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GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Parke County

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

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Donald E. Foltz, Director

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Charles H. Bechert, Director

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Preliminary Report: Parke County

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By F. A. Watkins, Jr., and D. G. Jordan

ABSTRACT

Parke County, in west-central Indiana, has an area of about 451 square miles. Consolidated rocks of Mississippian and Pennsylvanian age and unconsolidated rocks of Pleistocene age are the sources of ground water for domestic, stock, industrial, and municipal supplies. Wells in Parke County vary greatly in depth and yield. Wells tapping Mississippian rocks range in depth from about 50 to 400 feet and in yield from less than 1 to about 300 gpm (gallons per minute), whereas those tapping Pennsylvanian rocks range in depth from about 40 to 350 feet and in yield from less than 1 to about 50 gpm. Some wells tapping the consolidated rocks yield no water. Wells tapping Pleistocene sand and gravel range in depth from about 20 to 180 feet and in yield from about 5 to 1,000 gpm. Field chemical analyses of water from these sources show that the chemical quality differs greatly. A modal grouping was used to find the most frequent values for the sulfate and chloride contents and for hardness of water in Parke County. This method yields the following results for water from aquifers of Pennsylvanian age: sulfate, 13 ppm (parts per million); chloride, 10 ppm; and hardness, 279 ppm; and for water from aquifers of Pleistocene age: sulfate, 16 ppm; chloride, 10 ppm; and hardness, 321 ppm. Locally, either the iron, chloride, or sulfate content will exceed the recommended standards of the U. S. Public Health Service (1946) for drinking water.

This preliminary report contains tabulated records of about 527 wells and other drilled holes giving information about well construction, water levels, conditions of occurrence, and character of the water-bearing material; selected logs for about 228 wells and other drilled holes giving the drillers' description of the material encountered and a tentative interpretation by the authors of the geologic age; records of 9 springs giving information about geologic source, yield and temperature of the water; results for 252 field chemical analyses of water from wells, 8 from springs, and 31 from streams, giving the iron, bicarbonate, sulfate and chloride contents and the hardness of water; and water levels in 5 observation wells indicating the magnitude of short and long-term water-level fluctuations in the consolidated and unconsolidated rocks. These basic data include much of the material to be used in an interpretive report on the ground-water resources and geology of the area.

A map of Parke County shows the location of all water wells, holes drilled for purposes other than water supply, springs, and stream sampling sites listed in this report. Additional maps show availability of ground water and generalized quality of water conditions with respect to hardness of water, and areas of high chloride or sulfate contents.

INTRODUCTION

Purpose and Scope

An investigation of the ground-water resources and geology of nine counties in west-central Indiana has been conducted intermittently since 1950. In 1956 the investigation was placed on a full-time basis and another county was added to the area of study. This investigation is being made by the U. S. Geological Survey in cooperation with the Division of Water Resources, Indiana Department of Conservation, as a part of a broad program of these agencies to inventory and evaluate the ground-water resources of Indiana.

This report is the seventh of a series of preliminary reports to be published on the ground-water resources and geology of west-central Indiana. The purpose of this report is to make the basic data collected during the investigation available to the public and to provide a preliminary evaluation of the ground-water conditions and the geology as an aid to the development of the ground-water resources. A more detailed and comprehensive analysis will be published in an interpretive report on the ground-water resources and geology of the area.

The investigation was made under the immediate supervision of F. H. Klaer and C. M. Roberts, successive district geologists for Indiana.

Location and Areal Extent

Parke County is in the west-central part of Indiana (fig 1). The county is roughly rectangular and has an area of about 451 square miles. It is bounded on the north by Montgomery and Fountain Counties, on the east by Montgomery and Putnam Counties, on the south by Clay and Vigo Counties, and on the west by Vermillion County.

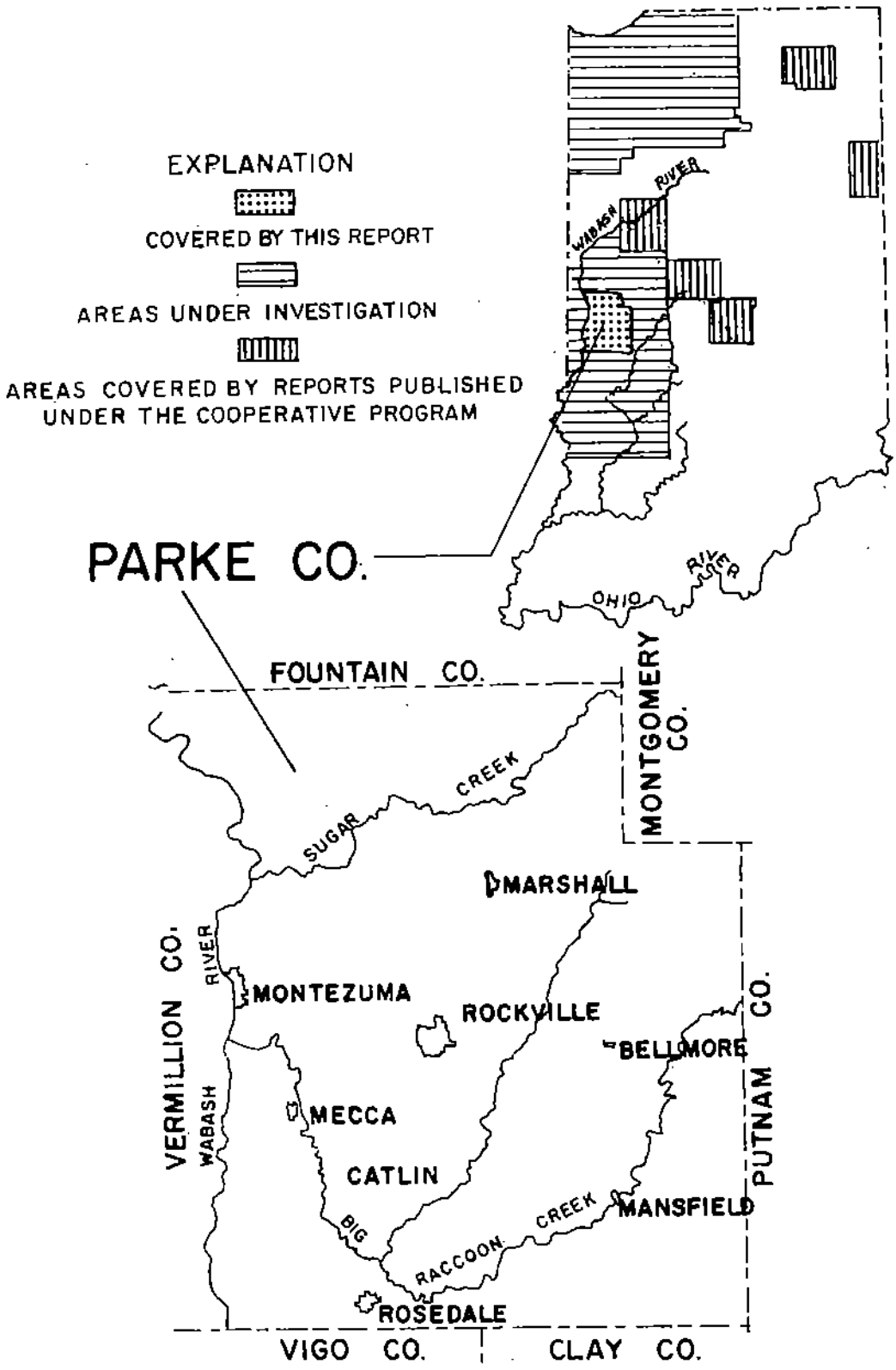

FIGURE . -- Map of Indiana showing area covered by this report, areas under investigation, and areas covered by reports published under the cooperative program.

Well-numbering System

A numbering system is used to locate and identify the wells, holes drilled for purposes other than water supply, and springs in this report. The number assigned indicates the location according to the official rectangular survey of public lands. For example, in the number for well 16/7W-35Q1, the part preceding the hyphen indicates that the well is in T. 16 N., R. 7 W. The first number after the hyphen indicates the section in which the well is located. Each quarter-quarter section (40-acre tract) within a section is given a letter symbol as shown on figure 2. Within the quarter-quarter section, wells are numbered serially. Therefore, well 16/7W-35Q1 is the first well listed in SW¼SE¼ sec. 35, T. 16 N., R. 7 W.

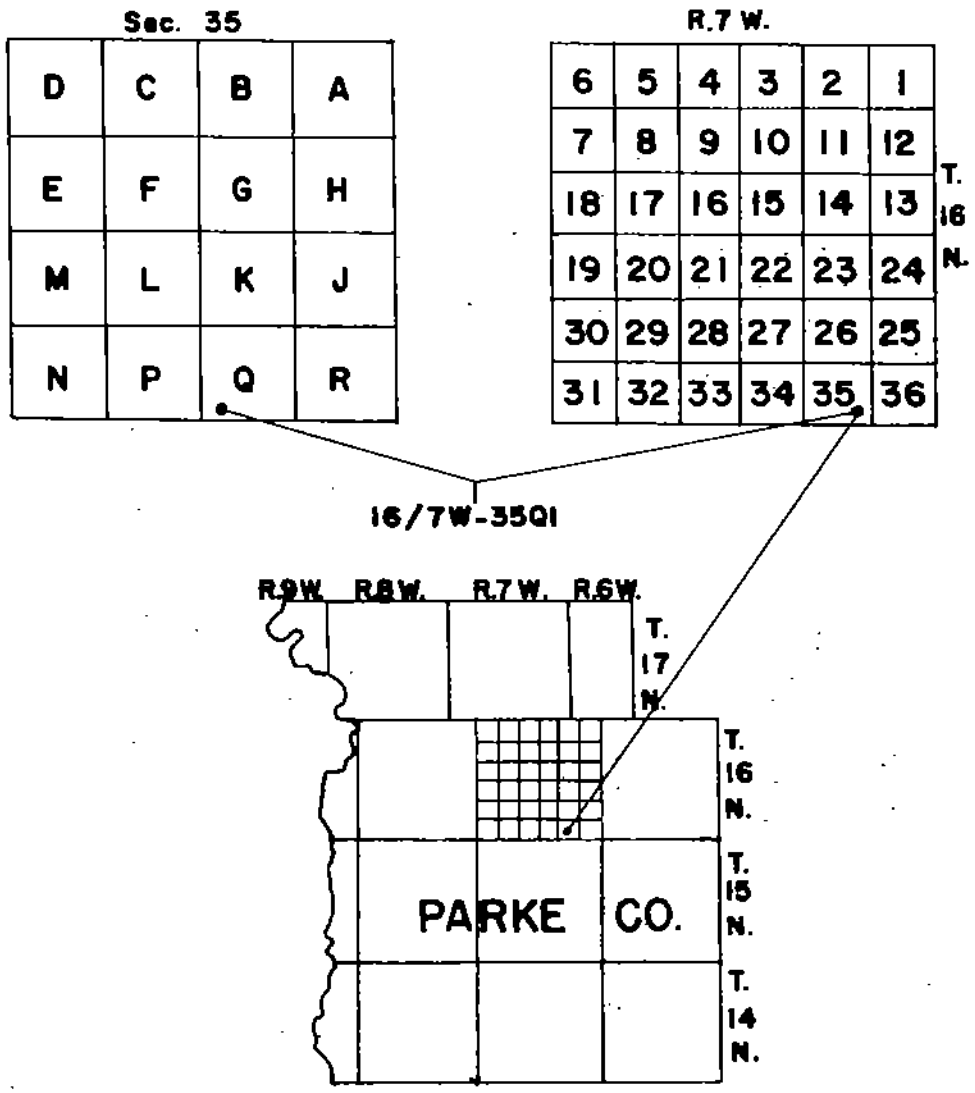

FIGURE 2.-- Sketch showing well-numbering system

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing data for this report. We especially thank the well drillers listed in the table of well records who furnished much of the information summarized in tables 4 and 5.

The authors also thank the following government agencies which provided information for the report: the Division of Oil and Gas, the Division of Water Resources, and the Coal Section and the Geophysics Section of the Geological Survey, all of the Indiana Department of Conservation; and the Indiana State Highway Department; and the Corps of Engineers, U. S. Army.

DATA COLLECTION AND PROCESSING

The well data were collected from drillers, water works superintendents, and others. The well records obtained from drillers were of two types--- written records and reports from memory. A tentative driller's location of the well record was obtained at the time of collection and this was checked against the property records in the county courthouse to verify the location, to locate the property, and to obtain the name of the current property owner. The well location was then checked in the field and its location plotted on the appropriate U. S. Geological Survey 7½-minute topographic quadrangle map. The locations given on the records of test holes, oil or gas exploration holes, and wells from other reports were accepted without further verification.

Plate 1 shows the location of water wells, oil wells, test holes, or holes drilled for purposes other than water supply, springs, and stream sampling sites. All locations are accurate to the nearest quarter-quarter section and most locations are shown to the nearest 10 acres or quarter-quarter-quarter section. The basic data for these wells and holes drilled for purposes other than water supply are summarized in table 4. Selected drillers' logs of wells and other drilled holes with tentative interpretations by the authors of the geologic age of the materials encountered are given in table 5. Basic data for the springs are summarized in table 7.

Samples of water were collected at the time well and spring sites were visited and from streams during a period of low flow. The samples were analyzed in the field for hardness of water, alkalinity (expressed as bicarbonate) and chloride content by standard titration methods. Sulfate was determined by a turbidimetric method using a colorimeter where concentrations were below 100 ppm (parts per million) and by a standard titration method where concentrations exceeded 100 ppm. The iron content was determined at the well site by the bipyridine method by comparison with standard color ampules having known iron concentrations. The results of these analyess (tables 6, 7 and 8) were used to select sites for collecting water samples for more comprehensive analyses by the U. S Geological Survey.

During the investigation observation wells were established to measure the fluctuations of water level. Table 9 contains water-level measurements obtained from these wells. The data from these observation wells show seasonal and longer term variations of the ground-water level.

General Geology and Sources of Ground Water

Consolidated rocks of Mississippian age and of Early and Middle Pennsylvanian age crop out in Parke County. Overlying these rocks are unconsolidated glacial deposits of Pleistocene age.

Rocks of Mississippian age that crop out in the eastern one-fourth of the county are used for domestic and stock supplies. The limestones and siltstones of Mississippian age are sources of ground water. Wells tapping aquifers of Mississippian age range in depth from about 50 to 400 feet. Yields from these wells range from less than 1 to about 30 gpm (gallons per minute) with some dry holes reported.

Rocks of Early and Middle Pennsylvanian age crop out throughout the county. These rocks consist chiefly of sandstone, sandy shale, shale, and minor amounts of coal and limestone. Sandstones are the principal source of ground water for domestic and stock supplies. Well depths range from about 40 to 350 feet, the most frequent depth being about 115 feet. Yields from these wells range from less than 1 to about 50 gpm with some dry holes reported.

Unconsolidated glacial deposits of Pleistocene age consisting of till and glaciofluvial sand and gravel overlie the consolidated rocks.

Considerable thicknesses of glaciofluvial sand and gravel were deposited in preglacial valleys whose courses are more or less followed by the present Wabash River and Big Raccoon and Little Raccoon Creeks. Erosion by these streams removed much of the sand and gravel, but enough remains beneath a thin mantle of Recent alluvium, that these deposits are an important source of ground water for domestic, stock, irrigation, industrial, and municipal supplies. Well depths range from about 20 to 150 feet. Yields range from about 5 to 1,000 gpm.

Several large preglacial valleys in the county contain as much as 40 feet of sand and gravel overlain by as much as 140 feet of till. Well depths range from about 50 to 180 feet. Yields from these deposits are more than adequate for domestic and stock uses and larger supplies may be possible from properly constructed wells.

Small amounts of glaciofluvial sand and gravel are present beneath Recent alluvium or are associated with clayey and sandy-clay till in the county. The sand and gravel was deposited as lenses or thin stringers either lying on the bedrock surface and overlain by alluvium or till or interbedded with till. There is a close relationship between the preglacial bedrock channels and these sand and gravel deposits. In many areas these deposits are, or with proper development, could be additional sources of ground water for domestic and stock supplies. In the preglacial upland areas the glacial deposits consist chiefly of a clayey to sandy-clay till and do not yield water freely.

Wells tapping the sand and gravel aquifers associated with till or overlain by Recent alluvium range in depth from about 30 to 130 feet and have yields ranging from about 5 to 50 gpm. At the present time some of the wells drilled in these areas pass through the sand and gravel deposits and are completed in the bedrock.

Deposits of Recent age in Parke County consist mostly of flood plain sediments and wind-blown sand. They are thin and are not important as sources of ground water.

Plate 2 shows availability of ground water in the consolidated and unconsolidated rocks underlying the county. Plate 3 shows generalized hardness of water conditions in the consolidated and unconsolidated rocks and also shows areas where the chloride or sulfate contents exceed the limits for these constituents as established by the U. S. Public Health Service (1946).

The chemical content and the hardness of water vary greatly in the aquifers of Mississippian, Pennsylvanian, and Pleistocene age. The maximum and minimum values and the mode 1/ for sulfate and chloride contents and hardness of water for the Pleistocene and Pennsylvanian aquifers is given in table 1. Owing to insufficient data on the water from Mississippian aquifers the maximum and minimum values for sulfate content and the modes for sulfate and chloride contents and hardness of water are not given. In addition table 2 indicates the significance of the various constituents and properties of the water that are listed in tables 6, 7, and 8.

