GEOLOGY AND GROUND-WATER RESOURCES OF GREENE COUNTY, ALABAMA

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

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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.

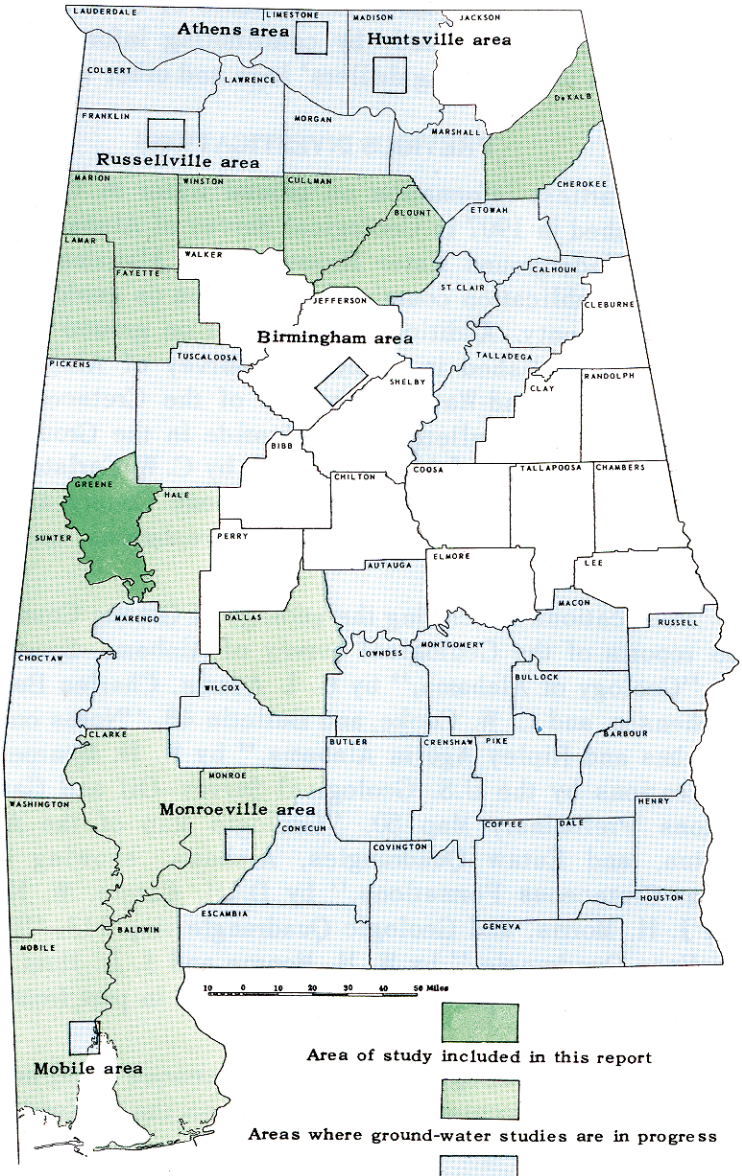

Figure 1.—Map of Alabama showing area studied and areas of other ground-water studies.

