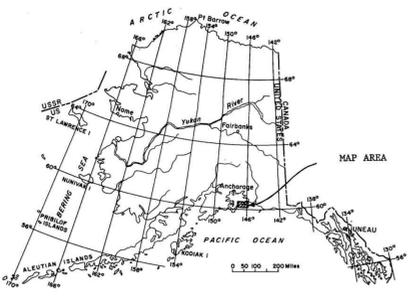


Base by U. S. Geological Survey, 1950-51

Geology by G. R. Winkler, 1971-72,
and G. Plafker, 1972



True North
Magnetic North
Approximate mean
declination, 1973

SCALE 1:63,360

CONTOUR INTERVAL 100 FEET
Dotted lines represent 50-foot contours
Datum is mean sea level
Depth curves and soundings in feet—datum is mean lower low water

| | | |
|-----|-----|-----|
| B-8 | B-7 | B-6 |
| A-7 | A-8 | |

QUADRANGLE GUIDE

EXPLANATION

UNCONSOLIDATED
Present beach, marine silt, tidal flat, and lagoonal deposits.
Unconsolidated, unvegetated. Inferred in part from low-altitude aerial photographs (scale ca. 1:16,000). Only the massive tidal deposits, exposed during all but the highest tides, are included; the extensive offshore intertidal flats of Hinchinbrook Island and Orca Island have not been delineated.

OLDER BEACH DEPOSITS, TERRACE GRAVELS, AND STREAM ALLUVIUM
Unconsolidated, generally vegetated. Inferred in part from aerial photographs. Generally older than unit Qy, but alluvium of present stream in gradient-valley and coastal-wash unit Qy. At least six successive episodes of shoreline progradation are preserved in beach complexes near Ft. Mestink. Each complex includes a beach ridge or berm separating a forebeach (a) from a lagoon or runnel (b), numbered from 1 (present beach) to 5 (oldest).

UNDIVIDED GLACIAL TILL
Unconsolidated older and younger till, inferred in part from aerial photographs. Generally unbedded, unsorted, and bouldery. Older till is vegetated and is characterized by clasts of foliated metamorphic and coarse-grained plutonic rocks. Younger till is unvegetated; is preserved only in cirques, and consists of locally derived clasts.

UNCONFORMITY
Sedimentary unit
Chiefly calcareous and lithofelspathic sandstone and siltstone, with minor conglomeratic sandstone and siltstone, red-weathering shale, and hematitic deposits. Circles indicate conglomeratic sandstone and siltstone; stars indicate red-weathering shale. Dense and well indurated. Baflof or shaly marine.
Completely deformed (in part, before complete lithification) and regionally metamorphosed to the laminitic and proterite-pumpellyite facies.
From many rugged ridges, are cliffs, of headlands where sandstone predominates, and smooth subhorizontal slopes, where siltstone predominates. Sandstone beds are characterized by abundant siltstone and shale bedding and by frequent convolute lamination and lignoid ripple; siltstone beds often are blocky. Some beds contain abundant carbonaceous plant remains, and the hematitic deposits contain scattered planktonic foraminifera of probable Paleocene age-directional measurements of flats and groove casts, when corrected for tectonic tilt, show considerable scatter but demonstrate general east-west sediment transport (see rose diagram). Mineral inclusions indicate dominant metamorphic ("tectonic") and subordinate volcanic source terranes.

CONTACTS
Approximately located

FAULTS
Sense of displacement is reverse or thrust, where demonstrable.
Fault approximately located, showing dip: U, upthrown side, D, downthrown side. Dotted where concealed. Perseverative minor faults not shown.
Fault showing evidence of Holocene movement
Probable fault seen as a linear trace on aerial photographs but not identified on ground. Dotted where concealed.

FOLDS
Approximately located, showing direction of dip of limbs, trace of axial surface, and plunge of axis. Symbols for many shoreline stations shown in water for clarity. Dotted where concealed.

ANTICLINE
Syncline
Overturned anticline
Overturned syncline
Inverted anticline
Minor anticline
Minor syncline
Closely spaced minor folds. May be syndepositional in part.

MISCELLANEOUS
Approximate upper limit of elevated marine terrace, inferred in part from aerial photographs.
Copper prospects
Open workings, approximately located. All inactive and unpatented.
Crests of beach bars (Ft. Mestink area only)
Microfossil locality showing station number
Foliated current rose diagram
Flute and groove cast orientations, corrected for tectonic tilt. Class interval, 30°. Number of measurements, 12.

SYMBOLS FOR MANY SHORELINE STATIONS
Shown in water for clarity
Inclined
Vertical
Overturned
Strike and dip of beds
Top of beds inferred from sedimentary structures
Strike and dip of beds
Top of beds inferred from aerial photographs
Dashed symbol indicates attitude estimated from aerial photographs
Strike and dip of plicated beds
Top of beds inferred

GLACIAL STRIATIONS AND GROOVES
Mostly inferred from aerial photographs. Arrows indicate direction of ice movement.
Older regional glaciation (Probably Wisconsin)
Younger local glaciation (Holocene)

GEOLOGIC MAP OF THE CORDOVA A-7 AND A-8, B-6, B-7, AND B-8 QUADRANGLES, HINCHINBROOK ISLAND, ALASKA

BY G. R. WINKLER
1973