Table 1.--Comparison of quality of ground water by source in Parke County

	Sulfate ppm	Chloride ppm	Hardness ppm
Pleistocene aquifers			
Maximum	405	86	668
Minimum	5	2	56
Mode	16	10	321
Pennsylvanian aquifers			
Maximum	290	1,160	628
Minimum	8	2	8
Mode	13	10	279
Mississippian aquifers			
Maximum	---	2,210	584
Minimum	---	4	24
Mode	---	---	---

1/ mode: The item, in a series of statistical data, which occurs oftenest. (Webster)

Table 2.--Significance of selected dissolved mineral constituents and properties of ground water [a/]

Constituent or property	Significance
Iron (Fe)----------	Oxidizes to reddish-brown sediment upon exposure to air. More than about 0.3 ppm stains laundry and utensils reddish-brown. More than 0.5 to 1.0 ppm imparts objectionalbe taste to water. Larger quantities favor growth of iron bacteria. Objectionable for food processing, textile processing, beverages, ice manufacturing, brewing, and other purposes.
Bicarbonate (HCO_3)---------	Bicarbonate in conjunction with carbonate (CO_3) produces alkalinity. Bicarbonate of calcium and magnesium decompose in steam boilers and hot water facilities to form scale and release corrosive carbon-dioxide gas.
Sulfate (SO_4)----------	Sulfate in water containing calcium forms hard scale in steam boilers. In large amounts sulfate in combination with other ions gives bitter taste to water. Some calcium sulfate is considered beneficial in the brewing process.
Chloride (Cl)----------	Gives salty taste to drinking water when in large amounts in combination with sodium. Increases the corrosiveness of water when in large amounts.
Hardness as $CaCO_3$ (Calcium and magnesium)-------	Hard water increases amount of soap needed to make lather. Forms scale in boilers, water heaters, and pipes. Leaves curdy film on bathtubs and other fixtures and on materials washed in the water.

a/ After Rosenshein and Hunn (1961), p. 17

CONFINED AND UNCONFINED CONDITIONS

In Parke County ground water occurs in the consolidated and unconsolidated rocks chiefly under confined (artesian) conditions, but in some places it occurs under unconfined (water-table) conditions. Under confined conditions, the aquifer (water-bearing material) is overlain directly by relatively impervious material, and the water, which is under pressure will rise in the well above the bottom of the impervious material. Under unconfined conditions, the aquifer is overlain directly by permeable unsaturated material and the water does not rise above the level at which it is encountered.

TYPES OF WELLS

Drilled wells are the principal type of water wells used in Parke County. A small number of dug and driven wells are still in use and occasionally one is constructed. Most water wells are 6-inches or more in diameter and are constructed by the cable-tool method. A well drilled by the cable-tool method is constructed by a combination of drilling, bailing and driving casing. Where the

water-bearing material is consolidated rock, the well casing generally is driven a few inches to several feet into rock, and the well is finished as an open hole in rock. Where the water-bearing material is sand and gravel, the well casing is driven into the water-bearing zone and is left as an open-end casing, or the lower end of the casing is slotted or perforated, or a well screen is set opposite the water-bearing zone below the end of the casing. A modification of the above type, the gravel-packed well, has a gravel lining between the well screen and the water-bearing material.

In Parke County the majority of industrial and municipal supply wells drilled in sand and gravel are equipped with well screens--a few are finished with slotted or perforated casing. Most domestic and stock wells that have been completed in sand and gravel do not have a screen but are finished with an open-end casing or the casing is slotted or perforated. The use of wire-wound, gauze-wrapped, or gauze washer well points or screens in domestic and stock wells is becoming more wide-spread. Successful wells can be obtained by the use of screens, in many water-bearing sand and gravel deposits from which it was once considered impossible to obtain water. Table 3 relates the grain-size in inches and millimeters to the slot and gauze size of screens commonly used in water wells.

Table 3.--Grain size and equivalent screen openings

Grain size: After Wentworth (1922).
Equivalent screen openings: From commercial catalogs for water-well supplies.
Slot size: In thousandths (0.001) of an inch.
Gauze size: Number of wire strands per lineal inch.

Material	Grain size		Equivalent screen opening	
	Inches	Millimeters	Slot size	Gauze size
Gravel	>0.08	>2	> 80	-------
Very coarse sand	.04 - .08	1 - 2	40 - 80	20
Coarse sand	.02 - .04	.50 - 1	20 - 40	40 - 20
Medium sand	.01 - .02	.25 - .50	10 - 20	60 - 40
Fine sand	.005 - .01	.125 - .24	6 - 10	90 - 60
Very fine sand	.002 - .005	.062 - .125	-------	-------
Silt	.00015 - .002	.004 - .062	-------	-------
Clay	<.00015	< .004	-------	-------

In areas where the water level in the unconsolidated material is close to the surface some water wells are constructed by driving or digging. The driven well consists of a small diameter pipe with a drive-point screen on the end which is driven into shallow water-bearing material. The dug well is constructed by digging a hole, usually about 3 feet in diameter into the upper part of the water-bearing material and using concrete pipe, tile, brick, or stone as a casing.

The oil or gas exploration holes, test holes, and holes drilled for purposes other than water supply are drilled by either the cable-tool or rotary method in Parke County.

SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are generally available for domestic and stock use from the rocks of Mississippian and Pennsylvanian age. In the sand and gravel of Pleistocene age, in the Wabash River valley and in Big Raccoon, and Little Raccoon Creek valleys, ground water is available in adequate quantities for domestic and stock use and locally for industrial, irrigation, and public supplies. Sand and gravel in the large buried preglacial bedrock channels in the county is a possible source of ground water for industrial, irrigation, and public supplies. A source of domestic and stock supplies is the sand and gravel deposits interbedded and overlain by till or alluvium in the preglacial bedrock channels.

The quality of the water from the rocks of Mississippian, Pennsylvanian, and Pleistocene age varies greatly. Locally water from these sources exceeds the U. S. Public Health Service (1946) drinking-water standards for either iron, chloride, or sulfate content.

RECORDS

The records of about 527 water wells and holes drilled for purposes other than water supply are given in table 4. The table gives information about well construction, water levels, yields, and drawdowns, thickness and character of the water-bearing material, conditions of occurrence, use, and other pertinent data. The altitude of the land surface at all wells, except oil or gas exploration holes, was determined from topographic maps. Altitudes of oil or gas exploration holes were on the records when received and were checked against the topographic maps.

Table 5 contains the selected logs of about 228 wells and other drilled holes. This table gives the drillers' description of the material encountered pertinent remarks with regard to the material, and tentative interpretation by the authors of the geologic age of the material. The logs contain local terms used by drillers in describing the material penetrated. A glossary of drillers' terms is on page 11.

The results of 252 analyses of well waters are given in table 6. These chemical analyses were determined in the field by the U. S. Geological Survey. The table gives information about geologic source, temperature, concentration in parts per million of iron, alkalinity (expressed as bicarbonate), sulfate, and chloride content, and hardness of water. The U. S. Public Health Service (1946) drinking-water standards state that the chemical constituents should not exceed the following concentrations: iron and manganese (together), 0.3 ppm; sulfate, 250 ppm, chloride, 250 ppm. Although no official standards have been established for hardness of water, the following classification (Lamar, 1942, p. 25, 26) is in general use: 0-60 ppm, soft; 61-120 ppm, moderately hard; 121-200 ppm, hard; more than 200 ppm, very hard.

Records of 9 springs are given in table 7. This table gives geologic source, yield, use, temperature of water, and the results of field chemical analyses.

Table 8 gives the results of 31 field chemical analyses of water from streams in Parke County with other data.

Water levels in 5 observation wells in Parke County are given in table 9. The water levels in one well were measured with an engineers steel tape and in the other four wells by recording gages. Daily high water levels are given for observation wells equipped with recording gages and periodic water levels are given for the observation well that was measured manually. The locations of these observation wells are shown on plate 1.

GLOSSARY OF DRILLERS' TERMS

Bluestone.--Blue-gray siltstone, sandy shale, or shaly sandstone.

Clay rock.--Clay hardened by pressure and/or cementation of some mineral usually a carbonate or silicate.

Drift.--Any rock material, such as boulders, till, gravel, sand, or clay, transported by a glacier and deposited by or from ice or by or in water derived from the melting of the ice.

Hardpan.--A hard impervious layer, composed chiefly of clay, cemented by relative insoluble materials, does not become plastic when mixed with water.

Jack.--Black carbonaceous shale or a clayey or shaly coal.

Pan.--Clay of glacial origin; generally contains small pebbles and occasional boulders.

Slate.--Hard shale which splits into thin platy fragments, usually black.

Soapstone.--Hard smooth clay or shale, slippery to the touch.

Softpan.--A hard impervious layer, composed chiefly of clay, partly cemented by relative insoluble materials, becomes plastic when mixed with water.

Wash.--Water laid glacial material consisting of sand, silt, and clay with a high percentage of twigs, leaves, and other organic matter.

White top.--White shale or fire clay.

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Table 4.--Record of wells, Parke County, Indiana

Well number: See text for description of well-numbering system.
Altitude: Altitude of land-surface datum from topographic map.
Type of well: Dn, driven; Dr, drilled; Du, dug; J, jetted.
Finish: Gp, gravel pack; Oe, open end; Oh, open hole; P, perforated casing; S, screen.
Material: C, coal; Cl, clay; F, fire clay; G, gravel; Ls, limestone; Ls-sh, limy shale; S, sand; Sd-sh, sandy shale; Sh, shale; Sh-ss, shaly sandstone; Sls, siltstone (bluestone); Ss, sandstone.
Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian; D, Devonian.

Ground-water occurrence: C, confined (artesian); U, unconfined (water table).
Water level: In feet below land-surface datum on date of completion of well, except as noted in remarks. F, flowing well.
Use: D, domestic; Dn, destroyed; I, industrial; Ir, irrigation; N, not used; O, observation; Og, oil or gas; P, public supply; S, stock; T, test.
Remarks: A, field chemical analysis in Table 6; E, electric log on file; G, gamma ray log on file; L, log in Table 5; La, log on file; Lam, log from memory on file; Lm, log from memory in Table 5; W, water level measurements in Table 9; Dd, drawdown; gpm, gallons per minute.

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
14/8W--1A1	H. Summers	M. O. Schrader	4- 4-55	805	Dr	51	6	32	Oh	32	18	Ss	P	--	---	7	D,S	L
1R1	J. Brattain	Rusk and Toney	--------	800	Dr	123	4	-----	Oh	-----	-----	Sh,Ss	P	C	25	12	D,S	La, A
2N1	J. Mayfield	----do----------	1947	750	Dr	122	6	47	Oh	49	78	Sd	P	--	---	-----	D,S	La, A
3Q1	W. C. Miller	M. O. Schrader	7-20-60	730	Dr	75	8	61	Oh	61	10	Ss	P	C	32	20	D	L, A; Dd 43 ft after 6 hr bailing at 20 gpm
5F1	C. C. Coleman	----do----------	4-13-54	690	Dr	149	8	101	Oh	125	23	Ss	P	--	---	6	D,S	L, A
5M1	G. Dolp	----do----------	6-28-58	625	Dr	52	6	52	Oe	51	1	S,G	Pl	C	12	5	D	La
5Q1	W. H. Babcock	----do----------	4-12-60	580	Dr	42	8	40	Oe	10	32	S,G	Pl	C	8	6	D	L; Dd 8 ft after 3 hr bailing at 6 gpm
7G1	H. Hill	----do----------	8- 1-57	590	Dr	51	6	51	Oe	42	9	S,G	Pl	--	---	8	D	L, A
7J1	H. and H. Gravel Co.	----do----------	7-16-57	580	Dr	68	8	-----	-----	-----	-----	S,G	Pl	--	---	-----	I	La, A
7Q1	----do----------	----do----------	3-16-57	570	Dr	55	8	-----	-----	-----	-----	S,G	Pl	--	---	-----	T	L
8D1	C. F. Chiles	Ringo and Son	7-48	610	Dr	85	6	40	Oh	39	21	Ss	P	--	---	8	D,S	La, A
8H1	W. M. Harmless	M. O. Schrader	1-25-57	595	Dr	58	6	57	Oe	53	5	S,G	Pl	--	---	17	D	L
10C1	W. Miller, Jr.	----do----------	8-14-60	730	Dr	251	8	80	Oh	130	112	Ls	M	C	86	2	D	L
11M1	A. B. Kitchen	----do----------	12-17-60	755	Dr	178	8	120	Oh	144	34	Ss	P	C	100	10	D	L
12H1	H. Phipps	D. Chavis	11-15-56	780	Dr	83	6	51	Oh	50	33	Ss	P	--	---	30	D,S	L, A
14B1	T. Thompson	----do----------	1958	760	Dr	125	6	80	Oh	60	65	Ss	P	--	---	6	D,S	A
15C1	C. Mostoller	----do----------	--------	665	Dr	100	8	60	Oh	60	40	Ls	M	--	---	1.5	D,S	
16D1	G. Williams	M. O. Schrader	9-21-57	615	Dr	52	6	29	P	25	7	S,G	Pl	--	---	17	D,S	L, A
16D1	M. C. McHargue	M. Crabb	1951	710	Dr	126	4	69	Oh	-----	-----	Sh	P	C	40	-----	D	Lam
17D1	J. McHargue	M. O. Schrader	3-15-52	650	Dr	104	6	76	Oh	-----	-----	Ss	P	--	---	3	D	L, A
18P1	B. Robenson	C. Ringo	1922	645	Dr	87	-----	87	Oe	30	57	S,G	Pl	--	---	-----	N	L
19R1	W. Thompson	D. Chavis	1958	685	Dr	118	-----	-----	-----	-----	-----	Ss	P	--	---	-----	D,S	A
20B1	R. Rightnell	M. O. Schrader	4- 2-53	680	Dr	85	6	29	Oh	29	36	Ss	P	--	---	2	D	L, A
21D1	E. E. Thomas	Ringo and Son	1-48	720	Dr	158	6	71	P	65	3	S,G	Pl	C	33	8	N	L; Well backfilled to 78 ft
22P1	H. Goodin, Jr.	----do----------	4-54	740	Dr	144	6	81	Oh	90	14	Sd-sh	P	C	60	4.5	D,S	L, A
27D1	H. Goodin, Sr.	Ringo	3-21-50	740	Dr	236	6	83	Oh	153	6	Ss	P	C	93	9	D	L, A; Dd 57 ft bailing at 9 gpm
										213	23	Ss	P					
27G1	R. H. Pell	L. Adkins	12-10-45	730	Dr	82	8	37	P	78	4	S	Pl	--	---	60	D,S	La, A.
							8	82										
30H1	B. Robenson	C. Ringo	1938	685	Dr	102	6	18	Oh	-----	-----	-----	P	--	---	-----	N	L
32N1	H. Spencer	M. O. Schrader	10-20-52	680	Dr	161	6	88	Oh	-----	-----	Ss?	P	--	---	3	D	L, A
33A1	C. F. Thompson	----do----------	8-22-59	720	Dr	206	6	101	Oh	-----	-----	-----	P	C	25	1	D,S	L, A
34E1	C. A. Pell	L. Adkins	12-31-45	730	Dr	85	8	36	P	83	2	G	Pl	--	---	-----	D,S	La, A
							6	66										
34N1	R. Morlan	M. O. Schrader	12- 8-54	720	Dr	128	6	23	Oh	93	35	Ss	P	--	---	3	D	L, A
35Q1	Lena Methodist Church	D. Chavis	--------	770	Dr	65	-----	65	Oe	-----	-----	G	Pl	--	---	-----	----	
35R1	R. Morlan	----do----------	--------	765	Dr	220	-----	115	Oh	180	-----	Ls	M	--	---	-----	D	
35R2	G. Thomas	M. O. Schrader	3-10-51	765	Dr	145	6	64	Oh	134	11	Ss	P	--	---	.6	D	L, A
36A1	T. E. Krout, Sr.	D. Chavis	--------	820	Dr	178	8	75	Oh	170	-----	Ls	M	--	---	-----	D	
36C1	J. Mace	M. O. Schrader	8-13-59	800	Dr	85	6	22	Oh	25	28	Ss	P	C	8	3.5	D,S	L, A
36K1	D. C. Young	L. Adkins	9-17-46	765	Dr	55	6	25	Oh	23	29	Ss	P	--	---	-----	D	La, A

