AVAILABILITY OF GROUND WATER IN TALLADEGA COUNTY, ALABAMA

A Reconnaissance

By Lawson V. Causey

GEOLOGICAL SURVEY OF ALABAMA *BULLETIN 81*

GEOLOGICAL SURVEY OF ALABAMA

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State Geologist

DIVISION OF WATER RESOURCES

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By Lawson V. Causey

Prepared by the United States Geological Survey
in cooperation with the
Geological Survey of Alabama

UNIVERSITY, ALABAMA

1965

STATE OF ALABAMA

Honorable George C. Wallace, Governor

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University, Alabama
September 8, 1965

Honorable George C. Wallace
Governor of Alabama
Montgomery, Alabama

Dear Governor Wallace:

I have the honor of transmitting the report "Availability of Ground Water in Talladega County, Alabama, a Reconnaissance," by Lawson V. Causey, which has been printed as Bulletin 81 of the Geological Survey of Alabama.

The report points out that dolomite, marble, and limestone are the most productive water-bearing beds underlying the county. Wells penetrating solutionally enlarged openings in these rocks produce as much as 1,600 gallons per minute. Areas in Talladega County that are potentially favorable for the development of large-capacity wells are shown on a map in the report. An important factor in the economic development of Talladega County will be the abundance of ground water of good chemical quality in many parts of the county.

Respectfully,

Philip E. LaMoreaux

Philip E. LaMoreaux
State Geologist

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AVAILABILITY OF GROUND WATER IN TALLADEGA COUNTY, ALABAMA

A Reconnaissance

By Lawson V. Causey

ABSTRACT

Talladega County, in east-central Alabama, has an area of 750 square miles. The rocks that crop out in the county range in age from Precambrian to post-Carboniferous and consist chiefly of dolomite, limestone, shale, quartzite, marble, phyllite, and slate.

Most of the wells and springs yield water from the dolomite, the limestone, the marble, and the phyllite and slate. However, the most productive aquifers are the dolomite and the marble. The dolomite yields as much as 1,600 gpm (gallons per minute) of water to wells and as much as 4,800 gpm to springs. The marble yields as much as 900 gpm to wells and as much as 1,000 gpm to springs.

Springs in the county discharge more than 50 and probably as much as 100 million gallons of water per day.

Ground water of good quality from wells and springs is the source of most municipal, industrial, and rural supplies. The estimated daily average use in Talladega County in 1962 was 7½ million gallons.

INTRODUCTION

Ground water is the principal source of municipal, industrial, and rural water supplies in Talladega County. The use of ground water is increasing, owing principally to an increase in population, industrial expansion, and modernization of rural homes. Most municipalities in the county have had to supplement their water supplies during the past 10 years. The quantity of water available from surface sources for Sylacauga became inadequate in 1950 because of increased demands on the system concurrent with several years of drought. A detailed study of the geology and ground-water resources of the Sylacauga area, begun in 1954 by the U.S. Geological Survey in cooperation with the Geological Survey of Alabama and the city of Sylacauga, revealed areas where large yields could be developed from wells tapping solution openings in the marble.

AREA OF STUDY

Talladega County, consisting of 750 square miles in east-central Alabama, is east of Shelby County and Birmingham. Its population has increased from 45,241 in 1930 to 65,495 in 1960. The principal municipalities of the county are Talladega, Sylacauga, Childersburg, Lincoln, Bon Air, and Munford. The area studied and areas of other ground-water studies in Alabama are shown in figure 1.

PURPOSE OF STUDY

As cities and towns in Talladega County grow and industries expand, where will they get more water? The purpose of this report is to provide general information on the availability of ground water by which to evaluate such a resource for meeting future water needs.

The study of the ground-water resources of Talladega County was begun in July 1962 by the U.S. Geological Survey in cooperation with the Geological Survey of Alabama. The investigation was made under the direct supervision of W. J. Powell, district geologist in charge of ground-water investigations in Alabama.

GEOGRAPHY

Talladega County lies almost entirely in the Valley and Ridge physiographic province of the Appalachian Highlands. A small area along the east edge of the county is in the Piedmont province (U.S. Geol. Survey, 1946). The topography is rolling to hilly in the western part, composed of valleys and ridges that trend northeastward in the central part, and mountainous in the eastern part.

The county is drained by the Coosa River and its tributaries. The Coosa River flows southwestward along the west edge of the county and forms the boundary between Talladega County and parts of St. Clair and Shelby Counties. Tributaries of the Coosa River drain westward and consist chiefly of Blue Eye, Choccolocco, Clear, Talladega, Tallaseehatchee, Kahatchee, and Cedar Creeks and their tributaries.

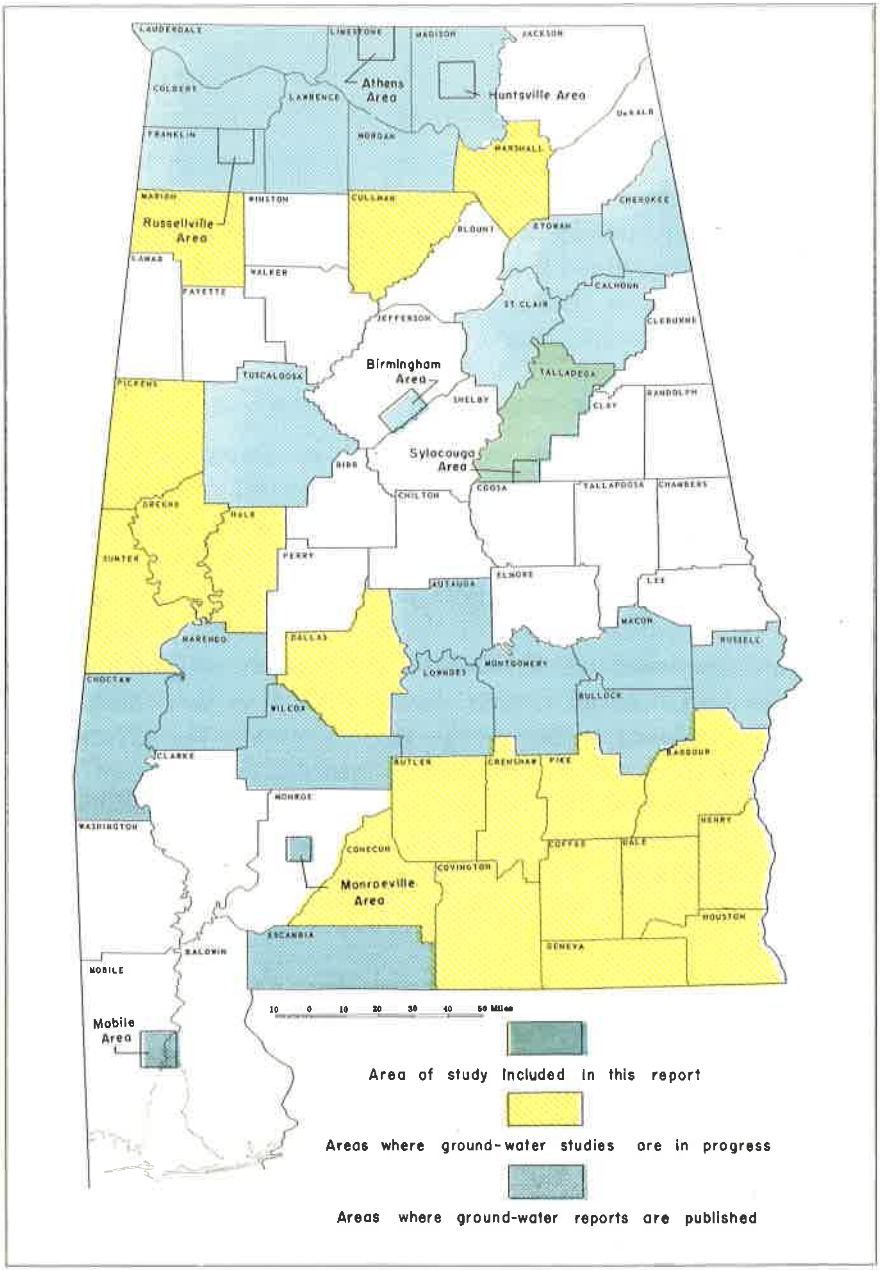

Figure 1.—Area studied and areas of other ground-water studies in Alabama.

CLIMATE

The climate of Talladega County is mild, characterized by high rainfall, high humidity (except during autumn), and temperatures that are moderately high during summer. The average annual precipitation, determined from 73 years of record at the U.S. Weather Bureau Station at Talladega, is 51.48 inches, and the mean annual temperature, determined from 72 years of record, is 63.6°F.

PREVIOUS INVESTIGATIONS

Two reports have been published by the Geological Survey of Alabama that contain sections on ground water in Talladega County. W. D. Johnston of the U.S. Geological Survey made a study in 1928-29 of the ground water in parts of northern Alabama. The results of that study were published in 1933 in Special Report 16, "Ground Water in the Paleozoic Rocks of Northern Alabama." A section of the report discusses the availability and quality of ground water from rocks in Talladega County. In 1951 the U.S. Geological Survey began a reconnaissance of the ground water in the crystalline rocks of Alabama, which included the eastern and southern parts of Talladega County. The results of that study were published in 1957 in Special Report 23, "Geology and Ground Water in the Piedmont Area of Alabama." This report discusses the availability and quality of the ground water and factors to be considered in selecting well sites.

Two comprehensive reports with sections describing the geology of Talladega County have been published by the Geological Survey of Alabama. They are Special Report 9, "The Valley Regions of Alabama, Part II, On the Coosa Valley Region," by Henry McCalley, and Special Report 14, "Geology of Alabama," by G. I. Adams, Charles Butts, L. W. Stephenson, and C. Wythe Cooke.

WELL- AND SPRING-NUMBERING SYSTEM

The well- and spring-numbering system used in Talladega County is based on the Federal land classification. Each township is divided into 36 sections which are numbered consecutively starting with 1 in the northeast corner of the township and ending with 36 in the southeast corner. In Talladega County each township also has been assigned a letter, beginning with "A" in the northernmost township and continuing through "Z" and from "AA" through "HH" in the southernmost township. Wells and springs within a township are numbered consecutively, and each number is prefixed by the letter identifying the township; for example, H-1, H-2, H-3 (fig. 2; table 5).

ACKNOWLEDGMENTS

Many water-well contractors, industries, municipalities, and individuals contributed to the basic data essential to this report. Special appreciation is given to Mr. George W. Swindel, Jr., administrative geologist with the Geological Survey of Alabama and formerly with the U.S. Geological Survey, for reviewing the basic data he had collected as a part of the detailed study of the Sylacauga area.

GENERAL GEOLOGY

Rocks in Talladega County, ranging in age from Precambrian to post-Carboniferous, have been sharply folded into northeastward-trending synclines and anticlines. Metamorphic rocks in the eastern and southern parts of the county have been thrust northwestward and overlie rocks of Cambrian, Ordovician, and Mississippian age. The principal overthrust between metamorphic and sedimentary rocks extends across the county from northeast to southwest. The Talladega Slate, which includes the Sylacauga Marble and the Cheaha Sandstone Members, crops out east of this overthrust. Along parts of the east edge of the county there is a narrow band of Hillabee Chlorite Schist and a small area of the Ashland Mica Schist. West of the overthrust is the exposed section of sedimentary rocks which includes formations of Cambrian to Mississippian age. These formations, from oldest to youngest, are the Weisner Formation, Shady Dolomite, and Rome and Conasauga Formations of Cambrian age; the Ketona(?), Copper Ridge, and Chepultepec Dolomites of Cambrian and Ordovician age; the Longview and Newala Limestones, the Athens Shale, and the Little Oak Limestone of Ordovician age; the Frog Mountain Sandstone of Devonian

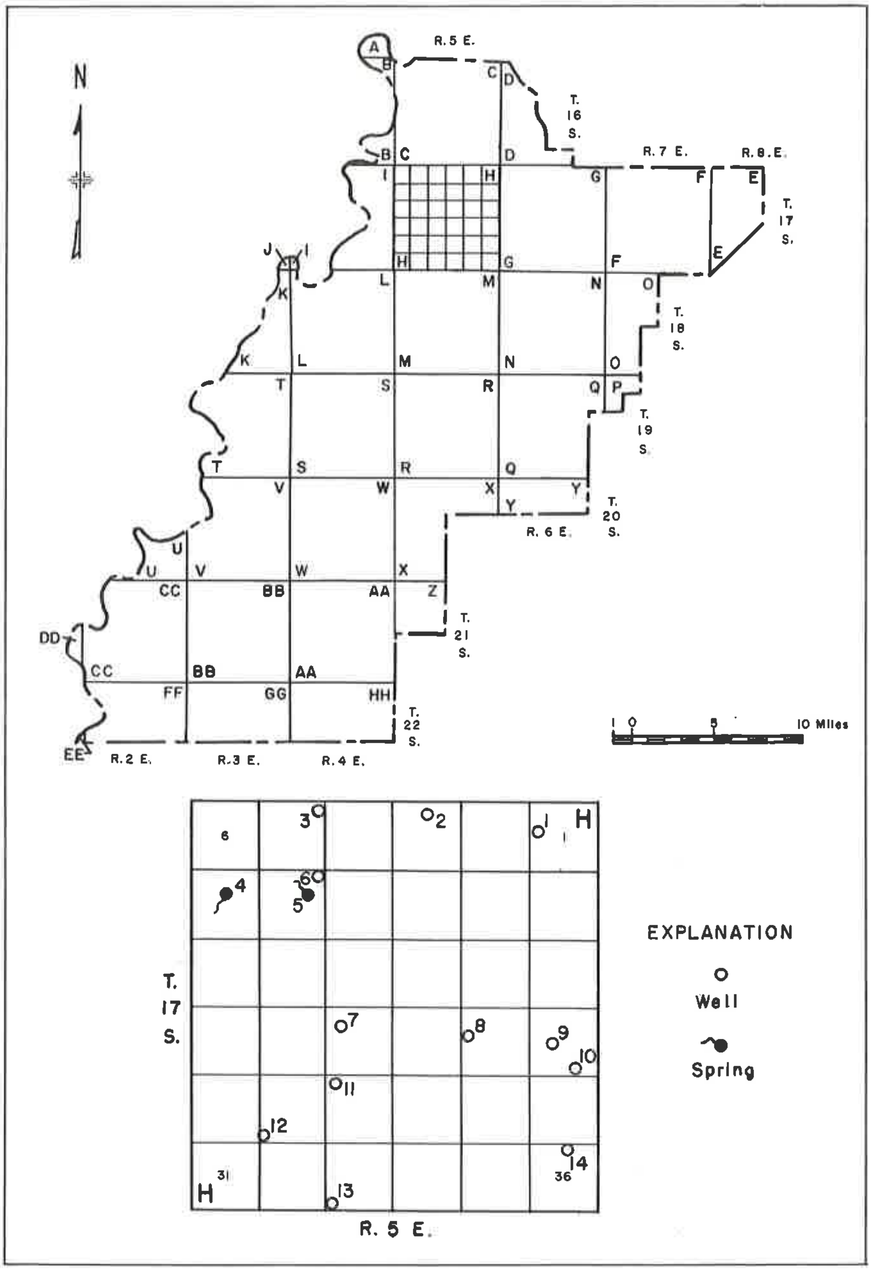

Figure 2.—Well- and spring-numbering system used in this report.

age; and the Fort Payne Chert and Floyd Shale of Mississippian age. Geologic formations in Talladega County are composed of dolomite, limestone, shale, chert, marble, sandstone, quartzite, phyllite, slate, and schist. In this report the rocks are grouped into nine units, and their distribution is shown on plate 1.

WATER-BEARING PROPERTIES OF THE ROCKS

DOLOMITE

DISTRIBUTION

Dolomite as described in this report includes the Shady, Ketona(?), Copper Ridge, and Chepultepec Dolomites; the Ketona may be present in parts of the county. Dolomite underlies about half the total area of the county—several long northeastward-trending belts which extend almost the entire length of the county and in many areas are interconnected. Several smaller outcrops are in the southwestern part of the county (pl. 1).

ROCK CHARACTER

In some areas the bedrock is overlain by a dark-red clayey residue and fertile soil; but, more commonly, a gray cherty unproductive soil has developed. The chert forms as a chemical precipitate during the early stages of weathering of the bedrock, and after complete weathering the chert breaks up into smaller pieces that cover most of the ground surface underlain by the dolomite. In places where the chert is over 20 feet thick, it is mined for road metal. The bedrock is composed of light- to dark-gray dolomite and thin layers of limestone.

WATER-BEARING PROPERTIES

About 65 percent of the wells and springs inventoried during the investigation yield water from openings in the dolomite and the overlying weathered chert zone. Wells obtaining water from the weathered zone have smaller yields than those developed in solution openings in the bedrock. Most industrial and municipal wells yield 200 to 450 gpm (gallons per minute) of water from the dolomite; however, well M-9 at Talladega yielded as much as 1,600 gpm during testing.

Flows from springs that discharge from the dolomite range from about 200 to 4,800 gpm. Spring H-4, the largest in the county, had a measured discharge of 4,800 gpm on April 2, 1963. This spring, however, will be covered by backwater from the Coosa River after completion of the dam north of Childersburg.

