UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
CITY OF MEMPHIS
LIGHT, GAS AND WATER DIVISION

WATER RESOURCES INVESTIGATIONS 79-80
OPEN FILE REPORT

90° 15'

89° 37'30"

35°22'30"

35°00'

EXPLANATION

210

POTENTIOMETRIC CONTOUR -- Shows altitude at which water level would have stood in tightly cased wells, August 1978; dashed where approximately located. Contour interval 10 feet, 3.048 meters. National geodetic vertical datum.

OBSERVATION WELL

DAVIS

MEMPHIS LIGHT, GAS AND WATER MUNICIPAL WELL FIELD

This map is based on water-level measurements made in wells screened in the Eocene Memphis Sand (formerly "500-foot sand"). Monthly low-water levels for the month of August, 1978 from USGS maintained recorder equipped wells and supplemental measurements made on August 22 and 23 of private and industrial wells were used as control. Water levels are commonly at their lowest for the year during late August or early September (Criner and Parks, 1976).

A potentiometric map depicts an imaginary surface which fluctuates with time because of changes in pumpage and recharge to the aquifer. Maps of the potentiometric surface of the Eocene Memphis Sand for the years 1886, 1960, 1970 and 1975 appear in Criner and Parks (1976). The purpose of this map and those in Criner and Parks (1976) is to show the status of development of the cone of depression caused by pumping in the Memphis area.

REFERENCE: Criner, J. H., and Parks, W. S., 1976, Historic water-level changes and pumpage from the principal aquifers of the Memphis area, Tennessee: 1886 - 1975, U.S. Geological Survey, Water Resources Investigation 76 - 67, 45 p.

SCALE 1:125 000

1 0 1 2 3 4 5 MILES

MISS. CO
TIPTON CO
SHELBY CO
ARKANSAS
TENNESSEE
MILLINGTON
ARLINGTON
Loosahatchie River
Wolf River
Mississippi River
BARTLETT
McCORD
MALLORY
WEST MEMPHIS
ALLEN
SHEAHAN
MEMPHIS
GERMANTOWN
LICHTERMAN
COLLIERVILLE
DAVIS
ARKANSAS
TENNESSEE
MISSISSIPPI
WALLS
HORN LAKE
SHELBY CO
DESOTO CO
FAYETTE CO
MARSHALL CO
OLIVE BRANCH
Nonconnah Creek

Inferred southeastern limits of confining bed overlying Memphis Sand (Criner and Parks, 1976)

Base from U.S. Geological Survey 1:24,000 and Mississippi River Commission 1:62,500 quadrangles

POTENTIOMETRIC MAP OF THE MEMPHIS SAND IN THE MEMPHIS AREA, TENNESSEE

AUGUST 1978

by David D. Graham

MEMPHIS, TENNESSEE