Table 4.--Record of wells, Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
16/6W-36L1	J. Kenley	L. Adkins	9-14-46	780	Dr	60	6	38	Gh	32	24	Ss	P	--	---	-----	D	La, A; well backfilled with gravel
J6Q1	J. P. Donaldson	M. O. Schrader	1- 8-52	770	Dr	140	6	78	Gh	-----	-----	-----	P	--	---	1	D	L, A
J6Q2	L. Girton	L. Adkins	9-21-48	770	Dr	120	6	70	Gh	-----	-----	-----	Pl	--	---	-----	N	La; Well backfilled with gravel to 70 ft
14/7W- 5Q1	R. Davidson	D. Chavis	1956	570	Dr	130	6	120	Gh	-----	-----	Ss	P	--	---	-----	D,S	A
5R1	----do----------	M. O. Schrader	5-14-60	585	Dr	125	6	31	Gh	100	25	Ss	P	C	33	12	D,S	L, A; Dd 92 ft after 3 hr bailing at 12 gpm
6D1	F. Stalker	W. L. Laughlin	6-53	550	Dr	21	8	21	S	12	9	S,G	Pl	U	12	-----	D	La, A; Screen, 8 ft of 6-in dia, no. 18 slot
6D2	H. Brunot	----do----------	9- 5-55	550	Dr	50	8	50	Co	47	3	G	Pl	C	21	10	D	L, A; Dd 1ft after 2 hr bailing at 10 gpm
6P1	L. Brubock	----do----------	7-46	535	Dr	50	4	50	S	12	38	G	Pl	U	12	-----	S	La; Screen, 3 ft of 2-in dia, no. 80 gauze
8M1	Parke County Coal Co.	----------	--------	550	Dr	266	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La; Ashley (1899)
11Q1	R. H. Poll	M. O. Schrader	2-28-60	570	Dr	38	6	38	S	11	29	S,G	Pl	U	11	50	D,S	L, A; Dd 7 ft after 5 hr pumping at 50 gpm; Screen, 5 ft of 6-in dia, no. 50 slot
13P1	D. S. Chapman	R. L. Scobee and Sons	9-10-60	670	Dr	250	7	181	Gh	175	75	Ss	P	C	102	8	D,S	La, A; Dd 33 ft after 3 hr bailing at 8 gpm
14Q1	G. Kerr	----------	2-25-48	580	D	1,315	-----	-----	-----	185	15	Ss	P	--	---	-----	Og	G. H. Prodorman 1; L (partial)
17S1	Parke County Coal Co.	----------	--------	600	Dr	611	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La; Ashley (1899)
18P1	H. Albright	M. O. Schrader	12-24-59	630	Dr	73	6	73	S	55	18	S,G	Pl	C	29	30	D,S	L, A; Dd 11 ft after 20 hr bailing at 30 gpm; Screen, 4 ft of 6-in dia, no. 50 slot
20D1	C. O. Callis	----do----------	9- 4-59	630	Dr	165	6	84	Gh	-----	-----	-----	P	C	90	8	S	L, A; Dd 75 ft after 4 hr bailing at 8 gpm
22D1	C. Puffley	----do----------	9-28-56	555	Dr	78	6	57	Oh	57	22	Ss	P	--	---	11	P	La, A
22D2	P. Sellers	----do----------	7- 7-56	555	Dr	56	6	27	Oh	27	29	Ss	P	--	---	4.5	D	La
22D3	E. Payton	----do----------	6-21-57	550	Dr	64	6	58	Oh	58	6	Ss	P	--	---	10	D	L, A
22E1	J. Hartman	R. L. Scobee and Sons	1945	570	Dr	73	6	25	Oh	18	55	Ss	P	--	---	-----	D	A
22E2	Bridgeton School	M. O. Schrader	8- 3-56	560	Dr	96	6	58	Oh	54	42	Ss	P	--	---	35	P	L, A
22E3	A. McHargue	R. L. Scobee and Sons	1945	565	Dr	66	6	23	Oh	16	40	Ss	P	--	---	-----	N	
22E4	C. P. Burke	----do----------	1945	555	Dr	82	6	24	Oh	17	65	Ss	P	--	16	-----	D	
22E5	N. Harney	M. O. Schrader	8-26-59	560	Dr	70	6	22	Oh	23	47	Ss	P	C	22	6	D	La, A; Dd 48 ft after 4 hr bailing 8 gpm
22K1	I. Stant	----do----------	5-24-54	610	Dr	90	6	88	Co	80	10	S,G	Pl	--	---	-----	D	L, A
22M1	I. M. Brown	----do----------	8-11-54	585	Dr	84	6	37	Oh	37	47	Ss	P	--	---	3.5	D	L
24P1	Shell Oil Co.	E. C. Baker and Sons	1939	665	Dr	237	8	173	Oh	173	61	Ss	P	--	---	9	I	L, A
24R1	P. O. Grothe	M. O. Schrader	2-10-53	660	Dr	110	-----	110	Co	80	20	S	Pl	--	---	-----	Dd	L
28L1	M. Lee	Ringo and Son	3-53	580	Dr	130	6	83	Oh	115	15	Ss	P	C	32	5	D	L, A; Dd 88 ft pumping at 5 gpm
31B1	P. Barnes	L. Adkins	1-41	540	Dr	40	6	40	P	22	18	S,G	Pl	--	---	-----	D,S	La, A
32E1	J. F. Mitchell, Jr.	----do----------	11-24-47	555	Dr	94	6	88	Oh	77	11	S	Pl	--	---	-----	D,S	L, A; Water from sand, comes under end of casing
35M1	G. and F. Coal Co.	M. O. Schrader	5- 6-57	620	Dr	58	6	-----	-----	-----	-----	-----	----	--	---	-----	T	La
35N1	----do----------	----do----------	5- 6-57	630	Dr	74	8	-----	-----	-----	-----	-----	----	--	---	-----	T	La
35N2	----do----------	----do----------	5- 6-57	630	Dr	68	8	-----	-----	-----	-----	-----	----	--	---	-----	T	La
35Q1	J. Dellacca	----do----------	2-20-54	650	Dr	155	6	98	Oh	-----	-----	Ss	P	--	---	2.5	D	L, A
36L1	W. Ellison	----do----------	4-14-58	620	Dr	105	6	49	Oh	50	55	Ss	P	--	---	3	D,S	La, A
36L2	E. Byerly	M. O. Schrader	9- 6-55	625	Dr	120	6	24	Oh	40	80	Ss	P	--	---	4	D,S	L, A
14/8W- 1J1	Ohio Oil Co.	----------	--------	532	Dr	38	8	-----	Co	-----	-----	S,G	Pl	C?	---	-----	O	Observation well Parke 2; W; Water level 6.73 ft 2-5-57
5G1	R. Tolin	W. L. Laughlin	1949	510	Dr	65	6	35	Gh	-----	-----	-----	P	--	37	10	D,S	L, A; Dd 10 ft bailing at 10 gpm

14/8W- 5G1	Mr. Fox	L. Schell	4- 4-58	560	Dr	90	8	66	Oh	84	14	Ls	P	C	19	8	P	L; Water at limestone and shale contact at 78 ft
9P1	G. Virostko	Ringo and Son	11- 1-47	615	Dr	148	6	-----	Oh	125 137	2 1	C C	P P	--	---	-----	D,S	L, A
14J1	V. Brown	W. L. Laughlin	4-53	530	Dr	44	6	44	Oo	40	4	S,G	Pl	C	25	-----	D	L, A
16R1	D. Evans	----------	-------	515	Du	8	-----	8	-----	-----	-----	-----	Pl	--	6	-----	D,S	A
18P1	R. Brown	C. Schell	8- 5-59	620	Dr	205	8	191	Oh	161	31	S,G	Pl	C	127	13	D,S	L, A; Reported Dd 0 ft after 2 hr pumping at 13 gpm
18R1	M. Heaton	L. Adkins	3-25-42	610	Dr	150	8	150	Oo	145	5	S,G	Pl	--	---	-----	D,S	L, A
			5-42				4	180	Oo	170	20	G	Pl	--	---	-----		Well deepened by L. Adkins
21A1	C. Kinsey	----do----------	4- 7-48	540	Dr	82	8	17	Oh	-----	-----	-----	P	C	15	-----	D	L, A
22L1	L. Chaney	----do----------	12-18-48	620	Dr	255	8	-----	-----	-----	-----	-----	P	--	---	-----	D,S	L
23R1	E. Beatty	W. L. Laughlin	10-16-59	570	Dr	118	6	118	Oo	95	23	G	Pl	C	62	7	D	L, A; Reported Dd 0 ft after 2 hr bailing at 7 gpm
26A1	D. Barnes	----do----------	8- 1-55	550	Dr	80	6	79	Oo	79	1	G	Pl	C	---	10	D,S	L, A
30P1	E. Huxford	F. E. Larrabee	--------	605	Dr	270	6	170	P	245	25	Ss	P	C	97	5	D	L, A; Dd 148 ft after 4 hr bailing at 5 gpm
							5	270										
30R1	F. Blair	----do----------	1944	595	Dr	188	4	165	-----	127	38	G	Pl	C	84	20	D,S	L, A; Water from gravel comes under end of casing
30R2	----do----------	----do----------	1945	595	Dr	155	4	155	Oo	127	28	G	Pl	C	60	20	----	La
31D1	E. Huxford	----------	1-21-54	598	Dr	1,844	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	W. Abel and H. L. Wood 1; La
31P1	T. Wilson	H. R. Knox	12-44	600	Dr	121	7	121	Oo	105	16	S,G	Pl	C	32	-----	D,S	L,A
33J1	W. Brant	L. Adkins	8-17-41	555	Dr	45	8	38	-----	-----	-----	S	Pl	--	---	-----	D,S	
33L1	I. Edington	----do----------	6-11-41	600	Dr	150	6	83	Oh	140	10	Ss	P	--	---	-----	D,S	L, A
33Q1	C. Martz	----do----------	3- 6-61	600	Dr	90	6	34	-----	38	2	S,G	Pl	C	30	3.5	D	L; Dd 60 ft bailing at 3.5 gpm
							4	80	P	74	18	S,G	Pl	C				
34A1	Town of Rosedale	Heldt-Monroe	1951	530	Dr	48	10	48	-----	-----	-----	G	Pl	U	14	100	P	Dd 2 ft after 8 hr pumping at 100 gpm
34F1	L. Lane	L. Lockard	1955	540	Dr	59	8	59	S	8	51	S,G	Pl	U	8	300	Ir	La; Screen, 15 ft of no. 20, 40, and 80 slot
34H1	A. Yeargin	----do----------	1- 1-54	540	Dr	90	8	80	S	16	74	S,G	Pl	U	16	400	Ir	L; Screen, 15 ft of no. 60 slot
35C1	S. S. Lane	L. Adkins	1952	530	Dr	68	10	68	S	19	49	S,G	Pl	U	19	600	Ir	Screen, 15 ft of no. 100 slot
35C2	----do----------	----do----------	1952	530	Dr	113	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	L
35Q1	G. W. Withers	J. C. Howse and Son	1- 3-54	540	Dr	1,490	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	Hedgrave Petroleum Co. and F. Bruce; La
36C1	H. V. Lee	----------	6-18-49	527	Dr	1,362	-----	-----	-----	210	30	Ss	P	--	---	-----	Og	Midwest Petroleum Co. 1; L (partial)
14/9W- 1R1	S. Kamm	Smith Bros.	--------	525	Dr	72	-----	72	S	70	2	G	Pl	C	30	-----	D,S	L; Screen, 1 ft of no. 80 slot
13M1	J. Zambonini	L. Adkins	4-12-48	630	Dr	250	8	147	Oh	-----	-----	-----	----	--	---	-----	N	La; Well dry, 8-24-59
13Q1	R. Brown	W. L. Laughlin	3-27-51	605	Dr	250	6	160	Oh	232	5	Ls	P	C	100	2.5	D,S	L, A; Dd 40 ft pumping at 2.5 gpm
14K1	W. Davis	L. Lockard	8- 8-60	530	Dr	105	4	105	P	95	10	G	Pl	C	58	10	D	L, A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
14L1	S. C. Stultz	----------	8-49	470	Dr	1,450	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	J. Gambill and O. M. Randleman 1; La
23A1	C. Wilding	F. E. Larrabee	3-11-61	525	Dr	87	2½	87	S	53	34	S,G	Pl	U	68	7	D	L; Reported Dd 0 ft after 2 hr pumping at 7 gpm; Screen, 3 ft of 1½-in dia, no. 50 slot
23H1	F. Yowell	L. Adkins	9-47	530	Dr	36	6	36	Oo	18	18	S,G	Pl	--	---	-----	N	La
23H2	F. Zoyonfus	----do----------	1- 7-47	535	Dr	45	8	45	P	18	27	G	Pl	--	---	-----	D	La, A
23H3	M. Shoemaker	F. E. Larrabee	4-15-60	535	Dr	93	2½	93	S	55	38	S,G	Pl	U	68	6	D	La, A; Reported Dd 0 ft after 3 hr pumping at 8 gpm; Screen, 3 ft of 1½-in dia, no. 40 slot
23H4	G. Moss	L. Adkins	1-24-47	535	Dr	101	7	101	P	51	50	G	Pl	--	---	-----	D	La
23R1	R. Golden	F. E. Larrabee	4-18-60	530	Dr	87	2½	87	S	54	33	S,G	Pl	U	65	6	D	L, A; Reported Dd 0 ft after 2½ hr pumping at 8 gpm; Screen, 3 ft of 1½-in dia, no. 80 slot
24D1	J. Chaney	Smith Brothers	5-13-58	545	Dr	76	2½	42	S	38	4	S,G	Pl	--	36	-----	D	L; Screen, 2 ft of no. 60 slot
24L1	E. Waters	W. McAlister	1940	590	Dr	188	6	-----	-----	121	45	G	Pl	--	85	-----	D	A
24L2	R. Harkness	R. McDaniel and Sons	8-20-57	600	Dr	63	8	63	-----	-----	-----	-----	Pl?	--	---	-----	D	La
24L3	J. Kaps	----do----------	7-30-57	610	Dr	100	6	100	-----	-----	-----	-----	Pl?	--	---	-----	D	La
24L4	D. Sheppard	L. Schell	1958	610	Dr	273	8	-----	-----	-----	-----	-----	P	--	---	-----	D	L
24M1	J. Rondaci	L. Adkins	2-28-48	535	Dr	98	6	98	S	63	35	G,S	Pl	--	---	-----	D	La, A; Screen, 10 ft

Table 4.--Record of wells, Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
14/9W-25M1	C. Miller	L. Adkins	11- 1-48	525	Dr	90	4	80	P	46	44	S,G	Pl	--	---	-----	D	L, A
26A1	R. Land	Smith Brothers	12-30-60	525	Dr	94	4	94	S	62	32	S,G	Pl	--	---	-----	D	L; Screen 3.5 ft of 3½-in dia, no. 40 slot
26J1	W. Van Duyn	F. E. Larrabee	1945	525	Dr	97	2	97	-----	-----	-----	G	Pl	--	82	-----	D	A
26R1	I. M. Novins	Smith Brothers	9-20-60	530	Dr	105	2½	105	S	71	34	S,G	Pl	U	76	15	D	L; Reported Dd 0 ft after 3 hr pumping at 15 gpm; Screen, 3 ft of 2-in dia, no. 30 slot
35H1	T. Schultz	C. Cassidy	--------	530	Dr	85	-----	85	-----	-----	-----	G	Pl	--	55	-----	D	A
35L1	J. Call	Smith Brothers	12-15-60	510	Dr	83	4	83	S	-----	-----	S,G	Pl	--	---	20	D	La, A; Reported Dd 0 ft after 3 hr pumping at 20 gpm; Screen, 2.5 ft of 4-in dia, no. 40 slot
35R1	R. Robinson	----do----------	8-20-59	510	Dr	70	2	70	S	50	20	S,G	Pl	U	50	15	D	La, A; Reported Dd 0 ft after 2 hr pumping at 15 gpm; Screen, 3.5 ft of 1¼-in dia, no. 12 slot
15/8W- 7E1	G. Seip	D. Chavis	--------	730	Dr	130	6	63	Oh	120	10	Ss	P	--	---	30	D,S	A
7H1	C. Roeder	M. Crabb	10-14-51	740	Dr	123	4	85	Ob	65	58	Sh	P	C	35	-----	P	Lm, A
7J1	R. Porter	D. Chavis	--------	740	Dr	125	-----	112	Oh	112	13	Ls	M	--	---	1.5	D	Lm
7J2	Mr. Hardesty	----do----------	1955	740	Dr	80	6	80	Oe	-----	-----	S	Pl	--	---	-----	D	A
7K1	W. B. Blue	----do----------	--------	740	Dr	145	6	100	Oh	-----	-----	Ss	P	--	---	30	S	Lm (partial), A
8E1	Town of Bellmore	----do----------	--------	740	Dr	278	-----	118	Ob	116	162	Ls	M	--	---	1.5	P	Lm, A
8J1	C. Hartman	M. Crabb	12-16-52	720	Dr	47	4	44	Ob	44	3	Sh	P	C	15	-----	D	Lm
8N1	H. Spencer	Ruark Well Drilling	9-14-60	740	Dr	132	6	65	Oh	90	42	Ls	M	C	30	6	S	L; Dd 100 ft after 3 hr bailing at 6 gpm
9G1	Mr. Blake	V. Haydon	1946	740	Dr	180	8	30	Oh	-----	-----	-----	----	--	---	-----	P	L, A
9J1	Mr. Williams	C. Cassidy	--------	740	Dr	116	6	38	Oh	114	2	Ss	M?	C	87	5	P	La, A
10E1	C. Bucklor	R. L. Scobee and Sons	1943	750	Dr	166	6	76	Oh	70	96	Ss	P?	--	70	-----	D,S	A
10L1	W. Hatfield	Ruark Well Drilling	9-19-60	665	Dr	110	4	28	Oh	-----	-----	Ls	M	--	55	3	D	L, A; Dd 55 ft after 3 hr bailing at 3 gpm
10P1	D. Cooper	----do----------	4-12-61	675	Dr	115	6	28	Oh	-----	-----	Ls	M	--	50	3	D	La; Dd 65 ft after 2½-hr bailing at 3 gpm
11K1	N. R. Stanley	----do----------	1-27-61	750	Dr	100	6	25	Oh	60	40	Ls	M	C	21	5	D	L; Dd 79 ft after 2 hr bailing at 5 gpm
12M1	O. Thomas	Ruark and Toney	1948	800	Dr	98	6	74	Oh	70	28	Sls,Ls	M?	--	---	7	D,S	La, A
13Q1	G. Berry	L. Smith	1942	810	Dr	45	-----	31	Oh	-----	-----	Ss	----	--	---	-----	D	A
14N1	W. Anderson	D. Chavis	--------	780	Dr	148	6	58	Oh	-----	-----	-----	-----	--	---	-----	D	La
15A1	N. Dillman	Holt Brothers	5- 3-60	690	Dr	63	4	63	S	60	3	G	Pl	C	50	10	D	La; Reported Dd 0 ft after 2 hr pumping at 10 gpm; Screen, 2 ft of 3 3/4-in dia, no. 40 slot
15B1	Mr. Ebert	----do----------	11-27-60	720	Dr	93	4	60	Oh	80	13	Ls,Sh	M	C	65	7	D	L; Reported Dd 0 ft after 1 hr pumping at 7 gpm
15B2	Mr. Richardson	----do----------	11-30-60	710	Dr	93	4	83	Oh	80	13	Ls,Sh	M	C	65	10	D	La; Reported Dd 0 ft after 1 hr pumping at 10 gpm
16F1	R. Reed	Ruark Well Drilling	8-15-60	700	Dr	100	4	91	Oh	88	12	Ss	P	C	55	6	D	L; Dd 45 ft after 1 hr bailing at 6 gpm
19C1	F. Moore	D. Chavis	--------	720	Dr	163	-----	-----	Oh	85	78	Ls	M	--	---	30	D,S	Lm
22G1	W. Anderson	Ruark Well Drilling	3-31-61	705	Dr	335	6	50	Oh	-----	-----	Ls	M	--	57	1.5	P	L; Dd 278 ft after 10 hr pumping at 1.5 gpm
22K1	E. Conway	----do----------	8-12-60	735	Dr	134	4	131	Oh	128	6	Ls	M	C	55	20	D	La, Dd 20 ft after 1 hr pumping at 20 gpm
24J1	C. R. Adamson	Smith Brothers	11- 7-58	800	Dr	40	6	40	P	-----	-----	Ss	P	--	---	6	D	La
27B1	C. Noble	D. Chavis	--------	740	Dr	108	6	70	Oh	88	20	Ss	P	--	---	-----	D	Lm (partial)
27C1	U. S. Government	----------	11-23-55	746	Dr	56	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
27C2	----do----------	----------	4- 6-55	733	Dr	66	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La