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

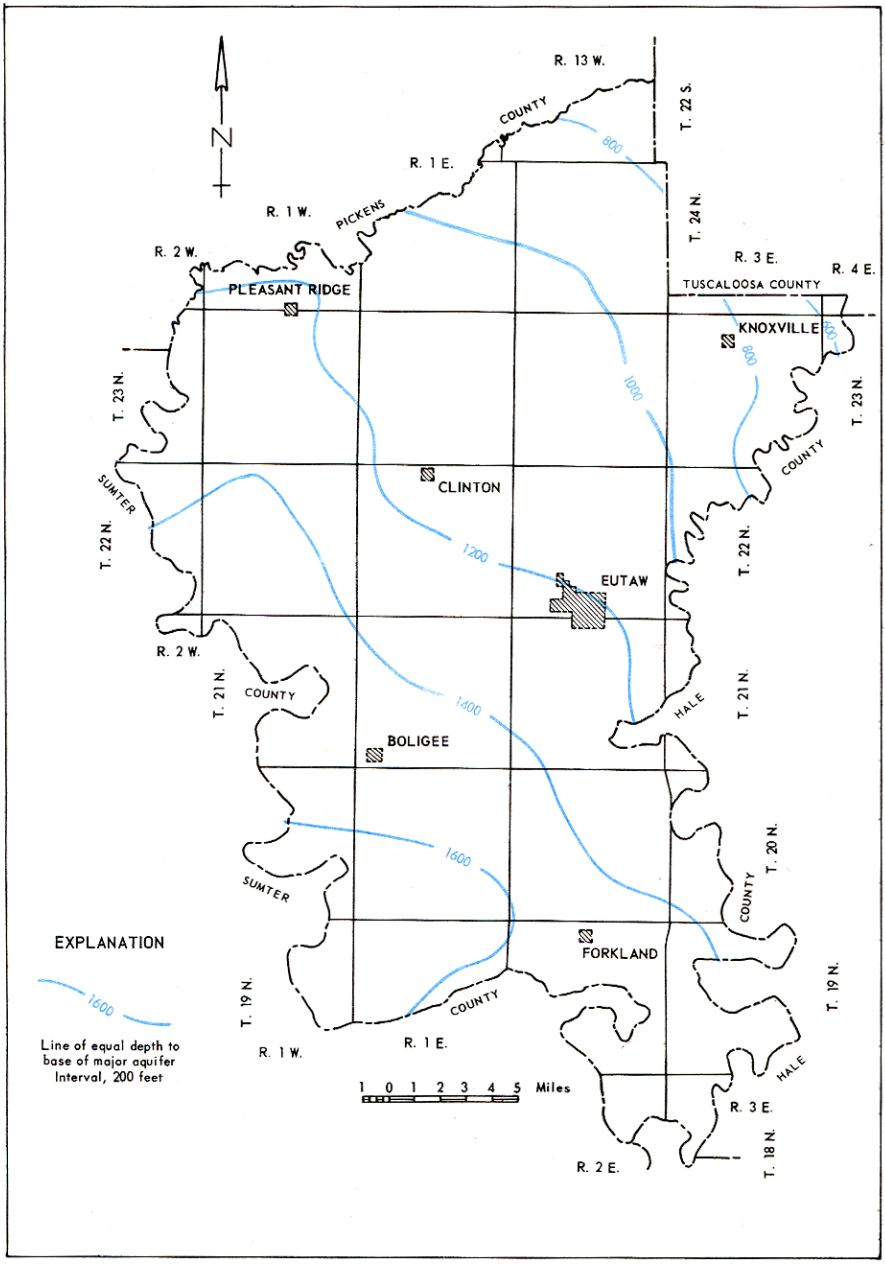

Figure 2.—Generalized depth to base of major aquifer, Coker Formation.

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).

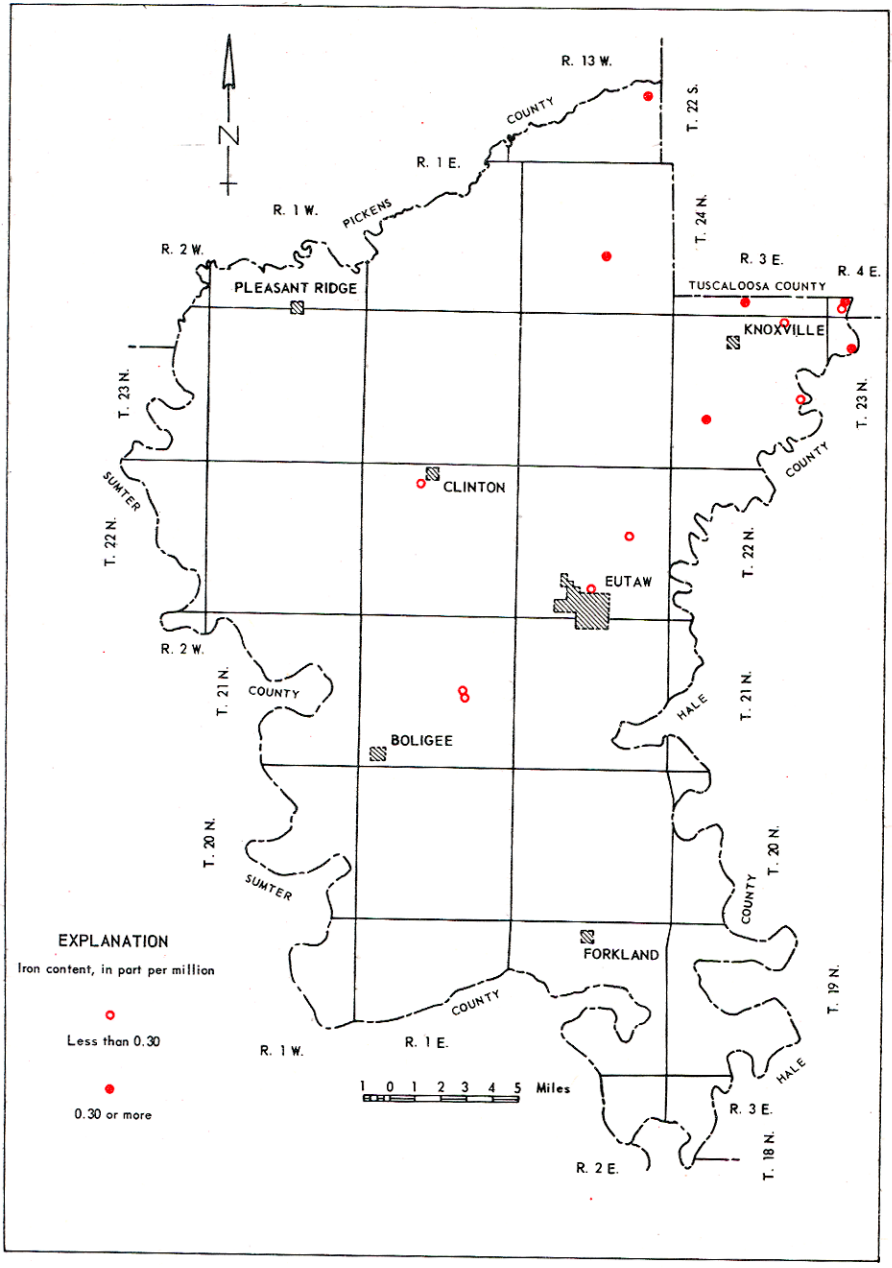

Figure 3.—Distribution of iron in water from the Coker Formation.

