# *GEOLOGY AND GROUND-WATER RESOURCES OF GREENE COUNTY, ALABAMA*

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*GEOLOGICAL SURVEY OF ALABAMA* *BULLETIN 86*

*Prepared in cooperation with*
*United States Geological Survey*

GEOLOGICAL SURVEY OF ALABAMA

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BULLETIN 86

# GEOLOGY AND GROUND-WATER RESOURCES OF GREENE COUNTY, ALABAMA

By Kenneth D. Wahl
Water Resources Division
U.S. Geological Survey

UNIVERSITY, ALABAMA
1966

# STATE OF ALABAMA

Honorable George C. Wallace, Governor

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University, Alabama
August 24, 1966

Honorable George C. Wallace
Governor of Alabama
Montgomery, Alabama

Dear Governor Wallace:

I have the honor to transmit the report, "Geology and Ground-Water Resources of Greene County, Alabama," by Kenneth D. Wahl, which has been published as Bulletin 86 of the Geological Survey of Alabama.

Abundant quantities of ground water are available for development in Greene County. Wells that will produce 1,000 gallons per minute or more can be developed in the Coker, Gordo, and McShan Formations. Small to moderate quantities of water are available from the Eutaw Formation and alluvial deposits.

Ground water in the northern part of Greene County generally is of good chemical quality except locally where it contains excessive amounts of iron. In the southern part of the county, there is a large area where wells produce water high in chloride and iron content and in hardness.

The most favorable areas in the county for development of large quantities of good quality water for industrial and municipal use are the extreme southeast corner and that part of the county lying north of the town of Eutaw.

Respectfully,

Philip E. LaMoreaux
State Geologist

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# GEOLOGY AND GROUND-WATER RESOURCES OF GREENE COUNTY, ALABAMA

By Kenneth D. Wahl


## ABSTRACT

Development of ground-water resources is related to the economic growth of Greene County, and wells that will produce 1,000 gpm (gallons per minute) or more can be developed in the Coker, Gordo, and McShan Formations at depths ranging from 100 to 1,600 feet below the land surface. Wells tapping the alluvial deposits and Eutaw Formation generally produce adequate water for domestic and stock use. The probability of developing large industrial supplies from alluvial deposits where they are hydraulically connected with nearby streams has not been investigated.

Ground-water use in Greene County in 1965 is estimated to be 1,150,000 gpd (gallons per day). Aquifers in the McShan Formation supply about 840,000 gpd. A determination of the ultimate amount of ground water available for utilization in Greene County is beyond the scope of this investigation; however, data indicate that only a small part of the available ground water was being utilized in 1965.

Flowing wells inventoried in 1964-65 had a total calculated flow of 2,740,000 gpd, more than double the estimated ground-water use in the county. It is estimated that the flow from these wells represents about 75 percent of the total discharge from flowing wells in the county.

In the northern part of Greene County the ground water is of satisfactory chemical quality for municipal, industrial, domestic, and stock use, except locally where it is high in iron content. In the southern part of the county there is a large area where wells tapping the Gordo, McShan, and Eutaw Formations produce water high in chloride, iron, and hardness. Partial chemical analyses of water from wells in the county indicate the following ranges of chemical constituents, hardness, and pH: iron, 0 to 24 ppm (parts per million); bicarbonate, 8 to 656 ppm; carbonate, 0 to 100 ppm; chloride, 0 to 3,700 ppm; hardness, 8 to 568 ppm; and pH, 6.0 to 9.6.

## THIS REPORT—WHY IT WAS PREPARED ITS PURPOSE, AND SETTING

Ground water is a natural resource that is vital to the economic development of many areas and is often taken for granted. The increasing demand for water for domestic, municipal, and industrial use has emphasized the need for water facts to keep abreast of the demand. This report is not intended to answer all water problems of the area; it is to provide water facts and evaluations that will serve as guides for water-resources planning and development.

The purpose of this report is to provide ground-water information in Greene County for the use of water managers and water users in answering the following questions: (1) Where is water available and how much do individual wells produce? (2) What is the chemical quality of the water? (3) How much water is utilized? (4) What problems are present or anticipated, and what steps are necessary to solve the problems?

Greene County, in west-central Alabama, is bounded by Pickens and Tuscaloosa Counties on the north, Hale County on the east, Marengo County on the south, and Sumter County on the west (fig. 1).

Greene County has an area of 637 square miles and in 1960 a population of 13,600. The economy of the county is based primarily on agriculture, timbering, and associated industries. Future development may be intensified and diversified because of the construction of a large steam-electric generating plant in the southern part of the county, an interstate highway being constructed across the county, and the possible construction of the Tennessee-Tombigbee waterway along the western boundary of the county.

## COOPERATION AND ACKNOWLEDGMENTS

Ground-water studies in Alabama are being made by the U.S. Geological Survey in cooperation with the Geological Survey of Alabama. The work in Greene County was done under the direct supervision of W. L. Broadhurst, district chief of the U.S. Geological Survey, Water Resources Division, in charge of water-resources investigations in Alabama.

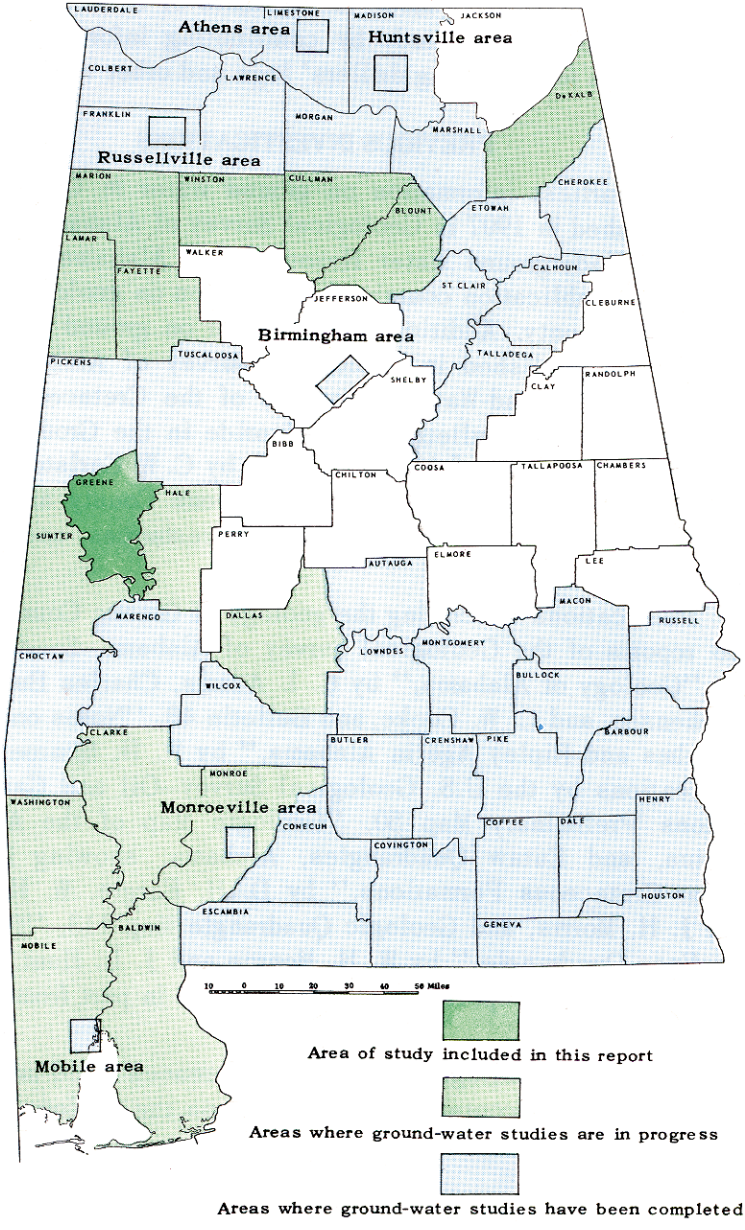


Figure 1.—Map of Alabama showing area studied and areas of other ground-water studies.

Acknowledgment is made to residents of Greene County who cooperated during the study by contributing information, and to drilling firms for providing drillers' logs and other well data.

## PREVIOUS INVESTIGATIONS

The earliest information on ground water in Greene County was published in 1907 in Geological Survey of Alabama Monograph 6, "The Underground Water Resources of Alabama," by E. A. Smith. The publication contained information on geology and wells in Greene County. Additional information on ground water in the county was published in Geological Survey of Alabama Special Report 18, "Ground-Water Resources of the Cretaceous Area of Alabama," and in Bulletin 52, "Fluoride in the Ground Water of the Cretaceous Area of Alabama," both by C. W. Carlston. Carlston recorded information on 40 wells in Greene County and included information on the geology, ground-water resources, and quality of ground water.

Publications describing the geology of Greene County include two reports of the Geological Survey of Alabama—Special Report 14, "Geology of Alabama," by G. I. Adams, Charles Butts, L. W. Stephenson, and C. W. Cooke, and Bulletin 48, "Notes on Deposits of Selma and Ripley Age in Alabama," by W. H. Monroe; and two publications by the U.S. Geological Survey—Oil and Gas Investigations Preliminary Map 50, "Geologic Map of the Aliceville, Mantua, and Eutaw Quadrangles, Alabama, showing Pre-Selma Upper Cretaceous Formations," by D. H. Eargle, W. H. Monroe, and J. H. Morris, and Geologic Quadrangle Map 113, "Geology of the Epes Quadrangle," by W. H. Monroe and J. L. Hunt. The geologic map in this report (pl. 1) was modified in part from the latter two maps.

A selected bibliography, listing references cited and reports, maps, and charts containing information on the geology and water resources of the general area, is appended to this report.

## GEOLOGY AND ITS RELATIONSHIP TO GROUND WATER

The distribution, the direction and rate of movement, and the chemical quality of ground water are so greatly affected by the physical structure, lithology, and arrangement of the materials

through which the water circulates that a consideration of the geology is necessary.

The geologic units that yield water to wells or otherwise influence ground water in Greene County are of sedimentary origin and consist of sand, gravel, chalk, and clay. These deposits range in age from Cretaceous to Recent. The Cretaceous deposits consist of the following geologic units, in ascending stratigraphic order: Coker Formation, Gordo Formation, McShan Formation, Eutaw Formation, Mooreville Chalk, and Demopolis Chalk. The upper part of the Eutaw Formation consists of the Tombigbee Sand Member, and the upper part of the Mooreville Chalk consists of the Arcola Limestone Member.

The Cretaceous units are overlain in places by sediments of Pleistocene and Recent age, which on the geologic map are subdivided into terrace deposits and alluvium. The terrace deposits underlie benchlike surfaces that occur above the present flood plain and are remnants of older flood plains. The terrace deposits were mapped as a unit but represent several terraces at different elevations above the flood plain. The uppermost terrace is the oldest and the lower terraces are younger. In many places the lower terrace and flood plain merge, and the contact between them is often difficult to distinguish. For convenience, some low terrace deposits are mapped with the alluvium.

Alluvium underlies the present flood plains and streambeds, and generally is confined to the part of the stream valley that was built of sediments during the present regimen of the streams. The alluvium is covered with water when streams overflow their banks at flood stage.

The distribution of outcropping geologic units is shown on plate 1; and the thickness, stratigraphy, lithology, and water availability are shown on plate 2, figures 2, 4, 5, 8, and tables 1, 4, and 5.

The Coker, Gordo, McShan, and Eutaw Formations and the terrace deposits and alluvium contain aquifers that yield water to wells. The Mooreville and Demopolis Chalks consist of relatively impermeable chalk and clay and generally do not yield water to wells; however, they have a significant influence on ground-water

conditions because they confine water in underlying aquifers and retard downward percolation of water from overlying aquifers.

## GROUND-WATER SOURCES

### COKER FORMATION

The Coker Formation as defined by Drennen (1953, p. 528) is the lower part of the Tuscaloosa Group and the base of Upper Cretaceous units in Alabama. The Coker is underlain by Lower Cretaceous deposits and is overlain by the Gordo Formation. The thickness of the Coker ranges from about 550 feet in the northeastern part of Greene County to about 850 feet in the western and southern parts of the county. The top of the Coker dips toward the southwest at an average rate of about 35 feet per mile. In general, the configuration of the top of the Coker is similar to that of the Gordo Formation shown on figure 4.

The Coker Formation crops out northeast of Greene County in Tuscaloosa and Hale Counties and is present in the subsurface in Greene County. The top of the Coker is about 150 feet below the land surface in northeastern Greene County and, because the dip of the beds is greater than the slope of the land surface, lies at progressively greater depths below the land surface toward the southwest.

The lower part of the Coker Formation consists of sand and gravel and irregular beds of dark-gray and purple carbonaceous clay. The middle part consists of thin beds of laminated clay and thin to massive beds of fine-grained glauconitic sand. The upper part consists of purple and gray carbonaceous clay and crossbedded white to pink fine- to coarse-grained micaceous sand, locally containing some chert gravel.

#### WATER AVAILABILITY

Sand and gravel beds in the Coker Formation are aquifers throughout Greene County. The depths to the base of the major aquifer in the Coker are shown on figure 2. The base of the major aquifer is about 500 feet below the top of the Coker, and the aquifer is about 200 feet thick. Other sand beds occur above and below the major aquifer. Sand beds above the major aquifer are of local

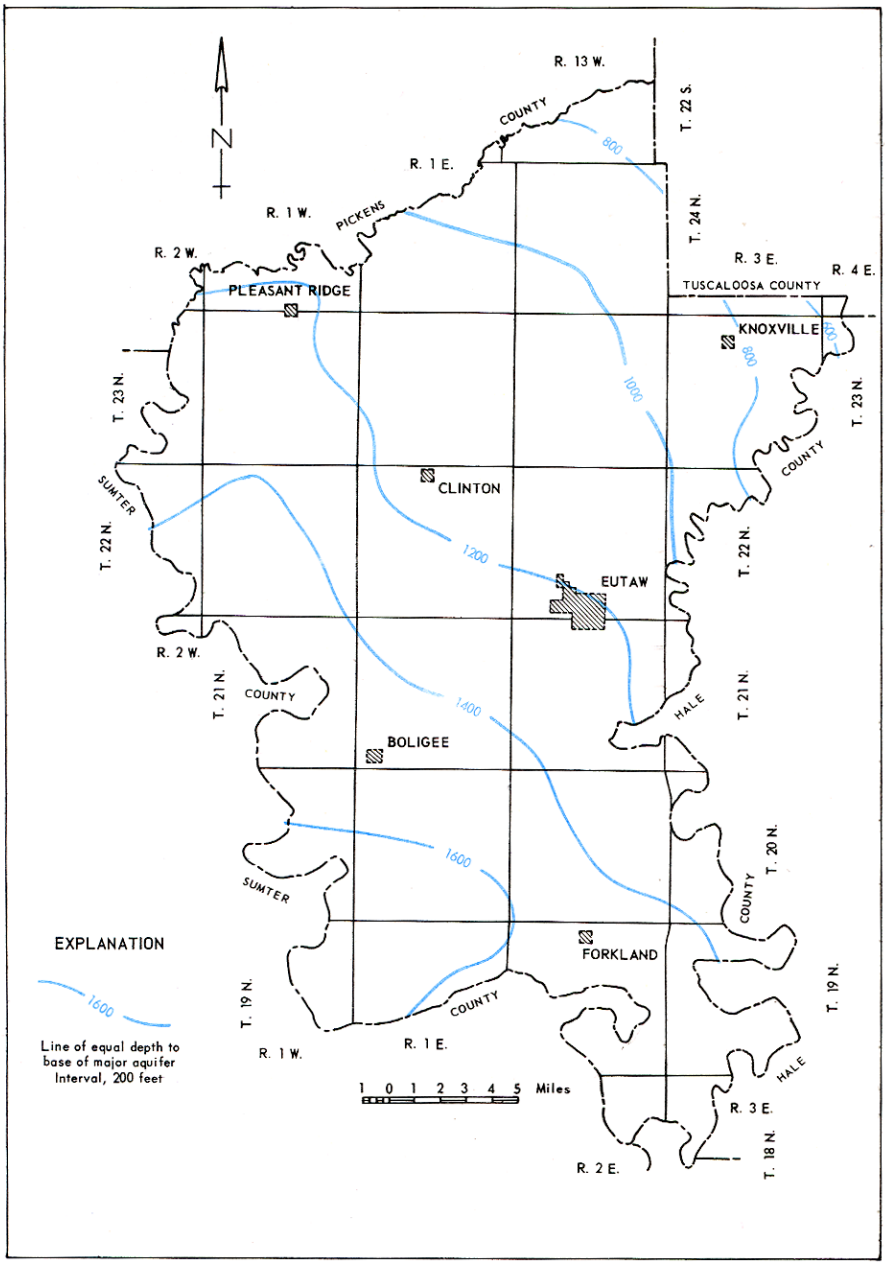


Figure 2.—Generalized depth to base of major aquifer, Coker Formation.

extent and relatively thin. Sand beds occurring below the major aquifer are not tapped by water wells in Greene County; however, electric-log data from oil test wells indicate that they are relatively thick and probably contain potable water. These sands are potential sources of large amounts of ground water.

The Coker Formation is not tapped extensively by wells in Greene County because of its excessive depth and the availability of water from shallower aquifers. Seventeen wells tapping the Coker were inventoried during this study (table 1). These wells ranged from 300 to 1,300 feet in depth. Thirteen of these wells flowed an average of about 18 gpm (gallons per minute) per well. Well J-3, which is 570 feet deep, flows at 50 gpm. Wells V-7 and V-8 are 1,260 feet deep and flow at 30 and 20 gpm respectively.

Data necessary to determine the specific capacity are not available for wells tapping the Coker Formation; however, the specific capacity is estimated to range from about 3 to about 20 gpm per foot of drawdown. (See Paulson and others, 1962, table 2, p. 26.) On the basis of these estimates, wells with capacities of 1,000 gpm or more could be constructed in the Coker Formation.

## CHEMICAL QUALITY

Partial chemical analyses of water from 14 wells tapping the Coker Formation are given in table 2 and summarized below.

| | In parts per million | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Hardness as $CaCO_3$ | | |
| | Iron | Bicarbonate | Carbonate | Chloride | Calcium, magnesium | Noncarbonate | pH |
| High | 24 | 144 | 6 | 165 | 175 | 83 | 8.2 |
| Median | .22 | 102 | 0 | 18 | 68 | 0 | 7.4 |
| Low | .03 | 40 | 0 | 4 | 12 | 0 | 6.5 |

Locally, in the northeastern part of Greene County, the iron content of water from wells tapping the Coker Formation is more than 0.3 ppm (part per million). In the central part of the county the iron content of wells tapping the Coker is less than 0.3 ppm (fig. 3).

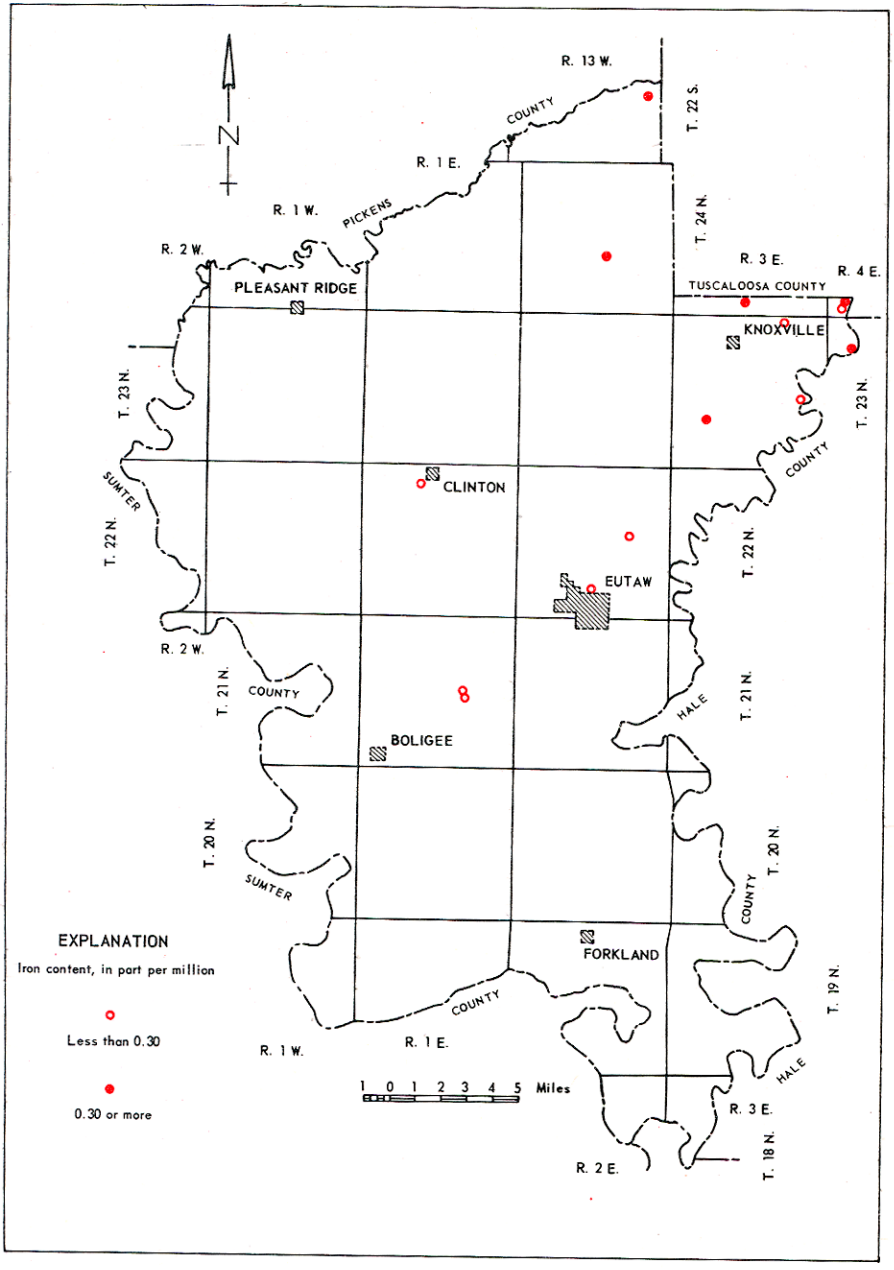


Figure 3.—Distribution of iron in water from the Coker Formation.

The bicarbonate, carbonate, and chloride contents of water from wells tapping the Coker Formation are relatively low and the water is satisfactory for domestic and municipal use. A gradual increase in chloride content toward the southeast indicates the possibility of water high in chloride similar to that in the Gordo and McShan Formations in the eastern part of the county (figs. 7 and 10). However, an electric log from well Z-4, and chemical analyses determined for water samples collected from wells U-11 and V-8, indicate that water in the Coker is less mineralized than water in the McShan and Gordo in the central part of the county (pls. 1 and 2).

The hardness of water from wells tapping the Coker Formation ranges from soft (0-60 ppm) to hard (121-180 ppm). In general, the hardness increases toward the southeast.

Water from two wells tapping the Coker Formation was slightly acidic (pH below 7.0) and water from the other 12 wells was alkaline (pH above 7.0).

Comprehensive chemical analyses of water from two wells tapping the Coker Formation are included in table 3. These analyses include values for chemical constituents and characteristics not included in table 2.

In general, water from the Coker Formation is of good chemical quality, but locally it contains objectionable quantities of iron.

## GORDO FORMATION

The Gordo Formation is the upper part of the Tuscaloosa Group in Alabama and is underlain by the Coker Formation and overlain by the McShan Formation. The Gordo crops out in areas of low elevation in the northeastern part of Greene County and is present in the subsurface throughout the county. The thickness of the Gordo ranges from 270 to 290 feet in Greene County. The top of the Gordo dips toward the southwest at an average rate of 35 feet per mile (fig. 4).

The lower part of the Gordo Formation consists of gravelly, poorly sorted sand containing thin lenses of carbonaceous clayey sand and some purple-mottled light-gray clay. The upper part consists of lenticular mottled clay and some beds of strongly cross-bedded fine- to coarse-grained sand.

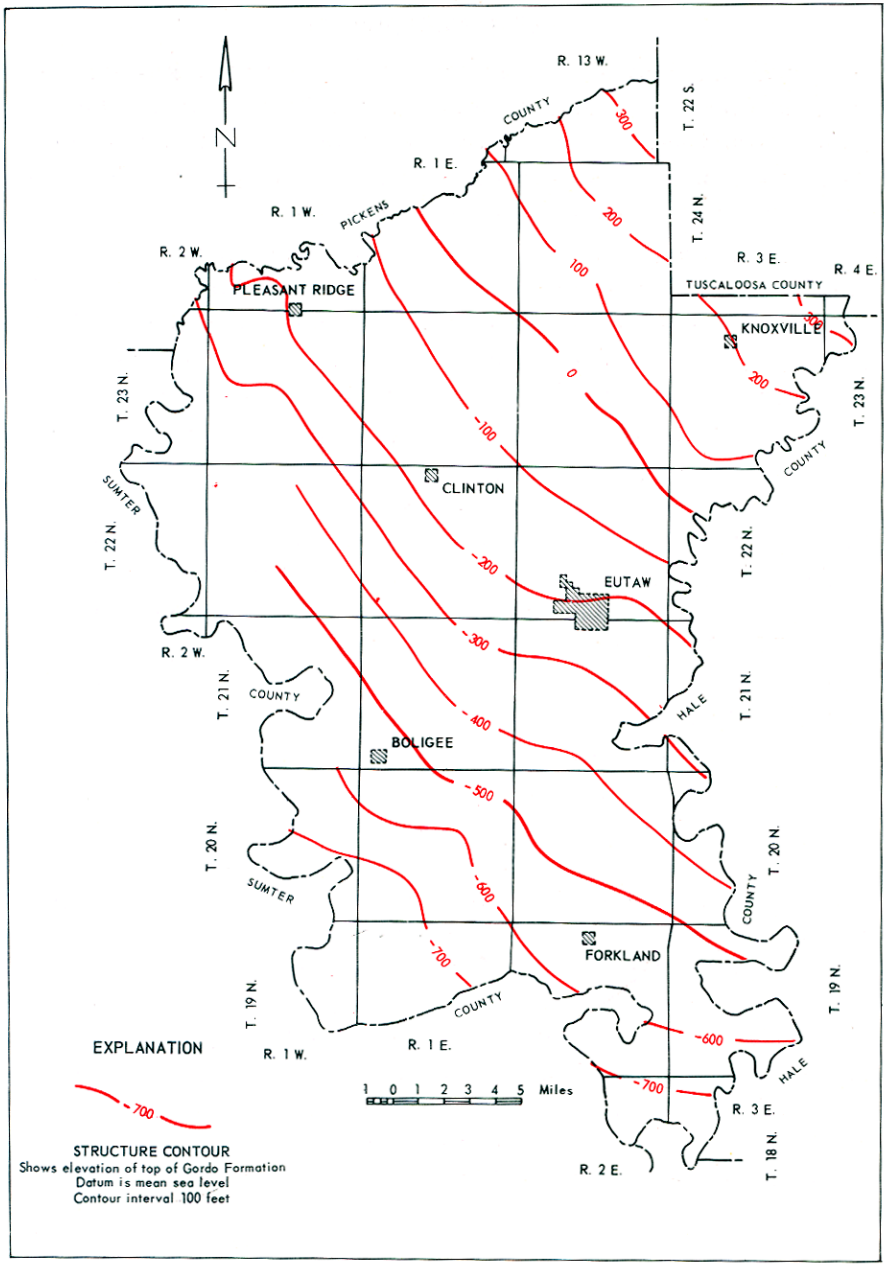


**Figure 4.—Generalized structure-contour map of top of the Gordo Formation.**

## WATER AVAILABILITY

Sand and gravel beds in the Gordo Formation generally are good aquifers in Greene County, except locally where they are poorly sorted and contain a large percentage of silt-size material. The lower part of the formation consists primarily of sand and gravel and is the major aquifer in the Gordo.

The depths below the land surface to the base of the major aquifer in the Gordo Formation are shown on figure 5. The aquifer is about 180 feet thick and the top of the aquifer is about 110 feet below the top of the formation (pl. 2). Sands above the major aquifer in the Gordo generally are of local extent and relatively thin.

Table 1 includes 30 wells that tap aquifers in the Gordo Formation at depths ranging from 200 to 1,300 feet. Seventeen of these wells were flowing in 1965 at an average of about 16 gpm per well. Well E-2 had the highest rate of flow, measured at 42.5 gpm on August 16, 1965, and reported at 90 gpm in 1940. Well EE-5, 1,300 feet deep, was flowing at 19.5 gpm in 1965. This well probably penetrates the underlying Coker Formation; however, the temperature of water from the well indicates that production is from the Gordo (table 2, wells EE-5, DD-12, and V-8).

The specific capacities of two wells tapping the Gordo Formation have been calculated from head and flow measurements (given in table 1) to be 3 and 0.3 gpm per foot of drawdown. These specific capacities probably are not representative of the formation, however, because the wells (U-11 and CC-2) were constructed for stock supplies and not for maximum yield. The specific capacities of wells tapping the Gordo Formation in Pickens County range from 9 to 12 gpm per foot of drawdown (Wahl, 1965), and it is assumed that properly constructed and developed wells in Greene County would have similar specific capacities. On the basis of these data, it is estimated that wells with capacities of 1,000 gpm or more can be constructed in the major aquifer of the Gordo Formation in Greene County.

