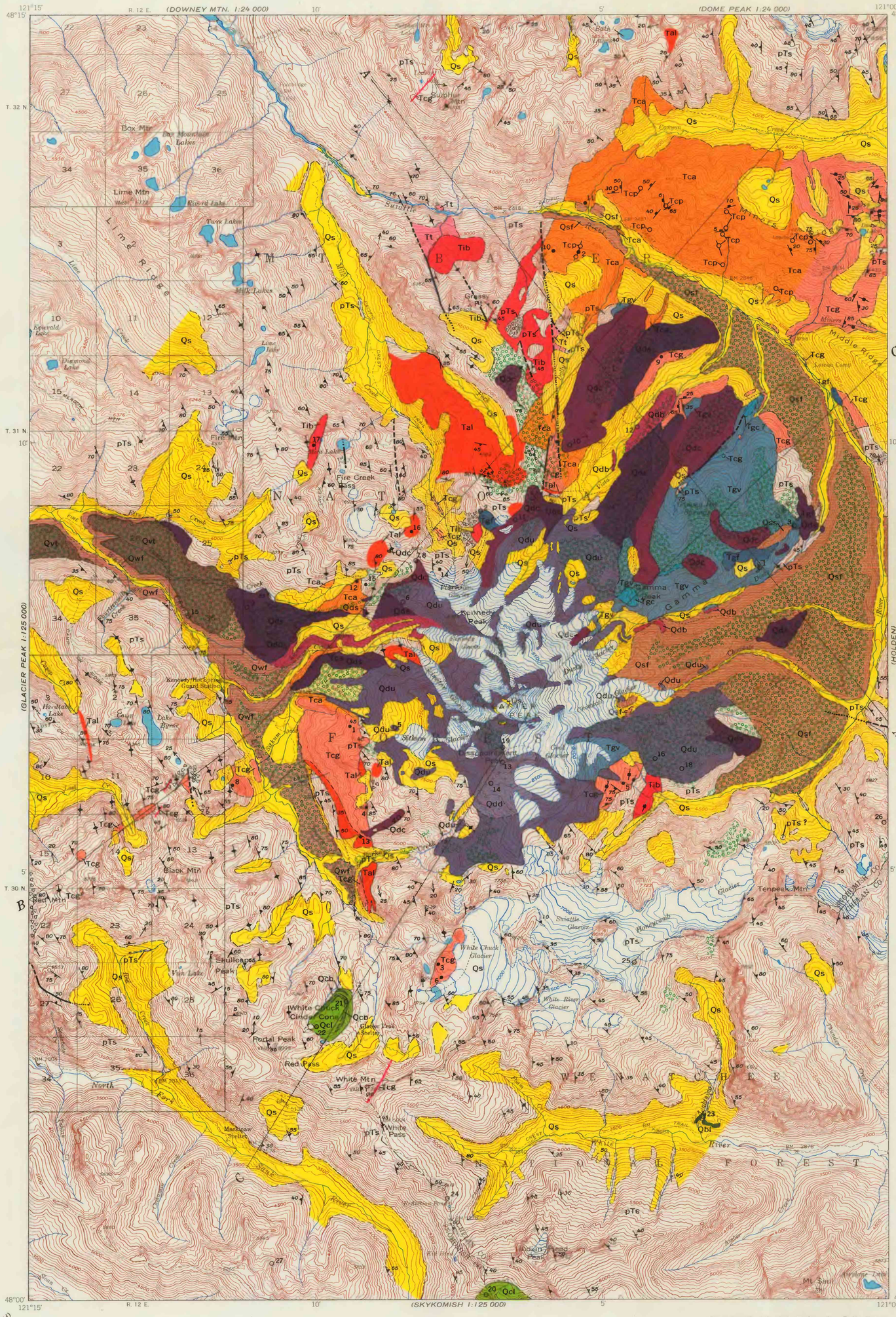


Base from U.S. Geological Survey 1959; drainage and names modified; only glaciers shown as corrected 1960–1963

Base modified from D. F. Crowder, R. W. Tabor, and A. B. Ford (1966)

EXPLANATION

Qs — Surficial deposits
Talus, moraine, and alluvium; includes considerable reworked pyroclastic material. Only major surficial deposits near Glacier Peak included

QUATERNARY

Pleistocene and Recent

Rocks of the late episode of volcanism

Pyroclastic and epiclastic deposits

Qvt, Qwf — Pyroclastic deposits and fill of White Chuck River valley
Pumice lapilli and minor ash; includes airfall and reworked material shown by overprint
Qvt, *vitric tuff. Forms cliffs*
Qwf, *fill of White Chuck River valley*

Qss, Qsf — Fill of Suiattle River valley
Qss, *stratified, white crystal-rich sand*
Qsf, *stratified volcaniclastic deposits containing much gray, glassy, vesicular hornblende dacite*

Lava flows

Qdb, Qds, Qdc, Qdu — Clinopyroxene-hypersthene dacite of Glacier Peak
Qdb, *valley bottom flows, slightly dissected*
Qds, *valleyside clinging flows, moderately dissected and (or) lying near bottom of present valleys*
Qdc, *ridge-capping flows, greatly dissected*
Qdu, *undivided flows of the summit cone. Includes slightly to greatly dissected flows*

Qdd — Oxyhornblende-hypersthene dacite of Disappointment Peak

Rocks of Glacier Peak Volcano

Qcl, Qcb — Cinder cone deposits
Qcl, *scoriaceous basalt lapilli*
Qcb, *olivine basalt*