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.

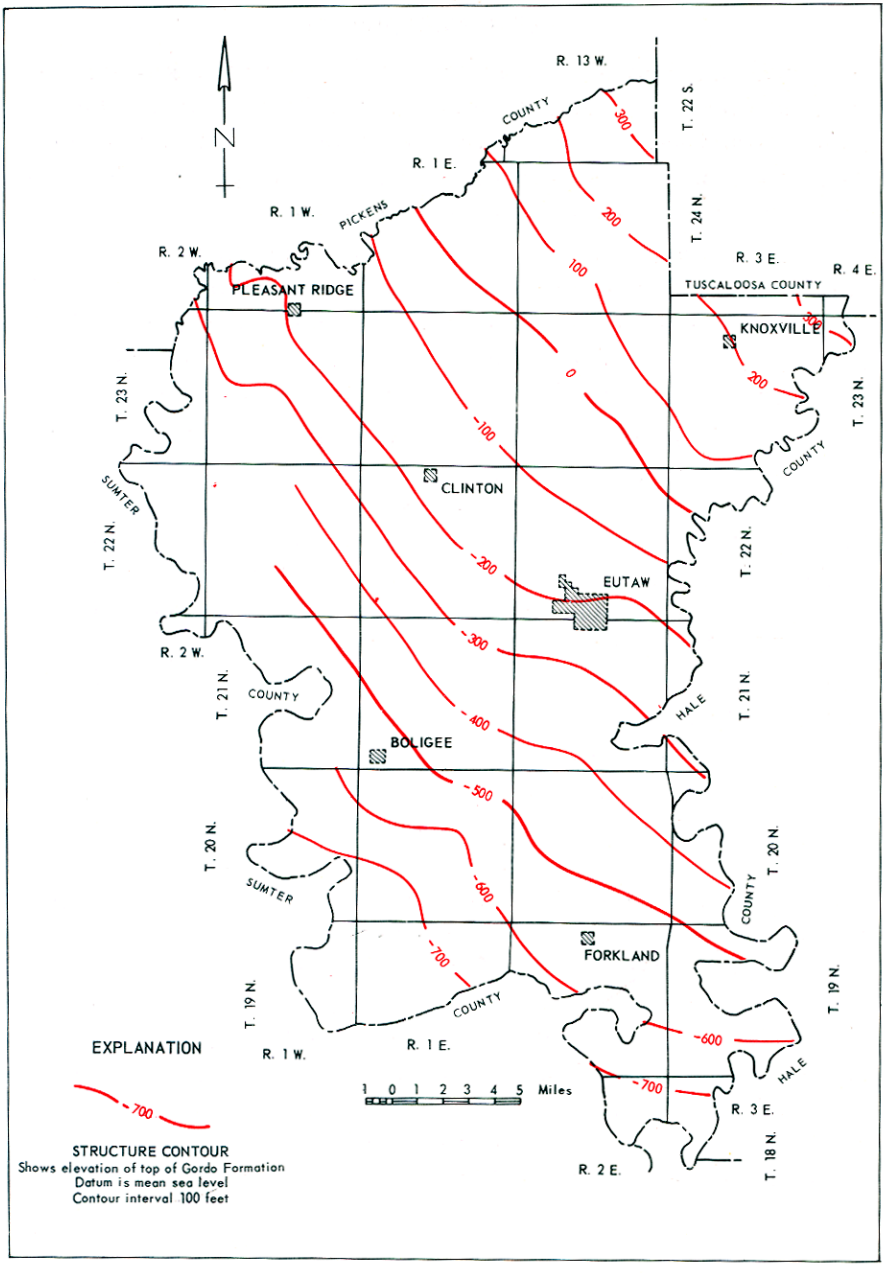

Figure 4.—Generalized structure-contour map of top of the Gordo Formation.

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.