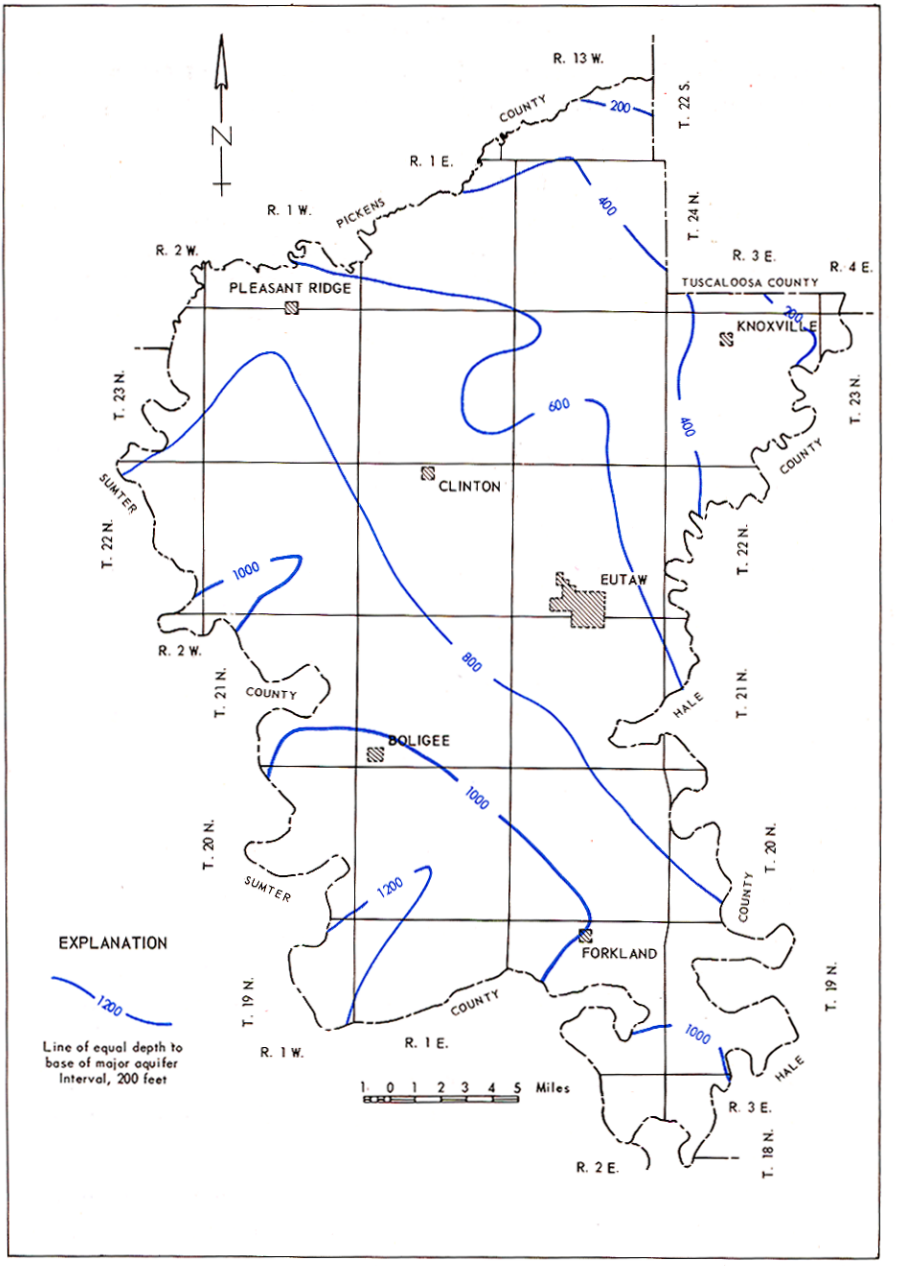


**Figure 5.—Generalized depth to base of major aquifer, Gordo Formation.**

## CHEMICAL QUALITY

Partial chemical analyses of water from 30 wells tapping the Gordo Formation are given in table 2 and summarized below.

| | In parts per million | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Hardness as $CaCO_3$ | | |
| | Iron | Bicarbonate | Carbonate | Chloride | Calcium, magnesium | Noncarbonate | pH |
| High | 7.3 | 336 | 14 | 3,700 | 568 | 379 | 8.8 |
| Median | .45 | 146 | 0 | 105 | 55 | 0 | 7.6 |
| Low | .05 | 8 | 0 | 4 | 9 | 0 | 6.3 |

Figure 6 shows the distribution of iron in water from the Gordo Formation. Locally the water has an iron content of 0.3 ppm or more in the central and eastern parts of the county.

The bicarbonate and carbonate contents of water from the Gordo Formation are not problems to domestic and municipal users but may be objectionable to some industrial users.

The distribution of chloride in water from the Gordo Formation is shown in figure 7. In general, water with a chloride content of less than 250 ppm is desirable for domestic and municipal use; however, water containing chloride in excess of 250 ppm is used in many areas where more suitable supplies are not available.

The hardness of water from wells tapping the Gordo Formation ranges from soft (0-60 ppm) to very hard (181 ppm or more). In general, hardness of water in the Gordo increases in conjunction with increasing chloride, and wells that produce very hard water are only in the area of 1,000 ppm or more chloride, shown on figure 7.

Water from 6 wells tapping the Gordo Formation was acidic (pH below 7.0) and from the other 24 wells was alkaline (pH above 7.0).

Comprehensive chemical analyses of water from two wells tapping the Gordo Formation, which include values for chemical constituents and characteristics not listed in table 2, are included in table 3.

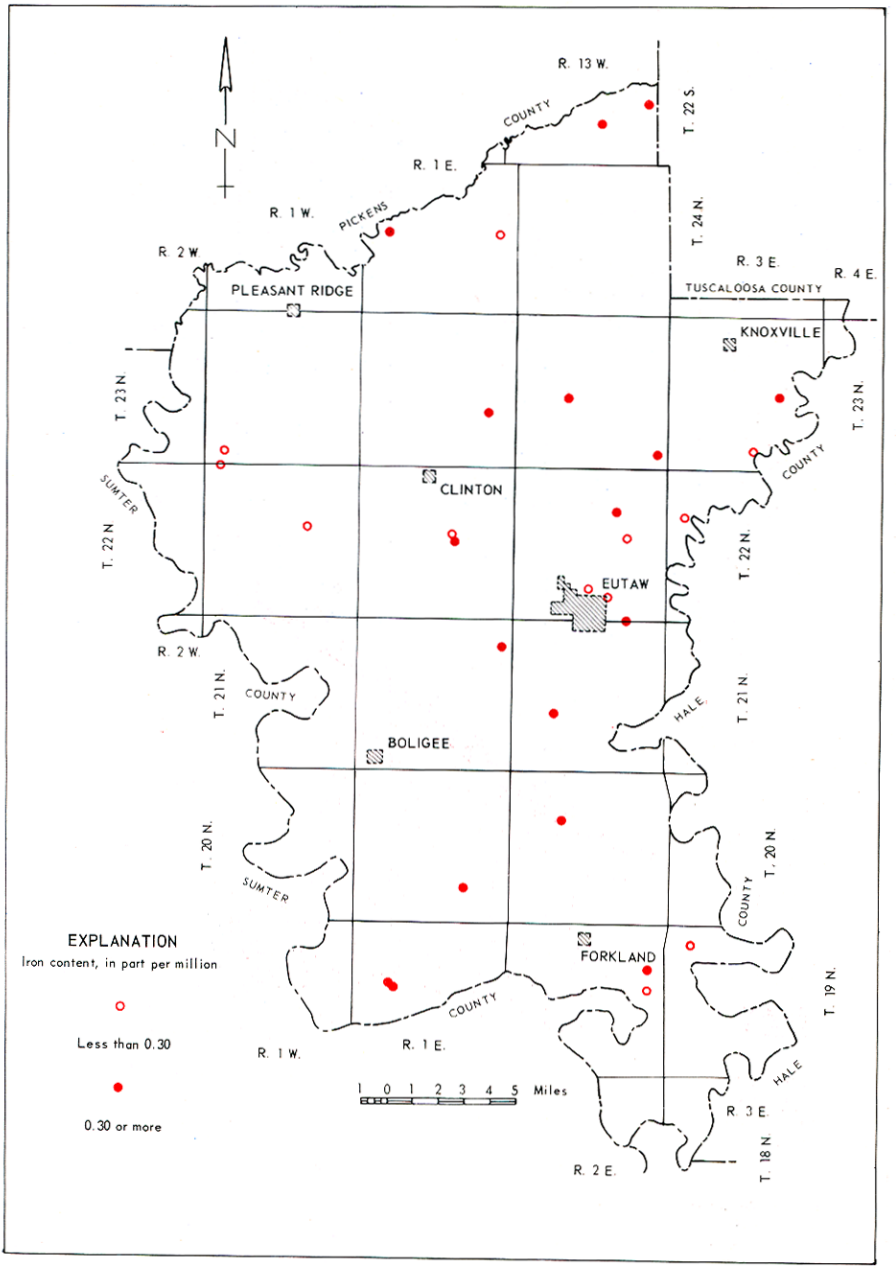


Figure 6.—Distribution of iron in water from the Gordo Formation.

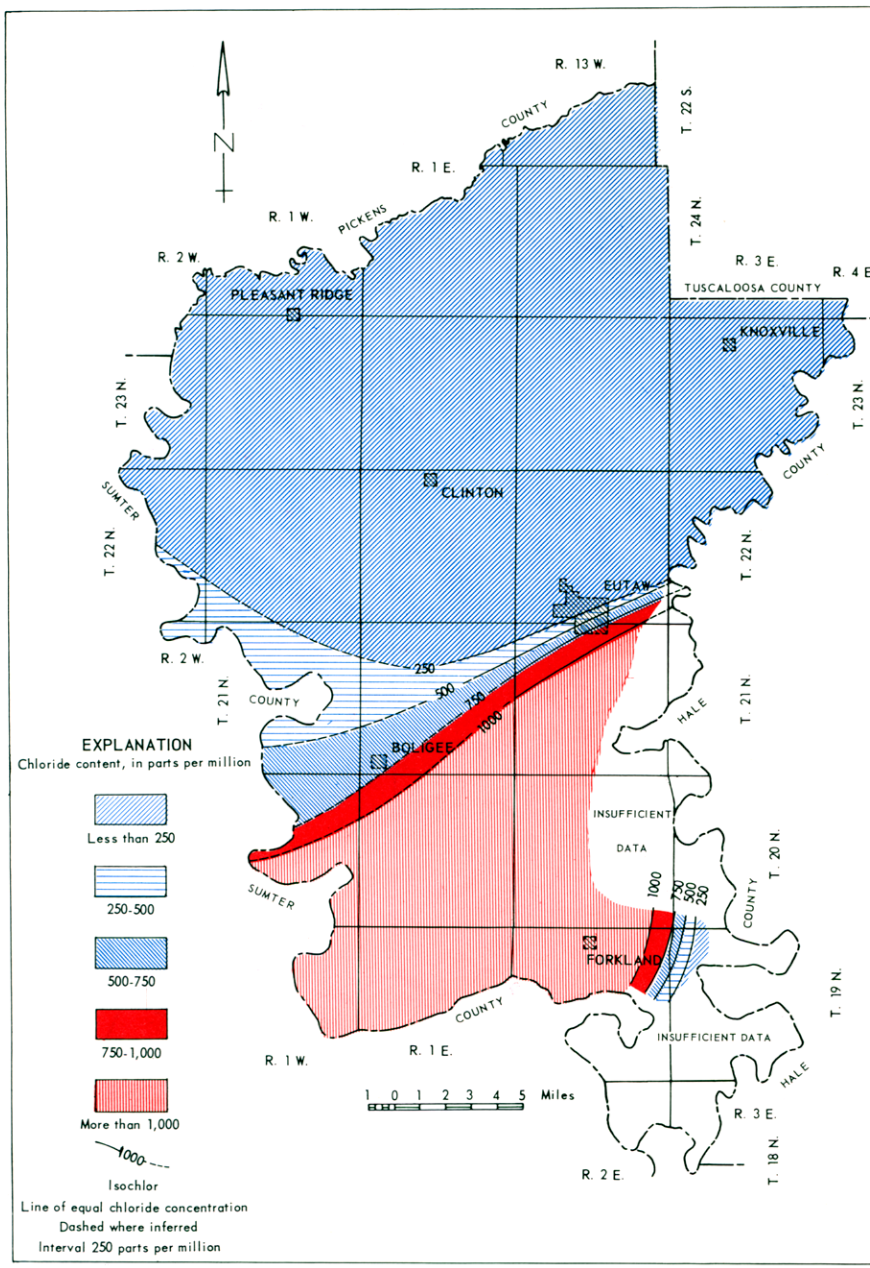


**Figure 7.—Distribution of chloride in water from the Gordo Formation.**

In general, water from the Gordo Formation in the northern part and in the extreme southeast corner of the county is of good chemical quality, except locally where it contains objectionable quantities of iron. Water from the Gordo in most of the southern part of the county is hard and high in chloride and iron.

## McSHAN FORMATION

The McShan Formation is underlain by the Gordo Formation and overlain by the Eutaw Formation. The McShan crops out in the northeastern part of Greene County and is present in the subsurface southwest of the outcrop area. The formation is about 250 feet thick and dips toward the southwest at an average rate of about 35 feet per mile. In general, the structural configuration of the McShan is similar to that of the Gordo Formation (fig. 4).

The lower part of the McShan Formation consists of thin to massive beds of fine- to coarse-grained glauconitic sand interbedded with layers of gray to light-gray laminated clay. The upper part consists of thin beds of crossbedded fine- to medium-grained glauconitic sand and gray laminated clay. Locally, sand beds are sparse or absent and the upper part of the McShan consists of massive beds of gray laminated clay.

### WATER AVAILABILITY

Sands in the McShan Formation generally are good aquifers in Greene County. The major aquifer in the McShan consists of massive beds of fine- to coarse-grained sand in the lower part of the formation. Depths to the base of this major aquifer are shown on figure 8. The top of the major aquifer generally is poorly defined, because the sand beds gradually thicken and become coarser grained with depth. In general, the top of the major aquifer is about 100 feet below the top of the formation and the aquifer is about 150 feet thick. Sands above the major aquifer yield water to many wells in Greene County, but generally yield less water than the major aquifer because the sands are fine grained and the beds are relatively thin.

Table 1 includes many wells that produce water from the McShan Formation at depths ranging from 73 to 900 feet. Many of

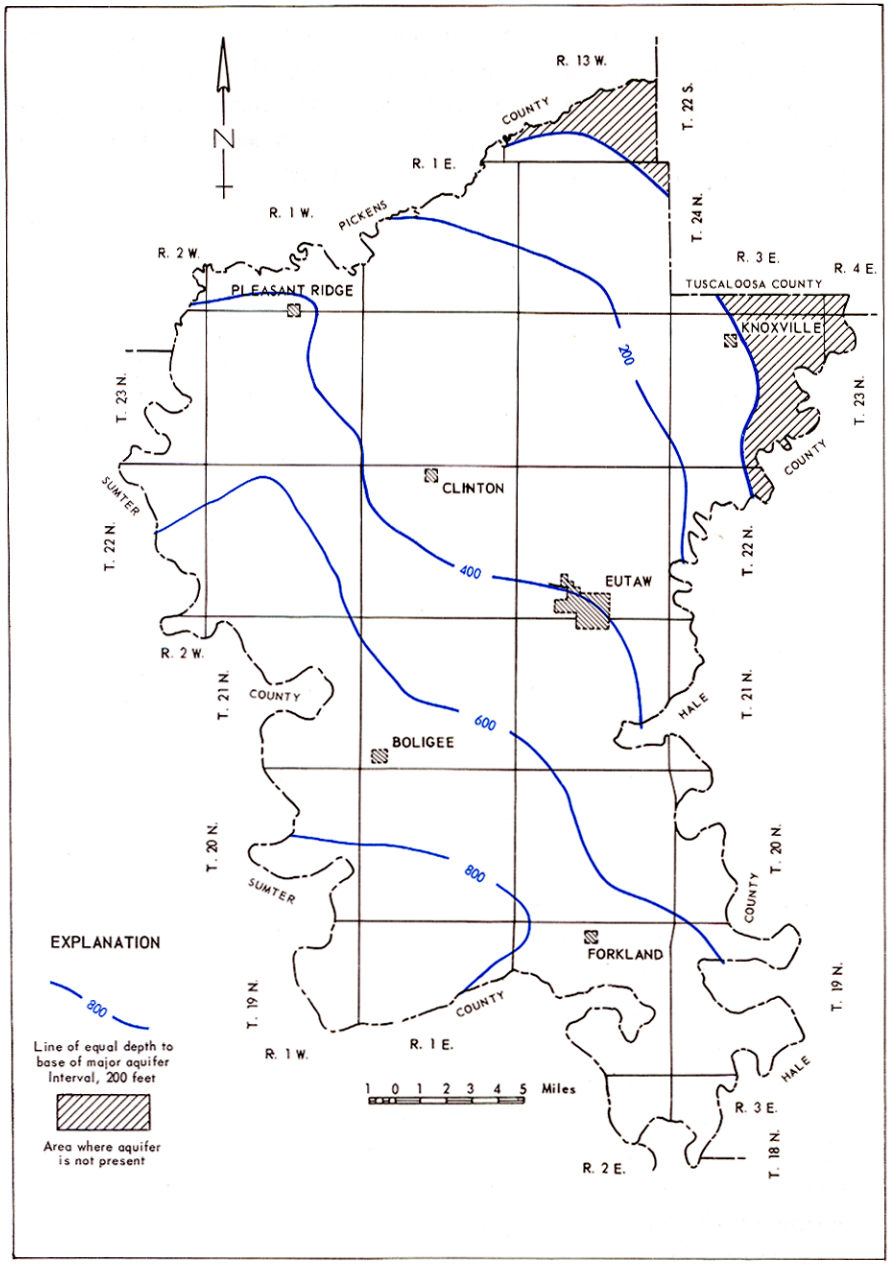


**Figure 8.—Generalized depth to base of major aquifer, McShan Formation.**

these wells flow. The average flows from wells tapping the upper part of the formation and the major aquifer are about 12 and 28 gpm, respectively. Well DD-18, which taps the major aquifer at a depth of 740 feet, flows 200 gpm. Well R-12, which taps the major aquifer, was test pumped at 460 gpm with 32 feet of drawdown for a specific capacity of 14 gpm per foot of drawdown. Well R-13, which taps the upper part of the McShan, was pumped at 75 gpm with 26 feet of drawdown for a specific capacity of 3 gpm per foot of drawdown. Well R-14, which taps the major aquifer, was test pumped at 250 gpm with 22 feet of drawdown for a specific capacity of 11 gpm per foot of drawdown. On the basis of the above data, it is estimated that wells with capacities of 1,000 gpm or more could be constructed in the major aquifer in the McShan Formation in Greene County.

## CHEMICAL QUALITY

Partial chemical analyses of water from 116 wells tapping the McShan Formation are given in table 2 and summarized below.

| | In parts per million | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Hardness as $CaCO_3$ | | |
| | Iron | Bicarbonate | Carbonate | Chloride | Calcium, magnesium | Noncarbonate | pH |
| High | 11 | 656 | 100 | 2,560 | 435 | 286 | 9.6 |
| Median | .10 | 295 | 0 | 225 | 35 | 0 | 8.0 |
| Low | .00 | 10 | 0 | 3.8 | 8 | 0 | 6.1 |

Figure 9 shows the areal distribution of iron in water from the McShan Formation. Water containing 0.3 ppm or more iron occurs locally in the northern part of the county and water high in chloride content in the southern part of the county (figs. 9 and 10). Wells tapping different parts of the McShan in an area may produce water having different iron content; however, available data are too sparse to delineate these areas.

The bicarbonate and carbonate contents of water from the McShan Formation are not problems for domestic and municipal uses, but they may be objectionable for some industrial uses.

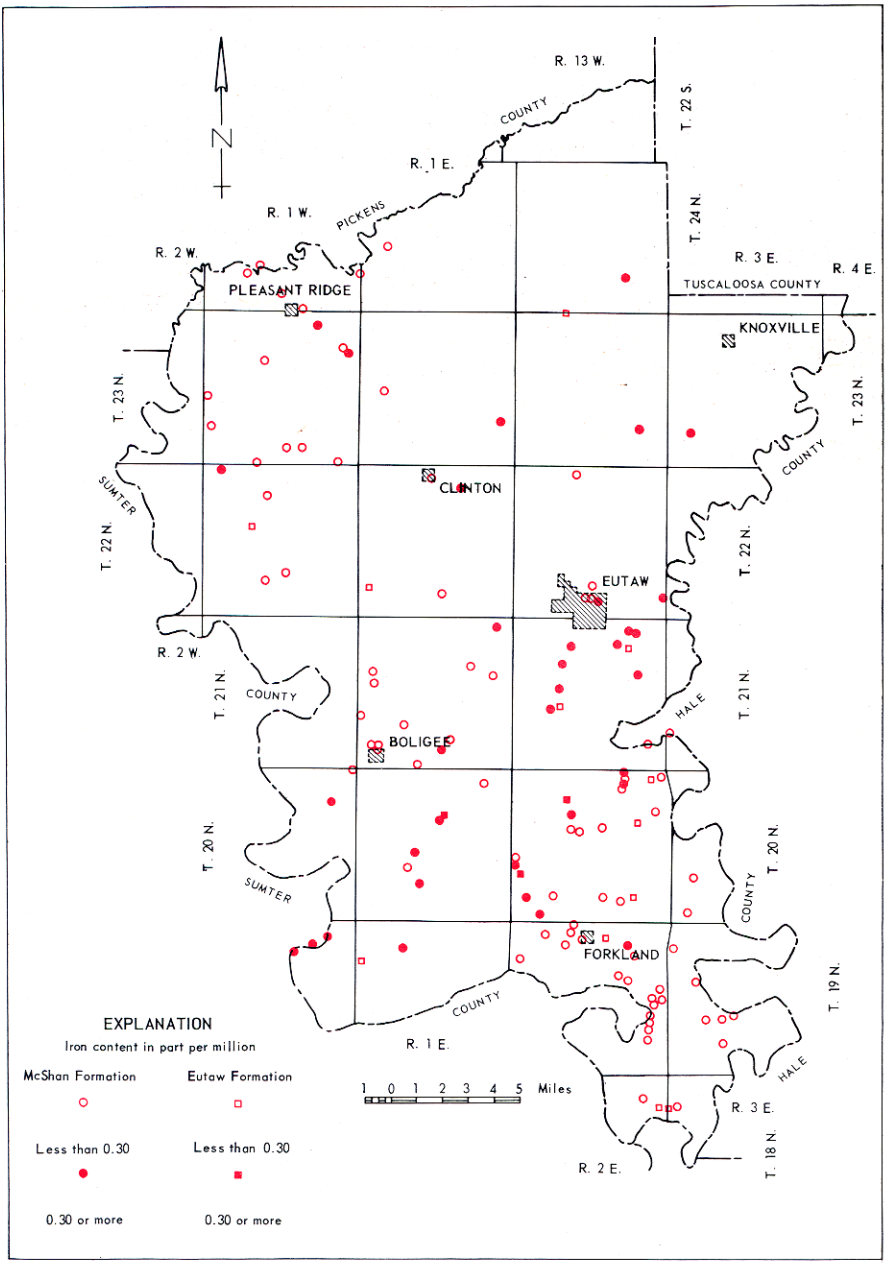


Figure 9.—Distribution of iron in water from the McShan and Eutaw Formations.

The distribution of chloride in water from the McShan Formation is shown on figure 10. In general, water with a chloride content of less than 250 ppm is desirable for domestic and municipal use; however, water containing chloride in excess of 250 ppm is used in many areas where more suitable supplies are not available.

The hardness of water from wells tapping the McShan Formation ranges from soft (0-60 ppm) to very hard (181 ppm or more). In the southern part of the county hardness increases in conjunction with increasing chloride, and wells producing hard and very hard water are only in the area of 1,000 ppm or more chloride, shown on figure 10. In the northern part of the county moderately hard to very hard water occurs in an area north of Clinton and Eutaw from Pleasant Ridge to the Warrior River.

Water from 5 wells tapping the McShan Formation was acidic (pH below 7.0) and water from 106 wells was alkaline (pH above 7.0).

Comprehensive chemical analyses of water from seven wells tapping the McShan Formation are included in table 3. These analyses include values for a number of chemical constituents and characteristics not listed in table 2.

The fluoride content of water from the McShan Formation ranges from 0.2 to 2.4 ppm (table 3). Fluoride in drinking water in excess of 1.5 ppm may cause mottled enamel on teeth if the water is used during the period of calcification of the teeth of children—roughly during the first 6 to 8 years of life (Dean and others, 1942). Although fluoride in excess of 1.5 ppm may cause mottled enamel, studies have indicated that moderate concentrations (0.7 to 1.5 ppm) help to prevent tooth decay (California State Water Quality Control Board, 1963, p. 189-190).

One means of estimating the suitability of water for irrigation is based on specific conductance and sodium-adsorption ratio (Hem, 1959, p. 251). The following ratings for water from the McShan Formation in Greene County are based on this system, from values given in table 3.

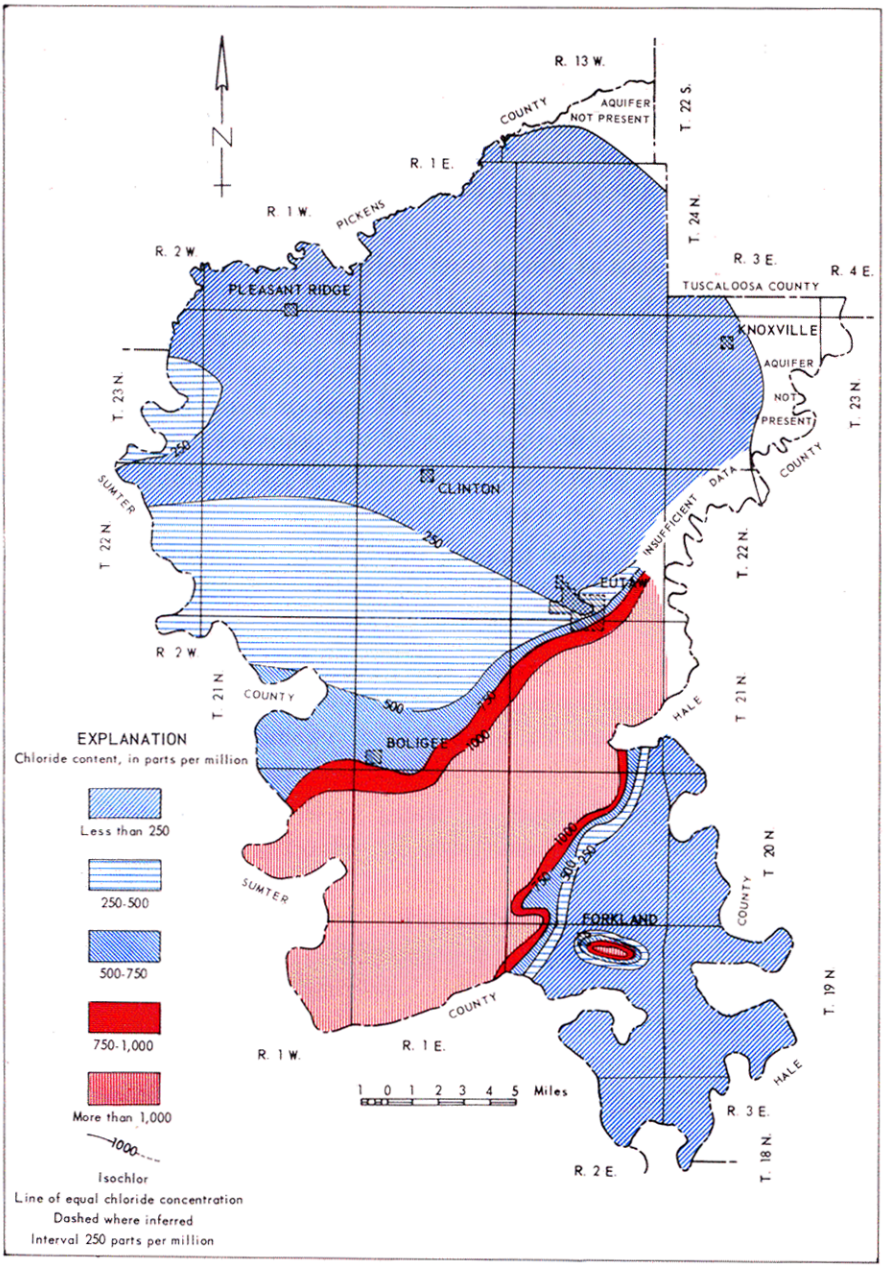


Figure 10.—Distribution of chloride in water from the McShan Formation.

| Well | Sodium (alkali) hazard | Salinity hazard |
|---|---|---|
| D-1 | Low | Medium |
| V-10 | Very high | High |
| Z-9 | Very high | Very high |
| DD-18 | Very high | Medium |

Criteria for evaluating water for irrigation, on the basis of chemical quality, have been developed for areas where irrigation has been practiced for many years, as in the southwestern United States. These criteria may not be applicable to Greene County; however, persons concerned with irrigation should be aware of the possible hazards.

