

DESCRIPTION OF MAP UNITS

Q SURFICIAL DEPOSITS—Unconsolidated glacial, alluvial, colluvial, marine, and glauconitic materials; see R. D. Miller (1972) for detailed descriptions and maps.

Southeastern metamorphic belt
(Southeast of Gastineau Channel and Montana Creek)

su METAMORPHIC ROCKS, UNDIFFERENTIATED

sub METAFELSITE—Dike and sill-like bodies.

subb METAGASALY, METADORTITE, AND METAGABBRO—Dikes, sills, and other small intrusive bodies.

sg GREENSTONE AND GREENSCHIST—Chiefly argillite-rich metabuff, originally basaltic to andesitic in places and with metagabbro, argillite, or slate. Dike formed.

sgc GREENSTONE AND METAGABBRO—Mixed and undifferentiated rocks.

sgm GREENSTONE AND PELTIC ROCKS—Mixed and undifferentiated rocks.

sgp GREENSTONE, METAFELTIC ROCKS, AND METAGABBRO—Mixed and undifferentiated rocks. Major lithologies of unit differentiated on basis of hornblende and quartz diorite; locally granodioritic.

sp PELTIC ROCKS—Mostly argillite and slate, locally phyllite.

spc PELTIC ROCKS, METAGABBRO, AND METAFELTIC—Chiefly dark, volcanic-derived metamorphic rocks, mixed and undifferentiated.

Central schist belt
(Between Gastineau Channel and western front of main schist belt between Lomon Creek Glacier and Stroeller White Mountain)

cu METAMORPHIC ROCKS, UNDIFFERENTIATED

cph HOMOGENEOUS GRANITIC GNEISS—Chiefly biotite- and hornblende-bearing quartz dioritic gneiss (orthogneiss) or Mount Juneau Pluton. Commonly contains minor amounts of garnet.

cm MIGMATITE—Heterogeneous mixture of schist and granitic gneiss.

cgc CHLORITE SCHIST AND GREENSCHIST—Generally well foliated, but includes gneiss and schist locally near Gastineau Channel and Montana Creek.

cch CHLORITE SCHIST, GREENSCHIST, AND HORNBLende SCHIST—Mixed and undifferentiated rocks.

cchb CHLORITE, HORNBLende, AND BIOTITE-BEARING SCHIST—Mixed and undifferentiated rocks.

ch HORNBLende SCHIST, AMPHIBOLITE, AND METAGABBRO—Commonly granitiferous in central and eastern part of belt. In places includes coarse-grained gneiss and amphibolite with amphiboles several centimeters or more long.

chm METAGABBRO—Generally coarse-grained, poorly foliated, hornblende-rich rocks in small lensitic bodies.

chb PHYLLITE AND SLATE

cp PHYLLITE, SLATE, AND SEMISCHIST

cps BIOTITE SCHIST—Commonly garnetiferous, locally with staurolite, kyanite, or sillimanite.

chb HORNBLende SCHIST AND BIOTITE SCHIST—Mixed and undifferentiated rocks.

cn MARBLE AND CALC-SILICATE ROCKS

cc QUARTZITE AND QUARTZITE-WHITE-MICA SCHIST

cg GNEISS—Varieties undifferentiated.

Northeastern gneiss belt
(Northeast of eastern edge of main schist belt between vicinities of Sarge Peak and Stroeller White Mountain)

nu METAMORPHIC ROCKS, UNDIFFERENTIATED

nuf FELSIC DIKE ROCKS

nsh GRANITIC GNEISS (ORTHogneISS) OF Mendenhall GLACIER PLUTON—Homogeneous, generally weakly foliated biotite-hornblende quartz diorite and quartz diorite gneiss; locally granodioritic.

nmm MIGMATITE RELATED TO Mendenhall GLACIER PLUTON—Chiefly biotite- and hornblende-bearing granitic schist mixed with various amounts of leucocratic rock.

nsh GRANITIC GNEISS (ORTHogneISS) OF Lomon CREEK GLACIER PLUTON—Lithology similar to that of Mendenhall Glacier pluton.

nls MIGMATITE RELATED TO Lomon CREEK GLACIER PLUTON—Chiefly biotite- and hornblende-bearing granitic schist mixed with various amounts of leucocratic rock.

nsh BIOTITE SCHIST—Commonly garnetiferous and migmatitic; locally hornblende-bearing.

nsh HORNBLende SCHIST AND AMPHIBOLITE—Commonly garnetiferous and migmatitic; locally biotite-bearing.

nc MARBLE AND CALC-SILICATE ROCK—Generally mixed with schist or gneiss.

ng HETEROGENEOUS GNEISS (MIGMATITE)

nh HOMOGENEOUS GRANITIC GNEISS—Chiefly granodioritic or quartz dioritic in composition.

