DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
77-200
LAKE INEZ QUAD., MONT.

Base from U.S. Geological Survey, 1965.

U.S. Geological Survey
OPEN FILE REPORT
This map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

Geology by Irving J. Witkind, 1975. Traces of faults from maps by J. E. Harrison (west of Highway 209), and M. R. Mudge (east of highway), both of the U.S. Geological Survey.

MONTANA
QUADRANGLE LOCATION

PRELIMINARY MAP SHOWING SURFICIAL DEPOSITS IN THE LAKE INEZ QUADRANGLE, MISSOULA COUNTY, MONTANA

By
Irving J. Witkind
1977

Introduction

Personnel of the U.S. Geological Survey, in conjunction with Mark Weber, Geologic Consultant to Missoula and Powell Counties, are studying the earth and water resources of an area that extends from the Big Fork quadrangle on the north to the Avon quadrangle on the south. This map represents one product of that study, and is for the use of environmental and land-use planners. Additional maps south of Highway 200 have been prepared by Weber.

The areal distribution of all geologic units, except alluvium, was determined in the field. The distribution of the alluvium was plotted in the office from aerial photographs.

Surficial deposits

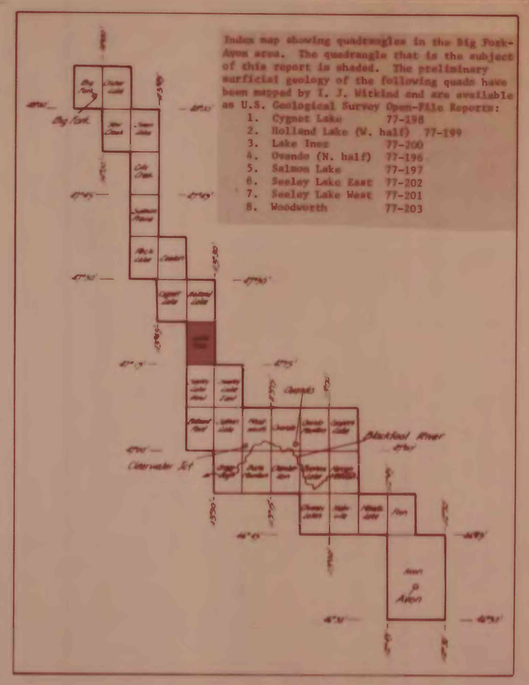
Most of the surficial deposits in the northern part of the Big Fork-Avon area were formed in the latter stages of the last ice age--the Pinedale glaciation of the Pleistocene--during the advance and waste of several large glaciers. These deposits mantle the lower flanks of the mountains and form the valley floors; they have been dissected and eroded somewhat by modern streams, but most still appear much as when they were formed.

For ease of discussion and to avoid the complexities of glacial nomenclature these deposits have been grouped into two categories, older and younger. The "older" deposits were likely formed either during early or middle Pinedale time, and the "younger" deposits during the late Pinedale. It is possible that in some localities deposits of more than one ice advance have been included in one or the other category.

Deposits of the older ice are identified on the map by the letter "o" added to the symbol, thus "Qto," is, "till of the older ice."

Deposits of the younger ice are identified on the map by the letter "y" added to the symbol, thus "Qoy," is, "outwash of the younger ice."

Locally, along the length of the Swan Valley, deposits of former small tributary glaciers extend into the main valley. These deposits have been mapped separately and are identified by appropriate symbols, thus "Qtb," is, "till of the Holland Lake ice."


Big Fork
Elmo
Polson
Lake Inez
Ronan
Moiese
Charlo
Dixon
Niarada
Perma
Arlee
Jocko
Dayton
Ravalli
Hot Springs
Camas Prairie
Paradise
Plains
Thompson Falls
Noxon
Trout Creek
Superior
Alberton
Frenchtown
Huson
Bonner
Milltown
Missoula
Clinton
Potomac
Seeley Lake
Condon
Greenough
Nine Mile Prairie
Huson
Frenchtown
Bonner
Milltown
Missoula
Clinton
Rock Creek
Clearwater Jct
Marshall
Pattee Canyon
Lolo
Florence
Stevensville
Victor
Corvallis
Darby
Sula
Conner
Hamilton
Pinesdale
Stevensville
Victor
Corvallis
Darby
Sula
Hamilton
Pinesdale
Blackfoot River
Ninemile
Frenchtown
Huson
Bonner
Milltown
Missoula
Clinton
Rock Creek
Clearwater Jct
Marshall
Pattee Canyon
Lolo
Florence
Stevensville
Victor
Corvallis
Darby
Sula
Hamilton
Pinesdale
Avon
Ovando
Helmville
Seeley Lake
Condon
Greenough
Nine Mile Prairie
Huson
Frenchtown
Bonner
Milltown
Missoula
Clinton
Potomac