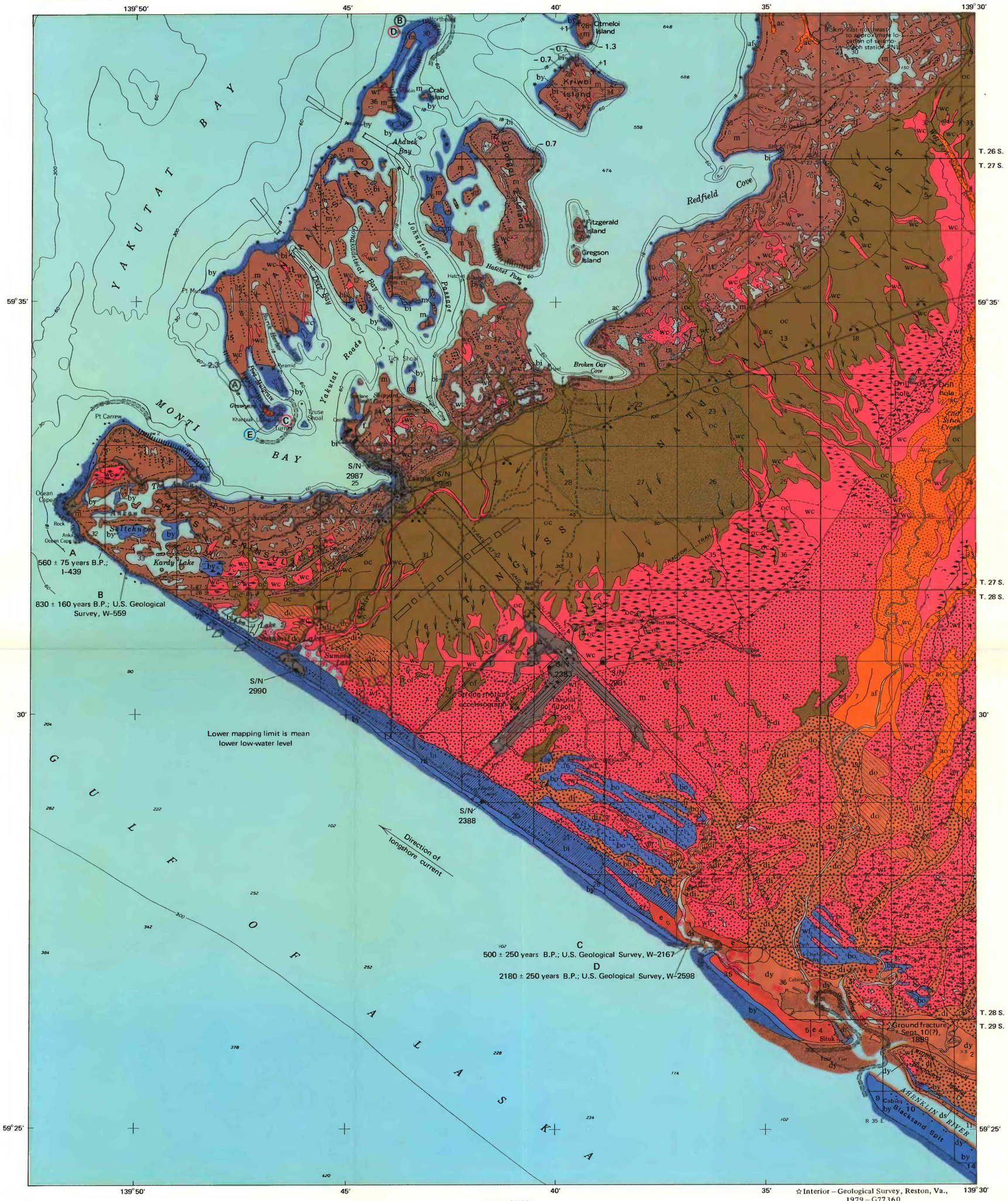


Base modified from U.S. Geological Survey Yakutat B-5 and C-5, 1959, minor revisions, 1970

☆Interior—Geological Survey, Reston, Va., 1979—G77360

Mapped by field methods, 1966, by interpretation in 1975 of aerial photographs taken 1948–63

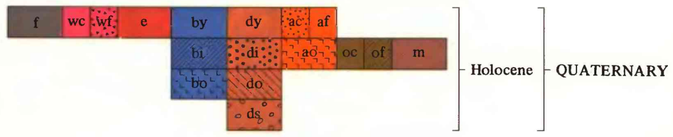
APPROXIMATE MEAN DECLINATION, 1979

SCALE 1:63 360

1 .5 0 1 2 3 4 5 6 7 KILOMETERS

CONTOUR INTERVAL 100 FEET (33 M)
DOTTED LINES REPRESENT 50-FOOT (17-M) CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SPOT SOUNDINGS IN FEET—DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 8 FEET (3 M)

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

All units are of Quaternary age and the usual practice of prefixing the letter Q before map units is omitted from the map, description, and correlation of map units.

