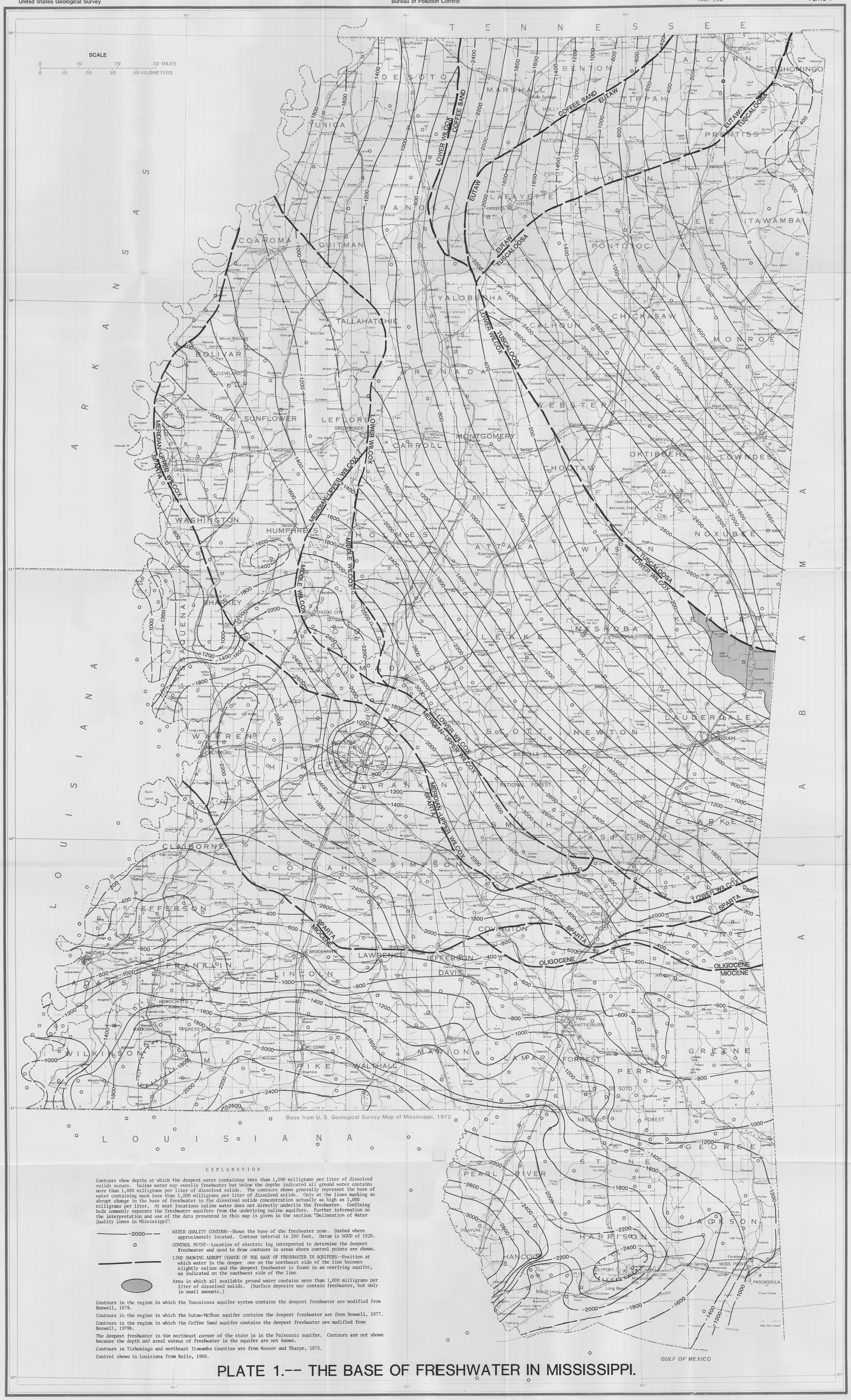
Department of the Interior
United States Geological Survey

Prepared in cooperation with the
Mississippi Department of Natural Resources
Bureau of Pollution Control

OPEN-FILE REPORT 81-550
PLATE 1

(200)
R290
no.81-550



EXPLANATION

Contours show depths at which the deepest water containing less than 1,000 milligrams per liter of dissolved solids occurs. Saline water may overlie freshwater but below the depths indicated all ground water contains more than 1,000 milligrams per liter of dissolved solids. The contours shown generally represent the base of water containing much less than 1,000 milligrams per liter of dissolved solids. Only at the lines marking an abrupt change in the base of freshwater is the dissolved solids concentration actually as high as 1,000 milligrams per liter. At most locations saline water does not directly underlie the freshwater. Confining beds commonly separate the freshwater aquifers from the underlying saline aquifers. Further information on the interpretation and use of the data presented in this map is given in the section "Delineation of Water Quality Zones in Mississippi".

-2000 — WATER QUALITY CONTOUR--Shows the base of the freshwater zone. Dashed where approximately located. Contour interval is 200 feet. Datum is NGVD of 1929.

CONTROL POINT--Location of electric log interpreted to determine the deepest freshwater and used to draw contours in areas where control points are shown.

LINE SHOWING ABRUPT CHANGE OF THE BASE OF FRESHWATER IN AQUIFERS--Position at which water in the deeper one on the northeast side of the line becomes slightly saline and the deepest freshwater is found in an overlying aquifer, as indicated on the southwest side of the line.

Area in which all available ground water contains more than 1,000 milligrams per liter of dissolved solids. (Surface deposits may contain freshwater, but only in small amounts.)

Contours in the region in which the Tuscaloosa aquifer system contains the deepest freshwater are modified from Boswell, 1978.

Contours in the region in which the Eutaw-McShan aquifer contains the deepest freshwater are from Boswell, 1977.

Contours in the region in which the Coffee Sand aquifer contains the deepest freshwater are modified from Boswell, 1979b.

The deepest freshwater in the northeast corner of the state is in the Paleozoic aquifer. Contours are not shown because the depth and areal extent of freshwater in the aquifer are not known.

Contours in Tishomingo and northeast Itawamba Counties are from Wasson and Tharpe, 1975.

Control shown in Louisiana from Rollo, 1960.

PLATE 1.-- THE BASE OF FRESHWATER IN MISSISSIPPI.