EXPLANATION OF SYMBOLS

Contact. Dotted where concealed; queried where inferred

Metamorphic isograd. First appearance of index mineral in transects northward across metamorphic belt. Dashed where inferred

Metamorphic isograd. Disappearance of index mineral in transects as above. Dashed where inferred

Fault. Dotted where concealed; queried where inferred

Major anticline, showing plunge

Major overturned anticline

Major syncline, showing plunge

Minor fold (marked FA on map) and lineation, showing bearing and plunge

Minor fold and lineation, vertical

Strike and dip of beds

Strike and dip of beds, top direction identifiable

Strike and dip of beds, overturned

Strike of vertical beds

Strike and dip of slaty cleavage

Strike of vertical slaty cleavage

Strike and dip of foliation

Strike of vertical foliation

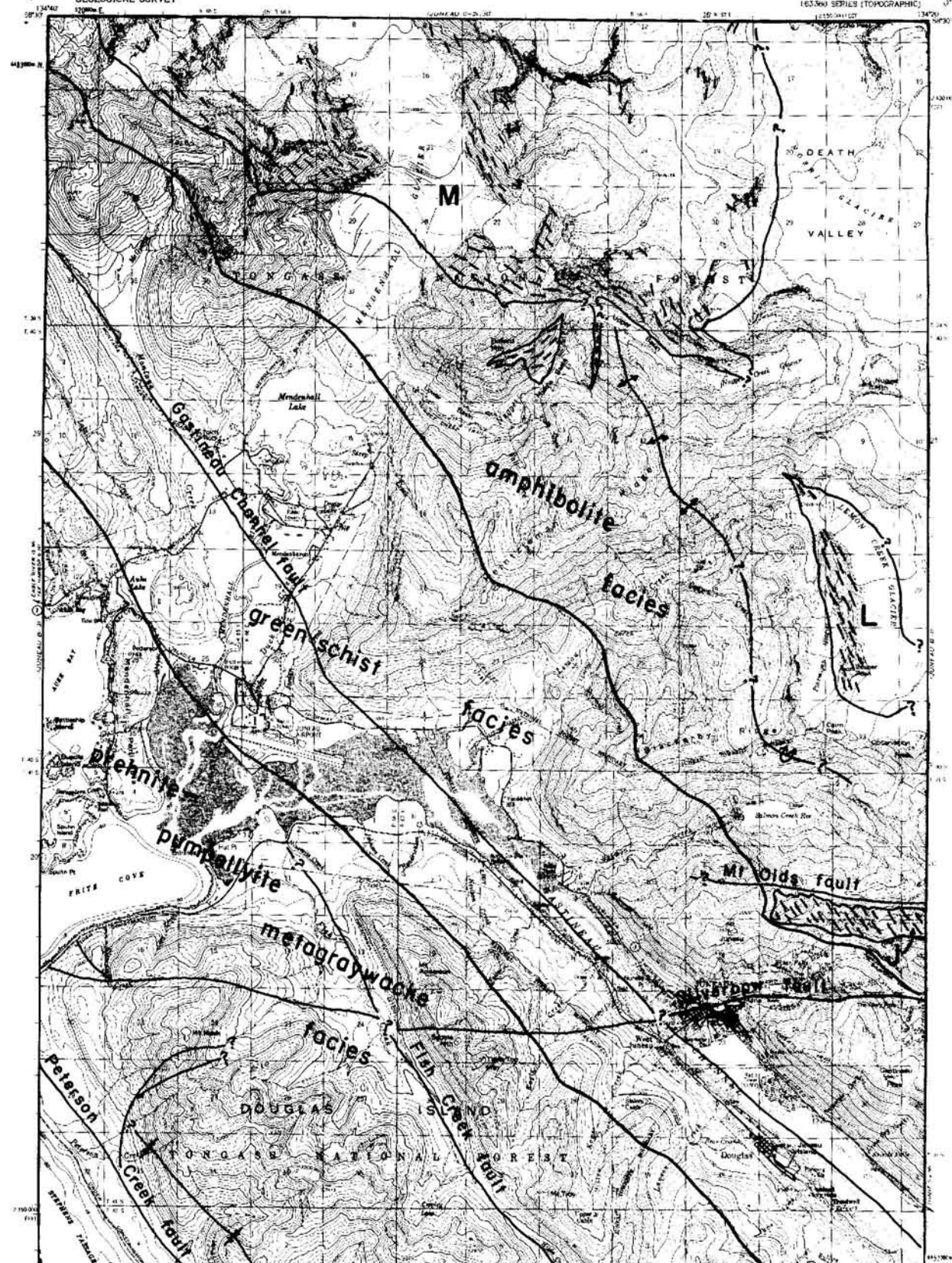
Horizontal foliation

Strike and dip of joint

Strike of vertical joint

Fossil locality. Number is locality number. Branch of Paleontology and Stratigraphy, U.S. Geological Survey

NOTE: above bedding, foliation, cleavage, and lineation symbols are shown in a variety of combinations where appropriate.



Base from U.S. Geological Survey 1:63,360 Juneau 8-2, 1962

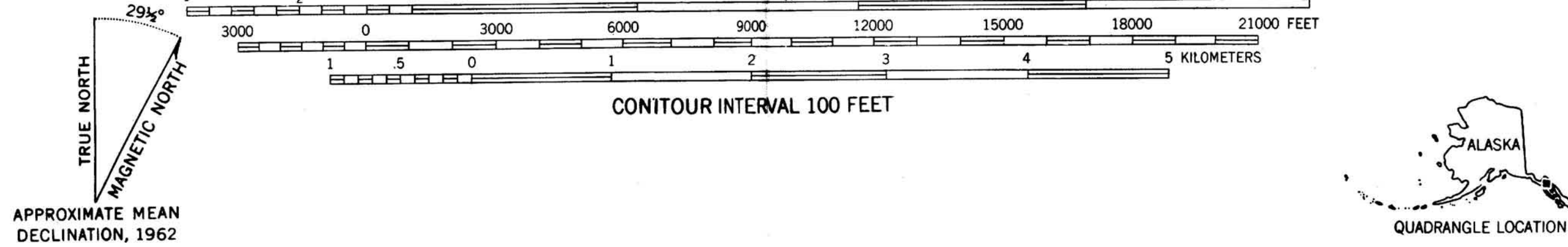
SELECTED REFERENCES

