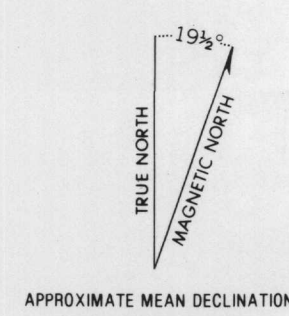
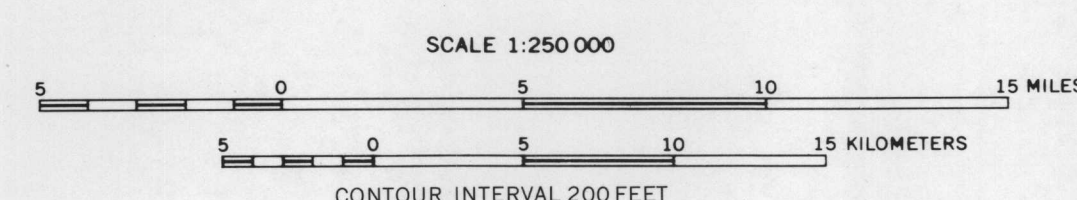


Base from U.S. Geological Survey, 1963

CORRELATION OF MAP UNITS			
SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS	VOLCANIC ROCKS	INTRUSIVE ROCKS	
Qs	Qs	Ti	Holocene and Pleistocene
Qv	Qv	Tv	Pliocene and Miocene
Unconformity	Tn	Tn	Miocene or Oligocene
Ti	Ti	Ti	Eocene and Paleocene
Unconformity	Tpd	Tpd	Paleocene
Rhc			Upper Cretaceous
Unconformity			Lower Cretaceous to Middle Jurassic
Khs			Cretaceous and Jurassic

DESCRIPTION OF MAP UNITS	
SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS	
Qs	SURFICIAL DEPOSITS—Unconsolidated alluvium, colluvium, glacial, marine, swamp and/or alluvial deposits; mainly sand, silt, gravel and pebbles
Qv	VALLEY FILL—FORMATION OF GULLY (1941) AND BEAR RIVER FORMATION (1941); mainly volcanic sandstone and conglomerate; some marine; Bear River Formation (Miocene), sandstone, conglomerate, siltstone, shale, and coal; shallow marine to non-marine
Ti	TOLSTOI FORMATION OF BURK (1965) (Paleocene and Eocene)—Sandstone, conglomerate, siltstone, dark shale, coal; high percent volcanic debris; mainly non-marine
Rhc	HODGSON AND CHIGNIK FORMATIONS—HODGSON 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
Khs	HERZEN LIMESTONE AND STANISLOVICH, HANSEN, AND SHELLFORD FORMATIONS—HERZEN LIMESTONE (Lower Cretaceous); thin-bedded calcarenite composed of microporous grains and thin calcareous sandstone; STANISLOVICH FORMATION (Upper Jurassic and Lower Cretaceous); thin-bedded calcarenite and sandstone; HANSEN FORMATION (Upper Jurassic); dark siltstone and shale in upper part; light calcareous sandstone and conglomerate in lower part; SHELLFORD FORMATION (Middle Jurassic); dark siltstone and shale
VOLCANIC ROCKS	
Qv	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
Qs	CINDER AND SPATTER CONES, AND DUNES—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 hyaloclastite plugs and dikes
Tn	MESHIK FORMATION (Miocene or Oligocene)—Basalt flows, volcanic rubble flows, and lahars; other volcanogenic sedimentary rock
INTRUSIVE ROCKS	
Ti	INTRUSIVE ROCKS—Quartz diorite, diorite, and gabbro; medium- to coarse-grained; mainly small plutons
Tpd	GRANODIORITE—Senio Islands pluton; medium- to coarse-grained; hornblende- and biotite-bearing