## EUTAW FORMATION

The Eutaw Formation, which includes the Tombigbee Sand Member in the upper part, is underlain by the McShan Formation and overlain by the Mooreville Chalk. The Eutaw crops out in the northeastern part of Greene County and is present in the subsurface southwest of the outcrop area (pl. 1). The formation is about 170 feet thick and dips toward the southwest at an average rate of about 35 feet per mile. In general, the structural configuration of the Eutaw is similar to that of the Gordo Formation (fig. 4).

The lower part of the Eutaw Formation consists of thin beds of crossbedded fine- to medium-grained glauconitic sand and gray laminated clay. Locally, sand beds are sparse or absent and the lower part of the Eutaw consists of massive beds of gray laminated clay. The Tombigbee Sand Member consists of a massive bed of glauconitic fine-grained sand containing fossil shells, and locally, layers of calcareous sandstone and sandy chalk.

### WATER AVAILABILITY

Table 1 includes 23 wells that produce water from the Eutaw Formation at depths ranging from 15 to 600 feet. Some of these wells flow and the average flow is about 8 gpm.

Wells V-6 and AA-2 yield 1.3 and 3.5 gpm with drawdowns of 1.5 and 15.1 feet for specific capacities of 0.9 and 0.2 gpm per foot of drawdown. On the basis of these data, it is estimated that wells producing up to about 100 gpm can be constructed in the Eutaw Formation in Greene County. Although the amount of water available from the Eutaw is small compared to that from underlying formations, the Eutaw is an important water-bearing unit because it is the shallowest source of ground water in a large part of the county (see pls. 1 and 2).

## CHEMICAL QUALITY

Partial chemical analyses of water from 16 wells tapping the Eutaw Formation are given in table 2 and summarized below.

| | In parts per million | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Hardness as $CaCO_3$ | | |
| | Iron | Bicarbonate | Carbonate | Chloride | Calcium, magnesium | Noncarbonate | pH |
| High | 1.6 | 463 | 30 | 3,530 | 482 | 346 | 8.8 |
| Median | .10 | 312 | 0 | 260 | 40 | 0 | 7.9 |
| Low | .01 | 10 | 0 | 10 | 12 | 0 | 6.3 |

Figure 9 shows the areal distribution of iron in water from the Eutaw Formation. Water containing 0.3 ppm or more iron occurs locally in the southern part of the county in association with water high in chloride content (table 2, wells Z-5, AA-8, and AA-22).

The bicarbonate and carbonate contents of water from the Eutaw Formation are not detrimental for domestic and municipal uses; however, these constituents may be objectionable for some industrial uses.

Present information is too sparse to delineate the extent of water high in chloride content in the Eutaw Formation. Information available indicates that water high in chloride content occurs in the Eutaw in an area similar to that shown for the McShan Formation on figure 10 except at two locations. Water from well P-8 had a chloride content of 640 ppm, indicating that water from the Eutaw is higher in chloride content than water from the McShan Formation

in the northwestern part of the county. Water from wells U-5 and U-13 had chloride contents of 25 and 180 ppm, indicating that water from the Eutaw Formation is lower in chloride content than water from the McShan in an area south and southeast of the town of Eutaw.

The hardness of water from wells tapping the Eutaw Formation ranges from soft (0-60 ppm) to very hard (181 ppm or more). Hardness increases in conjunction with increasing chloride, and wells producing hard and very hard water generally produce water having a chloride content of 1,000 ppm or more.

Water from one well tapping the Eutaw Formation was acidic (pH below 7.0) and water from 14 wells was alkaline (pH above 7.0).

Comprehensive chemical analyses of water from two wells tapping the Eutaw Formation are included in table 3. These analyses include values for a number of chemical constituents and characteristics not listed in table 2. Water from these two wells had fluoride contents of 1.3 and 1.0 ppm, and the following ratings of sodium and salinity hazards to irrigation.

| Well | Sodium (alkali) hazard | Salinity hazard |
|---|---|---|
| Q-7 | Very high | High |
| AA-8 | Very high | Very high |

A discussion of the effect of fluoride on teeth and of sodium and salinity hazards is included in the section describing chemical quality of water from the McShan Formation.

In general, chemical analyses of water from the Eutaw Formation indicate that it is satisfactory for municipal, domestic, and stock use except locally in the southern and western parts of the county, where the water is high in chloride and iron content.

## ALLUVIAL DEPOSITS

The alluvial deposits (pl. 1) consist of two geologic units, terrace deposits and alluvium. They crop out in and along major

stream valleys throughout the county and are underlain by sediments of Cretaceous age. The alluvial deposits are as much as 70 feet thick and consist of clay, sand, and gravel. Because of the heterogeneity of alluvial deposits, individual beds are inconsistent in arrangement, thickness, and areal extent.

### WATER AVAILABILITY

Ground water occurs in sands and gravels in the alluvial deposits, but because of the heterogeneity of the deposits, individual aquifers are difficult to define or describe accurately. In general, aquifers in the alluvial deposits yield sufficient water for domestic or stock use. Wells of large capacity probably could be constructed in the lower terrace deposits or in the alluvium along the Tombigbee, Warrior, and Sipsey Rivers where the aquifers are hydraulically connected with the streams.

### CHEMICAL QUALITY

Reports of previous investigations in surrounding areas indicate that water in the alluvial deposits is of good chemical quality except locally where the iron content is high (Newton and others, 1961, p. 138; Sanford, personal communication; and Wahl, 1965).

One well, DD-8, tapping alluvial deposits in Greene County, produces water high in chloride content, which is attributed to pollution from nearby deep well DD-7.

## UTILIZATION OF GROUND WATER

Ground-water use in Greene County in 1965 was estimated to be 1,150,000 gpd: 170,000 gpd for municipal use; 80,000 gpd for industrial use; and 900,000 gpd for farm use (table 6).

The calculated discharge from 111 flowing wells inventoried in 1964-65 was 2,740,000 gpd, which is estimated to be about 75 percent of the total discharge from all flowing wells in the county. The total discharge of water from all wells, flowing and pumped, is estimated to be about 4,000,000 gpd. The calculated discharge from 111 flowing wells, 2,740,000 gpd, is more than double the estimated ground-water use in the county.

The relation between ground-water discharge, recharge, and storage of an aquifer is usually expressed as follows: recharge equals discharge plus or minus the change in storage. The change in storage may be caused by increases or decreases in recharge and discharge. A change in ground-water storage is indicated by a rise or fall of the water level in a well tapping the aquifer.

Figure 11 shows a hydrograph for well R-11, which taps the major aquifer in the McShan Formation, monthly precipitation, and cumulative departure from average precipitation. The correlation between the hydrograph and the cumulative departure from average precipitation indicates that short-term changes in storage in the aquifer are primarily the result of seasonal precipitation, and that a long-term change in storage is due primarily to a long-term change in precipitation. Up to 1965, withdrawals from wells have not caused a notable decrease in storage in the aquifer and, therefore, these withdrawals probably are not exceeding recharge to the aquifer. A slight rise in the water-level trend in the fall of 1957 cannot be correlated with cumulative departure, but is attributed to the activation of Warrior Lock and Dam in September 1957, which raised the water level on the river about 32 feet at low-flow conditions. Because aquifers in the McShan Formation are estimated to supply more than 50 percent of the water used in Greene County in 1965 (table 6), it is assumed that withdrawals have not exceeded recharge in other aquifers in the county.

A determination of the amount of ground water available for utilization in Greene County is beyond the scope of this investigation; however, it is evident that only a small part of the available ground-water supply was being utilized in 1965.

## WATER PROBLEMS

A detailed discussion of water problems in Greene County is beyond the scope of this report; however, table 7 shows some of the major problems, the most common causes, the possible solutions, and the data needed to make pertinent decisions.

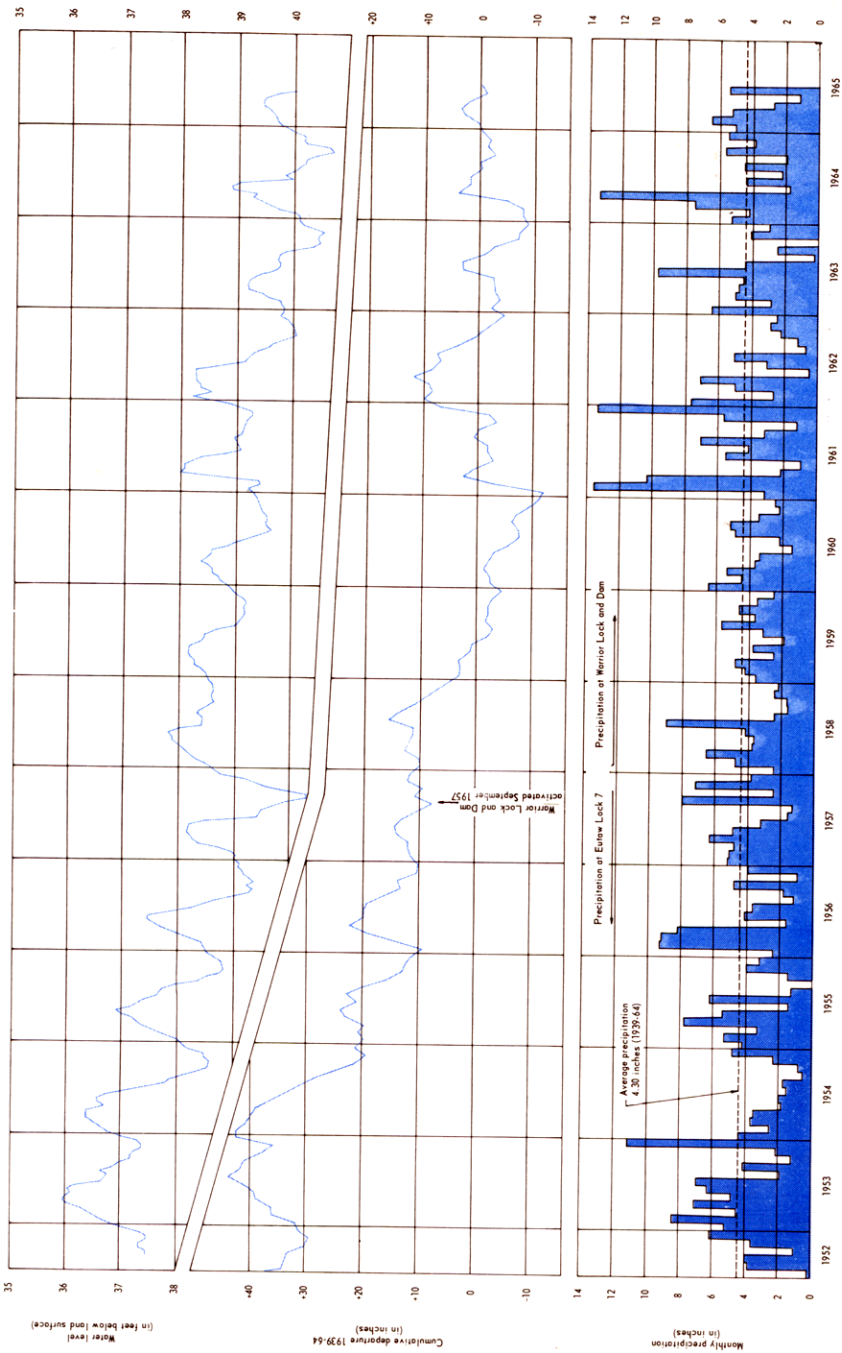


Figure 11.—Monthly precipitation, cumulative departure from average precipitation, and hydrograph of well R-11.

Table 7.—*Ground-water problems and solutions*

| Major water problems | Common causes | Possible physical solutions | For data needed, see Greene County report reference below |
|---|---|---|---|
| 1. Deficient supply | 1. Increased demand for water | 1. Tap more productive aquifer | 1. Location of aquifers. See text "Ground-Water Sources," pl. 1, tables 1 and 5. |
| 2. Decreasing or cessation of flow from wells | 2. Declining water levels, see problem 4 | 2. Provide water storage | 2. Depth to aquifers. See text "Ground-Water Sources," pl. 2, figs. 2, 5, 8, and table 1. |
| 3. Poor quality | 3. Poor well construction | 3. Proper well construction | 3. Yields of aquifers. See text "Ground-Water Sources," tables 1 and 5. |
| | 4. Water high in iron in aquifer | 4. Treatment or filter system | 4. Water level. See figure 11 and table 1. |
| | 5. Water high in chloride in aquifer | 5. Tap aquifers containing better water | 5. Driller's or sample log. See table 4. |
| 4. Declining water levels | 6. Pumping | 6. Proper well spacing and a planned program of pumping | 6. Quality of water in aquifers. See text "Ground-Water Sources," figs. 3, 6, 7, 9, and 10, and tables 2 and 3. |
| | 7. Weather conditions | 7. No proved economical solution | 7. Aquifer properties (specific capacity, transmissibility, storage, etc.). See text "Ground-Water Sources." |
| 5. Wasted ground water | 8. Uncontrolled flow from wells | 8. Equip flowing wells with valves and cap or plug abandoned wells | 8. Well construction. See table 1. |

## SUMMARY AND CONCLUSIONS

The results of the ground-water investigation in Greene County lead to the following conclusions regarding the water resources:

**Source:** Ground water is available from sand and gravel aquifers in the Coker, Gordo, McShan, and Eutaw Formations and in the alluvial deposits. The Mooreville and Demopolis Chalks are relatively impermeable and are not sources of ground water; however, these impermeable units are significant parts of the overall ground-water system because they confine water in underlying aquifers and limit the downward percolation of water from overlying aquifers.

**Quantity:** Relatively large quantities of water (1,000 gpm or more per well) can be obtained from the Coker, Gordo, and McShan Formations. The alluvial deposits and Eutaw Formation generally yield sufficient water for domestic or stock use, and wells of large capacity probably can be constructed in the lower terrace deposits and alluvium along major streams where the aquifers are hydraulically connected with the streams.

**Use:** Ground-water use in Greene County was estimated to be 1,150,000 gpd in 1965. Most of this water, 840,000 gpd, was supplied by aquifers in the McShan Formation.

The calculated flow from 111 flowing wells inventoried in 1965 was 2,740,000 gpd, more than double the estimated ground-water use in the county.

**Quality:** The chemical quality of water from wells tapping the Coker Formation is generally satisfactory for domestic, stock, or municipal use; however, the water may be too highly mineralized for some industrial uses. Water containing excessive chloride and hardness probably occurs in the Coker in the southern part of the county.

The chemical quality of water from wells tapping the Gordo, McShan, and Eutaw Formations ranges from good to poor (figs. 6, 7, 9, and 10).

Water from wells tapping the alluvial deposits is of good chemical quality except locally where excessive amounts of iron or chloride are present.

**Problems:** The most serious ground-water problem in Greene County is that much of the water contains excessive amounts of iron or of chloride. The possible solutions are: (1) if the problem is due to a high iron content, the water can be treated or filtered or another source may be located; (2) if the chloride content is high, another source of water having a lower chloride content may be sought.

**Future studies:** Additional studies will be necessary to solve quantitative ground-water problems in Greene County. Some subjects that should be considered for future investigation are: the interrelation of ground water and surface water; the quantity and quality of water available in the Coker and Gordo Formations in the southern part of the county; aquifer characteristics (storage and transmissibility) of the Coker, Gordo, McShan, and Eutaw Formations; a water budget for the county; the location of and depth to aquifers low in iron content; the relation between the chemical quality of water and the distance the water has to travel in the aquifer; the relation between the area of high chloride in the county and the geologic structure and ground-water movement; and the relation, if any, between the quality of the water and the lithology of the aquifer.

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# BASIC DATA

Table 1.—*Records of selected wells in Greene County*

Well: Numbers correspond to those on plates 1 and 2 and in tables 2, 3, and 4; asterisk indicates chemical analysis given in table 3.

Type: D, drilled or bored; Du, dug; Dv, driven.

Depth of well and water level: Reported depths are given in feet; measured depths are given in feet and tenths.

Altitude: Altitudes determined by aneroid barometer, or from topographic maps.

Method of lift: C, cylinder; Cn, centrifugal; J, jet; N, none; R, ram; S, submergible; T, turbine.

Use of water: D, domestic; I, industrial; N, none; O, observation; P, public supply; S, stock.

Water-bearing unit: Kck, Coker Formation; Kg, Gordo Formation; Km, McShan Formation; Ke, Eutaw Formation; Qt, terrace deposits; Qal, alluvium.

