



EXPLANATION

SURFICIAL DEPOSITS

Glacial deposits	Glaciofluvial and alluvial deposits	Estuarine and lacustrine deposits	Eolian deposits	Mass movement deposits	Swamp deposits
Qau, moraine on ice	Qal, flood-plain alluvium Qa, alluvial fans and cones	Qes, Estuarine silt	Qd, Sand dunes	Qtr, Talus and rubble deposits	Qs, Swamp deposits
Qai, moraine of the Tunnel Stade Qat, moraine of the Tuxtemena Stade	Qao, Outwash deposits	Qsm, Salt marsh deposits Ql, lacustrine deposits	Qtr, moraine terrace and beach ridge deposits Qtl, lake terrace and beach ridge deposits	Qrg, Rock glaciers	Qls, Landslide deposits
Qbu, moraine of the Iliuk Stade Qbn, moraine of the Nuvakale Stade Qbl, moraine of the Elawana Stade Qbk, moraine of the Kiechak Stade	Qbg, Ground moraine	Qc, Abandoned-channel deposits	Qgl, Proglacial lake deposits	Qso, Solifluction deposits	
Qm, moraine of the Kukaklek Lake	Qmk, Ground moraine	Qm, Terraced and modified moraine deposits	Qac, Abandoned-channel deposits		
Qmu, Drift, undivided					

BEDROCK

Sedimentary, metamorphic, and igneous rocks

Contact
Geologic boundaries between surficial deposits, and between bedrock and surficial deposits

Moraine boundary
End and lateral moraine marking maximum position of each stade; hachures point toward moraine. Used only for Pleistocene stades

Moraine contact
Recessional moraine and major still-stands; hachures point toward moraine

Moraine boundary
Marking maximum position of Holocene glacial stades; hachures point away from moraine

High strandline
Highest stand of water in Iliamna Lake, about 150 feet above present lake level

Location and direction of view of photograph taken from air and used as figure in text

M105618
M105619
Location of analyzed limestone sample

Medial moraine

Scarp
Stream, lake, and moraine; paired and unpaired

Beach ridges
Lake and moraine

Archeological and abandoned village sites

Sample site
C-8
Localities for carbon-14 samples

Base from U.S. Geological Survey, 1957
100,000-foot grid based on Alaska coordinate system, zone 5,
10,000-meter Universal Transverse Mercator grid ticks,
zone 5

SCALE 1:250 000

0 5 10 15 20 25 30 35 KILOMETERS

0 5 10 15 20 25 30 35 MILES

CONTOUR INTERVAL 200 FEET
DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOWEAP LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER

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Charles E. Bickel, 1963 and 1964; Travis E. Hudson,
1965 and 1966; and John Erfurth, 1967

SURFICIAL DEPOSITS OF THE ILLIAMNA QUADRANGLE, ALASKA