Wells or springs in the dolomite are a source of water supply for the communities of Bon Air, Lincoln, Sycamore, and Talladega. Industrial supplies in the vicinity of Talladega and a few in Sylacauga also are obtained from wells and springs in dolomite.

The quality of water from the dolomite is generally good, but locally may have a high iron content and be hard. Water from well G-12 has 0.89 ppm (part per million) iron. Hardness, based on 167 analyses (tables 3 and 4), ranges from 5 to 510 ppm and has a median of 122 ppm.

Areas underlain by dolomite are potentially favorable for the development of wells of large capacity (pl. 2).

LIMESTONE

DISTRIBUTION

Limestone as used in this report corresponds to the area mapped as the Conasauga Formation, the Longview and Newala Limestones, the Athens Shale, and the Little Oak Limestone on the geologic map of Alabama (1926). The limestone generally occurs in narrow northeastward-trending belts in the northern, central, and southwestern parts of the county (pl. 1).

ROCK CHARACTER

The Conasauga is about 500 feet thick in Talladega County and is poorly exposed. The formation consists of limestone, dolomitic limestone, dolomite, and minor amounts of shale. The limestone and dolomite are generally light to medium gray, but are much darker where interbedded with the shale.

The Longview, Newala, and Little Oak Limestones consist of gray limestone and minor amounts of chert. The Athens Shale is included with the limestone unit because its outcrop is too narrow to show separately on the map (pl. 1). The Athens consists of black fissile shale interbedded with layers of dark-gray to black limestone.

WATER-BEARING PROPERTIES

Most drilled wells tapping the limestone yield sufficient water for a domestic and stock supply. Wells D-3 and G-2 furnish sufficient water for two small schools. In lowland areas, drilled wells tapping solution openings in the limestone may yield as much as 100 gpm. Flows from springs in the limestone range from less than 1 gpm to as much as 1,100 gpm.

Water from the limestone, based on 20 analyses (tables 3 and 4), ranges in hardness from 99 to 310 ppm and has a median of 147 ppm.

SHALE

DISTRIBUTION

Shale as used in this report includes the Rome Formation and the Floyd Shale, shown as a single unit on plate 1. Outcrops of the Rome form narrow belts in the north-central and northeastern parts of the county. Outcrops of the Floyd form oval belts in the northwestern and southwestern parts of the county.

ROCK CHARACTER

The Rome in Talladega County is composed of an undetermined thickness of red shale and siltstone, green shale, and red, tan, and light-gray sandstone.

The Floyd is about 2,000 feet thick in the northwestern part of the county and about 1,200 feet thick in the southwestern part. It consists of black to greenish-black thin-bedded to fissile shale interbedded with gray to greenish-gray fine-grained thin- to medium-bedded sandstone, which is lenticular in places. A medium- to dark-gray lenticular clayey limestone is interbedded in some places.

WATER-BEARING PROPERTIES

Ground water in the shale occurs in small openings along bedding planes, fracture or joint systems. These openings are generally not interconnected, and ground-water supplies developed from them are small though adequate for domestic use. These water-bearing openings are generally penetrated at a depth of 225 feet below the land surface. Wells W-2 and W-3 at Winterboro High School are reported to obtain water from the shale, and pumpage from each well is estimated at 20 gpm.

Water from the shale in the northwestern and southwestern parts of the county is more mineralized than water from the shale in the central part. Water from well C-1 in the northwestern part of the county contained 1.1 ppm iron, 266 ppm sulfate, and 783 ppm dissolved solids on March 25, 1963. These constituents exceed the limits recommended for a domestic supply. Water from the shale, according to the results of 15 analyses (tables 3 and 4), ranges in hardness from 8 to 598 ppm and has a median of 121 ppm.

CHERT

DISTRIBUTION

The chert as used in this report corresponds to the area mapped as Fort Payne Chert on the geologic map of Alabama (1926). Chert crops out in several short and narrow belts in the northwestern and southwestern parts of Talladega County (pl. 1).

ROCK CHARACTER

The Fort Payne Chert is less than 100 feet thick in Talladega County. Exposures consist almost entirely of light-tan and light-gray chert that is broken by fractures and joints. The Fort Payne is highly fossiliferous and crinoid stem plates are abundant.

WATER-BEARING PROPERTIES

Wells and springs are not known to yield water from the chert in Talladega County. The Fort Payne Chert is a good aquifer in most parts of Alabama, but its potential as an aquifer in Talladega County has not been determined.

MARBLE

DISTRIBUTION

Marble as used in this report is the Sylacauga Marble Member of the Talladega Slate. Marble crops out in Talladega County in a northeastward-trending belt that begins at the county line southwest of Sylacauga and extends through Sylacauga to 1 mile southeast of Sycamore (pl. 1), and about 2 miles north of Sycamore for a total distance of 14 miles in a northeasterly direction.

ROCK CHARACTER

The marble is a fine-grained white or cream-tinted translucent rock clouded with green in places by thin layers of green phyllite. The marble is overlain and underlain by phyllite.

WATER-BEARING PROPERTIES

Ground water in the marble occurs in openings along joints and bedding planes. Many of these openings have become enlarged through the solvent and abrasive action of moving ground water to form extensive conduits for the movement of large quantities of water. Large quantities of ground water in the Sylacauga area are obtained from wells penetrating such solution openings in the marble. Well AA-22 penetrated solution openings at depths of 160, 221, and 332 feet, and yielded 900 gpm during testing in 1954. Well BB-24 had a drawdown of 12 feet after pumping 3 months at 700 gpm in 1955. The results of test drilling and pump testing done in 1955, as a part of a detailed investigation, indicate that the size and extent of solution cavities in the marble are variable. The thickness of the cavities ranged from less than 1 foot to more than 14 feet and the quantity of water available to wells tapping these cavities ranged from less than 10 gpm to more than 900 gpm. Therefore, test drilling is necessary in locating areas underlain by fractures and solution cavities, and testing by pumping is necessary to determine the quantity of water available. The study also revealed that most of the fractures and solution cavities in the marble occur above a depth of 300 feet.

Spring AA-16 had a measured discharge of 1,000 gpm on June 25, 1955, from an opening in the marble. Spring GG-1 discharges about 150 gpm of water and is the source of supply for 50 families at Gantts Quarry.

The chemical quality of water from the marble is good except for the hardness. The hardness of water, based on 11 analyses (tables 3 and 4), ranges from 52 to 171 ppm and has a median of 144 ppm.

SANDSTONE

DISTRIBUTION

Sandstone as used in this report corresponds to the area mapped as Frog Mountain Sandstone on the geologic map of Alabama (1926). The sandstone forms narrow belts in the northwestern and southwestern parts of the county (pl. 1).

ROCK CHARACTER

The Frog Mountain is about 20 feet thick in the southwestern part of the county and probably less than 50 feet thick in the northwestern part. The formation is composed of tan coarse-grained thick-bedded hard sandstone.

WATER-BEARING PROPERTIES

The sandstone is not a source of water for any known wells or springs in Talladega County.

QUARTZITE

DISTRIBUTION

The areas shown as quartzite on plate 1 of this report include the Cheaha Sandstone Member of the Talladega Slate and the Weisner Formation. Quartzite crops out in Talladega County in a northeastward-trending belt in the central part of the county, in a narrow belt in the east-central part, and in three small areas in the southwestern part.

ROCK CHARACTER

The Cheaha is composed of quartz conglomerate in the lower part and thin-bedded soft sandstone, interbedded in places with layers of purple phyllite, in the upper part. The Weisner is composed of shale, siltstone, quartzite, sandstone, and conglomerate. Although not as conspicuous as the quartzite and conglomerate, the shale and siltstone beds are the principal lithologic units composing the formation.

WATER-BEARING PROPERTIES

Ground water in the quartzite occurs in openings along fractures. Adequate supplies are generally available from drilled wells for domestic and farm use. Water from well M-5 contains 0.87 ppm of iron and requires treatment. With the exception of iron, water from the quartzite is of suitable quality for many uses.

PHYLLITE AND SLATE

DISTRIBUTION

Phyllite and slate as used in this report include all the Talladega Slate except the Cheaha Sandstone and the Sylacauga Marble Member. Phyllite and slate crop out in a broad belt along the eastern and southern parts of the county and in several smaller areas north and west of Sylacauga (pl. 1).

ROCK CHARACTER

In this report, the Talladega Slate is composed chiefly of phyllite and slate. Minor constituents include conglomerate, sandstone, limestone, marble, dolomite, and chert. The phyllite and slate are medium to dark greenish-gray, but exposures weather tan to brown.

WATER-BEARING PROPERTIES

Most wells obtaining water from the phyllite and slate are in lowland areas. These wells yield adequate quantities of water for domestic supplies. Wells drilled on ridges and upland areas have the smallest yields and some are an inadequate source for domestic supply during dry seasons. Drilled wells seldom yield more than 20 to 30 gpm. Water from the phyllite and slate, based on 32 analyses (tables 3 and 4), ranges in hardness from 4 to 224 ppm and has a median of 55 ppm.

SCHIST

DISTRIBUTION

Schist in this report includes the Hillabee Chlorite and the Ashland Mica Schists. They crop out in Talladega County in two small areas—one at Chandler Springs in the east-central part of the county and another in the extreme southeastern part (pl. 1).

ROCK CHARACTER

An outcrop of Hillabee Chlorite Schist at Chandler Springs consists of green coarse-grained massive chlorite schist. The rock contains abundant pyrite. The Ashland Mica Schist consists chiefly of garnetiferous biotite schist and quartz-muscovite schist.

WATER-BEARING PROPERTIES

Schist has a small areal extent in the county and is a source of water for only a few families and one school. Wells tapping water-bearing openings in the schist yield less than 10 gpm. The water is soft to very hard and often contains excessive amounts of iron.

GROUND WATER

SOURCE

How does water become ground water? It becomes ground water during a phase of the never-ending water cycle—a cycle in which water is carried from earth to atmosphere and back to earth. Heat from the sun causes water to evaporate from wet ground, from vegetation, from lakes and streams, and from the gulf. The water vapor rises into the atmosphere and is carried by winds from place to place. When the vapor cools sufficiently, it condenses and falls as precipitation. Part of the precipitation is carried away by surface streams, part is evaporated again, and part seeps downward into the soil to become subsurface water. Some of the water entering the soil is returned to the atmosphere by evaporation or transpiration, and the rest seeps downward and becomes ground water.

OCCURRENCE

Ground water occupies pores, fractures, and solution openings in rocks. The porosity or percentage of open space in soil and rocks determines the amount of water the material will hold. In unconsolidated sediments such as clay, sand, and gravel, water is contained in the original pore spaces between the grains. The porosity due to openings of this type is termed "primary porosity." In consolidated rocks, the primary porosity generally has been reduced by compaction and cementation and perhaps also by recrystallization during metamorphism. The storage of ground water in consolidated rocks (limestone, marble, etc.) depends on "secondary porosity"—porosity resulting from fractures and solution channels which have developed after deposition of the rock.

In the limestone, chert, and marble aquifers of Talladega County ground-water conditions vary greatly from one aquifer to another and from place to place. Some of these rocks store and transmit very little water and others are very good aquifers. Important factors controlling the occurrence of ground water in these rocks are the original texture and chemical composition of the rocks. These factors may in turn determine the extent to which solution passages have been developed.

Water derived from precipitation carries carbon dioxide in solution (carbonic acid); also, organic acids derived from decaying vegetation may be added to the water as it percolates through the soil. The slightly acidic water attacks and dissolves openings through which it percolates. Under favorable geologic and climatic conditions an extensive network of solution passages may develop along the secondary fissures, greatly increasing the porosity and permeability of the rocks.

In Talladega County the general movement of ground water is west and southwest.

WATER-LEVEL FLUCTUATIONS

Water-level fluctuations in wells and changes in discharge from springs are caused by variations in precipitation, pumping from wells and springs, changes in atmospheric pressure, earthquakes, earth and ocean tides, and loading of the land surface.

The principal cause of water-level fluctuations in Talladega County is seasonal or cyclic, related directly to precipitation. An example of this relationship is shown in figure 3. The lowest annual water level is in the fall during a period of low precipitation. The highest water level is in late winter or early spring during a period of high precipitation.

Water-level fluctuations indicate variations in ground-water storage, which is an important factor in the yield of a well. The potential yield from a well during a period of high water level is generally larger than during a period of low water level. Therefore, test pumping to determine the potential yield of a well should be done during the period of low water level to determine its minimum yield.

RECOVERY OF GROUND WATER

DRILLED WELLS

Ground-water data in this report were obtained chiefly from a study of 263 drilled wells, ranging in diameter from 4 to 14 inches and in depth from 28 to 1,360 feet. Most of these wells are 6 inches in diameter, and only about 20 percent of them are deeper than 200 feet. Casing is generally installed through the unconsolidated material and seated in bedrock, and the interval below the top of the bedrock is uncased. However, wells penetrating fractured or deeply weathered zones that are likely to cave are cased and finished with perforated casing. Drillers' logs of 15 wells are given in table 6.

The yields from drilled wells range from 2 to 1,600 gpm, and the lithologic units tapped by them are the bases for the interpretation of the availability of ground water (pl. 2).

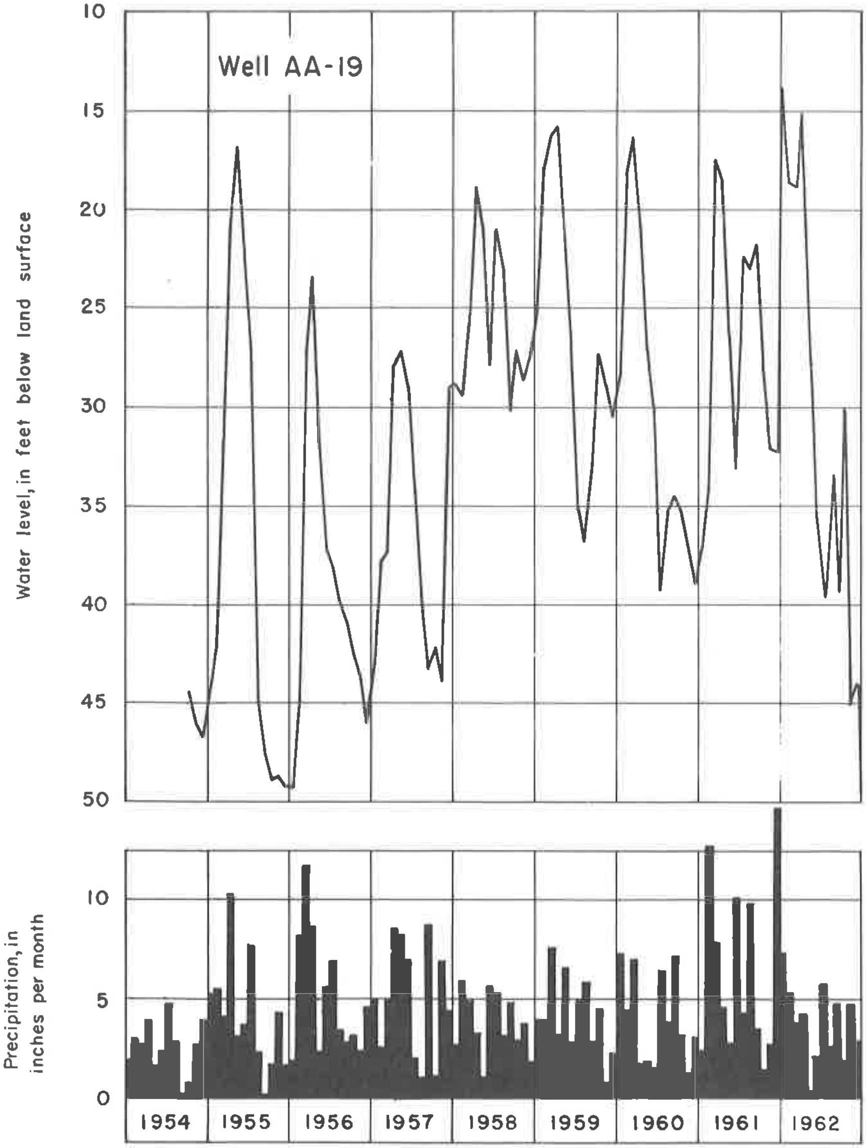

Figure 3.—Changes in water level in well AA-19 and precipitation at Sylacauga.

DUG WELLS

Dug wells yield small quantities of ground water for domestic and stock supplies in rural parts of the county. The supply from some of these wells is inadequate during late summer and fall. However, in most areas drilled wells tapping deeper aquifers would yield sufficient water for domestic and stock supplies. Most dug wells are excavated in unconsolidated deposits to depths that range from 8 to 85 feet. These wells may or may not be lined (cased), depending on the character of material penetrated; however, unlined wells tend to cave and are more subject to pollution from surface seepage. Dug wells were numerous until about 1940. Since that time, many have been replaced by drilled wells to supply the increased needs for modern homes.

