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WATER AVAILABILITY AND GEOLOGY OF SUMTER COUNTY, ALABAMA

By Marvin E. Davis, Thomas H. Sanford, Jr., and Patrick O. Jefferson

ABSTRACT

Geologic units that crop out in Sumter County include the Selma Group of Late Cretaceous age; the Midway and Wilcox Groups of Tertiary age; and terrace deposits and alluvium of Quaternary age. The Tuscaloosa Group, consisting of the Coker and Gordo Formations, and Eutaw Formation of Late Cretaceous age underlie the entire county. The Cretaceous units dip southwestward about 45 feet per mile and strike northwestward. They consist chiefly of deposits of sand, gravel, chalk, and clay.

Potential sources of large supplies of ground water are major aquifers in the Coker, Gordo, and Eutaw Formations; expected yields are 1.5 mgd (million gallons per day) or more per well. The Naheola and Nanafalia Formations, Tuscahoma Sand, and terrace deposits and alluvium are expected to yield 10 to 50 gallons per minute per well.

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The average annual runoff originating in Sumter County is about 17 inches or 0.8 mgd per square mile. The Tombigbee River, the largest potential source of surface water in the county, has an average flow of about 15,100 mgd and a median annual 7-day low flow in excess of 900 mgd where it leaves the county. Noxubee and Sucarnoochee Rivers and their tributaries also are potential sources of surface water. These rivers have average flows in excess of 700 mgd and median annual 7-day low flows in excess of 30 mgd along their lower reaches.

Water from most streams in the county contains less than 30 mg/l (milligrams per liter) chloride, and ranges from soft to hard. The iron content and color of the water in some streams may be objectionable for some uses. Water from the major aquifers underlying the northern part of the county contains less than 500 mg/l chloride, less than 0.3 mg/l iron, and is soft to moderately hard; however, in the central and southern parts of the county, water from the major aquifers contains more than 500 mg/l chloride. Water from minor aquifers contains less than 20 mg/l chloride but locally contains more than 0.3 mg/l iron.

Water use in Sumter County in 1968 was about 1.7 mgd, most of which was from surface-water sources. Less than one percent of the potential water resources was being utilized.

INTRODUCTION

A statewide study of the geology and availability of water resources in Alabama is being conducted by the U. S. Geological Survey in cooperation with the Geological Survey of Alabama. The study is designed to map the geology and describe and appraise the availability of surface water and ground water of seven areas generally corresponding to major river basins. The work is planned, conducted, and the results published on the basis of county units. The boundaries of the seven areas and the status of the studies are shown on figure 1.

Figure 1 (caption on next page) belongs near here.

This report for Sumter County describes the general geology and water availability of part of the study area designated "Water Resources of Upper Tombigbee-Black Warrior River Basin" (AL 66-020C). The purpose of this report is to present (1) basic information on the water resources of Sumter County in such a manner that a rapid appraisal and comparison with the water resources of other counties can be made, and (2) a geologic map at a scale of 1 inch equals 1 mile.

Figure 1. --Status of geologic and water-availability studies in Alabama

Several published reports containing geologic and hydrologic information for Sumter County are listed in the selected references. Previous investigations of the geology and water resources in the county have been confined to small specific areas or included in reconnaissance studies with several other counties. A detailed geologic map of the Epes quadrangle, which includes about one-fifth of Sumter County, in the vicinity of Epes and Livingston was prepared by W. H. Monroe and J. L. Hunt (1958). Reports by Peirce and Geurin (1959), Peirce and Rogers (1966), and Peirce (1967) contain information on the low flow, average flow, and flow duration of selected streams. The reports also describe physical and climatological features of Sumter County and all or part of 27 other counties in west-central and southwestern Alabama. Those reports, however, are not presented pictorially so as to compare surface-water data in Sumter County with other counties in Alabama.

PHYSIOGRAPHY AND DRAINAGE

Sumter County is in the East Gulf Coastal Plain section of the Coastal Plain physiographic province (Fenneman, 1938, p. 67-75). The East Gulf Coastal Plain section is subdivided into physiographic belts that extend southeastward across central and southern Alabama. The delineation of the belts is based on distinctive topographic features and generally represents erosional characteristics of outcropping geologic formations. Four of these belts are represented in Sumter County: the Black Prairie, Ripley Cuesta, Flatwoods, and Southern Red Hills.

The Black Prairie belt is represented by gently rolling hills of low relief and prairie land, and receives its name from the black residual soil formed on underlying chalk beds. The Ripley Cuesta belt is formed on calcareous clayey sand, sandstone, and chalk, and is characterized by a series of ridges ~~which~~ high rise sharply 200 to 300 feet above the Black Prairie and slope gently southward to merge with the Flatwoods. The Flatwoods belt is underlain by clay and is characterized by a low and relatively level surface. The Southern Red Hills belt is underlain by sand, clay, claystone, and sandstone and rises 200 to 400 feet above the Flatwoods as a dissected upland plain. Flood plains and terrace remnants dissect and modify the belted physiography throughout the county.

The Tombigbee River is the eastern boundary of Sumter County. Tributaries of the river drain all of the county and generally flow toward the east from Mississippi. Major streams draining the northern part of the county are the Noxubee River and Bodka Creek. The southern part is drained principally by the Sucarnoochee River and its tributaries and Kinterbish Creek.

GEOLOGY

General Geology

Geologic units that crop out in Sumter County are shown on figure 2.

Figure 2 (caption on next page) belongs near here.

The units are of sedimentary origin and consist mainly of sand, clay, gravel, silt, chalk, and sandstone. These deposits range in age from Late Cretaceous to Quaternary. The outcropping units include, in ascending stratigraphic order: the Mooreville and Demopolis Chalks, Ripley Formation, and Prairie Bluff Chalk of the Selma Group of Late Cretaceous age; the Porters Creek and Clayton Formations, undifferentiated, and Naheola Formation of the Midway Group, and Nanafalia Formation and Tuscahoma Sand of the Wilcox Group of Tertiary age. The units are overlain in places by sediments of Quaternary age which, on the geologic map, are subdivided into terrace deposits, and alluvium and low terrace deposits. Geologic units that underlie the Mooreville Chalk in the subsurface and crop out north and northeast of Sumter County include the Coker and Gordo Formations of the Tuscaloosa Group and the Eutaw Formation of Late Cretaceous age. The total thickness of the deposits in Sumter County to the base of the Coker Formation ranges from about 1, 600 feet in the northeast corner of the county to about 3, 600 feet in the southwest corner. A summary of the geologic units and their lithology is given in table 1.

Figure 2. --Geologic map of Sumter County, ~~Alabama.~~

The Cretaceous deposits strike northwestward and dip southwestward about 45 feet per mile. Locally the beds of the Demopolis Chalk, Ripley Formation, and Prairie Bluff Chalk are disrupted at the surface by a zone of faulting, known as the Livingston fault zone, that trends southeastward from the vicinity of Sumterville (fig. 2). This fault zone is composed of a series of parallel horsts and grabens separated by reverse faults, that have displacements ranging from a few inches to 100 feet (Monroe and Hunt, 1958).

Geologic contacts shown on the map conform with those mapped in the Epes quadrangle by Monroe and Hunt (1958), and are in general agreement with those mapped by Monroe (1941) and MacNeil (1946).

Cretaceous System

Tuscaloosa Group

The Tuscaloosa Group consists of the Coker and Gordo Formations. The Coker, the lower formation of the Tuscaloosa Group, is the basal unit of the Upper Cretaceous Series in Alabama. The formation is present in the subsurface throughout Sumter County. The Coker unconformably overlies deposits of the Lower Cretaceous Series (Boswell and others, 1965, fig. 8). The formation ranges in thickness from about 800 to 900 feet and consists of olive-gray to yellowish-gray carbonaceous clay interbedded with fine- to coarse-grained glauconitic micaceous sand, chert gravel, and fine- to coarse-grained sandstone. The sands generally become progressively finer grained and less abundant toward the top of the formation where clay predominates; however, medium- to coarse-grained sand and gravel beds are present in the upper part in some places. Massive beds of coarse-grained sand and gravel, averaging about 250 feet in thickness, constitute the basal part of the formation.

The Gordo Formation, the upper unit of the Tuscaloosa Group, unconformably overlies the Coker Formation in the subsurface of Sumter County. The formation ranges in thickness from about 300 to 450 feet and consists of light-gray to mottled red and gray carbonaceous micaceous clay and shale and light-gray fine to very coarse grained sand and chert gravel. The upper part of the formation consists of massive clay and lenticular beds of sand; poorly sorted coarse-grained sand and chert gravel beds are prevalent in the lower part. The base of these sand and gravel beds is generally recognized as the contact between the Coker and Gordo Formations.

Eutaw Formation

The Eutaw Formation, as mapped in Sumter County, includes all beds between the Tuscaloosa Group and the Selma Group. In some counties in western Alabama the deposits between the overlying Selma Group and the underlying Tuscaloosa Group have been designated as the McShan Formation in the lower part and the Eutaw Formation in the upper part. However, because of the difficulty in determining the contact between the McShan and Eutaw Formations in the subsurface, these deposits were not differentiated in Sumter County.

The Eutaw Formation unconformably overlies the Gordo Formation in the subsurface of Sumter County. The formation is about 400 feet thick and consists of light-gray to yellowish-brown fine- to medium-grained glauconitic sand and light-gray to green micaceous laminated clay. A massive bed of fine to medium-grained glauconitic sand, which contains fossil shells and locally a few thin beds of light-gray glauconitic sandstone and sandy chalk, comprises the upper part of the formation. The lower part of the formation consists of thin to massive beds of fine- to coarse-grained glauconitic sand interbedded with layers of light-gray to gray laminated clay. Locally, sand beds are thin or absent in the middle part of the formation.

Selma Group

The Mooreville Chalk disconformably overlies the Eutaw Formation and crops out in a narrow belt in the northeast corner of Sumter County. The formation ranges in thickness from about 225 to 360 feet and consists chiefly of light-gray silty fossiliferous chalk which weathers to white or light yellowish gray.

The Demopolis Chalk unconformably overlies the Mooreville Chalk and crops out in a belt as much as 8 miles wide in the northeastern part of the county. The formation ranges in thickness from about 450 to 520 feet and consists mainly of light-gray silty micaceous fossiliferous chalk, which weathers to light gray or white at outcrops. The lower part of the Demopolis Chalk consists of a thin bed of fossiliferous silty chalk that contains the index fossil Diploschiza cretacea (Conrad). The basal beds are overlain by nearly pure chalk which, according to published analyses (Emmons and Hayes, 1904, p. 445-446), contains from 75 to 90 percent calcium carbonate ($CaCO_3$).

The Ripley Formation conformably overlies the Demopolis Chalk and crops out in a northwestward trending belt about 1 to 3 miles wide in the north-central part of the county. It generally ranges in thickness from 35 to 220 feet. The formation consists chiefly of gray very fine to fine-grained micaceous, calcareous fossiliferous clayey sand interbedded with dark-gray calcareous fossiliferous sandy clay and light-gray chalk. The lower part of the Ripley locally contains a few thin beds of micaceous, calcareous hard sandstone.

The Prairie Bluff Chalk unconformably overlies the Ripley Formation and crops out in a northwestward trending belt across the county. The formation is about 70 feet thick along the outcrop in the Epes quadrangle (Monroe and Hunt, 1958); the unit is about 30 feet thick westward in Mississippi (Hughes, 1958, p. 71) and less than 10 feet thick eastward in Marengo County (Newton and others, 1961, p. 37). The unit in Sumter County consists predominantly of white fossiliferous sandy chalk.

Tertiary System

Midway Group

The Clayton and Porters Creek Formations, undifferentiated, unconformably overlie the Prairie Bluff Chalk and crop out in a northwestward trending belt from 5 to 8 miles wide through the southwestern part of the county. The Clayton is not separated from the overlying Porters Creek on the geologic map because of its thinness and narrow width of outcrop. The combined thickness of the Clayton and Porters Creek ranges from about 330 to 520 feet. The Clayton consists of yellowish-gray silty calcareous clay, light-olive-gray clayey glauconitic fine-grained sandstone, and silty chalk. The Porters Creek consists of dark-gray to black micaceous noncalcareous clay. The unit locally contains a few thin beds of light-gray very fine to coarse-grained quartzose sand in the upper and middle parts and a thin bed of light-gray silty limestone near the base.

The Naheola Formation overlies the Porters Creek Formation and crops out in the southwestern part of the county. The Naheola is about 200 feet thick and consists of two members--the Oak Hill Member at the bottom and the Coal Bluff Marl Member at the top. The Oak Hill Member consists of about 150 feet of laminated to thin-bedded very fine to fine-grained sand and silty clay. The top of the member is marked by one or more beds of lignite that generally are 1 to 3 feet thick. The Coal Bluff Marl Member consists chiefly of about 50 feet of white and yellow fine- to coarse-grained sand that locally is crossbedded and contains clay pebbles. Sand in this member is lithologically similar to sand in the overlying Nanafalia Formation. Because of the similar lithologies and the indistinct contact, the Coal Bluff Marl Member is mapped with the Nanafalia Formation in Sumter County. The contact mapped as the top of the Naheola Formation on the geologic map (fig. 2) represents / the top of the Oak Hill Member.

Wilcox Group

The Nanafalia Formation unconformably overlies the Naheola Formation and crops out in the southwestern part of the county. The formation is about 120 feet thick and consists of white and yellow fine- to coarse-grained crossbedded sand with some clay pebbles, light-gray to yellowish-orange very fine to coarse-grained glauconitic fossiliferous sand and sandstone, and gray silty fossiliferous clay and claystone. The basal crossbedded sand is overlain by beds of gray silty clay, glauconitic sand, and calcareous sandstone that contain abundant Ostrea thirsae (Gabb). The upper part of the formation consists mainly of dark-gray silty clay containing thin beds of fine-grained glauconitic sand and claystone. The Nanafalia Formation as mapped in Sumter County (fig. 2) includes the underlying Coal Bluff Marl Member of the Naheola Formation. The units were not separated because of their similar lithologies and the indistinct contact between them.

The Tuscahoma Sand overlies the Nanafalia Formation and crops out in the southwest corner of the county. The unit is more than 390 feet thick in the northwestern part of Choctaw County; however, only the lower 200 feet of the unit underlies Sumter County. The Tuscahoma consists mainly of light-gray fine-grained sand and gray laminated clay, yellow fine- to coarse-grained crossbedded sand, and fossiliferous glauconitic sandy clay. Locally the basal part of the formation consists of about 60 feet of olive-gray and green fine-grained glauconitic sand and sandstone.

Quaternary System

Terrace deposits overlie older rocks adjacent to the valleys of the Tombigbee River and its major tributaries. These alluvial sediments were deposited by ancestral streams and, since their deposition, have been eroded into isolated, benchlike remnants that range in areal extent from a few acres to several square miles at different elevations above the flood plains. The deposits generally are less than 50 feet thick and consist of lenticular beds of poorly sorted gravel, sand, and clay.

Alluvium underlies the flood plains of major streams in Sumter County. These deposits consist of lenticular beds of sand, gravel, clay, and silt, and generally are less than 50 feet thick.

The terrace deposits and alluvium merge near the edges of the flood plain, and in places the contact between them cannot be distinguished because of lithological similarity; therefore, the low terrace deposits are mapped with alluvium (fig. 2).

SOURCE AND OCCURRENCE OF WATER

The source of all fresh water in Sumter County is precipitation which occurs mainly in the form of rain. Annual rainfall averages about 50 inches and is fairly evenly distributed throughout the year. Part of the rainfall runs off directly into streams; part is returned to the atmosphere by evapotranspiration; and part percolates downward to replenish underground reservoirs. The average annual runoff from the county is about 17 inches or about 0.8 mgd (million gallon per day) per square mile.

The occurrence of ground water and the low flow of tributary streams in Sumter County are governed largely by physical characteristics of geologic units. A summary of the geologic units in the county, their water-bearing characteristics, and chemical quality of water from the aquifers are given in table 1.

AVAILABILITY OF WATER

Ground Water

The major aquifers that will yield water to wells in Sumter County are beds of sand in the Coker, Gordo, and Eutaw Formations. Aquifers in the Naheola and Nanafalia Formations, Tuscahoma Sand, and terrace deposits and alluvium yield small quantities of water for domestic and stock supplies, and may yield larger quantities in some areas. The Mooreville, Demopolis, and Prairie Bluff Chalks and the Clayton and Porters Creek Formations, undifferentiated, consist of relatively impermeable chalk and clay beds that 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 the land surface and from overlying aquifers.

The evaluation of the availability of ground water in Sumter County is based on records for 189 wells and 1 spring. Their locations are shown on figure 3 and data ~~collected~~ are tabulated in table 2. A compilation of drillers' and sample logs is given in table 3.

Figure 3 (caption on next page) belongs near here.

Figure 3. --Location of wells and spring in Sumter County, Alabama.

Where aquifers are overlain by relatively impermeable beds of chalk or clay, the water in the aquifers becomes confined and is under hydrostatic pressure exerted by the weight of water in the same aquifers at higher elevations. Water in a well tapping a confined aquifer will rise above the top of the aquifer and in lowland areas will flow at the land surface. Such aquifers are termed artesian and the imaginary surface to which the water will rise under artesian conditions is called the potentiometric surface. An artesian well will flow if the potentiometric surface is above the land surface. The three major aquifers underlying Sumter County are artesian; the areas of artesian flow in the county are shown on figure 3.

Ground water generally moves from areas of recharge toward areas of discharge. The rate of movement is dependent on the hydraulic gradient of water in the aquifer and the permeability of the aquifer. The direction of flow of ground water in Sumter County is generally southwestward and downdip from areas of outcrop. Recharge to the aquifers is derived from rainfall on these outcrop areas within and immediately north and northeast of the county.

The generalized bases of the three major aquifers in the northern part of Sumter County are shown by contour lines on figure 4. Also shown

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is a subsurface profile of the southwestward-dipping aquifers and their potentiometric surfaces. Figures 5, 6, and 7 show by contour lines the

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base of each of the three major aquifers for the entire county. Depths to the bases of the aquifers are based on interpretation of electric, sample, and drillers' logs of water wells and oil-test wells in or near Sumter County. The lines represent approximate elevations of the bases of the aquifers; therefore, they should not be regarded as exact elevations in all parts of the county. To estimate the depth below land surface necessary to drill to the base of a major aquifer, add the elevation above mean sea level of the proposed well site to the elevation shown by the contour line nearest the site. For example, if the elevation of the well site is 100 feet above sea level and the nearest contour line for the aquifer is 700 feet below sea level, the depth necessary to reach the base of the aquifer would be 800 feet.

Figure 4. --Water availability in Sumter County, Alabama

Figure 5. --Elevation of base of major aquifer, Coker Formation, in Sumter County.

Figure 6. --Elevation of base of major aquifer, Gordo Formation, in Sumter County.

Figure 7. --Elevation of base of major aquifer, Eutaw Formation, in Sumter County.

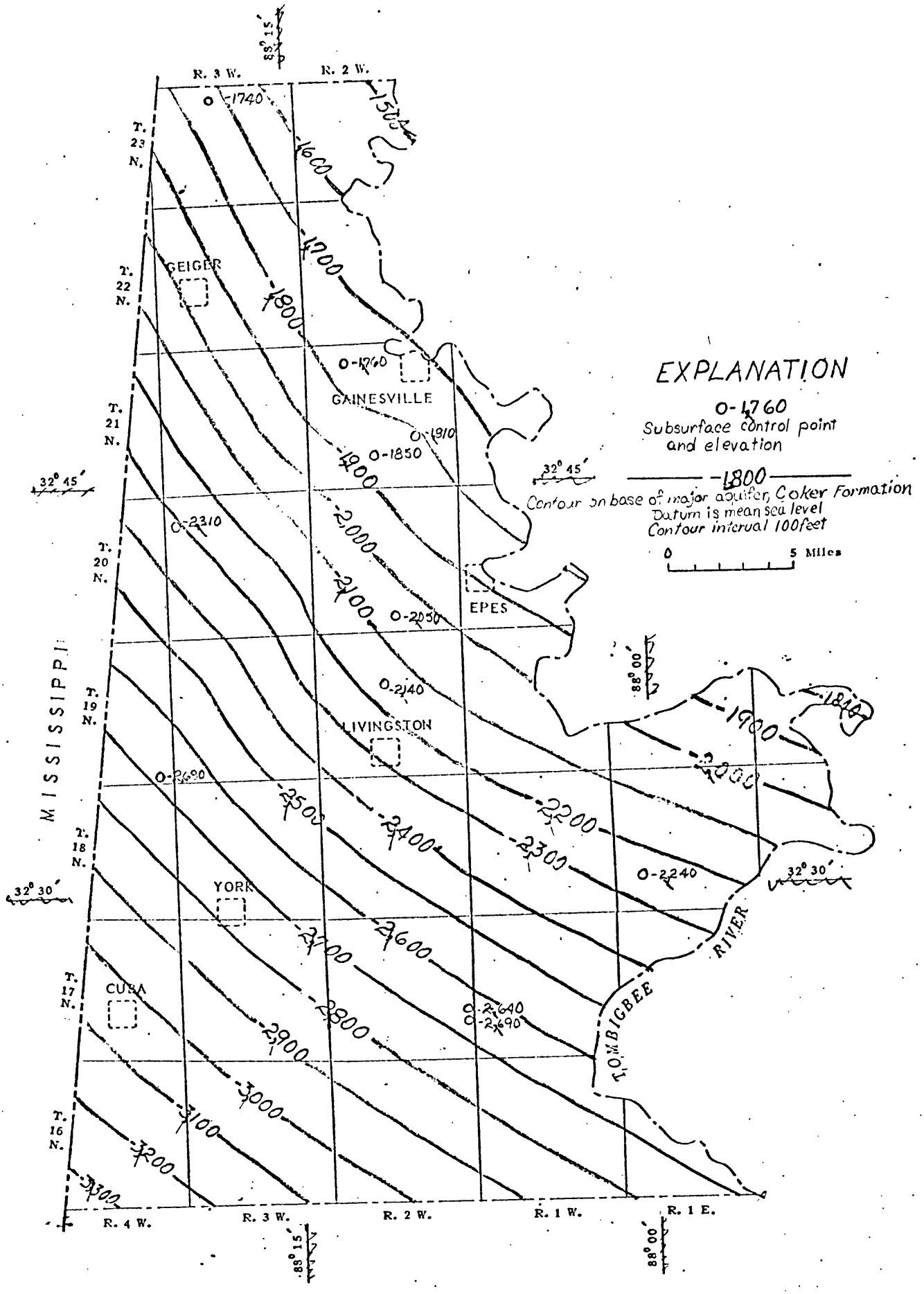

Figure 5 - Elevation of base of major aquifer, Coker Formation, in Sumter County

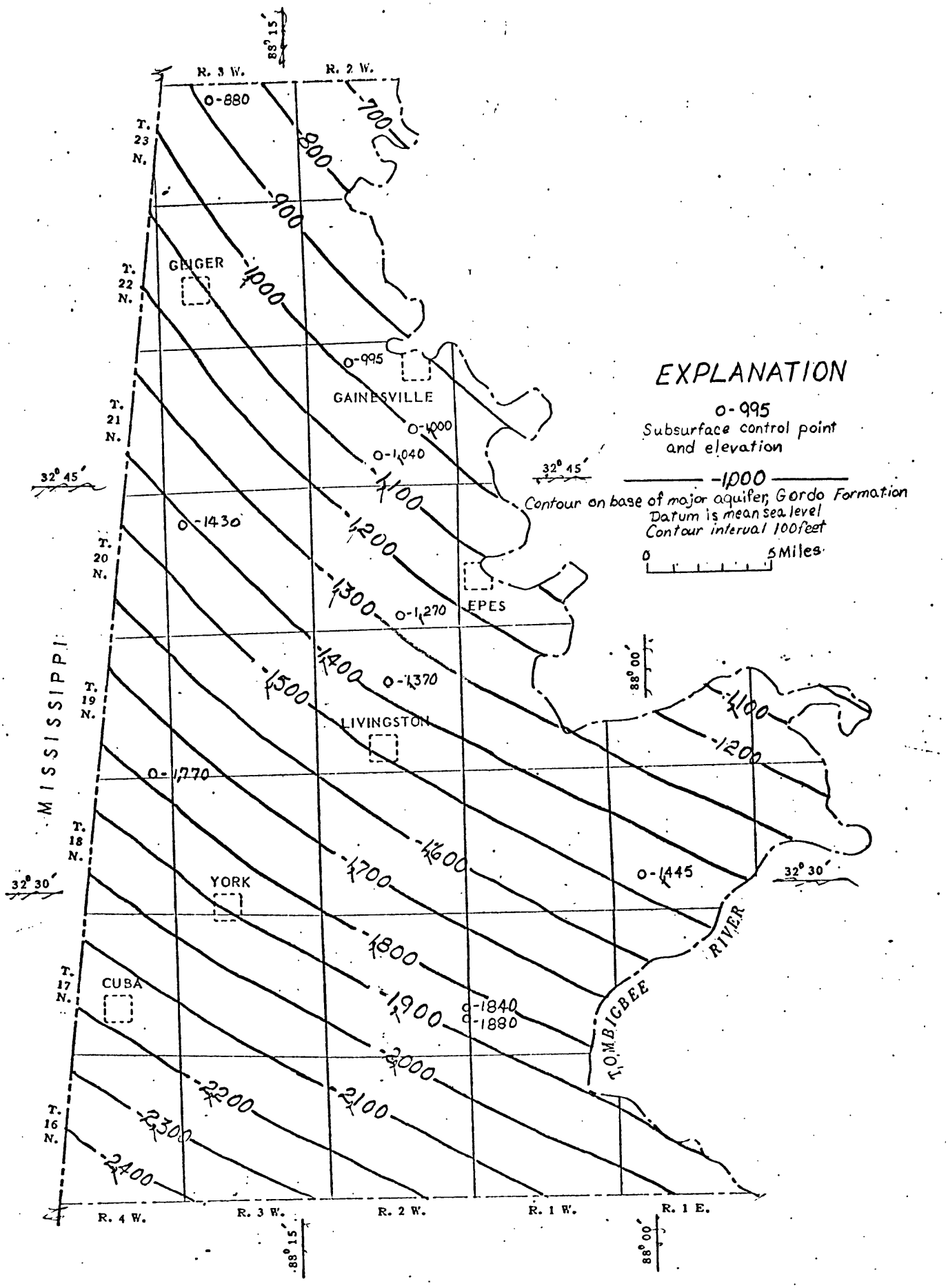

Figure 6 - Elevation of base of major aquifer, Gordo Formation, in Sumter County.

