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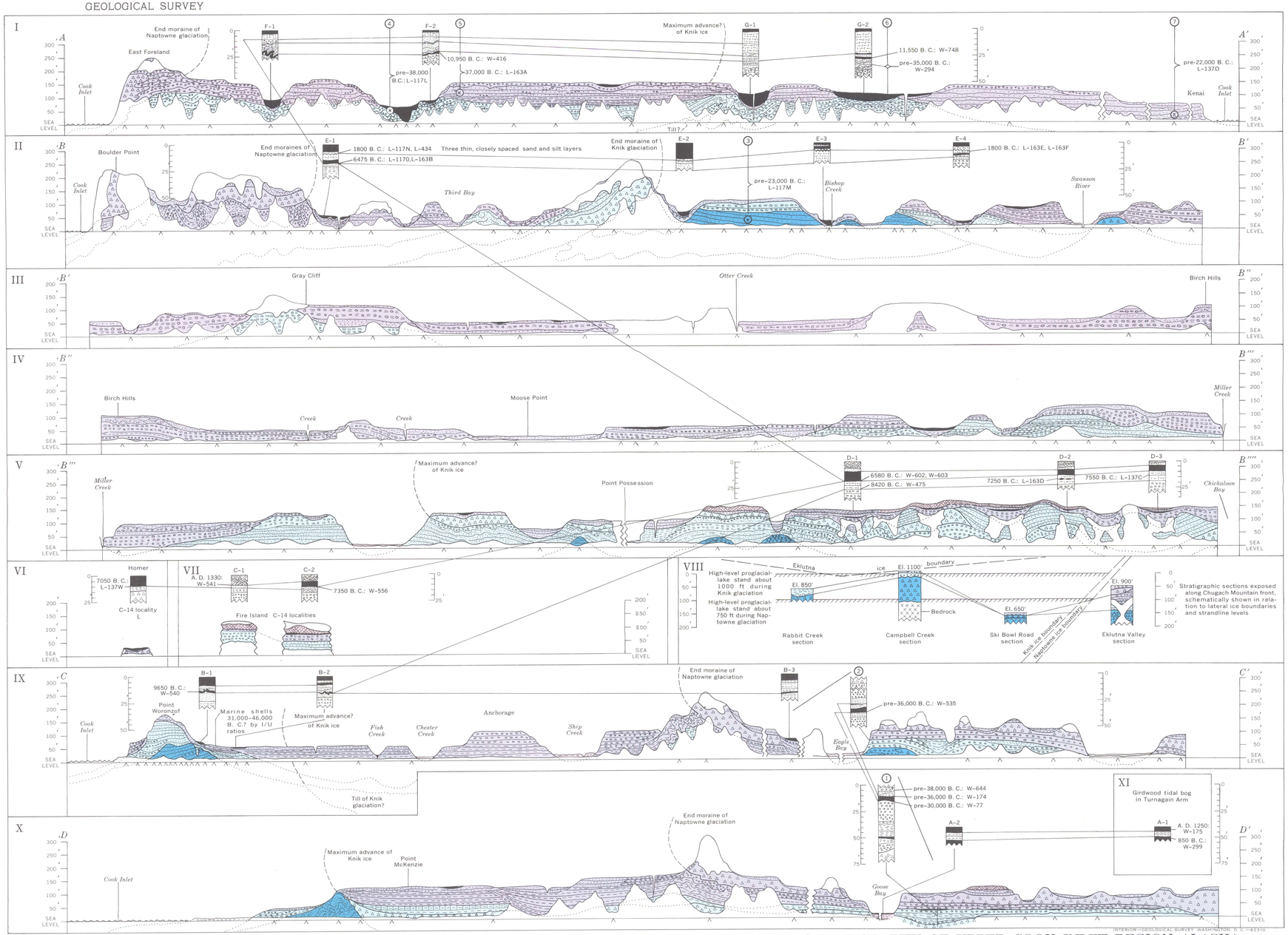
PLATE 6



Geology by T. N. V. Karlstrom, 1958

SEA-BLUFF AND RIVER-BLUFF STRATIGRAPHY OF UPPER COOK INLET REGION, ALASKA

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—62310

EXPLANATION

Deposits of Alaskan age

Loess, windblown sand, and bog deposits
Slightly weathered to unweathered, form a nearly continuous mantle overlying older deposits. Deposits shown on section only where unusually thick