SPRINGS

Springs in Talladega County are numerous and they discharge more than 50 and probably as much as 100 million gallons of water daily. Twenty-eight selected springs were inventoried during the investigation. Twenty of these springs discharge from dolomite, three from limestone, and five from marble. The discharge of springs from dolomite ranges from 200 to 4,800 gpm and averages 1,140 gpm. Discharges of three springs from limestone are 0.5, 50, and 1,100 gpm, and discharges of two springs from marble are 150 and 1,000 gpm. Rushing Spring (H-4) is the largest known spring in the county and on April 2, 1963, had a measured discharge of 4,800 gpm. The discharge from most of the springs in Talladega County, method of determination, and date of determination are given in table 1. Two discharge determinations are given in table 1 for springs C-16, G-14, H-4, M-11, and W-1. Each spring had a larger discharge in April 1963 than in October 1928, reflecting the greater rainfall during late winter and spring.

USE OF GROUND WATER

Ground water is used for domestic, stock, school, industrial, and municipal purposes in Talladega County. Rural areas depend almost entirely on ground water as a source of water supply, and nearly all county schools obtain their water from wells. Wells and

Table 1.—*Discharges from selected springs in Talladega County*

[Method of determination: M, measured; E, estimated; R, reported.]

Spring	Type of rock	Discharge (gpm)	Method of determination	Date
C-16	Dolomite	300	M	10-14-28
C-16	do.	550	M	4- 2-63
G-14	do.	2,500	M	10-18-28
G-14	do.	3,300	M	4- 3-63
H-4	do.	3,900	M	10-14-28
H-4	do.	4,800	M	4- 2-63
H-5	do.	1,400	M	4- 2-63
L-12	do.	800	M	4- 2-63
M-11	Limestone	100	M	10-18-28
M-11	do.	1,100	M	4- 3-63
N-6	Dolomite	400	E	9-18-62
R-2	do.	1,400	M	4- 3-63
V-7	do.	500	E	10-23-62
V-14	do.	2,200	M	4- 2-63
V-17	do.	200	M	4- 2-63
W-1	do.	155	M	10-20-28
W-1	do.	1,200	M	4- 3-63
W-17	do.	1,600	M	4- 2-63
AA-11	do.	350	R	
AA-12	do.	350	R	
AA-16	Marble	1,000	M	6-25-55
AA-21	Dolomite	350	R	
DD-1	Limestone	50	E	12-19-62
FF-1	Dolomite	500	M	4- 2-63
FF-6	do.	290	M	4- 2-63
FF-9	do.	300	E	1- 3-63
FF-10	Limestone	.5	E	1- 3-63
GG-1	Marble	150	M	10-22-28
GG-5	Dolomite	1,200	M	4- 2-63

springs are the principal source of water for most industries and municipalities in the county. Talladega and Sylacauga have both ground- and surface-water supplies. Talladega obtains most of its water from two wells, and supplemental water from Talladega Creek during periods of peak demand. Sylacauga obtains its water supply from Tallaseehatchee Creek, but during periods of drought supplemental water is obtained from a well in Sylacauga. Other municipalities that use water from wells and springs are Bon Air, Childersburg, Gantts Quarry, Lincoln, and Munford.

For the purpose of this report, a well or spring is considered adequate for an average domestic and stock supply if it yields more than 1,500 gallons per day; it is considered adequate for an average domestic supply if it yields more than 500 gallons per day. Supplies for schools are based on an estimated use of 15 gallons per person per day. Some schools use more water than others, of course, according to the shower, toilet, and lunchroom facilities. The estimated average use of ground water in Talladega County in 1962 is as follows:

Consumer	Use (gallons per day)
Rural homes	2,000,000
Rural schools	65,000
Industries	
Alabama Marble Co.	300,000
America Talc Co.	150,000
Avondale Mills	1,000,000
Coosa River Newsprint Co.	40,000
Foremost Ice Cream Co.	200,000
Marble City Ice Co.	100,000
Moretti-Harrah Marble Co.	300,000
Newbury Manufacturing Co.	150,000
Talladega Ice and Storage Co.	60,000
Wehadkee Yarn Mills, Dye Plant	240,000
Others	100,000
Municipalities	
Bon Air	30,000
Childersburg	500,000
Gantts Quarry	80,000
Lincoln	100,000
Munford	35,000
Sycamore	50,000
Talladega	2,000,000
Total use	7,500,000

QUALITY OF WATER

The mineral content of water changes in its cycle from the sea to the atmosphere, to the land, and back to the sea. Precipitation as it reaches the earth is low in mineral content, but carbon dioxide and other gases dissolved from the atmosphere and from the soil make it a good solvent for certain minerals in the rocks and soils over and through which it passes. The amount of minerals that will be dissolved depends on their resistance to chemical and physical attack, the length of time the minerals are in contact with the water, and the chemical composition and temperature of the water itself. Water returning to the sea from land is considerably more mineralized than when it fell to earth.

The chemical quality of water may limit its use. Many commercial and industrial users require water of a certain quality. Drinking and culinary water on interstate carriers is subject to standards established by the U.S. Public Health Service (1962). Water for municipal and domestic supplies should, insofar as possible, conform to these standards. Chemical constituents commonly found in natural waters are listed in table 2, with their source, effect, and limit established by the U.S. Health Service for drinking and culinary water on interstate carriers.

The results of partial chemical analyses of water from 216 wells and springs in Talladega County are in table 3. The results of comprehensive chemical analyses of water from 36 wells and springs are in table 4. These analyses indicate the following:

1. The quality of ground water in Talladega County is suitable for most uses; however, some aquifers yield mineralized water which may require treatment for some uses.

2. The iron content of water from 12 wells and springs ranges from 0.02 to 1.1 ppm (table 4). In the northern part of the county water from the shale, dolomite, and quartzite contains more than 0.3 ppm of iron.

3. The bicarbonate content of water ranges from 2 to 564 ppm (tables 3 and 4). The median bicarbonate content of water from the principal aquifers ranges from 66 ppm from the phyllite and slate to 163 ppm from limestone (fig. 4).

Table 2.—*Some minerals found in water and their significance*

Constituent	Source or origin	Limit[1] (parts per million)	Significance
Silica (SiO_2)	Most abundant constituent in igneous rocks, resistant to solution.	......	Causes scale in boiler and deposits on turbine blades.
Iron (Fe)	One of the most abundant elements, readily precipitates as hydroxide.	0.3	Stains laundry and porcelain; imparts unpleasant taste.
Manganese (Mn)	Less abundant than iron, present in lower concentrations.	.05	Do.
Calcium (Ca)	Dissolved from most rocks, especially limestone and dolomite.	......	Causes hardness, forms boiler scale; helps maintain good soil structure and permeability.
Magnesium (Mg)	Dissolved from rocks.	......	Contributes to hardness. Excess has a physiological effect on man.
Sodium (Na)	Dissolved from rocks, industrial waste.	......	Injurious to soils and crops, and to certain physiological conditions in man.
Potassium (K)	Abundant but not very soluble in rocks and soils.	......	Causes foaming in boilers.
Bicarbonate (HCO_3) Carbonate (CO_3)	Abundant and soluble from limestone and dolomite, and soils.	......	Causes foaming in boilers and embrittlement of boiler steel.
Sulfate (SO_4)	Sedimentary rocks, mine water, and industrial waste.	250	Excess is cathartic; imparts bitter taste in combination with other ions.
Chloride (Cl)	Rocks, soils, industrial waste, sewage, brines, sea water.	250	Imparts salty taste in combination with sodium; increases corrosiveness.

Fluoride (F)	Not very abundant, sparingly soluble, seldom found in industrial wastes except as spillage, some sewage.	0.6 to 1.7	Limit depends on the annual average of daily maximum air temperatures. Excess causes mottling of children's teeth; within limits, aids in preventing tooth decay.
Nitrate (NO_3)	Rocks, soils, sewage, industrial waste, normal decomposition (plants and animals), bacteria, fertilizer.	45	Excess indicates pollution, causes methemoglobinemia in infants.
Hardness	Alkaline earths, principally calcium and magnesium.	.....	Causes excessive soap consumption, scale in pipes; interferes in industrial processes. Classification of hardness: Soft water 0 to 60 ppm Moderately hard water 61 to 120 ppm Hard water 121 to 180 ppm Very hard water 181+ ppm

[1] Limit recommended by the U.S. Health Service (1962) for drinking and culinary water on interstate carriers.

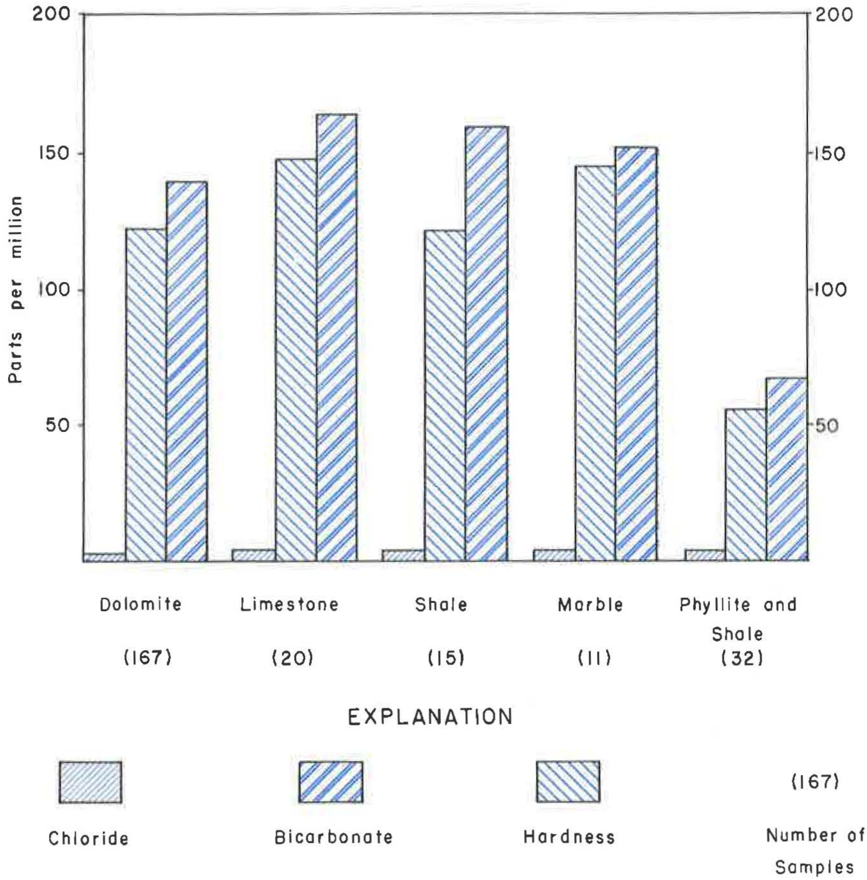

Figure 4.—Median chloride, hardness, and bicarbonate content of water from wells and springs in Talladega County.

4. The chloride content of water ranges from 0 to 272 ppm (tables 3 and 4). Water from 90 percent of the wells and springs contains less than 10 ppm of chloride. The median chloride content of water from each aquifer is less than 5 ppm (fig. 4).

5. The fluoride content of water in Talladega County is low. Fluoride in water from 36 wells and springs ranges from 0.0 to 0.3 ppm (table 4).

6. The hardness of water ranges from 3 ppm from the quartzite to 598 ppm from the shale (tables 3 and 4). The median hardness of water from the principal aquifers ranges from 55 ppm from phyllite and slate to 147 ppm from limestone (fig. 4).

7. The concentration of sulfate and dissolved solids exceeds the recommended limits in water from well C-1, which contains 266 ppm sulfate and 783 ppm dissolved solids.

8. The median temperature of ground water in Talladega County is 62° F.

SUMMARY

Water from wells and springs is the source of most municipal, industrial, rural domestic, and rural school supplies in Talladega County. Municipal supplies are adequate for present needs; however, nearly all municipalities have had to supplement their supply during the past 10 years. In areas where dug wells have failed to yield adequate water for domestic use, an adequate supply can generally be obtained from a drilled well tapping a deeper water-bearing rock.

Most of the wells and springs yield water from dolomite, limestone, marble, and phyllite and slate. The dolomite and the marble are the most productive aquifers. The dolomite yields as much as 1,600 gpm of water to wells and as much as 4,800 gpm to springs. The marble yields as much as 900 gpm of water to wells and as much as 1,000 gpm to springs. Large yields probably can be obtained from wells drilled in some parts of the undeveloped area underlain by dolomite.

The shale, sandstone, quartzite, phyllite and slate, and schist yield small quantities of water to wells. These yields generally are adequate for a domestic supply but seldom do they exceed 20 to 30 gpm.

The estimated daily average use of ground water from wells and springs in 1962 was 7,500,000 gallons.

The quality of ground water from most wells and springs is suitable for many uses. The median hardness of water from the aquifers ranges from 55 ppm in phyllite and slate to 147 ppm in limestone. Water from a few wells developed in shale, dolomite, and quartzite contains excessive amounts of iron. The median temperature of ground water in Talladega County is 62° F.

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BASIC DATA

Table 3.—*Partial chemical analyses of water from wells and springs in Talladega County*

(Analyses by U.S. Geological Survey, Quality of Water Branch)
Well and spring numbers correspond with those in plate 2 and tables 4 and 5.
Water-bearing rock: dol, dolomite; ls, limestone; mb, marble; ps, phyllite and slate; qtz, quartzite; sc, schist; sh, shale.

Well or spring	Date of collection	Water-bearing rock	Bicarbonate (HCO_3)	Carbonate (CO_3)	Chloride (Cl)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25^0 C)	pH	Temperature (^{0} F)
			Parts per million							
C-1	8-28-62	sh	343	0	34	520	239	.....	8.0	...
C-2	8-28-62	sh(?)	218	0	19	192	13	.....	8.0	...
C-3	8-28-62	sh	240	0	8.0	198	1	.....	7.9	...
C-4	8-28-62	dol	5	0	2.0	8	4	.....	6.5	...
C-5	8-28-62	dol	135	16	3.0	139	2	.....	8.4	...
C-6	8-30-62	dol	118	0	2.0	106	9	.....	8.0	...
C-7	8-28-62	dol	162	0	6.0	126	0	.....	7.7	...
C-8	8-30-62	dol	170	0	4.0	155	16	.....	8.2	...
C-9	8-30-62	dol	156	0	4.0	130	2	.....	7.9	...
C-11	9-10-62	dol	134	0	3.0	110	0	.....	7.8	...
C-12	9- 6-62	dol	160	6	2.0	140	0	.....	8.6	...
C-15	8-30-62	dol	126	0	3.0	108	5	.....	7.5	...
C-16	8-27-62	dol	183	0	5.0	161	11	.....	8.0	61
C-17	9- 6-62	dol	147	0	3.0	125	4	.....	7.6	...
D-1	8-28-62	dol	130	0	2.0	106	0	.....	8.1	...
D-2	8-28-62	dol	134	0	4.0	116	6	.....	7.5	...
D-3	9- 6-62	ls	149	2	7.0	138	12	.....	8.4	...
D-4	9-19-62	ls	163	0	3.0	139	5	.....	7.5	...
E-1	9-24-62	dol	98	0	1.0	91	11	.....	7.2	...
E-2	9-24-62	dol	142	0	2.0	116	0	.....	8.1	...
E-3	9-24-62	dol	153	0	1.0	125	0	.....	7.4	...
E-4	9-24-62	dol	169	0	4.0	138	0	.....	7.5	...
F-1	9-24-62	ls	237	0	2.0	202	8	.....	7.4	...
F-2	9-24-62	dol	137	0	3.0	118	6	.....	6.9	...
F-3	9-25-62	dol	147	0	2.0	130	9	.....	7.6	...
F-4	9-25-62	dol	174	0	2.0	145	2	.....	7.6	...
F-5	9-25-62	sh	145	0	2.0	121	2	.....	7.6	...
F-6	9-18-62	dol	147	4	3.0	128	7	.....	8.4	...
F-7	9-18-62	dol	122	0	3.0	109	9	.....	7.8	...
F-8	9-19-62	dol	157	0	5.0	136	7	.....	7.6	...
F-10	9-25-62	dol	137	0	13	130	18	.....	7.7	...
F-11	9-25-62	dol	122	0	4.0	100	0	.....	7.8	...
F-12	10- 3-62	ps	66	0	5.0	55	1	.....	7.8	...
G-1	9-11-62	ls	150	0	4.0	136	13	.....	7.5	...
G-2	9-19-62	ls	262	0	6.0	228	13	.....	7.4	...
G-3	9-11-62	ls	176	7	8.0	166	22	.....	8.4	...
G-4	9-19-62	ls	202	0	2.0	189	23	.....	7.0	...
G-5	9-19-62	dol	189	8	3.0	171	6	.....	8.6	...
G-6	9-19-62	dol	96	0	4.0	79	0	.....	7.2	...
G-8	9-11-62	ls	119	0	6.0	109	11	.....	7.9	...
G-9	9-11-62	ls	211	0	4.0	176	3	.....	7.9	...