Units generally >1 m thick; bedrock covered by as much as 67 m of surficial material. Classification of grain size from Wentworth (1922): Clay, <0.0039 mm; silt, 0.0039–0.0625 mm; sand, 0.0625–2 mm; granule, 2–4 mm; pebble, 4–64 mm; cobble, 64–256 mm; boulder, >256 mm.

f — ARTIFICIAL FILL (HOLOCENE) — Includes fill and ground areas extensively modified during construction

ORGANIC DEPOSITS (HOLOCENE)
- **wc** — Underlain by coarse-grained deposits — Mostly sandy pebble gravel or silty sandy pebble gravel
- **wf** — Underlain by fine-grained deposits — Chiefly sand and silty sand

e — EOLIAN SAND DEPOSITS (HOLOCENE)

BEACH DEPOSITS (HOLOCENE)
- **by** — Young — Mostly sand and some pebbly sand along Gulf of Alaska; elsewhere, sandy to pebbly cobble gravel with some boulders. (Unit shown only for wide areas of deposits.)
- **bi** — Intermediate — Mostly sand and some pebbly sand
- **bo** — Old — Mostly sand and some pebbly sand

DELTA-ESTUARINE DEPOSITS (HOLOCENE)
- **dy** — Young — Chiefly silty sand or fine sand
- **di** — Intermediate — Mostly sand; some silt and small pebbles
- **do** — Old — Probably mostly sand; some pebbles and silt
- **ds** — Clayey silt

ALLUVIAL DEPOSITS (HOLOCENE)
- **ac** — Coarse grained — Mostly pebble gravel; some sand, cobbles, and silty sand
- **af** — Fine grained — Chiefly sand; some pebble gravel and silt
- **ao** — Old — Probably sand and silty sand and, near base, sandy pebble gravel

OUTWASH DEPOSITS (HOLOCENE)
- **oc** — Coarse-grained — Chiefly sandy pebble gravel. Size locally ranging from granule sand to silty cobble gravel
- **of** — Fine-grained — Mostly sand ranging from pebbly sand to silty sand

m — END AND GROUND MORAINE DEPOSITS (HOLOCENE) — Till (diamicton) prevalent; chiefly granule- and pebble-laden silt to sand with lesser cobbles, clay, and some boulders. Subordinate deposits include sandy pebble gravel or sandy cobble gravel to silty fine sand

Contact

Prominent curvilinear ridge

Relatively straight linear ridge

Areas containing mostly sand at surface — Shown in units by, dy, and e

Abandoned channel and direction of gradient of glacial outwash stream

Possible alinement of former channel for glacial outwash

Alinement of drainage divide — Possibly overlying an older glacial moraine or other geologic feature

Areas containing abundant cobbles, boulders, and pebbles

Marsh or swamp areas — Interpreted by topographer who developed initial topographic map using 1948 aerial photographs. These wet areas form only part of the organic deposits mapped as units wc and wf

AREA ≥ 17 M ABOVE MEAN SEA LEVEL AND WITHIN ABOUT 8 KM OF YAKUTAT

AREA OF EXTENSIVE CHANGE IN CONFIGURATION OF SHORELINE AND INTERTIDAL CHANNELS — These changes occurred since 1948, the date of the photographs used in construction of topographic map (1959)

AREAS OF KNOWN GEOLOGIC EFFECTS OF EARTHQUAKES OF SEPTEMBER 1899 — Data mostly from Tarr and Martin, 1912, pl. 14

+ Slight uplift — If measured, in meters

Slight submergence — If measured, in meters

Ground fractures

Sand craters and ground fractures (Martin, 1910, p. 363)

Ⓐ Ⓑ Possible large submarine landslides

AREAS OF KNOWN GEOLOGIC EFFECTS OF EARTHQUAKE, JULY 10, 1958 — Data mostly from Davis and Sanders (1960)

Most severe jostling of concrete slabs making up airport runway

Ground fractures

Sand ejected from craters — Interpreted from infrared aerial photographs taken August 12, 1958, U.S. Coast and Geodetic Survey

Ⓒ Ⓓ Large submarine landslides

Ⓔ SLUMPING OF BEACH — Possible geologic effect, Alaska earthquake, March 28, 1964 (U.S. Coast and Geodetic Survey, 1966)

S/N 2388 — APPROXIMATE LOCATION OF SEISMOSCOPE AND DESIGNATION (B.L. Silverstein, written commun., 1975)

A, B, C — Sample locality of radiocarbon age-dated wood (see text description of end and ground moraine deposits, map unit m)

D — Sample locality of radiocarbon age-dated marine mollusk shells (see text description of clayey silt delta-estuarine deposit, map unit dg)

Borrow pit—Used for fill or construction aggregate. Some pits possibly abandoned

Abandoned borrow pit

RECONNAISSANCE GEOLOGIC MAP SHOWING SELECTED TOPOGRAPHIC, HYDROLOGIC, AND EARTHQUAKE-RELATED INFORMATION, YAKUTAT AREA, ALASKA