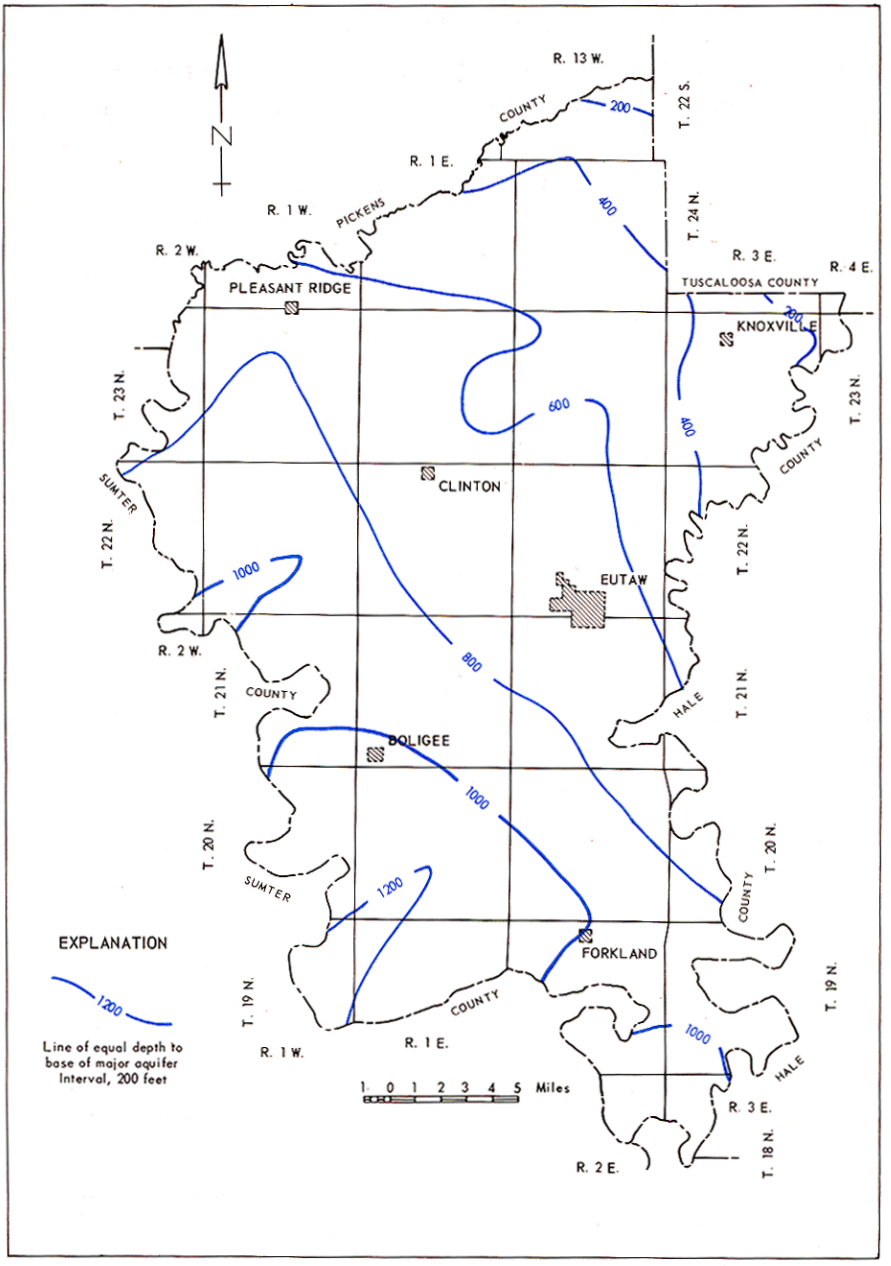

Figure 5.—Generalized depth to base of major aquifer, Gordo Formation.

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.