Table 3.—*Partial chemical analyses of water from wells and springs in Talladega County*—Continued

Well or spring	Date of collection	Water-bearing rock	Bicarbonate (HCO_3)	Carbonate (CO_3)	Chloride (Cl)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million							
G-10	9-18-62	dol	146	6	4.0	134	14	.....	8.5	...
G-11	9-14-62	dol	154	0	2.0	129	3	.....	7.8	...
G-12	9-18-62	dol	128	0	2.0	118	13	.....	8.2	...
G-13	9-18-62	dol	188	0	4.0	161	7	.....	8.1	...
G-14	9-18-62	dol	142	0	4.0	120	4	.....	7.6	61
G-15	9-11-62	dol	126	19	6.0	148	45	.....	8.5	...
G-16	9-18-62	sh	140	0	2.0	114	0	.....	8.1	...
H-1	9-10-62	ls	109	0	4.0	99	10	.....	7.9	...
H-2	9-10-62	dol	137	0	2.0	122	10	.....	8.2	...
H-3	9- 6-62	dol	60	0	4.0	49	0	.....	7.7	...
H-4	8-27-62	dol	136	3	2.0	122	5	.....	8.4	61
H-5	9- 6-62	dol	144	0	2.0	124	6	.....	8.2	61
H-6	9- 6-62	dol	153	3	5.0	140	9	.....	8.4	...
H-7	9-10-62	dol	139	0	3.0	120	6	.....	8.1	...
H-8	9-11-62	sh	10	0	15	8	0	.....	6.8	62
H-9	9-11-62	dol	292	0	29	260	20	.....	8.1	62
H-10	9-11-62	dol	173	0	55	166	24	.....	8.0	...
H-11	9-10-62	sh	19	0	230	19	4	.....	6.9	...
H-12	9-12-62	dol	110	0	2.0	91	1	.....	8.1	...
H-13	9-10-62	ls	163	0	6.0	151	17	.....	8.2	...
H-14	9-11-62	dol	18	0	50	28	13	.....	7.1	...
I-1	9-12-62	dol	122	3	3.0	110	5	.....	8.4	...
I-2	9-12-62	dol	88	0	6.0	78	6	.....	6.9	...
I-3	9-12-62	dol	13	0	2.0	5	0	.....	6.9	...
I-4	9-12-62	dol	31	0	11	16	0	.....	7.0	...
I-5	9-12-62	dol	106	0	3.0	88	1	.....	8.2	...
I-6	9-12-62	dol	139	0	2.0	112	0	.....	8.0	...
I-7	9-12-62	dol	93	0	4.0	79	3	.....	7.8	...
K-1	10- 9-62	dol	137	0	4.0	119	7	.....	8.2	...
K-2	10-10-62	dol	145	8	6.0	132	6	.....	8.7	...
K-3	10-10-62	dol	26	0	6.0	8	0	.....	6.9	...
K-4	10-29-62	dol	126	2	7.0	100	0	.....	8.4	...
K-5	10-10-62	dol	130	0	7.0	115	8	.....	8.2	...
L-1	10- 9-62	dol	217	0	32	198	20	.....	8.1	...
L-2	10- 9-62	dol	147	5	4.0	118	0	.....	8.5	...
L-3	10- 8-62	dol	133	5	5.0	114	0	.....	8.5	...
L-4	10- 8-62	dol	124	13	6.0	122	0	.....	8.8	...
L-5	10- 9-62	dol	147	0	2.0	118	0	.....	8.2	...
L-6	10- 9-62	dol	118	12	4.0	99	0	.....	8.8	...
L-7	10- 8-62	dol	118	6	6.0	99	0	.....	8.5	...
L-8	10- 8-62	dol	117	7	4.0	101	0	.....	8.5	...
L-9	10- 9-62	qtz	42	0	5.0	4	0	.....	7.4	...
L-10	10-10-62	dol	157	2	2.0	134	2	.....	8.4	...
L-11	10-15-62	dol	111	2	3.0	95	1	.....	8.3	...
L-12	10- 8-62	dol	124	4	9.0	100	0	.....	8.6	62
L-13	10- 8-62	dol	86	0	7.0	120	49	.....	7.0	...
M-1	10- 4-62	dol	78	0	6.0	62	0	.....	7.8	...
M-2	10- 4-62	dol	156	4	3.0	132	0	.....	8.5	...
M-3	10- 4-62	dol	162	2	7.0	131	0	.....	8.4	...
M-4	10- 4-62	dol	144	3	6.0	121	0	.....	8.5	...
M-5	10- 4-62	qtz	6	0	1.0	8	3	.....	7.1	...
M-6	10- 4-62	dol	44	0	2.0	41	5	.....	7.5	...
M-7	10- 4-62	dol	138	3	5.0	120	2	.....	8.5	62

Table 3.—*Partial chemical analyses of water from wells and springs in Talladega County*—Continued

Well or spring	Date of collection	Water-bearing rock	Bicarbonate (HCO_3)	Carbonate (CO_3)	Chloride (Cl)	Hardness as $CaCO_3$		Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million			Calcium, magnesium	Noncarbonate			
M-9	9-18-62	sh, dol	163	0	3.0	144	10	.....	8.2	...
M-12	1- 9-63	sh, dol	232	0	9.2	209	....	415	7.5	...
M-14	10- 8-62	sh	232	14	6.0	115	0	.....	8.6	...
N-1	10- 3-62	dol	38	0	9.0	61	30	.....	7.4	...
N-2	10- 3-62	dol	140	0	4.0	124	9	.....	8.1	...
N-3	9-18-62	dol	125	2	3.0	116	10	.....	8.3	...
N-4	9-19-62	dol	142	0	4.0	120	4	.....	7.7	...
N-5	9-18-62	dol	186	8	1.0	175	9	.....	8.6	...
N-6	9-18-62	dol	42	0	2.0	136	102	.....	6.1	61
N-7	10- 3-62	dol	162	0	4.0	144	11	.....	8.2	...
N-8	9-19-62	dol	59	0	6.0	129	81	.....	6.7	...
N-9	10- 5-62	dol	127	4	3.0	114	3	.....	8.4	62
N-10	10- 5-62	dol	134	0	33	122	12	.....	...	63
N-11	11- 7-62	dol	213	7	6.0	192	6	.....	8.5	62
N-12	10- 3-62	ps	9	0	3.0	4	0	.....	6.9	...
N-13	10- 3-62	dol	115	0	3.0	94	0	.....	8.1	...
N-14	10- 5-62	dol	131	0	3.0	111	4	.....	8.2	...
N-15	9-18-62	dol	127	0	4.0	108	4	.....	7.7	...
N-16	10- 5-62	dol	104	1	3.0	90	3	.....	8.3	...
N-17	11- 7-62	ps	12	0	3.0	10	0	.....	7.2	...
O-1	9-25-62	ps	44	0	3.0	28	0	.....	7.1	...
Q-1	11- 7-62	ps	35	0	3.0	19	0	.....	7.6	...
Q-2	11- 7-62	mb	28	0	7.0	52	29	.....	7.8	...
Q-3	11- 5-62	dol	142	0	4.0	110	0	.....	7.7	...
Q-4	11- 7-62	dol	73	0	14	70	10	.....	7.9	...
Q-5	11- 5-62	ps	36	0	5.0	22	0	.....	7.0	...
Q-7	11- 5-62	ps	115	0	4.0	79	0	.....	7.3	...
R-1	10-15-62	dol	162	0	3.0	132	0	.....	8.2	...
R-2	10-15-62	dol	144	9	7.0	132	0	.....	8.4	63
R-3	10-15-62	dol	296	0	8.0	215	0	.....	8.0	...
R-4	10-18-62	ps	29	0	1.0	15	0	.....	7.5	...
R-5	10-18-62	ps	10	0	7.0	4	0	.....	6.8	...
R-6	10-16-62	dol	134	7	4.0	120	0	.....	8.5	...
R-7	10-18-62	mb	134	46	3.0	130	0	.....	9.4	...
R-8	10-16-62	mb	132	0	7.0	105	0	.....	8.2	...
R-9	10-16-62	dol	2	0	6.0	18	16	.....	6.0	...
S-1	10-25-62	sh	134	0	.2	110	....	210	7.7	...
S-2	10-10-62	dol	145	0	12	126	7	.....	8.2	...
S-3	10-15-62	dol	124	2	5.0	108	6	.....	8.4	...
S-4	10-10-62	dol(?)	24	0	3.0	5	0	.....	7.3	...
S-5	10-30-62	ls	148	0	.7	132	....	230	7.7	...
S-6	11-19-62	dol	129	0	1.9	107	....	203	7.2	...
S-7	10-15-62	qtz	110	0	3.0	89	0	.....	7.4	...
S-8	10-29-62	dol	139	0	1.2	122	....	222	7.5	...
S-9	10-25-62	dol	137	0	4.8	124	....	248	7.7	...
S-10	10-15-62	sh	89	0	4.0	72	0	.....	8.0	...
S-11	10-15-62	ls	198	0	6.0	181	19	.....	8.0	...
S-13	10-15-62	dol	137	0	5.0	121	9	.....	8.2	...
S-14	10-30-62	dol	258	0	1.1	221	....	390	8.1	...
S-15	11-19-62	sh, dol	119	0	2.1	100	....	210	7.3	...
S-16	11-26-62	dol	162	0	13	145	....	331	7.6	...
S-17	11-19-62	dol	176	0	2.7	144	....	280	7.2	...
S-19	10-16-62	sh	180	0	1.1	154	....	282	7.7	...
T-1	10-29-62	dol	84	0	.0	68	....	140	7.0	...
T-2	10-29-62	dol	18	0	3.0	10	....	38	6.4	...

Table 3.—*Partial chemical analyses of water from wells and springs in Talladega County*—Continued

Well or spring	Date of collection	Water-bearing rock	Bicarbonate (HCO_3)	Carbonate (CO_3)	Chloride (Cl)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million							
T-3	10-25-62	dol	161	0	9.8	128	....	280	7.7	...
T-4	10-25-62	dol	152	0	.5	143	....	261	7.8	...
T-5	10-29-62	dol	126	0	1.8	108	....	211	7.4	...
T-6	10-29-62	dol	128	0	.0	110	....	202	7.4	...
T-7	10-25-62	dol	122	0	.0	105	....	200	7.5	...
T-8	10-25-62	dol	170	0	6.0	152	....	301	7.7	...
T-9	11-26-62	dol	296	0	18	290	....	626	7.6	...
U-1	12-18-62	ls	139	0	2.1	120	....	238	7.8	...
U-2	12-18-62	dol(?)	173	0	2.3	155	....	296	7.6	...
V-2	11-19-62	dol	164	0	1.7	141	....	272	7.5	...
V-4	10-23-62	dol	58	0	1.0	52	....	110	7.0	...
V-5	10-23-62	dol	125	0	7.0	112	....	223	7.6	...
V-6	10-26-62	dol	113	0	.8	95	....	182	7.5	...
V-7	10-23-62	dol	146	0	1.1	127	....	233	7.8	...
V-8	10-26-62	dol	134	0	3.2	111	....	221	7.7	...
V-10	10-23-62	dol	153	0	3.1	132	....	249	7.6	...
V-11	12- 4-62	dol	240	0	16	179	....	433	8.1	...
V-12	12- 4-62	dol	133	0	45	132	....	413	7.7	...
V-13	12- 4-62	dol	133	0	2.6	115	....	221	7.5	...
V-14	11-27-62	dol	146	0	3.3	122	....	233	7.8	...
V-15	12- 4-62	dol	146	0	1.9	121	....	236	7.8	...
V-17	11-13-62	dol	154	0	2.8	133	....	258	7.5	...
V-18	12-18-62	dol	78	0	3.8	64	....	148	7.5	...
W-1	10-16-62	dol	126	0	.2	110	....	209	7.4	...
W-2	10-16-62	sh(?)	138	0	3.0	115	....	235	7.6	63
W-3	10-16-62	sh(?)	194	0	.3	148	....	279	7.7	...
W-4	10-23-62	dol	153	0	1.0	138	....	257	7.7	...
W-5	10-23-62	dol	119	0	4.9	110	....	236	7.4	...
W-6	10-18-62	ps	140	0	.5	120	....	226	7.6	...
W-7	10-18-62	dol	144	0	5.9	134	....	282	7.8	...
W-8	11-27-62	ps	228	0	2.9	200	....	360	7.3	...
W-9	12- 4-62	ps	17	0	41	39	....	196	6.2	59
W-10	11-27-62	dol	151	0	7.0	149	....	299	7.0	...
W-11	12- 4-62	ps	120	0	1.2	110	....	205	6.9	...
W-12	10-23-62	ps	114	0	1.1	98	....	191	7.3	...
W-13	11-27-62	ps	5	0	6.7	7	....	42	5.7	...
W-14	1- 4-63	dol	164	0	2.6	138	....	265	7.7	...
W-15	1- 4-63	dol	180	0	10	171	....	342	7.7	...
W-16	11-27-62	dol	138	0	2.2	122	....	236	7.1	...
W-17	11-27-62	dol	140	0	3.8	130	....	255	7.1	63
W-18	1- 4-63	dol	172	0	5.8	154	....	302	7.8	...
X-1	10-18-62	dol	205	0	4.2	172	....	337	7.9	...
Y-1	11- 5-62	ps	145	0	.0	114	....	252	7.6	...
Y-2	11- 5-62	sc	8	0	.5	7	....	23	6.3	...
Y-3	11- 5-62	sc	208	0	13	194	....	421	7.8	...
BB-19	1- 8-63	dol	147	0	8.3	130	....	280	7.1	...
BB-20	1- 8-63	dol	237	0	14	212	....	420	7.7	...
CC-1	12-19-62	ls	130	0	.5	119	....	218	7.0	...
CC-3	12-19-62	ls	146	0	16	155	....	308	7.0	...
CC-4	1- 2-63	ps	126	0	4.5	115	....	235	7.3	...
CC-5	1- 3-63	ps	84	0	14	70	....	196	7.5	...
CC-6	12-18-62	ps	234	0	2.8	211	....	384	7.2	...
CC-7	12-18-62	ps	163	0	25	224	....	439	7.0	...

Table 3.—*Partial chemical analyses of water from wells and springs in Talladega County*—Continued

Well or spring	Date of collection	Water-bearing rock	Bicarbonate (HCO_3)	Carbonate (CO_3)	Chloride (Cl)	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million							
CC-8	12-18-62	ps	19	0	1.4	10	.....	53	6.2	...
CC-9	12-19-62	dol	161	0	3.0	137	.....	262	7.0	...
CC-10	1- 2-63	ps	134	0	3.1	115	.....	221	7.3	...
CC-12	1- 2-63	ls	234	0	4.4	202	.....	374	7.9	63
CC-14	1- 2-63	dol	564	0	28	510	.....	973	7.3	...
DD-1	12-19-62	ls	167	0	4.7	144	.....	282	7.7	...
FF-3	1- 2-63	dol	195	0	1.6	168	.....	319	7.9	...
FF-5	1- 2-63	ps	156	0	3.9	125	.....	265	7.7	...
FF-6	1- 8-63	dol	138	0	2.0	58	.....	225	7.7	...
FF-7	1- 8-63	ps	82	0	7.1	75	.....	176	7.3	...
FF-8	1- 8-63	ps	97	0	2.0	87	.....	172	7.3	...
FF-9	1- 3-63	dol	146	0	1.9	122	.....	239	7.7	63
FF-10	1- 3-63	ls	196	0	272	310	.....	1,590	7.5	...
GG-5	1- 8-63	dol	152	0	2.9	130	.....	247	7.6	62

Table 4.–*Comprehensive chemical analyses of water from wells and springs in Talladega County*

(Analyses by U.S. Geological Survey, Quality of Water Branch)

Well or spring: Numbers correspond with those in plate 2 and tables 3 and 5.

Water-bearing rock: dol, dolomite; ls, limestone; mb, marble; ps, phyllite and slate; qtz, quartzite; sh, shale.