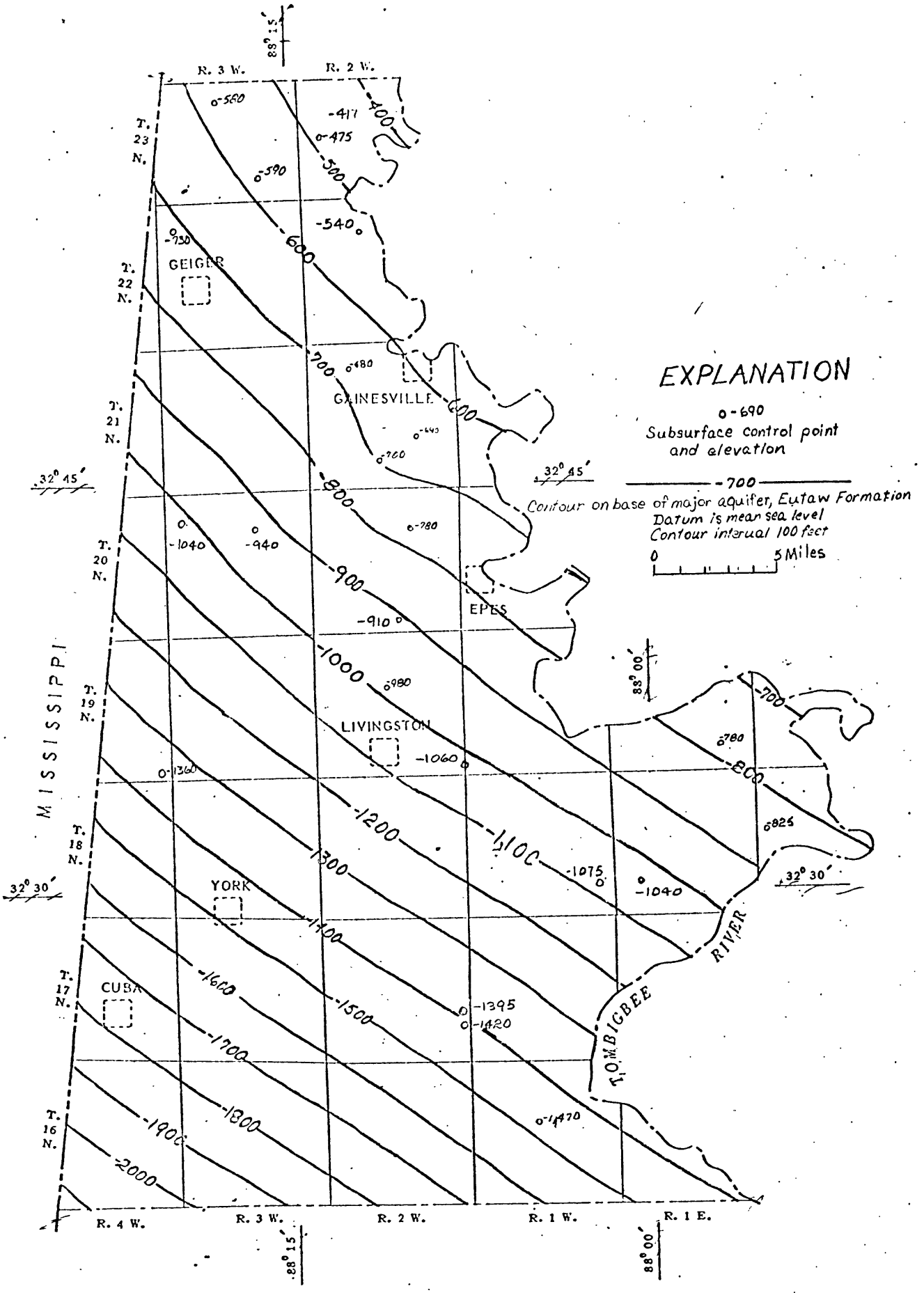

Figure 7- Elevation of base of major aquifer, Eutaw Formation, in Sumter County

Sand and gravel beds in the Coker Formation comprise a potential major aquifer throughout Sumter County. The formation ranges in thickness from 800 to 900 feet and is composed of sand, gravel, clay, and shale. The thicker and coarser grained sand beds in the lower part of the formation comprise the major aquifer. Data from oil-test wells in the county indicate that the basal 250 feet of the formation is chiefly sand and gravel.

Depths to the base of the Coker Formation range from about 1,600 feet below land surface in the northeastern part of the county to about 3,600 feet in the southwestern part. The formation is not tapped by wells in Sumter County because of its excessive depth and the availability of water from shallower aquifers, and because it contains mineralized water in the southern part of the county (fig. 4).

Availability data are inadequate to evaluate the hydraulic characteristics of the Coker in Sumter County; however, a municipal well ~~which~~ taps the Coker aquifer at Moundville in Hale County reportedly had a drawdown of 25 feet while producing about 200 gpm (gallons per minute). The specific capacity (8 gpm per foot of drawdown) of the Moundville well indicates that the well could be pumped at 1,000 gpm (1.5 mgd) with a pumping level of about 150 feet below land surface. Two municipal wells at Macon, Mississippi, which also tap the Coker aquifer, reportedly produced 447 and 566 gpm when completed; the specific capacities are not known (Boswell, 1963). On the basis of these data, it is estimated that wells with yields of 1.5 mgd could be constructed in the Coker aquifer in Sumter County.

Sand and gravel beds in the Gordo Formation generally are a major aquifer where tapped in the northern part of Sumter County and are a potential major aquifer in the remainder of the county. The formation ranges in thickness from about 300 to 450 feet; however, the lower 150 to 200 feet of the formation, which consists predominantly of poorly sorted sand and gravel, is the major aquifer. Sand beds in the upper part of the formation are relatively thin and generally yield only small to moderate quantities of water to wells.

The depth to the base of the Gordo Formation ranges from about 900 feet below land surface in the northeastern part of the county to about 2,700 feet in the southwestern part. The Gordo is not tapped by wells in central and southern parts of Sumter County because of its excessive depth and mineralized water (fig. 4).

Data for ~~23~~ 24 wells tapping the Gordo Formation in the northern part of the county are included in table 2. Available data are inadequate to determine the hydraulic characteristics of the Gordo Formation in Sumter County; however, a municipal well at Aliceville in Pickens County, which taps the major aquifer, had a drawdown of 55 feet while producing about 640 gpm. The specific capacity of this well (12 gpm per foot of drawdown) indicates that the well could be pumped at 1,000 gpm with a pumping level of about 80 feet below land surface. Two municipal wells which tap the major aquifer at Greensboro in Hale County yield 618 and 545 gpm, respectively, and have specific capacities of 36 and 24 gpm per foot of drawdown. Based on these data, it is estimated that wells with yields of 1,000 gpm or more could be constructed in the major aquifer of the Gordo Formation in Sumter County.

Sand and gravel beds in the lower part of the Eutaw Formation are a major aquifer where tapped in the northern part of Sumter County and are a potential major aquifer in the remainder of the county. The formation is about 400 feet thick and generally consists of thin clay and sand beds with thicker and coarser grained sand and gravel beds in the lower 200 feet, which is the major aquifer. Sand beds in the upper part of the formation are relatively fine grained and yield less water than the basal coarse-grained sand beds.

The depth to the base of the Eutaw Formation ranges from about 540 feet below land surface in the northeastern part of the county to about 2,400 feet in the southwestern part. The Eutaw Formation is not tapped by wells in the southwestern part of the county because of its excessive depth and mineralized water (fig. 4). A well tapping the major aquifer in the southern part of Greene County flows at a rate of 200 gpm. Two municipal wells at Eutaw yield 250 to 460 gpm, respectively, from the major aquifer with specific capacities of 11 and 14 gpm per foot of drawdown. Two wells in the southern part of Pickens County, also tapping the major aquifer, were test pumped at 600 gpm with specific capacities of 11 and 16 gpm per foot of drawdown. On the basis of these data, it is estimated that the major aquifer of the Eutaw Formation in Sumter County will yield 1.5 mgd to individual wells.

The Eutaw Formation is the principal source of ground-water supply for domestic and stock wells in northern and east-central parts of the county; many of these wells flow (table 2). The flow from wells tapping different parts of the formation ranges from 0.6 to 60 gpm and average about 14 gpm. Sand beds in the upper part of the formation will probably yield as much as 100 gpm. Data for 100 wells tapping the Eutaw in the county are tabulated in table 2.

The Naheola Formation consists of about 200 feet of thin-bedded clay and fine-grained sand. The depth to the base of the formation generally ranges from 20 feet in the area of outcrop to 600 feet in the southwest corner of the county.

Sand beds in the Naheola generally yield sufficient water to wells for domestic and stock use. The most productive well tapping the formation yields about 40 gpm for a municipal supply at Cuba. The Naheola probably will not yield more than 50 gpm to wells in Sumter County. Data for nine wells tapping the Naheola Formation are included in table 2.

The Nanafalia Formation consists of about 120 feet of silty clay, fine- to coarse-grained sand, and thin beds of sandstone and claystone. The lower part of the formation contains the coarsest sand and is the principal aquifer. Sand beds in the upper part are relatively thin and generally yield less than 10 gpm to wells. The depth to the base of the formation generally ranges from 20 feet in the area of outcrop to 400 feet in the southwest corner of the county.

The Nanafalia yields sufficient water to wells for domestic and stock use. Maximum yields from the formation are not known; however, it yields as much as 100 gpm per well in Choctaw County and may yield as much as 50 gpm per well in Sumter County. Data for six wells tapping the Nanafalia are included in table 2.

The Tuscahoma Sand in Sumter County consists of about 200 feet of thin beds of very fine to fine-grained sand and clay. Locally the basal part of the Tuscahoma consists of as much as 60 feet of fine-grained sand and sandstone. No wells tap the formation in Sumter County; however, it is tapped by domestic and stock wells in northwestern Choctaw County. Where the sands are of sufficient saturated thickness, the Tuscahoma will probably yield 10 gpm to wells in Sumter County.

Terrace deposits and alluvium are a potential source of water in some parts of Sumter County. The deposits generally are less than 50 feet thick and consist of lenticular beds of poorly sorted gravel, sand, and clay. The units yield sufficient water for domestic and stock use, and wells with large capacities probably could be constructed in the low terrace deposits and alluvium along the Tombigbee River where the aquifers are of sufficient saturated thickness. Data for ~~four~~ five wells tapping terrace deposits or alluvium are included in table 2.

A well that will supply 10 gpm is considered adequate for normal domestic needs. The maximum depths necessary to drill a well that will produce 10 gpm are shown on figure 8. Depths shown are based on

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differences between the general elevation of the land surface and that of aquifers in underlying formations.

Figure 8. --Depth to aquifer that will yield water for domestic supply.

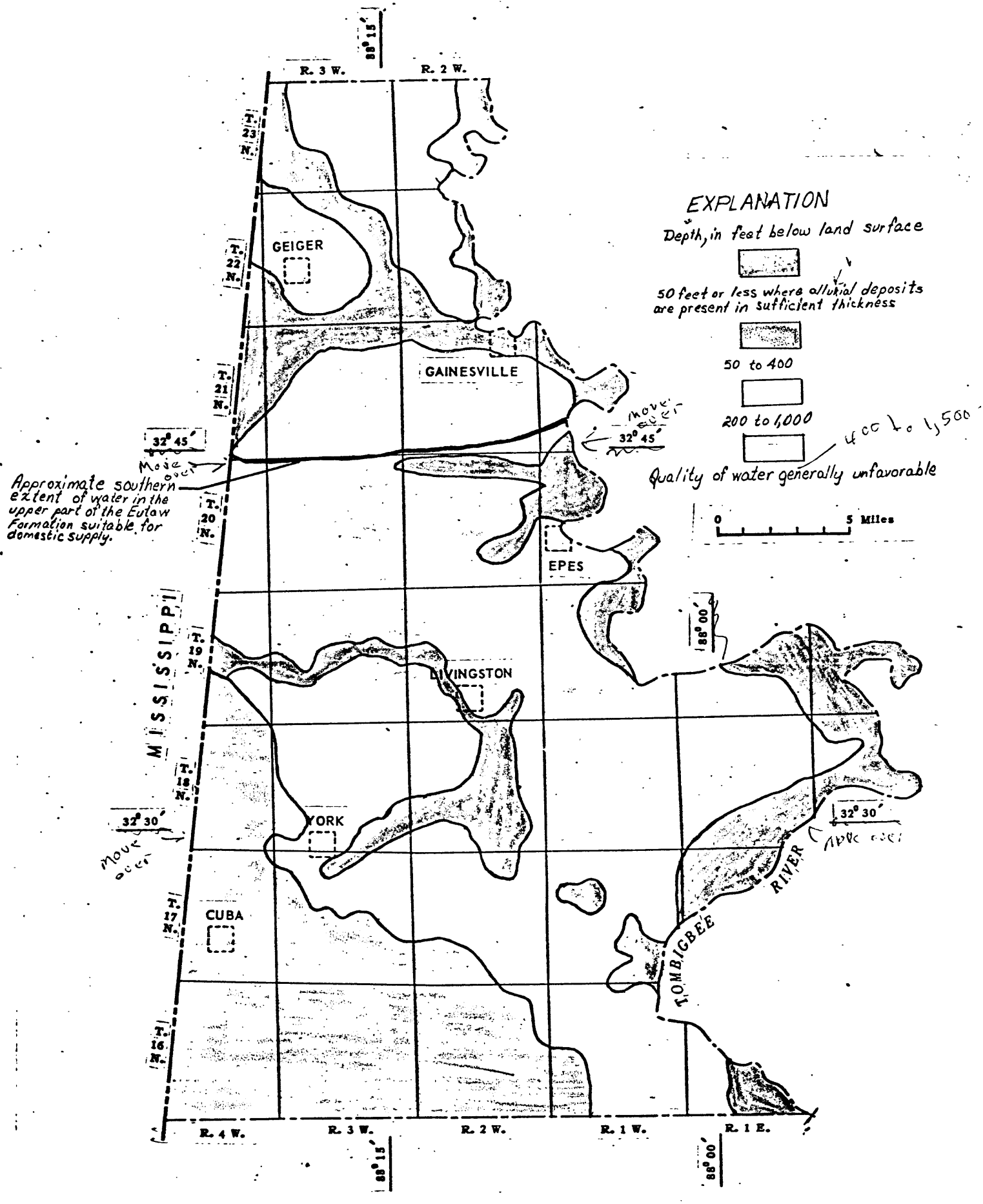

Figure 8- Depth to aquifer that will yield water for domestic supply.

Domestic supplies may be obtained at depths of less than 50 feet from aquifers in terrace deposits and alluvium in the valleys of the Tombigbee River and its major tributaries where the saturated deposits are present in sufficient thickness. The Naheola and Nanafalia Formations and Tuscahoma Sand, in the southwestern part of the county, contain aquifers that will yield sufficient water for domestic supply. The depth necessary to tap one of these aquifers ranges from 50 to 400 feet (fig. 8).

In the area of outcrop of the Selma Group and the Clayton and Porters Creek Formations, undifferentiated, of the Midway Group, the shallowest source of ground water generally is from sand beds in the upper part of the underlying Eutaw Formation. Aquifers capable of yielding sufficient water for domestic supplies generally occur less than 100 feet below the top of the Eutaw Formation. The quality of the water from these aquifers may be unsuitable for domestic use in the central and southern part of the county. Chalk and clay beds overlying the Eutaw Formation generally do not yield water to wells, and alluvium overlying the chalk beds is usually thin and may not yield sufficient quantities of water for domestic supply. The depth below land surface to the top of the Eutaw Formation ranges from about 100 feet in the northeast corner of Sumter County to about 1,400 feet near York.

Surface Water

Average Flow

The long-term average flow of a stream, the arithmetic mean of all discharges for a long period of time, is a useful statistic for evaluating the availability of surface water. Because this statistic should reflect a reasonable balance of wet and dry years, about 20 years of streamflow records are required for adequate definition of average flow. Average flow computations for streams with short-term records can be improved by correlation with nearby streams where longer records are available. Average flows, adjusted to the base period 1940-65, of streams in Sumter County with flows greater than 10 mgd are shown on figure 4 by width between lines or numbers in arrows along streams. The Tombigbee River has an average flow of about 6, 100 mgd where it enters the county and about 15, 100 mgd where it leaves. The Black Warrior River, entering the Tombigbee River near the Demopolis Lock and Dam, contributes an average flow of about 6, 300 mgd. Average flows of Sucarnoochee and Noxubee Rivers, at their mouths, are about 750 and 1, 100 mgd, respectively.

7-day Q_2

A streamflow parameter that provides useful information in appraising the low flow of streams is the median annual 7-day low flow--hereafter referred to as the 7-day Q_2. For streams that are not regularly gaged, this parameter can be satisfactorily evaluated from a relatively small amount of streamflow data. As a median value, it is a fairly stable parameter, being the average only of position in an array of items and hence unaffected by extreme values. Also, as a median, it is a good measure of normal conditions. The recurrence interval for a median value in a series of annual events is always known, being equal to 2 years in any form of frequency distribution. Finally, the 7-day period of low flow is short enough to represent flow that is available for the most part without storage, yet is long enough to suppress the effects of abnormally low transient flows of little hydrologic significance that might result from occasional regulations or from natural causes of an accidental nature.

The approximate range of the 7-day Q_2 for streams in Sumter County is shown by color pattern on figure 4. Also shown are estimates of the 7-day Q_2 at several network stations. The Tombigbee River, the largest source of surface water in the county, has a 7-day Q_2 greater than 900 mgd where it leaves the county. The lower reaches of Alamuchee Creek and the Noxubee and Sucarnoochee Rivers have 7-day Q_2's of about 20, 40, and 90 mgd, respectively. Other streams in the county have 7-day Q_2's less than 8 mgd.

Variability of Flow

Flow-duration curves, which show the percentage of time specified flows are equaled or exceeded, depict flow variability. A steeply sloping curve indicates a highly variable streamflow; a flat curve indicates lower variability in flow. The slope of the flow-duration curve reflects the hydrogeologic characteristics of the basin and is useful for comparing the flow characteristics of different streams.

Flow-duration curves for two streams in Sumter County are shown on figure 9. For the purpose of comparison, the curves are plotted in

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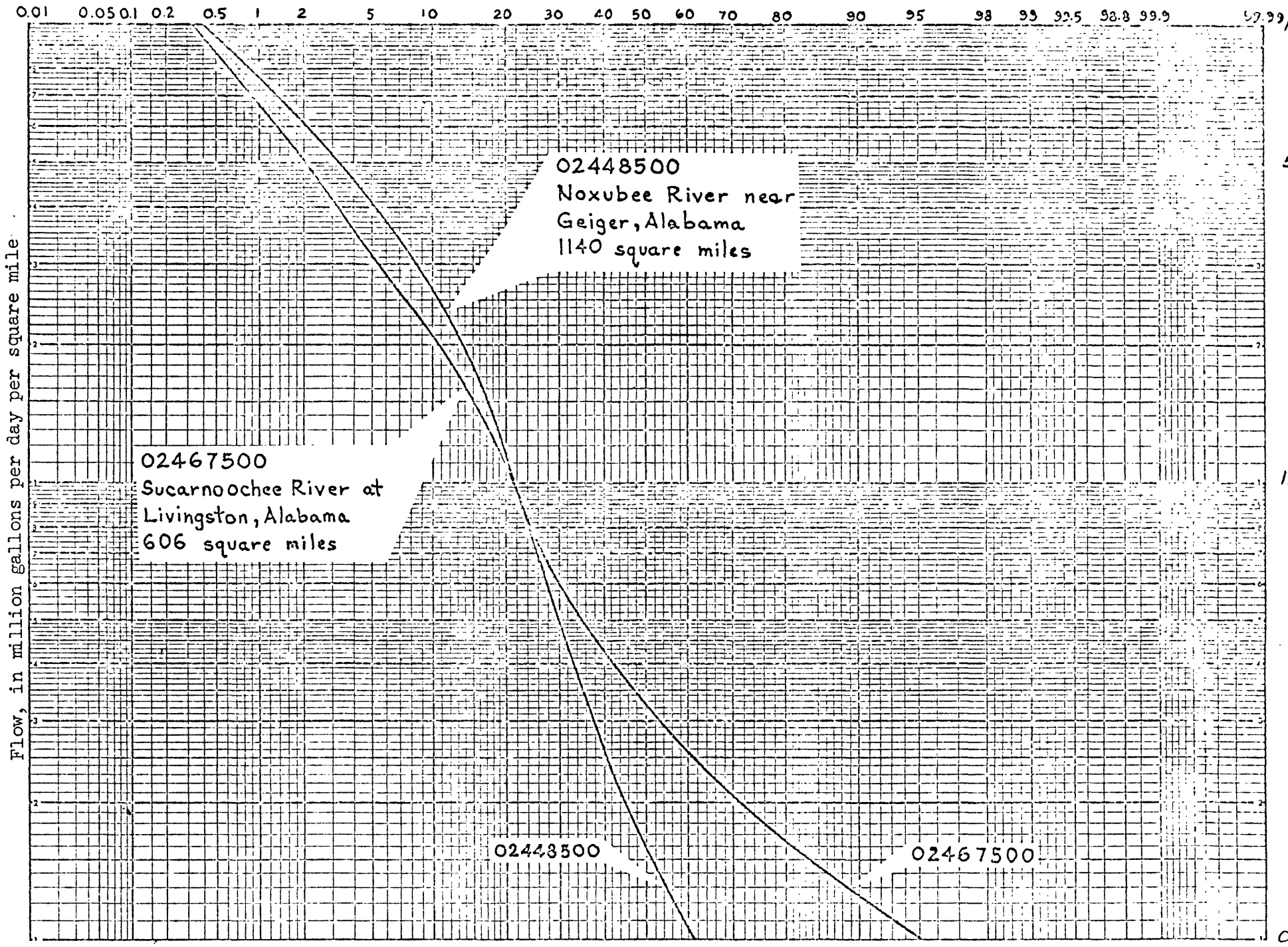
terms of millions of gallons per day per square mile of contributing drainage area.

Figure 9. --Flow-duration curves for two streams in Sumter County.



Percent of time discharge equaled or exceeded that shown

Figure 9.--Flow-duration curves for two streams in Sumter County, ~~Alabama~~.

Reviewer - Coordinates will be changed to standard for final publication

fill caps

Sucarnoochee River drains geologic units that consist primarily of sand, gravel, and clay that have a relatively high capability of storing and transmitting water. Rainfall percolates into the units, is stored, and later is released to the stream during dry periods. This characteristic is reflected by the relatively flat slope in the lower end of the flow-duration curve for Sucarnoochee River (fig. 9). The curve for Sucarnoochee River may be considered as characteristic of flow duration of other streams draining the southern part of the county.

The drainage basin of Noxubee River is underlain chiefly by chalk, which has relatively low permeability and does not readily store and transmit water. Water discharged from ground-water reservoirs will sustain streamflow during dry periods; however, the lack of ground-water storage and subsequent discharge from the chalk is reflected by the steeper slope of the lower end of the flow-duration curve for Noxubee River (fig. 9) than for Sucarnoochee River. The curve for Noxubee River may be considered as characteristic of flow duration of other streams draining the northern part of the county.

QUALITY OF WATER

The chemical quality of water may limit the water's usefulness for some purposes. Most municipal supplies are selected to insure good quality or are treated to remove objectionable minerals and properties of the water. Quality requirements for industrial water depends on the type of use made of the water. Some industries have quality requirements that are far more exacting than requirements for municipal supplies; other industries use water only for cooling and can use highly mineralized water.

Hard water is objectionable for some uses because it increases soap consumption and may deposit scale in pipes, water heaters, and boilers; soft water under certain conditions may induce corrosion. General terms used in this report to describe hardness of water are: soft, 0-60 mg/l (milligrams per liter); moderately hard, 61-120 mg/l; hard, 121-180 mg/l; and very hard, 181 mg/l or more. Iron in excess

* Insert-
Standards for drinking water established by the U.S. Public Health Service (1962) for water used on interstate carriers are often quoted as limits for drinking water. According to these standards, drinking water supplies should not contain more than 250 mg/l of chloride; however,

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Insert
Ground water
In many areas in
ntaining 500 mg/l

Ground Water

The chemical character of ground water depends on several variables, such as composition of the aquifer, distance from recharge areas, time the water has been in contact with the aquifer, and the overall pattern of ground-water circulation. An evaluation of chemical analyses available for ground water and interpretation of electric logs of oil-test wells in Sumter County indicate that water from the major aquifers has a ~~high~~ chloride content in excess of 500 mg/l and is hard to very hard except in the northern and easternmost parts of the county. Locally water from the Eutaw and Gordo aquifers contains more than 0.3 mg/l iron. Water from the minor aquifers in the southwest corner of the county has a ~~low~~ chloride content of less than 20 mg/l but locally contains more than 0.3 mg/l iron. The results of chemical analyses of water samples collected from wells and springs in Sumter County are given in table 4.

The Coker Formation is not tapped by wells in Sumter County; therefore, the chemical quality of water in the Coker aquifer is not known. However, electric logs of oil-test wells in Sumter County indicate that the chloride content of the water is more than 500 mg/l in central and southern parts of the county (fig. 4). Interpretation of electric logs of wells in Sumter County and chemical analyses of water from wells in adjacent Greene County and in Mississippi indicate that water in the Coker aquifer in the northern part of Sumter County ~~contains~~ has a chloride content of less than 500 mg/l chloride, ~~is~~ a hardness range is from soft to moderately hard, and ~~probably~~ an iron content of ~~contains~~ less than 0.3 mg/l ~~iron~~.

Chemical analyses of water from wells and interpretation of electric logs of oil-test wells indicate that the chloride content of water from the Gordo aquifer is more than 500 mg/l except in northern and easternmost parts of the county (fig. 4). The water in these areas is soft to moderately hard and generally contains less than 0.3 mg/l iron.