15/6W-27C3	U. S. Government	----------	4-20-55	744	Dr	74	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
27C4	----do----------	----------	5- 2-55	748	Dr	78	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
27D1	----do----------	----------	2-24-55	716	Dr	92	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L
27E1	----do----------	----------	3- 8-57	704	Dr	104	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L, Water level 27.5 ft 3-8-57
27E2	----do----------	----------	4-28-55	700	Dr	30	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
27F1	----do----------	----------	4- 1-55	718	Dr	61	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
27F2	----do----------	----------	1- 6-56	748	Dr	58	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L
27F3	----do----------	----------	12-20-55	751	Dr	61	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L, Water level 38.0 ft 12-21-55
27K1	----do----------	----------	--------	749	Dr	112	8	84	Oh	-----	-----	Ls	M	C	48	-----	O	E, G, Observation well Parke 4, W
28A1	----do----------	----------	3- 1-55	805	Dr	88	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La; Water level 8.0 ft 2-28-55
28D1	----do----------	----------	3-23-55	691	Dr	45	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L
28D2	----do----------	----------	3-18-55	692	Dr	50	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
28F1	----do----------	----------	2- 5-57	730	Dr	40	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
28G1	----do----------	----------	2- 6-57	713	Dr	60	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
28G2	----do----------	----------	6- 1-54	708	Dr	94	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L, Water level 79.7 ft 6-2-54
28G3	----do----------	----------	5-25-54	686	Dr	169	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L; Water level 39.0 ft 5-24-54
28H1	----do----------	----------	10-20-55	609	Dr	44	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L; Water level 9.0 ft 10-20-55
28H2	----do----------	----------	3-10-55	607	Dr	87	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La; Water level 7.9 ft 3-11-55
28H3	----do----------	----------	3- 7-55	604	Dr	29	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La; Water level 3.9 ft 3-7-55
28Q1	N. M. Rowings	M. O. Schrader	8-23-54	620	Dr	140	6	80	Oh	-----	-----	Ls	M	--	---	4	D,S	L, A
31M1	C. Michael	D. Chavis	--------	700	Dr	150	-----	-----	Oh	120	10	Ss	P	--	---	20	D,S	Lm (partial), A
34D1	Indiana State Highway Department	----------	6-13-58	611	Dr	19	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	L
34D2	----do----------	----------	6-13-58	616	Dr	18	-----	-----	-----	-----	-----	-----	-----	--	---	-----	T	La
34R1	W. L. Mathews	R. L. Scobee and Sons	1940	750	Dr	284	6	160	Oh	150	134	Sh,Ss	-----	C	80	-----	D,S	
35E1	J. Snodgrass	D. Chavis	--------	780	Dr	170	6	170	P	45	125	S	Pl	--	---	-----	S	A
35H1	T. Quinn	----do----------	12-28-57	710	Dr	58	8	22	Oh	-----	-----	-----	P	C	9	15	D	L
36J1	L. W. Sommerville	Ruark and Toney	1948	805	Dr	193	8	177	Oh	173	20	Ss	P	C	30	3	D,S	La
15/7W- 3M1	R. E. Adams	W. L. Laughlin	8-24-56	590	Dr	32	6	32	P	15	17	G	Pl	U	15	13	D,S	L, A; Reported Dd 0 ft after 2½ hr pumping at 13 gpm
4K1	M. Lundgreen	M. Crabb	8- 1-53	620	Dr	102	4	82	Oh	82	40	Ss	P	C	20	-----	D	Lm, A
9D1	P. Crowder	A. R. Scobee	4-12-60	680	Dr	120	7	68	Oh	99	21	Ss	P	C	25	8	D	L; Dd 70 ft after 4 hr bailing at 8 gpm
9K1	City of Rockville	Layne-Northern Co., Inc.	9-28-33	575	Dr	46	72 38	25 48	Gp	-----	-----	S,G	Pl	C	15	500	P	Screen, 15 ft of 38-in dia, no. 5 shutter
9K2	----do----------	Diehl Pump and Supply Co.	8-54	570	Dr	59	26	39	Gp	23	36	S,G	Pl	C	8	400	P	Dd 17 ft after 8 hr pumping at 407 gpm; Screen, 20 ft of shutter
9K3	----do----------	----do----------	5-54	570	Dr	67	-----	-----	-----	23	44	S,G	Pl	C	13	-----	T	L
9J1	----do----------	----do----------	4- 5-54	575	Dr	70	-----	-----	-----	14	56	S,G	Pl	C	14	-----	T	La
9J2	----do----------	----do----------	4-54	570	Dr	67	-----	-----	-----	13	54	S,G	Pl	U	13	-----	T	L
10A1	State of Indiana	Layne-Northern Co., Inc.	9-16-48	575	Dr	44	12 10	28 44	S	10	34	S,G	Pl	U	10	-----	P	La, Screen, 15 ft of 10-in dia, no. 7 shutter
10A2	----do----------	Diehl Pump and Supply Co.	8-50	575	Dr	53	12	53	S	23	30	S,G	Pl	U	23	260	P	L, Screen 15 ft of 12-in dia
13B1	W. C. Rose	C. Cassidy	1901	715	Dr	250	6	-----	Oh	180	60	Ls	M	--	---	-----	Do	La
13D2	-----do----------	M. O. Schrader	3-21-58	715	Dr	141	6	79	Oh	137	4	Ss	P	--	---	2	D,S	L, A
13E1	C. C. Thompson	D. Chavis	--------	710	Dr	188	6	83	Oh	180	8	Ss	P	--	---	30	D, S	Lm, A
14A1	L. Spurr	----do----------	--------	720	Dr	204	6	83	Oh	185	19	Ss	P	--	---	30	D,S	A
18B1	City of Rockville	Diehl Pump & Supply Co.	5-54	585	Dr	80	-----	-----	-----	20	40	S,G	Pl	--	13	-----	T	L
18L1	L. W. Fisher	A. R. Scobee	3-22-55	680	Dr	404	6	143	Oh	204	140	Ls	M	--	---	-----	D	L, A
20Q1	Indiana State Highway Department	----------	6-14-56	550	Dr	40	-----	-----	-----	-----	-----	-----	Pl	--	---	-----	T	L
20Q2	----do----------	----------	6-14-56	550	Dr	40	-----	-----	-----	-----	-----	-----	Pl	--	---	-----	T	La
26N1	Wimmer Coal Co.	M. O. Schrador	8-10-51	690	Dr	70	6	70	-----	-----	-----	-----	-----	--	---	-----	I	La; Mine pump hole
27R1	Batterman Mining Co.	Ringo and Son	11-48	660	Dr	66	8	20	-----	-----	-----	-----	-----	--	---	-----	I	L; Mine pump hole
31P1	E. G. Beavers	W. L. Laughlin	6-48	555	Dr	101	4	71	Oh	70	31	Sh	P	C	18	-----	S	La, A
32H1	A. Ferguson	----do----------	5-54	540	Dr	250	6	130	Oh	150	100	Ls	M	C	30	12	S	L; Dd 25 ft after 8 hr pumping at 12 gpm
35D1	Wimmer Coal Co.	----do----------	11-47	685	Dr	72	8	-----	-----	-----	-----	-----	-----	--	---	-----	I	La; Mine pump hole
15/8W- 1M1	U. S. Government	R. L. Clark	10-50	730	Dr	172	6	152	S	142	30	S,G	Pl	C	62	100	P	L; Dd 12 ft after 24 hr pumping at 100 gpm; Screen, 20 ft, no. 80 slot
3Q1	D. C. Stutler	----------	--------	605	Du	19	12	19	-----	-----	-----	-----	Pl	C	3	-----	O	Observation well Parke 1, W
4P1	C. Gaines	M. O. Schrader	8-18-57	660	Dr	355	6	151	-----	-----	-----	-----	P	--	---	2	D,S	L, A; not used dor drinking

Table 4.--Record of wells Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
15/8W- 5J1	G. Henderson	W. L. Laughlin	1940	540	Dr	63	4	63	S	60	3	S,F	Pl	C	18	-----	D	L, A; Screen, 3 ft of 2-in dia, no. 60 gauze
5J2	D. Collings	----do----------	3- 7-50	540	Dr	235	6	26	Oh	195	17	Ss	P	C	37	3	D,S	L
5Q1	M. Culton	----do----------	1936	550	Du	32	2½	32	-----	-----	-----	G	Pl	--	10	-----	Do	
6H1	S. Smith	M. Crabb	7-20-50	550	Dr	110	4	110	Oo	-----	-----	S,G	Pl	U	---	-----	D,S	Lam, A
7N1	S. Hessler	W. L. Laughlin	12-46	530	Dr	80	6	80	Oo	-----	-----	S,G	Pl	U	30	-----	D,S	La
12D1	W. Hargrave	----do----------	9-53	690	Dr	193	6	150	Oh	150	43	Ls	M	C	50	9	D	L, Dd 35 ft after 6 hr pumping at 9 gpm
12F1	R. Boyd	----do----------	--------	695	Dr	173	4	160	Oh	160	13	Sh	P	C	30	-----	S	La, A
14E1	L. Sparks	----------	2-16-48	620	Dr	1,444	-----	-----	-----	18	28	S	Pl	--	---	-----	Og	H. Craig and H. Phillips 1; L (partial)
										275	28	Ss	P					
18E1	H. Robertson	M. Crabb	2-57	540	Dr	216	4	18	Oh	-----	-----	Sh	P	C	36	-----	N	Lam
19A1	E. Myers	W. L. Laughlin	5-20-58	540	Dr	125	6	51	Oh	100	25	Ss	P	--	---	5	D	L, A; Dd 20 ft after 2 hr bailing at 5 gpm
19R1	P. Stover	L. Schell	1957	640	Dr	92	6	83	Oh	45	-----	-----	Pl	C	30	1	D	L, A; 8-in hole, annular space filled with gravel
										90	2	C	P					
23Q1	J. M. McDowell	M. O. Schrader	10-15-56	645	Dr	130	6	100	Oh	102	28	Sh	P	--	---	2	D,S	L, A
24D1	R. Vaught	W. L. Laughlin	--------	650	Dr	87	6	-----	-----	85	2	S,G	Pl	C	76	-----	D	L
24N1	P. Trotzke	M. O. Schrader	9-23-54	650	Dr	104	6	104	Oo	103	1	G	Pl	C	75	35	D	L, A
25F1	L. W. Fishor	W. L. Laughlin	9-25-56	640	Dr	104	6	104	Oo	103	1	G	Pl	--	---	-----	D,S	L, A
27H1	M. D. Swaim	----do----------	4-49	640	Dr	110	8	89	Oh	90	20	Ss	P	C	50	-----	D,S	L, A
32D1	F. S. Wood	----do----------	9-20-55	520	Dr	78	6	28	S,Oh	-----	-----	S,G	Pl	--	---	10	D	L; Dd .5 ft after 3 hr pumping at 10 gpm
32L1	G. Laws	----do----------	1947	505	Dr	44	6	10	Oh	-----	-----	-----	P	C	15	3	D	L, A
32L2	----------	Mr. McCullum	--------	510	Dr	119	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La; Ashley (1899)
33L1	W. H. Davis	W. L. Laughlin	3-59	640	Dr	309	6	150	Oh	285	24	Ss	P	C	135	5	D,S	L, A; Dd 30 ft after 3 hr bailing at 5 gpm
15/9W- 1C1	O. Gill	M. O. Schrader	11-19-56	490	Dr	65	6	65	P	55	10	S,G	Pl	--	33	-----	D,S	La
1R1	L. Myers	W. L. Laughlin	1946	525	Du	48	2½	48	S	40	8	S,G	Pl	--	33	-----	D,S	Screen 20-in dia drive point
2A1	Western Indiana Gravel	----do----------	2-29-51	490	Dr	98	6	98	Oo	21	77	S,G	Pl	C	16	5	I	L; Dd 7 ft after 2½ hr pumping at 5 gpm
12J1	H. Tucker	M. Crabb	1950	520	Dr	220	4	25	Oh	-----	-----	-----	P	--	---	-----	D,S	Lam
13E1	C. Baldwin	W. L. Laughlin	8-41	500	Dr	60	4	60	Oo	47	13	S,G	Pl	U	47	-----	D	A
13P1	R. Baldwin	M. Crabb	1-51	490	Dr	59	4	39	Oo	36	3	S,G	Pl	C	30	-----	D,S	Lm, A
13Q1	G. Shorrill	W. L. Laughlin	10-46	480	Dr	115	6	100	Oh	100	15	Sh	P	C	22	-----	N	L
14R1	E. M. Fisher	L. Schell	7-15-59	495	J	63	2½	63	S	30	33	S,G	Pl	C	29	10	D	La, A; Screen, 3 ft of 2½-in dia, no. 30 slot
36R1	C. Dickey	----do----------	3-58	540	Dr	110	6	88	S	83	5	S,G	Pl	C	71	7	D,S	Lm, A; Screen, 2 ft of no. 20 slot, bottom set at 88 ft
16/8W- 2J1	H. Ramsey	Ruark and Toney	1946	780	Dr	112	6	36	Oh	32	80	Sls	M	--	---	-----	D,S	La
2L1	F. Gardner	----do----------	1947	790	Dr	83	6	54	Oh	53	30	Ls	M	--	---	-----	S	La, A
8C1	C. Bushong	Swishor and Swank	9-26-57	670	Dr	56	4	37	Oh	35	21	Ss	P	--	39	12	D,S	Lam, A
9K1	F. E. Spencer	R. L. Scobee and Sons	1945	755	Dr	230	6	196	Oh	188	42	Sls	M	--	---	-----	D,S	La
11F1	W. B. McClain	Mr. Moolahan	1886	790	Dr	108	3	-----	Oh	100	8	Sls	M	--	---	-----	S	A
12G1	J. L. Allen	Ruark and Toney	1948	780	Dr	111	6	88	Oh	84	27	Ls	M	--	---	-----	D,S	La, A
12H1	Indiana State Highway Department	----------	1-15-57	756	Dr	40	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	L
12H2	----do----------	----------	1-11-57	758	Dr	40	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
12J1	J. L. Allen	Layne-Northern Co., Inc.	8-22-40	775	Dr	80	6	80	S	75	5	S,G	Pl	C	29	39	D,S	L, A; Dd 10 ft pumping at 38 gpm; Screen, 5 ft of 8-in dia, no. 20 slot
18C1	C. Porter	Ruark Well Drilling	6-25-60	655	Dr	200	8	30	Oh	-----	-----	Sls?	M	--	26	2.5	S	L, A; Dd 174 ft after 3 hr pumping at 2.5 gpm
20M1	M. Nesler	D. Chavis	--------	720	Dr	120	6	65	Oh	100	20	Ss	P	--	---	-----	D,S	A
23E1	Indiana State Highway Department	----------	8-24-58	697	Dr	40	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	L
23E2	----do----------	----------	8-24-58	700	Dr	40	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
23M1	----do----------	----------	9-24-58	700	Dr	40	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
25P1	M. L. Smith	D. Chavis	8-54	785	Dr	228	6	112	Oh	112	116	Ls	M	--	---	-----	D,S	Lam, A