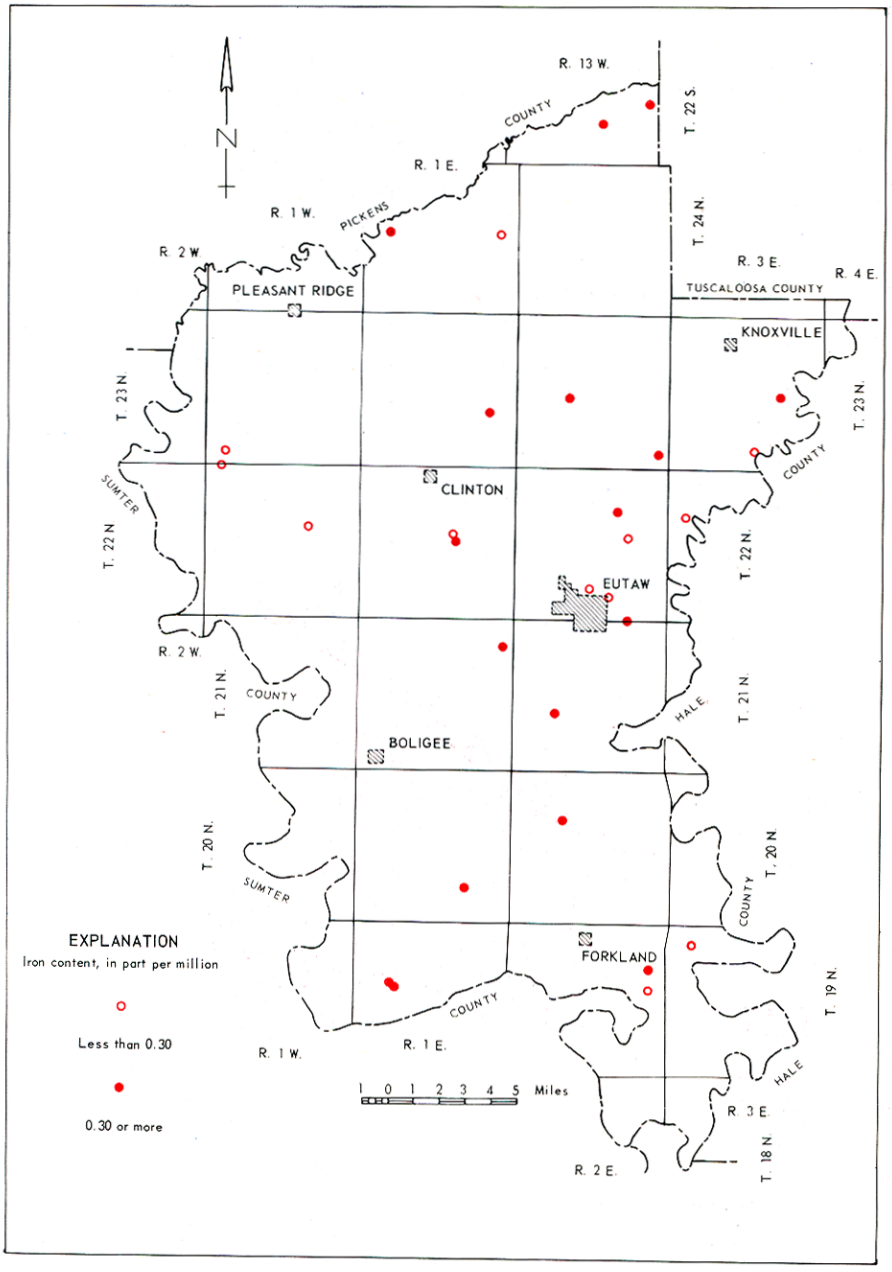

Figure 6.—Distribution of iron in water from the Gordo Formation.

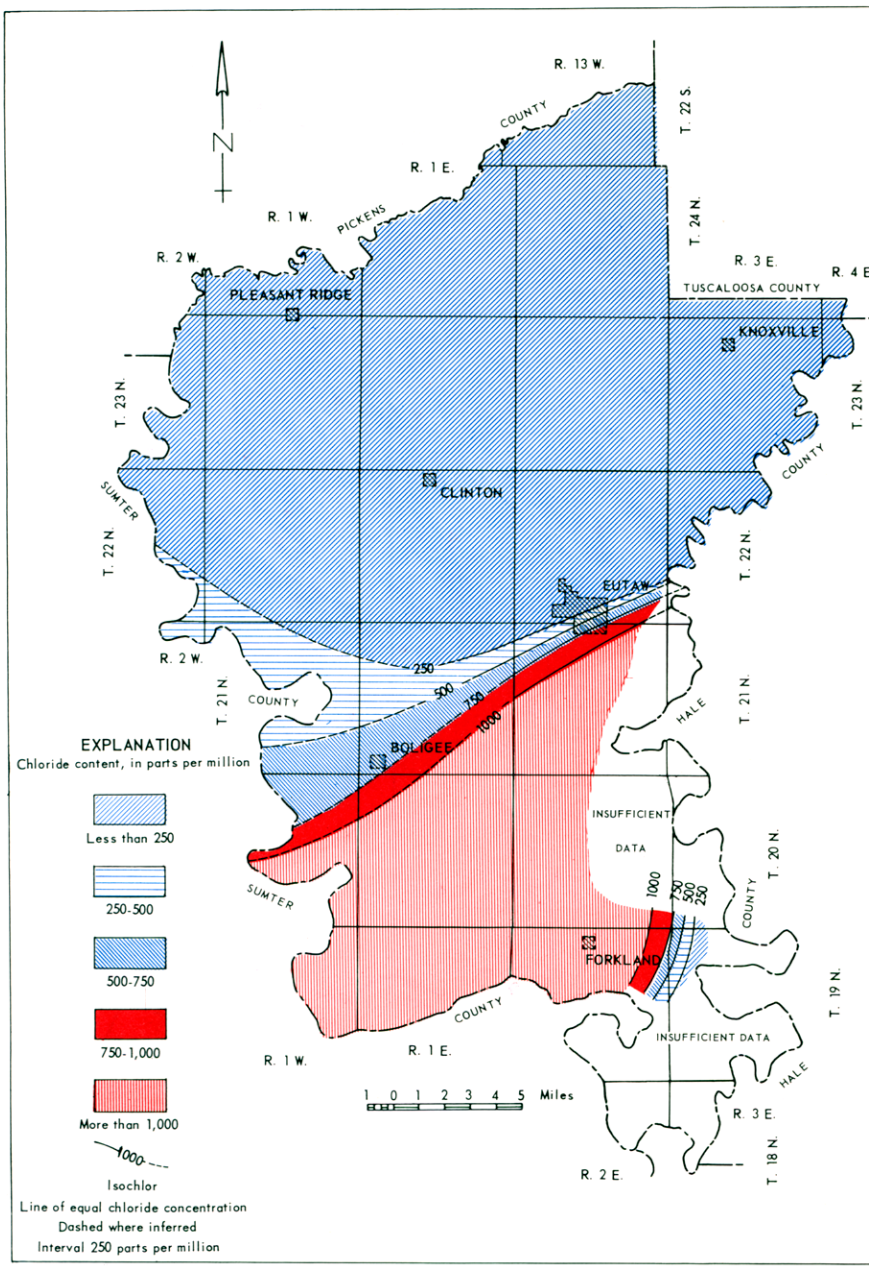

Figure 7.—Distribution of chloride in water from the Gordo Formation.