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A-1 | W. H. Morrow ..... | James Lamb..... | D | 600 | 3½, 1½ | Kg, Kck | 197 | + 2.5 | 3-28-46 | J | D,S | Casing: 3½-in from surface to 50 ft; 1½-in from surface to 250 ft; none below. Flow: 2.1 gpm on 3-28-46; stopped flowing in 1955. |
| A-2 | Stuart Gandy..... | ..... | D | 280 | 2 | Kg | 206 | 10 | ..... | J | D,S | Casing: 2-in from surface to 147 ft. See sample log. |
| *D-1 | H. H. and Thomas Eatman. | Andrew Norwood .. | D | 253 | 3 | Km | 157 | + 9<br>+ 5.5 | 4- 2-14<br>10-18-40 | N | D,S | Casing: 3-in from surface to 18 ft; none below. Flow: 18 gpm on 4-2-14; 17.5 gpm with 2.5 ft of drawdown on 10-18-40; 4 gpm on 8-10-65. |
| D-2 | Marsha Horton Spear | ..... | D | 25[illegible] | 3 | Km | 132 | + 3.8 | 10-18-40 | N | D,S | Flow: 1.7 gpm with 1.2 ft of drawdown on 10-18-40; 1 gpm on 8-4-65. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D-3 | ....do..... | ..... | D | 280 | 4 | Km | 137 | + 6.5 | 8- 4-65 | N | S | Flow: 6.5 gpm with 5.5 ft of drawdown on 8-4-65. |
| D-4 | Everett Owens ..... | C. W. Blount..... | D | 450 | 4 | Km | 285 | 135 | ..... | J | D,S | |
| E-1 | Curtis Eatman..... | West Alabama Lime Co. | D | 340 | 4,2 | Kg | 233 | 32 | 1963 | J | D,S | Casing: 4-in from surface to 42 ft; 2-in from 25 to 340 ft. See driller's log. |
| E-2 | Mrs. Mary Richardson | ..... | D | 460 | 6 | Kg | 145 | Flowing | 8-16-65 | N | D,S | Reported flow 90 gpm in 1940; flow 42.5 gpm on 8-16-65. |
| E-3 | Jim Noland ..... | E. B. Norwood.... | D | 280 | 4,2 | Km | 155 | Flowing | 8-10-65 | J | D,S | Flow: 15 gpm on 8-10-65. |
| E-4 | L. A. Hollingsworth | ..... | Du | 25 | 36 | Ke | 309 | ..... | ..... | J | D,S | |
| F-1 | Curtis Eatman..... | Ace Drilling Co... | D | 292.5 | 4 | Kg | 212 | 34.1 | 8-10-65 | N | N | Casing: 4-in from surface to 272 ft; 2-in screen from 272 to 282 ft. See driller's log. Electric log in files of U.S. Geol. Survey. |
| F-2 | V. E. Pearce..... | ..... | D | 700 | 4 | Kck | 226 | ..... | ..... | J | D,S | |
| F-3 | Willard Williams.... | Ace Drilling Co... | D | 268 | 4,2 | Km | 305 | 91.5 | 3-20-57 | J | D,S | Casing: 4-in from surface to 147 ft; 2-in from 147 to 215 ft; 2-in perforated casing from 215 to 236 ft. Equipped with sand filter to remove iron. See driller's log. Electric log in files of U.S. Geol. Survey. |
| G-1 | Lula Philips..... | James Lamb..... | D | 497 | 4 | Kck | 153 | + 14.0 | 8-16-65 | N | D | Well equipped with valve for confining flow. Flow 5 gpm on 8-16-65 with valve wide open. |
| H-1 | Dan Miller..... | Causey Drilling Co. | D | 420 | 4,2 | Kck | 124 | + 13.0 | 9- 5-56 | N | D | Estimated flow 15 gpm on 8-10-65. |
| H-2 | --Meredith..... | ..... | D | 420 | ... | Kck | 124 | + 12 | 8-10-65 | N | D | Flow 1.8 gpm on 8-10-65. |
| I-1 | U.S. Corps of Engineers. | ..... | D | 300 | 3 | Kck | 120 | Flowing | 8-10-65 | N | N | Estimated flow 15 gpm on 8-10-65. |
| J-1 | J. H. Lamb ..... | ..... | D | 400 | 4 | Kck | 124 | Flowing | 8-10-65 | J | D,S | Flow 10.5 gpm on 8-10-65. |
| J-2 | Russell Allen..... | Causey Drilling Co. | D | 220 | 4 | Kg | 240 | 170 | 10- -64 | J | D | |
| J-3 | ....do..... | F. C. Null Drilling Co. | D | 570 | 4,2 | Kck | 115 | Flowing | 8-10-65 | N | S | Casing: 4-in from surface to 72 ft; 2-in from 72 to 570 ft. Flow 50 gpm on 8-10-65. |
| J-4 | W. H. Spencer ..... | ..... | D | 560 | 2 | Kck | 150 | Flowing | 8- 5-65 | J | D | Flow 5.4 gpm on 9-18-40; estimated flow 3 gpm on 8-5-65. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J-5 | New Bethany Baptist Church. | J. K. Scott ..... | D | 540 | 4 | Kck | 145 | + 21.0 | 2- 4-47 | N | P | Casing: 4-in from surface to 107 ft; none below. Flow 11.6 gpm on 2-4-47. See driller's log. |
| J-6 | Ernest Wilson..... | Posey Drilling Co. | D | 73 | 4 | Km | 180 | 33 | 1962 | J | D,S | |
| J-7 | E. Hamilton..... | ..... | D | 200 | 4 | Kg | 100 | Flowing | 8- 5-65 | C | D | Flow 25 gpm on 8-5-65. |
| K-1 | Frenchie Burton.... | ..... | Du | 36 | 36 | Ke | 297 | ..... | ..... | J | D,S | |
| K-2 | Allen Upchurch..... | ..... | Du | 30 | 36 | Ke | 270 | 24 | 1964 | J | D | |
| K-3 | H. O. Gosa ..... | ..... | D | 200 | 4 | Km | 225 | ..... | ..... | J | N | Water reported to be high in iron content. Well unused due to poor quality. |
| K-4 | H. H. Coleman ..... | James Phillips ... | D | 370 | 4 | Kg | 230 | 30 | 12-17-47 | J | D,S | Casing: 4-in from surface to 45 ft; none below. See driller's log. |
| K-5 | Union Church ..... | Blackbelt Drilling Co. | D | 190 | 4 | Km | 335 | ..... | ..... | C | P | Casing: 4-in from surface to 84 ft; none below. See driller's log. |
| K-6 | E. C. Lamb, Jr..... | ..... | Du | 22 | 36 | Qal | 175 | 13 | 1965 | J | D,S | |
| K-7 | Gulf States Paper Corp. | ..... | D | 350 | 4 | Kg | 178 | + 1 | 8-16-65 | J | D | |
| L-1 | Maybelle Baines.... | James Lamb..... | D | 700 | 3 | Kck | 225 | ..... | ..... | N | N | |
| L-2 | J. C. Jacobs..... | ..... | Du | 30 | 36 | Ke | 240 | ..... | ..... | J | D | |
| L-3 | J. W. Sterling ..... | West Alabama Lime Co. | D | 420 | 4,2 | Km | 246 | 50 | 1960 | J | D,S | |
| L-4 | Homer Bambarger... | ..... | D | 450 | 4 | Kg | 195 | 6 | ..... | J | D | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L-5 | Greene County Schools. | Blackbelt Drilling Co. | D | 360 | 4,2 | Km | 260 | 120 | 2- -64 | J | P | Casing: 4-in from surface to 204 ft; 2-in from 204 to 267 ft; 2-in screen from 267 to 277 ft; 2-in casing from 277 to 298 ft; 2-in screen from 298 to 318 ft; 2-in casing from 318 to 360 ft. See driller's log. |
| M-1 | Allen Grubbs..... | ..... | D | 300 | 4 | Km | 222 | 53 | 1956 | J | P | |
| M-2 | Albert Billings..... | ..... | D | 500 | 4 | Km | 268 | ..... | ..... | C | D,S | Casing: 4-in from surface to 30 ft; none below. |
| M-3 | Richard Owens..... | Clardy Drilling Co. | D | 448 | 4,2 | Km | 297 | 140 | 1958 | J | D,S | Casing: 4-in from surface to 198 ft; 2-in from 198 to 448 ft. |
| M-4 | ..... | L. M. Glasco..... | D | 1,880 | ... | ..... | 289 | ..... | ..... | .... | ... | Oil exploration corehole. See sample log. |
| M-5 | Allen Grubbs..... | ....do..... | D | 1,900 | ... | ..... | 219 | ..... | ..... | .... | ... | Do. |
| M-6 | Mrs. J. L. Hardy.... | ..... | Du | 35 | 36 | Qt | 278 | ..... | ..... | J | D | |
| M-7 | ..... | L. M. Glasco..... | D | 1,840 | ... | ..... | 191 | ..... | ..... | .... | ... | Do. |
| M-8 | Allen Grubbs..... | ..... | D | 200 | 4 | Km | 241 | 17 | 1956 | J | D | |
| M-9 | ....do..... | ..... | D | 500 | 4 | Km | 239 | 55 | 1946 | J | P | |
| M-10 | I. A. Gay..... | Lynn McCracken.. | D | 375 | 3 | Km | ... | 24.9 | 7-29-65 | J | D,S | |
| M-11 | J. A. Norwood..... | L. M. Glasco..... | D | 5,530 | ... | ..... | 200 | ..... | ..... | .... | ... | Oil test. See sample log. Electric log in files of U.S. Geol. Survey. |
| M-12 | ..... | ....do..... | D | 1,870 | ... | ..... | 166 | ..... | ..... | .... | ... | Oil exploration corehole. See sample log. |
| M-13 | Foster Norton..... | E. B. Norwood.... | D | 410 | 4,2 | Km | 136 | Flowing | 8- 4-65 | Cn | D,S | Casing: 4-in from surface to 40 ft; 2-in from surface to 410 ft. Flow 10 gpm on 8-4-65. |
| M-14 | ....do..... | ..... | D | 400 | 2 | Km | 146 | Flowing | 7-26-65 | Cn | D | Casing: 2-in from surface to 400 ft; perforated in lower part. Flow 10 gpm on 7-26-65. |
| M-15 | ....do..... | E. B. Norwood.... | D | 723 | 4,2 | Kg | 144 | Flowing | 8- 4-65 | N | S | Casing: 4-in from surface to 34 ft; 2-in from surface to 723 ft; perforated in lower part. Flow 7 gpm on 8-4-65. |
| M-16 | J. O. Gay..... | ..... | D | 435 | 4 | Km | 187 | 32 | 1950 | J | D | |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M-17 | H. O. Williams ..... | --Adams ..... | D | 300 | 4 | Km | 157 | 30 | ..... | J | D | |
| M-18 | J. H. Montgomery... | ..... | D | 450 | 4 | Km | 223 | ..... | ..... | J | D | |
| N-1 | St. Louis-San Fransisco Railway. | ..... | D | ..... | 8 | ..... | 130 | Flowing | 7-30-65 | .... | D | Estimated flow 25 gpm on 7-30-65. |
| N-2 | Foster Norton..... | ..... | D | 150 | ... | Ke | 120 | Flowing | 7-26-65 | N | S | |
| P-1 | Charles Montgomery. | ..... | D | 500 | 4 | Km | 257 | ..... | ..... | C | D,S | |
| P-2 | W. C. Hardy ..... | F. C. Null Drilling Co. | D | 350 | 4 | Km | 201 | 60 | ..... | J | D | |
| P-3 | W. H. Williams ..... | ..... | D | 300 | 4 | Km | 145 | 2 | 11-29-40 | C | D,S | Casing: 4-in from surface to 20 ft; none below. |
| P-4 | ....do..... | C. W. Blount ..... | D | 777 | 4 | Kg | 145 | Flowing | 7-19-65 | N | D,S | Flow 12 gpm on 7-19-65. |
| P-5 | ....do..... | ..... | D | 500 | 4 | Km | 145 | + 7.4 | 11-29-40 | N | D,S | Casing: 4-in from surface to 500 ft. Flow: 3.4 gpm with 5.1 ft of drawdown on 11-29-40; no flow on 7-19-65. |
| P-6 | ....do..... | West Alabama Lime Co. | D | 520 | 4 | Km | 125 | Flowing | 7-19-65 | N | S | Flow 0.[illegible] gpm on 7-19-65. |
| P-7 | ....do..... | C. W. Blount ..... | D | 747 | 4 | Kg | 157 | Flowing | 7-19-65 | N | S | Flow 3 gpm on 7-19-65. |
| P-8 | E. V. Montgomery .. | West Alabama Lime Co. | D | 280 | 4,2 | Ke | 130 | + 2 | 7-23-65 | J | P | Casing: 4-in from surface to 23 ft; 2-in from 112 to 280 ft. |
| P-9 | C. H. Hardy ..... | ....do..... | D | 580 | 4 | Km | 265 | 130 | 1964 | J | D,S | See driller's log. |
| P-10 | R. H. Williams ..... | --Adams ..... | D | 460 | 4 | Km | 130 | + 4.4<br>+ .7 | 11-29-40<br>7-19-65 | N | D,S | Flow: 1.3 gpm with 3.7 ft of drawdown on 11-29-40; estimated 1 gpm on 7-19-65. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P-11 | Greene County Schools. | ..... | D | ..... | 4 | ..... | 120 | Flowing | 7-19-65 | J | P | Estimated flow 1 gpm on 7-19-65. |
| P-12 | Burt McClellen..... | ..... | D | ..... | 2 | ..... | 112 | Flowing | 7-19-65 | N | D | Flow 31 gpm on 7-19-65. |
| Q-1 | M. L. Porter..... | ..... | D | 300 | 4,2 | Km | 210 | 20 | 1955 | J | D | |
| *Q-2 | E. F. King ..... | C. W. Blount ..... | D | 960 | 4,2 | Kck | 157 | Flowing | 7-29-65 | Cn | D,S | Flow 35 gpm on 7-29-65. |
| Q-3 | ....do..... | Barney Kelley .... | D | 300 | 4 | Km | 157 | .2 | 7-29-65 | N | N | |
| Q-4 | ....do..... | ..... | D | 150 | 4 | Km | 157 | ..... | ..... | J | D | |
| Q-5 | M. Hales ..... | F. C. Null Drilling Co. | D | 500 | 6 | Kg | 185 | ..... | ..... | J | D,S | |
| Q-6 | ....do..... | ....do..... | D | 550 | 4 | Kg | 170 | ..... | ..... | J | D,S | |
| *Q-7 | Philip Crawford .... | --Adams..... | D | 240 | 4 | Ke | 180 | 25 | ..... | J | D,S | Casing: 4-in from surface to 18 ft; none below. |
| Q-8 | Archie I. Brown .... | James Lamb..... | D | 250 | 4 | Km | 150 | ..... | ..... | J | D,S | |
| R-1 | Mrs. Carrie Peoples. | F. C. Null Drilling Co. | D | 300 | 4 | Km | 340 | ..... | ..... | S | D,S | |
| R-2 | Cecil Stephens..... | ..... | Du | 15 | 36 | Ke | 180 | 5 | 8- 5-65 | J | D,S | |
| R-3 | R and R Truckstop.. | James Lamb..... | D | 135 | 4 | Km | 145 | 1.4 | 9-18-40 | J | P | Well deepened to 400 ft about 1950. |
| *R-4 | M. F. Roebuck ..... | West Alabama Lime Co. | D | 466 | 4,2 | Kg | 145 | Flowing | 8- 5-65 | J | P | Casing: 4-in from surface to 40 ft; 2-in from 40 to 466 ft. Estimated flow 15 gpm on 8-5-65. |
| R-5 | Arther Spencer ..... | ..... | D | 600 | 4 | Kg, Kck | 140 | Flowing | 7-15-65 | J | D | Flow 40 gpm on 7-15-65. |
| R-6 | J. O. Banks..... | ..... | D | ..... | 4 | ..... | 166 | 6.2 | 8- 5-65 | C | D | |
| R-7 | James H. Poole .... | ..... | Du | 22 | 36 | Ke | 190 | 3 | 7-29-65 | J | D | |
| R-8 | E. P. Soloman ..... | West Alabama Lime Co. | D | 600 | 4 | Kg, Kck | 140 | Flowing | 7-14-65 | N | S | Estimated flow 0.2 gpm on 7-14-65. |
| R-9 | ....do..... | Causey Drilling Co. | D | 170 | 4 | Km | 160 | 35.8 | 4-12-54 | J | D,S | Casing: 4-in from surface to 110 ft; none below. See sample log. |
| R-10 | Gorden Coleson Sawmill. | ..... | D | 524 | 4 | Kg | 122 | Flowing | 8- 5-65 | Cn | I | Flow 30 gpm on 8-5-65. |
| R-11 | City of Eutaw..... | Causey Drilling Co. | D | 407 | 4,2 | Km | 173 | 36.9 | 5-30-52 | N | O | Casing: 4-in from surface to 314 ft; 2-in from 290 to 395 ft; 2-in screen from 395 to 407 ft. Equipped with automatic water-level recorder. See driller's log. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *R-12 | City of Eutaw..... | Layne-Central Co. | D | 441 | 16, 10 | Km | 205 | 83<br>85.8 | 1952<br>6-24-65 | T | P | Casing: 16-in from surface to 390 ft; 10-in from 331 to 394 ft; 10-in screen from 394 to 429 ft; 10-in casing from 429 to 435 ft. Drawdown 32 ft after 8 hrs pumping 460 gpm. See driller's log. Owner's well 3. |
| *R-13 | ....do..... | ....do..... | D | 306 | 12, 8 | Km | 205 | 84 | 1940 | T | N | Casing: 12-in from surface to 262 ft; 8-in from 206 to 264 ft; 8-in screen from 264 to 306 ft. Drawdown 26 ft when pumping 75 gpm. Not used since 1950. See driller's log. Owner's well 1. |
| *R-14 | ....do..... | ....do..... | D | 389 | 12, 6 | Km | 166 | 30.0<br>34.4 | 12- 3-49<br>6-24-65 | T | P | Casing: 12-in from surface to 325 ft; 6-in from 249 to 329 ft; 6-in screen from 329 to 379 ft; 6-in casing from 379 to 389 ft. Drawdown 22 ft after 8 hrs pumping 250 gpm. See driller's log of test hole to 634 ft. Owner's well 2. |
| R-15 | William Lee ..... | West Alabama Lime Co. | D | 750 | 4,2 | Kg | 115 | Flowing | 7-15-65 | N | S | Flow 12 gpm on 7-15-65. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-16 | U.S. Corps of Engineers. | ..... | D | 100 | 6 | Km | 100 | + 1 | 8- 5-65 | N | P | Flow 0.8 gpm on 8-5-65. |
| S-1 | Lewis Brodnix ..... | F. C. Null Drilling Co. | D | 360 | 2 | Kg | 100 | + 10 | 1935 | R | D,S | Casing: 2-in from surface to 340 ft; 2-in perforated casing from 340 to 360 ft. Estimated flow 15 gpm on 8-16-65. |
| T-1 | Dollarhide Hunting Club. | Causey Drilling Co. | D | 210 | 4 | Km | 101 | + 12.0 | 6-23-65 | N | D,S | Casing: 4-in from surface to 40 ft; none below. Flow 3 gpm on 6-23-65. See sample log. |
| T-2 | ....do..... | ..... | D | ..... | 8 | ..... | 100 | Flowing | 6-23-65 | N | S | Flow 50 gpm on 6-23-65. |
| U-1 | State Highway Dept. | ..... | D | ..... | 6,4 | ..... | 105 | + 1.0 | 7-14-65 | N | N | Estimated flow 3 gpm on 7-14-65. |
| U-2 | S. D. Bayers..... | F. C. Null Drilling Co. | D | 357 | 4,2 | Km | 110 | + 9<br>+ 4.5 | 9- 6-55<br>7-14-65 | N | S | Casing: 4-in from surface to 80 ft; 2-in from 80 to 315 ft; 2-in perforated from 315 to 357 ft. Flow: reported 20 gpm on 9-6-55; 2.5 gpm with 2.5 ft of drawdown on 7-14-65. See driller's log. |
| U-3 | S. B. Bayers..... | Causey Drilling Co. | D | 517.0 | 4,2 | Km | 165 | 63 | 6- 2-55 | J | D | Casing: 4-in from surface to 135 ft; 2-in from surface to 379 ft; 2-in perforated from 379 to 400 ft. See driller's log. Electric log in files of U.S. Geol. Survey. |
| U-4 | R. E. Lunceford.... | ....do..... | D | 400 | 4,2 | Km | 167 | ..... | ..... | J | D | Casing: 4-in from surface to 93 ft; 2-in from 93 to 370 ft; 2-in perforated from 370 to 400 ft. See sample log. Electric log in files of U.S. Geol. Survey. |
| U-5 | William Lee..... | ....do..... | D | 110 | 4 | Ke | 155 | 40 | 10-25-50 | J | S | Casing: 4-in from surface to 70 ft; none below. See driller's log. |
| U-6 | ....do..... | F. C. Null Drilling Co. | D | 200 | 4 | Km | 145 | ..... | ..... | J | S | |
| U-7 | Dr. J. P. Smith..... | Blackbelt Drilling Co. | D | 250 | 4 | Km(?) | 180 | ..... | ..... | J | D | Casing: 4-in from surface to 63 ft; none below. See driller's log. |
| U-8 | ....do..... | ..... | D | ..... | 3 | ..... | 110 | Flowing | 7-14-65 | N | S | Estimated flow 1 gpm on 7-14-65. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-9 | John Bishop ..... | F. C. Null Drilling Co. | D | 461 | 4,2 | Ke, Km(?) | 135 | + 5.0 | 7-14-65 | N | S | Casing: 4-in from surface to 21 ft; 2-in from 21 to 400 ft; 2-in perforated from 400 to 442 ft. Flow 2.8 gpm with 2 ft of drawdown on 7-14-65. See driller's log. |
| U-10 | David Brasfield .... | ....do..... | D | 470 | 4 | Km | 140 | ..... | ..... | N | S | Casing: 4-in from surface to 4 ft; none below. Flow 15 gpm on 6-2-49. Stopped flowing in 1963. |
| *U-11 | ....do..... | ....do..... | D | 788 | 5,2 | Kg | 140 | + 7.0 | 6- 8-65 | N | S | Casing: 5-in from surface to 16 ft; 2-in from 74 to 788 ft. Flow 16 gpm with 5.5 ft of drawdown on 6-8-65. See driller's log. |
| U-12 | Kenneth Reed..... | ..... | D | 570 | 4 | Km | 135 | Flowing | 7-14-65 | N | S | Flow 12 gpm on 7-14-65. |
| U-13 | David Brasfield .... | F. C. Null Drilling Co. | D | 127 | 4 | Ke | 155 | 15 | 1950 | J | D | |
| U-14 | Dollarhide Hunting Club. | Causey Drilling Co. | D | 370 | 4 | Km | 99 | + 16.0 | 9-21-55 | N | S | Casing: 4-in from surface to 46 ft; none below. Flow: 60 gpm with 16 ft of drawdown on 9-21-55; 42.8 gpm on 6-23-65. See driller's log. |
| V-1 | --McLean ..... | ..... | D | 500 | 4 | Km | 165 | 11.9 | 7-19.65 | J | S | |
| V-2 | Mt. Olive Church ... | Barney Kelley .... | D | 200 | 4 | Ke | 161 | ..... | ..... | J | P | |
| V-3 | --McLean ..... | ..... | D | 700 | ... | Kg | 175 | ..... | ..... | C | D,S | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-4 | W. B. Baker and Sons. | ..... | D | 450 | 4 | Km | 165 | ..... | ..... | J | D,S | |
| V-5 | S. C. King..... | ..... | D | 480 | 4 | Km | 145 | 6 | 9-30-40 | J | D,S | |
| V-6 | A. N. Grubbs ..... | James Lamb..... | D | 300 | 4 | Ke | 143 | + 4.5 | 11-22-40 | N | S | Flow 1.3 gpm with 1.5 ft of drawdown on 11-22-40. |
| V-7 | ....do..... | C. W. Blount ..... | D | 1,260 | 4 | Kck | 145 | Flowing | 7-15-65 | N | S | Flow 30 gpm on 7-15-65. |
| *V-8 | James Ozement .... | West Alabama Lime Co. | D | 1,260 | 4,2 | Kck | 145 | Flowing | 7-19-65 | N | S | Casing: 4-in from surface to 21 ft; 2-in from surface to 1,260 ft. Flow 20 gpm on 7-19-65. |
| V-9 | A. Shaw..... | ....do..... | D | 450 | 4 | Km | 117 | Flowing | 7-26-65 | C | D,S | Flow 42.5 gpm on 7-26-65. |
| *V-10 | Greene County Schools. | C. W. Blount ..... | D | 580 | 4 | Km | 120 | + 8.5 | 7-23-65 | J | P | Flow 18 gpm with 8.5 ft of drawdown on 7-23-65. |
| V-11 | C. H. Ervin..... | F. C. Null Drilling Co. | D | 645 | 4,2 | Km | 263 | 130 | 1964 | .... | D,S | Casing: 4-in from surface to 40 ft; 2-in from 300 to 600 ft; 2-in perforated from 600 to 622 ft; 2-in from 622 to 645 ft. See driller's log. Electric log in files of U.S. Geol. Survey. |
| V-12 | J. F. Cameron ..... | ....do..... | D | 650 | 4 | Km | 159 | 14 | 1958 | J | D | |
| V-13 | Willie Gibson ..... | West Alabama Lime Co. | D | 520 | 4,2 | Km | 120 | Flowing | 7-15-65 | N | D,S | Casing: 4-in from surface to 21 ft; 2-in from 120 to 520 ft. Flow 13 gpm on 7-15-65. See driller's log. |
| V-14 | W. F. Bell..... | ..... | D | 560 | 3 | Km | 120 | + 5.8 | 10-17-40 | Cn,J | D,S | Flow 2.9 gpm on 10-17-40; no flow on 7-23-65. |
| V-15 | Mrs. Z. C. Moville .. | James Lamb..... | D | 500 | 4 | Km | 120 | Flowing | 7-23-65 | N | D,S | Flow: 2.9 gpm on 10-18-40; 1.2 gpm on 7-23-65. |
| V-16 | Town of Boligee.... | F. C. Null Drilling Co. | D | 620 | 4 | Km | 122 | + 8.5 | 5-11-65 | N | P | Flow 18 gpm with 7 ft of drawdown on 5-11-65. |
| V-17 | W. D. Johnson, Jr .. | ..... | D | 600 | 3 | Km | 120 | Flowing | 5-13-65 | Cn | D,P | Flow 4 gpm on 5-13-65. |
| V-18 | Charles F. Willen Co. | F. C. Null Drilling Co. | D | 575 | 6 | Km | 160 | 30 | 1959 | J | S | |
| V-19 | N. C. Hunt ..... | ..... | D | 750 | 6 | Km | 240 | ..... | ..... | J | D,S | |
| W-1 | W. D. Johnson, Jr... | ..... | D | ..... | 2 | ..... | 110 | Flowing | 5-11-65 | N | N | Estimated flow 0.2 gpm on 5-11-65. |
| W-2 | Mrs. Mary Thetford.. | ..... | D | ..... | 4 | ..... | 110 | Flowing | 5-13-65 | N | N | Estimated flow 15 gpm on 5-13-65. |
| Y-1 | W. D. Johnson, Jr... | ..... | D | 700 | 4 | Km | 220 | ..... | ..... | J | D | |
| Y-2 | S. L. Greene..... | ..... | D | 550 | 4 | Km | 102 | 10 | 1964 | J | D,S | |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y-3 | W. Oliver..... | ..... | D | ..... | 4 | ..... | 83 | Flowing | 5-13-65 | N | N | Estimated flow 15 gpm on 5-13-65. |
| Z-1 | Jimmy Watson..... | F. C. Null Drilling Co. | D | 527 | 4,2 | Km | 165 | 37 | 1964 | J | D,S | Casing: 4-in from surface to 24 ft; 2-in from 233 to 492 ft; 2-in perforated from 492 to 527 ft. See driller's log. |
| Z-2 | Charles F. Willen Co. | ....do..... | D | 700 | 6 | Km | 240 | ..... | ..... | J | D,S | |
| Z-3 | Mrs. L. Bouchell... | ..... | D | ..... | 4 | ..... | 120 | Flowing | 5-13-65 | N | D,S | Flow 13.5 gpm on 5-13-65. |
| Z-4 | --Willis..... | R. C. Johnston.... | D | 2,602 | 12, 8 | ..... | 120 | ..... | ..... | .... | ... | Oil test. Electric log in files of U.S. Geol. Survey. |
| Z-5 | A. B. Hitt..... | Barney Kelley.... | D | 350 | 4 | Ke | 143 | ..... | ..... | J | D | Casing: 4-in from surface to 18 ft. |
| Z-6 | Mrs. C. Pearson.... | ..... | D | 550 | 10 | Km | 130 | ..... | ..... | Cn | D | |
| Z-7 | J. J. Bethany..... | ..... | D | 600 | ... | Km | 100 | Flowing | 6- 4-65 | N | S | Flow: 1.7 gpm on 10-18-40; 1.4 gpm on 6-4-65. |
| Z-8 | Harold Smart..... | ..... | D | 1,030 | 6 | Kg | 132 | Flowing | 6- 4-65 | N | S | Flow 7 gpm on 6-4-65. |
| *Z-9 | Billy Lavender..... | F. C. Null Drilling Co. | D | 644 | 5 | Km | 110 | + 20 | 7- 5-54 | N | S | Flow: Estimated 30 gpm on 7-5-54; 8 gpm on 5-27-65. See driller's log. |
| Z-10 | Zion Church..... | ..... | D | ..... | 4 | ..... | 232 | ..... | ..... | C | P | |
| Z-11 | Jonas Smothers.... | E. B. Norwood.... | D | 698 | 4 | Km | 165 | 25 | 11- -56 | J | D,S | |
| Z-12 | Mrs. W. D. Simms... | ..... | D | 700 | 1¾ | Km | 142 | 3 | 1964 | N | N | |
| AA-1 | Dollarhide Hunting Club. | ..... | D | 250 | 4 | Km | 93 | + 22.9<br>+ 20.4 | 9-20-55<br>6-23-65 | N | D | Casing: 4-in from surface to 4 ft; none below. Flow: 21.4 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | gpm with 16.5 ft of drawdown on 9-20-55; 15 gpm with 14 ft of drawdown on 6-23-65. |
| AA-2 | ....do..... | ..... | D | 163.1 | 4 | Ke | 97 | + 21.7 | 9-20-55 | N | D | Casing: 4-in from surface to 4 ft; none below. Flow: 3.5 gpm with 15.1 ft of drawdown on 9-20-55; 2.8 gpm on 6-23-65. |
| AA-3 | ....do..... | Causey Drilling Co. | D | 400 | 4 | Km | 128 | ..... | ..... | J | D | |
| AA-4 | ....do..... | ..... | D | 430 | 4 | Km | 131 | + 1.6 | 9-20-55 | N | N | Well abandoned in 1961. |
| AA-5 | ....do..... | ..... | D | 440 | 4 | Km | 132 | + 1.0 | 9-20-55 | N | N | Well destroyed in 1961. |
| AA-6 | Bradley Brown ..... | ..... | D | 450 | 4 | Km | 138 | + 1.0 | 9-22-55 | N | N | Flow 0.5 gpm on 9-22-55. |
| AA-7 | F. J. Inge ..... | Smith Drilling Co.. | D | 880 | ... | ..... | 185 | ..... | ..... | J | S | Oil test converted to water well. See sample log. |
| *AA-8 | Albert Gray..... | F. C. Null Drilling Co. | D | 290 | 4 | Ke | 150 | 30 | 1957 | J | D | Casing: 4-in from surface to 30 ft; none below. |
| AA-9 | ....do..... | ....do..... | D | 706 | 3 | Kg | 150 | 15.7 | 2-16-55 | J | S | Casing: 3-in from surface to 685 ft; 3-in perforated from 685 to 706 ft. Electric log in files of U.S. Geol. Survey. |
| AA-10 | Dollarhide Hunting Club. | Causey Drilling Co. | D | 440 | 5 | Km | 90 | Flowing | 9-21-55 | N | S | Casing: 5-in from surface to 42 ft; none below. Flow: reported 200 gpm on 11-15-50; 100 gpm on 9-21-55. See driller's log. |
| AA-11 | ....do..... | ....do..... | D | 340 | 4 | Km | 93 | Flowing | 11-19-50 | N | S | Casing: 4-in from surface to 40 ft; none below. Reported flow 30 gpm on 11-19-50. See driller's log. |
| AA-12 | ....do..... | ..... | D | 191.0 | 5 | Ke | 89 | Flowing | 9-21-55 | N | S | Flow 20 gpm on 9-21-55. |
| AA-13 | Albert Gray..... | ..... | D | 400 | 3 | Km | 103 | Flowing | 6-23-65 | N | S | Estimated flow less than 1 gpm on 6-23-65. |
| AA-14 | ....do..... | ..... | D | 400 | 3 | Km | 120 | Flowing | 6-23-65 | N | S | Do. |
| AA-15 | ....do..... | ..... | D | 410 | 4 | Km | 120 | Flowing | 6-23-65 | N | S | Estimated flow 1 gpm on 6-23-65. |
| AA-16 | ....do..... | West Alabama Lime Co. | D | 420 | 4 | Km | 104 | Flowing | 6-23-65 | N | S | Estimated flow 15 gpm on 6-23-65. |
| AA-17 | Watson Jones ..... | F. C. Null Drilling Co. | D | 608 | 4 | Km | 265 | 130 | 11-22-40 | N | N | |
| AA-18 | W. P. Breen ..... | ..... | D | ..... | 4 | ..... | 125 | Flowing | 6- 8-65 | J | D,S | Flow 1.8 gpm on 6-8-65. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AA-19 | ..... | ..... | D | ..... | 4 | ..... | 105 | Flowing | 9- 8-64 | N | N | Flow 0.5 gpm on 9-8-64. |
| AA-20 | Van Ethridge..... | ..... | D | ..... | 4 | ..... | 103 | + 16.0 | 9- 8-64 | N | S | Flow 8 gpm with 13 ft of drawdown on 9-8-64. |
| AA-21 | Watson Jones ..... | West Alabama Lime Co. | D | 800 | 6 | Km | 265 | ..... | ..... | S | D | |
| AA-22 | L. K. Paul ..... | Blackbelt Drilling Co. | D | 490 | 4,2 | Ke | 243 | 125 | 10- 2-52 | C | S | Casing: 4-in from surface to 42 ft; 2-in from 395 to 500 ft. See driller's log. |
| AA-23 | Andrew Parker ..... | ....do..... | D | 570 | 4,2 | Km | 120 | ..... | ..... | J | D,S | Casing: 4-in from surface to 12 ft; 2-in from 308 to 570 ft. See driller's log. |
| AA-24 | V. Jennings ..... | ..... | D | ..... | 3 | ..... | 110 | Flowing | 5-10-65 | N | S | Flow: 0.7 gpm on 10-19-40; estimated less than 1 gpm on 5-10-65. |
| AA-25 | H. S. Nelson..... | ..... | D | 800 | ... | Km | 250 | ..... | ..... | J | D,S | |
| AA-26 | Joe Simpson ..... | Blackbelt Drilling Co. | D | 790 | 4,2 | Km | 245 | 116.5 | 6- 4-65 | N | N | Casing: 4-in from surface to 174 ft; 2-in from 390 to 790 ft. See driller's log. |
| AA-27 | J. E. Trimble ..... | F. C. Null Drilling Co. | D | 690 | 6,2 | Km | 107 | + 21.5 | 5-14-65 | N | S | Flow regulated by float in stock tank. |
| AA-28 | Sterling Parker..... | ....do..... | D | 800 | 4 | Km | 230 | 125 | ..... | C | D,S | |
| AA-29 | W. J. Townsend .... | ..... | D | 400 | 4 | Ke | 110 | Flowing | 9- 8-64 | J | D,S | Flow 4 gpm on 9-8-64. |
| AA-30 | Sterling Parker..... | F. C. Null Drilling Co. | D | 600 | 1 | Km | 107 | + 15.0 | 9- 8-64 | N | S | Flow 9 gpm with 11 ft of drawdown on 9-8-64. |
| AA-31 | Van Ethridge ..... | ..... | D | ..... | 1 | ..... | 111 | Flowing | 9- 8-64 | J | D,S | Estimated flow less than 1 gpm on 9-8-64. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AA-32 | ....do..... | ..... | D | ..... | 3 | ..... | 108 | Flowing | 9- 8-64 | N | S | Flow 2 gpm on 9-8-64. |
| BB-1 | Causter Bros..... | West Alabama Lime Co. | D | 280 | 4,2 | Km | 95 | Flowing | ..... | .... | ... | Casing: 4-in from surface to 42 ft; 2-in from 28 to 280 ft. See driller's log. |
| BB-2 | Mrs. Alice Caldwell. | ..... | D | ..... | 2 | ..... | 103 | + 9.0 | 9- 8-64 | .... | D,S | Flow 20 gpm with 6 ft of drawdown on 9-8-64. |
| BB-3 | ..... | ..... | D | 330 | 3 | Km | 102 | Flowing | 9- 8-64 | N | D,S | Estimated flow 2 gpm on 9-8-64. |
| BB-4 | Abraham Wallace Estate. | ..... | D | ..... | 3 | ..... | 102 | Flowing | 9- 8-64 | N | D,S | Flow 4 gpm on 9-8-64. |
| BB-5 | Van Ethridge..... | ..... | D | ..... | 1½ | ..... | 111 | Flowing | 9- 8-64 | C | D,S | Estimated flow 1 gpm on 9-8-64. |
| BB-6 | O. T. Powers ..... | Blackbelt Drilling Co. | D | 500 | 4,2 | Km | 106 | Flowing | 8-31-64 | J | D,S | Casing: 4-in from surface to 30 ft; 2-in from 250 to 500 ft. Flow: reported 10 gpm on 9-3-57; estimated 2 gpm on 8-31-64. See driller's log. |
| BB-7 | Altman Estate..... | ..... | D | ..... | 6 | ..... | 112 | Flowing | 8-31-64 | N | D,S | Flow 13 gpm on 8-31-64. |
| BB-8 | ....do..... | ..... | D | ..... | 6 | ..... | 109 | Flowing | 8-31-64 | N | D,S | Flow 25 gpm on 8-31-64. |
| BB-9 | ....do..... | ..... | D | ..... | 6 | ..... | 108 | Flowing | 8-31-64 | N | D,S | Flow 33 gpm on 8-31-64. |
| BB-10 | ....do..... | ..... | D | ..... | 3 | ..... | 99 | Flowing | 8-31-64 | N | D,S | Estimated flow 25 gpm on 8-31-64. |
| CC-1 | Alco Land and Timber Co. | ..... | D | ..... | 3 | ..... | 100 | + 6.0 | 8-31-64 | N | N | Flow 1.2 gpm with 3 ft of drawdown on 8-31-64. |
| CC-2 | Henry Harrison ..... | ..... | D | 900 | ... | Kg | 110 | + 21.0 | 8-31-64 | N | S | Flow 5 gpm with 19 ft of drawdown on 8-31-64. |
| CC-3 | A. R. Taylor..... | ..... | D | ..... | 5 | ..... | 100 | Flowing | 8-31-64 | Cn | D | Flow 2 gpm on 8-31-64. |
| CC-4 | ....do..... | ..... | D | 700 | 4 | Km | 145 | 19.5 | 8-31-64 | J | D,S | |
| CC-5 | Sid Burton..... | Blackbelt Drilling Co. | D | 570 | 4,2 | Km | 110 | Flowing | 7-23-64 | J | D | Casing: 4-in from surface to 45 ft; 2-in from 370 to 507 ft; 2-in perforated from 507 to 570 ft. Flow: reported 20 gpm on 11-21-57; estimated 8 gpm on 7-23-64. See driller's log. |
| CC-6 | E. G. Maxie ..... | F. C. Null Drilling Co. | D | 550 | 4 | Km | 102 | + 23.8 | 3-25-54 | C | D,S | Flow: 55 gpm with 20 ft of drawdown on 3-25-54; 33 gpm on 7-22-64. |
| CC-7 | ....do..... | ..... | D | 500 | 4 | Km | 98 | + 10 | 3-25-54 | J | D,S | Flow: estimated 25 gpm on 3-25-54; 8 gpm on 7-22-64. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CC-8 | Alabama Power Co.. | F. C. Null Drilling Co. | D | 710.6 | 6,4 | Km | 102 | + 22.8 | 3-27-63 | Cn | I | Casing: 6-in from surface to 33 ft; 4-in from 270 to 646 ft; 4-in perforated from 646 to 710 ft. Flow: 195 gpm on 2-17-63; 175 gpm with 20.8 ft of drawdown on 3-27-63. |
| CC-9 | ....do..... | ....do..... | D | 600 | 4 | Km | 97 | + 27.6 | 3-30-54 | N | S | Flow: 30 gpm on 3-30-54; 19 gpm on 7-22-64. |
| CC-10 | Cole Plantation .... | ..... | D | ..... | ... | ..... | 90 | + 13.0 | 3-30-54 | N | D,S | Flow: 4 gpm on 3-30-54; 2.8 gpm on 8-10-64. |
| DD-1 | J. B. Burage ..... | Blackbelt Drilling Co. | D | 510 | 4,2 | Km | 150 | 26 | 3-29-64 | J | D,S | Casing: 4-in from surface to 63 ft; 2-in from 279 to 510 ft. See driller's log. |
| DD-2 | J. T. Tate ..... | F. C. Null Drilling Co. | D | 560 | 4,3 | Km | 135 | 10 | 1950 | J | D | |
| DD-3 | Bud Legear ..... | ....do..... | D | 700 | 4,2 | Km | 155 | 7<br>19 | 8- 1-46<br>5-10-65 | J | D,S | Casing: 4-in from surface to 37 ft; 2-in from 300 to 660 ft; 2-in perforated from 660 to 700 ft. |
| DD-4 | J. T. Tate ..... | ....do..... | D | 567 | 4,3 | Km | 110 | + 20.2 | 5-14-65 | N | S | Flow regulated by float in stock tank. |
| DD-5 | Armistead Selden... | ..... | D | 600 | 4 | Km | 104 | Flowing | 5-14-65 | N | D,S | Flow 7 gpm on 5-14-65. |
| DD-6 | J. T. Tate ..... | F. C. Null Drilling Co. | D | 560 | 4.3 | Km | 142 | 19 | 1950 | J | S | |
| DD-7 | Jerry Campbell..... | Blackbelt Drilling Co. | D | 450 | 6,2 | Ke | 140 | 25<br>35 | 2- 6-63<br>5-10-65 | J | D,S | Casing: 6-in from surface to 28 ft; 2-in from 240 to 450 ft. See driller's log. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DD-8 | ....do..... | ..... | Dv | 21 | 1½ | Qt | 140 | 15 | 5-10-65 | J | D | |
| DD-9 | Greene County Schools. | Blackbelt Drilling Co. | D | 695 | 4,2 | Km | 142 | 15.2 | 8-26-64 | J | P | Casing: 4-in from surface to 202 ft; 2-in from 202 to 586 ft; 2-in perforated from 586 to 670 ft; 2-in from 670 to 680 ft. See driller's log. |
| DD-10 | T. A. Walter ..... | F. C. Null Drilling Co. | D | 750 | 6 | Km | 143 | ..... | ..... | J | D | |
| DD-11 | Jim Bird ..... | Blackbelt Drilling Co. | D | 1,010 | 4,2 | Kg | 138 | Flowing | 8-26-64 | N | S | Casing: 4-in from surface to 40 ft; no record below. Flow 1 gpm on 8-26-64. See driller's log. |
| DD-12 | W. H. Dixon ..... | ....do..... | D | 930 | 4,2 | Kg | 135 | Flowing | 7-23-64 | J | D,S | Casing: 4-in from surface to 42 ft; 2-in from 230 to 830 ft; 2-in perforated from 830 to 930 ft. Flow: reported 20 gpm on 11-5-56; 18 gpm on 7-23-64. See driller's log. |
| DD-13 | G. F. Putman ..... | F. C. Null Drilling Co. | D | 560 | 4,2 | Km | 141 | 17 | 1963 | J | D | |
| DD-14 | Jim Bird ..... | ..... | D | 500 | 4 | Km | 90 | + 20 | 3-31-54 | N | N | Flow 48 gpm on 8-26-64. |
| DD-15 | ....do..... | F. C. Null Drilling Co. | D | 700 | 5, 2½ | Km | 130 | + 7.0 | 3-31-54 | Cn | D,S | Flow: 30 gpm on 3-31-54; 5.6 gpm on 8-10-64. |
| DD-16 | Andrew Wright ..... | ....do..... | D | 565 | 4, 2½ | Km | 100 | + 60 | 1944 | C | D,S | Flow: 40 gpm on 3-30-53; 11 gpm on 7-23-64. |
| DD-17 | Centrala Farmers Co-op. | ....do..... | D | 500 | 6,4 | Km | 103 | Flowing | 7-23-64 | Cn | D | Estimated flow 4 gpm on 7-23-64. |
| *DD-18 | ....do..... | ....do..... | D | 740 | 6,4 | Km | 87 | Flowing | 5-10-65 | Cn | I | Flow 200 gpm on 7-23-65. |
| DD-19 | --Green..... | ....do..... | D | 600 | 5 | Km | 102 | + 12.4 | 3-31-54 | C | D,S | Flow: 10 gpm with 9.5 ft of drawdown on 3-31-54; 4 gpm on 7-23-64. |
| DD-20 | Sam Nielson ..... | ....do..... | D | 546.0 | 4 | Km | 102 | + 19.2<br>+ 14.0 | 10-19-40<br>3-31-54 | N | D,S | Flow: 8 gpm on 10-19-40; 5 gpm on 3-31-54; 2 gpm on 7-23-64. |
| DD-21 | J. V. Singleton..... | ....do..... | D | 560 | 5 | Km | 90 | Flowing | 7-23-64 | J | D | Flow 9.5 gpm on 7-23-64. |
| DD-22 | Kato Logan..... | ....do..... | D | 567 | 4 | Km | 95 | Flowing | 7-23-64 | C | D,S | Casing: 4-in from surface to 20 ft; no record below. Flow: 12 gpm on 3-31-54; 7 gpm on 7-23-64. See driller's log. |
| DD-23 | Cole Plantation .... | ..... | D | 550 | 2 | Km | 89 | + 10 | 3-31-54 | N | D,S | Flow: 2 gpm on 3-31-54; estimated less than 1 gpm on 7-23-64; no flow on 5-10-65. |

