



EXPLANATION

- SEDIMENTARY ROCKS**
- Quaternary**
 - Qsg Sand, gravel, and silt; unconsolidated materials including older stream and lake deposits, alluvium of the present stream, glacial moraines, and outwash gravel
 - Tn Nenana gravel. The deposits are poorly stratified, deeply weathered, and contain pieces of lignitized wood
 - Tertiary**
 - Kcs Conglomerate, greenish-gray sandstone with shaly partings and plant remains, tuffaceous(?) sandstone, and sandy shales
 - Jc Conglomerate and sandy shales
 - Cretaceous**
 - Msa Banded shale and argillite, arkosic sandstone, conglomerate, and limestone, of Late Jurassic and Early Cretaceous age; may include shale of Late Triassic age
 - Jurassic**
 - W Massive and thin-bedded limestone; includes Nabesna limestone in White Mountain areas
 - TPu Undifferentiated Upper Triassic and Permian limestone
 - L Limestone, crystalline in most places
 - Permian**
 - Ps Shale, arkosic sandstone, and conglomerate, with basaltic flows and intrusives; may include folded or faulted Mesozoic beds
 - PDI Undifferentiated Permian and Devonian limestone
 - Ds Slate, quartzite, and conglomerate; locally schistose
 - Devonian**
 - Pf Undifferentiated Paleozoic rocks, chiefly Permian and Middle Devonian shale, argillite, and conglomerate, including volcanic material and intrusives; somewhat metamorphosed but only locally schistose; may include Carboniferous rocks
 - Uf Undifferentiated early Paleozoic(?) or pre-Cambrian limestone
 - Uf Undifferentiated early Paleozoic or pre-Cambrian rocks; chiefly schist derived in large part from sedimentary beds that were dominantly quartzose, though locally argillaceous and in lesser amount from igneous rocks
 - Sp Schist and phyllite with granular intrusives; derived in part from sedimentary deposits

- PREDOMINANTLY IGNEOUS ROCKS**
- QTW Wrangell lava. Basaltic and andesitic lava flows, tuffs, and agglomerate of Tertiary to Recent age; some of the fragmental materials were deposited in water and are well rounded
 - Gr Granitic intrusives. Light to dark-colored, coarse-grained diorite, quartz diorite, and related intrusives; markedly porphyritic in places and showing large feldspar phenocrysts, predominantly of late Mesozoic age
 - Uf Undifferentiated igneous rocks of late Paleozoic and Mesozoic age; dark-gray diorite, basic intrusives, lavas, and tuffs, metamorphosed in places; locally may include folded or faulted sediments
 - Pv Amygdaloidal basalts, tuffs, and intrusives of Permian age or older; may include some Permian shale or folded Mesozoic rocks
 - PDb Mainly Permian basaltic rocks, tuffs, and agglomerates; includes some Devonian shale and limestone and possibly some Mesozoic deposits
 - G Gabbro. Age undetermined
- Contact, approximately located
- - - - - Fault, approximately located, dotted where concealed

- MINES AND PROSPECTS**
- Copper
 - ⊙ Gold lode
 - ⊗ Gold placer
 - Molybdenum
 - ⊕ Prospect—gold, silver, lead, zinc

Base from Alaska Reconnaissance Topographic Series maps Mt. Hayes, Gulkana, Nabesna, and Tanacross, sheets prepared by the U. S. Geological Survey, International Boundary Commission, and the U. S. Coast and Geodetic Survey, Edition of 1951

Geology from original surveys by the Alaska Branch from 1902 to 1908; revised and correlated through field studies by Fred H. Moffitt at intervals from 1929 to 1942, inclusive

GEOLOGIC MAP AND SECTION OF THE EASTERN ALASKA RANGE AND ADJACENT AREA FROM THE INTERNATIONAL BOUNDARY TO THE TOK RIVER

