POTENTIOMETRIC MAP OF THE WINONA-TALLAHATTA AQUIFER IN NORTHWESTERN MISSISSIPPI, FALL 1979

B. E. WASSON

The potentiometric map of the Winona-Tallahatta aquifer in the region is a series of maps prepared for the U.S. Geological Survey in May 1979, under a cooperative agreement between the U.S. Geological Survey and the State of Mississippi Department of Water Resources. The maps are based on water-level data collected in the field and compiled by the Mississippi Department of Water Resources and the U.S. Geological Survey. The maps show the potentiometric surface, which is the surface at which the water table intersects the land surface. The potentiometric surface is an important indicator of groundwater flow and is used to assess the vulnerability of aquifers to contamination.

The Winona-Tallahatta aquifer is one of several major aquifers in the southeastern United States. It is located in the Mississippi River Valley and is composed of sand and gravel deposited by the Mississippian River. The aquifer is underlain by clay and shale, which form a confining layer that prevents the movement of groundwater from the aquifer to the surface. The aquifer is recharged by rainfall and is one of the principal sources of water for irrigation and domestic use in the region.

The potentiometric surface of the Winona-Tallahatta aquifer is shown on the maps by contour lines that represent the elevation of the water table. The contour lines are spaced at regular intervals, with each line representing a constant depth below the surface. The maps also show the location of wells and monitoring stations, which are used to monitor the water level and quality of the groundwater. The maps are a valuable resource for understanding the hydrogeology of the region and for managing groundwater resources.