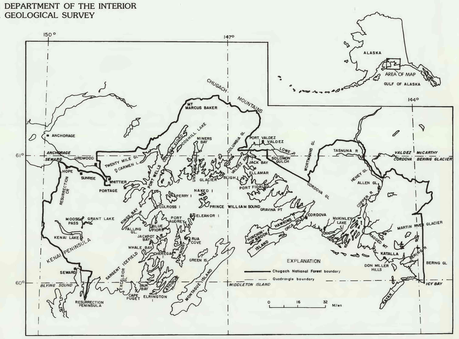
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF–1645–H
Explanatory pamphlet accompanies map



INDEX MAP SHOWING LOCATION AND GEOGRAPHIC SETTING OF CHUGACH NATIONAL FOREST, ALASKA

Base from U.S. Geological Survey, Strong Sound, Seward, 1953; McDaniel Island, 1956; Bering Glacier, Cordova, 1958; McCarthy, Valdez, 1963; Icy Bay, 1961; Anchorage, 1962

SCALE 1:250 000

GLACIER CONTOUR INTERVAL 200 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

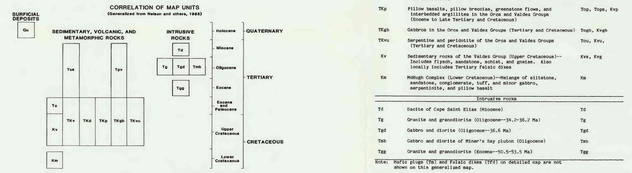
DESCRIPTION OF MAP UNITS

Unit	Description	Detailed map units of Nelson and others (1985)
	Sedimentary, metamorphic, and volcanic	
Qu	Surficial deposits, undivided (Holocene)—Includes moraine, alluvium, colluvium and beach deposits that prevent delineation of geological contacts	Qu
Tus	Sedimentary rocks, undivided (Tertiary)—Includes Yakataga, Redwood, Poul Creek, Tonsina, Kulthieth, and Stillwater Formations	Ty, Tr, Tpu, Tt, Tk, Ts
Tpv	Mafic volcanic rocks of Poul Creek Formation	Tpv
To	Sedimentary rocks of the Orca Group (Eocene? and Paleocene)—Includes Tarwathcha and Hinchinbrook Formations. Also locally includes Tertiary felsic dikes	Tfd, Tos, Toc
TKv	Volcanic rocks of the Orca and Valdez Groups—Includes mafic volcanic rocks, minor pillow basalt, tuffaceous and interbedded sedimentary rocks (Tertiary and Cretaceous)	Tov, Tota, Tsav, Kvm, Kvgr
TKd	Sheeted dike complexes in the Orca and Valdez Groups (Tertiary and Cretaceous)	Tsd, Kvd
TKp	Pillow basalts, pillow breccias, greenstone flows, and interbedded argillites in the Orca and Valdez Groups (Eocene to Late Tertiary and Cretaceous)	Top, Topa, Kvp
TKgb	Gabbros in the Orca and Valdez Groups (Tertiary and Cretaceous)	Togb, Kvgb
TKvu	Serpentine and peridotite of the Orca and Valdez Groups (Tertiary and Cretaceous)	Tou, Kvu,
Kv	Sedimentary rocks of the Valdez Group (Upper Cretaceous)—Includes flysch, sandstone, schist, and gneiss. Also locally includes Tertiary felsic dikes	Kvs, Kvg
Km	McHugh Complex (Lower Cretaceous)—Melange of siltstone, sandstone, conglomerate, tuff, and minor gabbro, serpentinite, and pillow basalt	Km
	Intrusive rocks	
Td	Dacite of Cape Saint Elias (Miocene)	Td
Tg	Granite and granodiorite (Oligocene—34.2–36.2 Ma)	Tg
Tgd	Gabbro and diorite (Oligocene—36.6 Ma)	Tgd
Tmh	Gabbro and diorite of Miner's Bay pluton (Oligocene)	Tmh
Tgg	Granite and granodiorite (Eocene—50.5–51.5 Ma)	Tgg

Note: Mafic plugs (Tm) and felsic dikes (Tfd) on detailed map are not shown on this generalized map.

CORRELATION OF MAP UNITS

(Generalized from Nelson and others, 1985)



EXPLANATION

Magnetic anomaly—Showing total intensity magnetic field of the Earth in gammas relative to arbitrary datum. Reduced to indicate closed areas of lower magnetic intensity (L). A, closed high. Contour intervals 5 and 20 (Valdez quadrangle) gammas; dashed supplementary contours (Valdez quadrangle) 10 gammas

Flight path—Showing location and spacing of data; date in month, ticks on contours in north. Flightline spacing, 1 mi; flight altitude, 1,000 ft above mean terrain

Magnetic areas or features discussed in text—R, apparent reversed magnetization

Boundary of magnetic anomaly or area—Approximately located

Magnetic lineament

Axis of magnetic low—Approximately located

Axis of magnetic high—Approximately located

Contact—Dashed where approximate or inferred; dotted where concealed

Fault—Dashed where approximate or inferred; dotted where concealed. Sense of movement unknown

Thrust or high angle reverse fault—Dashed where approximately located. Sawteeth on upthrown plate

Geology generalized from Nelson and others (1985)

Aeromagnetic survey flown and compiled by Geometrics, Inc., 1976–1977 (Seward, Strong Sound, Cordova, and McDaniel Island quadrangles) and by LKB Resources, Inc., 1976–1979 (Anchorage and Valdez quadrangles).

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MAP SHOWING GEOLOGIC INTERPRETATION OF AEROMAGNETIC DATA FOR THE CHUGACH NATIONAL FOREST, ALASKA

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1991

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