Chemical analyses of water from wells and interpretation of electric logs of oil-test wells indicate that the chloride content of water from the Eutaw aquifer is more than 500 mg/l except in northern and easternmost parts of the county (fig. 4). Water from the aquifer in those areas generally is soft and contains less than 0.3 mg/l iron. Water from sand in the upper part of the Eutaw Formation may contain more than 500 mg/l chloride in all parts of the county.

Water from aquifers in the Naheola and Nanafalia Formations and terrace deposits and alluvium is soft to moderately hard and contains less than 20 mg/l chloride. Locally, the water contains objectionable amounts of iron. The quality of water from the Tuscahoma Sand probably is similar to that in the Naheola and Nanafalia Formations.

Surface Water

Surface water may undergo changes in chemical quality as it moves from one environment to another. In general, surface water tends to carry increasing loads of dissolved minerals as it moves downstream, although the mineral concentration may be reduced by increased runoff or by inflow of less mineralized water. Dissolved minerals in surface water result in part from natural causes--the solvent action of water on soil and rock and in part from cultural causes--the activities of man that add minerals to the water.

The results of chemical analyses of water collected from streams since September 1965 at network and project stations in Sumter County are tabulated in table 5. Chemical quality records prior to November 1965 have been published in Alabama Geological Survey Circular 36 and annual water-quality reports for Alabama.

Water from most streams in the county contains less than 30 mg/l chloride, and ranges from soft to hard. Based on chemical analyses of water collected prior to the period of this report and a water sample collected from the Tombigbee River at station 02467000, the iron content and color of water in some streams may be objectionable for certain industrial uses. Water from streams which drain sand and clay deposits in the southern part of Sumter County is less mineralized than water from streams which drain calcareous rocks in the northern part of the county.

UTILIZATION OF WATER

Estimated use of water in Sumter County in 1968 was about 1.7 mgd. The table below indicates that approximately 34 percent of the water was used for municipal and industrial supplies, 62 percent for rural-domestic and stock supplies, and 4 percent for school supplies.

Estimated water use in Sumter County, 1968

Use	Gallons per day	
	Ground water	Surface water
Municipal		
York	---	250,000
Livingston	---	299,000
Cuba	30,000	----
Industrial	24,000	----
Rural-domestic	90,000	130,000
Stock	210,000	640,000
Schools	75,000	----
Total use	429,000	1,319,000

WATER BUDGET

A water budget is an accounting of the inflow to, the outflow from, and the changes in storage in a hydrologic unit such as a drainage basin, aquifer, or group of aquifers. Because Sumter County is not a true hydrologic unit and available data are not adequate, a precise quantitative evaluation of all variables in the water budget cannot be made. However, an approximate water budget using known or estimated geologic and hydrologic data is shown on figure 10. Most of the values are

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Figure 10 (caption on next page) belongs near here.

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estimates and should not be considered as absolute.

The water budget for Sumter County includes 30,300,000 million gallons of ground water in storage to the base of the Coker Formation and available to wells, about 28 percent of which contains less than 500 mg/l chloride (fig. 4); more than 15,000 mgd of water leaving the county as streamflow and underflow; and an estimated use of about 1.7 mgd. From the generalized water budget for Sumter County, it is apparent that water use in the county is insignificant when compared to the total available supply of water. Less than 1 percent of the potential water resources was being used in 1968. An evaluation of potential water supplies available at selected locations in Sumter County is given in table 6.

Figure 10. --Generalized water budget for Sumter County.

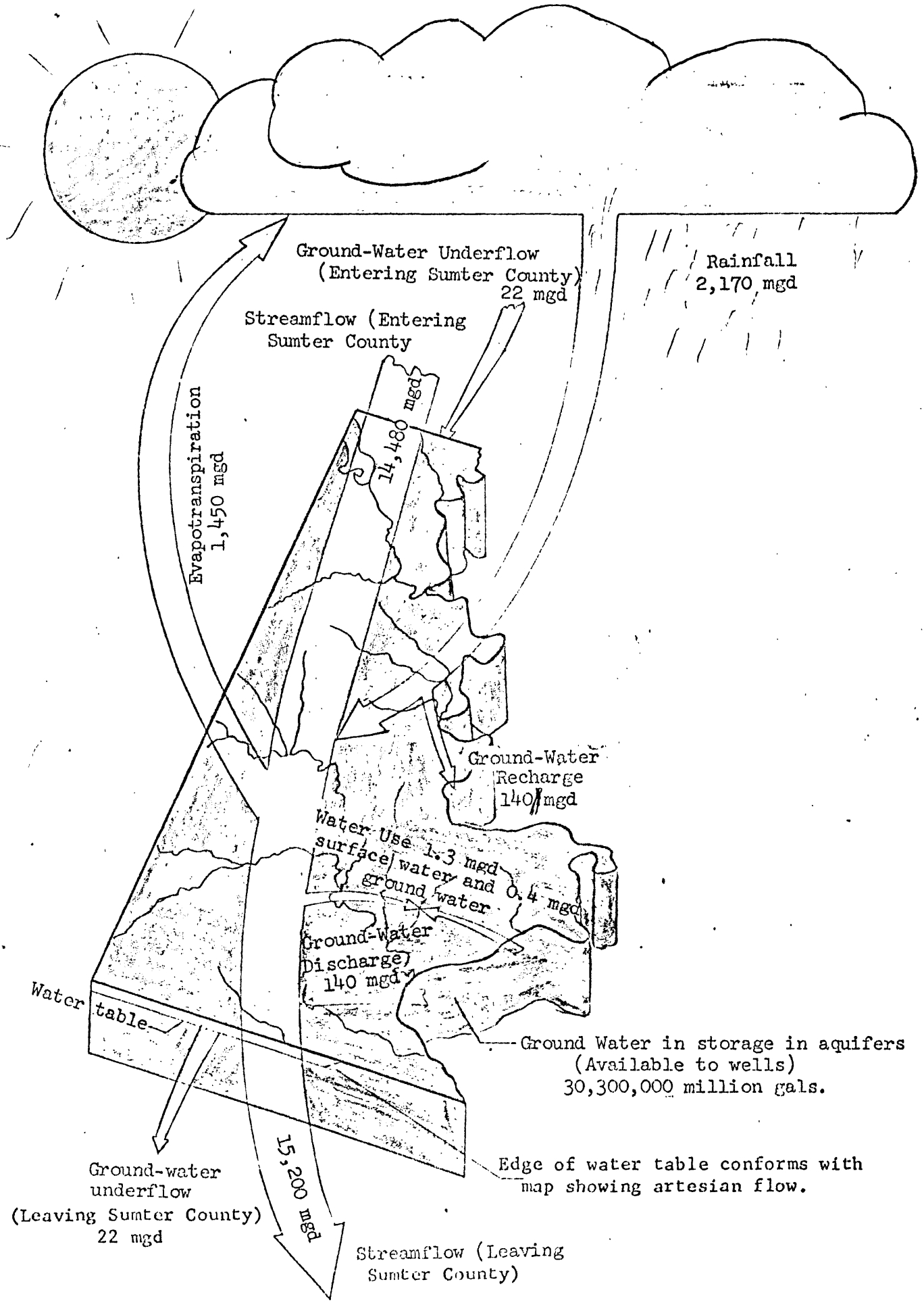

FIGURE 10. --GENERALIZED WATER BUDGET FOR SUMTER COUNTY

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Table 3.--Sample and drillers' logs of wells in Sumter County

	Thickness (feet)	Depth (feet)
Well A-7		
Driller's log		
Owner: C. M. Halsell		
Driller: S. D. Smith		
Soil, sand, and gravel	48	48
Limestone	85	133
Sand	70	203
Shale and gumbo	210	413
Sand	106	519

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well A-11		
Driller's log		
Owner: T. W. Rogers		
Driller: E. B. Norwood		
Clay	14	14
Blue rock	181	195
Sand	53	248
Shale	53	301
Sand	17	318
Shale	142	460
Sand	37	497
Shale	13	510
Sand	61	571

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well A-20		
Driller's log		
Owner: Mrs. W. J. Rogers		
Driller: C. T. White		
Sand.....	26	26
Blue rock.....	194	220
Sand.....	80	300

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well B-1		
Sample log		
Owner: J. J. Hagerman		
No record	65	65
Mooreville Chalk		
Chalk, gray, shaly	36	101
Chalk, gray, shaly; speckled shaley chalk	29	130
Chalk, gray, shaly	180	310
Chalk, gray, shaly; small amount of coarse glauconite	15	325
Eutaw Formation		
Chalk, gray, shaly; small amount of coarse glauconite	15	340
Chalk, speckled, shaly; coarse glauconite	60	400
Chalk, sandy; glauconite; mica; carbonaceous material	30	430
Shale, gray, soft, carbonaceous; fine mica	70	500
Shale, gray, carbonaceous, micaceous	210	710

Table 3.--Sample and drillers logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well B-1--Continued		
Eutaw Formation--Continued		
Gravel; siderite concretions; red clay; coarse to medium glauconitic sand.....	30	740
Gordo Formation		
Clay, dark-red; siderite concretions	180	920
Gravel, variegated, chert; coarse sand.....	130	1,050
Coker Formation		
Gravel, variegated, chert; coarse sand.....	110	1,160
Gravel, variegated, chert; coarse sand with siderite cementing sand grains.....	30	1,190
Clay, red and gray.....	60	1,250
Shale, gray, carbonaceous	150	1,400
Clay, red and gray; siderite.....	150	1,550
Gravel, variegated.....	90	1,640
Lower Cretaceous (?)		
Gravel, variegated.....	60	1,700
Gravel, variegated; pink sandstone; nodular lime.....	30	1,730

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well B-1--Continued		
Lower Cretaceous (?)--Continued		
Sand; coarse sand.....	60	1,790
Sand; pink nodular lime.....	30	1,820
Sand; pink nodular lime; lignite....	60	1,880
Sand, variegated.....	30	1,910
Sand, variegated; lignite; pink nodular lime.....	30	1,940
Sand, variegated.....	30	1,970
Sand, variegated; lignite.....	30	2,000
Sand, variegated; lignite; pink nodular lime.....	90	2,090
Lime, pink and reddish, nodular.....	60	2,150
Lime, pink and reddish, nodular; gravel and coarse sand.....	30	2,180
Lime, pink and reddish, nodular; pink sandstone; conglomerate.....	60	2,240
Sand, milky, coarse-grained.....	30	2,270
Sand, milky, coarse-grained; pyrite cementing sand grains.....	30	2,300

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (Feet)
Well B-1--Continued		
Pennsylvanian		
Gravel, chert, black and smoky.....	60	2,360
(Incomplete)		

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Well B-8

Driller's log

Owner: Nell Brockway

Driller: S. D. Smith

Top soil and limestone.....	256	256
Sand.....	68	324
Gumbo and shale.....	209	533
Sand.....	107	640

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well B-10		
Driller's log		
Owner: J. L. Parker		
Driller: Jack Smith		
Dirt	20	20
Rock	310	330
Sand	188	518
Sandrock	0.5	518.5
Sand	189	707.5
Well B-12		
Driller's log		
Owner: O. R. Chafin		
Driller: S. D. Smith		
Top soil	12	12
Limestone	317	329
Sand	81	410
Shale and gumbo	188	598
Sand	103	701

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well E-4		
Driller's log		
Owner: Chuck Fleming		
Driller: West Alabama Lime Co.		
Top soil	12	12
Limerock	488	500
Sand	120	620
Gumbo	140	760
Sand	140	900
Well E-14		
Driller's log		
Owner: Carlton Fleming		
Driller: J. A. Dial Drilling Co.		
Top soil	10	10
Limerock	440	450
Sand	230	680
Gumbo	100	780
Sand	20	800

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well F-1		
Driller's log		
Owner: C. M. A. Rogers		
Driller: J. A. Dial Drilling Co.		
Top soil	12	12
Limerock	388	400
Sand	230	630
Gumbo	100	730
Sand	110	840
Well F-2		
Driller's log		
Owner: Billie Taylor		
Driller: S. D. Smith		
Top soil and chalk	265	265
Sand	73	338
Gumbo and shale	193	531
Sand	120	651

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well H-1		
Driller's log		
Owner: B. A. Rogers		
Driller: C. T. White		
Soil, clay.....	34	34
Blue rock.....	242	276
Sand.....	324	600
Well I-14		
Driller's log		
Owner: Tom Long		
Driller: West Alabama Lime Co.		
Top soil.....	15	15
Limerock.....	635	650
Sand.....	100	750
Gumbo.....	75	825
Sand.....	75	900

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2		
Sample log		
Owner: James B. Hill		
No record.....	70	70
Demopolis Chalk		
Chalk, light-gray, silty, fossiliferous; microfossils.....	50	120
Mooreville Chalk		
Chalk, light-gray, silty, fossiliferous; medium-light-gray highly calcareous siltstone; very light gray limestone, saccharoidal in appearance.....	10	130
Chalk, light-gray, silty, fossiliferous; microfossils.....	145	275
Chalk, light-gray, silty, fossiliferous; quartz grains; pyrite.....	15	290
Chalk, light-gray, silty, fossiliferous; shell fragments.....	70	360
Chalk, light-gray, silty, fossiliferous; abundant microfossils; pyrite; aragonite prisms; shell fragments.	60	420

Table 3.--Sample and driller's logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Mooreville Chalk--Continued		
Chalk, light-gray, silty, fossiliferous; trace of glauconite.....	15	435
Chalk, light-gray, silty, fossiliferous; trace of light-gray fine-to-medium-grained sandy glauconitic poorly indurated siltstone.....	15	450
Chalk, light-gray, silty, fossiliferous; trace of yellowish-gray sandy chalky marl.....	30	480
Eutaw Formation (?)		
Chalk, light-gray, silty, fossiliferous; medium-gray silty slightly micaceous shale; very light to yellowish-gray weathered fine-grained quartzitic silty glauconitic sideritic sandstone.....	15	495

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Eutaw Formation (?)--Continued		
Sand, light-gray, fine- to medium-grained, subangular to subrounded, quartzose, glauconitic, fossiliferous; lignite; phosphate nodules; siderite; shell fragments; microfossils.....	15	510
Sand, light-gray, fine- to medium-grained, subangular to subrounded, quartzose, glauconitic, fossiliferous; light-gray micaceous shale; sideritic sandstone; lignite and phosphate; shell fragments.....	45	555
Sand, light-gray, fine- to medium-grained, subangular to subrounded, quartzose, glauconitic, fossiliferous; light-gray micaceous partly glauconitic shale; shell fragments.	10	565

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Eutaw Formation (?)--Continued		
Shale, light-gray, micaceous, partly carbonaceous; light-gray fine- to medium-grained subangular to sub-rounded quartzose glauconitic fossiliferous sand.....	30	595
Shale, light-gray, micaceous, partly carbonaceous; light-gray fine- to medium-grained subangular to sub-rounded quartzose glauconitic fossiliferous sand; grayish-yellow-green silty micaceous shale.....	45	640
Shale, light-gray, micaceous, partly carbonaceous; light-gray fine- to medium-grained subangular to sub-rounded quartzose glauconitic fossiliferous sand; grayish-yellow-green silty micaceous shale; lignite.....	15	655

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Eutaw Formation (?)--Continued		
Shale, light-gray to light-olive-gray, micaceous, partly carbonaceous; light-gray fine- to medium-grained subangular to subrounded quartzose glauconitic fossiliferous sand.....	140	795
Gordo Formation		
Shale, light-gray to light-olive-gray, micaceous, partly carbonaceous; light-gray fine- to medium-grained subangular to subrounded quartzose glauconitic fossiliferous sand; light-gray coarse-grained quartzose frosted sand; sideritic sandstone.....	30	825

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Gordo Formation--Continued		
Sand, light-gray, fine- to coarse-grained, subangular to rounded, in part frosted, quartzose, glauconitic; light-gray to light-olive-gray micaceous partly carbonaceous shale; rounded chert grains; abundant siderite; sideritic micaceous glauconitic quartzose pale-yellowish-orange sandstone; lignite.	50	875
Shale, light-gray and light-olive-gray, silty, micaceous, partly carbonaceous; siderite crystals and nodules; lignite.....	15	890
Shale, light-gray and light-olive-gray, silty, micaceous, partly carbonaceous with coarse and very coarse quartz and chert grains; abundant siderite; sideritic sandstone; phosphate nodules.....	15	905

Table 3. --Sample and driller's logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Gordo Formation--Continued		
Shale, light-gray and light-olive-gray, silty, micaceous, partly carbonaceous; coarse and very coarse quartz and chert grains; dusky-red shale fragments.....	15	920
Shale, grayish-yellow-green, silty, micaceous; abundant coarse to very coarse quartz and chert grains; abundant sideritic nodules and concretions; trace of dusky-red shale.....	55	975
Sand, light-gray, coarse and very coarse grained, subrounded, quartzose, frosted with varicolored chert; grayish-yellow-green silty micaceous shale; abundant siderite; quartz pyrite clusters.....	45	1,020

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Gordo Formation--Continued		
Shale, grayish-yellow-green, silty, micaceous; light-gray coarse and very coarse grained subrounded quartzose frosted sand with varicolored chert; quartz-pyrite clusters; abundant siderite and sideritic sandstone; trace of dusky-red shale.....	15	1,035
Sand, light-gray, coarse and very coarse grained, subrounded, quartzose, frosted with varicolored chert; grayish-yellow-green silty micaceous shale; sideritic sandstone; chert gravels.....	80	1,115
Coker Formation		
Shale, greenish-gray, silty, micaceous with fragments of fine sandy glauconitic marl.....	180	1,295

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Coker Formation--Continued		
Shale, greenish-gray, silty, micaceous; light-gray fine-grained quartzose glauconitic very calcareous sandstone.....	15	1,310
Shale, greenish-gray, dusky-red, and dusky-red-purple; coarse and very coarse grained varicolored rounded quartzose sand; fine quartz; chert gravel.....	60	1,370
Shale, greenish-gray, dusky-red, and dusky-red-purple; light-gray very fine to fine-grained quartzose micaceous slightly glauconitic sandstone.....	25	1,395
Sand, varicolored, coarse, subrounded, frosted in part, quartzose, slightly micaceous; chert	15	1,410
Shale, greenish-gray and light-gray, silty, micaceous, in part carbonaceous.....	15	1,425

Table 3.--Sample and driller's logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Coker Formation--Continued		
Sand, light-gray and varicolored, coarse-grained, subangular to subrounded, frosted in part, quartzose, slightly micaceous; moderate-orange-pink fine- to medium-grained semiconsolidated sand aggregates...	45	1,470
Shale, greenish-gray and light-gray, silty, micaceous, in part carbonaceous.....	15	1,485
Shale, greenish-gray and light-gray, silty, micaceous; pyrite and quartz clusters; moderate-orange-pink very fine and medium-grained semiconsolidated sandstone.....	60	1,545
Shale, greenish-gray and light-gray, silty, micaceous; abundant lignite; siderite.....	15	1,560
Shale, greenish-gray and light-gray, silty, micaceous; light-gray to pale-yellowish-orange fine- to medium grained quartzitic micaceous		

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Coker Formation--Continued		
Shale--Continued		
in part glauconitic, semi-consolidated sandstone.....	45	1,605
Shale, greenish-gray, in part sandy and glauconitic, silty, micaceous; lignite; light-gray to pale-yellowish-orange fine- to medium-grained sandstone.....	15	1,620
Sand, very light gray, coarse-grained, subrounded, in part frosted, quartzose; greenish-gray, in part sandy and glauconitic silty micaceous shale; light-gray to pale-yellowish-orange fine- to medium-grained sandstone.....	15	1,635
Sand, very light gray, medium- to coarse-grained, subangular to subrounded, in part frosted, quartzose; greenish-gray silty micaceous slightly carbonaceous shale.....	130	1,765

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Coker Formation--Continued		
Shale, greenish-gray, silty, micaceous, in part carbonaceous; very light gray medium- to coarse-grained subangular to subrounded quartzose sand with fine quartz and chert gravel.....	15	1,780
Gravel, fine quartz and chert; greenish-gray silty, micaceous in part carbonaceous shale.....	60	1,840
Shale, greenish-gray to light-gray, silty, micaceous, in part carbonaceous; fine quartz and chert gravel	10	1,850
Sand, moderate-pink-orange, fine- to coarse-grained, subangular to subrounded; moderate-red silty micaceous partly mottled shale; quartz-pyrite aggregates.....	30	1,880

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous rocks		
Shale, moderate-red, and greenish-gray mottled; moderate-orange-pink medium- to coarse-grained subangular to subrounded sand; light-red dense poorly indurated limestone; pink lime nodules.....	20	1,900
Sand, very light gray and moderate-pink, medium to very coarse grained, subangular to rounded, in part frosted, quartzose; moderate-red and greenish-gray mottled shale; light-red dense poorly indurated limestone.....	15	1,915
Shale, moderate-red and greenish-gray mottled; very light gray and moderate-pink medium to very coarse grained subangular to rounded, in part frosted, quartzose sand; trace of light-red dense poorly indurated limestone.....	15	1,930

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous--Continued		
Sand, very light gray and moderate-pink, medium to very coarse grained, subangular to rounded, in part frosted, quartzose; moderate-red and greenish-gray mottled shale; fine quartz and chert gravel; siderite; trace of light-red dense poorly indurated limestone.....	40	1,970
Sand, moderate-orange-pink, coarse-grained, subrounded, in part frosted, quartzose; trace of moderate-red and greenish-gray mottled shale.....	10	1,980
Sand, moderate-orange-pink, coarse-grained, subrounded, in part frosted, quartzose; trace of light-pink limestone.....	10	1,990

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous--Continued		
Sand, moderate-orange-pink, coarse-grained, subrounded, in part frosted, quartzose; semiconsolidated aggregates of light-red fine quartz sand; trace of light-pink limestone.....	20	2,010
Sand, moderate-reddish-orange, coarse to very coarse grained, subrounded, in part frosted, quartzose; some chert grains; trace of pink limestone.....	70	2,080
Sand, moderate-reddish-orange, coarse to very coarse grained, subrounded, in part frosted, quartzose; some chert grains; moderate-red and greenish-gray mottled shale; trace of pink limestone.....	10	2,090
No record.....	5	2,095

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well-I-2--Continued		
Lower Cretaceous--Continued		
Sand, varicolored, coarse and very coarse grained; fine to medium quartz and chert gravel; oolitic chert pebbles.....	75	2,170
Sand, very pale orange, fine- to coarse-grained, subangular to subrounded, in part frosted, quartzose; trace of glauconite.....	20	2,190
Sand, very pale orange, coarse to very coarse grained, subrounded, frosted in part, quartzose; fine to medium quartz and chert gravel and oolitic chert gravel; moderate-red and greenish-gray shale; pink limestone.....	20	2,210
Shale, moderate-red and dusky-red; very pale orange coarse to very coarse grained subrounded, in part frosted quartzose sand; fine- to medium-grained quartz and chert		

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous--Continued		
Shale--Continued		
gravel; pink limestone.....	40	2,250
Shale, moderate-red and dusky-red; very pale orange coarse to very coarse grained subrounded, in part frosted, quartzose sand; fine- to medium-grained quartz and chert gravel; dark-yellowish-orange fine- to medium-grained quartzose calcareous indurated sandstone; trace of pink limestone.....	100	2,350
Sand, very pale orange, medium to very coarse grained, subangular to subrounded, quartzose; moderate-pink and pale-yellowish-orange fine- to medium-grained quartzose sandstone; moderate-red and dusky-red shale; fine- to medium-grained quartz and chert gravel; trace of pink limestone.....	20	2,370
Sand, very pale orange, medium to very coarse grained, subangular to subrounded, quartzose; fine- to medium-grained quartz and chert gravel; moderate-red and dusky-red shale; very light gray silty		

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous--Continued		
Sand--Continued		
indurated limestone; trace of pink limestone; pyrite cemented quartz aggregates.....	80	2,450
Limestone, white to yellowish-gray, silty, in part porous and sandy...	10	2,460
Limestone, white to yellowish-gray, silty, indurated.....	10	2,470
Limestone, white to yellowish-gray, silty, indurated, in part sandy...	10	2,480
Limestone, very pale orange, silty, indurated.....	10	2,490
Limestone, very pale orange, silty, indurated, in part dolomitic and porous.....	10	2,500
Limestone, very pale orange, silty, indurated, in part dolomitic and porous; medium-dark-gray fine- to medium-grained quartzose pyrite-cemented sandstone.....	30	2,530

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well I-2--Continued		
Lower Cretaceous--Continued		
Limestone, very pale orange, silty, indurated, in part dolomitic and porous; medium-dark-gray fine- to medium-grained quartzose sandstone; white to very light gray fine-grained quartzose calcareous sandstone.....	10	2,540
Pottsville Formation		
Sandstone, very light gray, fine- to medium-grained, quartzose, contains few rock fragments and apatite grains, well indurated, in part slightly pyritic.....	10	2,550
(Incomplete)		

Modified from sample description by Charles Copeland, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well J-3		
Driller's log		
Owner: Charles Hutcherson		
Driller: Terry Drilling Co.		
Clay, yellow.....	12	12
Limerock.....	491	503
Sand and rock.....	84	587
Tough mud and shale.....	189	776
Sand.....	85	861
Well J-5		
Driller's log		
Owner: Roger Watt		
Driller: S. D. Smith		
Top soil and clay.....	13	13
Limestone.....	496	509
Sand.....	73	582
Shale and gumbo.....	209	791
Sand.....	112	903

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well J-14		
Driller's log		
Owner: Frank Watson		
Driller: S. D. Smith		
Top soil, clayey.....	4	4
Limestone.....	700	704
Sand.....	68	772
Gumbo and shale.....	209	981
Sand.....	106	1,087
Well M-3		
Sample log		
Owner: Mrs. B. A. Jenkins		
Prairie Bluff chalk and Ripley Formation undifferentiated		
Sand, glauconitic; sandy lime; phosphatic material.....	40	40
Demopolis chalk		
Chalk, light-gray, sandy.....	40	80
Shale, light-gray, sandy.....	20	100
Chalk, gray, sandy, glauconitic.....	20	120
Chalk, gray, shaly.....	80	200