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

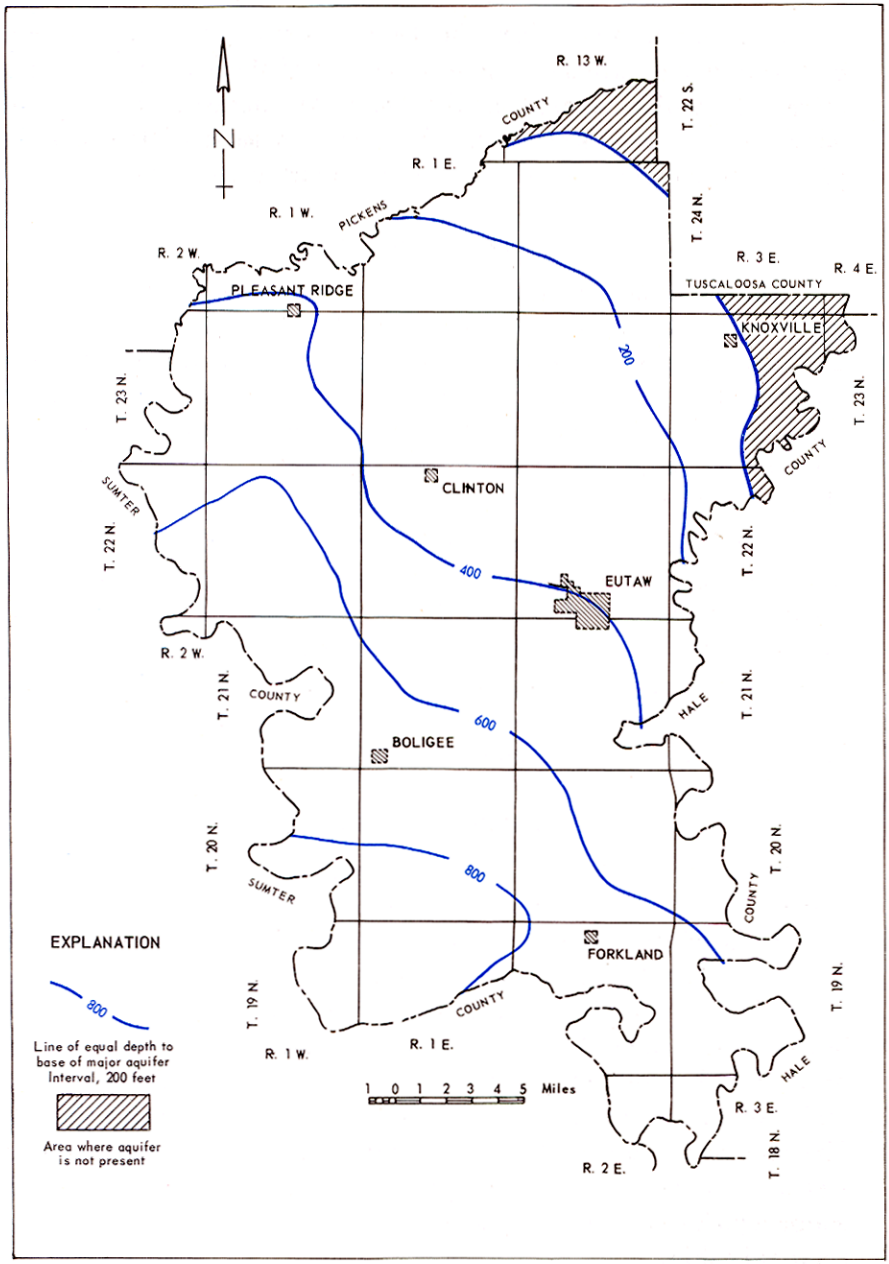

Figure 8.—Generalized depth to base of major aquifer, McShan Formation.

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.