Table 1.—*Records of selected wells in Greene County*—Continued

| Well | Owner | Driller | Type | Depth of well (feet) | Diameter of well (inches) | Water-bearing unit | Altitude of land surface (feet) | Water level: Above (+) or below land surface (feet) | Water level: Date of measurement | Method of lift | Use of water | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EE-1 | S. B. Mason ..... | F. C. Null Drilling Co. | D | 800 | 4 | Km | 100 | Flowing | 5-11-65 | N | S | Casing: 4-in from surface to 50 ft; none below. |
| EE-2 | W. D. Johnson, Jr... | ..... | D | 700 | 6 | Km | 143 | 24.4 | 5-13-65 | J | D,S | |
| EE-3 | S. B. Mason ..... | F. C. Null Drilling Co. | D | 800 | 6 | Km | 120 | ..... | ..... | N | N | Casing: 6-in from surface to 50 ft; none below. |
| EE-4 | ....do..... | ....do..... | D | 980 | ... | Kg | 120 | ..... | ..... | J | D | Casing: 4-in from surface to 50 ft; none below. |
| EE-5 | ....do..... | ....do..... | D | 1,300 | 2 | Kg, Kck(?) | 120 | Flowing | 5-11-65 | N | S | Casing: 2-in from surface to 50 ft; none below. Flow 19.5 gpm on 5-11-65. |
| EE-6 | Greene County Schools. | ..... | D | 400 | 5 | Ke(?) | 105 | + 8.5 | 5-13-65 | N | P | Flow 12 gpm with 5.5 ft of drawdown on 5-13-65. |
| FF-1 | Nabb Drennen..... | Ace Drilling Co... | D | 889.0 | 6 | Km | 100 | Flowing | 5-11-65 | N | S | Casing: 6-in from surface to 22 ft; none below. Reported flow 11 gpm on 9-17-57. See driller's log. Electric log in files of U.S. Geol. Survey. |
| FF-2 | ....do..... | Causey Drilling Co. | D | 900 | 4 | Km | 87 | Flowing | 5-11-65 | N | S | Flow: estimated 20 gpm on 5-20-53; 9 gpm on 5-11-65. |
| FF-3 | J. J. Bethany ..... | ..... | D | 830 | 4 | Km | 110 | Flowing | 5-20-53 | N | S | No flow on 5-11-65. |
| FF-4 | Nabb Drennen..... | F. C. Null Drilling Co. | D | 825 | 4 | Km | 118 | ..... | ..... | J | D,S | |
| GG-1 | Miller, Webb, and Clinkscale. | Blackbelt Drilling Co. | D | 840 | 4,2 | Km | 80 | + 36 | 7-23-65 | N | S | Casing: 4-in from surface to 40 ft; 2-in from 336 to 756 ft; 2-in perforated from 756 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | to 840 ft. Flow 60 gpm on 7-23-65. See driller's log. |
| GG-2 | St. Louis-San Fransisco Railway. | F. C. Null Drilling Co. | D | 525 | 4 | Ke | 82 | + 18 | 3-30-54 | N | N | Estimated flow less than 1 gpm on 7-22-65. |
| HH-1 | Douglas Kallum .... | ....do..... | D | 850 | 3 | Km | 82 | Flowing | 8-26-64 | N | D | Flow 60 gpm on 8-26-64. |
| HH-2 | J. P. McLemore .... | ..... | D | 600 | 5 | Ke | 82 | + 24.0 | 8-26-64 | J | D | Well shut in, no flow. |
| HH-3 | Taylor & Bryant.... | F. C. Null Drilling Co. | D | 700 | 4,2 | Km | 78 | + 32.2 | 3-25-54 | N | S | Flow 40 gpm with 29 ft of drawdown on 3-25-54. |

Table 2.—*Partial chemical analyses of water from wells in Greene County*

Results in parts per million except pH.
Well: Numbers correspond to those on plates 1 and 2 and tables 1, 3, and 4. Asterisk indicates comprehensive chemical analysis available in table 3.
Depth of well: Reported depths are given in feet; measured depths are given in feet and tenths.
Water-bearing unit: Kck, Coker Formation; Kg, Gordo Formation; Km, McShan Formation; Ke, Eutaw Formation; Qt, terrace deposits; Qal, alluvium.

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Temperature (°F) | Iron (Fe) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Chloride (Cl) | Hardness as $CaCO_3$ | | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Calcium, magnesium | Noncarbonate | |
| A-1 | 8-10-65 | 600 | Kg, Kck | .... | 8.3 | 49 | 0 | 4.0 | 31 | 0 | 6.6 |
| A-2 | 8-10-65 | 280 | Kg | .... | 1.7 | 11 | 0 | 4.0 | 9 | 0 | 6.8 |
| *D-1 | 8-10-65 | 253 | Km | 65 | .05 | 134 | 0 | 15 | 18 | 0 | 7.6 |
| D-2 | 8- 4-65 | 250 | Km | 67 | .07 | 135 | 0 | 8.0 | 10 | 0 | 7.7 |
| D-3 | 8- 4-65 | 280 | Km | 66 | .04 | 118 | 0 | 8.6 | 22 | 0 | 7.7 |
| D-4 | 7-30-65 | 450 | Km | .... | .09 | 147 | 0 | 17 | 16 | 0 | 7.6 |
| E-1 | 8-10-65 | 340 | Kg | .... | .27 | 8 | 0 | 6.2 | 22 | 15 | 6.7 |
| E-2 | 10- 3-40 | 460 | Kg | 65 | ..... | 130 | ..... | 5.0 | 39 | 0 | ... |
| E-2 | 8-16-65 | 460 | Kg | 65 | .36 | 131 | 0 | 6.0 | 55 | 0 | 7.5 |
| E-3 | 8-10-65 | 280 | Km | 66 | .11 | 140 | 0 | 9.2 | 35 | 0 | 7.5 |
| F-2 | 8-16-65 | 700 | Kck | .... | 24 | 40 | 0 | 5.0 | 34 | 1 | 6.5 |
| F-3 | 5-14-57 | 268 | Km | .... | 9.0 | ..... | ..... | 11 | 14 | .... | 6.4 |
| F-3 | 8-10-65 | 268 | Km | .... | 4.0 | 18 | 0 | 6.0 | 24 | 10 | 6.3 |
| G-1 | 12-10-40 | 497 | Kck | 68 | ..... | 96 | ..... | 2.0 | 60 | 0 | ... |
| G-1 | 8-16-65 | 497 | Kck | 67 | .35 | 97 | 0 | 4.8 | 68 | 0 | 8.0 |
| H-1 | 2-23-54 | 420 | Kck | 67 | 3.5 | ..... | ..... | 8.6 | 68 | .... | 7.4 |
| H-1 | 9- 5-56 | 420 | Kck | 68 | .30 | ..... | ..... | 24 | 70 | .... | 7.1 |
| H-1 | 8-10-65 | 420 | Kck | 67 | 1.5 | 96 | 0 | 41 | 95 | 16 | 7.4 |
| H-2 | 8-10-65 | 420 | Kck | 67 | .26 | 108 | 0 | 10 | 80 | 0 | 7.4 |
| I-1 | 8-10-65 | 300 | Kck | 64 | .42 | 104 | 0 | 142 | 160 | 75 | 7.3 |
| J-1 | 8-10-65 | 400 | Kck | 67 | .15 | 102 | 0 | 5.8 | 68 | 0 | 7.2 |
| J-2 | 8-10-65 | 220 | Kg | .... | 3.5 | 83 | 0 | 5.6 | 62 | 0 | 7.0 |
| J-3 | 8-10-65 | 570 | Kck | 67 | .17 | 113 | 0 | 165 | 175 | 83 | 7.7 |
| J-4 | 8- 5-65 | 560 | Kck | 67 | 1.5 | 94 | 0 | 6.8 | 64 | 0 | 7.4 |
| J-6 | 8-16-65 | 73 | Km | .... | 11 | 76 | 0 | 3.8 | 62 | 0 | 7.0 |
| J-7 | 8- 5-65 | 200 | Kg | 65 | .27 | 114 | 0 | 39 | 62 | 0 | 7.5 |
| K-1 | 8- 4-65 | 36 | Ke | .... | .05 | 10 | 0 | 10 | 35 | 27 | 6.3 |
| K-4 | 8- 4-65 | 370 | Kg | .... | 4.9 | 116 | 0 | 5.6 | 98 | 3 | 6.5 |
| K-6 | 8- 5-65 | 22 | Qal | .... | .36 | 10 | 0 | 6.6 | 18 | 10 | 6.4 |
| K-7 | 8-16-65 | 350 | Kg | .... | 7.3 | 79 | 0 | 7.4 | 70 | 5 | 6.3 |
| L-3 | 8- 4-65 | 420 | Km | .... | .03 | 223 | 0 | 51 | 294 | 111 | 7.3 |
| L-4 | 8- 4-65 | 450 | Kg | .... | 1.2 | 88 | 0 | 9.4 | 78 | 6 | 6.9 |
| L-5 | 9- -65 | 360 | Km | .... | ..... | 90 | 0 | 4.0 | 64 | 0 | 6.6 |
| L-5 | 7-19-65 | 360 | Km | .... | .73 | 140 | 0 | 5.6 | 98 | 0 | 7.6 |
| M-2 | 7-30-65 | 500 | Km | .... | 2.7 | 218 | 0 | 6.8 | 179 | 0 | 7.6 |
| M-3 | 8- 4-65 | 448 | Km | .... | .05 | 102 | 0 | 12 | 20 | 0 | 7.1 |
| M-8 | 7-30-65 | 200 | Km | .... | .21 | 30 | 0 | 4.4 | 31 | 6 | 6.1 |
| M-9 | 7-30-65 | 500 | Km | .... | 4.4 | 93 | 0 | 5.6 | 75 | 0 | 7.3 |
| M-10 | 7-29-65 | 375 | Km | .... | .07 | 150 | 0 | 31 | 15 | 0 | 7.5 |
| M-13 | 8- 4-65 | 410 | Km | 68 | .06 | 230 | 0 | 320 | 28 | 0 | 8.2 |
| M-14 | 7-26-65 | 400 | Km | 71 | .15 | 144 | 0 | 140 | 38 | 0 | 8.2 |
| M-15 | 8- 4-65 | 723 | Kg | 71 | .11 | 153 | 0 | 160 | 22 | 0 | 7.8 |
| M-16 | 7-29-65 | 435 | Km | .... | .03 | 237 | 0 | 240 | 32 | 0 | 7.6 |
| M-17 | 7-23-65 | 300 | Km | .... | .01 | 219 | 12 | 11 | 15 | 0 | 8.6 |
| N-1 | 7-30-65 | ..... | ..... | 67 | .05 | 167 | 0 | 31 | 9 | 0 | 8.0 |
| P-1 | 7-23-65 | 500 | Km | .... | .13 | 243 | 0 | 98 | 30 | 0 | 7.5 |
| P-2 | 7-23-65 | 350 | Km | .... | .04 | 284 | 16 | 43 | 15 | 0 | 8.6 |
| P-4 | 7-19-65 | 777 | Kg | 71 | .10 | 148 | 0 | 160 | 30 | 0 | 7.7 |
| P-5 | 11-29-40 | 500 | Km | 68 | 1.1 | 224 | ..... | 241 | 14 | 0 | ... |
| P-6 | 7-19-65 | 520 | Km | 69 | .14 | 228 | 8 | 260 | 18 | 0 | 8.3 |

Table 2.—*Partial chemical analyses of water from wells in Greene County*—Continued

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Temperature (°F) | Iron (Fe) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Chloride (Cl) | Hardness as $CaCO_3$: Calcium, magnesium | Hardness as $CaCO_3$: Noncarbonate | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P-7 | 7-19-65 | 747 | Kg | 71 | 0.15 | 146 | 0 | 140 | 28 | 0 | 7.7 |
| P-8 | 7-23-65 | 280 | Ke | .... | .19 | 340 | 27 | 640 | 72 | 0 | 8.7 |
| P-9 | 7-19-65 | 580 | Km | .... | .12 | 290 | 0 | 320 | 35 | 0 | 8.2 |
| P-10 | 7-19-65 | 460 | Km | 68 | .03 | 298 | 0 | 360 | 18 | 0 | 8.2 |
| P-11 | 7-19-65 | ..... | ..... | 67 | .12 | 354 | 0 | 880 | 85 | 0 | 7.9 |
| P-12 | 7-19-65 | ..... | ..... | 73 | .05 | 298 | 0 | 380 | 22 | 0 | 8.1 |
| Q-1 | 7-29-65 | 300 | Km | .... | 4.9 | 71 | 0 | 7.4 | 68 | 10 | 7.4 |
| *Q-2 | 7-29-65 | 960 | Kck | 74 | .16 | 96 | 0 | 6.4 | 71 | 0 | 7.5 |
| Q-4 | 7-29-65 | 150 | Km | .... | .12 | 148 | 0 | 32 | 22 | 0 | 7.8 |
| Q-5 | 7-29-65 | 500 | Kg | .... | .24 | 188 | 0 | 110 | 40 | 0 | 8.1 |
| Q-6 | 7-29-65 | 550 | Kg | .... | 2.2 | 202 | 0 | 100 | 68 | 0 | 8.0 |
| *Q-7 | 7-23-65 | 240 | Ke | .... | .09 | 312 | 0 | 370 | 39 | 0 | 7.5 |
| Q-8 | 7-29-65 | 250 | Km | .... | .07 | 286 | 0 | 330 | 38 | 0 | 8.2 |
| R-1 | 8- 5-65 | 300 | Km | .... | .19 | 148 | 0 | 7.6 | 110 | 0 | 7.6 |
| *R-4 | 8- 5-65 | 466 | Kg | 70 | .47 | 109 | 0 | 21 | 38 | 0 | 7.5 |
| R-5 | 11-13-56 | 600 | Kg, Kck | .... | .10 | ..... | ..... | 32 | 46 | .... | 6.3 |
| R-5 | 7-15-65 | 600 | Kg, Kck | 70 | .07 | 114 | 0 | 45 | 52 | 0 | 7.9 |
| R-6 | 8- 5-65 | ..... | ..... | 65 | 4.1 | 162 | 0 | 8.4 | 52 | 0 | 8.1 |
| R-8 | 7-14-65 | 600 | Kg, Kck | .... | .11 | 122 | 6 | 60 | 10 | 0 | 8.4 |
| R-9 | 4-12-54 | 170 | Km | 68 | .35 | ..... | ..... | 297 | 32 | .... | 7.5 |
| R-9 | 7-14-65 | 170 | Km | .... | .07 | 272 | 0 | 280 | 28 | 0 | 8.2 |
| R-10 | 8- 5-65 | 524 | Kg | 70 | .05 | 138 | 0 | 50 | 14 | 0 | 7.6 |
| *R-12 | 6-24-65 | 441 | Km | .... | .08 | 200 | 8 | 220 | 22 | 0 | 8.5 |
| *R-13 | 12- 3-49 | 306 | Km | .... | .20 | ..... | ..... | 424 | 33 | .... | ... |
| *R-14 | 12- 3-49 | 389 | Km | .... | .25 | ..... | ..... | 219 | 23 | .... | ... |
| R-14 | 12-14-49 | [1]545 | Kg | .... | 1.0 | 285 | ..... | 341 | 24 | .... | 8.0 |
| *R-14 | 6-24-65 | 389 | Km | .... | .36 | 222 | 6 | 220 | 20 | 0 | 8.3 |
| R-15 | 7-15-65 | 750 | Kg | 72 | .52 | 314 | 0 | 940 | 128 | 0 | 8.1 |
| R-16 | 8- 5-65 | 100 | Km | 68 | 1.8 | 182 | 0 | 2,550 | 435 | 286 | 7.8 |
| S-1 | 8-16-65 | 360 | Kg | 68 | .05 | 113 | 0 | 56 | 62 | 0 | 7.1 |
| T-1 | 9-21-55 | 210 | Km | 66 | .10 | ..... | ..... | 146 | 28 | .... | 7.0 |
| T-1 | 6-23-65 | 210 | Km | .... | .03 | 352 | 0 | 220 | 20 | 0 | 8.2 |
| T-2 | 6-23-65 | ..... | ..... | 67 | .02 | 336 | 0 | 100 | 12 | 0 | 7.8 |
| U-1 | 7-14-65 | ..... | ..... | .... | .46 | 192 | 0 | 2,200 | 360 | 202 | 8.0 |
| U-2 | 7-14-65 | 357 | Km | 69 | .59 | 214 | 0 | 2,560 | 405 | 229 | 7.4 |
| U-3 | 10-21-55 | 517.0 | Km | .... | 1.0 | ..... | ..... | 1,090 | ..... | .... | ... |
| U-3 | 7-14-65 | 517.0 | Km | .... | .94 | 254 | 0 | 1,040 | 160 | 0 | 7.6 |
| U-4 | 4-14-54 | 400 | Km | 69 | .10 | ..... | ..... | 1,110 | 116 | .... | 7.7 |
| U-4 | 6- 8-65 | 400 | Km | .... | .50 | 368 | 0 | 1,080 | 96 | 0 | 7.8 |
| U-5 | 7-15-65 | 110 | Ke | .... | .09 | 180 | 0 | 25 | 40 | 0 | 7.8 |
| U-6 | 7-15-65 | 200 | Km | .... | .38 | 306 | 0 | 1,620 | 198 | 0 | 7.9 |
| U-7 | 7-14-65 | 250 | Km(?) | .... | 3.3 | 254 | 0 | 12 | 255 | 47 | 6.9 |
| U-8 | 7-14-65 | ..... | ..... | .... | .09 | 318 | 0 | 1,640 | 178 | 0 | 7.4 |
| U-9 | 7-14-65 | 461 | Ke, Km(?) | 67 | .35 | 196 | 0 | 12 | 80 | 0 | 7.8 |
| U-10 | 6- 3-49 | 470 | Km | .... | .60 | ..... | ..... | 1,900 | 210 | .... | 7.0 |
| *U-11 | 6- 8-65 | 788 | Kg | 73 | .71 | 208 | 0 | 2,000 | 300 | 129 | 7.6 |
| U-12 | 7-14-65 | 570 | Km | 73 | .65 | 244 | 0 | 2,120 | 288 | 88 | 8.0 |
| U-13 | 6- 8-65 | 127 | Ke | .... | .09 | 288 | 0 | 180 | 55 | 0 | 8.1 |
| U-14 | 11-27-50 | 370 | Km | .... | .20 | ..... | ..... | 698 | 65 | .... | ... |
| U-14 | 9-26-55 | 370 | Km | 66 | .10 | ..... | ..... | 498 | 54 | .... | 7.2 |
| U-14 | 6-23-65 | 370 | Km | 66 | .07 | 288 | 12 | 560 | 48 | 0 | 8.5 |
| V-1 | 7-19-65 | 500 | Km | .... | .36 | 330 | 6 | 380 | 60 | 0 | 8.3 |
| V-3 | 7-29-65 | 700 | Kg | .... | .33 | 308 | 0 | 260 | 30 | 0 | 7.9 |
| V-4 | 7-15-65 | 450 | Km | .... | .19 | 386 | 0 | 660 | 68 | 0 | 7.7 |
| V-5 | 7-29-65 | 480 | Km | .... | .07 | 12 | 0 | 440 | 32 | 22 | 7.0 |

Table 2.—*Partial chemical analyses of water from wells in Greene County*—Continued

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Temperature (°F) | Iron (Fe) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Chloride (Cl) | Hardness as $CaCO_3$ | | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Calcium, magnesium | Noncarbonate | |
| V-6 | 10- 4-40 | 300 | Ke | 68 | ..... | ..... | ..... | 682 | ..... | .... | ... |
| V-7 | 7-15-65 | 1,260 | Kck | 78 | 0.04 | 144 | 0 | 25 | 15 | 0 | 8.1 |
| *V-8 | 7-19-65 | 1,260 | Kck | 78 | .03 | 144 | 0 | 40 | 12 | 0 | 8.2 |
| V-9 | 7-26-65 | 450 | Km | 69 | .05 | 374 | 0 | 420 | 31 | 0 | 7.5 |
| *V-10 | 7-23-65 | 580 | Km | 70 | .05 | 380 | 0 | 470 | 35 | 0 | 7.5 |
| V-11 | 3-12-65 | 645 | Km | .... | .06 | 369 | 6 | 580 | 81 | 0 | 8.3 |
| V-12 | 7-15-65 | 650 | Km | .... | .13 | 400 | 0 | 640 | 38 | 0 | 7.9 |
| V-13 | 7-15-65 | 520 | Km | 70 | .07 | 390 | 12 | 580 | 35 | 0 | 8.3 |
| V-14 | 12-31-40 | 560 | Km | .... | ..... | 408 | ..... | 822 | 54 | 0 | ... |
| V-15 | 7-23-65 | 500 | Km | 69 | .08 | 382 | 22 | 600 | 40 | 0 | 8.5 |
| V-16 | 5-11-65 | 620 | Km | 71 | .12 | 377 | 20 | 610 | 42 | 0 | 8.6 |
| V-17 | 5-13-65 | 600 | Km | 70 | .10 | 424 | 0 | 600 | 45 | 0 | 8.0 |
| V-19 | 6- 4-65 | 750 | Km | .... | .45 | 270 | 0 | 930 | 100 | 0 | 7.9 |
| Y-1 | 7-23-65 | 700 | Km | .... | .09 | 406 | 0 | 840 | 68 | 0 | 8.2 |
| Y-2 | 5-13-65 | 550 | Km | .... | .92 | 270 | 0 | 1,550 | 138 | 0 | 7.8 |
| Y-3 | 5-13-65 | ..... | ..... | .... | .08 | 440 | 0 | 750 | 35 | 0 | 7.9 |
| Z-1 | 7-15-65 | 527 | Km | .... | .18 | 358 | 0 | 1,240 | 110 | 0 | 8.2 |
| Z-2 | 6- 4-65 | 700 | Km | .... | .13 | 432 | 0 | 700 | 60 | 0 | 8.0 |
| Z-3 | 5-13-65 | ..... | ..... | 70 | .09 | 436 | 0 | 830 | 55 | 0 | 8.0 |
| Z-5 | 5-13-65 | 350 | Ke | .... | .38 | 251 | 0 | 1,820 | 220 | 15 | 7.8 |
| Z-6 | 5-13-65 | 550 | Km | .... | .44 | 329 | 0 | 1,280 | 122 | 0 | 8.0 |
| Z-7 | 12- 8-40 | 600 | Km | 68 | ..... | 219 | ..... | 2,280 | 188 | 8 | ... |
| Z-7 | 6- 4-65 | 600 | Km | 69 | .50 | 216 | 0 | 2,260 | 290 | 113 | 7.5 |
| Z-8 | 6- 4-65 | 1,030 | Kg | 75 | 1.8 | 221 | 0 | 2,490 | 382 | 201 | 7.5 |
| *Z-9 | 5-27-65 | 644 | Km | 73 | .12 | 392 | 0 | 1,180 | 78 | 0 | 7.6 |
| Z-10 | 5-13-65 | ..... | ..... | .... | .38 | 244 | 0 | 1,600 | 250 | 50 | 7.5 |
| Z-11 | 6- 4-65 | 698 | Km | .... | .30 | 356 | 0 | 1,400 | 130 | 0 | 8.1 |
| AA-1 | 6- 3-49 | 250 | Km | .... | .20 | ..... | ..... | 75 | 30 | .... | 7.0 |
| AA-1 | 9-26-55 | 250 | Km | 66 | .10 | ..... | ..... | 71 | 18 | .... | 7.6 |
| AA-1 | 6-23-65 | 250 | Km | 66 | .04 | 346 | 16 | 80 | 8 | 0 | 8.6 |
| AA-2 | 6- 3-49 | 163.1 | Ke | .... | .80 | ..... | ..... | 86 | 25 | .... | 7.0 |
| AA-2 | 9-26-55 | 163.1 | Ke | 66 | .10 | ..... | ..... | 50 | 20 | .... | ... |
| AA-2 | 6-23-65 | 163.1 | Ke | 66 | .01 | 408 | 30 | 80 | 12 | 0 | 8.8 |
| AA-3 | 6-23-65 | 400 | Km | .... | .34 | 312 | 0 | 1,220 | 120 | 0 | 7.7 |
| AA-4 | 6- 3-49 | 430 | Km | .... | .20 | ..... | ..... | 1,130 | 140 | .... | 6.0 |
| AA-4 | 9-26-55 | 430 | Km | .... | .10 | ..... | ..... | 1,480 | 260 | .... | 6.8 |
| AA-5 | 6- 3-49 | 440 | Km | .... | .40 | ..... | ..... | 1,560 | 145 | .... | 7.0 |
| AA-6 | 6- 3-49 | 450 | Km | .... | .80 | ..... | ..... | 1,880 | 210 | .... | 7.0 |
| AA-6 | 9-22-55 | 450 | Km | 70 | .20 | ..... | ..... | 1,720 | 318 | .... | 7.0 |
| *AA-8 | 6- 8-65 | 290 | Ke | .... | .34 | 216 | 0 | 2,490 | 365 | 188 | 7.4 |
| AA-9 | 6- 8-65 | 706 | Kg | .... | .73 | 190 | 0 | 3,180 | 498 | 342 | 7.4 |
| AA-10 | 12- 5-50 | 440 | Km | .... | .00 | ..... | ..... | 52 | 15 | .... | ... |
| AA-10 | 9-26-55 | 440 | Km | 68 | .10 | ..... | ..... | 71 | 32 | .... | 7.0 |
| AA-11 | 11-27-50 | 340 | Km | .... | ..... | ..... | ..... | 178 | 40 | .... | ... |
| AA-12 | 9-26-55 | 191.0 | Ke | 68 | .10 | ..... | ..... | 118 | 38 | .... | 7.2 |
| AA-13 | 6-23-65 | 400 | Km | 68 | .04 | 468 | 31 | 340 | 18 | 0 | 8.8 |
| AA-14 | 6-23-65 | 400 | Km | 67 | .45 | 252 | 0 | 2,320 | 230 | 24 | 7.7 |
| AA-15 | 6-23-65 | 410 | Km | 67 | .07 | 510 | 24 | 600 | 50 | 0 | 8.6 |
| AA-16 | 6-23-65 | 420 | Km | 67 | .14 | 404 | 20 | 820 | 70 | 0 | 8.4 |
| AA-17 | 11-22-40 | 608 | Km | .... | ..... | 300 | ..... | 2,300 | 201 | 0 | ... |
| AA-17 | 3- 1-55 | 608 | Km | .... | .10 | ..... | ..... | 2,240 | 232 | .... | 7.3 |
| AA-18 | 6- 8-65 | ..... | ..... | 68 | .19 | 468 | 0 | 1,080 | 100 | 0 | 8.0 |
| AA-19 | 9- 8-64 | ..... | ..... | 70 | .01 | 385 | 31 | 18 | 15 | 0 | 8.9 |
| AA-20 | 9- 8-64 | ..... | ..... | 70 | .02 | 336 | 35 | 26 | 20 | 0 | 9.0 |
| AA-21 | 6- 4-65 | 800 | Km | .... | .48 | 236 | 0 | 1,720 | 288 | 94 | 7.4 |
| AA-22 | 5-14-65 | 490 | Ke | .... | 1.6 | 166 | 0 | 3,530 | 482 | 346 | 7.7 |
| AA-23 | 5-14-65 | 570 | Km | .... | .45 | 606 | 0 | 660 | 61 | 0 | 7.8 |
| AA-24 | 10-19-40 | ..... | ..... | 66 | ..... | 175 | ..... | 3,380 | 390 | .... | ... |
| AA-24 | 5-10-65 | ..... | ..... | 67 | .36 | 172 | 0 | 3,320 | 492 | 353 | 7.6 |
| AA-25 | 5-14-65 | 800 | Km | .... | .06 | 490 | 0 | 540 | 41 | 0 | 8.2 |