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Demopolis chalk--Continued		
Chalk, light-gray, soft.....	60	260
Chalk, light-gray.....	140	400
Shale, gray, chalky.....	20	420
Chalk, light-gray, soft.....	100	520
Shale, gray, chalky.....	40	560
Mooreville chalk		
Chalk, gray, shaly.....	20	580
Chalk, gray, shaly; glauconite.....	20	600
Chalk, gray, shaly.....	240	840
Eutaw Formation		
Chalk, gray, shaly, glauconitic; glauconitic sandstone.....	20	860
Sand, medium-grained, glauconitic...	20	880
Sand, medium-grained, glauconitic; sandstone; phosphatic material....	20	900
Sand and sandstone, gray and yellow, medium-grained, very glauconitic; brown claystone.....	100	1,000
Sand and sandstone, gray and yellow, medium-grained, very glauconitic; brown claystone; green shale.....	20	1,020

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Eutaw Formation--Continued		
Sand and sandstone, gray and yellow, fine- and medium-grained, very glauconitic; green shale.....	40	1,060
Sand and sandstone, gray and yellow, fine- and medium-grained, very glauconitic; gray shale.....	20	1,080
Sand and sandstone, gray and yellow, medium-grained, very glauconitic; brown claystone.....	20	1,100
Sand and sandstone, gray and yellow, medium-grained, very glauconitic; brown claystone; carbonaceous shale	100	1,200
Sand and sandstone, gray and yellow, medium- and coarse-grained, very glauconitic; brown claystone; carbonaceous shale; chert gravel..	40	1,240
Gordo and Coker Formations, undifferentiated		
Sand, medium- to coarse-grained; abundant siderite concretions; pyrite.....	20	1,260

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Gordo and Coker Formations, undifferentiated--Continued		
Sand, coarse-grained; siderite concretions; rose and yellow sand grains	30	1,290
Sand, coarse-grained; siderite concretions; chert	50	1,340
Sand, medium- to coarse-grained; siderite concretions	10	1,350
Sand, medium-grained; mica	10	1,360
Sand, coarse-grained; yellow and rose grains	10	1,370
Sand, variegated, coarse-grained; chert	10	1,380
Gravel, chert; sand; dark-gray micaceous carbonaceous shale	10	1,390
Shale, gray, micaceous, carbonaceous; glauconitic sandstone fragments	20	1,410
Sand, medium-grained; fragments of dark-red shale	10	1,420

Table 3.--Sample and drillers' logs of wells in Sumter County--Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Gordo and Coker Formations, undifferentiated--Continued		
Shale, dark-gray, micaceous, carbonaceous; fragments of glauconitic sandstone; dark-red shale	40	1,460
Shale, gray, micaceous, carbonaceous; pink soft clay; dark-red clay	20	1,480
Sand, variegated, medium- to coarse-grained	10	1,490
Shale, dark-gray, micaceous, carbonaceous; pink clay	10	1,500
Sand, variegated, medium-grained	10	1,510
Shale, dark-gray, micaceous, carbonaceous; pink and dark-red clay	10	1,520
Sand, variegated, fine- to medium-grained; pink and red clay; mica	50	1,570
Sand, variegated, medium- to coarse-grained	70	1,640
Shale, dark-red; variegated fine- to coarse-grained sand	20	1,660

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Gordo and Coker Formations, undifferentiated--Continued		
Shale, dark-gray, carbonaceous; siderite concretions cementing fine-grained sand; medium-grained sand.....	30	1,690
Shale, dark-gray, micaceous, carbonaceous; dark-red and purple clay; chert gravel.....	30	1,720
Sand, medium-grained; chert gravel; dark-red clay; siderite concretions; coarse mica.....	30	1,750
Sand, medium-grained; gray carbonaceous shale; pink clay.....	20	1,770
Sandstone, yellow, medium-grained; coarse-grained sand; gravel; and red clay.....	30	1,800
No record.....	10	1,810
Clay, dark-red, pink, and purple.....	20	1,830
Clay, dark-red, pink, and purple; yellow medium-grained sand and sandstone; red and green mottled clay.....	20	1,850

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
›rdo and Coker Formations, undifferentiated--Continued		
Clay, dark-red and pink; abundant small siderite concretions; green clay.....	20	1,870
Clay, dark-red and pink; abundant small siderite concretions;mottled red and green clay; fragments of glauconitic sandstone; pyrite; partly oolitic chert gravel.....	10	1,880
Clay, green; small siderite concretions; brown claystone; gray glauconitic micaceous carbonaceous sandy shale; carbonaceous material.....	50	1,930
Clay, green; fine- to medium-grained sand; fragments of glauconitic sandstone; shell fragments.....	30	1,960
Shale, gray; sand; dark-red clay; gray hard medium-grained glauconitic sandstone; brown claystone; carbonaceous shale.....	80	2,040

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Gordo and Coker Formations, undifferentiated--Continued		
Sand, medium- to coarse-grained, subangular; glauconitic sand and sandstone; gravel.....	40	2,080
Sand, medium- to coarse-grained, subangular; gravel; medium-grained sandstone; gray carbonaceous shale; pink and dark-red clay; pyrite.....	40	2,120
Sand, variegated, coarse-grained, subangular; gravel; gray carbonaceous shale; green and red shale..	80	2,200
Sand and gravel, variegated; siderite concretions; dark-red and purple clay.....	30	2,230
Sand, medium- to coarse-grained, subangular; siderite concretions; reddish-brown and purple clay; gravel.....	150	2,380

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Gordo and Coker Formations, undifferentiated--Continued		
Sand, coarse-grained, subangular; brown and purple clay.....	50	2,430
Sand, yellow, coarse-grained, subangular; reddish-brown and purple clay.....	90	2,520
Clay, dark-reddish-brown and yellow, glauconitic; yellow subangular sand.....	20	2,540
Lower Cretaceous rocks		
Clay, dark-reddish-brown and yellow, glauconitic; pink nodular lime; coarse-grained subangular sand....	20	2,560
Sand, yellow, coarse-grained, subangular; reddish-brown and yellow mottled clay; pink lime; pink calcareous sandstone; chert gravel	110	2,670
Sand, coarse-grained, subangular; reddish-brown clay.....	30	2,700
Sand, medium- to coarse-grained; reddish-brown clay.....	60	2,760

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-3--Continued		
Lower Cretaceous rocks--Continued		
Sand, very coarse grained, sub-angular; reddish-brown clay, lime, and chert; reddish-brown and yellow mottled clay.....	110	2,870
Gravel; reddish-brown clay; pink and red nodular lime; coarse-grained sand.....	20	2,890
Gravel; coarse-grained sand; reddish-brown and purple clay; pink and gray nodular lime.....	20	2,910
Gravel, variegated, chert, partly oolitic; reddish-brown and purple clay; nodular lime.....	15	2,925
No record.....	35	2,960
Gravel, reddish-brown and variegated, in part chert; coarse-grained sand and sandstone; pink lime; brick-red shale; siderite concretions...	70	3,030
Clay, brick-red; pink medium-grained sandstone; gravel.....	10	3,040

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-4		
Driller's log		
Owner: Bessie Fuller		
Driller: West Alabama Lime Co.		
Top soil	30	30
Rock	790	820
Sand	120	940
Gumbo	140	1,080
Sand	120	1,200
Well M-5		
Driller's log		
Owner: George B. Waddall		
Driller: West Alabama Lime Co.		
Top soil	15	15
Rock	805	820
Sand	140	960
Gumbo	140	1,100
Sand	100	1,200

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well M-7		
Driller's log		
Owner: J. L. Elliott		
Driller: S. D. Smith		
Top soil	7	7
Limestone	770	777
Sand	76	853
Gumbo and shale	202	1,055
Sand	105	1,160
Well N-3		
Driller's log		
Owner: C. B. Neel		
Driller: S. D. Smith		
Top soil	8	8
Limestone	505	513
Sand	78	591
Shale and gumbo	209	800
Sand	103	903

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-5		
Driller's log		
Owner: Thomas M. Nelson		
Driller: S. D. Smith		
Top soil	7	7
Limestone	503	510
Sand	77	587
Shale and gumbo	210	797
Sand	106	903
Well N-8		
Sample log		
Owner: M. G. Larkin		
Demopolis Chalk		
Chalk, light-gray	55	55
Chalk, light-gray, hard	15	70
Chalk, light-gray	70	140
Chalk, light-gray; pyrite	5	145
Chalk, light-gray, hard	15	160
Chalk, light-gray	75	235
Chalk, light-gray, impure	145	380
Chalk, gray, impure; *Kyphopyxa christneri*	30	410

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Mooreville Chalk (?)		
Chalk, gray, impure; light-gray granular chalk; Kyphopyxa christneri	20	430
Chalk, light-gray, granular	30	460
Chalk, gray	230	690
Chalk, gray; glauconite	20	710
Eutaw Formation		
Sand, medium-grained, glauconitic; sandy glauconitic chalk; phosphatic material	10	720
Sand, medium-grained, glauconitic, fossiliferous; phosphatic material; gray micaceous carbonaceous shale; brown hard glauconitic sandstone	50	770
Sandstone, medium-grained, glauconitic; sandy lime	20	790
Sandstone, medium-grained, glauconitic; sand; gray micaceous carbonaceous shale	40	830

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Eutaw Formation--Continued		
Sand, fine-grained, glauconitic; dark-gray and green micaceous shale.....	40	870
Shale, dark-gray to green; mica; brown claystone; glauconitic sand and sandstone.....	20	890
Lignite; micaceous sandstone; brown claystone; fine-grained glauconitic sand; dark-gray shale; pyritized wood.....	20	910
Lignite; pyritized wood; glauconitic sand; dark-gray carbonaceous shale	10	920
Sand, medium-grained, glauconitic; dark-gray carbonaceous shale; lignite; glauconitic sandy shale; brown claystone.....	20	940
Sand, glauconitic; brown claystone; gray carbonaceous shale; brown glauconitic sandstone.....	50	990

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Eutaw Formation--Continued		
Sand, glauconitic, glauconitic sandy shale; gray carbonaceous shale; brown glauconitic sandstone; lignite.....	20	1,010
Shale, dark-gray and green; glauconitic sandy shale; coarse-grained sand, in part chert and slightly variegated.....	60	1,070
Gordo Formation		
Shale, dark-gray; abundant siderite concretions; dark-red clay; sand..	40	1,110
Clay, dark-red; sand; siderite concretions; purple clay.....	110	1,220
Clay, purple; fine- to medium-grained micaceous porous sandstone	10	1,230
Clay, purple and gray; variegated fine- to coarse-grained sand; yellow sandstone; yellow sand and gravel; conglomerate fragments....	90	1,320

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Gordo Formation--Continued		
Gravel, variegated, chert; purple clay and sand.....	50	1,370
Shale, gray, micaceous, carbonaceous; glauconitic sandy shale; glauconitic sandstone fragments; purple clay.....	10	1,380
Clay, purple; gray sandy carbonaceous glauconitic shale.....	20	1,400
Gravel; light-gray, medium-grained sandstone; gray micaceous carbonaceous shale.....	10	1,410
Sandstone, light-gray, medium-grained; gravel; purple clay.....	40	1,450
Shale, gray, micaceous, carbonaceous; glauconitic sand.....	40	1,490
No record.....	10	1,500
Coker Formation (?)		
Clay, dark-red and purple; dark-gray micaceous carbonaceous shale; glauconitic sand.....	70	1,570

Table 3.--Sample and driller's logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Coker Formation--Continued		
Shale, dark-gray to black, micaceous, carbonaceous, splintery.....	20	1,850
Sand, medium- to coarse-grained; lignite.....	20	1,870
Sand, medium- to coarse-grained; abundant siderite concretions.....	20	1,890
Sand, fine- to coarse-grained; gravel; siderite concretions.....	60	1,950
Gravel, variegated; conglomerate; medium- to coarse-grained sand; sandstone; siderite concretions...	40	1,990
Sand, coarse-grained, rounded; dark-red clay; gravel.....	20	2,010
Sandstone, light-gray, hard, medium-grained, calcareous.....	10	2,020
Sand, coarse-grained, subangular; gravel; siderite concretions.....	80	2,100
Gravel; variegated sand; dark-red clay; coarse-grained sandstone fragments; reddish-brown clay.....	40	2,140

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Coker Formation--Continued		
Sand, coarse-grained; subangular; variegated gravel and sand; reddish-brown clay.....	50	2,190
Clay, reddish-brown, green, and yellow.....	20	2,210
Sand, variegated, coarse-grained, subangular.....	10	2,220
Clay, reddish-brown and yellow; coarse-grained sand.....	10	2,230
Lower Cretaceous rocks		
Clay, reddish-brown and yellow; coarse-grained sand; pink mottled clay; pink nodular lime.....	50	2,280
Sand, variegated, coarse-grained, subangular; gravel; dark-red and purple clay.....	160	2,440
Sandstone, pink, medium-grained, calcareous; variegated gravel.....	10	2,450

Table 3.--Sample and driller's logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Lower Cretaceous rocks--Continued		
Sand, coarse-grained, variegated; reddish-brown concretions; reddish-brown clay; pink nodular lime.....	30	2,480
Clay, reddish-brown and gray; pink nodular lime; medium- to coarse-grained variegated sand; gravel....	60	2,540
Sandstone, pink, medium-grained; green conglomerate; variegated gravel; coarse-grained sand; reddish-brown clay.....	100	2,640
Clay, reddish-brown, sandy, with small red concretions; gravel and coarse-grained sand.....	50	2,690
Gravel, variegated; some chert; coarse-grained subangular sand; gray nodular lime.....	60	2,750
Gravel; gray to yellow; medium-grained sandstone; pink lime; red and green mottled clay.....	10	2,760

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Lower Cretaceous--Continued		
Clay, dark-red and purple; coarse-grained sand; conglomerate fragments	40	2,800
Gravel, variegated; coarse-grained sandstone; dark-red clay; pink lime	30	2,830
Clay, red, gray, and green; coarse gravelly sand; medium-grained soft porous sandstone	5	2,835
Conglomerate, reddish-green; coarse-grained soft porous sandstone; dark-red and green clay	5	2,840
Sand, coarse; reddish-brown and yellow clay; pink lime	20	2,860
Clay, reddish-brown and green	20	2,880
Sandstone, light-gray and pink, coarse-grained, calcareous; pink lime	20	2,900
Clay, red and green; conglomerate fragments	10	2,910

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well N-8--Continued		
Lower Cretaceous rocks--Continued		
Clay, reddish-brown, pink and green; light-gray coarse-grained sandstone; gray and pink lime.....	40	2,950
Clay, pink or brick-colored; reddish-brown micaceous clay; pink nodular lime.....	30	2,980
Sand, coarse-grained, subangular, in part chert; pink nodular lime; conglomerate; chert gravel.....	40	3,020
Limestone, light-gray, dense; coarse-grained sandstone fragments.....	40	3,060
Limestone, light-gray, dense; green and dark-red sandy clay; chert	10	3,070
Ordovician (?) rocks		
Dolomite, light-gray.....	10	3,080
(Incomplete)		

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Table 3.--Sample and driller s' logs of wells in Sumter County. --Continued

	Thickness (feet)	Depth (feet)
Well O-3		
Driller's log		
Owner: S. B. Motes		
Driller: West Alabama Lime Co.		
Top soil	20	20
Rock	480	500
Sand	140	640
Gumbo	100	740
Sand	80	820
Well O-9		
Driller's log		
Owner: Jack J. Minus		
Driller: Black Belt Drilling Co.		
Top soil and white limerock	10	10
Limerock, white	90	100
Blue rock or clay	140	240
Blue rock or clay and rock	10	250
Blue rock or clay	120	370
Clay, blue	90	460
Clay, blue; white clay	10	470
Clay, blue	40	510

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well O-9--Continued		
Clay, blue with sandrock	30	540
Clay, blue	10	550
Clay, blue with greensand and rock	10	560
Sand	10	570
Sand, clay, and rock	10	580
Clay	10	590
Clay, rock, and greensand	20	610
Clay, rock and sand	10	620
Clay	10	630
Clay and rock	10	640
Clay, blue; greensand; white clay	10	650
Clay; fine sand	10	660
Clay	50	710
Clay, blue	10	720
Clay, blue; rock	10	730
Sand, fine; shell rock	50	780
Clay	40	820
Clay, rock and sand	20	840
Rock and sand	45	885
Sand	65	950

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Q-2		
Driller's log		
Owner: Joe P. Lindsey		
Driller: West Alabama Lime Co.		
Top soil	10	10
Limerock	470	480
Sand	180	660
Gumbo	140	800
Sand	140	940
Gumbo	100	1,040
Sand	140	1,180
Well R-4		
Driller's log		
Owner: Norvelle Loper		
Driller: E. B. Norwood		
Clay	12	12
Rock, blue	836	848
Sand	21	869
Shale	16	885
Sand	18	903
Shale	9	912
Sand	18	930

Table 3.--Sample and drillers' logs of wells in Sumter County.--Continued

	Thickness (feet)	Depth (feet)
Well R-4--Continued		
Shale	108	1,038
Sand	40	1,078
Shale	5	1,083
Sand	12	1,095
Shale	41	1,136
Sand	64	1,200

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well R-5		
Driller's log		
Owner: Vaughn Gould		
Driller: E. B. Norwood		
Clay	12	12
Rock, blue	835	847
Sand	24	871
Shale	7	878
Sand	18	896
Shale	18	914
Sand	16	930
Shale	91	1,021
Sand	20	1,041
Shale	29	1,070
Sand	23	1,093
Shale	9	1,102
Sand	76	1,178
Shale	16	1,194
Sand	17	1,211

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well S-1		
Sample log		
Owner: A. S. McCain		
Driller: E. B. Norwood		
No record.....	60	60
Demopolis Chalk		
Chalk, light-gray, silty, micaceous, fossiliferous; microfossils and shell fragments.....	380	440
Chalk, light-gray, silty, micaceous, in part glauconitic; trace of yellowish-gray poorly indurated limestone.....	20	460
Mooreville Chalk		
Chalk, light-gray, silty, micaceous, slightly glauconitic; yellowish-gray poorly indurated limestone.....	20	480
Chalk, light-gray, silty, micaceous.	320	800

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well S-1--Continued		
Eutaw Formation (?)		
Chalk, light-gray, sandy, in part glauconitic, micaceous; light-gray fine-grained quartzitic glauconitic calcareous sandstone.....	20	820
Sandstone, light-gray, fine-grained, quartzitic, glauconitic, calcareous.....	40	860
Clay, light-olive-gray, micaceous, slightly glauconitic, calcareous; trace of sandstone.....	40	900
Clay, light-olive-gray, micaceous, silty, in part glauconitic; siderite.....	20	920
Clay, light-olive-gray, micaceous, silty to sandy, in part glauconitic.....	40	960
Clay, light-olive-gray, micaceous, silty to sandy, in part carbonaceous; siderite.....	100	1,060
No record.....	40	1,100

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well S-1--Continued		
Eutaw Formation--Continued		
Clay, light-olive-gray, silty to sandy, micaceous; in part carbonaceous; siderite.....	21	1,121

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well S-5		
Driller's log		
Owner: Mary B. Battle		
Driller: E. B. Norwood		
Clay	34	34
Rock, blue	856	890
Sand	25	915
Shale	14	929
Sand	20	949
Shale	10	959
Sand	22	981
Shale	63	1,044
Sand and rock	77	1,121
Shale	21	1,142
Sand	18	1,160
Shale	16	1,176
Sand	52	1,228

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well U-1		
Sample log		
Owner: Allison Lumber Co.		
No record.....	120	120
Porter's Creek Clay		
Shale, black, fossiliferous.....	75	195
Shale, black, fossiliferous; yellow fine-grained sand.....	60	255
Shale, black, fossiliferous; light-gray marl.....	30	285
Clayton Formation		
Marl, light-gray, in part glauconitic.....	35	320
Prairie Bluff Chalk and Ripley Formation, undifferentiated		
Chalk, light-gray.....	60	380
Chalk, light-gray; fine-grained sand.....	30	410
Demopolis Chalk		
Chalk, light-gray; fine-grained sand and mica.....	120	530
Chalk, light-gray, soft.....	120	650
Chalk, light-gray, soft; chalky shale.....	60	710

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well U-1--Continued		
Demopolis Chalk--Continued		
Chalk, light-gray, impure.....	60	770
Chalk, light-gray, impure; chalky shale; Kyphopyxa christneri.....	90	860
Mooreville Chalk		
Chalk, light-gray, impure; gray chalky shale.....	90	950
Chalk, light-gray; speckled shale...	50	1,000
Chalk, light-gray, impure.....	90	1,090
Chalk, light-gray.....	10	1,100
Chalk, light-gray, impure.....	10	1,110
Chalk, light-gray.....	30	1,140
Eutaw Formation		
Sand, medium-grained, glauconitic; sandstone; phosphatic material....	80	1,220
Sand, medium-grained, glauconitic; gray carbonaceous shale.....	20	1,240
Sand, medium-grained, glauconitic; green shale; mica; carbonaceous material.....	10	1,250

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well U-1--Continued		
Eutaw Formation--Continued		
Sand, fine- to medium-grained, glauconitic; sandy shale.....	20	1,270
Sand, fine-grained, glauconitic, micaceous; green micaceous sandy shale.....	20	1,290
Sand, fine- to medium-grained, glauconitic; green micaceous shale; sandy shale; phosphatic material....	200	1,490
Sand, fine- to coarse-grained, glauconitic; green micaceous shale; sandy shale.....	40	1,530
Gordo Formation		
Sand, fine- to coarse-grained, glauconitic; green micaceous shale; abundant siderite concretions	30	1,560
Sand, fine- to coarse-grained, glauconitic; dark-red clay.....	25	1,585
Clay, dark-red and yellow.....	20	1,605
Clay, purple; medium-grained sand; siderite concretions.....	25	1,630

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well U-1--Continued		
Gordo Formation--Continued		
Sand, fine- to medium-grained; mica; dark-red and purple clay; siderite concretions	60	1,690
Sand, medium- to coarse-grained; mica; red and green mottled clay	90	1,780
Gravel, chert; variegated sand	30	1,810
Sand, coarse-grained; dark-red, green, and purple clay	60	1,870
Gravel, chert; sand	60	1,930
Coker Formation		
Gravel, chert; purple, green, and red clay	30	1,960
Sand, medium- to coarse-grained; purple and green clay; gravel	60	2,020
Gravel; purple, green, and gray clay; sand	130	2,150
Shale, green and gray; carbonaceous material; sand and sandstone	30	2,180

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well U-1--Continued		
Coker Formation--Continued		
Sandstone, gray, medium-grained, glauconitic; hard gray shale; glauconitic sand.....	185	2,365
Gravel, white and pink, quartz; sand.....	90	2,455
Gravel, white and pink, quartz; coarse-grained sand; siderite concretions.....	60	2,515
Gravel, white and pink, quartz; green sandy shale; purple and green clay.....	60	2,575
Lower Cretaceous (?)		
Gravel, variegated; coarse-grained sand; purple and reddish-brown clay.....	35	2,610
Sand, coarse-grained; gravel; green, purple, and reddish-brown clay.....	8	2,617

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well X-1		
Driller's log		
Owner: Walter Greene		
Driller: J. A. Dial Drilling Co.		
Top soil	14	14
Limerock	886	900
Sand	160	1,060
Gumbo	160	1,220
Sand	125	1,345
Well Y-1		
Driller's log		
Owner: Ellis Levy		
Driller: West Alabama Lime Co.		
Top soil	21	21
Limerock	839	860
Sand	100	960
Gumbo	100	1,060
Sand	100	1,160

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-7		
Driller's log		
Owner: Curtis Levy		
Driller: West Alabama Lime Co.		
Top soil	16	16
Rock	524	540
Sand	100	640
Gumbo	140	780
Sand	100	880
Well Z-9		
Driller's log		
Owner: John R. Ruzic, Jr.		
Driller: J. A. Dial Drilling Co.		
Top soil	30	30
Limerock	620	650
Sand	70	720
Gumbo	80	800
Sand	100	900

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-10		
Sample log		
Owner: J. R. Ruzic, Jr.		
No record.....		
Demopolis Chalk		
Chalk, light-gray.....	110	460
Mooreville Chalk		
Shale, gray, chalky, containing mica.....	250	710
Eutaw Formation		
Shale, gray, chalky; speckled shaly chalk.....	160	870
Shale, gray, chalky; gray sandy marl.....	14	884
Shale, green, micaceous, carbonaceous; fine- to medium-grained glauconitic sandstone; dense black shale.....	20	904
Sand, medium-grained, glauconitic; green micaceous carbonaceous shale.....	36	940

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-10--Continued		
Eutaw Formation--Continued		
Sand, medium-grained, glauconitic; green micaceous carbonaceous shale; sandstone; claystone; pyrite; pyritized wood.....	180	1,120
Gordo Formation		
Sand, medium-grained, glauconitic; brown claystone; carbonaceous material.....	30	1,150
Sand, medium-grained, glauconitic; dark-red clay fragments.....	30	1,180
Sand, medium-grained, glauconitic; dark-red and gray clay.....	30	1,210
No record.....	232	1,442
Sand, medium- to coarse-grained, variegated; mica; siderite concretions; fragments of dark-red clay.....	26	1,468
No record.....	72	1,540
Coker Formation		
Clay, dark-red, purple and gray; coarse-grained sand; gravel.....	60	1,600

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-10--Continued		
Coker Formation--Continued		
Clay, dark-red; coarse sand; green shale	80	1,680
Clay, dark-red, yellow; gray waxy clay; green micaceous glauconitic sandy shale	56	1,736
Sandstone, gray, hard, medium-grained, glauconitic, micaceous; fragments of black carbonaceous shale	154	1,890
Sand, medium-grained, variegated; glauconite; siderite concretions	40	1,930
Sand, medium-grained; gray shale; glauconitic sandstone; claystone; pyrite; pyritized wood	51	1,981
No record	37	2,018
Sand, very coarse grained; green sandy clay	25	2,043
Sandstone, gray, medium- to coarse-grained; very coarse grained sand.	60	2,103
Sand, very coarse grained	62	2,165