Qbl — Olivine basalt of Lightning Creek

UNCONFORMITY

TERTIARY

Middle or upper Miocene or Pliocene

Rocks of the early episode of volcanism

Tgc, Tgv, Tgf — Volcanic and volcaniclastic rocks of Gamma Ridge
Tgc, *tuffaceous conglomerate; includes some volcanic conglomerate which may be younger than the oldest flows of Glacier Peak*
Tgv, *volcanic breccia; lithic breccia, wacke and tuff; and minor flows of andesite, dacite, and rhyodacite*
Tgf, *andesite and dacite flows*

UNCONFORMITY

Lower Miocene

INTRUSIVE ROCKS

Tca, Tcp, Tcg, Tib, Tt, Tal — Cloudy Pass batholith and associated rocks
Tca, *adamellite, granodiorite, and minor alaskite. Occurs as light-colored phase of Cloudy Pass pluton and Sitkum stock*
Tcp, *inclusions and dikes of hornblende tonalite porphyry*
Tcg, *granodiorite, tonalite, quartz gabbro, and gabbro. Occurs as dark-colored phase of Cloudy Pass pluton and Sitkum stock; also makes up Cool stock, White Chuck stock, small bodies in the Lost Creek area, and dikes on Sulphur and White Mountains*
Tib, *intrusive dacite breccia; some may be of Pliocene age*
Tt, *tonalite and gabbro; some may be of Pliocene age*
Tal, *alaskite*

METAMORPHIC ROCKS

PRE-TERTIARY

pTs — Schist, gneiss, and granitoid gneiss
Includes rare quartzite and marble. Triangles denote brecciated rock

SYMBOLS

Contact
Long-dashed where approximately located; short dashed where inferred; dotted where concealed. No contact shown where gradational

Fault
Dashed where inferred; dotted where concealed. Dip unknown but probably steep

Brecciated rocks

50 Inclined — Vertical
Strike and dip of foliation and (or) compositional layering, parallel everywhere observed together

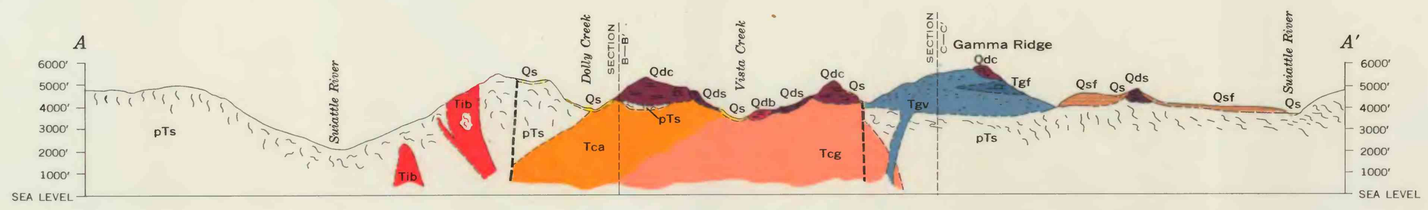
40 Inclined — Vertical — Horizontal

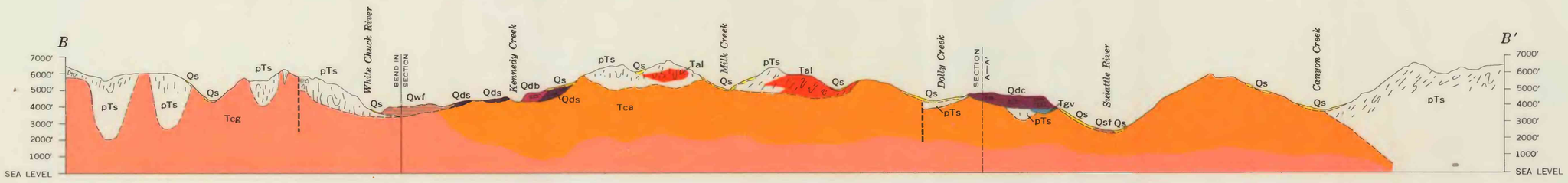
Strike and dip of joints

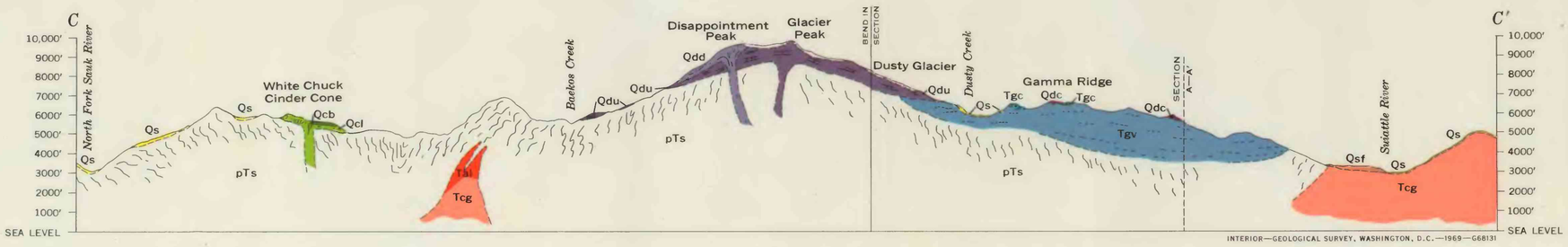
20 Inclined — Horizontal

Bearing and plunge of axis of crinkle or small fold or elongate mineral clusters and elongate grains

2 — 16
Location of analyzed specimen
Numbers are referenced to tables in text. Closed circle, specimens from the Cloudy Pass batholith, open circle, specimen from eruptive rocks and dikes in the Glacier Peak area







INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1969—G68131

GEOLOGIC MAP OF LATE CENOZOIC IGNEOUS ROCKS OF THE GLACIER PEAK AREA, WASHINGTON