Well or spring	Date of collection	Water-bearing rock	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 $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million																	
C-1	3-25-63	sh	17	1.1	118	74	46	5.1	453	0	266	33	0.2	0.0	783	598	226	1,210	7.5	....
C-13	3-25-63	dol	5.8	.03	33	11	.0	.3	150	0	.0	2.0	.1	.0	143	128	5	246	7.5	....
D-3	3-25-63	ls	6.2	.13	24	12	1.4	.5	123	0	.0	5.6	.0	4.6	139	108	7	233	7.0	....
G-12	3-25-63	dol	5.8	.72	26	9.3	.9	.1	124	0	.0	1.4	.1	.9	106	103	1	204	7.3	....
L-12	3-25-63	dol	6.9	.02	20	10	.9	1.3	111	0	.0	2.4	.1	.6	107	93	2	188	7.0	62
M-5	3-25-63	qtz	5.4	.89	1.0	1	.0	.4	2	0	.0	1.2	.0	.3	10	3	1	15	5.7	....
V-10	3-25-63	dol	6.9	.04	29	13	1.8	.9	149	0	.0	4.2	.2	1.0	137	127	5	248	7.5	....
V-17	3-25-63	dol	5.8	.03	42	3.7	3.0	.5	138	0	.0	6.0	.1	1.6	142	120	7	247	7.1	62
W-1	3-25-63	dol	5.8	.11	23	12	.0	.4	125	0	.0	2.4	.1	2.1	123	107	4	214	7.2	63
W-2	3-25-63	sh(?)	9.8	.08	30	15	.5	.3	158	0	.0	3.4	.3	1.9	155	135	5	271	7.2	....
W-15	3-25-63	dol	5.8	.26	30	20	4.8	.5	177	0	.0	11	.2	5.4	203	158	13	338	7.3	....
AA-1	2-27-56	mb	....	....	26	16	.....	....	151	0	1.8	2.0	.1	.9	.....	130	7	235	7.7	....
AA-3	2-27-56	mb	....	....	33	21	.....	....	192	0	2.5	4.0	.1	4.6	.....	170	12	308	7.5	....
AA-4	3-11-57	dol	....	....	25	13	2.5	....	143	0	1.2	1.5	.0	1.6	.....	116	0	220	7.8	64
AA-11	2-28-56	dol	....	....	30	17	.....	....	155	0	4.5	13	.1	7.1	.....	145	18	297	7.6	63
AA-13	2-28-56	dol	....	....	36	19	.....	....	189	0	5.0	5.5	.1	4.3	.....	170	13	315	7.7	63
AA-18	2-28-56	mb	....	....	54	8.9	.....	....	186	0	6.8	7.0	.1	7.7	.....	171	19	333	7.6	....
AA-20	2-28-56	mb	....	....	55	8.3	.....	....	187	0	7.2	8.5	.1	5.0	.....	171	18	335	7.7	64

Table 4.—*Comprehensive chemical analyses of water from wells and springs in Talladega County*—Continued

Well or spring	Date of collection	Water-bearing rock	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 $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25° C)	pH	Temperature (° F)
			Parts per million																	
AA-21	2-28-56	dol	....	....	28	15	.....	....	147	0	2.8	3.0	.1	3.4	.....	130	11	240	7.6	64
AA-22	2-28-56	mb	....	....	42	9.5	.....	....	162	0	1.8	4.0	.1	4.9	.....	144	11	271	7.7	....
AA-25	2-27-56	ps	....	....	12	9.5	.....	....	34	0	1.0	29	.2	31	.....	69	41	211	6.6	63
BB-1	2-27-56	ps	....	....	1.2	2.2	.....	....	12	0	.5	1.0	.1	.0	.....	12	2	23	6.2	62
BB-3	2-27-56	dol	....	....	30	12	.....	....	135	0	10	2.5	.2	1.5	.....	126	14	232	7.6	....
BB-7	2-27-56	dol	....	....	28	11	.....	....	136	0	.2	1.5	.1	.4	.....	117	4	213	7.7	63
BB-9	2-27-56	ps	....	....	25	6.9	.....	....	118	0	6.8	3.0	.2	.1	.....	91	0	205	6.9	62
BB-17	3-13-57	dol	....	....	20	9.5	2.5		110	0	.5	1.5	.1	1.6	.....	89	0	175	7.3	64
BB-22	2-27-56	dol	....	....	15	19	.....	....	119	0	1.0	6.5	.2	4.4	.....	116	18	212	7.5	62
BB-24	2-28-56	mb	....	....	45	8.4	.....	....	168	0	2.2	3.0	.1	3.1	.....	147	9	275	7.7	64
FF-3	3-25-63	dol	5.1	.06	36	22	.5	.5	208	0	.0	4.7	.2	1.1	190	180	9	341	7.4	....
GG-1	3- 1-57	mb	....	....	53	5.8	4.6		189	0	4.0	3.5	.0	2.5	.....	156	1	301	7.8	61
GG-2	3- 1-57	mb	....	....	44	4.4	3.9		152	0	4.5	2.2	.1	4.9	.....	128	4	254	7.7	....
GG-7	2-27-56	ps	....	....	22	3.2	.....	....	68	0	.2	14	.2	.1	.....	68	12	146	6.7	61
HH-3	2-28-56	ps	....	....	3.6	1.5	.....	....	24	0	2.0	2.0	.2	.1	.....	15	0	44	6.9	62
HH-6	2-27-56	sc	....	....	6.8	2.2	.....	....	54	0	1.2	2.5	.2	.3	.....	26	0	91	6.7	64
HH-7	2-27-56	ps	....	....	15	3.3	.....	....	78	0	2.0	2.5	.2	.1	.....	51	0	128	7.0	....
HH-9	2-27-56	ps	....	....	3.6	2.2	.....	....	30	0	2.5	2.0	.2	.5	.....	18	0	59	6.6	....

Table 5.—*Records of wells and springs in Talladega County*

Well or spring: Numbers correspond to those on plate 2; asterisk indicates comprehensive chemical analysis given in table 4.

Type: D, drilled well; Du, dug well; S, spring.

Depth of well and water level: Depths shown in feet are reported; those shown in feet and tenths are measured.

Altitude: Altitudes determined by barometric altimeter.

Method of lift: F, flow; J, jet pump; M, manual; N, none; P, piston pump; S, submergible pump; T, turbine pump.

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

Water-bearing rock: dol, dolomite; ls, limestone; mb, marble; ps, phyllite and slate; qtz, quartzite; sc, schist; sh, shale.

Well or spring	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-1	Ronald D. Geier	Carl Pace	D	125	6	sh	535	21.3	8-28-62	J	D	Cased to 60 ft. Yield reported, 5 gpm in 1961. Water is high in iron content.
C-2	Frank Acker	E. L. Graves	D	79	6	sh(?)	536	34	1961	J	D	Cased to 28 ft.
C-3	Charles Jolley	Carl Pace	D	150	6	sh	583	31.6	8-28-62	J	D	Cased to 60 ft. Reported yield, 50 gpm in 1957.
C-4	Billie Reaves		D	140	6	dol	674	73.4	8-28-62	J	D	Cased to 140 ft. Supplies 2 families.
C-5	George Dempsey		D	125	6	dol	534	20	8- -61	J	D,P	Cased to 123 ft. Supplies 1 family and store.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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-6	T. R. Brooks	Fairpark Equipment Co.	D	125	6	dol	546	48.9	8-30-62	J	D	Cased to 84 ft. Reported yield, 30 gpm on 8-28-62.
C-7	James F. Adams	Carl Pace........	D	210	6	dol	574	80-90	....	J	D,S	Supplies 1 family and 60 head of stock.
C-8	B. A. Burton	....do...........	D	343	6	dol	553	135.8	8-30-62	S	D,S	Cased to 75 ft. Supplies 1 family, 10,000 chickens, and 100 head of stock. Reported yield, 20 gpm from a pumping level of 225 ft. below land surface.
C-9	Mrs. Cecil H. Burton .	Lawson and Hurst.	D	92	6	dol	511	38.9	8-30-62	J	D	Cased to 40 ft. Cavity at a depth of 92 ft.
C-10	Mrs. J. F. Graves	....	D	149	6	dol	624	127.9	9-10-62	N	N	Cased to 149 ft.
C-11	.... do	F. O. Pugh.......	D	168	6	dol	624	130	1961	J	D	Cased to 168 ft.
C-12	M. L. Johnson	Carl Pace........	D	240	6	dol	618	160	1962	S	D,S	Cased to 240 ft. Supplies 2 families, service station, and 5,000 chickens.
*C-13	Town of Lincoln	do	D	260	8	dol	529	.....	....	T	P	Known as well 2. Cased to 90 ft. Supplies about 100,000 gpd to 200 services. Reported yield, more than 300 gpm. See driller's log in table 6.

C-14	....do	...do	D	208	8	dol	502	.....	....	T	P	Known as well 1. Cased to 100 ft. Supplemental supply. Reported yield, 200 to 300 gpm. Water becomes silty when pumped at more than 50 gpm.
C-15	T. H. McCaig.......	Alvin Yancey.....	D	126	6	dol	481	36	7- 6-60	S	D,P	Cased to 36 ft. Supplies 10 families, 2 cafes, and motel. Reported yield, 30 to 50 gpm on 7-6-60.
C-16	John Watson........	....	S	....	...	dol	468	.....	....	F	N	Cited as Blue Eye Spring (Johnston, 1933, pt. 2, table 42, no. 39). Measured flow, 300 gpm on 10-14-28; 550 gpm on 4-2-63.
C-17	Emett Freeman	E. L. Graves	D	195	6	dol	625	140	1961	J	D	
D-1	R. Rhodes	Carl Pace........	D	348	6	dol	572	30	1960	J	D	
D-2	J. A. Bullock.......	-- Bryan	D	104	6	dol	610	53.0	12-18-56	J	D	Cased to 50 ft.
*D-3	Eastaboga Junior High School.	Carl Pace........	D	....	6	ls	570	29.2	9- 6-62	P	P	Supplies 250 students and 8 teachers.
D-4	Roy E. Haynes	F. O. Pugh.......	D	82	6	ls	585	40.2	9-19-62	J	D	Cased to 82 ft., slotted from 50 to 82 ft.
E-1	Rudolph Jackson....	Carl Pace........	D	135	6	dol	677	56.5	9-24-62	J	D	Cased to 135 ft. Supplies 2 families.
E-2	J. T. Traywick......	....do	D	235	6	dol	717	75	1954	S	D	Cased to 190 ft. Supplies 2 families. Reported yield, 18 gpm in 1954.
E-3	Ralph Lewis........	Fairpark Equipment Co.	D	211	6	dol	691	103.1	9-24-62	J	D	Cased to 180 ft. Supplies 3 families.
E-4	Mark Bannister	Carl Pace........	D	200	6	dol	695	71.9	9-24-62	J	D	Supplies 5 families. Bedrock at 150 ft.
F-1	Curtis Hughes	....do..........	D	120	6	ls	598	22.1	9-24-62	J	D,P	Cased to 50 ft. Supplies 1 family and service station. Bedrock at 25 ft.
F-2	O. F. Abbott	....	D	125	6	dol	614	38.1	9-24-62	J	D	Cased to 125 ft. Supplies 5 families. Reported yield, 25 to 30 gpm in 1952.
F-3	N. R. O'Rear	Carl Pace........	D	260	6	dol	656	75	1962	P	D	

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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-4	Sweet Home Elementary School.	Carl Pace........	D	....	6	dol	682	.....	....	J	P	Supplies 80 students and 3 teachers.
F-5	Jones Tractor Co....	....do	D	225	6	sh	640	75	9-25-62	J	D,P	Supplies 2 families and tractor sales company.
F-6	Ophelia Hill High School.	....do	D	....	6	dol	651	.....	....	S	P	Supplies 560 students and 21 teachers; inadequate during dry season.
F-7	Munford Cooperative.	....do	D	275	6	dol	635	.....	....	T	P	Known as well 1. Supplies about 17,500 gpd to 150 services. Reported to yield 75 gpm.
F-8	Munford High School.	....	D	140	6	dol	624	89.7	9-19-62	S	P	Supplies 806 students and 31 teachers.
F-9	Robert McMillian....	....	D	155	6	dol	635	90	10-18-28	T	N	Cited as Southern Mills Corp. well (Johnston, 1933, pt. 2, table 41, no. 8). Drawdown reported to be negligible after 12 hours pumping 60 gpm.
F-10	Bruce Nowland	Carl Pace........	D	94	6	dol	589	43.6	9-25-62	J	D	Supplies 2 families.
F-11	C. C. Stevens	....	D	....	6	dol	645	106.8	9-25-62	J	D	
F-12	Coleman Goodwin ...	Fairpark Equipment Co.	D	48	6	ps	746	12	1- -62	J	P	

G-1	W. H. Wallace.......	....	D	135	6	ls	564	53.1	9-11-62	J	D	
G-2	Salem School	....	D	....	6	ls	527	.....	....	J	P	Supplies 110 students and 4 teachers.
G-3	W. Isbell Sim	Carl Pace........	D	85	6	ls	529	.....	....	P	D,S	Supplies 1 family and 35 head of stock.
G-4	Howard H. Green....	....do	D	68	6	ls	520	10	1960	P	D,S	Supplies 1 family and 50 head of stock.
G-5	Petro Hester	....do	D	80	6	dol	541	.....	....	J	D	
G-6	Edgar Parker	Alabama-Pennsylvania Drilling Co.	D	102	4	dol	600	75	....	J	D	
G-7	J. H. Champion	Fairpark Equipment Co.	D	76	6	dol	533	26	....	J	D	
G-8	J. W. Beck	Carl Pace	D	107	6	ls	527	15	1959	J	D,S	Cased to 90 ft. Supplies 1 family and 37 head of stock.
G-9	J. H. O'Neal	....do	D	80	6	ls	510	20.8	9-11-62	J	D,P	Cased to 19 ft. Supplies 2 families and store.
G-10	H. T. Rowell	....do	D	399	6	dol	593	66.2	9-14-62	J	D,P	Supplies 2 families and garage.
G-11	Kermit Strickland ...	....	D	150	6	dol	623	.....	....	J	D	Supplies 3 families. Water becomes muddy after rain.
*G-12	Munford Cooperative.	Carl Pace........	D	300	8	dol	656	.....	....	T	P	Known as well 2. Supplies about 17,500 gpd to 150 services. Pumped at 75 gpm; potential yield of well is about 300 gpm.
G-13	Esther J. Miller.....	....do	D	165	6	dol	.....	.....	....	J	D	Cased to 161 ft. Supplies 1 family and store.
G-14	Walker Collins......	....	S	....	...	dol	510	.....	....	F	...	Cited as Cedar Spring (Johnston, 1933, pt. 2, table 42, no. 41). Measured flow, 2,500 gpm on 10-18-28; 3,300 gpm on 4-3-63. Water becomes muddy after rain.
G-15	Colonel Woods......	....	D	140	6	dol	542	20.8	9-11-62	J	D	
G-16	Carver School	Carl Pace........	D	....	6	sh	550	.....	....	J	P	Supplies 93 students and 3 teachers. Water is reported to be high in iron content.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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
H-1	L. J. Hollingsworth	Alabama-Pennsylvania Drilling Co.	D	77	6	ls	534	.....	....	J	D	
H-2	E. T. Merkl	Carl Pace........	D	117	6	dol	527	25	....	J	D	Cased to 115 ft. Supplies 3 families.
H-3	Mrs. Lula Knox	Lawson and Hurst.	D	162	6	dol	563	95.9	9- 6-62	J	D	
H-4	Estate of James Emery.	....	S	....	...	dol	461	.....	....	F	N	Cited as Rushing Spring (Johnston, 1933, pt. 2, table 42, no. 40). Measured flow, 3,900 gpm on 10-14-28; 4,800 gpm on 4-2-63.
H-5	Estate of Mae Morgan Houston.	....	S	....	...	dol	474	.....	....	F	D,S	Known as Sam Houston Spring. Measured flow, 1,400 gpm on 4-2-63.
H-6	....do	....	D	92	6	dol	493	27.3	9- 6-62	J	D	
H-7	J. B. Bowden.......	....	D	....	6	dol	633	192.0	9-10-62	S	D,S	Supplies 1 family and stock.
H-8	Will Roszell........	....	Du	45.7	24	sh	546	28.6	9-11-62	M	D	
H-9	Virgil Butterworth...	Shaddix Drilling Co.	D	65.7	6	dol	515	25.4	9-11-62	M	D	Cased to 22 ft. Bedrock at 22 ft.
H-10	Joe Wallace	....	Du	35.5	24	dol	522	29.6	9-11-62	J	D	
H-11	Betty Cunningham...	....	Du	46.9	18	sh	547	15.3	9-10-62	J	D	Not cased. Supplies 2 families. Supply was reported low in 1954.