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-10--Continued		
Coker Formation--Continued		
Sand, very coarse grained; chert gravel.....	26	2,191
Sand, coarse-grained; pink and purple lime; reddish-brown and green mottled clay; chert gravel....	66	2,257
Gravel, variegated; coarse-grained sand; pink sandstone; dark-reddish-brown clay; pink and purple lime....	30	2,287
Sand, medium- to coarse-grained; reddish-brown and green mottled clay; pink lime.....	61	2,348
Lower Cretaceous (?) rocks		
Sand, very coarse grained, variegated; gravel; reddish-brown, green, and purple clay; pink and green nodular lime.....	22	2,370
Sand, coarse-grained; subangular.....	40	2,410
Clay, brick-red and yellow; reddish-brown and green mottled clay; pink lime.....	40	2,450

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well Z-10--Continued		
Lower Cretaceous (?) rocks--Continued		
No record.....	51	2,501
Incomplete		

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well AA-1		
Driller's log		
Owner: N. B. Fields		
Driller: F. C. Null		
Soil	18	18
Selma chalk	487	505
Eutaw sand	420	925
Tuscaloosa sand	...	925
Well CC-3		
Driller's log		
Owner: Mrs. J. F. Allison		
Driller: J. A. Dial Drilling Co.		
Top soil	12	12
Soapstone	32	44
Limerock	842	886
Sand	90	976
Gumbo	76	1,052
Sand	8	1,060

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well DD-2		
Sample log		
Owner: Allison Lumber Co.		
No record.....	150	150
Porters Creek Formation		
Shale, black, fossiliferous.....	30	180
Marl, light-gray, soft.....	40	220
Clayton Formation		
Marl, light-gray, soft; phosphatic material.....	40	260
Prairie Bluff Chalk and Ripley Formation, undifferentiated		
Marl, gray.....	20	280
Chalk, gray, soft.....	60	340
Chalk, light-gray.....	20	360
Demopolis Chalk		
Chalk, light-gray.....	220	580
Chalk, light-gray; chalky shale.....	60	640
Chalk, light-gray.....	200	840
Mooreville Chalk		
Chalk, light-gray.....	100	940
Shale, gray, chalky.....	160	1,100

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well DD-2--Continued		
Eutaw Formation		
Shale, gray, chalky; medium-grained glauconitic sandstone.....	20	1,120
Sandstone, medium-grained, glauconitic, fossiliferous.....	160	1,280
Shale, green, glauconitic, sandy; medium-grained glauconitic sand; sandstone; claystone.....	200	1,480
Sand, medium-grained, glauconitic; brown claystone; sandstone.....	60	1,540
Gordo Formation		
Sand, medium-grained, glauconitic; siderite concretions.....	160	1,700
Clay, dark-red and purple; siderite concretions.....	40	1,740
Clay, dark-red and purple; sand; gray clay.....	80	1,820
Sand, coarse-grained, variegated; dark-red and purple clay.....	140	1,960

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well DD-2--Continued		
Coker Formation		
Sand, coarse-grained, variegated; gray and purple clay.....	80	2,040
Clay, dark-red and purple; sand; glauconitic sandstone.....	200	2,240
Sandstone, glauconitic; dark-green shale.....	20	2,260
Sandstone, gray, hard, glauconitic, fossiliferous; dark-green shale...	60	2,320
Shale, dark-green, micaceous, carbonaceous; sand.....	140	2,460
Sand, coarse-grained; gravel.....	260	2,720
Sand, coarse-grained; reddish-brown and green mottled shale.....	50	2,770
Lower Cretaceous rocks		
Sand, coarse-grained; reddish-brown and green mottled shale; purple and green lime.....	170	2,940
Sand, coarse-grained, variegated....	120	3,060

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well DD-2--Continued		
Lower Cretaceous rocks--Continued		
Sand, medium- to coarse-grained, variegated; reddish-brown and green mottled shale; pink nodular lime	200	3,260
Sand, coarse-grained; reddish-brown and green micaceous shale; pink nodular lime; gravel	200	3,460
Sand, coarse-grained; reddish-brown and green micaceous shale; pink nodular lime; yellow coarse-grained sandstone; chert gravel	140	3,600
Sandstone, pink, coarse-grained; very calcareous; yellow chert gravel; coarse-grained sand	100	3,700
Clay, brick-red; shale; nodular lime; fine- to coarse-grained sand and sandstone	60	3,760
Clay, brick-red and green, mottled; pink lime; sand	20	3,780
Sandstone, pink, coarse-grained, calcareous; brick-red clay	20	3,800

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well DD-2--Continued		
Lower Cretaceous--Continued		
Clay, brick-red and green; pink fine-grained sandstone and sand; pink lime.....	100	3,900
Clay, brick-red and green; pink fine-grained sandstone and sand; conglomerate; pink sandy lime.....	110	4,010

Modified from sample description by Winnie McGlamery, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well EE-1		
Sample log		
Owner: Morris Hancock		
Driller: J. A. Dial Drilling Co.		
Hawthorn Formation		
Sand, pale-orange, very fine to coarse-grained, subangular to subrounded, quartzose; trace of mica.....	21	21
Sand, pale-orange, very fine to coarse-grained, subangular to subrounded, quartzose; light-gray micaceous silty carbonaceous clay.....	42	63
Sand, pale-orange, very fine to coarse-grained, subangular to subrounded, quartzose; light-gray sandy micaceous clay; medium-gray silty clay.....	21	84
Clay, light-gray, sandy, micaceous, in part carbonaceous.....	21	105

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well EE-1--Continued		
Porters Creek Formation		
Clay, light-gray, sandy, micaceous, in part carbonaceous; medium-gray silty clay; microfossils.....	21	126
Clay, medium-gray, silty, micaceous.	168	294
Clay, medium-gray, silty, micaceous; sideritic sandstone.....	42	336
Clay, medium-gray, silty, micaceous; fossiliferous.....	168	504
Clay, medium-gray, silty, micaceous; light-gray fine- to medium-grained subangular to subrounded quartzose sand.....	21	525
Clay, light-gray, sandy, micaceous, very poorly indurated.....	63	588
Clayton Formation		
Clay, light-gray, sandy, micaceous, very poorly indurated; light-gray silty chalky clay.....	42	630

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well EE-1--Continued		
Selma Group (Formation undifferentiated)		
Chalk, light-gray, silty, micaceous; light-gray sandy clay.....	21	651
Sand, light-gray, very fine to fine-grained, angular to subangular, quartzose, micaceous; light-gray silty chalk; light-gray sandy clay..	84	735
Chalk, light-gray, silty.....	21	756
Clay, medium-gray, silty, micaceous...	21	777
Chalk, light-gray, silty, fossiliferous.....	126	903
Chalk, light-gray, silty; medium-gray silty micaceous clay; trace of sand.....	42	945
Chalk, light-gray, silty, micaceous (The samples consist almost entirely of clay from the Porters Creek Formation and are not representative of the geologic section penetrated.)	588	1,533

Modified from sample description by Randall J. Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-1		
Sample log		
Owner: City of Cuba		
Driller: Terry Drilling Co.		
Nanafalia Formation		
Sand, pale-yellowish-orange, very fine to coarse-grained, subangular to rounded, quartzose, in part iron stained.....	16	16
Sand, light-gray, very fine to fine-grained, subangular, quartzose, micaceous, grains have slight clay coating.....	16	32
Sand, light-gray to very light gray, very fine to fine-grained, angular to subangular, quartzose.....	16	48
Naheola Formation		
Clay, light-olive-gray, silty, micaceous, carbonaceous; light-gray fine-grained sand; lignite.....	16	64

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-1--Continued		
Naheola Formation--Continued		
Sand, light-gray, very fine to fine-grained, angular, quartzose, micaceous, clay coated; light-olive-gray silty micaceous carbonaceous clay.....	16	80
Sand, light-gray, very fine grained, quartzose, very micaceous, glauconitic.....	32	112
Sand, light-gray, very fine grained, quartzose, very micaceous, glauconitic, slight clay coating; trace of lignite.....	16	128
Sand, light-gray, very fine grained, angular, quartzose, micaceous, glauconitic, slight clay coating...	16	144

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-2		
Driller's log		
Owner: City of Cuba		
Driller: Terry Drilling Co.		
Sand, medium, gray and yellow.....	9	10
Sand, medium, yellowish gray.....	20	30
Clay.....	5	35
Sand, medium to fine.....	15	50
Sand, fine.....	20	70
Clay and marl.....	10	80
Sand, fine.....	10	90

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-2		
Sample log		
Owner: City of Cuba		
Driller: Terry Drilling Co.		
No record.....	1	1
Naheola Formation		
Sand, very pale orange, very fine to medium-grained, subangular to subrounded, quartzose, micaceous....	9	10
Sand, very light gray, very fine to fine-grained, subangular, quartzose, micaceous; trace of lignite.....	10	20
Sand, very light gray, very fine to medium-grained, subangular to subrounded, quartzose, micaceous....	5	25
Sand, very light gray, very fine to medium-grained, subangular to sub-rounded, quartzose, very micaceous; light-gray sandy micaceous carbona-ceous clay; abundant lignite.....	10	35

Table 3.--Sample and drillers' logs of wells in Sumter County .--Continued

	Thickness (feet)	Depth (feet)
Well FF-2--Continued		
Naheola Formation--Continued		
Sand, yellowish-gray, very fine to medium-grained, subangular to subrounded, quartzose, micaceous; light-gray sandy micaceous carbonaceous clay; lignite.....	5	40
Sand, light-gray, very fine grained, angular, glauconitic, micaceous; light-gray silty micaceous carbonaceous clay.....	50	90
Clay, light-olive-gray, silty to sandy, carbonaceous, micaceous....	50	140
Clay, light-olive-gray, silty to sandy, carbonaceous, micaceous; very pale orange very fine to medium-grained subangular to subrounded quartzose glauconitic sideritic fossiliferous sand.....	20	160

Table 3.--Sample and drillers' logs of wells in Sumter County--Continued

	Thickness (feet)	Depth (feet)
Well FF-2--Continued		
Porters Creek Formation (?)		
Clay, medium-gray, silty, micaceous; trace of very pale orange very fine to medium-grained sand.....	20	180

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-3		
Sample log		
Owner: City of Cuba		
Driller: Terry Drilling Co.		
No record.....	60	60
Naheola Formation		
Sand, light-gray, very fine grained, angular, quartzose, glauconitic, micaceous; medium-gray silty micaceous carbonaceous clay; lignite.	20	80
Sand, light-gray, very fine grained, angular, quartzose, very micaceous, glauconitic; medium-gray silty micaceous carbonaceous clay.	20	100
Clay, medium-gray, micaceous, carbonaceous, silty; light-gray very fine grained angular sand.....	10	110
Clay, medium-gray, micaceous, carbonaceous, silty.....	10	120
Clay, medium-gray, micaceous, carbonaceous, silty; light-gray very fine grained angular quartzose glauconitic micaceous sand.....	20	140

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-3--Continued		
Naheola Formation--Continued		
Sand, light-gray, very fine grained, angular, quartzose, micaceous, glauconitic, clay coated grains; medium-gray micaceous carbonaceous silty clay.....	20	160
Porters Creek Formation (?)		
Clay, medium-gray, sandy, micaceous, slightly carbonaceous; light-gray very fine grained angular sand....	20	180

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-4		
Driller's log		
Owner: W. A. Ganguet		
Driller: Terry Drilling Co.		
Clay, sandy	24	24
Sand	31	55
Clay, hard	6.5	61.5
Lignite	2	63.5
Sand, fine, micaceous	32.5	96
Sand and marl	24	120
Soapstone, blue or marl with thin rocks	560	680
Limerock	6	686
Well GG-3		
Driller's log		
Owner: Willie B. DeLaine		
Driller: West Alabama Lime Co.		
Top soil	42	42
Rock	58	100
Sand	60	160
Gumbo	100	260
Sand	100	360

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-6		
Sample log		
Owner: City of Cuba		
Driller: Terry Drilling Co.		
No record.....	63	63
Haheola Formation		
Sand, light-gray, very fine grained, angular, quartzose, micaceous, trace of glauconite.....	7	70
Sand, light-gray, very fine grained, angular, quartzose, micaceous, trace of glauconite; trace of light-olive-gray silty micaceous clay, in part carbonaceous.....	20	90
Clay, medium-gray, silty, micaceous, carbonaceous; light-gray very fine grained angular sand....	10	100
Clay, medium-gray, silty, micaceous, carbonaceous.....	18	118
Sand, light-gray, very fine grained, angular, quartzose, micaceous, trace of glauconite; medium-gray silty micaceous carbonaceous clay.....	15	133

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well FF-6--Continued		
Naheola Formation--Continued		
Sand, light-gray, very fine grained, angular, quartzose, micaceous, trace of glauconite; medium-gray silty micaceous carbonaceous clay; lignite.....	7	140
Clay, light-olive-gray, silty to sandy, micaceous, in part carbonaceous.....	50	190
Porters Creek Formation (?)		
Clay, medium-gray, silty to sandy, micaceous, carbonaceous; trace of glauconite; shell fragments and microfossils.....	10	200

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well HH-2		
Driller's log		
Owner: Hosie K. Bragg		
Driller: MacDonald and Hill		
Clay and sand	10	10
Sand	18	28
Lignite, streak of shale	9	37
Shale	39	76
Sandy	29	105
Shale, soft	46	151
Rock, streak of shale	14	165
Shale, fine, sandy	15	180

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2		
Sample log		
Owner: Allison Lumber Co.		
Driller: Merry Brothers Drilling Co.		
Terrace deposits		
Sand, orange-pink, very fine to coarse-grained, subangular to subrounded quartzose.....	10	10
Porters Creek Formation		
Sand, orange-pink, very fine to coarse-grained; medium-gray silty micaceous clay; trace of ironstone.....	10	20
Clay, medium-gray, silty, micaceous.....	140	160
Clay, medium-gray, silty, micaceous; sideritic indurated siltstone.....	10	170
Clay, medium-gray, silty, micaceous.....	40	210
Clay, medium-gray, silty, micaceous; sideritic indurated siltstone.	10	220

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2--Continued		
Porters Creek Formation--Continued		
Clay, medium-gray, silty, micaceous	70	290
Clay, light- to medium-gray, silty, micaceous	20	310
Clayton Formation		
Clay, medium-gray, silty, micaceous; light-gray silty chalky clay	10	320
Clay, light-gray, silty, chalky; medium-gray silty micaceous clay	20	340
Prairie Bluff Chalk, Ripley Formation, and Demopolis Chalk, undifferentiated		
Chalk, light-gray, silty; medium-gray silty micaceous clay	10	350
Chalk, light-gray, silty	50	400
Chalk, light-gray, silty; medium-gray silty micaceous clay	70	470
Chalk, light-gray, silty, pyritic; medium-gray silty micaceous clay	130	600
Chalk, light-gray, silty; medium-gray silty clay	110	710

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2--Continued		
Prairie Bluff Chalk, Ripley Formation, and Demopolis Chalk, undifferentiated--Continued		
Chalk, light-gray, silty; medium-gray silty clay; light-gray very fine to fine-grained subangular quartzose sand.....	10	720
Chalk, light-gray, silty; medium-gray silty clay.....	90	810
No record.....	60	870
Clay, medium-gray, silty, micaceous; light-gray silty chalk.....	60	930
Mooreville Chalk		
Limestone, light-gray, slightly indurated, grainy textured; light-gray silty chalk; abundant pyrite.	20	950
Clay, medium-gray, silty, micaceous; light-gray silty chalk.....	10	960
Chalk, light-gray, silty; medium-gray silty clay; *Kyphopyxa christneri*.....	60	1,020

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2--Continued		
Mooreville Chalk--Continued		
Chalk, light-gray, silty, pyritic; medium-gray silty clay.....	100	1,120
Chalk, light-gray, silty; medium-gray silty clay; pale-yellowish-orange waxy appearing clay.....	10	1,130
Chalk, light-gray, silty, pyritic; medium-gray silty clay.....	80	1,210
Eutaw Formation		
Sandstone, light-gray, fine-grained, quartzitic, glauconitic, calcareous.....	10	1,220
Sand, yellowish-gray, very fine to medium-grained, subangular to subrounded, quartzose, glauconitic; sandstone.....	10	1,230
Clay, medium-gray to light-olive-gray, silty, micaceous.....	10	1,240

Table 3.--Sample and drillers' logs of wells in Sumter County --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2--Continued		
Eutaw Formation--Continued		
Clay, medium-gray to light-olive-gray, silty, micaceous; yellowish-gray very fine to medium-grained subangular to subrounded quartzose glauconitic sand.....	30	1,270
Shale, light-olive-gray, silty, micaceous; light-gray very fine grained angular quartzose sand.....	50	1,320
Sand, yellowish-gray, very fine to fine-grained, angular to subrounded, quartzose, glauconitic; light-olive-gray shale; very light gray fine-grained quartzitic calcareous micaceous sandstone.....	50	1,370
Sand, yellowish-gray, very fine to medium-grained, angular to subangular, quartzose, glauconitic; phosphate; light-olive-gray shale..	20	1,390

Table 3.--Sample and drillers' logs of wells in Sumter County, --Continued

	Thickness (feet)	Depth (feet)
Well JJ-2--Continued		
Eutaw Formation--Continued		
Shale, light-olive-gray, silty, micaceous, carbonaceous; sideritic glauconitic siltstone...	10	1,400
No record.....	10	1,410
Shale, light-olive-gray, silty, micaceous, carbonaceous; moderate-red very fine grained quartzitic sandstone; sideritic siltstone....	10	1,420
Shale, light-olive-gray, silty, micaceous, carbonaceous; light-gray very fine to medium-grained subangular to subrounded quartzose glauconitic sand.....	170	1,590
No record.....	10	1,600
Shale, olive-gray, silty, micaceous, carbonaceous; abundant lignite....	7	1,607