16/6W-28E1	R. E. Smith	D. Chavis	--------	750	Dr	200	6	200	Qa	-----	-----	S	Pl	--	50	-----	D,S	A
28H1	R. Spencer	V. Hayden	1946	735	Dr	80	6	60	Qa	77	3	G	Pl	--	---	-----	D,S	L
28P1	L. Leatherman	M. Crabb	11-15-51	740	Dr	188	4	60	Oh	60	128	Sh	M	C	25	-----	D,S	Lm, A
31Q1	R. Neild	A. H. Scoboe	4- 5-60	730	Dr	128	7	48	Oh	113	15	Ls	M	C	30	13	D,S	L, A; Dd 60 ft after 3 hr bailing at 13 gpm
34N1	R. Coleman	M. O. Schrader	9- 4-54	740	Dr	230	6	92	Oh	-----	-----	-----	P	--	---	1	S	L, A
35M1	F. Fritts	Ruark Well Drilling	10-20-59	750	Dr	105	6	39	Oh	-----	-----	-----	P	C	13	6	D,S	L, A; Dd 90 ft after 1 hr bailing at 6 gpm
35Q1	J. C. Shalley	V. Hayden	1947	760	Dr	146	8	34	P	36	8	Ss	P	--	---	-----	---	
							4	146		138	10	Ss	P	--	---	-----	D,S	La, A
18/7W- 3K1	H. Butler	W. L. Laughlin	6- 1-58	705	Dr	112	7	85	Oh	104	8	Ss	P	C	14	10	S	L, A; Dd 8 ft after 5 hr pumping at 10 gpm
4G1	A. S. Hadley	----do----------	4-34	665	Dr	80	2½	59	Oh	60	3	C	P	C	15	-----	D	La
4G2	----do----------	----do----------	4-34	650	Dr	76	2	58	Oh	70	3	C	P	C	8	-----	S	L
4H1	L. Davies	----do----------	6-22-55	680	Dr	230	6	84	Oh	218	12	Ss	P	C	150	3.5	D,S	La; Dd 80 ft after 2 hr pumping at 3.5 gpm
4H2	A. S. Hadley	----do----------	4-34	670	Dr	90	2	58	Oh	67	3	Ls	P	C	10	20	N	La; Dd 12 ft pumping at 20 gpm
4H3	P. Roberts	----do----------	10-46	675	Dr	200	6	94	Oh	160	20	Ss	P	C	80	2.5	D,S	L, A
4H4	----do----------	----do----------	3-40	675	Dr	146	4	81	Oh	80	10	F,Ls	P	C	18	3	D	La
4K1	O. Myers	----do----------	--------	670	Dr	54	-----	-----	Oh	42	12	Ss	P	C	12	-----	D,S	La
4K2	S. J. Lee	----do----------	7-36	675	Dr	81	4	80	Qa	80	1	G	Pl	C	30	-----	D,S	L, A
4L1	A. W. Camerly	----do----------	--------	680	Dr	80	6	40	Oh	40	40	Ss	P	--	40	-----	D,S	La
4L2	Kraft Food Co.	J. P. Miller Artesian Well Co.	1954	680	Dr	43	-----	-----	-----	34	9	S,G	Pl	--	---	-----	T	L
4M1	A. Hockett	W. L. Laughlin	9-46	680	Dr	118	6	43	Oh	58	62	Sh,Ls	P	C	6	-----	D,S	La
4P1	W. Wilson	Ruark Well Drilling	2-20-61	680	Dr	51	4	51	S	50	1	G	Pl	C	15	12	D	La, Dd 30 ft after 1½ hr pumping at 12 gpm; Screen, 25 ft of 4-in dia, no. 20 slot
5N1	F. DePlanty	M. O. Schrader	4- 7-57	630	Dr	64	6	84	Qa	60	4	S,G	Pl	--	---	17	D,S	La, A
6D1	W. Ritchey	Ruark Well Drilling	5-27-60	640	Dr	298	6	104	Oh	-----	-----	-----	P,M	C	85	.2	D	L, A; Dd 213 ft after 1 hr bailing at 0.2 gpm
6N1	C. Chamness	W. L. Laughlin	10-53	660	Dr	88	6	44	Oh	80	8	Ls	P	C	30	5	P	L, A, Dd 19 ft after 3 hr pumping at 5 gpm
7C1	W. Ritchey	----do----------	8-54	650	Dr	42	6	42	Qa	38	4	S,G	Pl	C	12	6	D	La, A; Reported Dd 0 ft after 4 hr pumping at 6 gpm
7J1	G. Timberlake	C. E. Crick	7-11-51	690	Dr	1,259	-----	-----	-----	-----	-----	-----	----	--	---	-----	---	F. D. Cline 1; La, E (partial)
8L1	W. O. Engle	W. L. Laughlin	4-49	660	Dr	28	8	28	Qe	27	1	S,G	Pl	--	---	-----	D,S	L
9C1	I. Ulery	----do----------	4-35	685	Dr	89	4	52	Oh	71	28	Sh,Ls	P	C	9	-----	D	La, Water from crevice at 94 ft
9F1	Kraft Foods Co.	J. P. Miller Artesian Well Co.	2-10-56	710	Dr	315	12	97	Oh	190	10	Ss	P	C	135	25	I	L
										230	15	Ss	P					
9F2	G. Marshall	W. L. Laughlin	5-36	700	Dr	59	4	30	Oh	25	34	Ss	P	C	21	-----	D	La
9G1	Kraft Foods Co.	R. L. Scoboe and Sons	1932	700	Dr	189	-----	68	Oh	-----	-----	Ss	P	--	---	-----	Do	La
9G2	----do----------	Strommel and Hill	3-34	700	Dr	251	10	70	Oh	-----	-----	-----	P	--	84	18	Do	La
9G3	----do----------	E. R. Parker	--------	700	Dr	1,100	10	-----	-----	-----	-----	-----	P	--	122	50	I	La; Well backfilled to 239 ft 239 ft
9L1	Town of Marshall	Ruark Well Drilling	1958	700	Dr	240	8	77	Oh	80	5	Ss	P	--	---	12	P	L
										85	20	Ls	P					
										145	13	Ls	P					
										170	7	Ss	P					
										210	15	Ls	P					
9P1	----do----------	Strommel and Hill	11-15-41	690	Dr	150	10	101	P,Oh	70	2	G	Pl	--	---	10	P	
10C1	G. E. Branson	M. Crabb	9-52	700	Dr	258	4	67	Oh	67	189	Sh,Ss	P	C	40	-----	D,S	Lam; Well dry 5-18-61
10C2	----do----------	----do----------	--------	700	Dr	127	4	-----	-----	-----	-----	-----	----	--	---	-----	Do	Lam (partial); dry hole
10C3	----do----------	----do----------	--------	700	Dr	33	4	33	Qo	33	-----	G	PL	C	F	-----	Do	Lam; Well dry 5-18-61
12L1	H. Flum	Swisher and Swank	--------	765	Dr	180	4	98	Oh	-----	-----	Sh	P	C	20	1.5	D,S	A
15E1	H. Evans	W. L. Laughlin	10-29-59	765	Dr	270	7	110	Oh	230	40	Ss	P	C	54	5	S	L, A; Dd 45 ft after 2 hr bailing at 5 gpm
15R1	L. O. Pyle	----do----------	2-47	745	Dr	196	6	100	Oh	118	77	Ss	P	C	30	-----	D	L, A
16K1	R. Allen	Ruark and Toney	1948	750	Dr	175	6	149	Oh	145	30	Ss	Pl	--	---	-----	D,S	La, A
16L1	W. Shoaf	W. L. Laughlin	4-34	750	Dr	148	4	148	Qa	146	2	G	Pl	C	30	-----	D	L, A
17F1	J. Jones	----do----------	9- 1-51	665	Dr	102	6	75	Oh	91	11	Ss	P	C	5	5	D	L, A; Dd 20 ft pumping at 5 gpm
17M1	----do----------	----do----------	4-47	685	Dr	103	6	85	Oh	85	18	Ss	P	C	18	6	D	La, A
19J1	C. Manner	----do----------	2-54	725	Dr	220	6	150	Oh	200	20	Ss	P	C	80	3	S	L, A; Dd 70 ft after 2 hr pumping at 3 gpm
19N1	B. Warren	W. L. Laughlin	4-46	715	Dr	141	4	103	Oh	115	5	C	P	C	21	2.5	D	L, A
										124	16	Ls	P					
20L1	A. Stark	----do----------	3-37	740	Dr	111	4	86	Oh	86	25	Ss	P	C	18	-----	D	L, A
21L1	R. Winings	----do----------	1939	725	Dr	90	4	62	Oh	61	29	Ss	P	C	30	-----	D	L, A
22L1	R. Overpack	D. Chavis	--------	720	Dr	100	6	100	Qe	-----	-----	G	Pl	--	---	-----	D	A
22L1	J. Wrightsman	----do----------	--------	715	Dr	130	6	80	Oh	-----	-----	Ss	P	--	---	4	D,S	
23K1	G. Baker	Ruark and Toney	1948	740	Dr	93	6	75	Oh	74	19	Ls?	M	--	---	-----	D,S	La, A

Table 4.--Record of wells, Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone					Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
16/7W-24L1	C. Baker	W. L. Laughlin	8-10-52	615	Dr	65	6	43	Oh	43	22	Ls	M.	C	21	10	D	L, A
24N1	R. Bell	D. Chavis	--------	640	Dr	50	6	50	Oo	-----	-----	S	Pl	--	---	-----	S	A
25F1	C. Thompson	M. O. Schrader	8-11-56	645	Dr	44	6	38	Oh	36	8	Ss	P	--	---	17	I	L, A
26Q1	F. S. Hinkley	W. L. Laughlin	5-19-60	630	Dr	48	6	37	P,Oh	28	9	S,G	Pl	C	18	10	D	L, A; Dd 2 ft after 5 hr bailing at 10 gpm
29E1	M. E. Adair	----do----------	5-46	725	Dr	104	4	84	Oh	99	5	C	P	C	30	-----	D,S	L, A
29Q1	C. Joslin	----do----------	10- 2-59	685	Dr	94	6	20	Oh	50	6	Ss	P	C	F	10	S	L, A; Dd 25 ft after 2 hr bailing at 10 gpm
										85	5	Sh	P					
30F1	M. F. Berry	----do----------	5-15-50	710	Dr	197	5	150	Oh	196	1	Ls	P	C	50	-----	D,S	L, A
30G1	E. Overpeck	M. O. Schrader	1-30-59	725	Dr	44	6	44	S	36	8	S,G	Pl	C	11	17	D,S	La, A; Screen, 5 ft of 6-in dia, no. 50 slot
30N1	R. Grimes	W. L. Laughlin	9-53	700	Dr	100	6	100	Oo	99	1	S,G	Pl	C	18	5	D	L, A; Dd 30 ft after 8 hr pumping at 5 gpm
32H1	J. Mull	----do----------	3-43	695	Dr	80	4	53	Oh	53	27	Ss	P	C	21	-----	D	L, A
33D1	H. P. Mull	R. McDaniel and Sons	8-24-57	700	Dr	83	6	83	Oh	60	23	Ss	P	C	14	2	D	L, A
33N1	J. M. Mull	W. L. Laughlin	5-12-52	700	Dr	102	6	54	S,Oh	50	4	G	Pl	C	14	8	D	L, A; Screen 4 ft of 4-in dia, no. 15 slot
35E1	D. Thomas	D. Chavis	--------	700	Dr	125	6	80	Oh	-----	-----	Ss	P	--	---	2	D	
35Q1	R. E. Adams	W. L. Laughlin	8-27-56	585	Dr	34	6	34	P	14	20	G	Pl	U	14	13	D,S	L, A
16/8W-1E1	L. Osborne	----do----------	7- 9-45	670	Dr	139	6	111	Oh	115	24	Ss	P	--	---	10	D,S	L; Dd 15 ft bailing at 10 gpm
1H1	----do----------	----do----------	4-15-55	655	Dr	102	7	38	Oh	35	40	Ss	P	C	30	7	S	La; Dd 20 ft after 5 hr pumping at 7 gpm
1R1	J. C. McNargulo	----do----------	7-49	650	Dr	30	6	30	Oo	29	1	S,G	Pl	--	---	-----	S	La
2M1	F. C. Alloe	----do----------	--------	675	Dr	81	6	80	Oo	80	1	G	Pl	C	24	5	D,S	L, A; Dd 10 ft after 3 hr bailing at 5 gpm
5L1	L. and A. Polotto	----------	8-15-52	550	Dr	1,260	-----	-----	------	-----	-----	-----	----	--	---	-----	Og	Ralph Mobley, Jr. 1; La
5P1	A. Polotto	----------	2-22-50	525	Dr	1,130	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	O. O. Borden 1; La
7K1	L. Causey	M. Crabb	12-51	530	Dr	70	4	70	Oo	-----	-----	G	Pl	--	40	-----	D	
7K2	A. Taylor	M. O. Schrader	10-29-52	530	Dr	90	6	90	Oo	90	-----	G	Pl	--	---	2	D	La, A
7Q1	H. Norman	----do----------	10-25-54	530	Dr	193	6	97	Oh	-----	-----	-----	P	--	---	.5	D	L, A
7Q2	L. Manwaring	----do----------	2- 9-55	530	Dr	148	6	148	Oo	144	5	G	Pl	--	---	17	D,S	L, A
8N1	G. Holsapple	D. Chavis	4-55	605	Dr	285	6	-----	Oh	-----	-----	-----	P	--	81	1.5	D	L, A
10Q1	M. Davies	W. L. Laughlin	1-58	680	Dr	215	6	80	Oh	-----	-----	-----	P	C	60	10	D,S	L; Dd 60 ft after 2 hr pumping at 10 gpm
11A1	L. G. Ayres	----do----------	6-22-51	650	Dr	210	6	70	Oh	160	10	Ss	P	C	20	5	D,S	L, A; Dd 60 ft after 2 hr pumping at 5 gpm
										196	14	Ss	P	C				
			5- 9-60			253									18	6		Dd 40 ft after 2 hr bailing at 6 gpm; Well deepened by W. L. Laughlin
12C1	L. Shelata	----do----------	1946	645	Dr	82	4	82	S	82	-----	G	Pl	C	18	-----	D	La; Screen, 3 ft, no. 60 gauze
12D1	J. R. Coffin	----do----------	--------	645	Dr	72	3	72	Oo	60	12	S,G	Pl	C	---	-----	D	La
12D2	W. L. Laughlin	----do----------	--------	640	Dr	63	4	63	S	60	3	S,G	Pl	C	18	-----	D	La; Screen, 3 ft, no. 60 gauze
12D3	E. Crowder	----do----------	9-22-56	640	Dr	80	6	80	Oo	60	20	S,G	Pl	C	---	10	D	L; Dd 15 ft after 3 hr pumping at 10 gpm
12D4	A. Wallace	----do----------	4-10-60	640	Dr	60	4	60	P	57	3	G	Pl	C	11	6	D	La; Dd 3 ft after 8 hr bailing at 6 gpm
12E1	J. Hannor	----do----------	2-58	640	Dr	35	6	35	Oo	30	5	G,Cl	Pl	C	12	5	D	La; Dd 3 ft after 3 hr pumping at 5 gpm
12H1	L. Chapman	----do----------	1- 2-55	660	Dr	222	6	60	Oh	210	12	Ls	M	C	50	3.5	D,S	L, A
13D1	J. O. Evans	----do----------	1948	630	Dr	38	6	36	Oo	38	-----	G	Pl	C	16	30	P	La
13E1	M. Cox	----do----------	4-53	650	Dr	110	6	-----	Oh	100	10	Ss	P	C	27	1.5	D	L
13E2	W. Dinsmore	----do----------	1947	640	Dr	52	8	52	S	32	20	S	Pl	C	10	-----	D	La; Screen, 2-in dia
13E3	W. Dooley	W. L. Laughlin	8-27-51	640	Dr	78	6	60	Oh	68	10	Ss	P	C	20	5	D	La, A; Dd 10 ft after 2½ hr pumping at 5 gpm
13E4	Farm Bureau Co-op	----do----------	1-57	645	Dr	135	8	75	Oh	126	9	Ss	P	C	18	10	I	La; Dd 30 ft after 3 hr bailing at 10 gpm

