



Bedrock geology by Sandra H.B. Clark and Susan R. Bartoch, 1970. Contacts of bedrock and surficial deposits by H.R. Schmol and E. Dobrovodny, 1971.

Mapped, edited, and published by the Geological Survey under the authority of the U.S. Geological Survey. Topography by photogrammetric methods from aerial photographs taken 1960, 1963 and 1970. Data available. Map not fully checked. Selected hydrographic data compiled from USCGS Chart 8553 (1:50,000 scale, 1960). This information is not intended for navigational purposes.

Universal Transverse Mercator projection, 1977 North American datum (10,000 foot grid based on Alaska coordinate system, zone 4 1000 meter Universal Transverse Mercator grid). Zone 4, shown in blue.

Land areas owned or leased by the Federal Government and other agencies are indicated by the Bureau of Land Management. Elevation 5 to 14. Seismicity. Symbols in parentheses indicate only the better known, usually of low relief, as interpreted from aerial photographs.

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ANCHORAGE (B-7), ALASKA
1977-1-10 (REVISED 1977-5-1977-5)

EXPLANATION

UNCONSOLIDATED DEPOSITS

Qs
Surficial deposits

SEDIMENTARY DEPOSITS

Tk
Kenai Formation
Predominantly sandstone, siltstone and claystone; nonmarine, contains fossil plants

METAMORPHIC ROCKS

KJv
Valdez(?) Group
Predominantly metagraywacke, siltite, and argillite flysch deposits; includes some calcareous metasandstones. Locally phyllitic. Generally medium to dark gray. Metamorphic assemblages of white mica, chlorite, epidote, and albite (greenschist facies?) are widespread.

JKa
Heterogeneous assemblage
Includes marine metaclastic and metavolcanic rocks. Predominantly metasandstone to metaconglomeratic sandstone; commonly quartz-poor, feldspathic to lithic, may include tuffaceous material. Characteristically massive, jagged outcrops, bedding commonly obscure to indistinguishable. Generally dark green to gray-green on weathered surfaces. Subordinate greenstones (including basaltic pillow lavas) usually associated with chert, cherty argillite, and argillite. May be part of a tectonically mixed mass of rocks which locally resembles a mélange. Both clastic and volcanic sequences contain widespread prehnite-pumpellyite facies metamorphic assemblages. The possibility that this unit is of early Tertiary age and that the contact with the Valdez(?) Group is not entirely a fault contact has not been ruled out, but is considered unlikely.

Upper Jurassic or Cretaceous

- Dot pattern indicates known areas of predominantly massive, weakly metamorphosed sandstone and conglomeratic sandstone.
- Open triangle pattern indicates known area of predominantly greenstone, chert, cherty argillite, and argillite.
- Queried where doubtful.

JPu
Undifferentiated plutonic, metaplutonic, metasedimentary and metavolcanic rocks

Igneous and metigneous rocks are predominantly gabbro to quartz-diorite in composition. Metasedimentary and metavolcanic rocks include greenstone (metabasalt to metadiorite), chert, siliceous argillite and marble. Green-schist facies metamorphic assemblages predominate; some have prehnite-pumpellyite facies overprint. Age assignment based on Permian (Leonardian?) fusulinids from marble and K-Ar age of middle Jurassic from quartz-diorite. Older and/or younger rocks could also be included.

JKa
Felsic to intermediate hypabyssal rocks. Dikes, sills, and small intrusive bodies. Some mapped from air photos, most checked on ground.

M2Ru
Ultramafic rocks
Predominantly peridotite (wehrlite), dunite, and pyroxenite. Most is weakly serpentinized; locally strongly serpentinized.

QUATERNARY

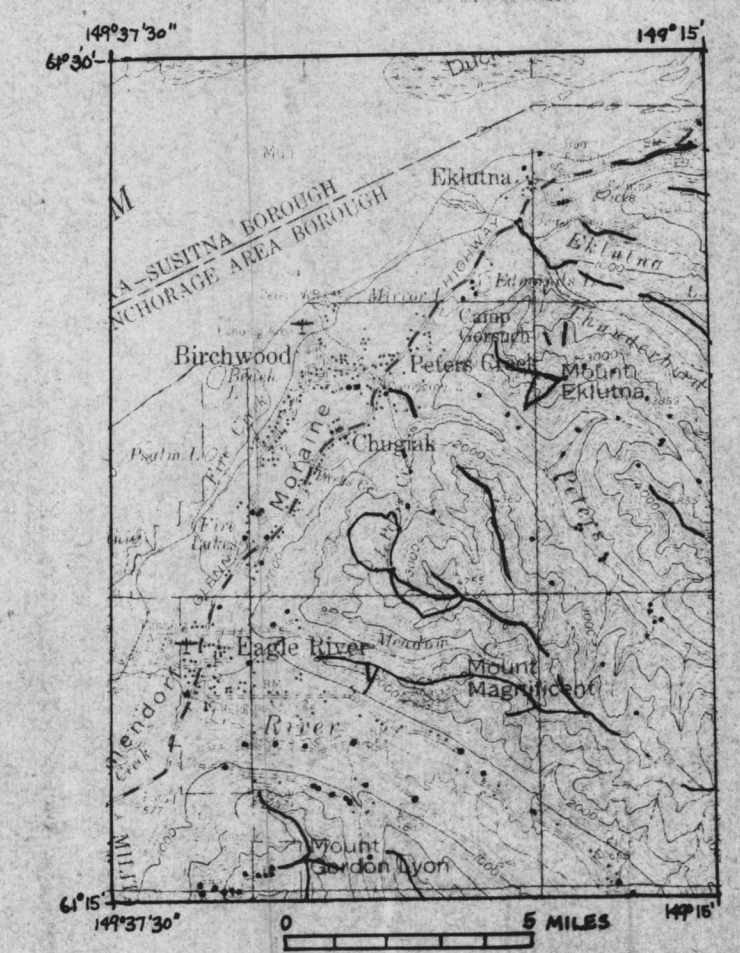
TERTIARY

JURASSIC(?) and CRETACEOUS

JURASSIC or CRETACEOUS

- SYMBOLS**
- Contact; dashed where approximately located
 - Scratch boundary
 - Fault
 - Dashed where inferred, dotted where concealed. Arrows show apparent relative movement
 - Probable thrust fault
 - Sawtooth on upper plate, dotted where concealed
 - Air photo linear feature, thought to be a fault
 - Strike and dip of bedding
 - Strike of vertical bedding
 - Strike and dip of cleavage
 - Strike and dip of parallel bedding and cleavage
 - Strike of vertical cleavage
 - Lineation, showing plunge
 - Horizontal lineation
 - Minor fold axis, showing plunge
 - Strike and dip of foliation
 - Strike and dip of axial plane of minor fold
 - Strike of vertical axial plane of minor fold
 - Fossil locality:
 - Fusulinids
 - Plant material
 - Locality of sample dated by K-Ar method

This map is preliminary and has not been edited or revised for conformity with U.S. Geological Survey standards and nomenclature.



INDEX MAP SHOWING FIELD COVERAGE
Foot traverses shown by lines; helicopter and vehicle stops shown by dots. Bedrock contacts and structures have been extended between field stations by aerial reconnaissance.

Figure 1. Reconnaissance geologic map of the Anchorage B-7 quadrangle, Alaska.