Modified from sample description by Randall Fleming, Geological Survey of Alabama.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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-5	C. M. Halsell.....	.....	D	...	4	...	124	...	...	F	S	Measured flow 25 gpm on 11-4-64 from 4-in pipe 3 ft above surface.
A-6	Warsaw Sand and Gravel Co.	S. D. Smith.....	D	450	4	Ke	122	...	...	F,J	Ind	Measured flow 17 gpm on 11-3-64 from 3-in pipe 1.3 ft above surface.
A-7	C. M. Halsell.....	.....do.....	D	519	4	Ke	123	...	...	F	D,S	Measured flow 12 gpm on 11-4-64 from 2-in pipe 2.9 ft above surface. Supplies tennants and 80 cattle. See driller's log.
A-8	Hugh Cameron.....	.....do.....	D	775	4	Kg	130	...	...	F	D,S	Measured flow 27 gpm on 11-4-64 from 3-in pipe 2.5 ft above surface. Supplies tenants and 100 cattle.
A-9	.....do.....	.....do.....	D	775	4	Kg	145	...	...	F	S	Measured flow 27 gpm on 11-4-64 from 3-in pipe 2 ft above surface. Supplies 100 cattle.
A-10	.....do.....	.....do.....	D	475	4	Ke	129	...	...	F	S	Measured flow 13.5 gpm on 11-4-64 from 2½-in pipe 2.3 ft above surface. Supplies 65 cattle.
A-11	T. W. Rogers.....	E. B. Norwood.....	D	571	4,2	Ke	125	+11.4	5-18-65	F	S	Casing: 4-in from surface to 21 ft; 2-in from surface to 571 ft; perforated from 151 to 571 ft. Measured flow 23 gpm on 11-4-64 from 2-in pipe 2.2 ft above surface. See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type ~~Mass completed~~	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-12	T. W. Rogers.....	.....	D	...	...	...	140	...	....	F	S	Measured flow 6 gpm on 11-4-64 from 3-in pipe 4 ft above surface.
A-13	Hugh Cameron.....	S. D. Smith.....	D	450	4	Ke	120	...	...	F	S	Measured flow 30 gpm on 11-3-64 from 3-in pipe 4 ft above surface.
A-14	.....do.....	Jack Smith.....	D	450	4	Ke	125	...	...	F	S	Measured flow 12 gpm on 11-3-64 from 3-in pipe 4 ft above surface.
A-15	J. L. Parker.....	.....	D	320	4	Ke	117	...	...	F	S	Measured flow 3 gpm on 10-27-64 from 4-in pipe 1 ft above surface.
A-16	Hugh Cameron.....	C. T. White.....	D	460	3½	Ke	120	...	...	F	D	Casing: 3½-in from surface to 20 ft; none below. Measured flow 5 gpm on 11-3-64 from 2-in pipe.
A-17	Hugh Cameron.....	.....do.....	D	560	3	Ke	119	...	...	F,J	D,S	Casing: 3-in from surface to 26 ft; none below. Estimated flow less than 1 gpm on 11-3-64.
A-18	Cliff Rogers.....	.....	D	500	...	Ke	119	...	...	F,J	D,S	Measured flow 3.4 gpm on 11-4-64 from 2-in pipe 4 ft above surface.
A-19	E. H. Nevin.....	.....	D	360	4	Ke	120	...	...	F,J	D	Measured flow 1.5 gpm on 11-4-64 from 2½-in pipe 3.6 ft above surface.
A-20	Mrs. W. J. Rogers..	C. T. White.....	D	300	3	Ke	123	...	...	F,J	D	Measured flow 1.4 gpm on 11-4-64 from 2-in pipe 3.4 ft above surface. See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type ~~Year completed~~	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level: Above (+) or below land surface (feet)	Water level: Date of measurement	Method of lift	Use of water	Remarks
A-21	Mrs. Mabry.....	.....	D	...	4	...	125	...	...	F	S	Measured flow 25 gpm on 11-10-64 from 2½-in pipe 2.8 ft above surface.
A-22	Hugh Cameron.....	Jack Smith.....	D	450	4	Ke	121	...	...	F	N	Measured flow 2.8 gpm on 11-3-64 from 2-in pipe 3.6 ft above surface.
B-1	.....	.....	...	10,322	...	...	...	...	...	...	...	Oil test. Permit No. 1040. Referred to as J. J. Hagerman No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
B-2	William King.....	.....	D	...	4	...	...	...	...	F	D,S	Measured flow 1 gpm on 10-30-64 from 2½-in pipe 2.5 ft above surface.
B-3	J. J. Hagerman.....	S. D. Smith.....	D	693	4	Ke	153	7.3	10-28-64	J	S	Casing: 4-in to 42 ft; none below.
B-4	Cliff Parsells.....	.....	D	...	3	...	...	...	...	F	S	Measured flow 12 gpm on 11-5-64 from 2½-in pipe 3 ft above surface.
B-5	Ben Brockway.....	--Ladd.....	D	...	...	...	178	...	...	J	D	
B-6	J. J. Hagerman.....	S. D. Smith.....	D	700	4	Ke	164	13 22.9	1951 10-28-64	J	D,S	Casing: 4-in to 42 ft; none below. Supplies 2 homes, swimming pool, and 200 cattle.
B-7	Nell Brockway.....	Joe Ladd.....	D	600	4	Ke	172	...	...	J	D,S	
B-8	.....do.....	S. D. Smith.....	D	640	4	Ke	190	...	...	J	S	See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
B-9	North Sumter High School.	E. B. Norwood.....	D	675	4,2	Ke	178	28	1958	C	Inst	Casing: 4-in from surface to 25 ft; none from 25 to 276 ft; 2-in from 276 to 675 ft. Supplies 672 students.
B-10	J. L. Parker.....	Jack Smith.....	D	707	6	Ke	173	20	1964	T	P	Supplies 30 homes and gin. Usage about 12,000 gpd. See driller's log.
B-11	.....do.....	.....	D	525	4	Ke	185	49.1	10-27-64	J	D	Casing: 4-in from surface to 50 ft; none below.
B-12	O. R. Chafin.....	S. D. Smith.....	D	701	4,2	Ke	149	...	...	F,J	D,S	Measured flow 12.5 gpm on 10-30-64 from 2-in pipe 3.5 ft above surface. See driller's log.
B-13	J. L. Parker.....	.....	D	362	...	Ke	129	...	...	F	S	Measured flow 0.6 gpm on 10-27-64 from 2-in pipe 1.7 ft above surface.
E-1	Mrs. Willis Meriweather.	.....	D	...	...	...	...	...	...	F	D,S	Estimated flow less than 1 gpm on 11-5-64.
E-2	Gelger Pinson.....	.....	D	...	3	...	...	...	...	F	S	Measured flow 3.5 gpm on 9-23-64 from 3-in pipe 3.1 ft above surface.
E-3	Arch Watt.....	C. W. Blount.....	D	850	4	Ke	143	...	...	F	D,S	Measured flow 22 gpm on 9-23-64 from 2-in pipe 2 ft above surface.
E-4	Chuck Fleming.....	West Alabama Lime Co.	D	900	4	Ke	180	29.3	5-19-65	J	S	See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
E-5	Sumter Farm and Stock Co.	.....	D	1,100	4	Kg	...	...	...	F	S	Measured flow 20 gpm on 9-22-64 from 3-in pipe 5.9 ft above surface.
E-6	.....do.....	.....	D	...	...	...	...	...	...	F	S	Measured flow 1 gpm on 9-23-64.
E-7	Will V. Little.....	.....	D	948	4	Kg	...	...	...	F	D,S	Measured flow 6.8 gpm on 11-5-64 from 2-in pipe 2.7 ft above surface.
E-8	Billie Taylor.....	.....	D	...	4	...	...	...	...	F	D,S	Measured flow 1 gpm on 11-5-64 from 1-in pipe 2.3 ft above surface.
E-9	Sumter Farm and Stock Co.	.....	D	...	...	...	...	...	...	F	S	Measured flow 0.9 gpm on 9-22-64 from 1½-in pipe 2 ft above surface.
E-10	.....do.....	.....	D	...	...	...	165	18	1964	C	P	Supplies 12 homes.
E-11	Town of Geiger.....	M. R. Smith, Jr.....	D	750	4	Ke	166	6 22.9	1940 9-23-64	J	P	Used as public fountain.
E-12	Sumter Farm and Stock Co.	.....	D	...	4	...	144	...	...	F,J	D,S	Estimated flow 3 gpm on 9-23-64.
E-13	.....do.....	.....	D	...	4	...	...	...	...	F	S	Measured flow 2.8 gpm on 9-22-64 from 4-in pipe 1.1 ft above surface.
E-14	Carlton Fleming.....	J. A. Dial Drilling Co.	D	800	4,2	Ke	152	...	...	M	S	Casing: 4-in from surface to 21 ft; none from 21 to 300 ft; 2-in from 300 to 800 ft. See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
E-15	--Owen.....	.....	D	1,150	...	Kg	...	...	...	F	S	Estimated flow 20 gpm on 9-25-64.
E-16	Frank Boyd.....	.....	D	900	4	Ke	...	...	...	F	S	Measured flow 12.5 gpm on 10-27-64 from 2½-in pipe 2.6 ft above surface.
E-17	--Kykendahl.....	.....	D	1,100	4	Kg	...	...	...	F	D,S	Measured flow 25 gpm on 10-27-64 from 3-in pipe 1.6 ft above surface.
E-18	Geiger Community House.	.....	D	945	4	Ke	128	+8.0	5-19-65	F	Inst	Measured flow 16 gpm on 9-24-64 from 2½-in pipe 2.5 ft above surface.
F-1	C. M. A. Rogers.....	J. A. Dial Drilling Co.	D	840	4,2	Kg	182	36 39.6	1960 5-19-65	J	D,S	Casing: 4-in from surface to 21 ft; none from 21 to 240 ft; 2-in from 240 to 840 ft; perforated from 714 to 840 ft. See driller's log.
F-2	Billie Taylor.....	S. D. Smith.....	D	651	4,2	Ke	139	...	...	F	D,S	Casing: 4-in from surface to 41 ft; none from 41 to 231 ft; 2-in from 231 to 651 ft. Measured flow 12.3 gpm on 10-30-64 from 2-in pipe 1.8 ft above surface. See driller's log.
F-3	Mrs. J. A. Rogers...	Roger Smith.....	D	850	...	Kg	125	...	...	F	S	Measured flow 1.3 gpm on 11-6-64 from 1-in pipe 4.3 ft above surface.
F-4	B. A. Rogers and Woodward Iron Works.	Jack Smith.....	D	850	4	Kg	125	...	...	F,J	D,S	Measured flow 24 gpm on 11-6-64 from 2-in pipe 5.2 ft above surface.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
F-5	St. John School.....	.....	S	...	...	Qal	185	...	...	J	Inst	Estimated flow less than 1 gpm on 11-6-64. Supplies 72 students.
F-6	John Houston.....	S. D. Smith.....	D	1,000	...	Kg	142	...	...	F	D,S	Estimated flow 13 gpm from 2-in pipe 3 ft above surface.
F-7	B. A. Rogers.....	.....	D	630	4	Ke	129	...	...	F	D,S	Measured flow 4.9 gpm on 11-10-64 from 1½-in pipe 2.8 ft above surface.
F-8	G. L. Dent.....	.....	D	850	4	Ke	127	...	...	F	D,S	Measured flow 7.2 gpm on 11-6-64 from 2-in pipe 2.9 ft above surface.
H-1	B. A. Rogers.....	C. T. White.....	D	600	...	Ke	100	...	...	F	S	Measured flow 5 gpm on 11-14-64 from 2-in pipe 2.6 ft above surface. See driller's log.
H-2	Tom Long.....	.....	D	...	4,2	...	...	...	...	F	S	Measured flow 17 gpm on 11-17-64 from 2-in pipe 3 ft above surface.
H-3	B. A. Rogers.....	.....	D	...	...	...	100	...	...	F	D	Estimated flow 2 gpm on 11-6-64.
H-4	P. M. Norwood.....	S. D. Smith.....	D	890	4,2	Kg	108	...	...	F	S	Measured flow 30 gpm on 11-12-64 from 2-in pipe 2.4 ft above surface.
H-5	.....do.....	E. B. Norwood.....	D	850	4,2	Kg	110	...	...	F,J	D,S	Measured flow 6.8 gpm on 11-12-64 from 2-in pipe 2.9 ft above surface.
H-6	W. D. Down.....	.....	D	...	4	...	100	...	...	F	D,S	Measured flow 1 gpm on 11-12-64 from 2-in pipe 5 ft above surface.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
I-1	Mrs. E. B. Harwood..	.....	D	750	4	Ke	164	28.6	11-10-64	J	D	
I-2	.....	.....	...	7,662	...	...	...	...	...	...	...	Oil test. Permit No. 1160. Referred to as James B. Hill No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
I-3	H. E. Fields.....	C. W. Blount.....	D	800	4	Ke	...	...	...	F,J	D,S	Measured flow 15 gpm on 11-11-64 from 4-in pipe 2.4 ft above surface.
I-4	James B. Hill.....	S. D. Smith.....	D	850	...	Ke	120	...	...	F	S	Measured flow 20 gpm on 11-11-64 from 2-in pipe 2.5 ft above surface.
I-5	Mrs. R. E. Harwood..	.....	D	850	4	Ke	120	...	...	F	S	Measured flow 20 gpm on 11-10-64 from 2-in pipe 3.1 ft above surface.
I-6	F. O. Fields.....	F. C. Mull.....	D	812	4	Ke	162	5	1964	J	D,S	Formerly flowed.
I-7	Town of Gainesville.	.....do.....	D	800	4	Ke	133	...	...	F,J	P	Measured flow 1.6 gpm on 11-6-64 from 3-in pipe 3.7 ft above surface.
I-8	B. A. Rogers.....	S. D. Smith.....	D	955	...	Kg	110	...	...	F,J	D,S	Measured flow 24 gpm on 11-10-64 from 2-in pipe 6 ft above surface.
I-9	Mrs. J. A. Rogers...	.....do.....	D	800	...	Ke	131	...	...	F,C	D,S	Measured flow 13 gpm on 11-10-64 from 2-in pipe 4.4 ft above surface.
I-10	Gainesville School..	J. A. Dial Drilling Co.	D	819	4,2	Ke	159	22.2	11-10-64	J	Inst	Casing: 4-in from surface to 43 ft; none from 43 to 319 ft; 2-in from 319 to 819 ft Supplies 129 students.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
I-11	Mrs. J. A. Rogers...	Roger Smith.....	D	800	...	Ke	114	...	...	F	S	Measured flow 3.6 gpm on 11-10-64 from 1-in pipe 4.3 ft above surface.
I-12	James B. Hill.....	S. D. Smith.....	D	...	...	...	...	0.5	11-11-64	N	N	
I-13	Alfred Harris, Jr...	.....do.....	D	860	4	Ke	162	15	1961	J	D,S	
								49.7	5-20-65	J	D,S	
I-14	Tom Long.....	West Alabama Lime Co.	D	900	4,2	Ke	172	28.8	11-11-64	J	S	Casing: 4-in from surface to 16 ft; none from 16 to 522 ft; 2-in from 522 to 900 ft. See driller's log.
I-15	P. M. Norwood.....	J. A. Dial Drilling Co.	D	1,100	4,2	Kg	...	...	...	F	S	Measured flow 6.5 gpm on 11-11-64 from 2-in pipe 2.8 ft above surface.
I-16	.....	.....	...	2,566	...	...	...	...	...	...	...	Stratigraphic test. Referred to as Roberts No.1.
I-17	.....	.....	...	2,653	...	...	...	...	...	...	...	Stratigraphic test. Referred to as Coggins No. 1.
J-1	W. O. Winston.....	S. D. Smith.....	D	865	4	Ke	...	...	...	F	S	Measured flow 40 gpm on 9-24-64 from 2-in valve 2 ft above surface.
J-2	J. W. Shirley.....	.....	D	...	4	...	115	...	...	F	D	Measured flow 3 gpm on 9-23-64 from 1½-in pipe 3 ft above surface.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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-3	Charles Hutcherson..	Terry Drilling Co...	D	861	4,2	Ke	115	+18.9	5-20-65	F	S	Casing: 4-in from surface to 21 ft; none from 21 to 461 ft; 2-in from 461 to 861 ft; perforated from 777 to 861 ft. Measured flow 5.5 gpm on 9-24-64 from 1½-in pipe 2.7 ft above surface. See driller's log.
J-4	Roger Watt.....	.....	D	...	4	...	131	...	...	F,J	D	Measured flow 3.5 gpm on 9-24-64 from 2-in pipe 3 ft above surface.
J-5	.....do.....	S. D. Smith.....	D	903	4	Ke	124	+8.0	5-19-65	F	D,S	Measured discharge 9.7 gpm on 9-24-64 from 2-in pipe 2.5 ft above surface. See driller's log.
J-6	J. L. Aust.....	J. A. Dial Drilling Co.	D	1,227	4,2	Kg	132	...	...	F,J	D,S	Casing: 4-in from surface to 28 ft; none from 28 to 727 ft; 2-in from 727 to 1,227 ft. Measured flow 22 gpm on 9-23-64.
J-7	C. A. Boyd.....	.....	D	1,000	4	Ke	129	...	...	F,J	D,S	Measured flow 13 gpm on 10-27-64 from pipe 3 ft above surface.
J-8	Clarence Boyd.....	.....	D	940	4	Ke	125	...	...	F	S	Measured flow 14 gpm on 10-27-64 from 2-in pipe 1.9 ft above surface.
J-9	J. W. Shirley.....	.....	D	880	4	Ke	127	...	...	F	S	Measured flow 30 gpm on 10-27-64 from 2-in pipe 2.5 ft above surface.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type ~~Bored or dug~~	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-10	C. L. Hutcherson....	E. B. Norwood.....	D	1,100	4	Kg	119	...	...	F	S	Measured flow 40 gpm on 9-24-64 from 2½-in pipe 2.3 ft above surface.
J-11	W. C. Winston.....	S. D. Smith.....	D	861	4	Ke	128	+7.0	5-20-65	F	S	Measured flow 8.6 gpm on 9-24-64 from 2-in pipe 2.8 ft above surface.
J-12	Charles Hutcherson..	.....	D	...	...	...	...	...	...	F	D,S	Estimated flow 2 gpm on 9-24-64.
J-13	C. L. Hutcherson....	E. B. Norwood.....	D	1,100	4	Kg	...	...	...	F	D,S	Estimated flow 3 gpm on 9-24-64.
J-14	Frank Watson.....	S. D. Smith.....	D	1,087	4,2	Ke	249	99.8	9-23-64	J	S	Casing: 4-in from surface to 40 ft; none from 40 to 688 ft; 2-in from 688 to 1,087 ft. See driller's log.
J-15	J. A. Mitchell, Jr..	.....do.....	D	1,285	4	Kg	201	...	...	J	S	Pumps fine sand and silt.
J-16	Roger G. Cobb.....	.....do.....	D	1,033	4,2	Ke	259	108.6	5-20-65	J	S	
M-1	Buck Boyd.....	.....	D	1,100	2½	Ke	250	60	1949	J	S	
M-2	J. B. Burnett.....	West Alabama Lime Co.	D	1,260	4	Ke	264	90	1963	C	D,S	
M-3	.....	.....	...	3,040	...	...	...	...	...	...	...	Oil test. Permit No. 378. Referred to as Mrs. B. A. Jenkins, et al No. 1. See sample log.
M-4	Bessie Fuller.....	West Alabama Lime Co.	D	1,200	4	Ke	238	60	1963	J	D,S	See driller's log.
M-5	George B. Waddall...	.....do.....	D	1,200	4,2	Ke	237	...	...	J	S	Casing: 4-in from surface to 18 ft; none from 18 to 780 ft; 2-in from 780 to 1,200 ft. See driller's log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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-6	Sumterville Junior High School.	.....	D	1,220	4,2	Ke	201	48.7	5-25-65	J	Inst	Casing: 4-in from surface to 21 ft; none from 21 to 720 ft; 2-in from 720 to 1,220 ft. Supplies 200 students.
M-7	J. L. Elliott.....	S. D. Smith.....	D	1,160	4	Ke	200	...	...	J	S	See driller's log.
N-1	S. B. Motes.....	.....	D	500	4	Ke	105	...	...	F	S	Measured flow 27 gpm on 11-12-64 from 3-in pipe 6 ft above surface.
N-2	Rucks and Fuller....	E. B. Norwood.....	D	912	4,2	Ke	130	...	...	F	S	Measured flow 5 gpm on 11-12-64 from 2½-in pipe 2.2 ft above surface.
N-3	C. B. Neel.....	S. D. Smith.....	D	903	4,2	Ke	140	0	11-12-64	J	D,S	See driller's log.
N-4	T. Steinhilber.....	.....do.....	D	960	4,2	Ke	120	...	...	F,Cf	D,S	Casing: 4-in from surface to 21 ft; none from 21 to 560 ft; 2-in from 560 to 960 ft. Measured flow 16 gpm on 11-12-64 from 2-in pipe 1.8 ft above surface.
N-5	Thomas M. Nelson....	.....do.....	D	903	4,2	Ke	130	...	...	F	S	Measured flow 8 gpm on 11-18-64 from 2-in pipe 1.5 ft above surface. See driller's log.
N-6	Epes School.....	E. B. Norwood.....	D	958	4,2	Ke	160	...	...	J	Inst	Casing: 4-in from surface to 16 ft; none from 16 to 560 ft; 2-in from 560 to 958 ft. Supplies 140 students.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level: Above (+) or below land surface (feet)	Water level: Date of measurement	Method of lift	Use of water	Remarks
N-7	C. B. Nixon, Jr.....	E. B. Norwood.....	D	1,114	4,2	Ke	200	49.5	11-20-64	J	S	Casing: 4-in from surface to 22 ft, none from 22 to 716 ft; 2-in from 716 to 1,114 ft.
N-8	.....	.....	...	3,399	...	...	...	...	...	...	...	Oil test. Permit No. 537. Referred to as M. G. Larkin No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
O-1	P. B. May.....	E. B. Norwood.....	D	875	4	Ke	110	...	...	F	D,S	Measured flow 43 gpm on 11-12-64 from 4-in pipe 2.6 ft above surface.
O-2	S. B. Motes.....	S. D. Smith.....	D	1,155	4,2	Kg	140	...	...	F	S	Measured flow 23 gpm on 11-12-64 from 2½-in pipe 2 ft above surface.
O-3	.....do.....	West Alabama Lime Co.	D	820	4,2	Ke	125	...	...	F	S	Measured flow 0.8 gpm on 11-12-64 from 2-in pipe 1.9 ft above surface. See driller's log.
O-4	Leona Campbell.....	S. D. Smith	D	822	4,2	Ke	100	...	...	F	D,S	Measured flow 46 gpm on 11-18-64 from 2½-in pipe 2.9 ft above surface.
O-5	Gene Spradling.....	C. W. Blount.....	D	800	4	Ke	120	...	...	F	D,S	Measured flow 22 gpm on 11-18-64 from 3-in pipe 6.3 ft above surface.
O-6	Town of Epes.....	S. D. Smith.....	D	1,200	4,2	Kg	140	...	...	F	P	Measured flow 10 gpm on 11-19-64 from 2-in pipe 0.9 ft above surface.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
C-7	B. G. Hines.....	F. C. Null.....	D	820	4	Ke	160	48	1964	J	D	
C-8	P. B. May.....	E. B. Norwood.....	D	958	4,2	Ke	145	20	1955	J	D	Casing: 4-in from surface to 28 ft; none from 28 to 360 ft; 2-in from 360 to 958 ft.
C-9	Jack J. Mimus.....	Black Belt Drilling Co.	D	950	6,2	Ke	150	...	...	J	D	Casing: 6-in from surface to 42 ft; none from 42 to 500 ft; 2-in from 500 to 950 ft. See driller's log.
C-10	Ray Hammock.....	.....	D	...	4	...	90	...	...	F	S	Estimated flow 4 gpm on 11-17-64.
C-11	Tom Norton	S. D. Smith.....	D	900	4	Ke	100	...	...	F,J	D,S	Measured flow 33 gpm on 11-17-64 from $2\frac{1}{2}$-in pipe 3 ft above surface.
C-12	Howard Turner.....	.....	D	...	4	...	105	...	...	F	D,S	Measured flow 10 gpm on 11-17-64 from 4-in pipe 3 ft above surface.
C-13	B. A. Rogers.....	.....	D	800	4,2	Ke	95	...	...	F	S	Measured flow 34 gpm on 11-17-64 from 2-in pipe 4 ft above surface.
C-14	Tom Luke.....	.....	D	...	4,2	...	100	...	...	F	S	Measured flow 3 gpm on 11-17-64 from 2-in pipe 2 ft above surface.
C-15	Ray Hammock.....	.....	D	...	4	...	85	...	...	F,J	D	Measured flow 7.7 gpm on 11-17-64 from 2-in pipe 1.4 ft above surface.
Q-1	Dr. --Hester.....	F. C. Null.....	D	...	5	...	110	+7	4- 8-54	F	S	Measured flow 3 gpm on 4-8-54 and 2.5 gpm on 5-5-65.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	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			
Q-2	Joe P. Lindsey.....	West Alabama Lime Co.	D	1,180	4	Kg	115	...	...	N	N	Formerly flowed. See driller's log.
Q-3	Wallace Spidle.....	J. A. Dial Drilling Co.	D	1,000	4	Kg	90	...	...	F	S	Reported flow 30 gpm on 5-6-65.
R-1	J. M. Nixon, Jr.....	.....	D	...	4	...	130	...	...	F	S	Measured flow 7 gpm on 11-18-64 from 2-in pipe 4.0 ft above surface.
R-2	.....do.....	.....	D	...	4,2	...	110	...	...	F	S	Measured flow 11.5 gpm on 11-18-64 from 2-in pipe 2.2 ft above surface.
R-3	William R. Hawkins..	J. A. Dial Drilling Co.	D	980	4,2	Ke	100	...	...	F	S	Measured flow 60 gpm on 11-19-64 from 2-in pipe 3.8 ft above surface.
R-4	Norvelle Loper.....	E. B. Norwood.....	D	1,200	4,2	Ke	260	105	1963	S	S	Casing: 4-in from surface to 42 ft; none from 42 to 800 ft; 2-in from 800 to 1,200 ft. See driller's log.
R-5	Vaughn Gould.....	.....do.....	D	1,211	4,2	Ke	220	64	1963	J	S	Casing: 4-in from surface to 37 ft; none from 37 to 808 ft; 2-in from 808 to 1,211 ft. See driller's log.
S-1	A. S. McCain.....	.....do.....	D	1,121	4,2	Ke	150	10.0	5-25-65	J	S	Casing: 4-in from surface to 21 ft; none from 21 to 721 ft; 2-in from 721 to 1,121 ft; perforated from 1,037 to 1,121 ft. Electric log in files of U.S. Geol. Survey. See sample log.

Table 2.--Records of wells and springs in Sumter County--Continued

Number	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			
S-2	H. B. Maye.....	E. B. Norwood.....	D	1,212	4,2	Ke	240	102	1954	C	D	Casing: 4-in from surface to 22 ft; none from 22 to 813 ft; 2-in from 813 to 1,212 ft.
S-3	County Training School.	.....	D	...	4	...	200	...	...	J	Inst	Supplies 1,150 students.
S-4	City of Livingston..	.....	D	1,062	...	Ke	150	...	...	F	P	
S-5	Mary B. Battle.....	E. B. Norwood.....	D	1,228	4,2	Ke	240	114	1962	C	S	Casing: 4-in from surface to 40 ft; none from 40 to 828 ft; 2-in from 828 to 1,228 ft. See driller's log.
S-6	.....	.....	...	2,510	...	...	...	...	...	...	...	Oil test. Permit No. 1363. Referred to as C. J. Grant No. 1.
T-1	Bell Institute.....	.....	Dr	14	1½	Qal	...	...	...	M	Inst	Supplies 80 students
U-1	.....	.....	...	2,617	...	...	...	...	...	...	...	Oil test. Permit No. 100. Referred to as Allison Lumber Co. No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
V-1	McGown School.....	.....	Du	23	36	Tna	271	14.6	9-18-64	M	Inst	Casing: 36-in from surface to 23 ft. Supplies 85 students.
W-1	City of York.....	.....	D	1,500	...	Ke	165	...	...	N	N	
X-1	Walter Greene.....	J. A. Dial Drilling	D	1,345	4,2	Ke	140	...	...	F	S	Casing: 4-in from surface to 21 ft; none from 21 to 820 ft; 2-in from 820 to 1,345 ft; perforated from 1,177 to 1,345 ft. Estimated flow 1 gpm on 9-17-64. See driller's log.

Table 2.--Records of wells and springs in Sumter County--Continued

Number	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			
X-2	Pine Grove School...	.....	Dr	18	1½	Qt	150	...	...	M	Inst	Supplies 113 students.
Y-1	Ellis Levy.....	West Alabama Lime Co.	D	1,160	4,2	Ke	195	52.7	5- 6-65	J	S	Casing: 4-in from surface to 20 ft; none from 20 to 845 ft; 2-in from 845 to 1,160 ft. See driller's log.
Z-1	Mrs. --Spidle.....	F. C. Null.....	D	700	5	Ke	107	+20.4	4- 9-54	F	S	Measured flow 3 gpm on 4-9-54.
Z-2	Belmont School.....	E. B. Norwood.....	D	993	4,2	Ke	200	...	...	J	Inst	Casing: 4-in from surface to 22 ft; none from 22 to 600 ft; 2-in from 600 to 993 ft. Supplies 250 students.
Z-3	J. R. Gandy.....	F. C. Null.....	D	740	6	Ke	127	+10 0.15	1954 5-6-65	F,Cf	D,S	Measured flow 3 gpm on 4-9-54. Owner reported on 5-6-65 that well flows when pump is off for several hours.
Z-4	Lewis Salem.....	.....do.....	D	1,000	5	Ke	160	...	...	J	D,S	
Z-5	J. M. Spidle.....	.....	D	655	...	Ke	105	...	...	N	N	Oil test.
Z-6	.....do.....	.....	D	1,030	...	Ke	105	...	...	N	N	Oil test.
Z-7	Curtis Levy.....	West Alabama Lime Co.	D	880	4,2	Ke	90	...	...	F	S	Casing: 4-in from surface to 16 ft; none from 16 to 544 ft; 2-in from 544 to 880 ft. Measured flow 15 gpm on 5-5-65 from 2-in pipe 3.1 ft above surface. See driller's log.

Table 2.--Records of wells and springs in Sumter County--Continued

Number	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			
Z-8	John R. Rugic, Jr..	F. C. Mull.....	D	900	...	Ke	115	+8.0	4- 8-54	F	S	Measured flow 7 gpm on 4-8-54 and 3.5 gpm on 5-4-65 from 2-in pipe 2.7 ft above surface.
Z-9	.....do.....	J. A. Dial Drilling Co.	D	900	4,2	Ke	85	...	...	F	S	Casing: 4-in from surface to 42 ft; none from 42 to 600 ft; 2-in from 600 to 900 ft; perforated from 755 to 900 ft. Measured flow 9.0 gpm on 5-4-65 from 2-in pipe 2.6 ft above surface. See driller's log.
Z-10	.....	.....	...	3,754	...	...	...	...	...	...	...	Oil test. Permit No. 177. Referred to as Pete Perolio No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
AA-1	N. B. Fields.....	F. C. Mull.....	D	925	5,2	Ke	90	...	...	F	S	Casing: 5-in from surface to 22 ft; none from 22 to 500 ft; 2-in from 500 to 925 ft; perforated from 883 to 925 ft. Measured flow 16 gpm on 5-5-65 from 2-in pipe 3.8 ft above surface. See driller's log.
AA-2	D. L. Marshandy, Jr.	.....do.....	D	831	4	Ke	90	+5 3.0	1954 5- 5-65	Cf	D,S	

Table 7.--Records of wells and spring in Sumter County--Continued

Number	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-3	Corps of Engineers, U.S. Army.	F. C. Hull.....	D	800	4,2	Ke	103	...	...	F	S	Casing: 4-in from surface to 25 ft; none from 25 to 550 ft; 2-in from 550 to 800 ft. Measured flow 6 gpm on 5-5-65 from 4-in pipe 0.8 ft above surface.
CC-1	P. M. Reed.....	.....	D	...	...	...	118	...	...	F	S	Measured flow 7.5 gpm on 9-16-64 from 2-in pipe 1.6 ft above surface.
CC-2	Everett Moore.....	J. A. Dial Drilling Co.	D	1,202	4	Ke	139	...	...	F	S	Measured flow 4.3 gpm on 9-16-65 from 2-in pipe 3.2 ft above surface.
CC-3	Mrs. J. F. Allison.	.....do.....	D	1,060	4,2	Ke	95	...	...	F	S	Casing: 4-in from surface to 21 ft; none from 21 to 660 ft; 2-in from 660 to 1,060 ft; perforated from 871 to 1,060 ft. Measured flow 50 gpm on 9-15-64 from pipe 0.5 ft above surface. See driller's log.
DD-1	Fourth Creek School	.....	Du	20	36	Qal	155	14	1963	M	D	Supplies 25 students.
DD-2	.....	.....	...	4,010	...	...	...	...	...	...	...	Oil test. Permit No. 445. Referred to as Allison Lumber Co. No. 1. Electric log in files of U.S. Geol. Survey. See sample log.
DD-3	.....	.....	...	3,940	...	...	...	...	...	...	...	Oil test. Permit No. 1006. Referred to as Allison Lumber Co. No. 1. Electric log in files of U.S. Geol. Survey.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type completed	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			
DD-4	Allison Lumber Co.	Bouchelle Drilling Co.	D	1,100	6	Ke	150	...	...	N	N	Reported to flow before well was capped.
DD-5	.....	.....	...	3,440	...	...	...	...	...	...	...	Oil test. Permit No. 1056. Referred to as Allison Lumber Co. No. 2. Electric log in files of U.S. Geol. Survey.
EE-1	Morris Hancock.....	J. A. Dial Drilling Co.	D	1,533	4	...	334	...	...	N	N	Test well. See sample log.
EE-2	F. M. Kellam, Sr...	.....	Du	20	30	Trf	304	...	...	M	S	
FF-1	City of Cuba.....	Terry Drilling Co..	D	144	...	Tna	221	...	...	N	N	Test well. Mechanical analysis report of sand samples in files of U.S. Geol. Survey. See sample log.
FF-2	.....do.....	.....do.....	D	90	8,6	Tna	198	...	...	T	P	Test hole drilled to 180 ft. Casing: 8-in from surface to 33 ft; 6-in from 26 to 40 ft; 6-in screen from 40 to 90 ft. Drawdown reported 43 ft while pumping 41 gpm in 1954. Maximum usage 25,000 gpd. ^ See sample and driller's logs. Test well to 180 ft.
FF-3	.....do.....	.....do.....	D	180	...	Tna	205	...	...	N	N	Test well. Mechanical analysis report of sand samples in files of U.S. Geol. Survey. See sample log.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level: Above (+) or below land surface (feet)	Water level: Date of measurement	Method of lift	Use of water	Remarks
FF-4	W. A. Ganguet.....	Terry Drilling Co..	D	686	4	Tna	215	...	...	N	N	Destroyed. Formerly potato washing plant. See driller's log.
FF-5	City of Cuba.....	.....do.....	D	...	...	Tna	218	...	...	N	N	Test well.
FF-6	.....do.....	.....do.....	D	140	8,6	Tna	205	+4.8	6-30-53	F,J	P	Casing: 8-in from surface to 90 ft; 6-in from 90 to 115 ft and 135 to 142 ft; 6-in screen from 115 to 135 ft. Drawdown, 95.5 ft after 24 hrs pumping 20 gpm on 6-30-53. Test well to 200 ft. Supplies 3 homes. See sample log.
FF-7	Cuba School.....	.....do.....	D	144	3,2	Tna	207	...	...	F	Inst	Casing: 3-in from surface to 61 ft; 2-in from 40 to 124 ft; 2-in screen from 124 to 144 ft. Estimated flow less than ½ gpm on 9-10-64. Supplies 125 students.
GG-1	Kinterbish High School.	.....	D	282	4	Tnf	361	...	...	T	Inst	Supplies 150 students.
GG-2	.....do.....	.....	D	149	3	Tnf	354	7.2	9-11-64	N	N	
GG-3	Willie B. DeLaine..	West Alabama Lime Co.	D	360	3	Tnf	346	...	...	J	S	
HH-1	Lizzie Judkins School.	Terry Drilling Co.	D	100	...	Tnf	345	...	...	M	Inst	Supplies 98 students.

