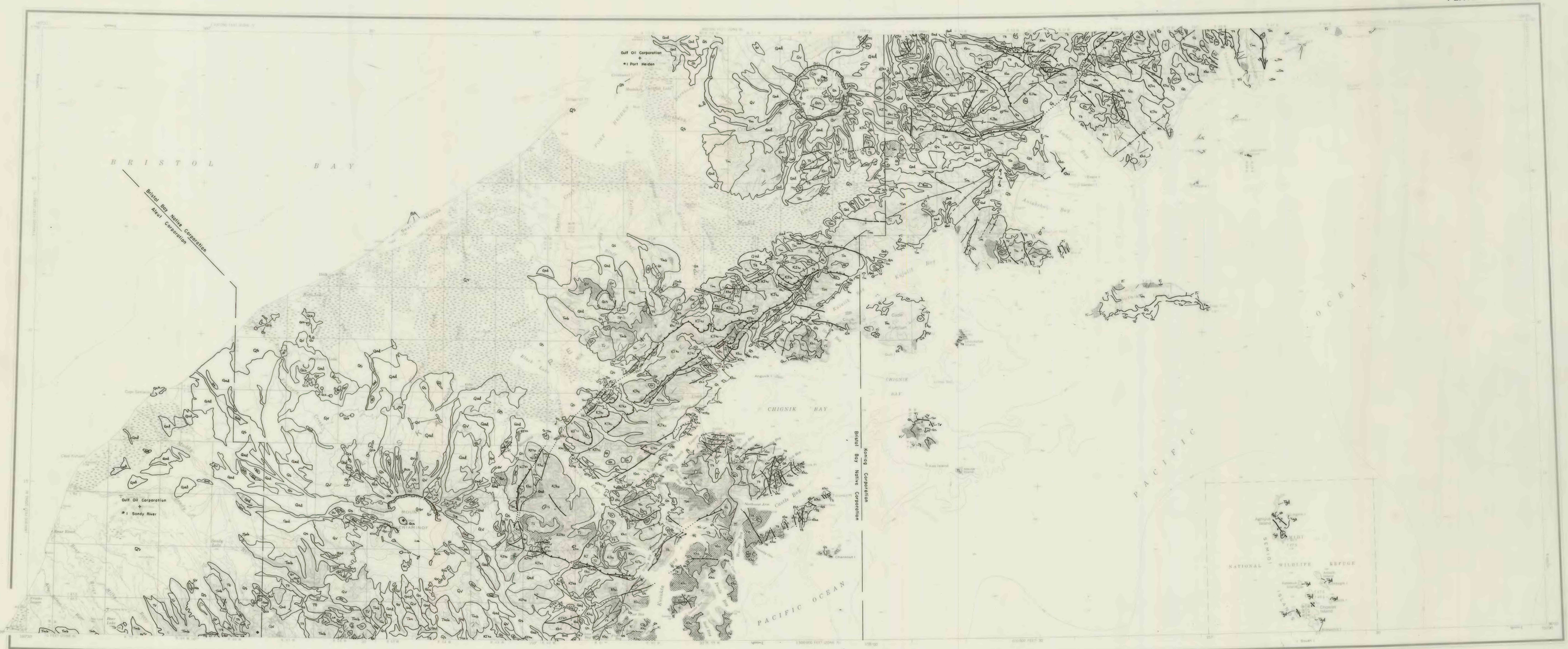
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN FILE REPORT 80- 543

FOLIO OF CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA
MISCELLANEOUS FIELD STUDIES MAP MF -1053 A
DETTERMAN AND OTHERS--GENERALIZED GEOLOGY

PLATE 1



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

SCALE 1:250 000

CONTOUR INTERVAL 200 FEET

APPROXIMATE MEAN DECLINATION, 1976

TRUE NORTH
MAGNETIC NORTH

Geology by R.L. Detterman, J.E. Case, 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		
Qs	Qad Qcs Qv		Holocene and Pleistocene	QUATERNARY
Tnb Unconformity	Tv	Tt	Pliocene and Miocene	TERTIARY
	Tm		Miocene or Oligocene	
Ts Unconformity			Eocene and Paleocene	
		Tgd	Paleocene	
Kbc Unconformity			Upper Cretaceous	CRETACEOUS
KJhs			Lower Cretaceous to Middle Jurassic	CRETACEOUS AND JURASSIC

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS

Qs SURFICIAL DEPOSITS--Unconsolidated alluvium, colluvium, glacial, marine, swamp and eolian deposits; mainly sand, silt, gravel and pumice

Tnb MILKY RIVER FORMATION OF GALLOWAY (1974) AND BEAR LAKE FORMATION--Milky River Formation (Pliocene), mainly volcanogenic sandstone and conglomerate, non-marine. Bear Lake Formation (Miocene), sandstone, conglomerate, siltstone, shale, and coal; shallow marine to non-marine

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

Kbc HOODOO AND CHIGNIK FORMATIONS--Hoodoo 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

KJhs HERENDEEN LIMESTONE AND STANIUKOVICH, HARDEX, AND SHELIKOF FORMATIONS--Herendeen Limestone (Lower Cretaceous); thin-bedded calcarenite composed of Inoceramus prisms and thin calcareous sandstone. Staniukovich Formation (Upper Jurassic and Lower Cretaceous); thin-bedded fetlspathic and laumontitic sandstone. Naknek Formation (Upper Jurassic); dark siltstone and shale in upper part, light arkosic sandstone and conglomerate in lower part. Shelikof Formation (Middle Jurassic); dark siltstone and shale

VOLCANIC ROCKS

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

Qcs CINDER AND SPATTER CONES, AND DOMES--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 domes

Tm MISSICK FORMATION (Miocene or Oligocene)--Basalt flows, volcanic rubble flows, and lahars; minor volcanogenic sedimentary rock

INTRUSIVE ROCKS

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

Tgd 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. Arrows indicate relative lateral movement
- Thrust or high-angle reverse fault--Dotted where concealed; sawteeth on upper plate
- Folds--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

REFERENCES CITED

Burk, C. A., 1965, Geology of the Alaska Peninsula--island arc and continental margin: Geol. Soc. America Mem. 99, 250 p.

Galloway, W. E., 1974, Deposition and diagenetic alteration of sandstone in northeast Pacific arc-related basins: Implications for graywacke genesis: Geol. Soc. America Bull., v. 85, no. 3, p. 379-390.

GENERALIZED GEOLOGIC MAP OF CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

BY

ROBERT L. DETTERMAN, THOMAS P.MILLER, M. ELIZABETH YOUNT, FREDERIC H. WILSON

1979

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