16/8W-13F1	J. Coffin	W. L. Laughlin	3-47	650	Dr	140	5	70	Oh	-----	-----	-----	P	C	30	6	D	L, A; Dd 28 ft pumping at 6 gpm
13F2	R. Norris	----do----------	8-53	650	Dr	116	-----	-----	Oh	-----	-----	-----	P	C	30	5	D	La; Dd 30 ft after 5 hr pumping at 5 gpm
13F3	L. Rukes	----do----------	7-53	650	Dr	95	-----	-----	Oh	-----	-----	-----	P	C	30	8	D	La; Dd 20 ft after 10 hr pumping at 8 gpm
13F4	R. Musson	----do----------	1946	640	Dr	120	6	80	Oh	90	30	Ss	P	C	30	-----	D	La
13F5	F. G. Greene	----do----------	--------	645	Dr	80	6	70	Oh	70	10	Ss	P	C	18	5	D	La; Dd 1ft after 2 hr pumping at 5 gpm
13F6	J. M. Evans	----do----------	5- 2-55	650	Dr	120	6	68	Oh	102	18	Ss	P	C	31	12	D	La; Dd 25 ft after 2 hr pumping at 12 gpm
13J1	C. Hannor	----do----------	11-20-52	645	Dr	78	6	76	Oo	74	2	G	Pl	C	12	15	D,S	L
13L1	W. Flock	----do----------	2-53	645	Dr	88	6	56	Oh	-----	-----	-----	P	C	23	8	D	La
13L2	R. Henshaw	----do----------	11-58	650	Dr	104	8	48	Oh	90	14	Ss,Ls	P	C	18	5	D	L; Dd 20 ft after 5 hr bailing at 5 gpm
13L3	M. Brown	----do----------	5-10-56	650	Dr	80	6	60	Oh	80	20	Ss	P	C	---	8	D	La; Dd 10 ft after 3 hr pumping at 8 gpm
13M1	L. J. Brown	----do----------	1934	640	Dr	85	4	70	Oh	70	15	Ss	P	C	30	6	D	La
13M2	M. Swaim	----do----------	10-54	650	Dr	98	6	80	Oh	-----	-----	-----	P	C	36	4	D	La; Dd 12 ft after 10 hr pumping at 4 gpm
13M3	Friends Church	----do----------	12- 5-51	650	Dr	100	6	75	Oh	-----	-----	Ss	P	C	30	5	P	La; Dd 18 ft bailing at 5 gpm
13P1	Mr. Jeffers	----do----------	5-48	615	Dr	52	6	52	Oo	50	2	S,G	Pl	C	18	-----	D	L
13P2	V. Hinshaw	----do----------	4-47	615	Dr	69	4	57	Oh	56	13	Ss	P	C	10	-----	D	La
13P3	C. Flock	----do----------	4- 1-55	615	Dr	71	6	50	Oh	50	21	Ss	P	C	10	10	D	L
13P4	C. Ozier	----do----------	7-53	615	Dr	80	-----	-----	Oh	50	30	Ss	P	C	13	8	D	La; Dd 18 ft after 6 hr pumping at 8 gpm
13P5	L. McMastors	----do----------	4-54	610	Dr	38	6	38	Oo	34	4	S,G	Pl	C	12	5	D	La; Dd 12 ft after 3 hr pumping at 5 gpm
13P6	S. L. Osborne	----do----------	6- 1-55	610	Dr	38	6	38	Oo	37	1	G	Pl	C	---	5	D	La
14D1	J. E. Russell	M. Crabb	4-30-57	610	Dr	50	4	50	S	21	29	S	Pl	C	12	15	D	L; Dd 12 ft pumping at 15 gpm; Screen 6 ft, no. 14 and 20 slot
14H1	W. Leonard	W. L. Laughlin	6- 5-55	645	Dr	100	8	100	Oo	98	2	G	Pl	C	15	10	D	La; Reported Dd 0 ft after 3 hr bailing at 10 gpm
14J1	L. Ditto	----do----------	1934	630	Dr	97	4	72	Oh	72	25	Ls-sh	P	C	9	6	D	L, A; Dd 15 ft pumping at 8 gpm
16C1	C. Cox	----------	4-28-57	611	Dr	741	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	R. Brinkley 1; La
16M1	C. Hartlow	----------	8-30-44	606	Dr	1,504	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	C. C. Nye 1; La; Well plugged at 250 ft, 1-9-45; completed as a water well
16R1	J. Whitely	W. L. Laughlin	8- 2-53	650	Dr	100	6	46	Oh	46	44	Sh	P	C	30	-----	D,S	L, A
18B1	I. O. Hobson	M. Crabb	12-18-49	530	Dr	210	4	42	Oh	-----	-----	-----	P	C	45	-----	D,S	Lam, A
18E1	F. M. Adams	W. L. Laughlin	4-49	520	Dr	102	8	33	Oh	48	22	Sls	P	C	8	3	S	L, A
										70	26	Ss	P	C				
										102	-----	Ss	P	C				
19M1	R. Simpson	Campbell Brothers	9- 3-54	510	Dr	230	6	28	Oh	56	7	Sd-sh	P	C	24	-----	S	L, A; Reported salt water 176 to 187 ft
20N1	M. A. Phillips	W. L. Laughlin	4-10-49	550	Dr	150	6	70	Oh	120	15	Ss	P	C	20	-----	D	L, A
22Q1	W. H. Wiedner	----do----------	2-49	665	Dr	34	8	34	P	24	1	G	Pl	C	10	-----	D	L, A
23H1	V. Woodard	----do----------	8-19-53	605	Dr	90	8	55	Oh	53	35	Ss	P	C	18	8	N	La; Dd 10 ft after 5 hr pumping at 8 gpm; Well backfilled with coarse gravel to 55 ft
23K1	----do----------	----do----------	11-21-49	615	Dr	90	6	56	Oh	76	10	Ss	P	C	20	15	D	L, A; Dd 18 ft pumping at 15 gpm
23P1	Ferguson Lumber Co.	----do----------	3-25-52	620	Dr	200	6	72	Oh	-----	-----	-----	P	C	21	5	S	L; Dd 40 ft after 2½ hr pumping at 5 gpm
24A1	B. Miller	----do----------	11-15-56	695	Dr	126	0	50	Oh	92	34	Ss	P	C	55	10	D	La; Dd 20 ft after 2 hr bailing at 10 gpm
24A2	R. Crowder	----do----------	4-54	695	Dr	110	6	70	Oh	84	26	Ss	P	C	---	8	P	L; Dd 20 ft after 4 hr bailing at 8 gpm
24C1	R. Smith	----do----------	8-46	625	Dr	79	5	50	Oh	50	29	Ss	P	C	10	-----	D	La
24F1	W. Jeffers	----do----------	5-20-51	640	Dr	44	8	44	S	28	16	S,G	Pl	C	12	10	D,S	L, A; Dd 3 ft after 3 hr pumping at 10 gpm; Screen, 4 ft of 4-in dia, no. 18 slot
26J1	E. Beavers	----do----------	1948	715	Dr	99	8	99	Oo	96	3	G	Pl	C	18	5	D,S	L, A
26J2	----do----------	----do----------	1938	710	Dr	185	4	101	Oh	172	23	Ls,sh	P	C	55	-----	N	La
							3	147										
27D1	N. Cox	----------	--------	670	Dr	122	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	L; Ashley (1899)
28G1	M. Henry	W. L. Laughlin	4- 5-51	600	Dr	62	8	21	Oh	50	12	Ss,Ls	P	C	12	5	D,S	La; Dd 20 ft pumping at 5 gpm
30E1	Panhandle Eastern Pipeline Co.	Layne-Northern Co., Inc.	5- 6-56	500	Dr	20	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La

Table 4.--Record of wells, Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
16/8W-30E2	Panhandle Eastern Pipe-line Co.	----do----------	5- 8-38	500	Dr	48	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
30E3	----do----------	----do----------	5-10-38	520	Dr	58	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	L
30E4	----do----------	----do----------	5-12-38	490	Dr	22	-----	-----	-----	-----	-----	-----	----	--	3	-----	T	La
31K1	Marion Brick Works	C. J. Cassidy	1902	550	Dr	145	6	40	Oh	120	25	Ss	P	--	---	-----	N	La
33F1	H. Overpeck	W. L. Laughlin	12-19-49	680	Dr	68	8	50	Oh	60	6	Ss	P	C	19	6	N	L; Well backfilled with gravel to 50 ft
34K1	O. Rennick	----do----------	9-10-50	720	Dr	237	8	133	Oh	145	10	Sh,C	P	C	96	4	D,S	L, A
										225	7	C	P	C				
										235	2	La	P	C				
35R1	G. Aldea and M. Hurley	C. J. Cassidy (?)	--------	730	Dr	65	4	65	Ca	------	-----	G	Pl	--	---	-----	N	
36G1	Parke County Farm Home	----do----------	1943	680	Dr	107	6	107	Ca	------	-----	G	Pl	--	---	-----	P	A
16/8W-25M1	Panhandle Eastern Pipe-line Co.	Layne-Northern Co., Inc.	5-15-38	490	Dr	60	38	43	Gp	17	43	S,G	Pl	U	17	300	I	La, A; Dd 0.67 ft pumping at 300 gpm; Screen, 15 ft of 18-in dia, no. 5 shutter
							18	60										
25R2	J. W. Oberholtzer	M. O. Schrader	4-27-57	490	Dr	62	6	62	P	5	57	S,G	Pl	U	----	25	S	
25N1	F. T. Moore	H. H. Fox and Sons	11- 7-55	514	Dr	124	12	108	P	67	57	G	Pl	C	56	700	O, Ir	L, G; Observation well Parke 3, W
							10	124										
35H1	Town of Montezuma	American Well Works	1924	505	Dr	80	12	80	S	-----	-----	G	Pl	--	28	500	De	
35R2	----do----------	----do----------	1924	505	Dr	80	10	80	-----	-----	-----	G	Pl	--	----	300	De	
35H3	Veterans of Foreign Wars	Kendall and McNorton	1900	500	Da	40	3	49	-----	45	4	G	Pl	--	---	-----	P	
35R1	H. Roador	----------	1890	490	Dr	1,687	6	-----	-----	-----	-----	-----	D	--	---	-----	Do	Montezuma Mineral Springs
35R2	----do----------	----------	1888	485	Dr	1,987	8	-----	-----	-----	-----	-----	D	C	F	-----	D	A; Montezuma Mineral Springs
35R3	Montezuma Lumber Co.	A. Domotto	1901	495	Dr	58	-----	-----	-----	50	4	G	Pl	--	---	-----	D,S	
35R4	B. Dunett	----do----------	1901	490	Dr	54	2½	54	S	51	3	G	Pl	--	---	-----	D	
36D1	Town of Montezuma	H. H. Fox and Sons	7-54	515	Dr	134	12	134	S	67	67	G	Pl	C	57	1,000	P	L, Dd 22 ft after 4 hr pumping at 1,000 gpm; Screen, 10 ft, no. 40 slot and 10 ft no. 60 slot
36D2	----do----------	----do----------	9-19-56	515	Dr	131	12	131	S	70	61	G	Pl	C	52	950	P	La; Dd 36 ft after 3 hr pumping at 950 gpm, Screen, 10 ft, no. 40 slot and 10 ft, no. 60 slot
36P1	Dunn Brothers	M. Crabb	1951	490	Dr	63	4	63	Ca	30	33	G	Pl	U	30	-----	D,S	A
17/6W- 5D1	A. Cloro	----do----------	5-54	730	Dr	43	4	39	Oh	39	4	Ss	P	C	15	-----	D,S	Lm, A
8C1	C. V. Burkhart	----do----------	6-54	730	Dr	122	4	87	Oh	87	55	Sh	M?	C	35	-----	D,S	Lm, A
6Q1	A. P. Myers	----do----------	6- 4-46	730	Dr	125	4	40	Oh	40	85	Sh	M?	--	50	-----	D,S	Lm, A
7B1	C. Moore	----do----------	1855	720	Dr	150	4	86	Oh	86	64	Sh	M	C	30	-----	D,S	Lm, A
18A1	M. Corrado	W. L. Laughlin	7-49	545	Dr	52	6	20	Oh	48	4	Ss	M	C	18	-----	D	L, A
18L1	M. Smith	Swisher and Swank	--------	670	Dr	150	4	150	S	------	-----	G	Pl	--	50	-----	D	A
21C1	T. M. Garland	M. Crabb	--------	780	Dr	80	4	50	Oh	-----	-----	Ss	P?	--	---	-----	S	A
21E1	----do----------	----do----------	4-16-46	760	Dr	80	4	52	Oh	51	29	Ss	P	C	20	-----	D,S	La, A
21L1	E. S. Mitchell	Swisher and Swank	--------	770	Dr	99	4	99	S	-----	-----	G	Pl	--	50	-----	D,S	A
29A1	G. E. Weaver	----do----------	1957	780	Dr	133	4	89	Oh	90	35	Ss	P	C	80	-----	D,S	Lm
30M1	B. Brewer	----do----------	1956	705	Dr	164	4	98	Oh	-----	-----	Sh	P	C	30	-----	D,S	A
31F1	B. Dooley	Ruark Well Drilling	J- 6-61	750	Dr	135	6	105	Oh	120	15	Ss	P	C	65	15	S	L, A; Dd 35 ft after 2 hr bailing at 15 gpm
32H1	J. Jenkins	Swisher and Swank	--------	790	Dr	55	4	55	S	-----	-----	G	Pl	--	---	-----	D,S	A
33C1	R. F. Cummings	W. L. Laughlin	6-20-56	795	Dr	165	6	130	Oh	130	35	Ss	P	C	---	10	D,S	L, A
17/7W- 1B1	Wolf Creek Church	M. Crabb	3-53	700	Dr	130	4	-----	Oh	-----	-----	Ss	P?	C	35	30	P	A
6K1	W. Myers	----do----------	5-54	700	Dr	108	4	72	Oh	72	36	Ss	P	C	65	15	D,S	Lm, A; Dd 25 ft bailing at 15 gpm
7D1	R. Thompson	----do----------	1947	700	Dr	180	4	83	Oh	136	24	Sh,Ss	P	C	45	-----	D,S	L
7L1	E. O. Teague	----do----------	1954	685	Dr	98	4	70	Oh	70	28	Ss	P	C	20	-----	D,S	Lm, A
8D1	O. W. King	----do----------	4-52	675	Dr	210	4	107	Oh	-----	-----	-----	P?	C	40	-----	Do	Lm (partial)

17/7W- 9N1	F. V. Grimm	M. Crabb	4-18-47	695	Dr	32	4	32	Co	30	2	G	Pl	C	18	-----	D,S	Lm, A
11D1	R. O. Delp	----do----------	8-50	700	Dr	110	4	40	Oh	40	70	Ss	P	C	35	-----	D,S	Lm
11E1	C. Hockett	----do----------	8-56	695	Dr	120	4	60	Oh	-----	-----	-----	P	C	25	10	S	A
11F1	----do----------	----do----------	8-50	700	Dr	185	4	44	Oh	65	-----	Sh,Ss	P	C	40	-----	S	Lm, A
										85	-----	Sh,Ss	P					
11K1	H. Delp	----do----------	46	700	Dr	108	4	108	Co	80	26	G	Pl	C	40	-----	D,S	Lm
11M1	Friends Union Church	----do----------	5-52	695	Dr	120	4	84	Oh	82	2	G	Pl	C	25	-----	P	Lm, A
										84	36	Sh	P					
11N1	J. W. Lucas	----do----------	4-20-46	700	Dr	115	4	82	Oh	82	23	Ss	P	C	40	-----	S	Lm
12R1	A. Myer	----do----------	8-53	720	Dr	110	4	65	-----	-----	-----	-----	-----	--	---	-----	Do	Lm
12R2	----do----------	----do----------	8-53	710	Dr	66	4	68	Co	15	51	S,G	Pl	--	15	-----	D,S	Lm, A
14D1	C. Wells	W. L. Laughlin	11-25-59	700	Dr	165	6	148	Oh	154	11	Ss	P	C	89	10	S	L; Dd 15 ft after 5 hr bailing at 10 gpm
15H1	F. Ingrum	M. Crabb	1- 8-47	700	Dr	58	4	56	Co	54	2	G	Pl	C	35	-----	N	Lm, A
15H2	----do----------	----do----------	1946	700	Dr	108	4	70	Oh	-----	-----	-----	-----	--	---	-----	Do	Lm
16A1	E. Harrington	----do----------	1-18-47	680	Dr	218	4	81	Oh	80	138	Sh	-----	--	---	-----	D,S	Lm
17E1	G. Crowder	W. L. Laughlin	2-50	582	Dr	165	6	132	Oh	145	12	Ls	M	C	38	-----	O	L, A; E, G; Observation well Parke 5, W
17E2	T. Miller	C. J. Cassidy	1932	570	Dr	65	-----	65	Co	-----	-----	G	Pl	--	---	-----	P	A
17E3	G. Crowder	Warrick and Youngblood	1958	570	Dr	97	4	97	S	85	12	G	Pl	--	---	-----	D,S	L, A; Screen 4 ft of 2-in dia
18H1	E. Tongue	M. Crabb	1955	670	Dr	182	4	182	Co	182	-----	G	Pl	C	125	-----	D,S	
20N1	G. W. Crowder	W. L. Laughlin	3-56	540	Dr	170	7	50	Oh	140	30	Ls	M	C	22	5	D,S	L, A; Dd 60 ft after 3 hr bailing at 5 gpm
23A1	T. E. Manley	Kramer	--------	705	Dr	154	6	154	Co	150	4	S,Cl	Pl	--	---	-----	D,S	L, A; Well deepened by
		W. L. Laughlin	10-28-51	---	-----	201	6	191	Oh	180	20	Ss	P	C	125	5	D,S	W. L. Laughlin; Dd 17 ft at 5 gpm
23P1	----do----------	----do----------	10-20-51	670	Dr	342	8	103	Oh	-----	-----	-----	-----	--	118	1	N	L
24P1	H. Tongue	Ruark and Toney	1948	600	Dr	313	6	78	Oh	310	3	Ss	M	C	15	-----	N	Lm
28C1	T. E. Manley	W. L. Laughlin	3-54	600	Dr	249	8	70	Oh	229	14	Ss	P	C	50	14	D,S	L, A; Dd 40 ft after 5 hr pumping at 14 gpm
28D1	R. L. Hobson	M. Crabb	11- 1-52	530	Dr	132	4	21	Oh	-----	-----	-----	P	C	F	10	D	A
28E1	----do----------	Warrick and Youngblood	--------	550	Dr	80	4	10	Oh	-----	-----	Ss	P	--	35	7	D	La; Dd 25 ft pumping at 7 gpm
27K1	State of Indiana	----------	12-29	660	Dr	152	-----	-----	Oh	-----	-----	-----	P	--	---	-----	Do	Lm
27P1	----do----------	----------	1-30	620	Dr	115	-----	-----	Oh	-----	-----	-----	P	--	---	-----	Do	L
29G1	J. Upp	W. L. Laughlin	7-10-56	575	Dr	112	6	51	Oh	88	24	Ls	M	C	---	8	D	L
29G4	R. Harris	Wyman and Brown	4-14-38	582	Dr	1,074	-----	-----	-----	-----	-----	-----	-----	--	---	-----	Og	Ward Development Co. 1; La
29J1	G. Pyle	M. Crabb	1-55	550	Dr	161	4	68	Oh	100	8	Ss	M	C	40	-----	D,S	Lm, A
29K1	R. Jordan	W. L. Laughlin	1948	530	Dr	58	5	20	Oh	-----	-----	-----	-----	--	24	20	P	La (partial), A
29Q1	----do----------	----------	--------	580	Dr	132	6	45	Oh	-----	-----	-----	-----	--	84	-----	P	A
29Q2	R. Floyd	W. L. Laughlin	5- 8-60	640	Dr	180	6	45	Oh	-----	-----	Ls	M	--	127	5	D	L, A; Dd 50 ft after 1 hr pumping at 5 gpm
30J1	G. Rainwater	----do----------	--------	580	Dr	130	-----	-----	Oh	-----	-----	Ls	M	--	---	-----	S	L, A
30J2	----do----------	----do----------	10-59	550	Dr	190	6	18	Oh	100	25	Ls	M	C	55	4	S	La, A; Dd 50 ft after 2 hr pumping at 4 gpm
31E1	C. Lawson	----do----------	1949	660	Dr	70	8	70	Co	-----	-----	-----	Pl	C	50	3.5	D	L
31K1	A. Wolfe	----do----------	10-28-60	660	Dr	107	6	84	Oh	100	7	Ss	P	C	60	10	D	L, A; Reported Dd 0 ft after 2 hr bailing at 10 gpm
32K1	W. Michki	----do----------	6-30-60	680	Dr	125	6	50	Oh	121	4	Ss	P	--	40	3	D	L; Dd 20 ft after 2 hr bailing at 5 gpm
32P1	L. Hartle	----do----------	11- 1-52	640	Dr	75	6	30	Oh	-----	-----	Ss	P	--	30	25	D,S	La, A
33B1	R. Boyd	----do----------	6-37	640	Dr	98	4	82	Oh	81	17	Ss	P	C	64	-----	D	La, A
33B2	M. J. Tenbrook	----do----------	9-49	650	Dr	106	8	97	Oh	100	8	Ss	P	C	50	10	D	L, A
33E1	L. Zachery	----do----------	7-25-52	655	Dr	141	6	109	Oh	109	32	Ss	P	C	50	12	D,S	La; Dd 4 ft after 6 hr bailing at 12 gpm
33E2	V. W. Spray	M. Crabb	7-53	655	Dr	116	4	103	Oh	103	13	Ss	P	C	25	10	D	Lm
33E3	----do----------	W. L. Laughlin	7-10-52	660	Dr	40	8	40	Co	34	6	G	Pl	U	34	.5	S	La, Dd 4 ft pumping at 0.5 gpm
33L1	L. Chapman	----do----------	8-54	655	Dr	103	6	79	Oh	79	16	Ss	P	C	50	3.5	S	L; Dd 10 ft after 6 hr pumping at 3.5 gpm
34B1	J. Adams	H. Lister	--------	670	Dr	84	-----	84	Co	-----	-----	G	Pl	--	78	-----	D,S	A
35B1	M. Warren	W. L. Laughlin	--------	700	Dr	165	6	101	Oh	-----	-----	-----	-----	C	55	10	S	L, A; Dd 5 ft after 4 hr bailing at 10 gpm
35D1	V. V. Channoss	----do----------	8-39	685	Dr	150	4	74	Oh	72	78	Sh	P	C	30	-----	D	La, A
35D2	----do----------	Swisher and Swank	5-21-58	685	Dr	100	4	80	Oh	90	4	C	P	C	25	5	S	La, A; Dd 12 ft pumping at 5 gpm
35E1	R. Hodson	M. Crabb	1955	690	Dr	77	4	66	Oh	66	11	Sh	P	C	35	-----	D	A
35J1	H. Froman	W. L. Laughlin	8-26-60	695	Dr	50	8	50	P	45	5	S,G	Pl	C	3	8	S	L, Dd 10 ft after 2 hr bailing at 8 gpm
36F1	B. Roberts	----do----------	8-18-48	715	Dr	98	5	98	Co	98	-----	G	Pl	C	32	20	D,S	L, A; Dd 12 ft bailing at 20 gpm
17/8W- 1M1	R. Miller	M. Crabb	--------	690	Dr	133	4	133	Co	131	2	G	Pl	--	---	-----	D,S	A
7E1	H. Bugg	----do----------	--------	565	Dr	212	4	65	Oh	-----	-----	-----	P	--	---	-----	Do	Lm; Well dry, 11-12-58