Table 2.--Records of wells and spring in Sumter County--Continued

Number	Owner	Driller	Type	Year completed	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level: Above (+) or below land surface (feet)	Water level: Date of measurement	Method of lift	Use of water	Remarks
HH-2	Hosie K. Bragg.....	MacDonald and Hill.	D	180	4	Tna	210	12	1963	J	S	See driller's log.
								13.1	5-26-65			
HH-3	Kinterbish II School	Terry Drilling Co.	D	194	3,2	Tnf	305	...	...	J	Inst	Supplies 68 students.
JJ-1	Whitfield School...	.....	Du	8	36	Qt	174	4.3	9-15-64	Cf	Inst	Supplies 150 students.
JJ-2	Allison Lumber Co..	Merry Brothers Drilling Co.	D	1,607	5	Ke	148	1.4	9-15-64	N	N	Casing: 5-in from surface to 420 ft; none from 420 to 1,214 ft; 4 3/4-in perforated pipe from 1,214 to 1,607 ft. Flowed 30 gpm in 1946. See sample log.
KK-1	Corps of Engineers, U. S. Army.	.....	D	...	...	...	80	...	...	F	S	Measured flow 8 gpm on 7-14-65 from pipe 1.9 ft above surface.

add line to end of table

Table 4.--Chemical analyses of water from wells and spring in Sumter County

Analyses by U.S Geological Survey except as indicated.

(Well or spring: Numbers correspond to those on figure 3 and in tables 2 and 3.)

Water-bearing unit: Kg, Gordo Formation; Ke, Eutaw Formation; Tna, Nanafalia Formation; Tnf, Nanafalia Formation; Qt, Terrace deposits; Qal, alluvium.

Number	~~Stream name~~ or well owner	Date of collection	Water-bearing unit	~~Stream discharge (mgd)~~ or well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
A-1	Billie Taylor....	11- 3-64	Kg	925	...	0.04	...	...	...	...	147	6	...	80	...	...	...	16	0	...	8.5	23	74
A-1	.....do.....	8-16-65	Kg	925	11	.02	2.2	0.6	100	2.6	152	0	0.0	76	0.7	0.1	268	8	0	509	...	23	74
A-2	E. A. Inmon.....	11- 5-64	Kg	700	...	.02	...	...	...	...	145	0	...	36	...	...	...	9	0	...	7.8	23	74
A-3	Marathon Southern Corp.	11- 5-64	...	...	...	.03	...	...	...	...	231	0	...	236	...	...	...	14	0	...	7.8	20	68
A-4	.....do.....	11- 5-64	...	...	...	.04	...	...	...	...	218	0	...	240	...	...	...	12	0	...	8.1	21	70
A-5	C. M. Halsell....	11- 4-64	...	...	...	.03	...	...	...	...	231	10	...	310	...	...	...	22	0	...	8.6	20	68
A-6	Warsaw Sand and Gravel Co.	11- 3-64	Ke	450	...	.04	...	...	...	...	224	4	...	282	...	...	...	22	0	...	8.4	21	70
A-7	C. M. Halsell....	11- 4-64	Ke	519	...	.03	...	...	...	...	196	8	...	254	...	...	...	18	0	...	8.5	21	70
A-8	Hugh Cameron.....	11- 4-64	Kg	775	...	.03	...	...	...	...	147	5	...	64	...	...	...	19	0	...	8.5	23	74
A-9	.....do.....	11- 4-64	Kg	775	...	.06	...	...	...	...	148	4	...	94	...	...	...	20	0	...	8.6	23	74
A-10	.....do.....	11- 4-64	Ke	475	...	.07	...	...	...	...	209	8	...	276	...	...	...	20	0	...	8.5	22	71
A-11	T. W. Rogers.....	11- 4-64	Ke	571	...	.07	...	...	...	...	258	0	...	324	...	...	...	24	0	...	8.1	22	71
A-12	.....do.....	11- 4-64	...	...	...	.04	...	...	...	...	261	0	...	316	...	...	...	15	0	...	7.9	22	71
A-13	Hugh Cameron.....	11- 3-64	Ke	450	...	.09	...	...	...	...	219	14	...	308	...	...	...	25	0	...	8.6	22	71
A-14	.....do.....	11- 3-64	Ke	450	...	.08	...	...	...	...	230	5	...	302	...	...	...	34	0	...	8.4	22	71
A-15	J. L. Parker.....	10-27-64	Ke	320	...	.09	...	...	...	...	374	20	...	624	...	...	...	51	0	...	8.7	19	66
A-16	Hugh Cameron.....	11- 3-64	Ke	460	...	.03	...	...	...	...	234	0	...	284	...	...	...	16	0	...	7.9	21	70

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	Stream name or well owner	Date of collection	Water-bearing unit	Stream discharge (mgd) or well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
A-17	Hugh Cameron.....	11- 3-64	Ke	560	...	0.04	...	...	...	...	230	12	...	302	...	...	...	20	0	...	8.6	20	68
A-18	Cliff Rogers.....	11- 4-64	Ke	500	...	.07	...	...	...	...	296	0	...	362	...	...	...	25	0	...	7.6	21	69
A-19	E. H. Nevin.....	11- 4-64	Ke	360	...	.08	...	...	...	...	206	7	...	272	...	...	...	24	0	...	8.6	21	69
A-20	Mrs. W. J. Rogers.	11- 4-64	Ke	300	...	.06	...	...	...	...	247	9	...	310	...	...	...	19	0	...	8.5	21	69
A-21	Mrs. --Mabry.....	11-10-64	...	...	...	.01	...	...	...	...	235	0	...	280	...	...	...	21	0	...	8.1	22	71
A-22	Hugh Cameron.....	11- 3-64	Ke	450	...	.04	...	...	...	...	258	0	...	294	...	...	...	15	0	...	7.8	21	69
B-2	William King.....	10-30-64	...	...	...	.17	...	...	...	...	146	4	...	142	...	...	...	15	0	...	8.5	22	71
B-3	J. J. Hagerman....	10-28-64	Ke	693	...	.09	...	...	...	...	226	14	...	312	...	...	...	42	0	...	8.7	...	...
B-4	Cliff Parsells....	11- 5-64	...	...	...	.04	...	...	...	...	156	0	...	92	...	...	...	14	0	...	7.8	24	75
B-5	Ben Brockway.....	10-30-64	...	...	...	.51	...	...	...	...	188	28	...	312	...	...	...	25	0	...	8.6	...	...
B-6	J. J. Hagerman....	10-28-64	Ke	700	...	.06	...	...	...	...	196	12	...	278	...	...	...	19	0	...	8.6	...	...
B-8	Nell Brockway.....	10-30-64	Ke	640	...	.09	...	...	...	...	216	8	...	294	...	...	...	35	0	...	8.6	...	...
B-9	North Sumter High School.	11- 3-64	Ke	675	...	.08	...	...	...	...	192	8	...	258	...	...	...	19	0	...	8.6	...	...
B-10	J. L. Parker.....	10-27-64	Ke	707	...	.01	...	...	...	...	270	0	...	336	...	...	...	15	0	...	7.7	...	...
B-10	.....do.....	8-30-65	Ke	707	11	.04	4.1	2.1	297	2.7	244	0	0.4	330	1.2	0.1	769	19	0	1,480	6.8	...	...
B-11	.....do.....	10-27-64	Ke	525	...	.02	...	...	...	...	350	22	...	526	...	...	...	48	0	...	8.9	...	...
B-12	O. R. Chafin.....	10-30-64	Ke	701	...	.05	...	...	...	...	216	16	...	284	...	...	...	20	0	...	8.7	23	73
B-13	J. L. Parker.....	10-27-64	Ke	362	...	.05	...	...	...	...	404	20	...	566	...	...	...	39	0	...	8.7	21	69

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream name or~~ well owner	Date of collection	Water-bearing unit	~~Stream~~ discharge (mgd) or well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
E-16	Frank Boyd.....	9-25-64	Ke	900	...	0.02	...	...	...	...	324	0	...	376	...	...	...	16	0	...	8.1	24	75
E-18	Geiger Community House.	5-19-65	Ke	945	...	.08	...	...	...	...	308	18	...	430	...	...	...	28	0	...	8.6	24	75
F-1	C. M. A. Rogers...	11-10-64	Kg	840	...	.11	...	...	...	...	212	0	...	236	...	...	...	21	0	...	8.2	...	...
F-2	Billie Taylor.....	10-30-64	Ke	651	...	.05	...	...	...	...	206	0	...	236	...	...	...	22	0	...	8.2	23	73
F-3	Mrs. J. A. Rogers.	11- 6-64	Kg	850	...	.04	...	...	...	...	286	0	...	324	...	...	...	32	0	...	7.7	21	70
F-4	B. A. Rogers and Woodward Iron Works.	11- 6-64	Kg	850	...	.02	...	...	...	...	268	0	...	306	...	...	...	16	0	...	8.0	22	72
F-5	St. John School...	11- 6-64	Cal	Spring	...	.20	...	...	...	...	26	0	...	16	...	...	...	30	9	...	6.7	...	...
F-6	John Houston.....	11- 6-64	Kg	1,000	...	.11	...	...	...	...	270	0	...	304	...	...	...	14	0	...	8.0	22	71
F-7	B. A. Rogers.....	11-10-64	Ke	630	...	.02	...	...	...	...	322	0	...	356	...	...	...	16	0	...	8.0	21	70
F-8	G. L. Dent.....	11- 6-64	Ke	850	...	.03	...	...	...	...	320	0	...	366	...	...	...	15	0	...	7.8	21	70
H-1	B. A. Rogers.....	11-12-64	Ke	600	...	.04	...	...	...	...	422	0	...	582	...	...	...	38	0	...	8.2	22	71
H-2	Tom Long.....	11-17-64	...	...	...	.13	...	...	...	...	306	0	...	380	...	...	...	48	0	...	8.0	25	77
H-3	B. A. Rogers.....	11- 6-64	...	...	...	.07	...	...	...	...	412	0	...	852	...	...	...	75	0	...	7.7	20	68
H-4	P. M. Norwood.....	11-12-64	Kg	890	...	.06	...	...	...	...	420	0	...	576	...	...	...	40	0	...	8.0	23	74
H-5	.....do.....	11-12-64	Kg	850	...	.06	...	...	...	...	404	0	...	572	...	...	...	35	0	...	7.8	23	74
H-6	W. D. Down.....	11-12-64	...	...	...	.18	...	...	...	...	364	0	...	1,300	...	...	...	88	0	...	8.2	...	...

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream name~~ or well owner	Date of collection	Water-bearing unit	~~Stream discharge (gpm)~~ or well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
I-3	H. E. Fields.....	11-11-64	Ke	800	...	0.04	...	...	...	..	338	0	...	380	...	..	...	22	0	...	8.0	24	76
I-4	James B. Hill.....	11-11-64	Ke	850	...	.12	...	...	...	..	299	18	...	400	...	..	...	20	0	...	8.7	24	75
I-5	Mrs. R. E. Harwood	11-10-64	Ke	850	...	.03	...	...	...	..	334	0	...	370	...	..	...	20	0	...	7.9	23	73
I-6	F. O. Fields.....	11-11-64	Ke	812	...	.07	...	...	...	..	316	0	...	360	...	..	...	28	0	...	8.1	...	...
I-7	Town of Gainesville	11- 6-64	Ke	800	...	.04	...	...	...	..	320	0	...	362	...	..	...	21	0	...	7.6	23	73
I-8	B. A. Rogers.....	11-10-64	Kg	955	...	.08	...	...	...	..	350	0	...	402	...	..	...	22	0	...	7.8	23	73
I-9	Mrs. J. A. Rogers.	11-10-64	Ke	800	...	.06	...	...	...	..	348	0	...	376	...	..	...	25	0	...	8.2	23	74
I-10	Gainesville School	11-10-64	Ke	819	...	.09	...	...	...	..	336	0	...	384	...	..	...	32	0	...	8.1	...	...
I-11	Mrs. J. A. Rogers.	11-10-64	Ke	800	...	.04	...	...	...	..	364	0	...	400	...	..	...	25	0	...	7.9	22	71
I-13	Alfred Harris, Jr.	11-11-64	Ke	860	...	.23	...	...	...	..	402	0	...	420	...	..	...	60	0	...	8.1	...	...
I-14	Tom Long.....	11-11-64	Ke	900	...	.08	...	...	...	..	388	12	...	410	...	..	...	...	...	...	8.4	...	...
I-14	.....do.....	8-13-65	Ke	900	11	.03	14	4.6	396	4.0	398	0	10	404	2.0	0.4	1,040	54	0	1,990	...	...	...
I-15	P. M. Norwood.....	11-11-64	Kg	1,100	...	.06	...	...	...	..	344	22	...	590	...	..	...	40	0	...	8.6	24	76
J-1	W. O. Winston.....	9-24-64	Ke	865	...	.06	...	...	...	..	288	28	...	370	...	..	...	25	0	...	8.9	24	75
J-2	J. W. Shirley.....	9-23-64	...	...	...	.08	...	...	...	..	392	44	...	480	...	..	...	22	0	...	8.8	22	72
J-3	Charles Hutcherson	9-24-64	Ke	861	...	.06	...	...	...	..	300	24	...	380	...	..	...	20	0	...	8.9	23	74
J-5	Roger Watt.....	9-24-64	Ke	903	...	.06	...	...	...	..	338	0	...	380	...	..	...	18	0	...	7.8	24	75
J-5	.....do.....	8-16-65	Ke	903	11	.02	3.0	1.6	363	4.0	333	0	.0	373	1.6	.4	922	14	0	1,750	7.5	24	75
J-6	J. L. Aust.....	9-23-64	Kg	1,227	...	.09	...	...	...	..	220	16	...	280	...	..	...	26	0	...	8.5	26	78

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	Stream-name or well owner	Date of collection	Water-bearing unit	Stream discharge (mgd) or well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature °C	Temperature °F
J-7	C. A. Boyd.....	9-25-64	Ke	1,000	...	0.09	...	...	...	...	348	0	...	390	...	...	...	21	0	...	7.9	24	76
J-9	J. W. Shirley.....	10-27-64	Ke	880	...	.06	...	...	...	...	348	0	...	380	...	...	...	20	0	...	8.0	24	76
J-10	C. L. Hutcherson..	9-24-64	Kg	1,100	...	.04	...	...	...	...	252	22	...	350	...	...	...	21	0	...	8.7	26	79
J-11	W. O. Winston.....	9-24-64	Ke	861	...	.07	...	...	...	...	292	24	...	380	...	...	...	15	0	...	8.8	24	76
J-13	C. L. Hutcherson..	9-24-64	Kg	1,100	...	.05	...	...	...	...	272	22	...	360	...	...	...	25	0	...	8.7	26	79
J-14	Frank Watson.....	9-23-64	Ke	1,087	...	.11	...	...	...	...	340	28	...	400	...	...	...	22	0	...	8.8	...	...
J-15	J. A. Mitchell, Jr.	9-25-64	Kg	1,285	...	3.3	...	...	...	...	396	0	...	360	...	...	...	38	0	...	7.9	...	...
J-16	Roger G. Cobb.....	9-17-64	Ke	1,033	...	1.1	...	...	...	...	424	0	...	440	...	...	...	26	0	...	8.1	...	...
M-1	Buck Boyd.....	9-17-64	Ke	1,100	...	.16	...	...	...	...	468	0	...	580	...	...	...	36	0	...	7.8	...	...
M-2	J. B. Burnett.....	9-18-64	Ke	1,260	...	.36	...	...	...	...	448	0	...	520	...	...	...	36	0	...	7.8	...	...
M-4	Bessie Fuller.....	9-18-64	Ke	1,200	...	.12	...	...	...	...	468	0	...	540	...	...	...	...	...	...	7.7	...	...
M-4	.....do.....	8-13-65	Ke	1,200	12	.06	9.4	4.5	511	4.5	473	0	11	544	2.2	0.6	1,330	42	0	2,470	7.7	...	...
M-5	George B. Waddall.	9-18-64	Ke	1,200	...	.14	...	...	...	...	432	16	...	630	...	...	...	45	0	...	8.5	...	...
M-6	Sumterville Junior High School.	9-17-64	Ke	1,220	...	.15	...	...	...	...	448	0	...	700	...	...	...	78	0	...	7.9	...	...
M-7	J. L. Elliott.....	9-18-64	Ke	1,160	...	.12	...	...	...	...	464	12	...	630	...	...	...	46	0	...	8.4	...	...
N-1	S. B. Motes.....	11-12-64	Ke	500	...	.08	...	...	...	...	410	0	...	640	...	...	...	45	0	...	8.0	24	75
N-2	Rucks and Fuller..	11-12-64	Ke	912	...	.13	...	...	...	...	410	0	...	660	...	...	...	35	0	...	7.8	25	77
N-3	C. B. Neel.....	11-12-64	Ke	903	...	.10	...	...	...	...	432	0	...	660	...	...	...	31	0	...	7.8	...	...

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Owner~~ or well owner	Date of collection	Water-bearing unit	~~Elevation of land surface (feet above sea level)~~ well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
N-4	T. Steinhilber....	11-12-64	Ke	960	...	0.13	...	...	...	...	424	0	...	680	...	...	...	40	0	...	8.2	25	77
N-5	Thomas M. Nelson..	11-18-64	Ke	903	...	.08	...	...	...	...	432	4	...	680	...	...	...	42	0	...	8.3	25	77
N-6	Epes School.....	11-18-64	Ke	958	...	.16	...	...	...	...	404	20	...	820	...	...	...	52	0	...	8.5	...	...
N-7	C. B. Nixon, Jr...	11-20-64	Ke	1,114	...	.06	...	...	...	...	400	20	...	880	...	...	...	74	0	...	8.5	...	...
O-1	P. B. May.....	11-12-64	Ke	875	...	.17	...	...	...	...	324	0	...	500	...	...	...	45	0	...	8.1	26	78
O-2	S. B. Motes.....	11-12-64	Kg	1,155	...	.29	...	...	...	...	336	0	...	570	...	...	...	60	0	...	7.7	26	78
O-3	.....do.....	11-12-64	Ke	820	...	.28	...	...	...	...	430	0	...	640	...	...	...	39	0	...	7.9	21	70
O-4	Leona Campbell....	11-18-64	Ke	822	...	.09	...	...	...	...	364	34	...	700	...	...	...	45	0	...	8.7	23	74
O-5	Gene Spradling....	11-18-64	Ke	800	...	.09	...	...	...	...	368	32	...	670	...	...	...	42	0	...	8.7	24	75
O-6	Town of Epes.....	11-18-64	Kg	1,200	...	.55	...	...	...	...	318	0	...	1,060	...	...	...	101	0	...	8.1	26	78
O-6	.....do.....	8-13-65	Kg	1,200	11	.54	29	6.0	79	7.8	309	0	3.0	1,060	2.2	...	2,040	97	0	3,880	7.4	26	78
O-7	B. G. Hines.....	12-31-40	Ke	820	...	...	...	...	...	...	357	...	...	1,420	...	...	...	58	0	...	...	...	...
O-7	.....do.....	11-19-64	Ke	820	...	.19	...	...	...	...	356	0	...	1,390	...	...	...	81	0	...	7.9	...	...
O-8	P. B. May.....	11-18-64	Ke	958	...	.17	...	...	...	...	448	0	...	780	...	...	...	48	0	...	8.0	...	...
O-9	Jack J. Mimus.....	11-18-64	Ke	950	...	.26	...	...	...	...	378	14	...	1,210	...	...	...	62	0	...	8.4	...	...
O-9	.....do.....	8-13-65	Ke	950	12	.13	17	6.2	902	7.0	398	0	5.4	1,210	1.4	...	2,360	68	0	4,400	...	...	...
O-10	Ray Hammock.....	11-17-64	...	...	...	.15	...	...	...	...	400	0	...	1,260	...	...	...	90	0	...	8.2	23	73
O-11	Tom Norton.....	11-17-64	Ke	900	...	.06	...	...	...	...	374	32	...	1,000	...	...	...	65	0	...	8.7	24	75
O-12	Howard Turner.....	11-17-64	...	...	...	.10	...	...	...	...	440	0	...	960	...	...	...	50	0	...	8.1	25	77

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream-source~~ well owner	Date of collection	Water-bearing unit	~~Stream discharge (mgd)~~ well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
O-13	B. A. Rogers.....	11-17-64	Ke	800	...	0.13	...	...	...	...	414	0	...	1,120	...	...	...	75	0	...	7.6	25	77
O-14	Tom Luke.....	11-17-64	...	...	...	.49	...	...	...	...	266	0	...	2,160	...	...	...	179	0	...	8.2	22	72
O-15	Ray Hammock.....	11-17-64	...	...	...	.31	...	...	...	...	216	16	...	2,140	...	...	...	175	0	...	8.5	22	72
Q-1	Dr. --Hester.....	4- 8-54	...	...	...	...	...	...	...	...	...	...	...	2,850	...	...	...	330	..	...	7.6	21	70
Q-1	.....do.....	5- 5-64	...	...	...	.13	...	...	...	...	308	0	...	2,560	...	...	...	262	9	...	6.9	21	70
R-1	J. M. Nixon, Jr...	11-18-64	...	...	...	.07	...	...	...	...	442	0	...	1,070	...	...	...	61	0	...	7.7	24	76
R-2	.....do.....	11-18-64	...	...	...	.24	...	...	...	...	288	24	...	1,600	...	...	...	86	0	...	7.6	24	76
R-3	William R. Hawkins	11-19-64	Ke	980	...	.13	...	...	...	...	340	40	...	1,260	...	...	...	72	0	...	8.7	26	78
R-4	Norvelle Loper....	9-16-64	Ke	1,200	...	.24	...	...	...	...	288	42	...	1,570	...	...	...	122	0	...	8.7	...	...
S-2	H. B. Maye.....	11-18-64	Ke	1,212	...	.40	...	...	...	...	392	28	...	1,040	...	...	...	80	0	...	8.6	...	...
S-3	County Training School.	11-18-64	...	...	...	.14	...	...	...	...	480	0	...	1,150	...	...	...	58	0	...	8.2	...	...
S-4	City of Livingston	12-31-40	Ke	1,062	...	...	...	...	...	...	227	0	...	3,050	...	...	...	168	0	...	...	...	...
S-4	.....do.....	2- 6-41	Ke	1,062	14	...	69	21	1,930	21	196	0	0.8	3,060	1.8	1.5	5,220	259	98	...	...	...	...
S-4	.....do.....	7-21-65	Ke	1,062	...	.73	...	...	...	...	224	0	...	3,020	...	...	...	258	74	...	7.5	...	...
S-5	Mary B. Battle....	9-16-64	Ke	1,223	...	.21	...	...	...	...	276	28	...	1,760	...	...	...	118	0	...	8.7	...	...
S-5	.....do.....	8-13-65	Ke	1,228	11	.14	32	13	1,160	9.1	329	0	15	1,660	1.8	...	3,060	132	0	5,710	7.4	...	...
T-1	Bell Institute....	9-17-64	Cal	14	...	6.4	...	...	...	...	20	0	...	17	...	...	...	30	14	...	6.4	...	...
V-1	McCown School.....	5-26-65	Tna	23	...	1.1	...	...	...	...	3	0	...	17	...	...	...	18	16	...	6.0	...	...

