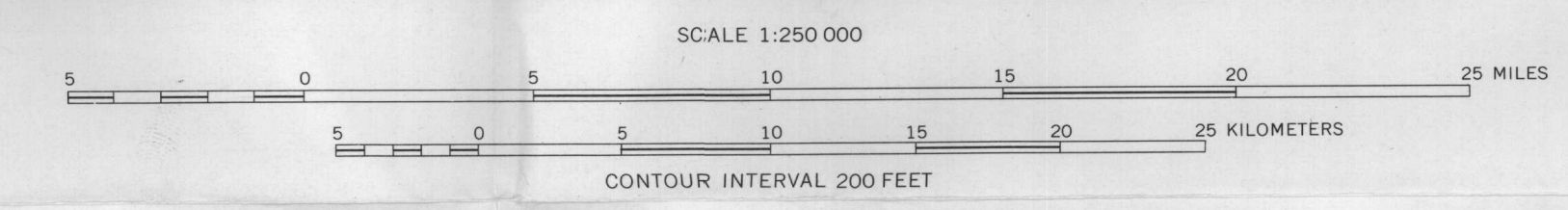


Base from U.S. Geological Survey, 1:250,000, Chignik and Sutwik Island, 1963



Geology by R.L. Determan, J.E. Cox, D.P. Cox, T.P. Miller, D.H. Richter, R.L. Smith, F.H. Wilson,  
and M.E. Yount, 1977 and 1978, C.D. Holloway and M.L. Silberman, 1977.  
Some geology modified from Burk, 1965

**CORRELATION OF MAP UNITS**

SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS	VOLCANIC ROCKS	INTRUSIVE ROCKS	PERIOD
Qd	Qd		QUATERNARY
Qs	Qs		
Tm	Tv	T1	TERTIARY
Tn	Tn		
TL			CRETACEOUS AND JURASSIC
Khc			
Khs			

**DESCRIPTION OF MAP UNITS**

**SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS**

Qd SURFICIAL DEPOSITS—Unconsolidated alluvium, colluvium, glacial, marine, swamp and eolian deposits; mainly sand, silt, gravel and quartz

Qs MELY RIVER FORMATION OF GALLOWAY (1974) AND BEAR LAKE FORMATION—Milly River Formation (Pliocene); mainly volcanic sandstone and conglomerate, non-marine. Bear Lake Formation (Miocene); sandstone, conglomerate, siltstone, shale, and coal; shallow marine to non-marine

T1 VOLSTOI FORMATION OF BURK (1965) (Paleocene and Eocene)—Sandstone, conglomerate, siltstone, dark shale, coal; high percent volcanic debris; mainly non-marine

Tn HODDOD AND CHIGNIK FORMATIONS—Hoddod Formation (Upper Cretaceous); dark shale and siltstone, deep water deposit. Chignik Formation (Upper Cretaceous); sandstone, shale, conglomerate, siltstone, and coal; shallow water to non-marine

Khc HERZEN LIMESTONE AND STANBUDOVICH, MANEK, AND SHILKOF FORMATIONS—Herzen Limestone (Lower Cretaceous); thin-bedded calcarenite composed of Indegrenite graptolite and thin calcareous sandstone. Stanbudovich Formation (Upper Jurassic and Lower Cretaceous); thin-bedded calcarenite and turbiditic sandstone. Manek Formation (Upper Jurassic); dark siltstone and shale in upper part. Shilkof Formation (Middle Jurassic); dark siltstone and shale

**VOLCANIC ROCKS**

Qv ASH AND CINDER FLOW DEPOSITS—Volcanic ash, pumice, tuff, and breccia; includes air-fall, ash flow, and avalanche deposits; unsorted to well-sorted poorly to well-sorted; includes some lava flows

Qcs CINDER AND SPATTER CONES, AND DOWNS—Cinders, scoria, and associated pyroclastic rock

Qv VOLCANIC ROCKS—Andesite and dacite flows, tuff, volcanic breccia, and lahars

Tv VOLCANIC ROCKS—Rhyolite, andesite, dacite, and basalt flows; tuff, volcanic rubble flows, and lahars; includes hypabyssal plugs and dikes

Tn MESHIK FORMATION (Miocene or Oligocene)—Basalt flows, volcanic rubble flows, and lahars; minor volcanogenic sedimentary rock

**INTRUSIVE ROCKS**

T1 INTRUSIVE ROCKS—Quartz diorite, diorite, and gabbro; medium- to coarse-grained; mainly small plutons

Tg GRANODIORITE—Semidi Islands pluton; medium- to coarse-grained; hornblende- and biotite-bearing

**GEOLOGIC MAP SYMBOLS**

Contact—Dotted where concealed

Fault—Dashed where approximately located, dotted where concealed; queried where probable. U, upthrown side; D, downthrown side. Arrow indicates relative lateral movement

