



DESCRIPTION OF MAP UNITS

ALL AREAS OF HEALY QUADRANGLE

SEDIMENTARY AND VOLCANIC ROCKS

Surficial deposits (Quaternary)

Horblende dactite (Pliocene)

Nenana Group (Pliocene and Miocene)

Cool-bearing rocks (Miocene to Eocene)

Sedimentary rocks (Miocene? to Paleocene?)

Volcanic rocks (Oligocene to Paleocene)

Felsic subvolcanic intrusive rocks—Mainly dikes of rhyolite and dacite

Mafic subvolcanic intrusive rocks—Mainly dikes of basalt and andesite

Fluviatile and volcanic rocks (Eocene?)

Canwell Formation (Paleocene)

Sedimentary rocks—Mainly conglomerate, sandstone, and shale

Granitic rocks (Oligocene to Paleocene)

Granitic and volcanic rocks, unroofed (Oligocene to Paleocene)

Granitic and hypabyssal intrusive rocks (Paleocene? and Late Cretaceous)

Canwell Formation (Paleocene)

Sedimentary rocks—Mainly conglomerate, sandstone, and shale

Granitic rocks (Oligocene to Paleocene)

Granitic and volcanic rocks, unroofed (Late Triassic; early Norian and Late Karakoram)

Nikolai Group (Late and/or Middle Triassic)

Metasedimentary rocks sequence (Middle Triassic to Late Paleozoic)

Andesitic volcanic rocks (Early Permian? and Pennsylvanian)

Basaltic subvolcanic rocks (Late Devonian)

Totomanka Schist (Early Mississippian to Middle Devonian)

Felsic metavolcanic rocks (Late Devonian)

Metamorphosed rhyolite and quartz latite

PLUTONIC ROCKS

Granitic rocks (Late and/or Early Cretaceous)

Tourmaline-bearing granite (Late or Early Cretaceous)

Ultramafic rocks (Early Cretaceous or Jurassic)

Fogelgale-bearing peridotite

Alkali gabbro (Late Jurassic)

Metagabbro (Late Devonian?)

Argillite, chert, sandstone, and limestone (Early Cretaceous and Late Jurassic)

Red and brown sedimentary rocks and basalt (Early Jurassic and Late Triassic)

Limestone and basalt sequence (Late Triassic; Norian?)

Red beds (Late Triassic)—Red sandstone, siltstone, and conglomerate

Volcanogenic and sedimentary rocks (Early Triassic to Late Devonian)

Serpentine, basalt, chert, and gabbro (Late Devonian)

Flysch and associated rocks

Flysch sequence (Late Cretaceous to Late Jurassic)

Crystal tuff, argillite, chert, graywacke, and limestone (Late Jurassic to Late Triassic?)

Rocks of unknown terrane affinity

Comglomerate and volcanic sandstone (Late Triassic; late Norian)

Metavolcanic, metavolcaniclastic, and subordinate metasedimentary rocks (Late Triassic; late Norian)

Marine basalt, tuff, slate, and diabase sills

Chertstone and Nipina Limestone, unroofed (Late Triassic; early Norian and Late Karakoram)

Nikolai Group (Late and/or Middle Triassic)

Mainly subvolcanic flows of amygdaloidal basalt

Metasedimentary rocks sequence (Middle Triassic to Late Paleozoic)

Black argillite and sandstone, and limestone overlain by thin-bedded chert

Andesitic volcanic rocks (Early Permian? and Pennsylvanian)

Volcanic flows and breccias, probably massive

TECTONIC ROCKS

Granitic rocks (Late and/or Early Cretaceous)

Mainly tonalite, quartz diorite, and granodiorite, generally well foliated

Tourmaline-bearing granite (Late or Early Cretaceous)

Ultramafic rocks (Early Cretaceous or Jurassic)

Fogelgale-bearing peridotite

Melange south of McKinley fault (Late and/or Early Cretaceous)

Dark gray flysch, shaly silt, volcanic sandstone, and blocks of limestone (mid)

Melange north of McKinley fault (Late and/or Early Cretaceous)

Similar to unit Kms but contains recrystallized limestone (mid) and ophiolite rocks (ms), mainly serpentinite, basalt, and chert

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SOUTHWESTERN AND WEST-CENTRAL AREAS OF QUADRANGLE

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Ohio Creek area (Chulitna district)

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Contact—Approximately located

Thrust fault—Showing direction of dip of overturned strata. Dashed where inferred; dotted where concealed. Sawtooth on upper plate

High-angle reverse fault—Dashed where inferred; dotted where concealed. Sawtooth on upper plate

Fault—Dashed where inferred; dotted where concealed. When displacement known, U, upthrown side, D, downthrown side; arrows indicate relative horizontal movement

Postulated position of fault prior to intrusion of plutonic and subvolcanic rocks

Anticline—Showing direction of plunge

Overturned anticline—Showing direction of dip of limbs and plunge