DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 84-355
PLATE 1

150°00'
147°00'
144°00'
61°00'
60°00'
TURNAGAIN ARM
CHICKALOON BAY
KENAI PENINSULA
CHUGACH NATIONAL FOREST
CHUGACH MOUNTAINS
KNIK GLACIER
MARCUS BAKER GLACIER
HARVARD GLACIER
COLUMBIA GLACIER
PORT WELLS
COLLEGE FIORD
BARRY ARM
HARRIMAN FIORD
UNAKWIK INLET
VALDEZ ARM
PORT VALDEZ
PORT FIDALGO
PORT GRAVINA
ORCA BAY
ORCA INLET
Cordova
PORT NELLIE JUAN
KINGS BAY
PRINCE WILLIAM SOUND
KNIGHT ISLAND PASSAGE
MONTAGUE STRAIT
HINCHINBROOK ENTRANCE
HAWKINS ISLAND CUTOFF
GULF OF ALASKA
COPPER RIVER DELTA
ALLEN GLACIER
MILES GLACIER
MARTIN RIVER GLACIER
CONTROLLER BAY
Okalee Spit
Kayak Island
Cape St. Elias
Cape Suckling
SEWARD
RESURRECTION BAY
HARDING ICEFIELD
BLYING SOUND
PORT WELLS FAULT
GRAVINA FAULT
BAGLEY FAULT
CHUGACH FAULT
MARTIN FAULT
MONTAGUE STRAIT FAULT
HANNING BAY FAULT
PATTON BAY FAULT
WINGHAM FAULT
KAYAK FAULT
TEN FATHOM FAULT
ALASKA
0 200 400 KM
0 100 200 MI
SCALE 1:250000
5 0 5 10 15 20 MILES
5 0 5 10 15 20 25 30 KILOMETERS

CORRELATION OF MAP UNITS

SURFICIAL DEPOSITS: Qu — Holocene — QUATERNARY

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS: QTy — Pleistocene and Pliocene — QUATERNARY AND TERTIARY; Tr — Miocene and Oligocene (?); Tps, Tpv — Miocene, Oligocene; Tt — Oligocene, Eocene; Tk, Ts — Eocene — TERTIARY

Orca Group: Toc, Tos, Top/Tops, Tosv, Tots, Tov, Tod, Togb, Tou — Eocene (?) and Paleocene

Valdez Group: Kvs, Kvg, Kvp, Kvgr, Kvd, Kvgb, Kvu, Kvvs — Upper Cretaceous — CRETACEOUS

Km — Lower Cretaceous

INTRUSIVE ROCKS: Td — Miocene; Tg, Tgd, Tmb — Oligocene; Tm — Oligocene (?); Tgg — Eocene; Tfd — Eocene (?) and Paleocene (?) — TERTIARY

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS

Qu	SURFICIAL DEPOSITS, UNDIVIDED (HOLOCENE)

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

QTy	YAKATAGA FORMATION (PLEISTOCENE TO MIOCENE)
Tr	REDWOOD FORMATION (MIOCENE AND OLIGOCENE?)
	POUL CREEK FORMATION (MIOCENE, OLIGOCENE, AND EOCENE)--Divided into:
Tps	Sedimentary rocks, undivided
Tpv	Volcanic rocks, undivided
Tt	TOKUN FORMATION (OLIGOCENE AND EOCENE)
Tk	KULTHIETH FORMATION (EOCENE)
Ts	STILLWATER FORMATION (EOCENE)
	ORCA GROUP (EOCENE? AND PALEOCENE)--Divided into:
Toc	CONGLOMERATE
Tos	SEDIMENTARY ROCKS, UNDIVIDED
Top	PILLOW BASALT
Tops	PILLOW BASALT AND SEDIMENTARY ROCKS
Tosv	INTERBEDDED SEDIMENTARY AND MAFIC VOLCANIC ROCKS
Tots	TUFFACEOUS SEDIMENTARY ROCKS
Tov	VOLCANIC ROCKS, UNDIVIDED
Tod	SHEETED DIKES
Togb	GABBRO
Tou	ULTRAMAFIC ROCKS
	VALDEZ GROUP (UPPER CRETACEOUS)--Divided into:
Kvs	SEDIMENTARY ROCKS, UNDIVIDED
Kvg	PARAGNEISS
Kvp	PILLOW BASALT
Kvgr	GREENSTONE
Kvd	SHEETED DIKES
Kvgb	GABBRO
Kvu	ULTRAMAFIC ROCKS
Kvvs	INTERBEDDED VOLCANIC AND SEDIMENTARY ROCKS
Km	McHUGH COMPLEX (LOWER CRETACEOUS)

INTRUSIVE ROCKS

Td	DACITE OF CAPE SAINT ELIAS (MIOCENE)
Tg	GRANITE AND GRANODIORITE (OLIGOCENE)
Tgd	GABBRO AND DIORITE (OLIGOCENE)
Tmb	MINERS BAY PLUTON (OLIGOCENE)
Tm	MAFIC PLUGS (OLIGOCENE?)
Tgg	GRANITE AND GRANODIORITE (EOCENE)
Tfd	FELSIC DIKES (EOCENE? AND PALEOCENE?)

GEOLOGIC SYMBOLS

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

LINEAMENT--Identified on air photos but not on ground. Possible fault

FELSIC DIKE--Approximate length. Too thin to show at map scale

Base from U.S. Geological Survey, Blying Sound, Seward, 1953; Middleton Island, 1955; Bering Glacier, Cordova, 1959; McCarthy, Valdez, 1960; Icy Bay, 1961; Anchorage, 1962.

PLATE I
LOCATIONS OF STREAM SEDIMENT AND MORAINE SITES FROM THE CHUGACH NATIONAL FOREST, SOUTH-CENTRAL ALASKA

BY

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1984

Geology by J.E. Case, J.A. Dumoulin, M.L. Miller, S.W. Nelson, M.L. Silberman, A.B. Till, G.R. Winkler, 1980; J.A. Dumoulin, R.A. Koski, M.L. Miller, S.W. Nelson, M.L. Silberman, 1981; J.A. Dumoulin, S.M. Karl, R.A. Koski, M.L. Miller, S.W. Nelson, G.R. Winkler, 1982; Geology in western part of Seward quadrangle from Tysdal and Case (1979) and in the Don Miller Hills and Kayak Island from Winkler and Plafker (1981).