Table 4.--Record of wells, Parke County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water-bearing zone: Geologic age	Water-bearing zone: Ground-water occurrence	Water level (feet)	Yield (gpm)	Use	Remarks
17/8W- 7E2	H. Bagg	M. Crabb	--------	580	Dr	100	-----	-----	-----	-----	-----	-----	P	--	---	-----	Do	Lm; Well dry, 11-12-58
7E3	----do----------	----do----------	--------	560	Dr	130	-----	-----	-----	-----	-----	-----	P	--	---	-----	Do	Do
7E4	----do----------	----do----------	9-55	560	Dr	138	4	70	-----	-----	-----	-----	P	--	---	-----	Do	Do
7E5	----do----------	----do----------	9-55	585	Dr	210	4	70	Oh	-----	-----	-----	P	C	45	-----	N	Lm; Well dry, 11-12-58; Reported salt water at 210 ft
7K1	P. Ray	----do----------	1957	580	Dr	100	4	56	Oh	50	6	S	Pl	C	40	-----	D	Lm; Well casing pulled back to make well in sand at 56 ft
7L1	E. Ray	----do----------	8-54	580	Dr	68	4	57	Oh	57	11	Sh	P	C	25	-----	D,S	Lm, A
7P1	----do----------	----do----------	1946	570	Dr	55	4	55	Oo	52	3	G	Pl	C	30	-----	D	Lm, A
8N1	----do----------	----do----------	1948	520	Dr	190	4	22	Oh	-----	-----	-----	P	C	45	-----	D,S	A; water at 160 ft
9Q1	R. R. Ritter	M. L. Laughlin	6-35	650	Dr	126	4	126	Oo	123	3	G	Pl	C	50	-----	D,S	L, A
10P1	H. Swain	M. Crabb	6-54	660	Dr	120	4	101	Oh	101	19	Ss	P	C	25	-----	D,S	A
10Q1	W. Lindley	----do----------	3-14-46	660	Dr	104	4	104	Oo	102	2	G	Pl	C	25	-----	D,S	Lm, A
10R1	H. Russell	----do----------	3-46	650	Dr	89	4	90	Oo	87	2	G	Pl	C	25	-----	D	Lm, A
11G1	L. S. Madden	----do----------	8-54	685	Dr	133	4	133	Oo	133	-----	G	Pl	C	20	-----	D,S	Lm, A
12D1	L. White	----do----------	5- 8-47	700	Dr	142	4	94	Oh	-----	-----	Sh	P	C	40	-----	D,S	Lm, A
12J1	W. H. Parr	----do----------	7-54	680	Dr	130	4	112	Oh	112	18	Sh	P	C	35	-----	D,S	Lm, A
12P1	H. Veach	----do----------	5-28-49	690	Dr	75	4	75	Oo	75	-----	G	Pl	C	35	-----	D,S	Lm, A
14D1	H. Russell	----do----------	1-54	670	Dr	190	4	161	Oh	161	29	Sh	P	C	45	-----	D,S	Lm (partial), A
14F1	G. Gleason	----do----------	8-21-50	675	Dr	120	4	120	Oo	120	-----	G	Pl	C	40	-----	D,S	Lm, A
14F2	G. Newman	----do----------	1957	670	Dr	122	4	122	Oo	118	4	S,G	Pl	C	35	-----	D	Lm (partial), A
14F3	J. Ray	----do----------	10-14-50	665	Dr	112	4	112	Oo	112	-----	G	Pl	C	40	-----	D	Lm
15E1	R. Carson	Swisher and Swank	12-11-56	640	Dr	120	4	120	S	117	3	G	Pl	C	----	-----	D	Lm
16N1	C. A. Deal	----------	1896	650	Du	20	10	-----	-----	-----	-----	-----	Pl	--	---	-----	D,S	
16K1	J. F. Lemon	M. Crabb	1949	620	Dr	150	4	127	Oh	124	26	Ss	P	C	35	-----	D	Lm
17H1	R. Collins	----do----------	1955	640	Dr	240	4	130	Oh	130	110	Sd-sh	P	C	40	-----	D	A
17K1	R. Carson	----do----------	5- 1-49	630	Dr	238	4	146	Oh	146	92	Sh	P	C	55	-----	D,S	
18K1	E. Ray	----do----------	1948	600	Dr	150	4	-----	Oh	145	5	Sh	P	--	---	-----	D	
18L1	E. Faust	W. L. Laughlin	3-47	550	Dr	138	6	97	S	97	41	G	Pl	C	86	-----	D,S	A; Screen, 3 ft of 2-in dia, no. 60 gauze
							5	138								-----		
18M1	P. Rodenbaugh	M. Crabb	1956	560	Dr	130	4	130	Oo	-----	-----	S,G	Pl	--	---	-----	D	
18N1	R. Durham	----do----------	5-21-48	555	Dr	154	4	154	Oo	-----	-----	S,G	Pl	--	30	-----	D	
18S2	O. Miller	----do----------	--------	560	Dr	154	4	154	Oo	-----	-----	S	Pl	--	---	-----	D	A
19R1	R. Wood	----do----------	3-56	525	Dr	35	4	-----	-----	-----	-----	-----	----	--	---	-----	T	Lm
19R2	----do----------	----do----------	3-27-56	510	Dr	31	4	-----	-----	-----	-----	-----	----	--	---	-----	T	Lm
19R3	----do----------	----do----------	3-27-56	495	Dr	65	4	65	Oo	15	50	S,G	Pl	U	15	30	D,S	A
21G1	G. Cory, Jr.	----do----------	3- 1-48	630	Dr	120	4	89	Oh	88	32	Sh	P	C	30	-----	D,S	Lm, A
23M1	P. Leonard	----do----------	3- 1-48	670	Dr	185	4	107	Oh	-----	-----	Ss	P	--	110	-----	D	Lm
27P1	M. Newnum	W. L. Laughlin	10-12-60	660	Dr	130	6	95	Oh	120	10	Sh-ss	P	C	70	15	D	L, A; Dd 4 ft after 8 hr bailing at 15 gpm
32J1	A. J. Allen	M. Crabb	1950	640	Dr	92	4	64	Oh	64	28	Sh	P	C	25	-----	D	Lm, A
32M1	R. Adams	W. L. Laughlin	9-47	480	Dr	33	6	33	S	4	28	S,G	Pl	U	4	10	N	La, A; Dd .7 ft pumping at 10 gpm
34H1	R. J. McElroy	D. Chavis	--------	670	Dr	200	6	115	Oh	115	85	Ss,Sh	P	--	---	-----	D	A
35B1	W. C. Brook	W. L. Laughlin	7-48	510	Dr	138	5	31	Oh	113	23	Ls	M	C	8	20	P	L; Dd 22 ft bailing at 20 gpm
17/9W- 1P1	P. Ray, Jr.	M. Crabb	1948	515	Dr	47	3	47	S	21	26	G	Pl	--	---	-----	D,S	Lm, A
2F1	Mr. Jackson	Swisher and Swank	1957	500	Dr	108	4	40	Oh	98	10	Ss	P	C	38	4	D	Lm
2F2	C. Laws	M. Crabb	1946	500	Dr	63	4	47	Oh	47	16	Sh	P	C	25	-----	D	Lm
2F3	C. Tibbett	Reynolds Brothers	8-24-54	500	Dr	107	-----	46	Oh	78	11	Ls	P	C	28	1.5	D	L
2F4	V. Watts	W. L. Laughlin	7-54	515	Dr	65	6	56	Oh	56	9	Sh	P	C	35	7	D	La; Dd 6 ft after 4 hr bailing at 7 gpm
3R1	C. Lydick	----do----------	8-10-56	490	Dr	38	6	38	P	35	3	G	Pl	--	---	20	D	La
12J1	M. M. Thompson	M. Crabb	2- 4-48	555	Dr	176	4	89	Oh	-----	-----	-----	P	C	50	-----	N	Lm; Reported salt water
12J2	----do----------	W. L. Laughlin	11-58	555	Dr	116	6	89	Oh	95	15	Ss	P	C	70	5	D	L, A; Dd 3 ft after 3 hr bailing at 5 gpm
12P1	R. F. Scott	----do----------	7-36	580	Dr	121	4	121	S	97	24	S,G	Pl	U	97	-----	Do	L; Screen, 3 ft of 2-in dia, no. 80 gauze
13H1	D. Doucrter	M. Crabb	1952	560	Dr	144	4	141	Oo	110	34	G	Pl	U	110	-----	D	Lm, A
13J1	Mr. Dowers	----do----------	1955	560	Dr	121	4	121	Oo	100	21	G	Pl	U	100	-----	D	Lm, A

Table 5.--Selected well logs, Parke County, Indiana

Remarks: T. D., total depth in feet, complete log not given; W. B., water bearing

Well 14/6W-1A1

Type of record: Driller's log. Altitude: About 805 feet.

	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Softpan	5	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, soft	12	32	
Sandstone	18	50	W. B.
Shale, light-gray	3	53	

Well 14/6W-3Q1

Type of record: Driller's log. Altitude: About 730 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	20	20	
Pan	41	61	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, soft, yellow	10	71	W. B.
Shale, soft, dark-gray	4	75	

Well 14/6W-5F1

Type of record: Driller's log. Altitude: About 690 feet.

Dug well	41	41	
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	33	74	
Softpan	27	101	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, gray	24	125	
Sandstone	23	148	W. B.
Coal	1	149	

Well 14/6W-5Q1

Type of record: Driller's log. Altitude: About 580 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface, sandy	10	10	
Sand and gravel, yellow	20	30	W. B.
Sand and gravel, gray	12	42	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-7G1

Type of record: Driller's log. Altitude: About 590 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Dug well----------	21	21	
Quaternary System:			
Recent and Pleistocene Series:			
Softpan, gravelly----------	21	42	
Sand and gravel----------	9	51	W. B.

Well 14/6W-7Q1

Type of record: Driller's log. Altitude: About 570 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	4	4	
Sand and gravel----------	46	50	
Gravel, large----------	3	53	
Gravel, pea-sized----------	2	55	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, gray----------	--	55	

Well 14/6W-8D1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	20	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, clay bands----------	19	39	
Sandstone, brown----------	21	60	W. B.
Sandstone, hard----------	5	65	

Well 14/6W-8H1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	20	20	
Pan, sandy----------	33	53	
Sand and gravel----------	5	58	W. B.

Well 14/6W-10C1

Type of record: Driller's log. Altitude: About 730 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	20	20	
Pan----------	20	40	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-10C1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, light	6	46	
Sandstone	2	48	
Shale, soft, light	32	80	
Shale, gray	52	132	
Sandstone	7	139	
Mississippian System:			
Meramec Series:			
Limestone, hard	112	251	W. B.

Well 14/6W-11M1

Type of record: Driller's log. Altitude: About 755 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	18	18	
Hardpan	25	43	
Softpan	17	60	
Hardpan	28	88	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, gray	34	122	
Shale, sandy, gray	22	144	
Sandstone	33.5	177.5	W. B.

Well 14/6W-12H1

Type of record: Driller's log. Altitude: About 790 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	35	35	
Pan, sandy	15	50	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	33	83	W. B.

Well 14/6W-16B1

Type of record: Driller's log. Altitude: About 615 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Pan, sandy	10	25	
Sand and gravel	7	32	W. B.
Mississippian System:			
Meramec Series:			
Limestone	20	52	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-17D1

Type of record: Driller's log. Altitude: About 650 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	30	30	
Pan	30	60	
Sand	.5	60.5	
Pan	14.5	75	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, shelly	14	89	
Sandstone, soft	1	90	
Sandstone	13	103	
Sandstone, soft	1	104	

Well 14/6W-19P1

Type of record: Driller's log. Altitude: About 645 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	20	20	
Hardpan	10	30	
Sand	52	82	W. B.
Gravel	5	87	W. B.

Well 14/6W-20B1

Type of record: Driller's log. Altitude: About 660 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	16	16	
Pan	13	29	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	36	65	W. B.

Well 14/6W-21B1

Type of record: Driller's log. Altitude: About 720 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface and clay	22	22	
Softpan, yellow	10	32	
Hardpan, gray	10	42	
Softpan, yellow	5	47	
Wash, gray	10	57	
Sand, gray	8	65	
Gravel, sandy, dirty, gray	3	68	W. B.
Hardpan	2	70	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-21B1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, light	10	80	
Shale, blue	12	92	
Shale, dark	28	120	
Shale, blue	28	148	
Mississippian System:			
Meramec Series:			
Limestone	10	158	

Well 14/6W-22P1

Type of record: Driller's log. Altitude: About 740 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	17	17	
Hardpan, gray	41	58	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Slate	3	61	
Coal, trace	--	61	
Fire clay	3	64	
Slate, blue	16	80	
Shale, dark	10	90	
Shale, sandy, dark	14	104	W. B.
Shale, sandy, light	4	108	
Sandstone, pasty, gray	23	131	
Sandstone, white	6	137	
Sandstone, blue	4	141	
Shale, dark-blue	3	144	

Well 14/6W-27D1

Type of record: Driller's log. Altitude: About 740 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Softpan, yellow	7	22	
Hardpan, gray	10	32	
Softpan	15	47	
Wash, yellow	3	50	
Hardpan, gray	1	51	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
White top	6	57	
Shale, sandy, blue	3	60	
Shale, sandy, light	3	63	
Shale, dark-blue	42	105	
Shale, black	12	117	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-27D1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	18	135	
Shale, light	10	145	
Sandstone, gray	8	153	
Sandstone, white	6	159	W. B.
Shale, blue	30	189	
Shale, sandy, blue	24	213	W. B.

Well 14/6W-30H1

Type of record: Driller's log. Altitude: About 685 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	18	18	
Limestone	1	19	
Shale, soft, light	13	32	
Slate, hard	56	88	
Coal	2	90	
Clay	2	92	
Clay rock	10	102	

Well 14/6W-32N1

Type of record: Driller's log. Altitude: About 690 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	14	14	
Softpan	8	22	
Hardpan	16	38	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	3	41	
Coal	3	44	
Clay	8	52	
Shale, gray	6	58	
Shale, sandy, gray	6	64	
Coal	2	66	
Clay	1	67	
Shale, sandy, gray	2	69	
White top	5	74	
Coal	1	75	
Clay	2	77	
Shale, sandy, gray	9	86	
Coal	1	87	
Shale, sandy, gray	23	110	
Sandstone	51	161	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-33A1

Type of record: Driller's log. Altitude: About 720 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	19	19	
Hardpan	11	30	
Pan, sandy	3	33	W. B.
Pan, sandy	17	50	
Quicksand	5	55	W. B.
Hardpan	5	60	
Softpan	25	85	
Hardpan	18	103	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	32	135	
Shale, light-gray	10	145	
Sandstone	25	170	
Shale, dark-gray	5	175	
Sandstone and shale	17	192	
Shale, dark-gray	8	200	
Sandstone	4	204	
Mississippian? System:			
Meramec? Series:			
Limestone	2	206	

Well 14/6W-34N1

Type of record: Driller's log. Altitude: About 720 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	10	10	
Pan	15	25	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	10	35	
Clay	10	45	
Shale, light-gray	15	60	
Sandstone	31.5	91.5	
Shale, gray	1.5	93	
Sandstone	35	128	W. B.
Shale, gray	.5	128.5	

Well 14/6W-35R2

Type of record: Driller's log. Altitude: About 765 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	14	14	
Pan, sandy	20	34	
Pan	4	38	

Table 5.--Selected well logs, Parke County--Continued

Well 14/6W-35R2--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Pan, sandy	5	43	
Sand	2	45	
Pan, sandy	4	49	
Sand	13	62	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	28	90	
Shale, gray	12	102	
Limestone	2	104	
Shale, sandy, gray	8	112	
Sandstone	21	133	
Shale, dark-gray	1.5	134.5	
Sandstone	10.5	145	W. B.