Thrust or high-angle reverse fault—Dotted where concealed; sawtooth on upper plate

Fold—Showing trace of axial plane: dashed where approximately located; dotted where concealed. Arrow indicates direction of plunge

Anticline

Syncline

Volcanic crater

Volcanic vent or cinder cone

Hornfels

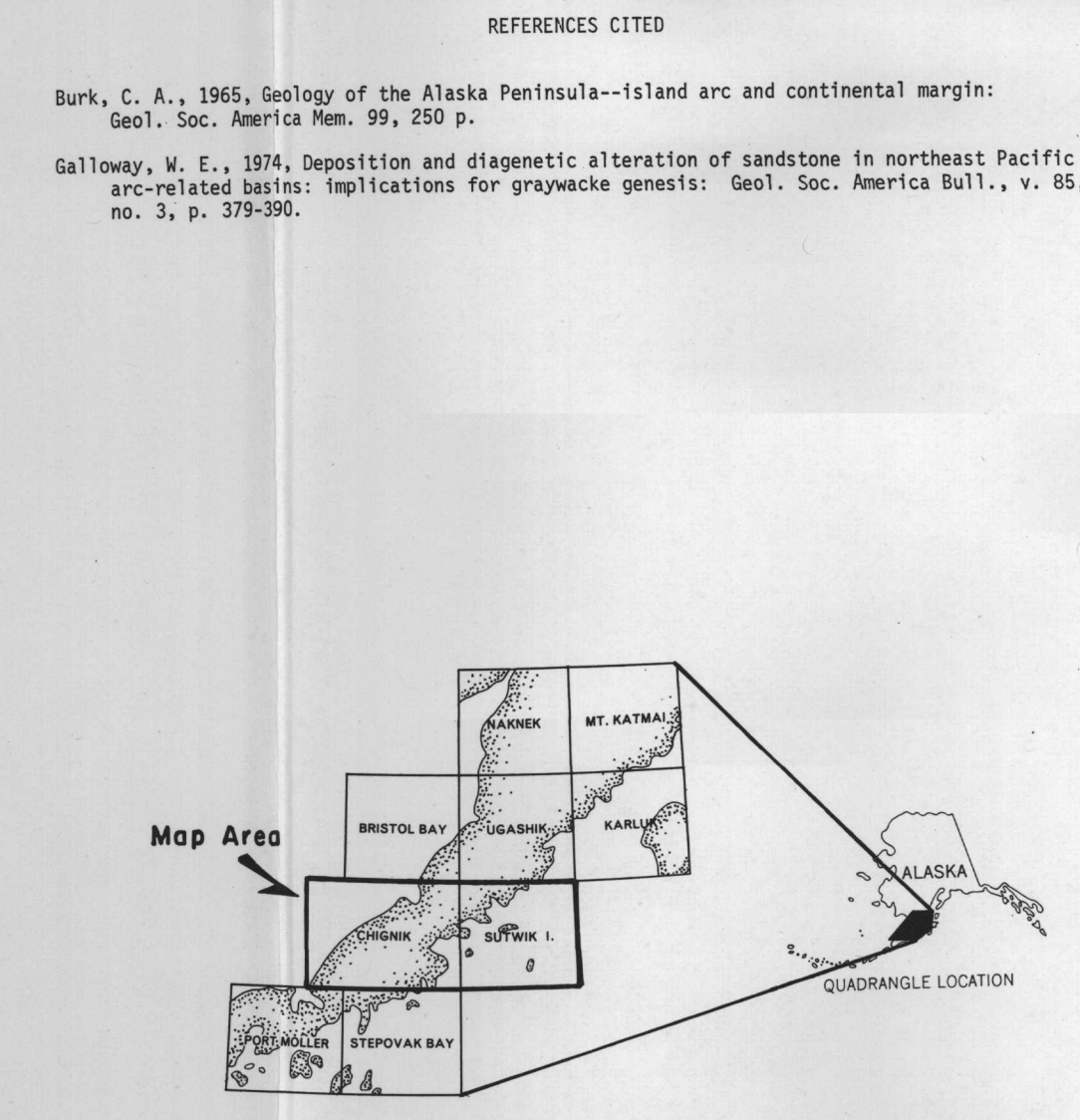
Alteration

Dikes and sills

Exploratory drill hole

Hot spring

Native Corporation boundary



**GENERALIZED GEOLOGIC MAP OF CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA**

THIS MAP IS ONE OF A SERIES ALL BEARING THE NUMBER MF-1053. BACKGROUND INFORMATION RELATING TO THIS MAP IS PUBLISHED AS U.S. GEOLOGICAL SURVEY CIRCULAR 802. AVAILABLE FREE FROM U.S. GEOLOGICAL SURVEY, RESTON, VA 22092.

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