Forbes, R. B., 1959. The geology and petrology of the Juneau Ice Field area, southeastern Alaska. Washington Div., Seattle, W. D. thesis, 201 p.

Forbes, R. B., and Engels, J. C., 1970. ⁴⁰Ar/³⁹K age relations of the Coast Range batholith and related rocks of the Juneau Ice Field area, Alaska. Geol. Soc. America Bull., v. 81, p. 329-344.

Miller, R. D., 1972. Surficial geology of the Juneau urban area and vicinity, Alaska, with emphasis on earthquake and other geologic hazards: U.S. Geol. Survey open-file report, 108 p.

NOTE: references to older literature of area included in above reports.



Geology by A. B. Ford and D. A. Brew, 1964-65, 1967-71; assisted by S. V. Nelson, P. J. Egan, C. D. Miller, M. C. Mack, W. A. Stopford, and F. R. Carlson. Unpublished field data of E. H. Lubben, S. J. Miller, K. M. Connor, and J. C. Smith were used locally to supplement the authors' original data. The overturned anticline on eastern Blackberry Ridge is from R. S. Forbes (1959) and from G. S. Barvick (written commun., 1973). Contacts of surficial deposits, mainly in Gastineau Channel and Mendenhall River valley areas, are from R. D. Miller (1972).

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**PRELIMINARY GEOLOGIC AND METAMORPHIC-ISOGRAD
MAP OF THE JUNEAU B-2 QUADRANGLE,
ALASKA**
by
Arthur B. Ford and David A. Brew
1973