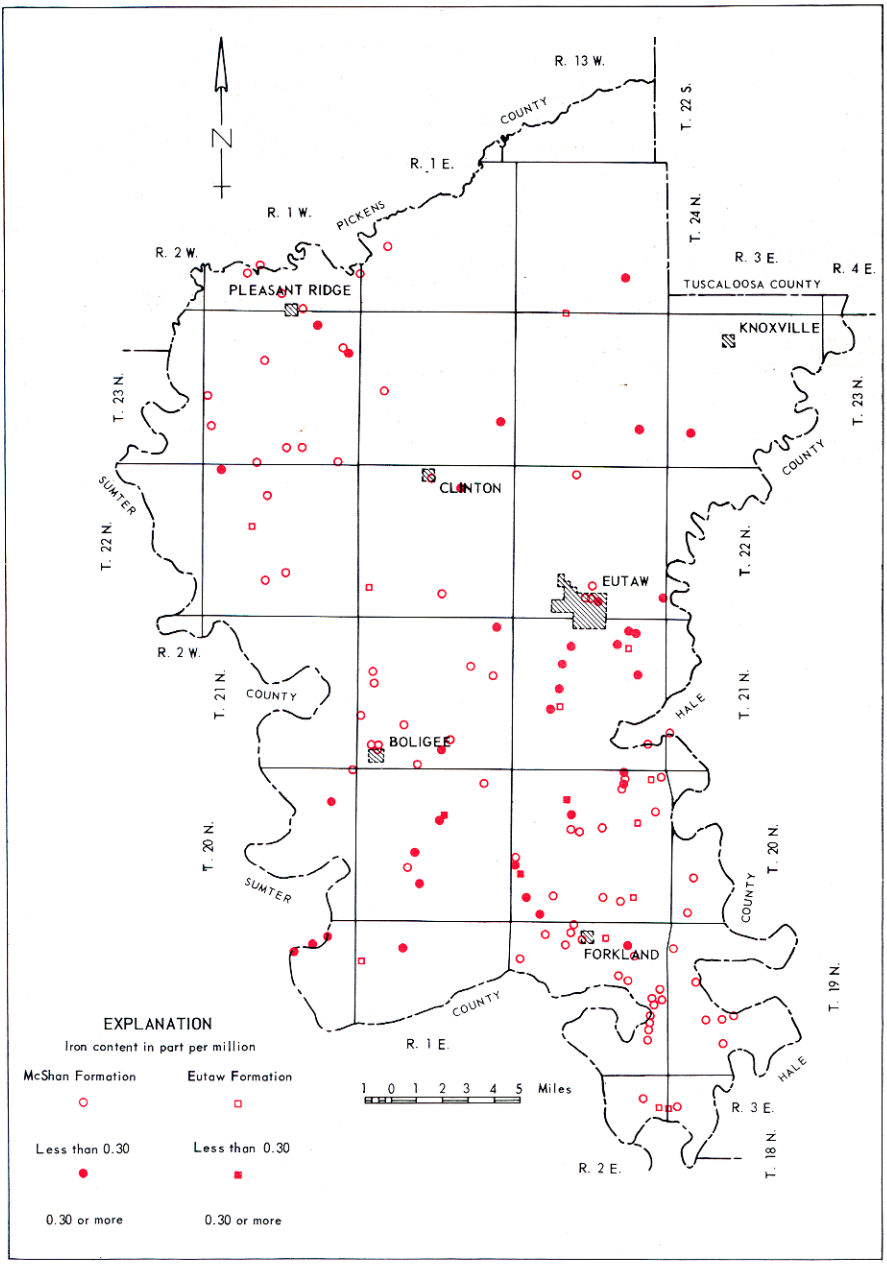

Figure 9.—Distribution of iron in water from the McShan and Eutaw Formations.

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.

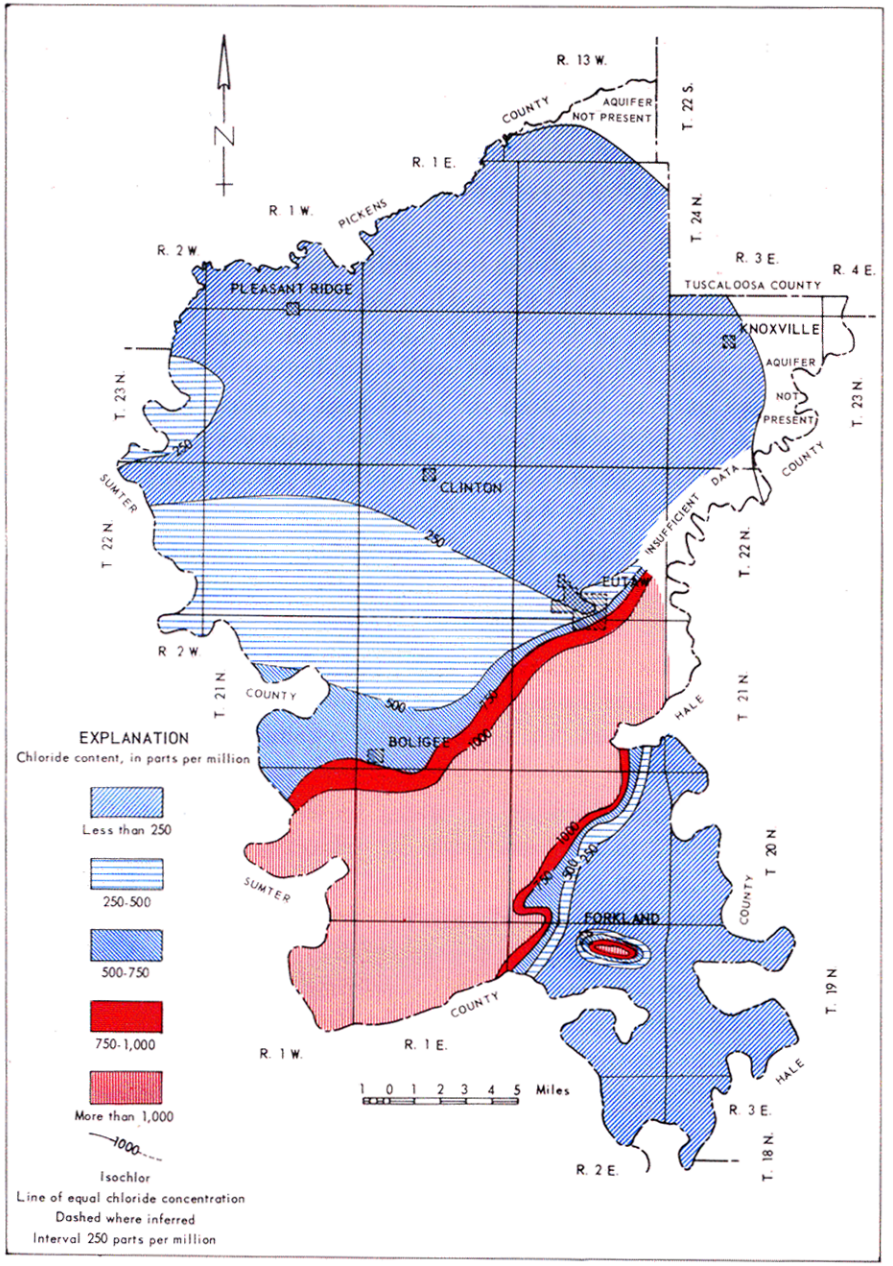

Figure 10.—Distribution of chloride in water from the McShan Formation.

