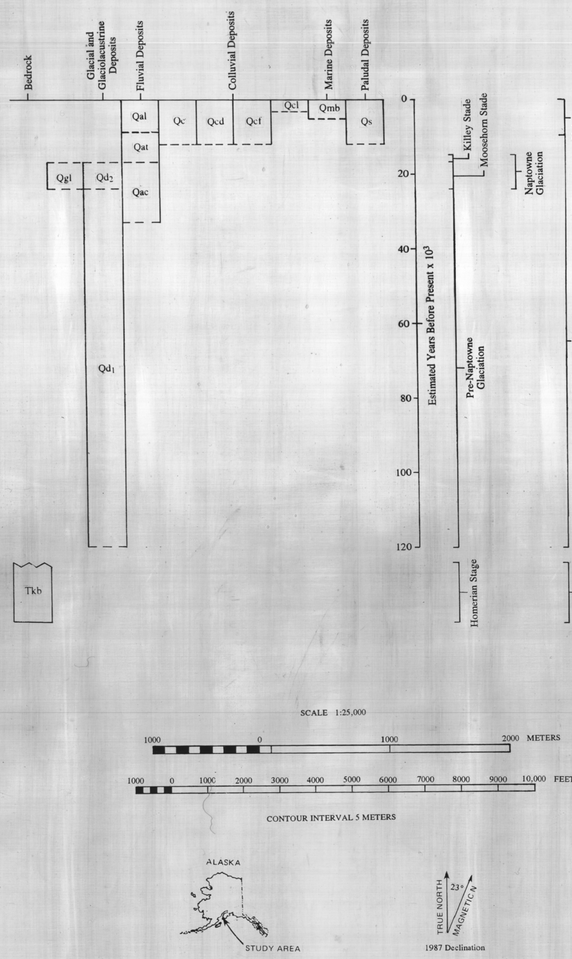
ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
PREPARED IN COOPERATION WITH ALASKA DIVISION OF WATER

CORRELATION OF MAP UNITS



SCALE 1:25,000

1000 0 1000 2000 METERS

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10,000 FEET

CONTOUR INTERVAL 5 METERS

SURFICIAL GEOLOGY OF THE ANCHOR POINT AREA, ALASKA

By

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1993

DESCRIPTION OF MAP UNITS

Fluvial Deposits

Qal FLOODPLAIN ALLUVIUM--Elongate deposits of pebble-cobble gravel and sand with few to numerous boulders beneath modern stream floodplains; well sorted and medium to thick bedded, locally crossbedded; surface smooth, except for low local scarps

Qac ABANDONDED-CHANNEL ALLUVIUM--Elongate channel fillings up to 5 m thick of well-sorted, clean pebble-cobble gravel and gravelly medium-to-coarse sand with rare to numerous boulders deposited in former drainage channels; upper 1 m commonly composed of medium sand; medium to thick bedded, locally crossbedded; surface smooth, except for low local scarps

Qat TERRACE ALLUVIUM--Elongate deposits of pebble gravel and sand with some cobbles forming stream terraces bordering modern stream floodplains; well sorted and medium to thick bedded, locally crossbedded; surface smooth, except for low local scarps

Colluvial Deposits

Qc UNDIFFERENTIATED COLLUVIUM--Heterogeneous aprons of silt, sand, and gravel left on lower steep slopes by complex mass-movement processes, including flowing, free fall, bouncing, rolling, sliding, and frost creep; surface generally smooth and well drained

Qcd DEBRIS-FLOW DEPOSITS--Fan- and cone-shaped, heterogeneous mixtures of silt and sand with some gravel and few to numerous, subrounded boulders deposited in gullies by debris flows; surface smooth to irregular

Qcf MIXED COLLUVIUM AND ALLUVIUM--Tongue-shaped, heterogeneous mixtures of clay, silt, sand, and pebble-cobble gravel with few subrounded boulders deposited in gullies by mass-movement and stream processes; locally composed of nests of boulders left as lag by winnowing of fine fraction; surface smooth to slightly irregular

Qcl LANDSLIDE DEPOSIT--Oval, heterogeneous mixture of clay, silt, sand and gravel with few to numerous subrounded boulders deposited by near-surface sliding and flowing due to instability of unconsolidated surficial deposits, primarily till; surface slightly irregular to very irregular, broken by numerous concentric ground cracks and low ridges

Marine Deposits

Qmb BEACH DEPOSITS--Wedge- and blanket-shaped deposits of medium to coarse sand with local lags of cobbles deposited by the action of waves and longshore currents

Glacial and Glaciolacustrine Deposits

Qd_1 UNDIFFERENTIATED TILL OF PRE-NAPTOWNE GLACIATION AND GLACIOLACUSTRINE DEPOSITS OF EARLY NAPTOWNE GLACIATION (MOOSEHORN STADE)(estimated between 18,000 and 120,000 years old--Widespread blanket of heterogeneously mixed silt with some sand and pebble-cobble gravel, trace clay (till) deposited by glacier flowing southward down Cook Inlet trough during pre-Naptowne glaciation; locally (especially near lower Anchor River), overlain by laminated to massive-bedded clay and silt with few to numerous pebble dropstones laid down in glacier-dammed lake of early Naptowne age; surface smooth to slightly irregular, locally channelled and terraced

Qd_2 TILL OF EARLY NAPTOWNE GLACIATION (MOOSEHORN STADE)(estimated 18,000 to 25,000 years old)--Blankets and digitated wedges composed of pebble-cobble gravel with trace to some silt and sand and numerous subrounded boulders deposited directly from melting Kachemak Bay glacier; in lower part composed of clay and silt with trace to some fine to medium sand and few cobble dropstones laid down in glacial lake into which Kachemak Bay lobe floated; intense folding and faulting 4.3 km south of Anchor River mouth identify zone of grounding by former floating glacier ; pebble-cobble gravel with trace to some medium to coarse sand dominates upper part, where meltwater processes resulted from stagnation of Kachemak Bay lobe; surface slightly irregular to irregular with numerous ponds, small lakes, and peat fens present in depressions

Qgl DOMINANTLY GLACIOLACUSTRINE DEPOSITS OF PRE-NAPTOWNE AND EARLY NAPTOWNE (MOOSEHORN STADE)GLACIATIONS(estimated between 18,000 and 120,000 years old)--Widespread blanket consisting of well-sorted sands varying laterally with channel pebble and cobble gravels with numerous subrounded boulders in upper part and moderately to poorly sorted fine sand, silt, and clay with some clastic coal in lower part ; surface rgular to planar

Paludal Deposits

Qs ORGANIC SWAMP DEPOSITS--Complexely interlayered moss and sedge peats, organic sand and silt, and fine to medium fluvial sand deposited in poorly drained former drainage channels and local depressions; maximum thickness generally 2 to 4 m; locally perennially frozen at depth; surface smooth to hummocky, poorly drained

Bedrock

Tkb BELUGA FORMATION--Moderately to weakly indurated fine- to medium-grained sandstone interbedded with siltstone, shale, claystone, and thin layers of bony coal (Adkison and others, 1975)

MAP SYMBOL

— — Approximate contact

● 1 Section location

REFERENCE

Adkison, W.L., Kelley, J.S., and Newman, K.R., 1975, Lithology and palynology of the Beluga and Sterling Formations exposed near Homer, Kenai Peninsula, Alaska: U.S. Geological Survey Open-File Report 75-383, 239 p.