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	[illegible] or well owner	Date of collection	Water-bearing unit	[illegible] well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
X-1	Walter Greene....	9-17-64	Ke	1,345	...	0.82	...	...	...	..	263	26	...	2,120	...	..	...	78	0	...	8.6	...	...
X-2	Pine Grove School.	9-17-64	Qt	18	...	4.4	...	...	...	...	33	0	...	13	...	...	...	26	0	...	6.2	...	...
Z-1	Mrs. --Spidle.....	4- 9-54	Ke	700	...	...	...	...	...	...	...	...	...	950	...	...	...	78	...	...	7.5	23	73
Z-2	Belmont School....	4-15-54	Ke	993	...	...	...	...	...	...	...	...	...	2,240	...	...	...	206	...	...	7.6	...	...
Z-2	.....do.....	5- 5-65	Ke	993	...	.13	...	...	...	...	310	0	...	2,200	...	...	...	190	0	...	7.9	...	...
Z-3	J. R. Gandy.....	4- 9-54	Ke	740	...	...	...	...	...	...	...	...	...	860	...	...	...	72	...	...	7.6	22	72
Z-3	.....do.....	5- 6-65	Ke	740	...	.09	...	...	...	...	556	0	...	840	...	...	...	56	0	...	7.8	...	...
Z-4	Lewis Salem.....	4- 8-54	Ke	1,000	...	...	...	...	...	...	...	...	...	4,350	...	...	...	546	...	...	7.3	...	...
Z-7	Curtis Levy.....	5- 5-65	Ke	880	...	.18	...	...	...	...	435	34	...	1,220	...	...	...	68	0	...	8.9	23	74
Z-8	John R. Rugic, Jr.	4- 8-54	Ke	900	...	...	...	...	...	...	...	...	...	3,370	...	...	...	330	...	...	7.4	23	74
Z-8	.....do.....	5- 4-65	Ke	900	...	.29	...	...	...	...	236	0	...	3,280	...	...	...	284	90	...	8.0	23	73
Z-9	.....do.....	5- 4-65	Ke	900	...	.62	...	...	...	...	226	0	...	3,230	...	...	...	280	95	...	7.7	22	72
Z-9	.....do.....	8-13-65	Ke	900	10	.57	78	19	2,120	14	228	0	36	3,300	1.2	...	5,690	275	88	10,300	7.4	22	72
AA-1	N. B. Fields.....	5- 5-65	Ke	925	...	.08	...	...	...	...	384	0	...	1,570	...	...	...	99	0	...	8.1	24	75
AA-2	D. L. Marshandy, Jr.	Mel5-54		831	...	...	...	...	...	...	...	...	...	615	...	...	...	78	...	...	7.7	23	74
AA-3	Corps of Engineers, U.S. Army.	4- 8-54	Ke	800	...	...	...	...	...	...	...	...	...	92	...	...	...	24	...	...	7.8	23	74
AA-3	.....do.....	5- 5-65	Ke	800	...	.02	...	...	...	...	456	35	...	71	...	...	...	12	0	...	8.9	23	74
AA-3	.....do.....	8-16-65	Ke	800	10	.00	3.2	.0	237	2.1	519	0	.0	70	2.2	0.1	581	8	0	1,020	8.1	23	74

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream name or~~ well owner	Date of collection	Water-bearing unit	~~Stream discharge (mgd) or~~ well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
CC-1	P. M. Reed.....	9-16-64	...	...	...	1.3	...	...	...	...	154	0	...	5,520	...	...	...	705	579	...	7.0	...	...
CC-2	Everett Moore....	9-16-64	Ke	1,202	...	1.3	...	...	...	...	130	0	...	5,120	...	...	...	535	428	...	7.8	24	76
CC-3	Mrs. J. F. Allison	9-15-64	Ke	1,060	...	.89	...	...	...	...	112	0	...	5,190	...	...	...	508	416	...	8.0	25	77
DD-1	Fourth Creek School	9-15-64	Qal	20	...	.33	...	...	...	...	98	0	...	11	...	...	...	72	0	...	7.8	...	...
EE-2	F. M. Kellam, Sr..	5-26-65	Tnf	20	...	.20	...	...	...	...	66	0	...	7.4	...	...	...	65	11	...	7.5	...	...
1/ FF-2	City of Cuba.....	2- 3-54	Tna	90	22	1.4	8.4	3.2	28.1	4.4	112.9	0	4.8	6.0	0.01	0.01	2/ 195.3	34.1	..	...	7.2	19	66
FF-2	.....do.....	9-10-64	Tna	90	...	1.8	...	...	...	...	103	0	4.8	...	...	...	...	41	0	...	6.9	19	66
3/ FF-4	W. A. Ganguet.....	5- 8-52	Tna	686	24.0	4.5	12.4	3.3	18.3	4.5	98.7	0	23.2	4.3	...	.01	2/ 196.2	44.6	..	...	7.0	...	...
FF-6	City of Cuba.....	4-24-53	Tna	140	...	...	...	...	...	...	...	...	...	...	...	...	...	7	..	...	8.2	...	...
FF-6	.....do.....	9-10-64	Tna	140	...	.13	...	...	...	...	129	0	...	7.8	...	...	...	5	0	...	8.0	...	...
FF-7	Cuba School.....	9-10-64	Tna	144	...	3.2	...	...	...	...	32	0	...	8.8	...	...	...	11	0	...	7.8	21	69
GG-1	Kinterbish High School.	9-11-64	Tnf	282	...	>2.4	...	...	...	...	30	0	...	6.2	...	...	...	16	0	...	7.4	...	...
GG-3	Willie B. DeLaine	9-11-64	Tnf	360	...	>10	...	...	...	...	24	0	...	6.0	...	...	...	15	0	...	7.0	...	...
HH-1	Lizzie Judkins School.	9-11-64	Tnf	100	...	3.9	...	...	...	...	58	0	...	4.2	...	...	...	25	0	...	7.5	...	...
HH-2	Hosie K. Bragg....	9-11-64	Tna	180	...	.29	...	...	...	...	123	0	...	6.6	...	...	...	25	0	...	7.9	...	...
HH-3	Kinterbish II School.	9-11-64	Tnf	194	...	>19	...	...	...	...	22	0	...	5.2	...	...	...	18	0	...	7.2	...	...

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream name~~ well owner	Date of collection	Water-bearing unit	~~Stream discharge (mgd)~~ well depth (feet)	Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$		Specific conductance (micromhos at 25° C)	pH	Temperature	
																		Calcium, magnesium	Non-carbonate			°C	°F
JJ-1	Whitfield School..	9-15-64	Qt	8	...	2.0	...	...	...	...	21	0	...	15	...	...	...	38	21	...	7.6	...	...
KK-1	Corps of Engineers, U.S. Army.	7-14-65	...	...	...	.71	...	...	...	...	184	0	...	5,100	...	...	...	455	304	...	7.9	26	78

Milligrams per liter

1/ Analysis by Alabama Department of Public Health.

2/ Residue on evaporation.

3/ Analysis by Picard Testing Laboratories, Inc.

Table 5.--Chemical analyses of water from streams in Sumter County

(Station numbers correspond to those on figure 5)

Number	Stream name ~~or tributary~~	Date of collection	Water-bearing unit	Stream discharge (mgd) ~~or well depth (feet)~~	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
02448500	Noxubee River near	11/17/66		45.2							84	0		7.4				75	6	179	7.5	16	60
	Geiger.	12-27-66		776							64	0		5.6				60	8	139	7.0	8	46
		2- 8-67		672							94	0		11				102	25	237	7.3	6	43
		3-22-67		167							78	0		6.8				78	14	188	7.5	17	63
		4- 4-67		210							80	0		7.2				82	16	206	8.0	21	70
		5-10-67		232							84	0		6.0				52	0	188	8.2	22	71
		6-15-67		104							91	0		4.2				76	1	183	7.2	30	86
		7-20-67		198							71	0		2.8				64	6	155	7.0	26	78
		9- 1-67		176							114	0		5.6				102	9	241	7.6	--	--
		10-18-67		48.5							119	0		5.2				104	6	234	8.1	18	65
		10-26-67		76.3							72	0		5.0				68	9	158	7.1	14	57
02448900	Bodka Creek near	2- 9-67		116							64	0		4.4				62	10	136	7.0	4	40
	Bodka.	4- 4-67		7.0							136	0		10				120	8	272	8.2	21	69
		10-26-67		4.7							208	0		10				72	0	398	8.2	13	55
02449000	Tombigbee River	11-17-66		1,880							36	0		8.2				38	8	107	7.2	15	59
	at Gainesville.	12-27-66		2,370							32	0		5.2				38	12	93	6.9	8	46
		2- 8-67		4,460							54	0		6.8				58	14	132	6.8	6	42
		3-22-67		2,730							40	0		5.2				42	9	110	7.1	15	59
		4- 4-67		2,990							48	0		5.8				48	9	126	7.1	22	71

Table 5.--Chemical analyses of water from streams in Sumter County--Continued

Number	Stream name	Date of collection	Water-bearing unit	Stream discharge (mgd)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
02449000--	Tombigbee River	5- 9-67		6,300							64	0		3.4				69	17	146	8.0	20	68
Continued.	at Gainesville--	6-15-67		918							48	0		5.0				44	5	120	7.6	30	86
	Continued.	7-20-67		2,050							78	0		4.2				64	0	153	7.4	25	77
		9- 1-67		2,530							52	0		5.0				48	5	133	7.0	--	--
		10-18-67		724							64	0		8.0				52	0	148	7.6	18	65
		10-26-67		1,140							49	0		8.2				58	18	140	7.0	17	62
02449340	Factory Creek	2- 9-67		9.3							176	0		5.2				40	0	334	7.4	3	38
	near Sunterville.	4- 4-67		.2							170	0		14				138	0	367	8.1	22	71
		10-26-67		.1							144	0		3.4				112	0	271	7.2	14	58
02449400	Jones Creek near	2-17-66		15.3							128	2		5.2				121	16	259	8.3	11	51
	Epes.	4- 8-66		1.7							254	0		11				165	0	462	7.9	19	66
02449500	Tombigbee River	2- 8-67		4,590							60	0		5.8				58	9	141	6.8	6	43
	at Epes.	4- 3-67		2,650							54	0		6.2				55	11	139	7.6	19	66
		10-25-67		1,010							51	0		10				50	8	152	7.0	17	63
02467000	Tombigbee River	1- 4-66		9,050	6.2	0.37	12	3.4	1/15		40	0	26	11	0.2	1.9	96	44	11	161	7.4	12	54
	at Demopolis	6-27-66		827							68	0		5.0				65	9	145	7.5	31	87
	Lock and Dam	2-10-67		11,300							46	0		7.2				58	20	155	6.7	9	48
	near Coatopa.	3-27-67		6,330							30	0		6.2				40	15	119	7.0	17	63
		4- 3-67		3,420							52	0		7.4				60	17	150	7.8	20	68
		10-27-67		2,970							40	0		7.8				50	17	158	7.3	21	70

Table 5.--Chemical analyses of water from streams in Sumter County --Continued

Number	Stream name	Date of collection	Water-bearing unit	Stream discharge (mgd)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
02467050	Tombigbee River near Coatopa.	11-29-65		1,680							46	0		11				58	20	187	7.8	18	64
		1- 3-66		5,000							48	0		13				55	16	173	7.6	12	54
		2-14-66		57,500							60	0		5.2				60	11	154	8.0	13	55
		3-28-66		8,730							42	0		6.2				48	14	116	7.6	17	62
		5-13-66		8,080							48	0		5.0				50	11	118	7.6	19	67
		6-27-66		827							64	0		10				62	10	160	7.9	29	85
		8- 4-66		4,120							60	0		8.8				58	9	161	7.5	31	88
		9-15-66		4,690							40	0		11				55	22	183	7.2	27	81
		10- 6-66		2/ 3,790							50	0		10				62	21	175	7.1	23	73
		11-15-66		2/ 6,260							36	0		9.4				48	18	153	7.6	17	63
		12-28-66		2/ 4,630							30	0		6.4				42	17	127	6.7	8	47
		2-10-67		2/ 9,760							46	0		9.0				58	20	160	6.8	9	48
		3-23-67		2/ 4,530							32	0		5.4				40	14	112	7.0	16	60
		3-27-67		2/ 5,210							40	0		7.8				45	12	127	7.0	17	63
		4- 3-67		2/ 3,420							50	0		8.4				55	14	157	7.2	21	69
		4- 5-67		2/ 2,820							52	0		8.6				58	15	152	7.6	22	71
		8-30-67		2/ 16,300							44	0		4.4				61	25	164	7.5	--	--
		10-18-67		2,460							54	0		11				58	14	179	7.2	19	67
		10-27-67		2,970							45	0		9.8				52	15	174	7.0	21	70

Table 5.--Chemical analyses of water from streams in Sumter County--Continued

Number	Stream name	Date of collection	Water-bearing unit	Stream discharge (mgd)	Milligrams per liter													Hardness as $CaCO_3$		Specific conductance (micromhos at 25° C)	pH	Temperature	
					Silica (SiO_2)	Iron (Fe)	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	Calcium, magnesium	Non-carbonate			°C	°F
02467480	Sucarnoochee	2- 9-67		641							8	0		4.2				15	8	50	6.5	4	40
	River near Boyd.	3-28-67		860							12	0		3.4				15	5	58	6.8	17	63
		4- 4-67		175							18	0		3.2				15	0	61	7.3	20	68
		10-26-67		71.1							19	0		2.2				14	0	51	6.7	13	56
02467500	Sucarnoochee River	11-18-66		137							28	0		5.2				22	0	77	7.2	13	55
	at Livingston.	12-27-66		149							24	0		4.6				22	2	65	6.6	9	49
		2- 8-67		1,290							20	0		4.8				30	14	75	6.7	6	43
		3-22-67		160							32	0		4.8				28	2	83	6.9	17	63
		3-27-67		194							50	0		26				45	4	196	7.3	17	63
		4- 3-67		185							26	0		4.4				25	4	79	7.5	20	68
		5- 5-67		905							34	0		1.6				34	0	90	7.6	17	62
		6-15-67		63.3							38	0		3.0				25	0	81	7.8	29	84
		7-21-67		111							32	0		6.2				20	0	90	7.7	23	73
		9- 1-67		113							22	0		3.8				20	2	66	7.1	--	--
		10-18-67		71.7							30	0		4.4				24	0	75	7.3	17	63
		10-26-67		72.4							26	0		5.2				22	1	76	7.1	15	59
02468000	Alamuchee Creek	11-29-65		6.2							24	0		4.8				20	0	66	7.5	11	52
	near Cuba.	1- 3-66		83.4							10	0		4.2				15	7	54	7.1	14	57
		2-15-66		236							6	0		3.2				12	7	41	7.0	13	55

Table 5.--Chemical analyses of water from streams in Sumter County--Continued

Number	Stream name	Date of collection	Water-bearing unit	Stream discharge (mgd)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
02468000--	Alamuchee Creek	3-28-66		41.7							16	0		4.2				18	5	57	7.2	13	55
Continued.	near Cuba--	5-12-66		16.5							28	0		3.2				25	2	69	7.6	18	65
	Continued.	6-23-66		14.0							40	0		2.8				30	0	87	7.6	24	76
		8- 4-66		12.0							18	0		3.4				22	7	55	7.5	24	76
		9-15-66		5.0							28	0		4.0				20	0	67	7.2	21	70
		10- 7-66		4.1							22	0		3.6				20	2	62	6.7	15	59
		11-17-66		7.9							22	0		3.6				18	0	64	7.1	12	54
		12-28-66		11.1							20	0		3.6				20	4	60	6.6	9	48
		2- 9-67		37.1							10	0		4.6				18	10	52	6.6	6	42
		3-23-67		14.2							26	0		4.2				22	1	75	6.8	13	55
		3-27-67		68.5							20	0		4.0				22	6	65	7.0	17	62
		4- 3-67		14.2							26	0		3.6				22	1	77	7.5	18	65
		5- 4-67		75.6							9	0		1.6				14	7	41	7.3	16	61
		6-15-67		4.3							38	0		2.8				23	0	83	7.8	24	75
		7-20-67		8.7							22	0		3.2				16	0	61	6.8	21	70
		8-31-67		9.3							18	0		4.2				19	4	69	7.0	--	--
		10-18-67		8.4							36	0		5.0				24	0	79	6.8	14	57
		10-27-67		7.8							16	0		3.2				18	5	71	6.6	12	54

Table 5.--Chemical analyses of water from streams in Sumter County--Continued

Number	Stream name (Well owner)	Date of collection	Water-bearing unit	Stream discharge (mgd) (Well yield)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
02469000--	Kinterbish Creek	9-15-66		19.9							14	0		2.6				12	1	39	6.5	21	70
Continued	near York--Con-	10- 7-66		12.7							16	0		3.8				12	0	43	6.9	14	58
	timued.	11-17-66		24.3							14	0		3.0				18	7	45	6.9	12	54
		12-28-66		30.6							12	0		3.4				12	2	40	6.5	9	48
		2- 9-67		90.5							8	0		4.0				10	3	36	6.5	5	41
		3-23-67		30.6							16	0		3.6				15	2	46	6.9	13	56
		3-27-67		126							10	0		2.6				12	4	39	6.8	16	61
		4- 3-67		34.9							18	0		4.2				15	0	49	7.2	17	63
		5- 4-67		117							10	0		2.2				11	3	33	6.9	16	61
		6-15-67		7.0							28	0		1.8				22	0	59	7.6	23	74
		7-20-67		12.0							18	0		1.2				12	0	43	6.8	21	70
		8-31-67		13.1							16	0		2.2				12	0	47	7.2	--	--
		10-17-67		5.0							21	0		2.0				19	2	52	7.1	15	59
		10-27-67		11.6							16	0		2.4				12	0	46	7.1	12	53

1/ Calculated Na plus K, reported as Na.

2/ Discharge from Sta. 2-4670.00 - Tombigbee River at Demopolis Lock & Dam near Coatopa.

well or spring. Numbers correspond to those on figure 3 and tables 3 and 4.

Table 2.--Records of wells and spring in Sumter County

Type: D, drilled; Dr, driven; Du, dug; S, spring.

Depth: Depths are given in feet below land surface.

Altitude: Determined by aneroid barometer.

Water level: Reported levels are given in feet; measured levels are given in feet and tenths.

Water-bearing unit: Kg, Cordo Formation; Ke, Eutaw Formation; Tna, Nahecola Formation; Tnf, Nanafalia Formation; Qt, terrace deposits; Qal, alluvial and low-terrace deposits.

Method of lift: C, cylinder; F, flow; J, jet; M, manual; T, turbine; S, submersible; Cf, centrifugal; N, none.

Use: D, domestic; Ind, industrial; P, public supply; S, stock; Inst, institutional; N, none.

Number	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
			Year completed					Above (+) or below land surface (feet)	Date of measurement			
A-1	Billie Taylor.....	E. B. Norwood.....	D	925	4,2	Kg	...	...	...	F	S	Measured flow 9 gpm on 11-3-64 from 2½-in pipe 3 ft above surface. Supplies 150 cattle.
A-2	E. A. Inmon.....	C. W. Blount.....	D	700	4	Kg	130	...	...	F	S	Measured flow 12 gpm on 11-5-64 from 2½-in pipe 1.3 ft above surface. Supplies 100 cattle.
A-3	Marathon Southern Corp.	.....	D	...	4	...	119	...	...	F	N	Measured flow 0.8 gpm on 11-5-64 from 2-in pipe 4.3 ft above surface.
A-4	.....do.....	S. D. Smith.....	D	...	4	...	119	...	...	F,T	D	Measured flow 33 gpm on 11-5-64 from 4-in pipe 4 ft above surface. Supplies camp and tenant houses.

Table 4.--Chemical analyses of water from wells and spring in Sumter County--Continued

Number	~~Stream or~~ well owner	Date of collection	Water-bearing unit	~~Stream discharge (mgd) or~~ well depth (feet)	Milligrams per liter: Silica (SiO_2)	Iron (Fe)	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 (calculated)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Non-carbonate	Specific conductance (micromhos at 25° C)	pH	Temperature: °C	Temperature: °F
E-1	Mrs. Willis Meriweather.	11- 5-64	...	...	...	0.05	...	...	...	...	484	0	...	614	...	...	...	39	0	...	7.8	19	67
E-2	Geiger Pinson.....	9-23-64	...	...	...	.06	...	...	...	...	292	0	...	300	...	...	...	20	0	...	8.1	23	73
E-3	Arch Watt.....	9-23-64	Ke	850	...	.04	...	...	...	...	270	6	...	328	...	...	...	20	0	...	8.4	23	74
E-4	Chuck Fleming.....	9-23-64	Ke	900	...	.10	...	...	...	...	252	2	...	340	...	...	...	15	0	...	8.3	...	...
E-5	Sumter Farm and Stock Co.	9-22-64	Kg	1,100	...	.06	...	...	...	...	188	12	...	300	...	...	...	35	0	...	8.6	25	77
E-6	.....do.....	9-23-64	...	...	...	.03	...	...	...	...	514	0	...	592	...	...	...	40	0	...	7.9	22	71
E-7	Will V. Little....	11- 5-64	Kg	948	...	.03	...	...	...	...	260	0	...	296	...	...	...	18	0	...	7.5	22	72
E-8	Billie Taylor.....	11- 5-64	...	...	...	.02	...	...	...	...	410	0	...	538	...	...	...	44	0	...	7.7	...	...
E-9	Sumter Farm and Stock Co.	9-22-64	...	...	...	.06	...	...	...	...	388	46	...	550	...	...	...	35	0	...	8.9	21	69
E-10	.....do.....	9-23-64	...	...	...	.04	...	...	...	...	264	16	...	360	...	...	...	41	0	...	8.7	...	...
E-11	Town of Geiger....	9-23-64	Ke	750	...	.09	...	...	...	...	336	0	...	376	...	...	...	30	0	...	7.8	...	...
E-12	Sumter Farm and Stock Co.	9-23-64	...	...	...	.08	...	...	...	...	304	0	...	334	...	...	...	15	0	...	7.8	23	73
E-13	.....do.....	9-22-64	...	...	...	.04	...	...	...	...	298	28	...	438	...	...	...	21	0	...	8.9	22	71
E-14	Carlton Fleming...	9-23-64	Ke	800	...	.17	...	...	...	...	204	20	...	380	...	...	...	20	0	...	8.7	...	...
E-15	--Owen.....	9-25-64	Kg	1,150	...	.03	...	...	...	...	234	16	...	352	...	...	...	44	0	...	8.6	...	...

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Table 6.--Evaluation of potential water supplies at selected locations in Sumter County

Location	Altitude (feet above mean sea level)	Ground Water: Principal water-bearing unit	Depth below land surface to base of principal water-bearing unit (feet)	Quantity available per well (mgd)	Ground Water: Quality of Water	Surface Water: Stream	Approximate distance from location (miles)	Average stream flow (mgd)	7-Day Q_2 (mgd)	Surface Water: Quality of Water
Geiger	165	Eutaw	890	1.5	Soft; iron content less than 0.3 mg/l; chloride content probably between 350 and 400 mg/l.	Nonubee River	3.5 N	868	32	Soft to moderately hard; low mineral content.
						Bodka Creek	4 S	130	5	Moderately hard; specific conductance indicates that dissolved solids may exceed 250 mg/l at low flow.
		Gordo	1,240	1.5	Soft; iron content less than 0.3 mg mg/l; chloride content probably between 300 and 350 mg/l.					
		Coker	2,090	1.5	Soft; iron content less than 0.3 mg/l; chloride content probably less than 250 mg/l.					
Chinesville	130	Eutaw	730	1.5	Soft; iron content less than 0.3 mg/l; chloride content probably between 350 and 400 mg/l.	Tombigbee River	0	7,460	478	Soft to moderately hard; low mineral content.
		Gordo	1,050	1.5	Soft; iron content less than 0.3 mg/l; chloride content about 400 mg/l.					
		Coker	1,850	1.5	Soft; iron content less than 0.3 mg/l; chloride content probably less than 250 mg/l.					
Epes	140	Eutaw	920	1.5	Soft to moderately hard; iron content less than 0.3 mg/l; chloride content from 800 to 1,200 mg/l.	Tombigbee River	0	7,680	504	Soft; low mineral content. to moderately hard
		Gordo	1,870	1.5	Moderately hard; iron content exceeds 0.3 mg/l; chloride content about 1,000 mg/l.					654-SE'00 4234 (200)
		Coker	2,640	1.5	Moderately hard; iron content probably less than 0.3 mg/l; chloride content may be less than 250 mg/l.					
Livingston	150	Eutaw	1,230	1.5	Very hard; iron content exceeds 0.3 mg/l; chloride content about 3,000 mg/l.	Sucarnoochee River.	1.0 SW	490	59	Soft; low mineral content.
		Gordo	1,630	1.5	May be moderately hard to hard; chloride content exceeds 500 mg/l.					
		Coker	2,420	1.5	Chloride content exceeds 500 mg/l.					
York	165	Eutaw	1,640	1.5	Probably very hard; iron content exceeds 0.3 mg/l; chloride content exceeds 500 mg/l.	Alamuchee Creek.	0.8 SE	130	10	Soft; low mineral content.
		Gordo	2,050	1.5	Probably hard to very hard; chloride content exceeds 500 mg/l.					
		Coker	2,920	1.5	Chloride content exceeds 500 mg/l.					
Bellamy	100	Eutaw	1,430	1.5	Very hard; iron content exceeds 0.3 mg/l; chloride content exceeds 5,000 mg/l.	Sucarnoochee River.	1.0 N	700	70	Soft; low mineral content.
		Gordo	1,870	1.5	Chloride content exceeds 500 mg/l.					
		Coker	2,670	1.5	Chloride content exceeds 500 mg/l.					
Belmont	250	Eutaw	1,080	1.5	Moderately hard to very hard; iron content less than 0.3 mg/l; chloride content exceeds 1,000 mg/l.	Tombigbee River	3.5 SE	14,100	900	Soft to moderately hard; low mineral content.
		Gordo	1,500	1.5	Chloride content exceeds 500 mg/l.					
		Coker	2,270	1.5	Chloride content exceeds 500 mg/l.					
Cuba	200	Miocene	160	1/ 40	Soft; iron content exceeds 0.3 mg/l; chloride content less than 20 mg/l.	Alamuchee Creek	1.0 SE	45	3	Soft; low mineral content.
		Eutaw	1,950	1.5	Probably very hard; iron content exceeds 0.3 mg/l; chloride content exceeds 500 mg/l.					
		Gordo	2,350	1.5	Chloride content exceeds 500 mg/l.					
		Coker	3,230	1.5	Chloride content exceeds 500 mg/l.					
Kinterbish	300	Hannahatta	230	1/ 50	Soft; iron content exceeds 0.3 mg/l; chloride content less than 20 mg/l.	Kinterbish Creek.	1.0 S	15	1.5	Soft; low mineral content.
		Miocene	420	1/ 50	Soft; iron content about 0.3 mg/l; chloride content less than 20 mg/l.					
		Eutaw	2,200	1.5	Probably very hard; iron content exceeds 0.3 mg/l; chloride content exceeds 500 mg/l.					
		Gordo	2,600	1.5	Chloride Content exceeds 500 mg/l.	Kinterbish Creek.	3.0 NE	50	5	Soft; low mineral content.
		Coker	3,430	1.5	Chloride content exceeds 500 mg/l.					

1/ Gallons per minute.