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.

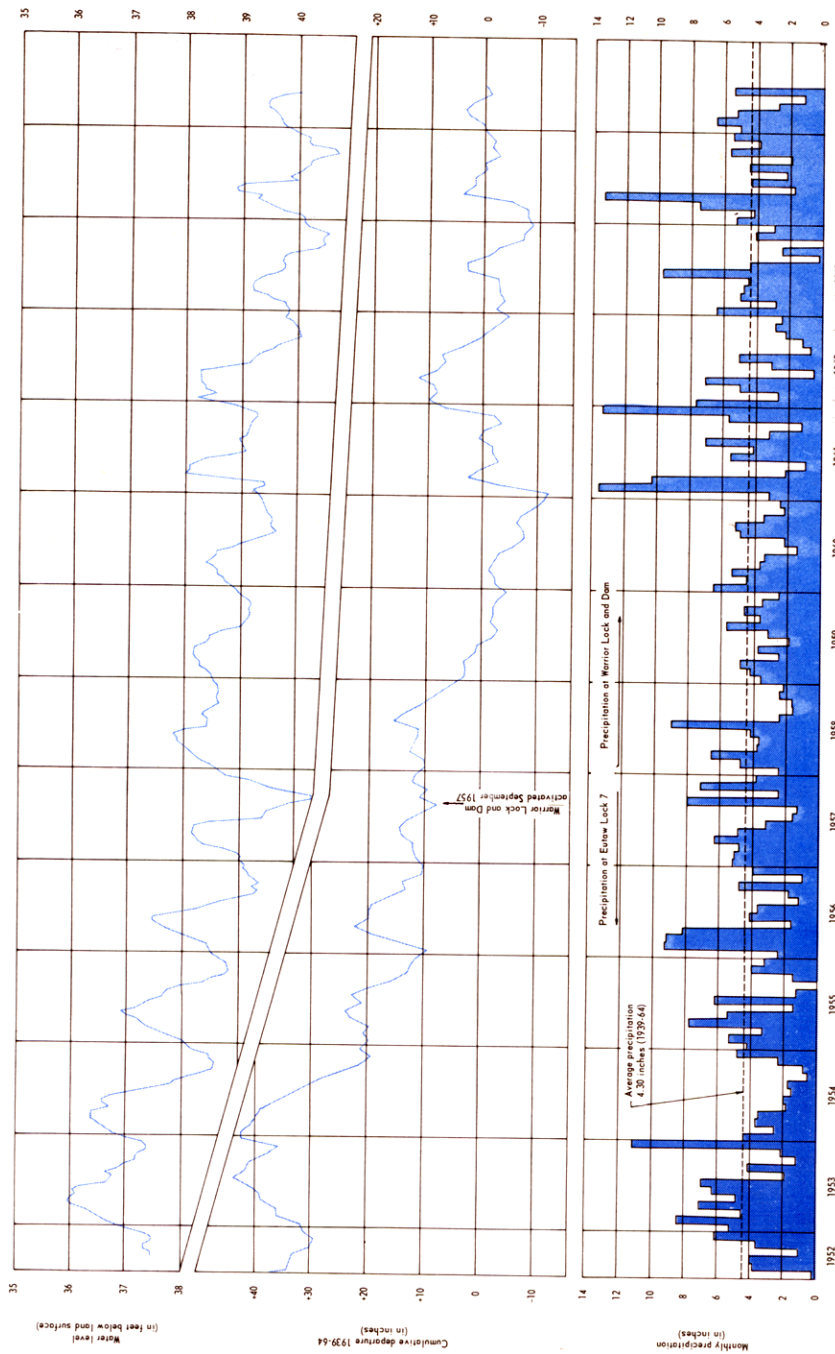

Figure 11.—Monthly precipitation, cumulative departure from average precipitation, and hydrograph of well R-11.

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. Provide water storage	2. Depth to aquifers. See text "Ground-Water Sources," pl. 2, figs. 2, 5, 8, and table 1.
2. Decreasing or cessation of flow from wells	2. Declining water levels, see problem 4		
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.
Water-bearing unit: Kck, Coker Formation; Kg, Gordo Formation; Km, McShan Formation; Ke, Eutaw Formation; Qt, terrace deposits; Qal, alluvium.
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.

Well	Owner	Driller	Type	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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 + 5.5	4- 2-14 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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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 Francisco 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 0.5 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 + .7	11-29-40 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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
*R-12	City of Eutaw.....	Layne-Central Co.	D	441	16, 10	Km	205	83 85.8	1952 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 34.4	12- 3-49 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.

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 + 4.5	9- 6-55 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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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	1¼	Km	142	3	1964	N	N	
AA-1	Dollarhide Hunting Club.	.....	D	250	4	Km	93	+ 22.9 + 20.4	9-20-55 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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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 19	8- 1-46 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 35	2- 6-63 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 + 14.0	10-19-40 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		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
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 $CaCO_3$		pH
									Calcium, magnesium	Noncarbonate	
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 $CaCO_3$		pH
									Calcium, magnesium	Noncarbonate	
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		
Sample log		
(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	650
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 Mooreville Chalk	0-275	Limestone, chalk, and marl.	Relatively impermeable; not a source of ground water.
		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.