Table 2.—*Partial chemical analyses of water from wells in Greene County*—Continued

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Temperature (°F) | Iron (Fe) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Chloride (Cl) | Hardness as $CaCO_3$ Calcium, magnesium | Hardness as $CaCO_3$ Noncarbonate | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AA-27 | 5-14-65 | 690 | Km | .... | 0.76 | 298 | 0 | 2,380 | 275 | 31 | 7.7 |
| AA-28 | 9- 8-64 | 800 | Km | .... | .02 | 551 | 5 | 66 | 14 | 0 | 8.3 |
| AA-29 | 9- 8-64 | 400 | Ke | 70 | .02 | 463 | 26 | 42 | 25 | 0 | 8.7 |
| AA-30 | 9- 8-64 | 600 | Km | 71 | .02 | 412 | 22 | 84 | 15 | 0 | 8.6 |
| AA-32 | 9- 8-64 | ..... | ..... | 71 | .12 | 252 | 8 | 504 | 42 | 0 | 8.3 |
| BB-2 | 9- 8-64 | ..... | ..... | 69 | .03 | 228 | 33 | 32 | 25 | 0 | 9.1 |
| BB-3 | 9- 8-64 | 330 | Km | 69 | .02 | 380 | 39 | 16 | 19 | 0 | 8.9 |
| BB-4 | 9- 8-64 | ..... | ..... | 68 | .03 | ..... | ..... | 16 | 20 | 0 | 8.8 |
| BB-5 | 9- 8-64 | ..... | ..... | 68 | .02 | 352 | 31 | 18 | 28 | 0 | 9.0 |
| BB-6 | 8-31-64 | 500 | Km | 71 | .04 | 266 | 31 | 18 | 20 | 0 | 9.0 |
| BB-7 | 8-31-64 | ..... | ..... | 70 | .03 | 216 | 18 | 20 | 20 | 0 | 8.7 |
| BB-8 | 8-31-64 | ..... | ..... | 70 | .04 | 208 | 16 | 38 | 18 | 0 | 8.7 |
| BB-9 | 8-31-64 | ..... | ..... | 70 | .02 | 208 | 14 | 13 | 11 | 0 | 8.8 |
| BB-10 | 8-31-64 | ..... | ..... | .... | .02 | 206 | 12 | 9.0 | 10 | 0 | 8.7 |
| CC-1 | 8-31 64 | ..... | ..... | 67 | .03 | 404 | 57 | 8.0 | 25 | 0 | 9.0 |
| CC-2 | 8-31-64 | 900 | Kg | 73 | .08 | 176 | 12 | 146 | 32 | 0 | 8.8 |
| CC-3 | 8-31-64 | ..... | ..... | 68 | .05 | 516 | 16 | 26 | 22 | 0 | 8.5 |
| CC-4 | 8-31-64 | 700 | Km | .... | .11 | 270 | 18 | 32 | 8 | 0 | 8.8 |
| CC-5 | 7-23-64 | 570 | Km | 70 | .01 | 282 | 33 | 6.0 | 22 | 0 | 9.0 |
| CC-6 | 3-25-54 | 550 | Km | 71 | .10 | ..... | ..... | .0 | 14 | .... | 8.1 |
| CC-6 | 7-22-64 | 550 | Km | 71 | .04 | 232 | 55 | 9.0 | 25 | 0 | 9.3 |
| CC-7 | 3-25-54 | 500 | Km | 68 | .10 | ..... | ..... | 5.2 | 18 | .... | 7.5 |
| CC-7 | 7-22-64 | 500 | Km | 71 | .03 | 424 | 63 | 14 | 15 | 0 | 9.2 |
| CC-8 | 7-22-64 | 710.6 | Km | 72 | .09 | 174 | 16 | 5.0 | 12 | 0 | 9.0 |
| CC-9 | 7-22-64 | 600 | Km | 70 | .00 | 276 | 100 | 8.0 | 18 | 0 | 9.6 |
| CC-10 | 3-30-54 | ..... | ..... | 70 | .10 | ..... | ..... | 74 | 18 | .... | 8.0 |
| DD-1 | 5-14-65 | 510 | Km | .... | .11 | 606 | 16 | 90 | 20 | 0 | 8.4 |
| DD-2 | 5-14-65 | 560 | Km | .... | .17 | 584 | 14 | 120 | 29 | 0 | 8.4 |
| DD-3 | 5-10-65 | 700 | Km | .... | .19 | 334 | 0 | 1,130 | 126 | 0 | 7.6 |
| DD-4 | 5-14-65 | 567 | Km | .... | .11 | 492 | 6 | 490 | 34 | 0 | 8.3 |
| DD-5 | 5-14-65 | 600 | Km | 70 | .09 | 600 | 16 | 600 | 48 | 0 | 8.4 |
| DD-6 | 5-14-65 | 560 | Km | .... | .08 | 656 | 0 | 160 | 22 | 0 | 8.2 |
| DD-7 | 5-10-65 | 450 | Ke | .... | .12 | 410 | 0 | 1,020 | 102 | 0 | 7.9 |
| DD-8 | 5-10-65 | 21 | Qt | .... | .49 | 74 | 0 | 478 | 60 | 0 | 6.7 |
| DD-9 | 9- -63 | 695 | Km | .... | .11 | 275 | 0 | 1,220 | 118 | 0 | 8.0 |
| DD-9 | 8-26-64 | 695 | Km | .... | .41 | 276 | 0 | 1,350 | 140 | 0 | 8.1 |
| DD-10 | 8-26-64 | 750 | Km | .... | .03 | 450 | 26 | 40 | 20 | 0 | 8.6 |
| DD-11 | 8-26-64 | 1,010 | Kg | 70 | .45 | 209 | 0 | 810 | 128 | 0 | 8.2 |
| DD-12 | 7-23-64 | 930 | Kg | 75 | .11 | 187 | 14 | 507 | 50 | 0 | 8.6 |
| DD-13 | 7-23-64 | 560 | Km | .... | .08 | 502 | 14 | 14 | 20 | 0 | 8.4 |
| DD-14 | 3-31-54 | 500 | Km | 72 | .10 | ..... | ..... | 108 | 20 | .... | 8.0 |
| DD-14 | 8-26-64 | 500 | Km | 72 | .02 | 324 | 47 | 145 | 30 | 0 | 9.1 |
| DD-15 | 3-31-54 | 700 | Km | 72 | .10 | ..... | ..... | 94 | 10 | .... | 7.1 |
| DD-15 | 3-10-59 | 700 | Km | .... | .30 | ..... | ..... | 53 | 10 | .... | 7.0 |
| DD-15 | 8-26-64 | 700 | Km | 72 | .03 | 262 | 18 | 127 | 18 | 0 | 8.8 |
| DD-16 | 3-30-54 | 565 | Km | 70 | ..... | ..... | ..... | 8.6 | 8 | .... | 7.9 |
| DD-16 | 7-23-64 | 565 | Km | 70 | .03 | 396 | 61 | 22 | 18 | 0 | 9.1 |
| DD-17 | 7-23-64 | 500 | Km | 69 | .03 | 544 | 31 | 35 | 26 | 0 | 8.7 |
| *DD-18 | 5-10-65 | 740 | Km | 72 | .04 | 300 | 0 | 80 | 8 | 0 | 8.2 |
| DD-19 | 3-31-54 | 600 | Km | 70 | .10 | ..... | ..... | 8.6 | 12 | .... | 8.1 |
| DD-19 | 7-23-64 | 600 | Km | 70 | .03 | 440 | 63 | 18 | 28 | 0 | 9.1 |
| DD-20 | 3-31-54 | 546.0 | Km | 70 | .30 | ..... | ..... | 26 | 18 | .... | 7.0 |
| DD-20 | 7-23-64 | 546.0 | Km | 70 | .04 | 504 | 59 | 34 | 30 | 0 | 9.0 |
| DD-21 | 7-23-64 | 560 | Km | 70 | .03 | 440 | 71 | 50 | 28 | 0 | 9.1 |
| DD-22 | 3-31-54 | 567 | Km | 70 | .20 | ..... | ..... | 12 | 10 | .... | 8.0 |
| DD-22 | 7-23-64 | 567 | Km | 70 | .02 | 482 | 59 | 25 | 24 | 0 | 9.0 |
| DD-23 | 3-31-54 | 550 | Km | 69 | .10 | ..... | ..... | 60 | 18 | .... | 8.0 |
| EE-2 | 5-13-65 | 700 | Km | .... | .55 | 376 | 0 | 1,490 | 135 | 0 | 7.7 |
| EE-4 | 5-11-65 | 980 | Kg | .... | .46 | 336 | 0 | 1,760 | 161 | 0 | 7.7 |

Table 2.—*Partial chemical analyses of water from wells in Greene County*—Continued

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Temperature (°F) | Iron (Fe) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Chloride (Cl) | Hardness as $CaCO_3$ | | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Calcium, magnesium | Noncarbonate | |
| EE-5 | 5-11-65 | 1,300 | Kg, Kck(?) | 74 | 2.6 | 230 | 0 | 3,700 | 568 | 379 | 7.8 |
| EE-6 | 5-13-65 | 400 | Ke(?) | 70 | .22 | 404 | 0 | 1,460 | 95 | 0 | 7.9 |
| FF-2 | 5-20-53 | 900 | Km | 72 | .10 | ..... | ..... | 2,310 | 178 | .... | ... |
| FF-2 | 5-11-65 | 900 | Km | 72 | .32 | 234 | 0 | 2,420 | 182 | 0 | 7.6 |
| FF-3 | 5-20-53 | 830 | Km | 71 | .30 | ..... | ..... | 2,420 | 222 | .... | ... |
| FF-4 | 5-20-53 | 825 | Km | .... | .20 | ..... | ..... | 1,700 | 140 | .... | ... |
| FF-4 | 6- 4-65 | 825 | Km | .... | .71 | 372 | 0 | 1,710 | 115 | 0 | 8.0 |
| GG-1 | 7-23-65 | 840 | Km | 74 | .04 | 355 | 25 | 100 | 15 | 0 | 8.8 |
| GG-2 | 3-30-54 | 525 | Ke | 71 | .20 | ..... | ..... | 74 | 18 | .... | 7.9 |
| HH-1 | 8-26-64 | 850 | Km | 74 | .04 | 248 | 35 | 40 | 22 | 0 | 9.0 |
| HH-2 | 8-26-64 | 600 | Ke | 68 | .17 | 630 | 10 | 35 | 21 | 0 | 8.3 |
| HH-3 | 3-30-54 | 700 | Km | 72 | ..... | ..... | ..... | 15 | 12 | .... | 6.9 |

[1] Sample collected from test well.

Table 3.—*Comprehensive chemical analyses of water from selected wells in Greene County*
(Results in parts per million except sodium-adsorption ratio, specific conductance, and pH.)

Well: Numbers correspond to numbers on plates 1 and 2 and in tables 1 and 2.

Water-bearing unit: Kck, Coker Formation; Kg, Gordo Formation; Km, McShan Formation; Ke, Eutaw Formation.

| Well | Date of collection | Depth of well (feet) | Water-bearing unit | Silica ($SiO_2$) | Iron (Fe) | Manganese (Mn) | Calcium (Ca) | Magnesium (Mg) | Sodium (Na) | Potassium (K) | Bicarbonate ($HCO_3$) | Carbonate ($CO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Dissolved solids (residue at 180° C) | Hardness as $CaCO_3$: Calcium, magnesium | Hardness as $CaCO_3$: Noncarbonate | Sodium-adsorption ratio | Specific conductance (micromhos at 25° C) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D-1 | 8-16-65 | 253 | Km | 13 | 0.05 | 0.00 | 3.6 | 2.7 | 48 | 3.0 | 132 | 0 | 2.2 | 12 | 0.2 | 0.0 | 157 | 20 | 0 | 4.7 | 370 | 6.5 |
| Q-2 | 8-16-65 | 960 | Kck | 12 | .15 | .04 | 18 | 3.7 | 7.8 | 4.9 | 91 | 0 | 7.0 | 1.3 | .0 | .0 | 103 | 60 | 0 | .4 | 183 | 7.1 |
| Q-7 | 8-16-65 | 240 | Ke | 11 | .06 | .... | 8.8 | 2.4 | 338 | 4.1 | 308 | 0 | 0 | 360 | 1.3 | .2 | 897 | 32 | 0 | 26 | 1,660 | 7.4 |
| R-4 | 8-16-65 | 466 | Kg | 11 | .33 | .... | 12 | 2.4 | 32 | 4.7 | 104 | 0 | 2.6 | 16 | .1 | .4 | 135 | 40 | 0 | 2.2 | 261 | 6.9 |
| [1]R-12 | 10-16-52 | 441 | Km | 6.0 | .... | 0 | .... | .... | .... | .... | .... | .... | .... | 235 | .5 | .... | 570 | 22.0 | .... | .... | .... | 8.2 |
| R-13 | 2- 6-41 | 306 | Km | 12 | .05 | .... | 9.9 | 2.1 | 391 | 7.7 | 326 | 6 | 1.2 | 428 | 2.4 | 2.9 | 1,030 | 33 | 0 | .... | .... | ... |
| [1]R-14 | 3-11-50 | 389 | Km | 3 | .... | 0 | .... | .... | .... | .... | .... | .... | .... | 228 | .5 | .... | 574 | 17.6 | .... | .... | .... | 8.5 |
| R-14 | 5-14-52 | 389 | Km | 12 | .12 | .... | 5.2 | 1.4 | 214 | 4.5 | 232 | 0 | 1.4 | 206 | 1.2 | .3 | [2] 562 | 19 | 0 | .... | 997 | 7.6 |
| U-11 | 8-16-65 | 788 | Kg | 11 | 1.4 | .01 | 87 | 19 | 1,240 | 9.8 | 204 | 0 | 14 | 2,020 | .8 | .... | 3,560 | 296 | 129 | 3.1 | 6,430 | 7.3 |
| V-8 | 8-20-65 | 1,260 | Kck | 11 | .06 | .... | 4.9 | .7 | 61 | 1.9 | 143 | 0 | 0 | 23 | .2 | .2 | 178 | 15 | 0 | 6.8 | 313 | 7.6 |
| V-10 | 8-16-65 | 580 | Km | 9.9 | .06 | .... | 8.8 | 386 | 423 | 4.2 | 386 | 0 | .0 | 452 | 2.0 | .4 | 1,110 | 26 | 0 | 36 | 2,040 | 7.8 |
| Z-9 | 8-20-65 | 644 | Km | 11 | .08 | .... | 22 | 5.1 | 865 | 6.7 | 390 | 0 | 5.6 | 1,160 | 1.1 | .... | 2,300 | 76 | 0 | 43 | 4,230 | 7.6 |
| AA-8 | 8-20-65 | 290 | Ke | 9.8 | .32 | .... | 115 | 17 | 1,530 | 14 | 212 | 0 | 23 | 2,500 | 1.0 | .... | 4,630 | 358 | 184 | 35 | 7,880 | 7.5 |
| DD-18 | 8-20-65 | 740 | Km | 11 | .05 | .... | 1.4 | .4 | 151 | 1.3 | 296 | 0 | .4 | 68 | .7 | .2 | 391 | 5 | 0 | 29 | 680 | 7.7 |

[1] Analysis from files of Alabama Department of Public Health.
[2] Calculated.

Table 4.—*Sample and drillers' logs of wells in Greene County*
(Well number corresponds to numbers on plates 1 and 2 and in table 1)

