POTENTIOMETRIC SURFACE OF THE CLAIBORNE AQUIFER IN SOUTHWESTERN GEORGIA, OCTOBER 1990

U.S. GEOLOGICAL SURVEY

Prepared in cooperation with

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

CITY OF ALBANY
WATER, GAS, AND LIGHT COMMISSION

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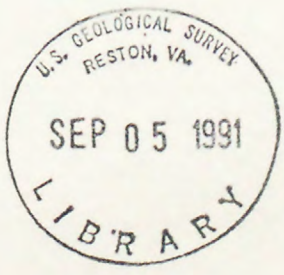

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Doraville, Georgia

1991

U.S. DEPARTMENT OF THE INTERIOR

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ILLUSTRATION

CONVERSION FACTOR

Multiply inch-pound unit	*by*	*to obtain metric units*
Flow		
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)

VERTICAL DATUM

Sea Level--In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level of 1929."

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ABSTRACT

The Claiborne aquifer in southwestern Georgia consists of sand and sandy limestone of middle Eocene age (McFadden and Perriello, 1983). The aquifer supplies more than 62 million gallons of water per day for industrial and agricultural use (Pierce and Kundell, 1990).

A potentiometric surface shows the level to which water would rise in tightly-cased wells that fully penetrate an aquifer. This report shows the potentiometric surface of the Claiborne aquifer in southwestern Georgia.

During October 22-30, 1990, water-levels measurements in 76 wells tapping the Claiborne aquifer, and stream elevations at 93 sites where the aquifer was under water-table conditions, were used to construct a map showing the potentiometric surface of the aquifer for October 1990. The potentiometric surface was mapped using contour lines of equal water-level altitude (fig. 1). The October 1990 potentiometric surface of the Claiborne aquifer is representative of the annual low (or near low) water levels that occurred near the end of the irrigation season.

Maps of the potentiometric surface of the Claiborne aquifer in southwestern Georgia are prepared annually by the U.S. Geological Survey, in cooperation with the Georgia Department of Natural Resources, Enviromental Protection Division, Georgia Geologic Survey; and published in an annual report entitled "Ground-Water Conditions in Georgia, 19XX."

REFERENCES

McFadden, S.S. and Perriello, P.D., 1983, Hydrogeology of the Clayton and Claiborne aquifers in Southwestern Georgia: Georgia Geologic Survey Information Circular 55, 59 p.

Pierce, R.R., and Kundel, J.E., 1990, Georgia water supply and use; *in* Carr, J.E., Chase, E.B., Paulson, R.W., and Moody, D.W., *ed.*; National water summary 1987-hydrologic events and water supply and use: U.S. Geological Survey Water-Supply Paper 2350, p. 215-222.

EXPLANATION

—— 100 — — POTENTIOMETRIC CONTOUR--Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Hachures indicate depressions. Contour interval 50 feet. Datum is sea level

DATA POINT

• Ground water--Altitude of water level in well

▲ Surface water--Location where stream and water-table altitudes are coincident. Altitude of stream surface is extrapolated from topographic contour map

Figure 1.--Potentiometric surface of the Clairborne aquifer in southwestern Georgia, October 1990.