

HEALY (A-3) QUADRANGLE
 ALASKA
 1:63,360 SERIES (TOPOGRAPHIC)

EXPLANATION OF MAP UNITS

This map is based on interpretation of 1:65,000-scale infrared aerial photographs (ALK 60 CIR: negatives 6125-6130 exposed on July 19, 1980, negatives 6872-6878 exposed on July 23, 1980, and negatives 7733-7738 exposed on August 28, 1984), verified by 28 days of helicopter-supported field observations, and supplemented by previous investigations in the area by Welsch and others (1982), Woodward-Clyde Consultants (1982), and Smith and others (1988). Former glacier limits are inferred from the distribution of such glacial-erosion features as cirques, faceted spurs, and ice-scoured valleys and bedrock surfaces and from glacial-deposition features like moraines, drift sheets, ice-stagnation deposits, kames, eskers, and proglacial and ice-marginal stream channels and alluvium (plate 1). Former limits of ice-dammed lakes are inferred from elevations of wave-cut scarps, one hanging delta, and the distribution of glaciolacustrine deposits, and wave-modified moraines, drift sheets, ice-stagnation deposits, kames, and eskers (plate 1). Spatial relations in which older landforms and deposits are crosscut or partially buried by younger features and deposits demonstrate relative ages and four radiocarbon dates provide coeval or minimum ages for sediments associated with or postdating glaciation.

GLACIAL LIMITS		PROMINENT WAVE-CUT SCARPS	
-----	Glaciation of unassigned age, dashed where discontinuously mapped	-----	3,700-ft (1,120-m) lake, dashed where discontinuously mapped, dots on descending scarp
- - - - -	Glaciation of Illinoian age, dashed where discontinuously mapped	▽▽▽▽	3,650-ft (1,110-m) lake, dashed where discontinuously mapped, open triangles point down descending scarp
	Glaciation of late Wisconsin age, dashed where discontinuously mapped	▲▲▲▲	3,400-ft (1,030-m) lake, dashed where discontinuously mapped, solid triangles point down descending scarp
	Glaciation of Holocene age, dashed where discontinuously mapped		
OTHER FEATURES		AREAS INUNDATED BY GLACIER-DAMMED LAKES	
←	Prominent meltwater drainage channel	[Wavy lines]	3,700-ft (1,120-m) lake
B	Radiocarbon sample locality described in Table #1	[Solid grey]	3,650-ft (1,110-m) lake
		[Diagonal lines]	3,400-ft (1,030-m) lake