H-12	Andy C. Barber	Lawson and Hurst	D	193	6	dol	614	143	10- -58	J	D	Cased to 193 ft. Supplies 2 families.
H-13	T. E. Newsome	Charlie Austin	D	108	6	ls	578	36.3	9-10-62	J	D	
H-14	Roy G. Champion	....	Du	20.8	30	dol	549	11.8	9-11-62	J	D,S	Not cased. Supplies 1 family and 5 head of stock.
I-1	Purvey Pettus	Carl Pace	D	77	6	dol	485	20	....	J	D,S	Cased to 65 ft. Supplies 3 families and 11 head of stock.
I-2	James Kirkland	Lawson and Hurst	D	95	6	dol	461	46.7	9-12-62	J	D	
I-3	Mrs. Myrtle Ogletree	Fairpark Equipment Co.	D	99	6	dol	.....	60	10- -61	J	D	Supplies 3 families.
I-4	T. H. Floyd	....do	D	148	6	dol	502	75.5	9-12-62	J	D	
I-5	T. H. Key	Lawson and Hurst	D	185	6	dol	569	123.6	9-12-62	J	D,P	Cased to 185 ft. Supplies 2 families and store.
I-6	R. E. Jeter	....	D	136	4	dol	561	89.8	9-12-62	J	D	Cased to about 136 ft.
I-7	Joe G. Williams	Carl Pace	D	114	6	dol	489	17	9- -56	J	D,P	Cased to 113 ft. Supplies 1 family, store, and service station.
K-1	David H. Challender	Lawson and Hurst	D	167	6	dol	537	40	7- -58	J	D	Supplies 3 families.
K-2	Mrs. M. Hubbard	Carl Pace	D	143	6	dol	506	88.2	10-10-62	J	D	Supplies 2 families.
K-3	B. F. Hill	E. L. Graves	D	67	6	dol	488	32.4	10-10-62	J	D,S	Supplies 1 family and 20 head of stock.
K-4	Mrs. Willie M. Warlick	Lawson and Hurst	D	165	6	dol	523	102.4	10-29-62	J	D	
K-5	James Haynes	....do	D	200	6	dol	556	168.0	10-10-62	J	D,S	Supplies 3 families and 10 to 20 head of stock.
L-1	Mrs. J. S. Armbrester	E. L. Graves	D	100	6	dol	498	61.2	10- 9-62	J	D	Cased to 100 ft.
L-2	Elizabeth Willingham	Fairpark Equipment Co.	D	180	6	dol	582	130.3	10- 9-62	J	D	Cased to 180 ft. Supplies 2 families.
L-3	Willie Howard Jones	Lawson and Hurst	D	202	6	dol	635	154.4	10- 8-62	J	D,S	Supplies 1 family and 19 head of stock.
L-4	Timothy Foreman	....	D	190	6	dol	554	19.0	10- 8-62	J	D	
L-5	Reedie Martin	Lawson and Hurst	D	148	6	dol	492	45	8- -62	J	D	Cased to 148 ft.
L-6	Antioch School	....	D	219	6	dol	591	.....	....	J	P	Supplies 80 students and 3 teachers.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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
L-7	Jones View Junior High School.	....	D	199	6	dol	560	.....	....	P	P	Supplies 158 students and 7 teachers.
L-8	Robert E. Armbrester	E. L. Graves	D	80	6	dol	558	53.4	10- 8-62	J	D,S	Supplies 2 families and 2 head of stock.
L-9	L. C. Styres	Fairpark Equipment Co.	D	90	6	qtz	629	38.9	10- 9-62	J	D	Cased to 87 ft.
L-10	Mrs. Anna L. Wesson	E. L. Graves	D	169	6	dol	538	71.7	10-10-62	J	D	
L-11	T. E. Lawson	Lawson and Hurst .	D	100	6	dol	535	93.1	10-15-62	J	D	
*L-12	William Pruitt	....	S	....	...	dol	520	.....	....	F	D	Supplies 3 families. Measured flow, 800 gpm on 4-2-63.
L-13	William W. Gilbert ...	Fairpark Equipment Co.	D	159	6	dol	532	21.5	10- 8-62	J	D	Cased to 120 ft. See driller's log in table 6.
M-1	Elbert Reynolds	Austin and Odom ..	D	128	6	dol	630	78.9	10- 4-62	J	D	Cased to 128 ft. Water is reported to be high in iron content.
M-2	Talladega County Training School.	Carl Pace	D	200	6	dol	580	90	....	S	P	Supplies 600 students and 21 teachers.
M-3	....do	Lawson and Hurst .	D	180	6	dol	580	101.2	10- 4-62	J	P	Supplemental supply.
M-4	Hugh Hutto	....do	D	100	6	dol	606	61.3	10- 4-62	J	D	Cased to 82 ft. Reported yield, 30 gpm in August 1960.

*M-5	R. A. Obert	E. L. Graves	D	225	6	qtz	612	80	7- -59	J	D,P	Cased to 225 ft. Supplies 1 family and cafe. Water is high in iron content. Installed water conditioner.
M-6	George Davis	Fairpark Equipment Co.	D	172	6	dol	681	99.4	10- 4-62	J	D	
M-7	Mrs. Fannie Oglesby	Carl Pace	D	95	6	dol	618	30.3	10- 4-62	M	D	Supplies 2 families.
M-8	Newbury Manufacturing Co.	....do	D	257	8	sh, dol	561	26	....	T	Ind	Cased to 257 ft. Reported drawdown 20 ft. after 24 hrs. pumping 300 gpm in November 1954.
M-9	City of Talladega ...	....do	D	203	10	sh, dol	553	57	10- 3-55	T	P	Known as well 1. Cased to 202 ft. Reported drawdown, 27 ft. pumping 1,100 gpm. Supplies part of 2 million gallons per day to 4,394 services. (See well N-15.)
M-10	Alabama Service Co .	....	D	604	8	sh, dol	549	32	10-19-28	T	N	Cited as Talladega Ice and Fuel Co. well (Johnston, 1933, pt. 2, table 41, no. 15). Reported drawdown, 45 ft. after 48 hrs. pumping 282 gpm.
M-11	City of Talladega ...	....	S	....	...	ls	533	.....	....	F	N	Cited as City Spring (Johnston, 1933, pt. 2, no. 46). Former city supply. Measured flow, 100 gpm on 10-18-28; 1,100 gpm on 4-3-63.
M-12	Talladega Ice and Storage Co.	....	D	....	6	sh, dol	534	19	2-15-57	T	Ind	Reported drawdown, 15 ft. pumping 150 gpm on 2-15-57.
M-13	Wehadkee Yarn Mills, Dye Plant.	Carl Pace	D	237	6	sh, dol	554	.....	....	T	Ind	About 1.5 million gallons per week used to dye yarn in 1962. Reported to yield 250 to 300 gpm.
M-14	Louis Achimon	....	D	....	6	sh	594	91.5	10- 8-62	J	D	
N-1	Mrs. Frank H. Powers	Carl Pace	D	55	6	dol	566	26.4	10- 3-62	J	D	Supplies 3 families.
N-2	G. N. Chandler	....	D	100.2	6	dol	600	57.3	10- 3-62	J	D	Supplies 2 families.
N-3	Alvin Nelson	....	Du	14.6	30	dol	537	10.2	9-18-62	J	D	Not cased.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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-4	Hardy Riddle	Carl Pace	D	86	6	dol	547	17.5	9-19-62	J	D	
N-5	C. M. Robinson	....do	D	28	5	dol	542	10.4	9-18-62	J	D,P	Supplies 3 families and store.
N-6	Robert McMellon	....	S	....	...	dol	530	.....	....	J	D	Estimated flow, 400 gpm on 9-18-62.
N-7	M. E. Coley	Carl Pace	D	225	6	dol	621	125	1959	J	D	
N-8	Turner Jones	....	D	....	6	dol	561	.....	....	J	D,S	Supplies 3 families, dairy, and 115 head of stock.
N-9	J. B. White, Jr......	....	D	100	6	dol	608	.....	....	P	D	
N-10	....do	....	D	160	6	dol	625	.....	....	P	D	Water is reported to be high in iron content.
N-11	Julian Elliott.......	....	Du	33.9	24	dol	587	31.0	11- 7-62	M	D	Terra-cotta casing. Supply inadequate during dry season.
N-12	L. A. Robinson	....	Du	27.4	42	ps	618	12.2	10- 3-62	J	D	Not cased.
N-13	Howard Lackey	Fairpark Equipment Co.	D	140	6	dol	678	100	10- -61	J	D	Cased to 137 ft.
N-14	Harry Simmons, Jr...	E. L. Graves	D	85	6	dol	605	15	9- -54	J	D	Supplies 2 families. Water is reported to be high in iron content.
N-15	City of Talladega ...	Carl Pace	D	450	10	dol	686	35	1957	T	P	Known as well 2. Casing: 10-in. to 130 ft.; 6-in. from

												150 to 169 ft. Pumped at 300 gpm. Supplies part of 2 million gallons per day to 4,394 services. Supplemental supply from Talladega Creek. See driller's log in table 6.
N-16	Floyd Taylor	-- Ballard	D	72	6	dol	666	43.2	10- 5-62	J	D	Cased to 68 ft.
N-17	Neal Couch.........	....do	D	104	6	ps	708	24	10- -60	J	D	Supplies 3 families. Reported yield, 15 gpm in 1960.
N-18	Ironaton School	Carl Pace	D	189	6	ps	664	.....	....	J	N	Cased to 189 ft. School closed.
O-1	Coleman Goodwin ...	Fairpark Equipment Co.	D	60	6	ps	810	30	1- -62	J	D,P	Cased to 40 ft. Supplies 1 family and store.
Q-1	Jack Goodwin	-- Wade	D	105	6	ps	869	.....	....	J	D	
Q-2	S. A. Galther	....	Du	84.9	36	mb	715	52.5	11- 7-62	J	D	Not cased.
Q-3	Lane Chapel School .	....	D	....	6	dol	710	104.0	11- 5-62	P	P	Supplies 99 students and 4 teachers. Water muddy at times.
Q-4	Marion M. Ray	....	Du	31.1	24	dol	614	13.2	11- 7-62	J	D	Terra-cotta casing.
Q-5	W. R. Roberts	Lawson and Hurst .	D	81	6	ps	695	39.2	11- 5-62	J	D	Cased to 35 ft.
Q-6	Buelah Canada	....	D	40.4	6	ps	929	30.9	11- 5-62	N	N	Originally drilled to 70 ft.
Q-7	Marvin Brewer	Lawson and Hurst .	D	....	6	ps	927	12.6	11- 5-62	J	D	
R-1	T. B. Ferguson	...do	D	55	6	dol	516	27.8	10-15-62	J	D	
R-2	Burk Grogan	....	S	....	...	dol	490	.....	....	F	D	Grogan Spring. Measured flow, 1,400 gpm on 4-3-63.
R-3	Mitchell Oil Co	E. L. Graves	D	56	6	dol	515	32.6	10-15-62	J	D, Ind	Supplies 1 family and service station.
R-4	W. S. Rogers	....	Du	8.1	36	ps	558	4.4	10-18-62	P	D	Not cased. Water is reported to be high in iron content.
R-5	Julian Elliott	E. L. Graves	D	85	6	ps	570	65	1954	J	D	Water is reported to be corrosive and high in iron content.
R-6	Mrs. M. A. Allison...	....do	D	32.6	6	dol	533	22.1	10-16-62	J	D	
R-7	C. J. Newsome	....do	D	235	6	mb	665	.....	....	J	D	
R-8	Ernest Hammonds ...	M. T. Coleman....	D	199	6	mb	627	97.4	10-16-62	J	D	

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	Owner	Driller	Type	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level		Method of lift	Use of water	Remarks
								Above (+) or below land surface (feet)	Date of measurement			
R-9	Mrs. Marion Autrey . .	. . . .	Du	34.5	36	dol	604	16.1	10-16-62	J	D	Rock curbing. Supply inadequate during dry season.
S-1	M. F. Lawson	Lawson Drilling Co.	D	88	6	sh	571	62.2	10-25-62	J	D	Cased to 80 ft.
S-2	Henry T. Searcy	Lawson and Hurst .	D	117	6	dol	526	43.3	10-10-62	J	D	
S-3	Hanner J. Mallory School.	Carl Pace	D	245	6	dol	583	. . . . .	. . . .	T	P	
S-4	Herbert Hurst	Lawson and Hurst .	D	145	6	dol(?)	523	29.1	10-10-62	J	D	Cased to 140 ft.
S-5	-- Cardwell	. . . .	D	. . . .	6	ls	495	. . . . .	. . . .	J	D	
S-6	Mrs. Harmon	. . . .	D	. . . .	6	dol	567	119.8	11-19-62	P	D	
S-7	James Matson	Lawson and Hurst .	D	214	6	qtz	569	114	11- -57	J	D	Cased to 214 ft.
S-8	Dude Hubbard	. . . .	D	. . . .	6	dol	549	99.7	10-29-62	J	D	
S-9	Belton S. Parks	Carl Pace	D	96	6	dol	507	76	7- -62	J	D	
S-10	S. E. Christie	E. L. Graves	D	135	6	sh	485	39.8	10-15-62	J	D	Supplies 2 families.
S-11	O. B. Hurst	Carl Pace	D	205	6	ls	463	20	8- -62	J	D,S	Supplies 1 family, dairy, and 70 head of stock.
S-12	James M. Moncus. . . .	. . . .	D	. . . .	6	dol	532	90.3	11-19-62	P	N	
S-13	P. D. Wood	G. H. Anderson . . .	D	116	6	dol	536	51	9- -58	J	D	
S-14	Howard Arnold	Fairpark Equipment Co.	D	104	6	dol	542	89.2	10-30-62	J	D,S	Supplies 1 family and 7 head of stock.

S-15	American Talc Co...	Lawson and Hurst.	D	404	8	sh, dol	465	.....	....	S	Ind	Cased to about 100 ft. Reported yield, 232 gpm for 24 hrs. with 158 feet of pump setting in 1958. About 150,000 gpd used as process water. See driller's log in table 6.
S-16	Rollin Thompson....	....	Du	55.0	24	dol	449	34.7	11-26-62	J	D	
S-17	Mrs. Sisk...........	....	D	....	4	dol	522	59.1	11-19-62	J	D	
S-18	Wesley Ponder......	E. L. Graves	D	....	6	dol	539	82.3	10-16-62	N	N	
S-19	Pine Hill School	Carl Pace........	D	100	6	sh	567	.....	....	J	P	Supplies 85 students and 3 teachers.
T-1	Ralph Finn.........	Fairpark Equipment Co.	D	150	6	dol	537	90	....	J	D	
T-2	Jesse L. Smelley....	E. L. Graves	D	155	6	dol	504	89.2	10-29-62	J	D,S	Cased to 150 ft. Supplies 1 family and 15 head of stock. Reported yield, 8 gpm.
T-3	J. W. Hindrick	Fairpark Equipment Co.	D	100	6	dol	481	71.3	10-25-62	J	D	Cased to 27 ft.
T-4	R. C. Allen.........	Lawson and Hurst.	D	379	6	dol	457	54	1958	J	D	Cased to 54 ft.
T-5	Samual Strickland ...	....do	D	166	6	dol	450	28.1	10-29-62	J	D	
T-6	Hosea Calhoun......	....do	D	150	6	dol	504	94.2	10-29-62	J	D,P, S	Cased to 148 ft. Supplies 1 family, store, and 8 head of stock.
T-7	Noble Holmes.......	....do	D	160	6	dol	542	125	1958	J	D	
T-8	W. A. Rowe.........	Fairpark Equipment Co.	D	74	6	dol	426	16.4	10-25-62	J	D	
T-9	Coosa River Newsprint Co.	H. W. Peerson Drilling Supply Co.	D	97	6	dol	418	25	....	T	Ind	Cased to 60 ft. Supplies about 32 gpm for bleaching. Reported drawdown, 42 ft. after 24 hrs. pumping 220 gpm in 1951. See driller's log in table 6.
T-10	Herman Robinson....	....	D	156	6	dol	454	40	1958	J	D	Cased to about 101 ft. Supplies 9 families.
U-1	Graham Casper......	....	Du	51.6	30	ls	449	41.2	12-18-62	J	D	Cased to 51 ft. Supplies 5 families.
U-2	Brannon Knight	M. T. Coleman....	D	....	6	dol(?)	498	78.2	12-18-62	J	D	

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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
V-1	United States Army Ordnance Corps.	....	D	117.1	8	dol	453	58.1	11-26-62	N	N	Well caved. Formerly supplied 25 families.
V-2	B. W. Owens	Fairpark Equipment Co.	D	396	6	dol	486	124.3	11-19-62	S	D	
V-3	Tallaseehatchee Baptist Church.	G. H. Anderson ...	D	143	6	dol	516	103	1962	N	N	Site for new church.
V-4	Homer Lee Ellison ..	E. L. Graves	D	127	6	dol	500	83.2	10-23-62	J	D	Supplies 3 families.
V-5	Booker Wesley......	....do	D	82	6	dol	459	54.1	10-23-62	J	D	Cased to 81 ft.
V-6	-- Gardner	....	D	....	6	dol	437	38.9	11-26-62	P	D	Supplies 2 families.
V-7	Childersburg Water, Sewage and Gas Board.	....	S	....	...	dol	417	.....	....	F, P	P	Supply for emergency. Water from creek inundates spring during periods of high flow. Estimated flow, 500 gpm on 10-23-62. Has been pumped at 500,000 gpd.
V-8	Miller W. Lawrence..	E. L. Graves	D	96	6	dol	440	.....	....	S	D	Water also used for irrigation of lawn.
V-9	Childersburg Ice Plant.	H. W. Peerson Drilling Supply Co.	D	250	6	dol	416	.....	....	T	Ind	Water used for cooling. Reported former supply for Childersburg.