Predominantly rudely stratified to massive proglacial lake silt interstratified with some sand and gravel
Contains scattered pebbles, cobbles, and locally large ice-rafted boulders; highly impermeable frost-susceptible sediments

Predominantly terrestrial sedge, moss, heath, and woody peat, locally interstratified with organic silty peat and inorganic silt and sand

Deposits of Naptowne age

Till, glaciolacustrine, glaciofluvial, eolian, and bog deposits
Characteristically blue-gray, gray and olive-drab-green sediments with weathering profiles of less than 10 feet generally overlain by loess and bog deposits of Alaskan age

Predominantly stratified to finely laminated glaciolacustrine and glaciofluvial sand interstratified with some silt and gravel
Locally contains scattered pebbles, cobbles, and boulders; poorly permeable locally frost-susceptible sediments

Predominantly laminated organic silt locally interbedded with inorganic silt and sand and detrital peat

Deposits of Knik age

Till, glaciolacustrine, glaciofluvial, eolian, bog, and marine silt deposits
Characteristically buff to gray and olive-drab-green sediments with weathering profiles ranging from 10 to 20 feet in thickness where overlain conformably by thick deposits of Naptowne and younger age

Predominantly stratified glaciolacustrine and glaciofluvial gravel interbedded with sand
Locally some silt; permeable sediments not susceptible to frost

Location of sections measured by hand level or estimated by eye from mean high tide or river levels
These measured sections are adjusted to profiles constructed from the 1:63,360 topographic maps and approximately to a datum of mean sea level

Deposits of Eklutna age

Till, glaciolacustrine, and glaciofluvial deposits
Characteristically yellow buff to buff to brown with weathering profiles more than 40 feet thick where overlain by deposits of Knik and younger age

Predominantly sandy silt to gravelly till containing numerous boulders, cobbles, and pebbles
Ranges from highly impermeable frost-susceptible sediments to permeable stable sediments

Stratigraphic profiles: horizontal scale, 1 inch=2640 feet
vertical scale, 1 inch=200 feet
vertical exaggeration × 13

Predominantly of finely laminated lacustrine silt and clay with some interbedded sand and gravel
Highly impermeable frost-susceptible sediments

Windblown cross-laminated sand with several buried soil profiles of cliff-head dunes locally present along the coast
Generally permeable sediments not susceptible to frost

Columnar sections of bog stratigraphy:
vertical scale, 1 inch=50 feet

Predominantly of marine silt and clay
Contains pelecypods and gastropods where exposed near Point Woronzof, Point McKenzie, and Goose Bay; highly impermeable frost-susceptible sediments

Base of slump deposits containing mixtures of silt, sand, and gravel
Locally mantled with vegetation which partially cover the bluff sections

① Location of C-14 samples collected beneath Naptowne drift

A-1 Location of C-14 samples collected from surface bogs

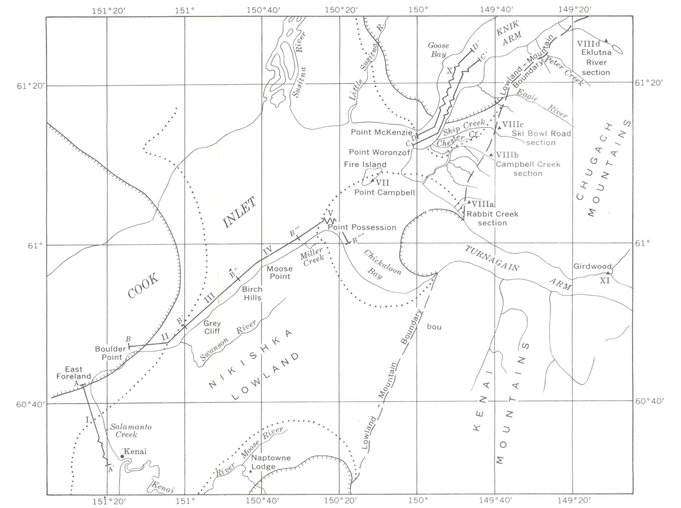
Sample localities shown on plates 1 and 4

Lines connecting stratigraphic zones of equivalent age

6580 B. C.: W-602, W-603

Stratigraphic position, age, and laboratory sample numbers of C-14 samples

Bedding contacts
Solid lines, exposed; dotted lines, buried



Sketch map showing location of sea-bluff and river-bluff sections in relation to the lowland moraines and reconstructed ice boundaries of the Knik (dotted lines) and of the Naptowne (hachured lines) glaciations. Location of gaps in the sea-bluff cross sections are indicated by wavy lines