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **A-2** | | |
| **Sample log** | | |
| **(Modified from sample description by P. E. LaMoreaux)** | | |
| Sand, tan, silty; subangular gravel and rotten chert | 10 | 10 |
| Sand, white and yellow, medium, angular; and some fine-grained gravel | 10 | 20 |
| Sand, white and yellow, medium; gravel; sandstone fragments; brown clay | 10 | 30 |
| Clay, red and gray, sandy | 10 | 40 |
| Clay, red and gray, sandy; and some subrounded chert gravel | 30 | 70 |
| Clay, brownish-red; and some gravel | 10 | 80 |
| Clay, brownish-red, sandy; and some gravel | 10 | 90 |
| Sand, white, fine, angular; and some gravel | 20 | 110 |
| Sand, white, fine, angular; and some gravel; clay | 30 | 140 |
| Clay, grayish-brown, sandy; and some gravel | 20 | 160 |
| Sand, white; clay; chert gravel | 10 | 170 |
| Sand, white, fine, angular; and some fine-grained gravel | 10 | 180 |
| Sand, medium; and some fine-grained gravel | 10 | 190 |
| Clay, purple and gray, mottled; sandy clay | 50 | 240 |
| Sand, yellow-gray, fine; pink clay | 40 | 280 |
| Summary: | | |
| Alluvium | 0-30 | |
| Upper Cretaceous | | |
| Tuscaloosa Group | | |
| Gordo Formation | 30-193 | |
| Coker Formation | 193-280 | |
| **E-1** | | |
| **Driller's log** | | |
| Topsoil | 42 | 42 |
| Rock | 80 | 122 |
| Sand | 60 | 182 |
| Gumbo | 78 | 260 |
| Sand | 80 | 340 |
| **F-1** | | |
| **Driller's log** | | |
| Soil, yellow, silty | 3 | 3 |
| Clay, gray | 6 | 9 |
| Sand, green-gray, fine | 9 | 18 |
| Clay, gray and yellow | 2 | 20 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **F-1—Continued** | | |
| Clay, blue | 8.5 | 28.5 |
| Sand, gray-green, fine; clay layers | 5 | 33.5 |
| Shale, light-blue; sand layers | 2.5 | 36 |
| Shale, light-blue | 4 | 40 |
| Sand, gray-green, fine | 1 | 41 |
| Shale, light-blue | 1.5 | 42.5 |
| Sand, gray, fine; clay layers | 8.5 | 51 |
| Clay, blue | 1 | 52 |
| Sand, gray | 1 | 53 |
| Clay; sand layers | 11 | 64 |
| Sand, green, fine; clay layers | 4.5 | 68.5 |
| Clay, blue | 5 | 73.5 |
| Clay, blue, green, and brown | 10 | 83.5 |
| Clay, blue | 8.5 | 92 |
| Clay, light-green | 12 | 104 |
| Clay, gray | 7.5 | 111.5 |
| Shale, dark-green and gray, hard | 5 | 116.5 |
| Clay, red, ocherous | 2 | 118.5 |
| Clay, purple, pink, and red | 63 | 181.5 |
| Clay, purple and olive, silty, soft | 4.5 | 186 |
| Clay, purple and red | 16.5 | 202.5 |
| Clay, purple and red; sand layers | 2.5 | 205 |
| Sand | 1.5 | 206.5 |
| Sand; clay layers | 3.5 | 210 |
| Clay, light-gray-green, purple, and red, mottled | 41 | 251 |
| Clay, light-green; layers of fine-grained sand | 2 | 253 |
| Clay, purple, olive, and red | 10 | 263 |
| Sand; clay layers | 2 | 265 |
| Sand, fine to coarse | 6 | 271 |
| Clay | .5 | 271.5 |
| Sand, yellow, fine to coarse | 2.5 | 274 |
| Sand, gray, fine to very coarse | 18.5 | 292.5 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **F-3** Driller's log | | |
| Clay, red | 17 | 17 |
| Clay, brown to yellow, sandy | 36 | 53 |
| Clay, light-brown to dark-gray | 10 | 63 |
| Clay, light-green to dark-gray | 20.5 | 83.5 |
| Sand, brown, fine; light-brown to yellow clay | 20.5 | 104 |
| Sand, yellow-brown, fine; and some blue to buff clay | 10.5 | 114.5 |
| Sand, yellow-brown, fine | 20.5 | 135 |
| Sand, yellow-brown, fine to medium | 10 | 145 |
| Clay, blue | 1 | 146 |
| Sand | 1 | 147 |
| Clay, blue | 6.5 | 153.5 |
| Sand | .5 | 154 |
| Clay, blue; and some carbonaceous material | 7.5 | 161.5 |
| Sand, gray, medium | 2 | 163.5 |
| Clay, blue | 15.5 | 179 |
| Sand | 1 | 180 |
| Clay, blue | 1.5 | 181.5 |
| Sand, gray, medium to coarse | 9.5 | 191 |
| Clay, blue | .5 | 191.5 |
| Sand, gray, medium to very coarse | 5.5 | 197 |
| Clay | .5 | 197.5 |
| Sand, gray, medium | 4 | 201.5 |
| Clay | .5 | 202 |
| Sand, gray, medium to coarse | 4.5 | 206.5 |
| Sand, gray, coarse to very coarse | 4.5 | 211 |
| Clay, gray to blue-gray | 1 | 212 |
| Sand, gray, coarse to very coarse; granules and small pebbles | 15 | 227 |
| Sand, gray, fine to coarse; and some small pebbles | 7 | 234 |
| Clay, gray to blue-gray | .5 | 234.5 |
| Sand, gray, fine to coarse; and some small pebbles | 13 | 247.5 |
| Sand, gray, fine to coarse | 12.5 | 260 |
| Clay, purple, pink, yellow, and gray, mottled | 8 | 268 |
| **J-5** Driller's log | | |
| Soil, dark | 10 | 10 |
| Sand, green, coarse | 5 | 15 |
| Sand, white, coarse | 5 | 20 |
| Clay, blue | 30 | 50 |
| Clay, red | 55 | 105 |
| Sand, light-brown | 10 | 115 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **J-5—Continued** | | |
| Clay, gray and brown; sand layers | 110 | 225 |
| Sand | 85 | 310 |
| Clay, blue and green; and some 2-3 ft sand layers | 200 | 510 |
| Sand | 30 | 540 |
| **K-4 Driller's log** | | |
| Sand | 40 | 40 |
| Lignite | 4 | 44 |
| Sand; clay layers | 266 | 310 |
| Rock | 60 | 370 |
| **K-5 Driller's log** | | |
| Soil; clay; sand | 10 | 10 |
| Sand; clay layers | 20 | 30 |
| Clay, blue | 50 | 80 |
| Clay, blue; sand layers | 10 | 90 |
| Sand; clay layers | 50 | 140 |
| Sand | 20 | 160 |
| Sand; clay | 10 | 170 |
| Sand | 20 | 190 |
| **L-5 Driller's log** | | |
| Soil; red clay | 12 | 12 |
| Clay, white, blue, and yellow | 18 | 30 |
| Clay, blue | 20 | 50 |
| Clay, blue, sandy | 40 | 90 |
| Clay, blue, sandy; sand layers | 60 | 150 |
| Clay, blue | 60 | 210 |
| Sand, fine; and some charcoal | 10 | 220 |
| Clay, sandy | 30 | 250 |
| Clay, blue | 10 | 260 |
| Clay, blue; and medium-grained sand | 10 | 270 |
| Sand, medium | 16 | 286 |
| Clay | 14 | 300 |
| Clay; fine-grained sand; rock | 10 | 310 |
| Clay; sand layers | 30 | 340 |
| Tuscaloosa Group | 20 | 360 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-4<br>Sample log<br>(Modified from sample description by Winnie McGlamery) | | |
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| Sand; gravel; chalk | 10 | 10 |
| Chalk, gray; and some glauconite | 110 | 120 |
| Sandstone, chalky, glauconitic | 10 | 130 |
| **Eutaw Formation** | | |
| Sand, medium, glauconitic; glauconitic shale; dark-gray and green carbonaceous shale | 20 | 150 |
| Sandstone, glauconitic; gray to green carbonaceous shale | 30 | 180 |
| Sandstone, glauconitic; gray to green carbonaceous shale; claystone | 10 | 190 |
| Sandstone, glauconitic; gray to green carbonaceous shale | 10 | 200 |
| Sand, medium, glauconitic; shale | 20 | 220 |
| Sand, medium, glauconitic; shale; claystone | 40 | 260 |
| Sandstone, medium, carbonaceous; gray carbonaceous shale | 50 | 310 |
| Sandstone, medium, carbonaceous; gray carbonaceous shale; claystone | 20 | 330 |
| Sandstone, medium, carbonaceous; gray carbonaceous shale; claystone; glauconitic sand | 40 | 370 |
| Shale, gray, sandy, carbonaceous; glauconitic sand | 10 | 380 |
| Shale, gray, sandy, carbonaceous; claystone, glauconitic sand | 120 | 500 |
| Shale, gray, sandy, carbonaceous; gravel; medium-grained sandstone; glauconitic sand | 20 | 520 |
| Sand, medium, glauconitic; and abundant siderite concretions | 10 | 530 |
| **Tuscaloosa Group** | | |
| Sand, medium, glauconitic; gray to dark-red clay; siderite concretions | 30 | 560 |
| Clay, gray, dark-red, and purple | 20 | 580 |
| Clay, gray, dark-red, and purple; and abundant siderite concretions | 10 | 590 |
| Clay, varicolored | 10 | 600 |
| Clay, varicolored, sandy | 20 | 620 |
| Sand, fine; dark-red and purple clay | 70 | 690 |
| Sand, medium to coarse | 10 | 700 |
| Sand, medium to coarse; gravel; dark-red clay | 20 | 720 |
| Clay, gray, pink, and green | 10 | 730 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **M-4—Continued** | | |
| **Upper Cretaceous**—Continued | | |
| **Tuscaloosa Group**—Continued | | |
| Sand, medium; dark-red clay | 10 | 740 |
| Sand, medium; gravel; purple clay | 10 | 750 |
| Sand, medium to coarse; gravel; dark-red and purple clay | 30 | 780 |
| Sand, medium to coarse; dark-red and purple clay | 20 | 800 |
| Sand, coarse; gravel; varicolored clay | 10 | 810 |
| Sand, medium to coarse; dark-red and purple clay | 50 | 860 |
| Clay, dark-red, green, and purple | 50 | 910 |
| Clay, dark-red, green, and purple; fine sand | 10 | 920 |
| Clay, dark-red, green, and purple | 210 | 1,130 |
| Sand, medium; dark-red, green, and purple clay | 100 | 1,230 |
| Clay, purple and dark-red | 10 | 1,240 |
| Clay, gray, purple, and dark-red | 20 | 1,260 |
| Clay, gray, purple, and dark-red; gravel | 40 | 1,300 |
| Clay, dark-red, gray, and green | 70 | 1,370 |
| Sand, coarse; purple, gray, and green clay | 40 | 1,410 |
| Clay, dark-red, purple, gray, and green | 20 | 1,430 |
| Clay, dark-red, purple, gray, and green; sand | 10 | 1,440 |
| **Lower Cretaceous** | | |
| Clay, dark-red, purple, gray, and green; sand; pink nodular lime | 20 | 1,460 |
| Clay, reddish-brown and green, mottled; pink nodular lime | 20 | 1,480 |
| Sand, medium to coarse; dark-red, reddish-brown, and green mottled clay | 10 | 1,490 |
| Sand, yellowish, medium to coarse; reddish-brown and green clay | 10 | 1,500 |
| Sand, yellowish, medium to coarse; gravel; siderite concretions; nodular lime; reddish-brown and green clay | 60 | 1,560 |
| Clay, dark-red and green, mottled, sandy | 20 | 1,580 |
| Sand; reddish-brown and green mottled clay | 10 | 1,590 |
| Gravel; gray, green, and purple clay | 30 | 1,620 |
| Clay, reddish-brown, green, and purple; and some oolite gravel | 30 | 1,650 |
| Sand, medium; reddish-brown and green clay | 10 | 1,660 |
| Sand, medium; gravel; reddish-brown and green clay | 20 | 1,680 |
| Sand, yellow, medium to coarse; purple and gray clay | 10 | 1,690 |
| Clay, purple, dark-red, gray, and green | 10 | 1,700 |
| Clay, purple, dark-red, gray, and green; nodular lime | 60 | 1,760 |
| Clay, purple, dark-red, gray, and green; nodular lime; and medium- to coarse-grained sand | 10 | 1,770 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **M-4—Continued** | | |
| **Lower Cretaceous**—Continued | | |
| Clay, reddish-brown and green, mottled; pink nodular lime | 20 | 1,790 |
| Sand and gravel, yellowish; reddish-brown and green mottled clay; gray fine-grained sandstone; nodular lime | 10 | 1,800 |
| Gravel, variegated; reddish-brown clay | 10 | 1,810 |
| Sand and gravel, variegated; reddish-brown clay | 20 | 1,830 |
| Sand and gravel, variegated; reddish-brown clay; nodular lime | 30 | 1,860 |
| Sand; purple, gray, and green clay | 10 | 1,870 |
| **Pennsylvanian** | | |
| Sandstone, gray, fine-grained, hard, micaceous, carbonaceous | 10 | 1,880 |
| **M-5** | | |
| Sample log | | |
| (Modified from sample description by Winnie McGlamery) | | |
| Sand, medium to coarse | 10 | 10 |
| Sand, medium | 30 | 40 |
| Sand, medium; gravel | 10 | 50 |
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| Chalk, light-gray | 10 | 60 |
| Chalk, light-gray, glauconitic | 10 | 70 |
| Chalk, light-gray, glauconitic, sandy | 10 | 80 |
| **Eutaw Formation** | | |
| Sand, medium, glauconitic | 10 | 90 |
| Sand, fine, glauconitic | 10 | 100 |
| Sand, fine, glauconitic; brown claystone | 10 | 110 |
| Sand, fine, glauconitic; greenish shale | 20 | 130 |
| Sand, fine, glauconitic; carbonaceous shale | 140 | 270 |
| Sand, medium, glauconitic; brown marl; claystone; green and gray carbonaceous shale | 20 | 290 |
| Sand, fine, glauconitic; gray carbonaceous shale | 90 | 380 |
| Sand, fine, glauconitic | 10 | 390 |
| Sand, medium, glauconitic; carbonaceous shale | 30 | 420 |
| Sand, coarse, glauconitic; carbonaceous shale | 40 | 460 |
| Gravel; medium- to coarse-grained sand | 10 | 470 |
| Gravel; glauconitic sand | 20 | 490 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **M-5—Continued** | | |
| **Upper Cretaceous**—Continued | | |
| **Tuscaloosa Group** | | |
| Clay, gray, green, and dark-red; siderite concretions | 10 | 500 |
| Clay, gray, green, and dark-red; coarse-grained sand; siderite concretions | 10 | 510 |
| Sand | 10 | 520 |
| Sand; gray, green, and dark-red clay | 10 | 530 |
| Clay, purple and green; medium-grained sand | 70 | 600 |
| Gravel; coarse-grained sand | 30 | 630 |
| Gravel; medium-grained sand | 10 | 640 |
| Sand, medium to coarse | 30 | 670 |
| Gravel and sand, variegated | 20 | 690 |
| Gravel and sand, variegated; red and purple clay | 10 | 700 |
| Sand; red and purple clay | 40 | 740 |
| Gravel and sand, yellow; red and purple clay | 40 | 780 |
| Clay, purple, green, and red | 20 | 800 |
| Clay, purple, green, and red; sand; gravel | 10 | 810 |
| Sand, medium to coarse, variegated; red clay | 70 | 880 |
| Clay, purple, red, and green; sand | 10 | 890 |
| Clay, purple, red, and green; siderite concretions; and some sand | 130 | 1,020 |
| Clay, purple, red, and green; siderite concretions | 60 | 1,080 |
| Sand, medium; dark-red, purple, and green clay | 10 | 1,090 |
| Sand, coarse; dark-red, purple, and green clay | 20 | 1,110 |
| Sand, medium to coarse | 10 | 1,120 |
| Sand, medium to coarse; gravel | 190 | 1,310 |
| Gravel, variegated; coarse-grained sand | 20 | 1,330 |
| Gravel, variegated; coarse-grained sand; dark-gray carbonaceous shale | 30 | 1,360 |
| Gravel, variegated; medium-grained sand; dark-gray carbonaceous shale | 100 | 1,460 |
| Sand, medium to coarse; variegated gravel; siderite concretions | 20 | 1,480 |
| Gravel, variegated; medium to very coarse grained sand | 40 | 1,520 |
| Gravel, variegated; medium to very coarse grained sand; dark-gray carbonaceous shale | 20 | 1,540 |
| Gravel; medium- to coarse-grained sand | 70 | 1,610 |
| Sand, yellow; variegated chert gravel | 40 | 1,650 |
| Sand, yellow, medium; variegated chert gravel | 20 | 1,670 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-5—Continued | | |
| **Lower Cretaceous** | | |
| Sand, medium to coarse; dark-red clay; pink nodular lime | 10 | 1,680 |
| Clay, dark-red, gray, and green, mottled; medium- to coarse-grained variegated sand; pink nodular lime | 110 | 1,790 |
| Clay, dark-red, gray, and green, mottled; medium- to coarse-grained variegated sand; variegated gravel; pink nodular lime | 50 | 1,840 |
| Sand, medium to coarse; dark-reddish-brown clay; nodular lime | 20 | 1,860 |
| Gravel, variegated; sand; reddish-brown and green mottled clay | 20 | 1,880 |
| **Pennsylvanian** | | |
| Shale, dark-gray, micaceous, sandy | 20 | 1,900 |
| M-7 Sample log (Modified from sample description by Winnie McGlamery) | | |
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| Chalk, gray, shaly | 40 | 40 |
| **Eutaw Formation** | | |
| Chalk, gray, shaly; medium-grained glauconitic sand; glauconitic sandstone | 10 | 50 |
| Sandstone, gray, medium, glauconitic; sand | 10 | 60 |
| Sandstone, gray, glauconitic; sand; gray shale | 20 | 80 |
| Sandstone, gray, glauconitic; sand; gray shale; brown claystone | 30 | 110 |
| Sand, medium, glauconitic | 20 | 130 |
| Sand, medium, glauconitic; gray shale | 20 | 150 |
| Clay, brown; gray carbonaceous shale | 10 | 160 |
| Sand; gray carbonaceous shale | 30 | 190 |
| Sand, medium, glauconitic | 10 | 200 |
| Sand, fine, glauconitic | 10 | 210 |
| Sand, fine, glauconitic; gray carbonaceous shale | 10 | 220 |
| Sand, medium, glauconitic; brown claystone | 30 | 250 |
| Sand, fine, glauconitic | 10 | 260 |
| Sand, fine, glauconitic; brown claystone | 40 | 300 |
| Sand, fine to medium, glauconitic | 20 | 320 |
| Sand, fine, glauconitic, micaceous | 30 | 350 |
| Sand, medium, glauconitic | 20 | 370 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-7—Continued | | |
| **Upper Cretaceous**—Continued | | |
| **Eutaw Formation**—Continued | | |
| Sand, fine, glauconitic | 10 | 380 |
| Sand, medium, glauconitic, carbonaceous, micaceous | 20 | 400 |
| Sand, glauconitic, carbonaceous | 10 | 410 |
| Sand, fine, glauconitic | 10 | 420 |
| Sand, medium to coarse, micaceous | 30 | 450 |
| Sand, medium to coarse, micaceous; gravel | 20 | 470 |
| **Tuscaloosa Group** | | |
| Clay, gray, dark-red, and purple; sand; gravel | 20 | 490 |
| Clay, gray, purple, and dark-red; sand | 10 | 500 |
| No record | 250 | 750 |
| Gravel; coarse-grained sand; gray, red, and purple clay | 60 | 810 |
| Sand, fine to coarse; dark-red clay | 10 | 820 |
| Sand, medium; dark-red clay | 30 | 850 |
| Gravel; coarse-grained sand | 20 | 870 |
| Clay, green, red, and dark-red | 10 | 880 |
| Sand, fine to medium | 10 | 890 |
| Sand, fine to coarse; siderite concretions | 10 | 900 |
| Sand, green, medium to coarse; dark-red and purple clay | 10 | 910 |
| Sand, medium | 10 | 920 |
| Sand, medium to coarse | 20 | 940 |
| Sand, medium to coarse; siderite; dark-red clay | 10 | 950 |
| Sand; abundant siderite concretions | 10 | 960 |
| Sand; abundant siderite concretions; gray clay | 20 | 980 |
| Clay, green; siderite concretions; sand | 50 | 1,030 |
| Clay, green and gray; siderite concretions; sand | 20 | 1,050 |
| Sand, fine to medium; siderite concretions; gray clay; gray carbonaceous shale | 100 | 1,150 |
| Gravel; coarse-grained sand; gray carbonaceous shale | 40 | 1,190 |
| Sand; gray carbonaceous shale | 30 | 1,220 |
| Gravel; coarse-grained sand; gray and green carbonaceous shale | 10 | 1,230 |
| Gravel; coarse-grained sand | 10 | 1,240 |
| Gravel; coarse-grained sand; carbonaceous shale | 10 | 1,250 |
| Sand, medium to coarse | 20 | 1,270 |
| Sand, medium to coarse; gravel | 20 | 1,290 |
| Sand, medium; gravel | 50 | 1,340 |
| Sand, medium; gravel; medium-grained yellowish sandstone fragments | 10 | 1,350 |
| Sand, yellowish, medium; sandstone fragments | 10 | 1,360 |
| Sand, yellowish, medium | 40 | 1,400 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **M-7—Continued** | | |
| **Upper Cretaceous**—Continued | | |
| **Tuscaloosa Group**—Continued | | |
| Sand, yellowish, fine; reddish-brown clay | 10 | 1,410 |
| No record | 10 | 1,420 |
| Sand, yellowish, coarse; reddish-brown clay | 10 | 1,430 |
| Sand, medium to coarse; varicolored mottled clay | 30 | 1,460 |
| Sand, variegated, medium to coarse | 10 | 1,470 |
| Sand, variegated, medium to coarse; siderite concretions | 20 | 1,490 |
| Gravel; coarse-grained variegated sand; dark-red clay | 60 | 1,550 |
| Gravel; coarse-grained yellow sand; dark-red clay | 30 | 1,580 |
| No record | 10 | 1,590 |
| Gravel; fine- to coarse-grained variegated sand | 10 | 1,600 |
| Gravel; fine- to coarse-grained variegated sand; dark-red clay | 40 | 1,640 |
| Gravel; fine- to coarse-grained variegated sand; purple clay | 10 | 1,650 |
| Sand, fine to medium; dark-red and purple clay | 10 | 1,660 |
| Sand, fine to medium; gravel; dark-red and purple clay | 60 | 1,720 |
| Gravel, variegated; coarse-grained sand | 50 | 1,770 |
| Gravel; medium- to coarse-grained variegated sand | 10 | 1,780 |
| Gravel; medium- to coarse-grained variegated sand; purple clay | 30 | 1,810 |
| **Pennsylvanian** | | |
| Gravel; medium- to coarse-grained variegated sand; purple clay; gray hard medium-grained sandstone | 10 | 1,820 |
| Sandstone, gray, medium-grained, hard | 20 | 1,840 |

**M-11**
Sample log
(Modified from sample description by Winnie McGlamery)

| | | |
|---|---|---|
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| Chalk, light-gray, impure | 30 | 30 |
| No record | 30 | 60 |
| Chalk, light-gray; coarse-grained glauconitic sand | 30 | 90 |
| Chalk, glauconitic; gray carbonaceous shale; glauconitic sand | 30 | 120 |
| Chalk, light-green, sandy, glauconitic, carbonaceous | 90 | 210 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-11—Continued | | |
| **Upper Cretaceous**—Continued | | |
| **Eutaw Formation** | | |
| Sand, glauconitic; brown claystone; gray shale | 90 | 300 |
| Shale, gray; glauconitic sand | 60 | 360 |
| Shale, gray, sandy, micaceous, glauconitic | 60 | 420 |
| Sand, coarse, glauconitic; glauconitic carbonaceous gray shale | 30 | 450 |
| **Tuscaloosa Group** | | |
| Clay, red and gray; siderite concretions | 30 | 480 |
| Clay, dark-red | 30 | 510 |
| No record | 9 | 519 |
| Clay, dark-red; sand | 121 | 640 |
| Clay, purple and red; variegated sand and gravel | 30 | 670 |
| Shale, gray, carbonaceous; red and gray mottled clay | 34 | 704 |
| Clay, purple and gray; siderite concretions; variegated sand; gravel | 156 | 860 |
| Clay, purple and gray; medium-grained sand | 120 | 980 |
| Shale, green; purple and red clay | 30 | 1,010 |
| Shale, green; sand | 90 | 1,100 |
| Shale, green, carbonaceous; sand | 55 | 1,155 |
| Shale, green; medium-grained glauconitic sandstone | 20 | 1,175 |
| Shale, green; sand | 35 | 1,210 |
| Shale, green; medium-grained sand | 15 | 1,225 |
| Sand, medium; gray and green carbonaceous shale: purple and red clay | 25 | 1,250 |
| Sand, variegated, medium; gravel; varicolored shale and clay | 150 | 1,400 |
| Gravel, chert; medium- to coarse-grained sand | 30 | 1,430 |
| Gravel, chert; medium- to coarse-grained sand; reddish-brown and purple clay | 50 | 1,480 |
| Clay, dark-reddish-brown and purple; medium- to coarse-grained sand | 40 | 1,520 |
| Clay, dark-reddish-brown and purple; gravel; medium- to coarse-grained sand | 85 | 1,605 |
| Gravel, variegated; sand; reddish-brown clay | 20 | 1,625 |
| No record | 25 | 1,650 |
| Sand, medium to coarse; reddish-brown and purple clay | 30 | 1,680 |
| Sand, medium to coarse; gravel; reddish-brown and purple clay | 45 | 1,725 |
| Clay, purple and reddish-brown; siderite concretions | 5 | 1,730 |
| Clay, purple and reddish-brown | 5 | 1,735 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **M-11—Continued** | | |
| **Lower Cretaceous** | | |
| Clay, reddish-brown and purple; pink nodular lime | 5 | 1,740 |
| Sand; reddish-brown and purple clay; pink nodular lime | 5 | 1,745 |
| Clay, reddish-brown and purple; pink nodular lime | 10 | 1,755 |
| Clay, reddish-brown and purple; pink nodular lime; light-gray variegated medium-grained sandstone | 20 | 1,775 |
| Clay, reddish-brown and purple; gravel; coarse-grained sand | 40 | 1,815 |
| Sand, variegated, coarse; chert gravel; reddish-brown clay | 60 | 1,875 |
| Sand, variegated, coarse; chert gravel; pink nodular lime; reddish-brown clay | 20 | 1,895 |
| **Pennsylvanian** | | |
| Shale, dark-gray to black, sandy, micaceous, carbonaceous, hard | 60 | 1,955 |
| Total depth 5,530 feet; entire log in files of Geological Survey of Alabama. | | |
| **M-12** | | |
| **Sample log** | | |
| (Modified from sample description by Winnie McGlamery) | | |
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| Chalk, light-gray, shaly | 20 | 20 |
| Chalk, light-gray, shaly, glauconitic | 10 | 30 |
| Chalk, sandy, glauconitic | 10 | 40 |
| **Eutaw Formation** | | |
| Sand, medium, glauconitic | 40 | 80 |
| Sand, medium, glauconitic; greenish glauconitic sandy shale | 10 | 90 |
| Shale, green, micaceous, carbonaceous; medium-grained glauconitic sand | 20 | 110 |
| Shale, green and gray, micaceous, carbonaceous | 10 | 120 |
| Sand, fine to medium, glauconitic, carbonaceous; shale | 30 | 150 |
| Sand, fine, glauconitic | 10 | 160 |
| Shale, green and gray, micaceous, carbonaceous | 10 | 170 |
| Sand, fine, glauconitic; gray carbonaceous shale | 20 | 190 |
| Sand, medium, glauconitic; gray shale | 20 | 210 |
| Sand, medium, glauconitic; greenish carbonaceous shale | 10 | 220 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-12—Continued | | |
| **Upper Cretaceous**—Continued | | |
| **Eutaw Formation**—Continued | | |
| Sand, medium to coarse, glauconitic, carbonaceous; brown claystone | 10 | 230 |
| Sand, medium; gray shale | 10 | 240 |
| Sand, fine, glauconitic; carbonaceous shale | 20 | 260 |
| Shale, gray; glauconitic sand; brown sandy shale | 10 | 270 |
| Shale, brown, carbonaceous, glauconitic | 10 | 280 |
| Sand, glauconitic; carbonaceous shale | 10 | 290 |
| Sand, glauconitic; glauconitic sandy shale; brown claystone | 10 | 300 |
| Sand, glauconitic; glauconitic sandy shale; brown claystone; siderite | 20 | 320 |
| Sand, glauconitic; gray shale | 10 | 330 |
| Sand, glauconitic, carbonaceous; gray shale | 30 | 360 |
| Sand, medium, carbonaceous; brown claystone | 10 | 370 |
| Sand, medium, carbonaceous; siderite concretions | 10 | 380 |
| Sand, fine to medium; carbonaceous shale | 10 | 390 |
| Sand, fine to medium, glauconitic; carbonaceous shale | 20 | 410 |
| Sand, medium to coarse; chert gravel | 30 | 440 |
| **Tuscaloosa Group** | | |
| Clay, dark-red, green, and gray; siderite; medium-grained sand | 10 | 450 |
| Sand; chert gravel | 20 | 470 |
| Sand; chert gravel; dark-red clay | 30 | 500 |
| Clay, dark-reddish-brown and purple; sand | 80 | 580 |
| Clay, yellow and purple; sand; gravel | 40 | 620 |
| Sand; chert gravel | 20 | 640 |
| Sand; purple clay | 40 | 680 |
| Sand, variegated; gravel; dark-red and purple clay | 20 | 700 |
| Sand, variegated, medium to coarse; dark-red and yellow clay | 20 | 720 |
| Sand, variegated, medium to coarse; gravel; purple clay | 20 | 740 |
| Clay, purple and green; variegated sand | 10 | 750 |
| Clay, purple and green; gravel; variegated sand | 30 | 780 |
| Sand, variegated; purple and red clay | 10 | 790 |
| Sand, variegated; yellow clay | 10 | 800 |
| Sand, variegated; purple clay | 10 | 810 |
| Gravel, chert, sandy; purple and gray clay | 10 | 820 |
| Sand, variegated; dark-red to purple clay | 40 | 860 |
| Clay, purple and gray | 10 | 870 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| M-12—Continued | | |
| **Upper Cretaceous**—Continued | | |
| **Tuscaloosa Group**—Continued | | |
| Sand, variegated; dark-red to purple clay | 90 | 960 |
| Gravel, chert, sandy; dark-red to purple clay | 20 | 980 |
| Sand, variegated; dark-red clay | 20 | 1,000 |
| Gravel, chert, sandy; dark-red and purple clay | 40 | 1,040 |
| No record | 10 | 1,050 |
| Gravel; gray, red, and purple clay | 20 | 1,070 |
| Shale, gray, carbonaceous; gravel; purple clay | 20 | 1,090 |
| Shale, gray, carbonaceous; gravel; gray clay; siderite concretions | 120 | 1,210 |
| Gravel; varicolored clay; sand; gray carbonaceous shale | 60 | 1,270 |
| Clay, red and purple; gray carbonaceous shale | 20 | 1,290 |
| Clay, dark-red and purple; sand | 60 | 1,350 |
| Gravel, sandy; dark-red and purple clay | 20 | 1,370 |
| Clay, reddish-brown and green; sand | 20 | 1,390 |
| Clay, reddish-brown and green; sand; gravel | 80 | 1,470 |
| Clay, reddish-brown and green; sand; gravel; gray carbonaceous shale | 10 | 1,480 |
| No record | 10 | 1,490 |
| Gravel, sandy; dark-red clay | 60 | 1,550 |
| Gravel; varicolored clay | 10 | 1,560 |
| Gravel, sandy; varicolored clay | 30 | 1,590 |
| Gravel, variegated; medium- to coarse-grained sand; dark-red and purple clay; conglomerate fragments | 30 | 1,620 |
| Gravel, chert; coarse-grained variegated sand | 30 | 1,650 |
| Gravel, chert; conglomerate; coarse-grained variegated sand | 50 | 1,700 |
| Gravel, chert; coarse-grained variegated sand; purple and dark-red clay | 30 | 1,730 |
| Gravel, chert; medium-grained variegated sand; purple and dark-red clay | 20 | 1,750 |
| Gravel, variegated, sandy; gray, purple, and red clay | 60 | 1,810 |
| Gravel, sandy; varicolored carbonaceous clay; gray shale | 10 | 1,820 |
| Shale, gray and green, carbonaceous; clay | 40 | 1,860 |
| Shale, gray and green, carbonaceous; sand; purple and red clay | 10 | 1,870 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **P-9** Driller's log | | |
| Topsoil | 40 | 40 |
| Rock | 240 | 280 |
| Sand | 100 | 380 |
| Gumbo | 100 | 480 |
| Sand | 100 | 580 |
| **R-9** Sample log | | |
| No record | 10 | 10 |
| Sand, tan, fine, glauconitic | 10 | 20 |
| No record | 10 | 30 |
| Clay, gray; fine-grained micaceous glauconitic sand | 40 | 70 |
| Clay, gray | 10 | 80 |
| Clay, gray; fine-grained glauconitic sand | 20 | 100 |
| Sand, fine, glauconitic; gray clay | 10 | 110 |
| Clay, gray, sandy; limonite cemented sandstone | 10 | 120 |
| Sand, greenish-gray, fine, glauconitic, carbonaceous | 30 | 150 |
| Sand, greenish-gray, fine, glauconitic | 10 | 160 |
| Sand, greenish-gray, fine, glauconitic, carbonaceous | 10 | 170 |
| **R-11** Driller's log | | |
| Sand, fine; iron-cemented nodules | 10 | 10 |
| Sand, fine; clay layers | 10 | 20 |
| Clay, gray | 10 | 30 |
| Clay, gray; fine-grained green sand | 20 | 50 |
| Clay, dark-gray | 10 | 60 |
| Sand, fine, glauconitic, clayey | 10 | 70 |
| Sand, green, fine, glauconitic | 20 | 90 |
| Sand, green, fine, glauconitic, clayey | 20 | 110 |
| Sand, gray, fine, glauconitic | 20 | 130 |
| Clay, dark-gray, shaly | 37 | 167 |
| Sand, glauconitic | 3 | 170 |
| Sand, medium; layers of shaly clay | 40 | 210 |
| Clay; sand layers | 35 | 245 |
| Sand, medium, glauconitic; clay layers | 70 | 315 |
| Sand, glauconitic, lignitic; clay layers | 12 | 327 |
| Clay, green, sandy, glauconitic | 10 | 337 |
| Sand, white, coarse | 10 | 347 |
| Clay | 7 | 354 |
| Sand | 3 | 357 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **R-11—Continued** | | |
| Sand, fine, glauconitic | 10 | 367 |
| Clay, light-gray | 7 | 374 |
| Clay, light-gray, sandy | 3 | 377 |
| Clay, light-gray | 13 | 390 |
| Sand, white, medium to coarse | 17 | 407 |
| **R-12 Driller's log** | | |
| Clay | 16 | 16 |
| Sand | 5 | 21 |
| Shale, blue | 28 | 49 |
| Sand, yellow, fine | 7 | 56 |
| Shale, blue | 7 | 63 |
| Sand, white, soft | 15 | 78 |
| Shale, blue | 8 | 86 |
| Shale; sand layers | 10 | 96 |
| Sand, blue, hard | 13 | 109 |
| Shale, blue | 4 | 113 |
| Sand | 5 | 118 |
| Shale, hard | 68 | 186 |
| Shale, sandy | 27 | 213 |
| Shale, gummy | 18 | 231 |
| Shale; sand layers | 59 | 290 |
| Shale, blue, hard; sand layers | 30 | 320 |
| Shale; sand layers | 16 | 336 |
| Shale, hard | 12 | 348 |
| Sand, blue, fine | 6 | 354 |
| Shale; sand layers | 17 | 371 |
| Sand, blue | 8 | 379 |
| Shale; sand layers | 14 | 393 |
| Sand, gray, packed | 38 | 431 |
| Clay, red | 10 | 441 |
| **R-13 Driller's log** | | |
| Clay | 18 | 18 |
| Sand, brown | 12 | 30 |
| Soapstone | 20 | 50 |
| Sand, muddy | 18 | 68 |
| Sand, fine | 17 | 85 |
| Sand, muddy | 5 | 90 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **R-13—Continued** | | |
| Sand, fine | 17 | 107 |
| Sand; shale | 8 | 115 |
| Shale; soapstone | 80 | 195 |
| Sand, fine, hard | 19 | 214 |
| Gumbo | 4 | 218 |
| Sand, fine, hard | 8 | 226 |
| Shale; sand layers | 34 | 260 |
| Sand, white, fine | 46 | 306 |
| **R-14** | | |
| **Driller's log** | | |
| Clay, sandy | 5 | 5 |
| Clay | 25 | 30 |
| Clay, blue, sandy | 20 | 50 |
| Soapstone | 84 | 134 |
| Shale, sandy | 7 | 141 |
| Soapstone | 77 | 218 |
| Rock | 1 | 219 |
| Sand | 2 | 221 |
| Clay | 2 | 223 |
| Sand; clay layers | 11 | 234 |
| Sand | 22 | 256 |
| Clay | 32 | 288 |
| Sand, blue, fine | 7 | 295 |
| Clay | 16 | 311 |
| Sand | 3 | 314 |
| Clay | 9 | 323 |
| Sand | 9 | 332 |
| Sand, gray, packed | 50 | 382 |
| Clay, red | 25 | 407 |
| Sand, soft, muddy | 10 | 417 |
| Sand | 4 | 421 |
| Sand, fine, soft | 15 | 436 |
| Clay | 7 | 443 |
| Clay, sandy | 8 | 451 |
| Clay; sand layers | 42 | 493 |
| Sand | 4 | 497 |
| Clay | 6 | 503 |
| Sand | 32 | 535 |
| Clay | 3 | 538 |
| Sand | 20 | 558 |
| Sand | 15 | 573 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **R-14—Continued** | | |
| Clay | 3 | 576 |
| Sand, coarse | 4 | 580 |
| Sand | 39 | 619 |
| Clay, red and gray | 15 | 634 |
| **T-1 Driller's log** | | |
| Sand, yellow | 22 | 22 |
| Chalk, gray | 43 | 65 |
| Chalk, sandy | 10 | 75 |
| Sand, green, fine | 35 | 110 |
| Clay, gray, sandy | 10 | 120 |
| Sand, gray | 1 | 121 |
| Clay, gray | 69 | 190 |
| Sand, gray, medium | 20 | 210 |
| **U-2 Driller's log** | | |
| Sand, red | 5 | 5 |
| Sand, red and white | 10 | 15 |
| Clay, red | 2 | 17 |
| Sand, gray and white | 58 | 75 |
| Shale, blue, hard | 30 | 105 |
| Sand, gray-white, fine | 38 | 143 |
| Shale, blue, hard | 32 | 175 |
| Sand, gray-white, fine | 40 | 215 |
| Sand; hard layers | 5 | 220 |
| Sand, gray-white, fine | 50 | 270 |
| Rock, hard | 1 | 271 |
| Sand, white, coarse | 34 | 305 |
| Shale, blue, hard | 6 | 311 |
| Sand, white, very coarse | 39 | 350 |
| Clay, red | 7 | 357 |
| **U-3 Driller's log** | | |
| Sand | 60 | 60 |
| Clay | 35 | 95 |
| Sand, fine | 15 | 110 |
| Clay | 57 | 167 |
| Sand | 7 | 174 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| U-3—Continued | | |
| Clay | 4 | 178 |
| Sand | 4 | 182 |
| Clay | 1 | 183 |
| Sand | 2 | 185 |
| Clay | 2 | 187 |
| Sand | 6 | 193 |
| Clay | 2 | 195 |
| Sand | 6 | 201 |
| Sand; clay layers | 34 | 235 |
| Clay | 5 | 240 |
| Sand | 6 | 246 |
| Clay, sandy | 2 | 248 |
| Sand, clayey | 2 | 250 |
| Clay | 2 | 252 |
| Sand; clay layers | 13 | 265 |
| Clay; sand layers | 8 | 273 |
| Sand; clay layers | 15 | 288 |
| Sand | 3 | 291 |
| Clay | 6 | 297 |
| Sand; clay layers | 10 | 307 |
| Clay | 5 | 312 |
| Sand; clay layers | 4 | 316 |
| Clay | 1 | 317 |
| Sand, clayey | 3 | 320 |
| Clay; sand layers | 3 | 323 |
| Sand | 3 | 326 |
| Clay; sand layers | 3 | 329 |
| Clay | 7 | 336 |
| Clay; sand layers | 12 | 348 |
| Sand | 6 | 354 |
| Clay | 3 | 357 |
| Sand; clay layers | 3 | 360 |
| Clay | 4 | 364 |
| Sand; clay layers | 8 | 372 |
| Clay | 1 | 373 |
| Sand, gray, coarse | 9 | 382 |
| Clay | 1 | 383 |
| Sand; clay layers | 4 | 387 |
| Sand, gray, medium to coarse | 18 | 405 |
| Clay, light-gray, slightly variegated | 5 | 410 |
| Clay, variegated | 42 | 452 |
| Clay, sandy, variegated | 1 | 453 |
| Clay, variegated | 9 | 462 |