*V-10	Childersburg Water, Sewage and Gas Board.	Virginia Supply and Well Co.	D	425	12, 10	dol	401	29	....	T	P	Casing: 12-in. to 52 ft.; 10-in. reliner to 71.3 ft. Reported drawdown, 46 ft. after 48 hrs. pumping 450 gpm. Supplies 750,000 gpd to 1,400 services. See driller's log in table 6.
V-11	W. C. Strickland	-- Ballard........	D	41	6	dol	430	13.5	12- 4-62	J	D	Cased to 30 ft. Supplies 3 families. Reported yield, 30 gpm.
V-12	Miss Riley	....	Du	21.7	36	dol	423	19.0	12- 4-62	M	D	Cased to 21 ft. Supply inadequate during dry season.
V-13	Mrs. Bessie Ellison .	E. L. Graves	D	70	6	dol	443	.....	....	J	D	Reported yield, 30 gpm in September 1960.
V-14	W. Boaz	....	S	....	...	dol	416	.....	....	F	...	Measured flow, 2,200 gpm on 4-2-63.
V-15	James Limbaugh	E. L. Graves	D	110	6	dol	456	57.1	12- 4-62	J	D	Cased to about 105 ft. Cavity at 110 ft.
V-16	Danville Knitting Mills.	....do	D	250	6	dol	420	6	10- -54	N	N	Reported yield, 200 gpm in October 1954. Pumping affects flow from nearby spring.
*V-17	....do	....	S	....	...	dol	421	.....	....	P	P, Ind	Supplies about 30,000 gpd of water for domestic and industrial use. Measured flow, 200 gpm on 4-2-63.
V-18	Curtis James	....	Du	52.9	30	dol	448	29.6	12-18-62	J	D,S	Cased to 18 ft. Supplies 1 family and 10 head of stock.
*W-1	Joseph J. Chastain..	....	S	....	...	dol	508	.....	....	F, P	D	Cited as Darby Spring (Johnston, 1933, pt. 2, table 42, no. 48). Measured flow, 155 gpm on 10-20-28; 1,200 gpm on 4-3-63.
*W-2	Winterboro School ...	Carl Pace	D	....	6	sh(?)	508	.....	....	P	P	Supplies 725 students and 27 teachers.
W-3	....do	Fairpark Equipment Co.	D	....	6	sh(?)	504	15.3	10-16-62	J	D,P	Supplies 2 families and fieldhouse.
W-4	A. G. McCain.......	E. L. Graves	D	360	6	dol	515	148.6	10-23-62	J	D	

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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			
W-5	W. S. Bryant	Carl Pace	D	84	6	dol	486	18.1	10-23-62	J	D, Ind	Supplies 2 families and store.
W-6	M. J. Cleveland	....	D	100	6	ps	544	20.9	10-18-62	J	D,S	Supplies 1 family and 3 head of stock.
W-7	R. B. Kent	Lawson and Hurst .	D	56	6	dol	521	13.6	10-18-62	J	D,S	Cased to about 22 ft. Supplies 2 families, dairy, and 74 cows. Bedrock at 20 ft.
W-8	J. C. Hammond	G. H. Anderson ...	D	98.7	6	ps	593	74.7	11-27-62	J	D	
W-9	Rosie H. Stamps	....	Du	23.1	36	ps	464	16.6	12- 4-62	M	D	Not cased.
W-10	Glenn Pruitt	E. L. Graves	D	84	6	dol	472	60.6	11-27-62	J	D,S	Supplies 2 families, 3,000 chickens, and 65 head of stock.
W-11	J. B. Frost	Lawson and Hurst .	D	....	6	ps	555	63.0	12- 4-62	J	D	
W-12	Austin Pruitt	....do	D	140	6	ps	591	73.0	10-23-62	J	D	
W-13	Buster Milam	E. L. Graves	D	70	6	ps	572	45	1-21-57	J	D	Cased to 10 ft.
W-14	Arthur G. Hammonds .	Carl Pace	D	147	6	dol	562	55	1956	J	P	Cased to 146 ft. Supplies about 8,000 gpd to 37 services. Reported drawdown, 2 ft. after pumping 20 gpm in 1949. Cavity at 147 ft.

*W-15	R. E. Williams	....	D	....	6	dol	559	.....	....	J	P	Supplies about 10,000 gpd to 48 services.
W-16	Robert Russa Moton High School.	Carl Pace	D	90	6	dol	545	.....	....	P	P	Supplies 420 students and 16 teachers.
W-17	-- Burkstreaker	....	S	....	...	dol	433	.....	....	F	N	Measured flow, 1,600 gpm on 4-2-63.
W-18	-- Smith	....	D	....	6	dol	561	.....	....	J	P	Supplies about 10,000 gpd to 52 services.
W-19	Avondale Mills	H. W. Peerson Drilling Supply Co.	D	208	8	dol	560	.....	....	N	N	Test well. Cased to 110 ft. See driller's log in table 6.
W-20	....do	....do	D	....	6	dol	547	.....	....	N	N	Test well.
W-21	....do	....	D	120	6	dol	549	.....	....	T	P, Ind	Known as well 1. Partial supply for mill and 190 families in mill village.
W-22	....do	H. W. Peerson Drilling Supply Co.	D	350	10	dol	538	15	6- 5-46	N	N	Test well. Cased to 31 ft. Reported yield, 8 gpm. See driller's log in table 6.
W-23	....do	....	S	....	...	dol	507	.....	....	P	P, Ind	Partial supply for mill and 190 families in mill village.
W-24	....do	Carl Pace	D	180	6	dol	527	.....	....	J	P, Ind	Known as well 2. Partial supply for mill and 190 families in mill village.
X-1	R. B. Kent	....	D	60	6	dol	532	15.8	10-18-62	J	D,S	Supplies 1 family and 47 head of stock.
Y-1	C. J. Horne.........	Carl Pace	D	120	6	ps	903	2	6- -56	J	D	Supplies 2 families.
Y-2	Olivia Harrell	....do	D	480	6	sc	904	4.5	11- 5-62	J	D	Water is reported to be high in iron content.
Y-3	Chandler Springs School.	....do	D	115	6	sc	1,026	26.4	11- 5-62	P	P	Supplies 53 students and 2 teachers. Water is reported to be high in iron content.
*AA-1	Malory Hammonds ...	E. L. Graves	D	83	6	mb	522	40	5-14-54	J	D,S	Cased to 63 ft.
AA-2	J. D. Beasley	....do	D	100	6	dol	515	4	12-23-54	P	D,S	Cased to 40 ft.
*AA-3	J. B. Sexton	-- Chadricks	D	152	8	mb	488	6	11- 3-55	J	D	Cased to 8 ft. Reported yield, 1.5 gpm.
*AA-4	W. G. Henderson	Carl Pace	D	130	6	dol	495	.....	....	J	D	
AA-5	S. D. Butts	-- Chadricks	D	211	5	dol	507	70	10-31-55	J	D,S	Cased to 60 ft.
AA-6	M. L. Owens	-- Scott	D	80	6	dol	518	.....	....	P	D	Cased to 22 ft.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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-7	Carl Parrish	E. L. Graves	D	50	6	dol	475	24	7- 5-51	J	D	Cased to 32 ft. Reported yield, 25 gpm.
AA-8	J. C. Castleberry ...	....do	D	102.0	6	ps	592	25.6	11-23-56	J	D	Cased to 53 ft. Reported yield, 2.5 gpm.
AA-9	Denson Crow	....do	D	71.0	6	dol	578	56.8	9-27-56	J	D	
AA-10	J. A. Finn	M. T. Coleman....	D	141.1	6	ps	482	29.8	12-15-55	...	D	Supplies several families.
*AA-11	Avondale Mills	....	S	....	...	dol	498	.....	....	F, T	P, Ind	Pumped at 350 gpm. Supplies part of about 1 mgd for mill and mill village.
AA-12	....do	....	S	....	...	dol	500	.....	....	F, T	P, Ind	Do.
*AA-13	....do	....	D	560	4	dol	510	10	10-22-28	T	Ind	Cited as Wisconsin Alabama Lumber Co. well (Johnston, 1933, pt. 2, table 41, no. 27). Pumped at 100 gpm.
AA-14	R. C. Moncus	Southern Drilling Co.	D	120	6	dol	525	20	2-25-54	J	D	Cased to 100 ft. Supplies several families. Cavity at 120 ft.
AA-15	Avondale Mills	H. W. Peerson Drilling Supply Co.	D	72.7	12	dol	510	1.8	2- 2-54	N	N	
AA-16	J. Hickman........	....	S	....	...	mb	500	.....	....	F	N	Measured flow, 1,000 gpm on 6-25-55.

AA-17	City of Sylacauga ...	....	S	....	...	mb	540	.....	....	F	N	Former municipal supply. Flow influenced by pumping in area.
*AA-18	Foremost Ice Cream Co.	H. W. Peerson Drilling Supply Co.	D	303	10	mb	541	18	1-15-53	T	Ind	Casing: 10-in. to 50 ft.; 8-in. liner 63 to 105 ft.; 6-in. liner 111½ to 175 ft. Reported drawdown, 6 ft. after 24 hrs. pumping 400 gpm. Supplies 200 to 400 gpm for cooling and cleaning. See driller's log in table 6.
AA-19	City of Sylacauga ...	Joy Manufacturing Co.	D	202.0	6	mb	547	36.0	6- 9-54	N	N	Cased to 68.8 ft. Test well used as observation well. See figure 3.
*AA-20	Marble City Ice and Coal Co.	Carl Pace	D	187	8	mb	547	.....	....	T	Ind	Supplies water for cooling and making ice. Pumped at 200 gpm.
*AA-21	Avondale Mills	....	S	....	...	dol	514	.....	....	F, T	D, Ind	Pumped at 350 gpm. Supplies a part of about 1 mgd for mill and mill village.
*AA-22	City of Sylacauga ...	H. W. Peerson Drilling Supply Co.	D	388	10	mb	558	31.5	2- 5-54	T	P	Cased to 176 ft.; casing perforated from 116 to 176 ft. Measured drawdown, 100 ft. after 72 hrs. pumping 900 gpm in 1954. Supplemental supply. Used during periods of prolonged drought. See driller's log in table 6.
AA-23	....do	....	D	1,360	14	mb	542	22.9	1- 8-53	N	N	Cited as City of Sylacauga well (Johnston, 1933, pt. 2, table 41, no. 27). Pumped at 75 gpm in 1928.
AA-24	....do	....	S	....	...	mb	540	.....	....	F	N	Brickyard Spring influenced by pumping in the area. Former municipal supply.
*AA-25	Henry Morris........	E. L. Graves	D	80	8	ps	761	44.4	11-21-56	J	D,S	Cased to 12 ft.
*BB-1	Pine Grove School ..	....do	D	175	6	ps	515	99.4	11- 1-55	J	P	Supplies 77 students and 2 teachers.
BB-2	W. H. Prince	M. T. Coleman....	D	249	6	dol	490	49.0	9-18-56	J	D	Cased to 71 ft. Reported yield, 25 gpm. See driller's log in table 6.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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
*BB-3	W. O. Jones	Carl Pace	D	360	6	dol	500	.....	....	J	P	Known as well 1. Cased to 70 ft. Supplies trailer park. Reported yield, 5 to 6 gpm.
BB-4	....do	....do	D	104	6	dol	505	52.9	10-31-55	J	P	Known as well 2. Water is muddy during winter months.
BB-5	Hoyt Strong	E. L. Graves	D	225	6	dol	531	60	11- 2-55	J	P	Cased to 110 ft. Supply for service station. Reported yield, 30 gpm.
BB-6	A. F. Tinney	M. T. Coleman	D	121.1	6	dol	......	106	3-14-57	...	D	Cased to 119 ft. Yields over 10 gpm.
*BB-7	Odena Baptist Church	Carl Pace	D	235	6	dol	498	.....	....	J	P	
BB-8	Dickson Davenport	M. T. Coleman	D	255	6	dol	503	77.1	11-30-56	J	D	Cased to 119 ft. Yields 10 gpm.
*BB-9	Calvin Edmonds	E. L. Graves	D	75	6	ps	580	10.0	11- 1-56	F, J	D	Cased to 33 ft. Flows about 9 months during the year.
BB-10	W. S. Ricks	G. H. Anderson	D	75	6	ps	576	35.0	2-28-57	...	D	Cased to 40 ft. Reported yield, 10 to 30 gpm.
BB-11	William A. Wilson	E. L. Graves	D	150	6	ps	618	110	8-18-52	J	D	Cased to 27 ft. Yields about 2.5 gpm. See driller's log in table 6.
BB-12	Country Kitchen	....do	D	68	6	ps	513	12	7-25-51	...	P	Cased to 60 ft.; perforated 20 to 25 and 45 to 55 ft., with gravel pack. Supply for cafe.

BB-13	John T. Honeycutt .	E. L. Graves	D	75	6	ps	561	25	10- 6-55	J	D	Cased to 28 ft. Reported yield, 30 gpm.
BB-14	Palmer Allen	....do	D	90	6	dol	530	21.0	3-11-54	T	P	Cased to 75 ft. Supplies 13 families.
BB-15	Willie Borden.......	H. W. Peerson Drilling Supply Co.	D	65	6	dol	545	40.9	3-11-54	P	P	Cased to 33 ft. Supplies 14 families. Reported yield, 30 gpm.
BB-16	Alabama Power Co ..	-- Parker.........	D	150	6	dol	586	.....	....	J	D, Ind	Supplies 3 families and electrical substation.
*BB-17	C. E. Davenport	E. L. Graves	D	65	6	dol	575	23	9- 8-54	J	D	Cased to 47 ft.
BB-18	Cedar Creek School..	....	D	....	6	ps	540	.....	....	J	P	Supplies 51 students and 2 teachers.
BB-19	Theodore Payton....	....	D	78	6	dol	464	43.4	1- 8-63	J	D	
BB-20	James R. Stove	M. T. Coleman...	D	329	6	dol	......	14	1957	J	D,S	Cased to 12 ft. Supplies 1 family and 6 head of stock. Reported yield, 3 gpm.
BB-21	New Hope Church ...	....do	D	203	6	dol	575	49.5	7-16-56	S	P	
*BB-22	Mrs. F. H. Powe	E. L. Graves	D	134	6	dol	582	21	4- 2-55	J	D,S	Cased to 77 ft.
BB-23	Moretti-Harrah Marble Co.	....	D	90.0	6	mb	580	60	10-22-28	N	N	Cited as Madras Marble Co. well (Johnston, 1933, pt. 2, table 41, no. 26). Cased to 18 ft. Original depth, 187 ft. Reported yield, 80 gpm.
*BB-24	....do	H. W. Peerson Drilling Supply Co.	D	238	12	mb	573	47.7	7- -55	T	Ind	Cased to 90 ft. Measured drawdown, 12 ft. after 3 months pumping 700 gpm in 1955. Cavity from 211 to 237 ft. About 75,000 gpd used from well; an additional 225,000 gpd used from quarry springs.
CC-1	V. W. Heard	E. L. Graves	D	58	6	ls	436	55	....	J	D	Cased to 58 ft.
CC-2	....do	....	D	200	6	ls	415	60	1962	J	D	
CC-3	Claude J. Wilson....	....	D	46	6	ls	430	37.7	12-19-62	J	D	Supplies 2 families.
CC-4	J. D. Coleman	Fairpark Equipment Co.	D	94	6	ps	462	.....	....	J	D	
CC-5	Clyde Etress	....	Du	20.7	30	ps	506	6.4	1- 3-63	J	D	Water is reported to be high in iron content.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	Owner	Driller	Type	Depth of well (feet)	Diameter of well (inches)	Water-bearing unit	Altitude of land surface (feet)	Water level: Above (+) or below land surface (feet)	Water level: Date of measurement	Method of lift	Use of water	Remarks
CC-6	J. K. Taylor	E. L. Graves	D	186	6	ps	470	25	10- 1-62	J	D	Cased to 65 ft. See driller's log in table 6.
CC-7	Otis Butler	....do	D	70	6	ps	506	22.4	12-18-62	J	D	Cased to 48 ft. Reported yield, 25 gpm.
CC-8	Dan Butler	....do	D	120	6	ps	503	25	....	J	D,S	Supplies 2 families and 56 head of stock.
CC-9	E. L. Brown	....do	D	265	6	dol	450	72.7	12-19-62	J	D	Supplies 2 families.
CC-10	C. V. Goodwin	....	D	....	8	ps	452	19.1	1- 2-63	J	D	Do.
CC-11	Wallace Pope	....	Du	14.1	30	ps	488	10.1	1- 3-63	N	N	Water is slightly muddy at all times and low during dry season.
CC-12	C. V. Goodwin	....	Du	25.1	30	ls	420	20.9	1- 2-63	N	D	Lined with rock. Reported to have been dry in 1954.
CC-13	H. F. Robinson	G. H. Anderson	D	152	6	ls	416	10	1962	J	D	
CC-14	Wallace Pope	-- Bryant	D	97	6	dol	423	10	1961	J	D	
CC-15	W. B. Caudle	....do	D	95	6	dol	422	15	....	J	D	Cased to 11 ft. Supplies 2 families.
DD-1	Avondale Mills	....	S	....	...	ls	407	.....	....	F, P	D,P	Supplies recreational area and caretaker's house. Estimated flow, 50 gpm on 12-19-62.

FF-1	W. D. Graham	....	S	....	...	dol	431	.....	....	F, P	D	Supplies 3 families. Measured flow, 500 gpm on 4-2-63.
FF-2	Louisville and Nashville Railroad.	....	D	69.8	6	dol	440	20.5	1- 3-63	N	N	
*FF-3	Fayetteville High School.	....	D	300	6	dol	424	.....	....	P	D,P	Supplies 1 family, 189 students, and 13 teachers.
FF-4	Morris Jackson	M. T. Coleman ...	D	145	6	ps	446	10.9	1- 3-63	J	D	Cased to 22 ft. Reported yield, 2 gpm in October 1962.
FF-5	Talladega Springs Elementary School.	....	D	....	6	ps	490	48.8	1- 2-63	J	P	Supplies 43 students and 2 teachers.
FF-6	A. D. Waites	....	S	....	...	dol	479	.....	....	F	...	Flow from spring is impounded. Measured flow, 290 gpm on 4-2-63.
FF-7	....do	M. T. Coleman....	D	128	6	ps	490	14.3	1- 8-63	J	D	Water enters well at 40 ft.
FF-8	A. A. Morris	Thompson-Wyman Marble Co.	D	102	4	ps	515	37	1960	J	D	Cased to 65 ft. Cored to explore marble. Reported drawdown, 5 ft. pumping 3 gpm in 1960.
FF-9	John M. Hightower ..	....	S	....	...	dol	457	.....	....	F	D	Estimated flow, 300 gpm on 1-3-63.
FF-10	D. V. Gooch........	....	S	....	...	ls	416	.....	....	F	N	Cited as Talladega Spring (Johnston, 1933, pt. 2, table 42, no. 53). Water has sulfurous odor. Former health resort. Estimated flow, 0.5 gpm on 1-3-63.
*GG-1	Alabama Marble Co..	....	S	....	...	mb	595	.....	....	P	P	Cited as Gantts Spring (Johnston, 1933, pt. 2, table 42, no. 54). Estimated yield, 200 gpm. Supplies about 80,000 gpd for 95 services.
*GG-2	....do	....	S	....	...	mb	565	.....	....	P	P	Supplemental supply.
GG-3	-- Pitts	E. L. Graves	D	150	6	dol	615	.....	....	J	D	
GG-4	S. V. Robertson.....	....do	D	150	6	ps	615	.....	....	J	D	
GG-5	-- Hamilton	....	S	....	...	dol	447	.....	....	F	D,S	Measured flow, 1,200 gpm on 4-2-63.