APPROXIMATE MEAN DECLINATION AT CENTER OF MAP, 1963

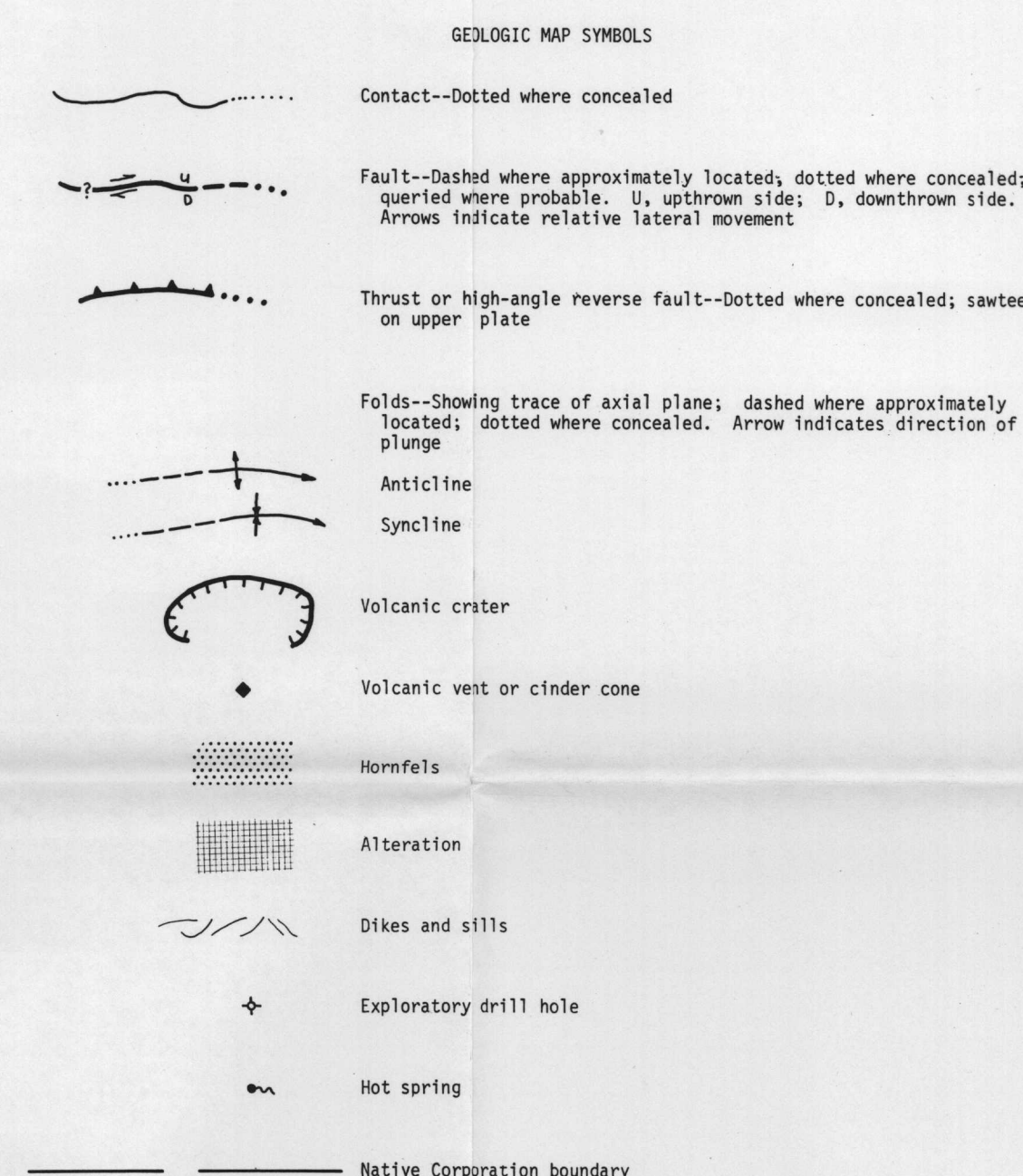
GEOLOGIC INTERPRETATION

MAPS SHOWING AEROMAGNETIC SURVEY AND GEOLOGIC INTERPRETATION OF THE CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

By

J.E. Case, D.P. Cox, David E. Detra, R.L. Detterman, and Frederic H. Wilson

1981



EXPLANATION FOR AEROMAGNETIC INTERPRETATION	
Qv	Anomalies over Holocene or Pleistocene volcanic complexes, small intrusive bodies, and ash and debris flows
Qs	Anomalies over Quaternary cones, plugs, and rocks
Qv	Positive anomalies over Quaternary lava flows
Qs	Anomalies over Quaternary intrusive rocks
Qv	Anomalies over Quaternary and/or Tertiary volcanic rocks, undivided, and small intrusive bodies
Qv	Anomalies over shallow but buried Quaternary and/or Tertiary volcanic volcanic rocks, undivided
Tv	Anomalies over Tertiary volcanic complexes
Tv	Anomalies over Tertiary volcanic-intrusive complexes
Tv	Anomalies interpreted to overlie buried Tertiary volcanic-intrusive complexes
Ti	Anomalies over Tertiary intrusive bodies and local volcanic rocks
Ti	Anomalies interpreted to overlie buried Tertiary intrusive bodies and local volcanic rocks
amb	Anomalies over "deep" magnetic basement (2 to 3 or more beneath flight elevation)
Qv	Anomalies over deeply buried plutonic or volcanic rocks
Tv + Tv	Anomalies caused by more than one rock unit
31	Approximate boundary around anomalies over major volcanic-intrusive complexes. Similar refers to text discussion
15	Approximate boundary of other numbered areas discussed in text
P.T.R?	Approximate boundary of closed aeromagnetic low, P, polarization low, T, "topographic" anomaly, and R?, area of possible reversed remnant magnetization
A	Approximate boundary of local positive anomalies over Quaternary volcanic complexes
C.A.	Approximate boundary of area of suspected alteration
C.A.	Center of mineralization identified by Cox (1961)
---	Inferred aeromagnetic lineament

* Potassium-argon and fission track data gathered after the publication of the geologic map (Detterman, Miller, Yount, and Wilson, 1975) and as the base for this map indicate that the age of the Meshiik Formation is Eocene and Oligocene (Detterman and others, 1981).