REFERENCES

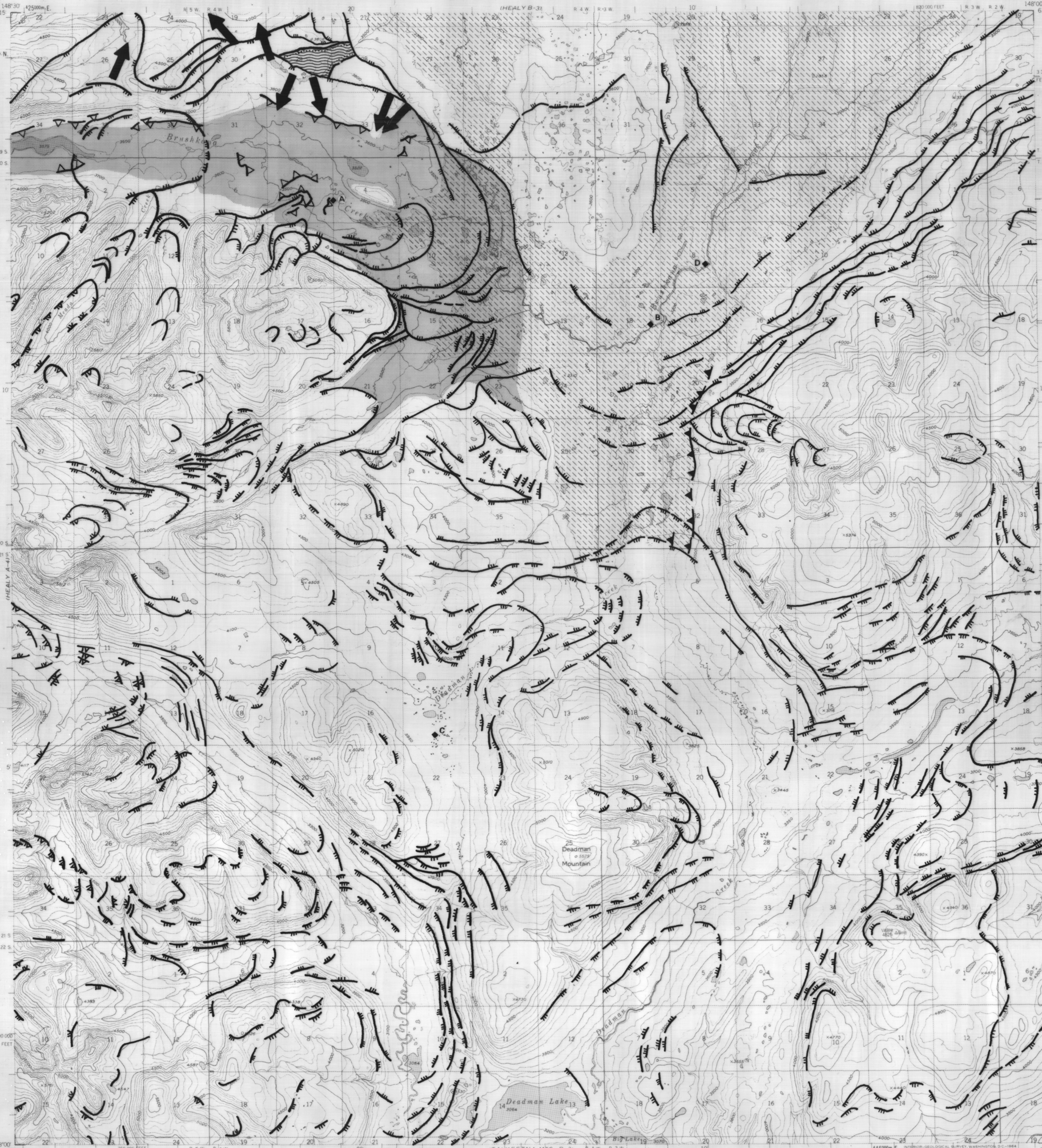
- Smith, T.E., Albanese, M.D., and Kline, G.L., 1988, Geologic map of the Healy A-2 Quadrangle, Alaska: Alaska Division of Geological and Geophysical Surveys Professional Report 95, scale 1:63,360, 1 sheet.
- Welsch, Dennis, Goodwin, Robert, and Ten Brink, Norman, 1982, Late Quaternary glaciations of the Talkeetna Mountains, Alaska (abs.): Geological Society of America Abstracts with Programs, v. 14, no. 6, p. 353-354.
- Woodward-Clyde Consultants, 1982, Quaternary geology, in Final report on seismic studies for Susitna Hydroelectric Project (Subtasks 4.09-4.15): Buffalo, Acres American Incorporated report, p. 3.1-3.20.

PHOTOINTERPRETIVE MAP OF INFERRED EXTENTS OF
 FORMER GLACIERS AND GLACIER-DAMMED LAKES,
 HEALY A-3 QUADRANGLE, ALASKA

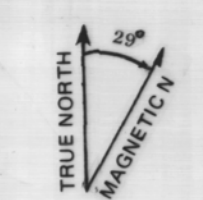
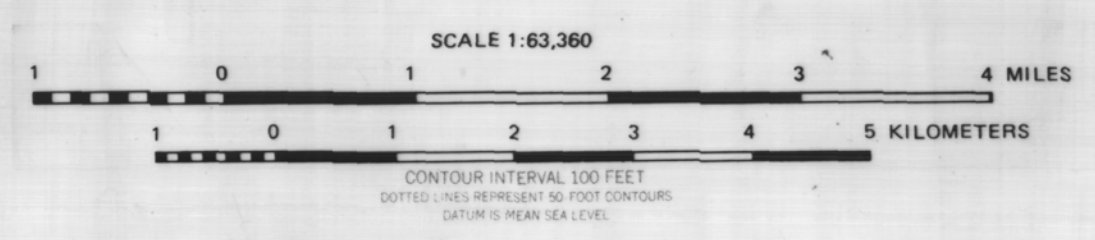
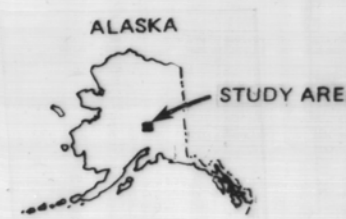
By

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1990



Base from U.S. Geological Survey
 Healy A-3 Quadrangle, Alaska



Photointerpretation by R.D. Reger, July 1988 and November 1989.
 Field checked July 1988. Cartography by R.D. Reger.

HEALY (A-3), ALASKA
 N6300-W14800/15X30
 1990