Table 5.—*Records of wells and springs in Talladega County*—Continued

Well or spring	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
GG-6	C. M. Pate	E. L. Graves	D	118	5	ps	689	32.8	11-23-56	J	D	Cased to 31 ft. Reported yield, 3 gpm. Bedrock at 15 ft.
*GG-7	Lake Tate Co-operative.	Carl Pace	D	200	6	ps	798	20	....	T	P	Cased to 160 ft.
GG-8	Thomas B. Caine ...	E. L. Graves	D	103	5	ps	824	36.0	6-27-56	J	D	Cased to 58 ft. Reported yield, 15 gpm.
HH-1	Glenn Elkins	....do	D	100	6	ps	626	25	6-20-53	J	D	Cased to 31 ft. Reported yield, 1.5 gpm.
HH-2	W. G. Rumsey	....do	D	82	6	ps	624	34.1	11-23-56	J	D	Cased to 78 ft.
*HH-3	E. L. Graves	....do	D	74	6	ps	781	27	11-15-55	J	D	Cased to 59 ft. Reported yield, 2 gpm.
HH-4	-- Goodman	M. T. Coleman	D	136	6	ps	842	....	....	N	N	Cased to 22 ft. Dry hole.
HH-5	Richard Scroggins ...	E. L. Graves	D	140	6	ps	664	50	6-18-48	J	P	Cased to 74 ft. See driller's log in table 6.
*HH-6	W. E. Miller	....do	D	92.0	6	sc	795	27.0	9- 2-54	J	N	Cased to 57 ft.
*HH-7	Howard Cherry	....do	D	130	6	ps	896	37.6	11-21-56	J	D,S	Cased to 71 ft.
HH-8	Charles Jennings ...	M. T. Coleman ...	D	82	6	ps	761	.....	....	J	D	
*HH-9	M. T. Coleman	E. L. Graves	D	180	6	ps	776	8.0	7-16-56	J	D	Cased to 93 ft. See driller's log in table 6.

Table 6.—*Drillers' logs of wells in Talladega County*

	Thickness (feet)	Depth (feet)
Well C-13		
Owner: Town of Lincoln Driller: Carl Pace		
Red clay	30	30
Yellow clay	62	92
Lime rock	6	98
Broken layers of lime rock and water-bearing chert	157	255
Light clay opening	5	260
Well L-13		
Owner: William W. Gilbert Driller: Fairpark Equipment Co.		
Shale and clay	80	80
Chert and mud	35	115
Limestone, soft	44	159
Well N-15		
Owner: City of Talladega Driller: Carl Pace		
Red clay	75	75
Yellow clay	53	128
Lime rock	32	160
Lime rock opening	4	164
Solid lime rock	76	240
Lime rock opening	6	246
Solid lime rock	114	360
Lime rock opening	3	363
Solid lime rock	87	450
Well S-15		
Owner: American Talc Co. Driller: Lawson and Hurst		
Shale, red	50	50
Slate, hard	40	90
Limestone with mud-filled cavity at bottom	314	404

Table 6.—*Drillers' logs of wells in Talladega County*—Continued

	Thickness (feet)	Depth (feet)
Well T-9		
Owner: Coosa River Newsprint Co. Driller: H. W. Peerson Drilling Supply Co.		
Clay	35	35
Mud and boulders	4	39
Lime rock, hard and solid	46	85
Chert, broken	12	97
Well V-10		
Owner: Childersburg Water, Sewage and Gas Board Driller: Virginia Supply and Well Co.		
Clay, sand, and broken rock	52	52
Soft rock	18	70
Blue limestone with streaks varying in hardness (water encountered in soft streaks)	224	294
Gray limestone	131	425
Well W-19		
Owner: Avondale Mills Driller: H. W. Peerson Drilling Supply Co.		
Sticky gumbo clay	60	60
Streaks of rock and mud	45	105
Chert	2	107
Limestone	101	208
Well W-22		
Owner: Avondale Mills Driller: H. W. Peerson Drilling Supply Co.		
Clay	20	20
Boulders	11	31
Solid rock	?	?
Lime and marble flint	?	350

Table 6.—*Drillers' logs of wells in Talladega County*—Continued

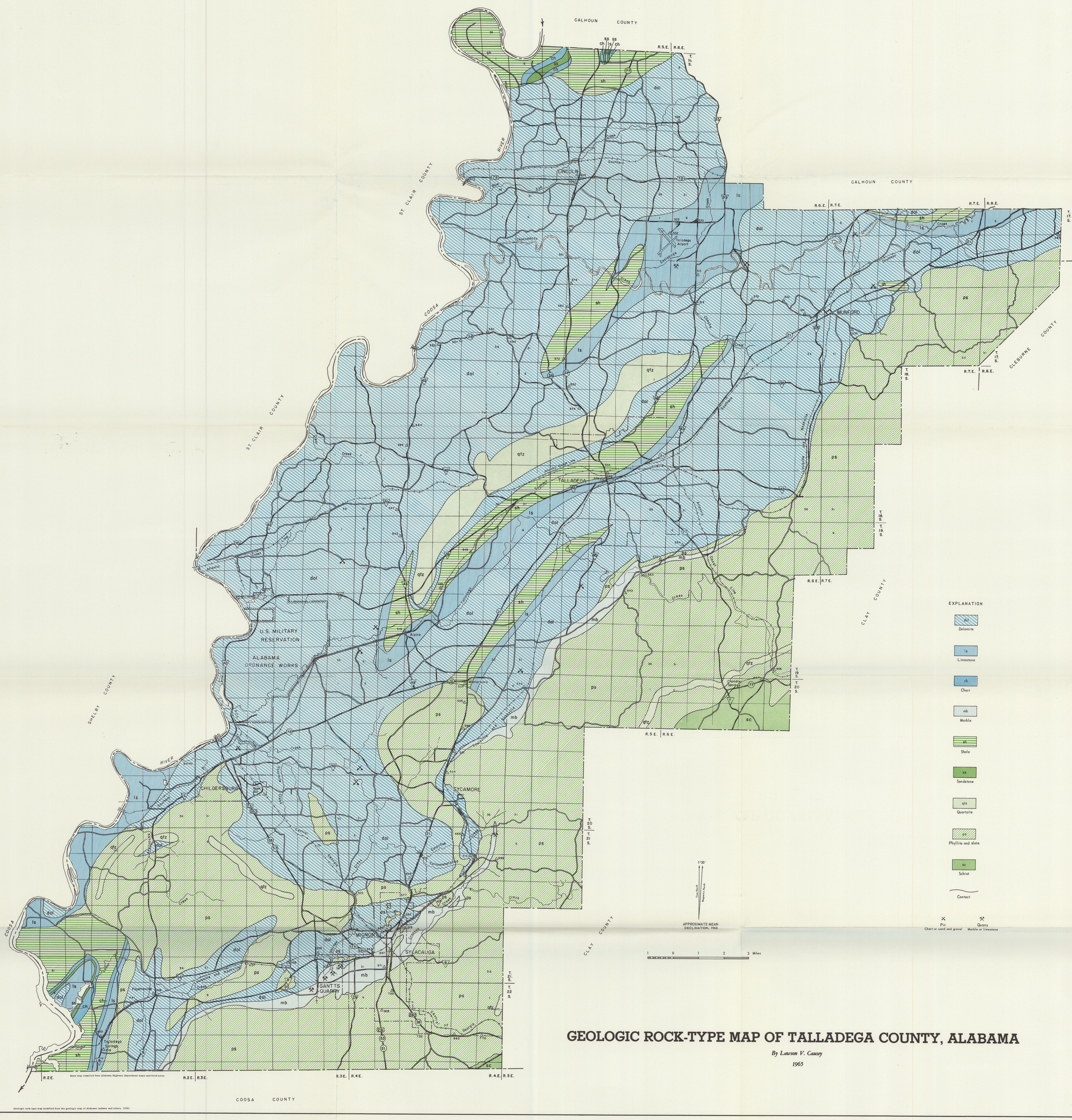
	Thickness (feet)	Depth (feet)
Well AA-18		
Owner: Foremost Ice Cream Co.		
Driller: H. W. Peerson Drilling Supply Co.		
Soil	40	40
Marble	44	84
Cavity	20	104
Shaly material	31	135
Marble, shaly	40	175
Marble becoming harder	128	303
Well AA-22		
Owner: City of Sylacauga		
Driller: H. W. Peerson Drilling Supply Co.		
Clay, red and white	25	25
Clay, red	50	75
Clay, red and white	56	131
Limestone, solid	5	136
Cavity	9	145
Limerock, solid	15	160
Cavity	16	176
Rock, solid	14	190
Limestone, rough, broken	31	221
Cavity filled with rough-broken limestone	69	290
Limestone, solid	42	332
Limestone, rough-broken, with solution cavity	56	388
Well BB-2		
Owner: W. H. Prince		
Driller: M. T. Coleman		
Soil and mud, brown, and gravel layer at bottom	71	71
Limestone (assumed)	19	90
Limestone	4	94
Limestone, bluish-gray, hard	52	146
Limestone, bluish-gray, hard (darker than above)	6	152
Schist, light-brown, soft	7	159
Limestone, gray	6	165
Limestone with sandy schist	6	171

Table 6.—*Drillers' logs of wells in Talladega County*—Continued

	Thickness (feet)	Depth (feet)
Well BB-2—Continued		
Limestone, gray, softer	10	181
Schist, bluish-gray	6	187
Cavity	½	187½
Limestone, dark-blue	5½	193
Limestone, gray	9	202
Limestone and schist	6	208
Limestone, gray	23	231
Limestone and schist, water at 247 ft	18	249
Well BB-11		
Owner: William A. Wilson		
Driller: E. L. Graves		
Soil	25	25
Shale, sandrock, soft places	40	65
Slate, hard	10	75
Marble and flint(?)	15	90
Cavity	1	91
Flint, marble, gray slate (water at 110 to 150 ft.)	59	150
Well CC-6		
Owner: J. K. Taylor		
Driller: E. L. Graves		
Soil	17	17
Rock	37	54
Mud	6	60
Rock	126	186
Well HH-5		
Owner: Richard Scroggins		
Driller: E. L. Graves		
Soil, rock, gravel	37	37
Rock	7	44
Rock, hard	5	49
Rock, soft, and soft places	23	72
Slate, hard, and blue granite	23	95
Rock, softer and lighter	25	120
Rock, softer	7	127

Table 6.—*Drillers' logs of wells in Talladega County*—Continued

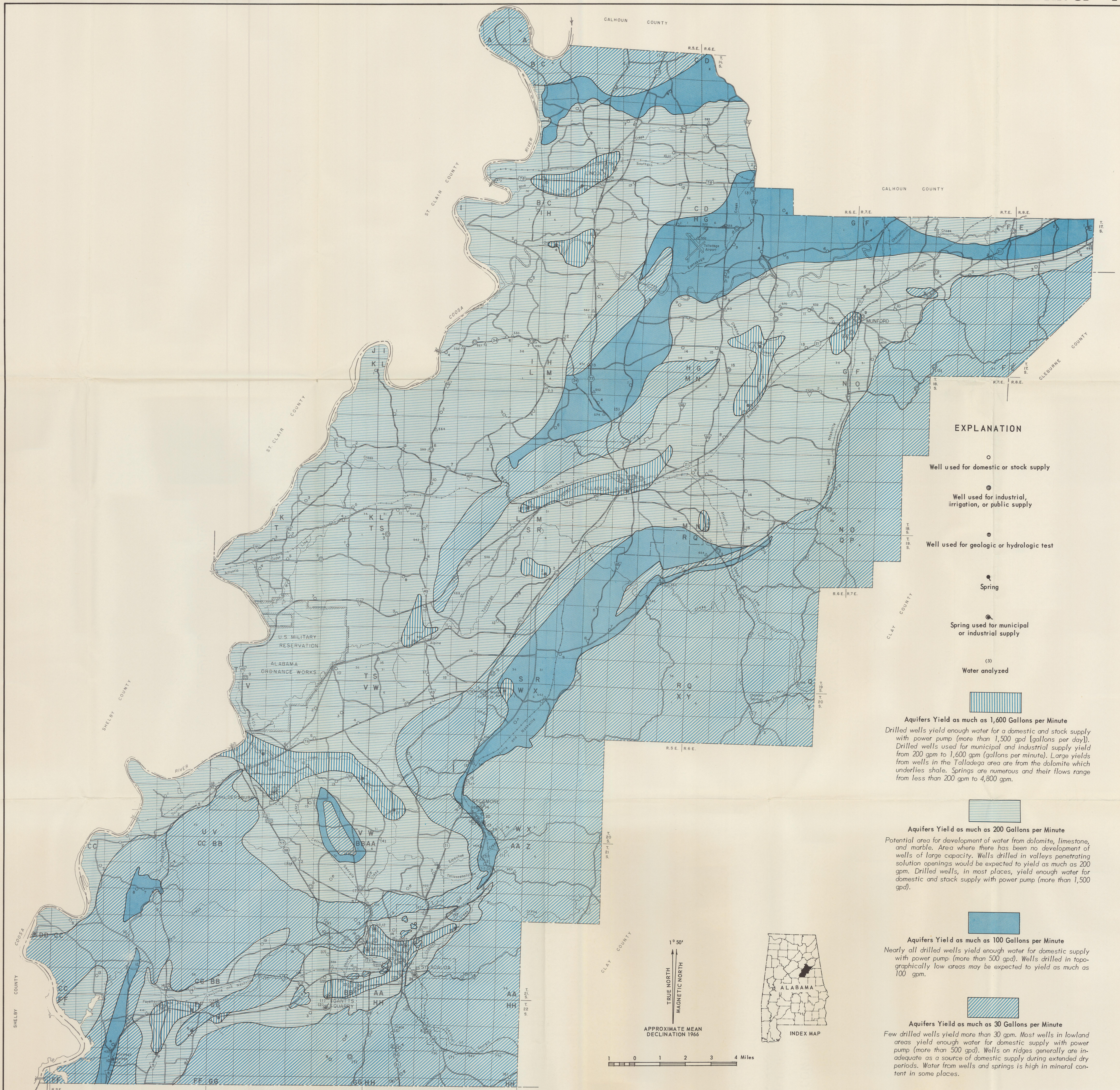
	Thickness (feet)	Depth (feet)
Well HH-5—Continued		
Rock, hard	5	132
Rock, softer	8	140
Water: 20 to 30 gph from 74 to 95 ft. 50 gph from 95 to 100 ft.		
Well HH-9		
Owner: M. T. Coleman Driller: E. L. Graves		
Clay, sandy, soft, with hard places	85	85
Slate, blue, and sand rock	31	116
Slate, blue, soft	14	130
No record	50	180



GEOLOGIC ROCK-TYPE MAP OF TALLADEGA COUNTY, ALABAMA

By Lawson V. Causey

1965



EXPLANATION

Well used for domestic or stock supply

Well used for industrial, irrigation, or public supply

Well used for geologic or hydrologic test

Spring

Spring used for municipal or industrial supply

(3) Water analyzed

Aquifers Yield as much as 1,600 Gallons per Minute

Drilled wells yield enough water for a domestic and stock supply with power pump (more than 1,500 gpd [gallons per day]). Drilled wells used for municipal and industrial supply yield from 200 gpm to 1,600 gpm (gallons per minute). Large yields from wells in the Talladega area are from the dolomite which underlies shale. Springs are numerous and their flows range from less than 200 gpm to 4,800 gpm.

Aquifers Yield as much as 200 Gallons per Minute

Potential area for development of water from dolomite, limestone, and marble. Area where there has been no development of wells of large capacity. Wells drilled in valleys penetrating solution openings would be expected to yield as much as 200 gpm. Drilled wells, in most places, yield enough water for domestic and stock supply with power pump (more than 1,500 gpd).

Aquifers Yield as much as 100 Gallons per Minute

Nearly all drilled wells yield enough water for domestic supply with power pump (more than 500 gpd). Wells drilled in topographically low areas may be expected to yield as much as 100 gpm.

Aquifers Yield as much as 30 Gallons per Minute

Few drilled wells yield more than 30 gpm. Most wells in lowland areas yield enough water for domestic supply with power pump (more than 500 gpd). Wells on ridges generally are inadequate as a source of domestic supply during extended dry periods. Water from wells and springs is high in mineral content in some places.

AVAILABILITY OF GROUND WATER AND LOCATION OF WELLS AND SPRINGS, TALLADEGA COUNTY, ALABAMA

Base map compiled from Alabama Highway Department maps and field notes.