Table 4.–*Sample and drillers' logs of wells in Greene County*–Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **U-3–Continued** | | |
| Sand, fine | 5 | 467 |
| Clay, variegated | 26 | 493 |
| Sand, yellow, coarse | 7 | 500 |
| Clay | 15 | 515 |
| Sand | 2 | 517 |
| **U-4** | | |
| **Sample log** | | |
| Chalk, gray to white, fossiliferous | 10 | 10 |
| Chalk, gray to white, silty | 10 | 20 |
| Chalk, gray, fossiliferous | 60 | 80 |
| Sand, gray, fine, glauconitic; gray chalk | 10 | 90 |
| Sand, gray-green, fine to medium, glauconitic | 20 | 110 |
| Sand, gray-green, fine to medium, glauconitic; gray clay | 10 | 120 |
| Sand, gray, fine to medium, glauconitic; gray clay | 30 | 150 |
| Sand, gray, fine to medium, glauconitic; gray lignitic clay | 10 | 160 |
| Sand, gray, fine to medium, glauconitic; gray clay | 40 | 200 |
| Sand, gray, fine to medium, glauconitic | 10 | 210 |
| Sand, gray, fine to medium, glauconitic; gray clay | 20 | 230 |
| Clay, gray; fine- to medium-grained glauconitic gray sand | 10 | 240 |
| Sand, gray, fine, glauconitic; gray clay | 20 | 260 |
| Clay, gray; fine-grained glauconitic gray sand | 10 | 270 |
| Sand, gray, fine, glauconitic; gray clay | 10 | 280 |
| Sand, gray, fine to medium, glauconitic; gray clay | 20 | 300 |
| Sand, gray, fine to medium, glauconitic; lignitic gray clay | 40 | 340 |
| Sand, gray, fine to medium, glauconitic, lignitic | 10 | 350 |
| Sand, gray, fine to medium, glauconitic, lignitic; gray clay | 20 | 370 |
| Sand, gray, medium to coarse, glauconitic; gray clay | 30 | 400 |
| **U-5** | | |
| **Driller's log** | | |
| Clay, yellow | 22 | 22 |
| Sand, green; sandy clay | 23 | 45 |
| Clay, blue | 10 | 55 |
| Sand | 8 | 63 |
| Chalk; clay | 17 | 80 |
| Sand, white | 30 | 110 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **U-7** | | |
| **Driller's log** | | |
| Topsoil; yellow sandy clay | 10 | 10 |
| Clay, blue | 32 | 42 |
| Clay, blue; sand; rock | 10 | 52 |
| Clay, blue; rock | 10 | 62 |
| Sand; thin rock layers | 8 | 70 |
| Sand; sandy clay | 20 | 90 |
| Sand, greenish-black; clay | 10 | 100 |
| Sand; clay | 50 | 150 |
| Clay, sandy; thin rock layers | 10 | 160 |
| Clay | 10 | 170 |
| Clay; sand | 10 | 180 |
| Clay | 30 | 210 |
| Sand; thin rock layers | 10 | 220 |
| Sand; clay | 30 | 250 |
| **U-9** | | |
| **Driller's log** | | |
| Clay, red | 10 | 10 |
| Chalk | 40 | 50 |
| Sand, grayish-white, very fine | 35 | 85 |
| Hard layer | 1 | 86 |
| Shale, blue, hard | 10 | 96 |
| Sand, grayish-white, very fine | 70 | 166 |
| Rock, hard | 2 | 168 |
| Sand, white, fine | 15 | 183 |
| Shale, blue, hard | 47 | 230 |
| Sand, grayish-white, fine | 39 | 269 |
| Sand, grayish-white; hard layers | 11 | 280 |
| Shale, blue, hard | 15 | 295 |
| Sand, white, fine | 55 | 350 |
| Hard layer | 1 | 351 |
| Sand, white, fine to coarse | 24 | 375 |
| Shale, blue, hard | 10 | 385 |
| Sand, white, coarse | 7 | 392 |
| Shale, blue, hard | 18 | 410 |
| Sand, variegated, very coarse | 20 | 430 |
| Shale, blue, hard | 5 | 435 |
| Sand, variegated, very coarse | 21 | 456 |
| Clay, Tuscaloosa Group | 5 | 461 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **U-11** | | |
| Driller's log | | |
| Limerock | 85 | 85 |
| Sand, Eutaw Formation | 403 | 488 |
| Clay and sand, Tuscaloosa Group | 300 | 788 |
| **U-14** | | |
| Driller's log | | |
| Sand, yellow | 40 | 40 |
| Chalk, gray | 100 | 140 |
| Sand, green, fine | 20 | 160 |
| Clay, gray | 180 | 340 |
| Sand, green, medium | 20 | 360 |
| No record | 10 | 370 |
| **V-11** | | |
| Driller's log | | |
| Sand, red, clayey; and some gravel in basal part | 30 | 30 |
| Chalk; marl; limestone layers | 5 | 35 |
| Chalk | 295 | 330 |
| Sand; clay layers | 150 | 480 |
| Clay; thin sand layers | 110 | 590 |
| Sand; thin clay layers | 55 | 645 |
| **V-13** | | |
| Driller's log | | |
| Topsoil | 20 | 20 |
| Rock | 120 | 140 |
| Gumbo | 60 | 200 |
| Sand | 160 | 360 |
| Gumbo | 20 | 380 |
| Sand | 140 | 520 |
| **Z-1** | | |
| Driller's log | | |
| Soil | 22 | 22 |
| Chalk | 221 | 243 |
| Sand, fine | 75 | 318 |
| Gumbo | 100 | 418 |
| Sand; clay layers | 109 | 527 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Z-9** | | |
| Driller's log | | |
| Chalk | 368 | 368 |
| Sand; clay layers | 276 | 644 |
| **AA-7** | | |
| Sample log | | |
| (Modified from sample description by Winnie McGlamery) | | |
| **Upper Cretaceous** | | |
| **Selma Group** | | |
| **Mooreville Chalk** | | |
| No record | 20 | 20 |
| Chalk | 60 | 80 |
| Shale, gray, chalky | 40 | 120 |
| Sand, medium, glauconitic | 10 | 130 |
| Sand, glauconitic; chalky shale | 60 | 190 |
| Shale, chalky | 10 | 200 |
| Shale, chalky, glauconitic | 40 | 240 |
| **Eutaw Formation** | | |
| Sand, coarse, glauconitic; ironstone concretions; gray carbonaceous shale | 14 | 254 |
| Sand, medium, glauconitic; sandstone fragments | 26 | 280 |
| Sand, medium to coarse, glauconitic | 50 | 330 |
| Sand, medium to coarse, glauconitic; gray carbonaceous shale; brown claystone | 30 | 360 |
| Sand, medium to coarse, glauconitic; gray carbonaceous shale | 30 | 390 |
| Sand, medium to coarse, glauconitic; gray carbonaceous shale; brown claystone | 20 | 410 |
| No record | 460 | 870 |
| Sand, variegated, medium to coarse; gravel; greenish-gray and gray clay | 10 | 880 |
| **AA-10** | | |
| Driller's log | | |
| Sand; gravel | 25 | 25 |
| Chalk, gray | 115 | 140 |
| Sand; clay | 40 | 180 |
| Clay, gray | 120 | 300 |
| Sand, gray, medium | 90 | 390 |
| Sand, green, variegated | 50 | 440 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **AA-11** | | |
| Driller's log | | |
| Sand, yellow | 25 | 25 |
| Chalk, gray | 115 | 140 |
| Sand, green, fine | 40 | 180 |
| Clay, gray | 50 | 230 |
| Sand, greenish-gray, medium | 110 | 340 |
| **AA-22** | | |
| Driller's log | | |
| Topsoil; red clay | 10 | 10 |
| Clay, red; brown and yellow sand | 10 | 20 |
| Clay, yellow; blue rock | 10 | 30 |
| Rock, blue | 340 | 370 |
| Sandrock | 10 | 380 |
| Sandrock; fine sand | 10 | 390 |
| Sand, fine; hard rock | 10 | 400 |
| Sand; shell rock | 20 | 420 |
| Sand | 10 | 430 |
| Rock, blue | 10 | 440 |
| Rock, blue; fine-grained sand | 10 | 450 |
| Rock, blue; sand | 10 | 460 |
| Sand | 20 | 480 |
| Sand; hard rock | 10 | 490 |
| **AA-23** | | |
| Driller's log | | |
| Topsoil, black; yellow clay | 10 | 10 |
| Clay, yellow; layers of sand and gravel | 10 | 20 |
| Clay, yellow | 15 | 35 |
| Clay, blue | 15 | 50 |
| Rock, blue | 110 | 160 |
| Rock, blue; hard lime rock | 10 | 170 |
| Rock, blue | 30 | 200 |
| Rock, blue; hard lime rock | 10 | 210 |
| Rock, blue | 50 | 260 |
| Rock, blue; shell rock | 6 | 266 |
| Sand | 14 | 280 |
| Sand; and a hard sandstone layer | 10 | 290 |
| Sand; shell rock | 20 | 310 |
| Sand; sandy clay | 10 | 320 |
| Clay, sandy | 10 | 330 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **AA-23—Continued** | | |
| Sand; sandy clay; shell rock | 10 | 340 |
| Clay, sandy; shell rock; sand | 10 | 350 |
| Sand; sandy clay | 10 | 360 |
| Clay, blue, sandy; sand | 10 | 370 |
| Sand; clay layers | 10 | 380 |
| Sand; sandy clay | 10 | 390 |
| Clay, sandy | 10 | 400 |
| Clay, blue | 30 | 430 |
| Clay, blue; sand | 10 | 440 |
| Clay, blue | 10 | 450 |
| Clay, blue; sand | 20 | 470 |
| Clay, blue | 10 | 480 |
| Clay, blue; sand | 10 | 490 |
| Clay, blue; shell rock; sand | 10 | 500 |
| Clay, blue; shell rock | 20 | 520 |
| Clay, blue; sand | 10 | 530 |
| Clay, blue; sand; shell rock | 10 | 540 |
| Clay, blue; sand | 10 | 550 |
| Sand; shell rock | 10 | 560 |
| Sand | 10 | 570 |
| **AA-26 Driller's log** | | |
| Topsoil; red clay | 10 | 10 |
| Clay, red; sand | 12 | 22 |
| Sand; blue clay | 10 | 32 |
| Clay, blue | 60 | 92 |
| Clay, blue; rock layer at 98 ft | 10 | 102 |
| Clay, blue; rock layers | 10 | 112 |
| Clay, blue | 278 | 390 |
| Clay, blue; shell rock | 5 | 395 |
| Sand; clay layers | 15 | 410 |
| Clay, sandy; sand | 20 | 430 |
| Clay, sandy; sand; clay | 10 | 440 |
| Clay, sandy | 10 | 450 |
| Clay, sandy; sand | 20 | 470 |
| Clay, sandy; sandstone at 475 ft | 10 | 480 |
| Clay, sandy; clay | 10 | 490 |
| Clay, sandy | 10 | 500 |
| Clay, sandy; fine-grained sand | 10 | 510 |
| Clay | 40 | 550 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **AA-26—Continued** | | |
| Clay; fine-grained sand | 30 | 580 |
| Clay | 10 | 590 |
| Clay; sandy clay | 10 | 600 |
| Clay | 10 | 610 |
| Clay; rock | 20 | 630 |
| Clay | 30 | 660 |
| Clay; rock | 10 | 670 |
| Clay | 30 | 700 |
| Clay; rock | 10 | 710 |
| Clay | 22 | 732 |
| Sand; green sandy clay | 28 | 760 |
| Sand; green sandy clay; clay | 20 | 780 |
| Clay | 10 | 790 |
| **BB-1** Driller's log | | |
| Topsoil | 40 | 40 |
| Rock | 40 | 80 |
| Sand | 80 | 160 |
| Gumbo | 60 | 220 |
| Sand | 60 | 280 |
| **BB-6** Driller's log | | |
| Topsoil; sandy clay | 10 | 10 |
| Sand, brown | 15 | 25 |
| Clay, blue | 140 | 165 |
| Sandrock | 5 | 170 |
| Sand | 10 | 180 |
| Sand; rock; sandy clay | 20 | 200 |
| Sand; rock; clay | 20 | 220 |
| Sand; gray clay | 20 | 240 |
| Sand; clay | 40 | 280 |
| Clay, gray | 20 | 300 |
| Clay, gray; sand | 10 | 310 |
| Clay, sandy | 40 | 350 |
| Clay, sandy; thin rock layers | 20 | 370 |
| Clay; rock; fine-grained sand | 10 | 380 |
| Sand; thin rock layers | 10 | 390 |
| Sand; clay | 10 | 400 |
| Sand; clay; rock | 10 | 410 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **BB-6—Continued** | | |
| Sand; rock | 30 | 440 |
| Sand; clay | 10 | 450 |
| Sand; clay; rock | 10 | 460 |
| Sand; rock | 30 | 490 |
| Sand; rock; clay | 10 | 500 |
| **CC-5** | | |
| **Driller's log** | | |
| Topsoil; sandy clay | 10 | 10 |
| Sand | 20 | 30 |
| Sand; blue rock | 10 | 40 |
| Rock, blue | 180 | 220 |
| Rock, blue; sandstone | 10 | 230 |
| Rock, blue; sand | 10 | 240 |
| Rock, blue | 20 | 260 |
| Rock, blue, hard | 20 | 280 |
| Rock, hard; sand | 10 | 290 |
| Shell rock; sand | 10 | 300 |
| Sand; blue rock | 10 | 310 |
| Rock, blue | 20 | 330 |
| Rock, blue; sand | 10 | 340 |
| Rock, blue, hard | 10 | 350 |
| Rock, blue | 40 | 390 |
| Rock, blue; sand | 80 | 470 |
| Sand | 10 | 480 |
| Rock, blue | 20 | 500 |
| Rock, blue; sand | 30 | 530 |
| Rock, blue | 10 | 540 |
| Rock, blue; sand | 10 | 550 |
| Sand | 20 | 570 |
| **DD-1** | | |
| **Driller's log** | | |
| Sand, yellow; yellow clay | 10 | 10 |
| Clay, yellow | 10 | 20 |
| Clay, yellow; sand | 10 | 30 |
| Clay, yellow | 10 | 40 |
| Clay, yellow; sandstone | 10 | 50 |
| Sand; yellow clay; blue rock | 10 | 60 |
| Rock, blue | 150 | 210 |
| Rock, blue; thin shell rock layers | 10 | 220 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **DD-1—Continued** | | |
| Rock, blue | 20 | 240 |
| Rock, blue; thin shell rock layers | 20 | 260 |
| Rock, blue | 20 | 280 |
| Rock, blue; thin shell rock layers | 10 | 290 |
| Rock, blue; hard sandy shell rock layers | 10 | 300 |
| Clay, blue, sandy | 10 | 310 |
| Clay, blue, sandy; hard rock | 10 | 320 |
| Shell rock, blue, sandy; sand layers | 10 | 330 |
| Rock, hard; sand; shell rock layers | 10 | 340 |
| Shell rock; layers of sand and shell rock | 10 | 350 |
| Rock, blue | 10 | 360 |
| Rock, blue; shell rock | 10 | 370 |
| Rock, blue; shell rock layers | 10 | 380 |
| Rock, blue | 10 | 390 |
| Rock, blue; blue sandy clay | 10 | 400 |
| Clay, blue, sandy | 30 | 430 |
| Clay, blue, sandy; sand layers | 10 | 440 |
| Clay, blue, sandy | 10 | 450 |
| Clay, blue, sandy; blue rock | 10 | 460 |
| Rock, blue | 20 | 480 |
| Rock, blue; sandy clay | 10 | 490 |
| Rock, blue | 10 | 500 |
| Rock, blue; shell rock | 10 | 510 |
| **DD-7** | | |
| **Driller's log** | | |
| Topsoil; sandy clay | 10 | 10 |
| Clay, sandy; coarse-grained sand | 11 | 21 |
| Rock, blue | 219 | 240 |
| Rock, blue; blue sandy clay | 10 | 250 |
| Rock, blue | 20 | 270 |
| Rock, blue; shell rock layers | 10 | 280 |
| Rock, blue; sand | 10 | 290 |
| Rock, blue | 20 | 310 |
| Rock, blue, hard | 10 | 320 |
| Rock, blue; sandy clay | 10 | 330 |
| Rock, blue | 10 | 340 |
| Rock, blue; sand | 10 | 350 |
| Rock, blue | 10 | 360 |
| Rock, hard; blue sandy clay; shell rock | 10 | 370 |
| Rock, hard; sandy clay | 10 | 380 |
| Rock, hard | 10 | 390 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **DD-7—Continued** | | |
| Rock, hard; sand | 10 | 400 |
| Rock, hard | 10 | 410 |
| Rock, hard; sandy clay | 10 | 420 |
| Rock, hard | 30 | 450 |
| **DD-9** | | |
| **Driller's log** | | |
| Topsoil; red clay | 10 | 10 |
| Clay, red; yellow sand | 10 | 20 |
| Sand, yellow | 3 | 23 |
| Rock, blue | 197 | 220 |
| Rock, blue; shell rock | 10 | 230 |
| Rock, blue | 30 | 260 |
| Rock, blue; shell rock | 20 | 280 |
| Rock, hard, sandy | 10 | 290 |
| Clay, blue, sandy | 20 | 310 |
| Clay, blue, sandy; hard rock | 10 | 320 |
| Sand | 10 | 330 |
| Clay, sandy | 10 | 340 |
| Clay, blue, sandy | 10 | 350 |
| Sand, blue; shell rock | 10 | 360 |
| Rock, hard; sand | 10 | 370 |
| Clay, blue, sandy | 30 | 400 |
| Clay, blue, sandy; sand | 20 | 420 |
| Clay, blue, sandy | 20 | 440 |
| Clay, blue | 30 | 470 |
| Clay, blue, sandy; hard rock | 10 | 480 |
| Clay, blue, sandy | 40 | 520 |
| Clay, blue, sandy; hard rock layers | 10 | 530 |
| Clay, blue, sandy | 60 | 590 |
| Rock, blue | 10 | 600 |
| Clay, blue, sandy; blue rock | 30 | 630 |
| Clay, sandy | 10 | 640 |
| Clay, blue, sandy; blue rock | 10 | 550 |
| Clay, blue, sandy; coarse-grained sand | 10 | 660 |
| Sand, coarse; blue rock | 10 | 670 |
| Sand, coarse; blue sandy clay | 10 | 680 |
| Clay, blue, sandy; coarse-grained sand | 10 | 690 |
| Sand, coarse | 5 | 695 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **DD-11** Driller's log | | |
| Topsoil; clay | 10 | 10 |
| Sand | 58 | 68 |
| Clay, blue | 207 | 275 |
| Sandstone | 5 | 280 |
| Sand | 10 | 290 |
| Sand; clay | 30 | 320 |
| Sand; clay; rock | 10 | 330 |
| Sand; clay | 20 | 350 |
| Sand | 10 | 360 |
| Sand; clay | 50 | 410 |
| Clay | 50 | 460 |
| Clay, sandy | 10 | 470 |
| Clay, sandy; sand | 20 | 490 |
| Sand; rock | 20 | 510 |
| Sand; rock; clay | 40 | 550 |
| Sand; clay | 10 | 560 |
| Sand; clay; rock | 10 | 570 |
| Sand; thin rock layers | 10 | 580 |
| Sand; clay | 20 | 600 |
| Clay; sand | 10 | 610 |
| Clay, sandy | 20 | 630 |
| Sand; rock | 10 | 640 |
| Sand; clay | 10 | 650 |
| Sand; clay; rock | 40 | 690 |
| Sand | 88 | 778 |
| Clay, Tuscaloosa Group | 77 | 855 |
| Sand | 15 | 870 |
| Sand; clay | 10 | 880 |
| Sand | 10 | 890 |
| Sand; layers of clay and rock | 10 | 900 |
| Sand | 110 | 1,010 |
| **DD-12** Driller's log | | |
| Topsoil; sand | 10 | 10 |
| Sand, yellow | 17 | 27 |
| Clay, blue | 263 | 290 |
| Sand; sandy clay layers | 20 | 310 |
| Sand; sandy clay; rock layers | 10 | 320 |
| Sand; sandy clay layers | 10 | 330 |
| Sand; clay layers | 10 | 340 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **DD-12—Continued** | | |
| Clay | 10 | 350 |
| Clay, sandy | 20 | 370 |
| Clay | 10 | 380 |
| Clay, sandy | 20 | 400 |
| Sand; clay | 60 | 460 |
| Sand; sandy clay | 10 | 470 |
| Clay, sandy | 10 | 480 |
| Clay, sandy; rock; sand | 30 | 510 |
| Clay, sandy; rock | 10 | 520 |
| Clay, sandy; clay | 10 | 530 |
| Clay, sandy; clay; rock | 10 | 540 |
| Clay, sandy; clay | 20 | 560 |
| Sand; rock; clay | 10 | 570 |
| Sand; clay | 20 | 590 |
| Clay | 10 | 600 |
| Sand; clay | 40 | 640 |
| Sand, coarse | 10 | 650 |
| Sand, coarse; rock; clay | 10 | 660 |
| Sand, coarse; layers of clay and rock | 10 | 670 |
| Rock; clay; coarse-grained sand | 20 | 690 |
| Clay; coarse-grained sand | 10 | 700 |
| Sand | 15 | 715 |
| Clay, Tuscaloosa Group | 105 | 820 |
| Sand | 8 | 828 |
| Clay | 12 | 840 |
| Sand | 80 | 920 |
| Sand; hard layers | 10 | 930 |
| **DD-22 Driller's log** | | |
| Clay | 15 | 15 |
| Sand, red | 6 | 21 |
| Chalk | 269 | 290 |
| Sandstone | 8 | 298 |
| Sand | 40 | 338 |
| Rock | 1 | 339 |
| Sand | 11 | 350 |
| Rock | 1 | 351 |
| Sand | 19 | 370 |
| Gumbo | 30 | 400 |
| Marl | 15 | 415 |
| Sand | 23 | 438 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **DD-22—Continued** | | |
| Gumbo | 12 | 450 |
| Marl | 15 | 465 |
| Sand | 102 | 567 |
| **FF-1** | | |
| **Driller's log** | | |
| Soil, yellow, sandy | 3 | 3 |
| Sand, brown, fine; varicolored clay | 2 | 5 |
| Sand | 4 | 9 |
| Clay, gray | 1 | 10 |
| Sand; gravel | 4 | 14 |
| Clay, white | 1 | 15 |
| Chalk, white | 4 | 19 |
| Chalk, light-blue | 40.5 | 59.5 |
| Chalk, blue | 155 | 214.5 |
| Chalk; olive calcareous clay | 20.5 | 235 |
| Chalk, hard; soft layers | 19.5 | 254.5 |
| Chalk, blue | 17 | 271.5 |
| Chalk, white, hard | 6.5 | 278 |
| Chalk | 240 | 518 |
| Chalk, hard | 5 | 523 |
| Chalk | 36 | 559 |
| Chalk, clayey; green glauconitic sandstone layers | 8 | 567 |
| Sandstone | 1 | 568 |
| Sand, yellow-green, fine, glauconitic | 4 | 572 |
| Sand; sandstone | 5 | 577 |
| Sand, yellow-green, fine | 6 | 583 |
| Sand; clay; sandstone | 12 | 595 |
| Sand, packed | 10 | 605 |
| Sand, clayey, packed | 12 | 617 |
| Sand, packed | 3 | 620 |
| Clay, green; fine-grained sand layers | 7 | 627 |
| Sand, green, fine, packed; green clay layers | 55 | 682 |
| Clay, green, fossiliferous; sand layers | 20 | 702 |
| Sand; clay | 13 | 715 |
| Sand, packed | 10 | 725 |
| Sand; white fossiliferous clay | 14 | 739 |
| Sand, green, fine; green clay | 22.5 | 761.5 |
| Hard | 3.5 | 765 |
| Sand; clay layers | 5 | 770 |
| Clay | 33 | 803 |
| Sand, green, fine | 2 | 805 |
| Hard | 1 | 806 |

Table 4.—*Sample and drillers' logs of wells in Greene County*—Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **FF-1—Continued** | | |
| Sand | 1 | 807 |
| Clay | 10 | 817 |
| Sand, green, very fine | 5 | 822 |
| Clay | 1 | 823 |
| Hard | 1 | 824 |
| Sand, green, very fine | 8 | 832 |
| Clay; sand | 4 | 836 |
| Clay | 12 | 848 |
| Sand; clay; fossiliferous sandstone | 6 | 854 |
| Sand; clay layers | 11 | 865 |
| Sandstone layers | 4 | 869 |
| Clay | 10 | 879 |
| Sand; sandstone layers | 3 | 882 |
| Clay, gray and green | 7 | 889 |
| **GG-1** | | |
| **Driller's log** | | |
| Topsoil; yellow clay | 10 | 10 |
| Clay, yellow | 10 | 20 |
| Sand | 17 | 37 |
| Clay, blue | 323 | 360 |
| Clay, blue; sand | 10 | 370 |
| Clay, blue; green sand | 10 | 380 |
| Clay, blue; sandy clay | 10 | 390 |
| Clay, blue; fine-grained sand | 40 | 430 |
| Clay, blue | 40 | 470 |
| Clay, shaly | 50 | 520 |
| Clay, shaly; sand | 10 | 530 |
| Clay, shaly | 10 | 540 |
| Clay, shaly; sand | 10 | 550 |
| Clay, shaly | 100 | 650 |
| Clay, shaly; sand | 10 | 660 |
| Clay, shaly | 100 | 760 |
| Clay, shaly; sand | 10 | 770 |
| Sand; sandy clay | 10 | 780 |
| Sand | 10 | 790 |
| Sand; shaly clay | 10 | 800 |
| Sand | 10 | 810 |
| Clay, shaly | 20 | 830 |
| Clay, Tuscaloosa Group | 10 | 840 |

Table 5.—*Summary of geologic units and their water-bearing properties in Greene County*

| System | Series | Stratigraphic unit | | Thickness (feet) | Lithologic character | Water-bearing properties |
|---|---|---|---|---|---|---|
| Quaternary | Pleistocene and Recent | Alluvial deposits (terrace deposits and alluvium) | | 0-70 | Gravel, sand, and clay. | Yields small supplies of water to shallow wells. |
| Cretaceous | Upper Cretaceous | Selma Group | Demopolis Chalk | 0-275 | Chalk and marl. | Relatively impermeable; not a source of ground water. |
| | | | Arcola Limestone Member | 0-275 | Limestone, chalk, and marl. | Relatively impermeable; not a source of ground water. |
| | | | Mooreville Chalk | | | |
| | | Eutaw Formation | Tombigbee Sand Member | 0-170 | Tombigbee Sand Member consists of fine-grained sand and layers of calcareous sandstone and sandy chalk. Lower part, massive to thin-bedded sand and gray clay. | Yields small to moderate supplies of water to wells. Water locally high in chloride and iron content in the southern part of the county. |
| | | McShan Formation | | 0-250 | Upper part, thin-bedded sand and gray clay. Lower part, massive to thin-bedded sand and gray clay. | Yields moderate to large supplies of water to wells. Principal source of water in Greene County. Water locally high in chloride content in the southern part of the county and locally high in iron content throughout the county. |
| | | Tuscaloosa Group | Gordo Formation | 270-290 | Upper part chiefly clay, some sand beds; lower part chiefly sand and gravel; some sandy clay and clay beds. | Yields small to large supplies of water to wells. Potentially a source of water throughout the county. Water is locally high in chloride content in the southern part of the county and locally high in iron content throughout the county. |
| | | | Coker Formation | 550-850 | Upper part chiefly clay, some sand beds; middle part alternating thin beds of sand and clay; lower part chiefly sand and gravel, some clay beds. | Yields small to large supplies of water to wells. Potentially a source of water throughout the county. Water is locally high in iron content in the northern part of the county. |

Table 6.—*Summary of ground-water use and flow from wells in Greene County, 1965*

(in gallons per day)

| | | Geologic source | | | |
|---|---|---|---|---|---|
| | | Coker | Gordo | McShan | Eutaw |
| City of Eutaw, public supply | 170,000 | | | 170,000 | |
| Industrial use, estimated | 80,000 | | 30,000 | 50,000 | |
| Rural-domestic and stock use, estimated | 900,000 | 120,000 | 120,000 | 620,000 | 40,000 |
| Total use | 1,150,000 | 120,000 | 150,000 | 840,000 | 40,000 |
| Calculated discharge from flowing wells inventoried (111)[1] | 2,740,000 | 380,000 | 390,000 | 1,900,000 | 70,000 |

[1] Estimated to be 75 percent of the total discharge from flowing wells in the county.