



EXPLANATION

Bottom deposits of 914 - 975 m lake



Overprint denoting glacial drift that is mantled by bottom sediments of glacial lake that extended to 914 - 975 m above modern sea level, largely confined to middle Susitna valley, above ice dam below Fog Lake (off map) and apparently bounded on east and south side by glacier ice. Does not cover late(st) Wisconsin (last major) moraine systems. No shoreline features are mapped.

Bottom deposits intermediate (777 - 747) lake



Overprint denoting bottom deposits of a local lake that covered melting glacier between Tylene Lake and Lake Louise, apparently behind Tylene Spillway, and drained as the elevation of the spillway was cut down from 777 m to 747 m above sea level while stagnant ice was still in valley bottom.

Bottom deposits of last regional lake



Overprint denoting drape of bottom deposits over drift and thick lake sediments that persisted in Copper River drainage basin from just before deposition of Old Man moraines to a time when glaciers had retreated to within 16 to 24 km of present glaciers: older than 13,000 years.

SYMBOLS



Location and letter designation of radiocarbon-dated stratigraphic section in accompanying text.



Ice boundary, moraine ridge, kame terrace, delta, or other ice contact feature marking edge of glacier: hachures toward glacier.



Shoreline of regional lake: mapped for the lake in Copper River basin where at 747 m (maximum elevation); the elevation to which Tylene Spillway was eroded, and successively lower levels in the northern part of area between 747 m and 701 m above sea level. Lesser recessional shorelines mapped by Nichols and Yehle (1969) not shown.



Upper limit of post-glacial (holocene, in part) shoreline of Tazlina Lake from elevation 564 m down to present lake level 544 m caused by lowering of lake as Tazlina River has deepened its canyon.



Delta of glacial lake, including those of modern glacial lakes such as Tazlina Lake.



Linear or drumlinoid feature, due to ice scour, direction of ice movement indicated by arrow.



Spillway for glacial meltwater, including that stored in large glacial lakes.



Contact between map units where not glacial boundary, most commonly between different levels of lake deposits.



Active (?) fault, lower Sonoma Creek, offsetting unconsolidated deposits.

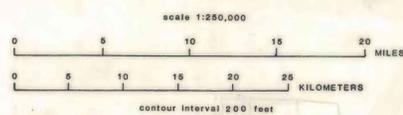


Location of selected erratic boulders, mountain top erratics transported by glaciers, e.g. Sheep Mountain; many occurrences on mountains lower than 1829 m not shown.



Refer to text for description of stratigraphic sections and radiocarbon dates.

Base: U.S. Geological Survey, compiled from the following 1:250,000 quadrangles: Anchorage, Gulkana, Talkeetna Mts., and Valdez.



Geologic mapping by J.R. Williams, assisted by Meyer Rubin and D.U. Wise, 1952; O.J. Ferrians, Jr., 1953-1954; Livingston, Chase, 1957, and C.L. Connor, 1980; by O.J. Ferrians, Jr., northeastern part 1955-60, assisted by R.R. Scholl; by D.R. Nichols, Gulkana Hills, 1959; and from published reports by Nichols and Yehle, 1961, 1969; Williams and Johnson, 1980; Williams and Ferrians, 1961, and reports listed in references.

MAP OF WESTERN COPPER RIVER BASIN, ALASKA, SHOWING LAKE SEDIMENTS AND SHORELINES, GLACIAL MORAINES, AND LOCATION OF STRATIGRAPHIC SECTIONS AND RADIOCARBON-DATED SAMPLES

by

John R. Williams and John P. Galloway

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.