Well 14/6W-36C1

Type of record: Driller's log. Altitude: About 800 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	19	19	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	6	25	
Sandstone	28	53	W. B.
Shale, dark-gray	17	70	
Shale, sandy	8	78	
Shale, dark-gray	7	85	

Well 14/6W-36Q1

Type of record: Driller's log. Altitude: About 770 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Softpan	65.5	80.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	9.5	90	
Shale, dark-gray	9	99	
Shale, sandy, light-gray	11	110	
Shale, dark-gray	8	118	
Sandstone	2	120	
Shale, dark-gray	19	139	
Coal and jack	1	140	

Table 5.--Selected well logs, Parke County--Continued

Well 14/7W-5R1

Type of record: Driller's log. Altitude: About 565 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Well pit----------	4	4	
Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	3	7	
Pan----------	15	22	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray----------	8	30	
Coal----------	1	31	
Shale, sandy, gray----------	1	32	
Sandstone----------	48	80	
Shale, sandy, gray----------	20	100	
Sandstone----------	25	125	W. B.

Well 14/7W-6D2

Type of record: Driller's log. Altitude: About 550 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow----------	10	10	
Gravel and sand----------	15	25	
Gravel and clay----------	22	47	
Gravel, coarse----------	3	50	W. B.

Well 14/7W-11Q1

Type of record: Driller's log. Altitude: About 570 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	4	4	
Sand and gravel----------	36	40	W. B.
Drift, sandy----------	7	47	

Well 14/7W-14Q1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface----------	10	10	
Gravel----------	5	15	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, hard----------	5	20	
Shale, blue----------	25	45	
Shale----------	30	75	
Limestone, soft----------	35	110	
Shale, blue----------	20	130	
Limestone, soft----------	15	145	

Well 14/7W-14Q1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, hard	50	195	
Sandstone	15	210	W. B.
Shale, sandy	25	235	
Limestone, soft	5	240	
Shale, sandy, gray	40	280	
Shale, muddy, blue	90	370	
Sandstone	12	382	T. D. 1,315 ft

Well 14/7W-18P1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	14	14	
Pan, sandy	4	18	
Hardpan	14	32	
Softpan	7	39	
Hardpan	11	50	
Softpan	5	55	
Sand and gravel	18	73	W. B.

Well 14/7W-20D1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Hardpan	16	31	
Sand	2	33	
Hardpan	47	80	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	12	92	
Coal	.5	92.5	
Clay	2.5	95	
Shale, sandy, light-gray	7	102	
Shale, dark-gray	13	115	
Sandstone	7	122	
Shale, light-gray	4	126	
Shale, sandy	4	130	
Shale, dark-gray	10	140	
Sandstone	8	148	
Shale, dark-gray	2	150	
Coal	4	154	
Sandstone	9	163	
Shale, light-gray	2	165	

Table 5.--Selected well logs, Parke County--Continued

Well 14/7W-22D3

Type of record: Driller's log. Altitude: About 550 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	12	12	
Pan, sandy	13	25	
Drift	23	48	
Sand	10	58	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	6	64	W. B.

Well 14/7W-22E2

Type of record: Driller's log. Altitude: About 560 feet.

Ground level to basement floor	10	10	
Quaternary System:			
Recent and Pleistocene Series:			
Surface	5	15	
Sand	10	25	
Pan	15	40	
Sand	14	54	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	42	96	W. B.

Well 14/7W-22K1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Pan	65	80	
Sand	8	88	W. B.
Sand and gravel	2	90	W. B.

Well 14/7W-22M1

Type of record: Driller's log. Altitude: About 565 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface, sandy	15	15	
Pan, sandy	15	30	
Drift	7	37	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	47	84	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/7W-24P1

Type of record: Driller's log. Altitude: About 665 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	26	26	
Hardpan, gray	9	35	
Sand, blue	126	161	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	12	173	
Sandstone	61	234	W. B.
Shale	3	237	

Well 14/7W-24R1

Type of record: Driller's log. Altitude: About 660 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	12	12	
Softpan	78	90	
Sand	20	110	W. B.

Well 14/7W-28L1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	8	8	
Sand, dirty, dark	22	30	
Softpan, yellow, and wash	20	50	
Softpan, dark	10	60	
Hardpan, gray	3	63	
Wash, yellow	9	72	
Sand and gravel, dirty, yellow	4	76	
Softpan, yellow	4	80	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale sandy, blue	5	85	
Shale, sandy, gray	17	102	
Sandstone, brown	2	104	
Shale, sandy, blue	2	106	
Sandstone, brown	9	115	
Sandstone, blue	15	130	W. B.

Well 14/7W-32E1

Type of record: Driller's log. Altitude: About 555 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface and sand	45	45	
Hardpan	32	77	

Table 5.--Selected well logs, Parke County--Continued

Well 14/7W-32E1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine	11	88	W. B.
Sandstone	6	94	
Shale, gray	--	94	

Well 14/7W-35Q1

Type of record: Driller's log. Altitude: About 650 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Pan	37	52	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Coal	1	53	
Clay	6	59	
Shale, sandy, gray	12	71	
Coal	3	74	
Clay	1.5	75.5	
Shale, sandy, gray	16.5	92	
Coal	.5	92.5	
Clay	1.5	94	
Shale, sandy, gray	10	104	
Coal	.5	104.5	
Clay	.5	105	
Shale, sandy, gray	5	110	
Sandstone	20	130	
Shale, sandy, gray	2	132	
Sandstone	23	155	

Well 14/7W-36L2

Type of record: Driller's log. Altitude: About 625 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	18	18	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	4	22	
Coal	1	23	
Clay	4	27	
Shale, gray	5	32	
Coal	2	34	
Clay	6	40	
Sandstone	80	120	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/8W-5G1

Type of record: Driller's log. Altitude: About 510 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Glacial drift	19	19	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Limestone, soft	20	39	
Slate, black	7	46	
Limestone, black	2	48	
Slate, black, and streaks of fire clay	17	65	

Well 14/8W-6C1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Hardpan	49	64	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Limestone	14	78	W. B.
Slate	1	79	
Coal	4	83	
Fire clay and shale	7	90	

Well 14/8W-9F1

Type of record: Driller's log. Altitude: About 615 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	14	14	
Softpan	8	22	
Sand, soft, dirty	1	23	
Hardpan, gray	32	55	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Sandstone, brown	10	65	Dry
Sandstone, gray	50	115	Do
Shale, gray	8	123	
Slate, black	2	125	
Coal	2	127	W. B.
Fire clay	2	129	
Shale, dark-blue	8	137	
Coal	1	138	W. B.
Fire clay, hard	1	139	
Clay rock, sandy, light	3	142	
Shale, gray	4	146	

Table 5.--Selected well logs, Parke County--Continued

Well 14/8W-14J1

Type of record: Driller's log. Altitude: About 530 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	16	16	
Clay, blue	24	40	
Gravel and sand	4	44	W. B.

Well 14/8W-18P1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface and yellow clay	18	18	
Hardpan, gray	52	70	
Sand, fine, gray	20	90	W. B.
Hardpan, gray	28	118	
Sand, fine, gray	2	120	
Hardpan, gray	41	161	Gas in 0.5 ft cavity at 160 ft
Quicksand	4	165	W. B.
Gravel and fine sand	14	179	W. B.
Quicksand	9	188	W. B.
Sand, coarse, and small gravel; gray	4.5	192.5	W. B.
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Limestone, gray	3.5	196	
Slate, black	1	197	
Limestone, sandy, gray	8	205	
Fire clay, white	--	205	

Well 14/8W-18R1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	24	24	
Hardpan	19	43	
Gravel and hardpan	3	46	
Drift, green	16	62	
Hardpan	83	145	
Sand and gravel	5	150	W. B.
Quicksand	20	170	W. B.
Gravel	10	180	W. B.

Well 14/8W-21A1

Type of record: Driller's log. Altitude: About 540 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	17	17	
Sandstone	18	35	
Coal and fire clay	5	40	
Shale, light	21	61	
Sandstone	3	64	
Shale, blue	8	72	
Slate, black	4	76	
Shale, light	6	82	

Well 14/8W-22L1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel, red	60	60	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale	5	65	
Shale, dark	10	75	
Shale, sandy, light	26	101	
Mine opening	3	104	
Shale, light	36	140	
Shale, dark	10	150	
Shale, light	8	158	
Shale, gray	37	195	
Shale, dark	11	206	
Sandstone	9	215	
Lower? Pennsylvanian Series:			
Shale, dark	20	235	
Coal	4	239	
Fire clay	3	242	
Sandstone	12	254	
Shale, light	1	255	

Well 14/8W-23R1

Type of record: Driller's log. Altitude: About 570 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Sand, yellow, and clay	20	22	
Clay, sandy, blue	48	70	
Sand, yellow, with coal; muddy	20	90	
Hardpan, shaly, blue	5	95	
Gravel, fine, sandy, yellow	15	110	W. B.
Gravel, yellow	8	118	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/8W-26A1

Type of record: Driller's log. Altitude: About 550 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay----------	18	18	
Clay, blue, and sand----------	45	63	
Clay, rocky, blue----------	16	79	
Gravel, coarse, gray----------	1	80	W. B.

Well 14/8W-30P1

Type of record: Driller's log. Altitude: About 605 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, soft, yellow----------	30	30	
Sand, dirty----------	2	32	
Hardpan----------	43	75	
Clay, blue----------	6	81	
Hardpan----------	41	122	
Clay, hard, yellow----------	15	137	
Hardpan----------	20	157	
Mud, hard, blue, and sand-------	8	165	
Sand, dirty, and mud----------	5	170	
Pennsylvanian System:			
Middle? Pennsylvanian Series:			
Shale, light----------	23	193	
Shale, dark----------	8	201	
Sandstone and shale----------	32	233	
Lower? Pennsylvanian Series:			
Coal----------	1	234	
Fire clay----------	2	236	
Shale, light----------	6	242	
Coal----------	3	245	
Sandstone----------	25	270	

Well 14/8W-30R1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface and clay----------	20	20	
Hardpan----------	35	55	
Clay, hard, blue----------	60	115	
Mud, thick----------	12	127	
Gravel, fine----------	38	165	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale----------	4	169	

Table 5.--Selected well logs, Parke County--Continued

Well 14/8W-31P1

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface, hard, and clay	20	20	
Hardpan and gravel	85	105	
Quicksand	13	118	W. B.
Gravel, coarse	3	121	W. B.

Well 14/8W-33L1

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	24	24	
Hardpan	23	47	
Sand and gravel	14	61	W. B.
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale	21	82	
Sandstone	7	89	
Lower? Pennsylvanian Series:			
Shale, blue	25	114	
Slate, black	2	116	
Rock, black	4	120	Limestone?
Shale, light	6	126	
Sandstone	2	128	
Shale, light	12	140	
Sandstone	10	150	W. B.

Well 14/8W-33Q1

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	16	16	
Sand, yellow	6	22	
Hardpan, yellow	16	38	
Sand and gravel, dirty	2	40	W. B.
Hardpan, white	34	74	
Sand, very fine, dirty, yellow	16	90	W. B.

Well 14/8W-34R1

Type of record: Driller's log. Altitude: About 540 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, silty	33	33	W. B. 16 to 90 ft

Table 5.--Selected well logs, Parke County--Continued

Well 14/8W-34R1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Quicksand	37	70	
Rock shelf	2	72	Boulder?
Gravel	18	90	

Well 14/8W-35C2

Type of record: Driller's log. Altitude: About 530 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and small gravel	95	95	
Gravel	18	113	
Pennsylvanian? System:			
Lower Pennsylvanian Series:			
Limestone	--	113	

Well 14/8W-36C1

Type of record: Driller's log. Altitude: About 527 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil	4	4	
Sand and gravel	76	80	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	39	119	
Limestone	11	130	
Coal and dark shale	5	135	
Shale, dark	25	160	
Shale	25	185	
Shale, dark	15	200	
Sandstone and shale	10	210	
Sandstone	30	240	W. B.
Shale, dark	30	270	T. D. 1,362 ft

Well 14/9W-1R1

Type of record: Driller's log. Altitude: About 525 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	30	30	
Sand and gravel	1	31	
Hardpan	7	38	
Sand and gravel	2	40	
Hardpan	20	60	
Gravel	1	61	
Hardpan	9	70	
Gravel	2	72	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/9W-13Q1

Type of record: Driller's log. Altitude: About 665 feet.

	Thickness (feet)	Depth (feet)	
Quaternary System:			
Recent and Pleistocene Series:			
Soil and yellow clay	14	14	
Hardpan, blue	96	110	
Clay, blue, and streaks of shale	37	147	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Fire clay, caving	13	160	
Limestone, blue	3	163	
Slate, black	22	185	
Shale, blue	30	215	
Coal	7	222	
Fire clay, white	10	232	
Limestone, coarse, white	5	237	W. B.
Limestone, sandy, gray	13	250	

Well 14/9W-14K1

Type of record: Driller's log. Altitude: About 530 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Hardpan, brown	45	65	
Hardpan, green	30	95	
Gravel, pea-sized	10	105	W. B.
Sand, fine	--	105	W. B.

Well 14/9W-23A1

Type of record: Driller's log. Altitude: About 525 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	38	38	
Mud, blue	15	53	
Sand and gravel	34	87	W. B.

Well 14/9W-23R1

Type of record: Driller's log. Altitude: About 530 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	45	45	
Mud, soft, blue	9	54	
Sand and gravel	33	87	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/9W-24D1

Type of record: Driller's log. Altitude: About 545 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Pit	15	15	
Quaternary System:			
Recent and Pleistocene Series:			
Sand	23	38	
Sand and gravel	4	42	W. B.
Hardpan	34	76	
Pennsylvanian? System:			
Middle? Pennsylvanian? System:			
Rock	--	76	

Well 14/9W-24L4

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	18	18	
Hardpan	139	157	
Sand, coarse	8	165	
Hardpan	20	185	
Sand and fine gravel, cemented	18	203	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale and coal	3	206	
Fire clay	6	212	
Shale, dark	18	230	
Shale, light	43	273	

Well 14/9W-25M1

Type of record: Driller's log. Altitude: About 525 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	6	6	
Sand	27	33	
Hardpan	13	46	
Gravel and sand	34	80	W. B.
Sand, fine	10	90	W. B.

Well 14/9W-26A1

Type of record: Driller's log. Altitude: About 525 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	4	4	
Sand and gravel, yellow	39	43	
Hardpan, sandy, gray	19	62	
Sand and gravel, yellow	32	94	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 14/9W-26R1

Type of record: Driller's log. Altitude: About 530 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sandy, black----------	6	6	
Sand----------	14	20	
Sand and gravel----------	34	54	
Hardpan, brown----------	17	71	
Sand----------	29	100	W. B.
Gravel----------	5	105	W. B.

Well 15/6W-8N1

Type of record: Driller's log. Altitude: About 740 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	20	20	
Hardpan, gray----------	23	43	
Sand, dirty----------	2	45	W. B.
Clay and hardpan, gray----------	17	62	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	3	65	
Shale, blue, and sandstone------	25	90	
Mississippian System:			
Meramec Series:			
Limestone, gray----------	42	132	W. B.

Well 15/6W-9G1

Type of record: Driller's log. Altitude: About 740 feet.

Quaternary System:			
Recent and Pleistocene Series			
Clay----------	24	24	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray----------	9	33	
Sandstone----------	5	38	
Shale, gray----------	20	58	
Sandstone, red----------	37	95	
Mississippian? System:			
Osage? Series:			
Sandstone, gray----------	85	180	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-10L1

Type of record: Driller's log. Altitude: About 665 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	10	10	
Clay, gray	10	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	10	30	
Mississippian System:			
Meramec Series:			
Limestone, gray	60	90	
Limestone, brown	20	110	

Well 15/6W-11K1

Type of record: Driller's log. Altitude: About 750 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	19	19	
Clay, gray	2	21	
Pennsylvanian? System:			
Lower? Pennsylvanian Series:			
Bluestone and blue shale	39	60	
Mississippian System:			
Meramec Series:			
Limestone	40	100	W. B.

15/6W-15B1

Type of record: Driller's log. Altitude: About 720 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, brown	40	40	
Sand	7	47	
Clay and sandy hardpan, gray	11	58	
Pennsylvanian? System:			
Lower? Pennsylvanian Series:			
Shale	22	80	
Mississippian System:			
Meramec Series:			
Limestone alternating with shale-	13	93	W. B.

Well 15/6W-16F1

Type of record: Driller's log. Altitude: About 700 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	50	50	
Hardpan and streaks of sand	5	55	
Clay, gray	33	88	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-16F1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	12	100	W. B.

Well 15/6W-22G1

Type of record: Driller's log. Altitude: About 705 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	25	25	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, shelly, brown--------	15	40	
Sandstone----------	8	48	
Mississippian System:			
Meramec Series:			
Limestone, gray----------	32	80	
Limestone, soft, white----------	50	130	
Limestone, hard, gray----------	45	175	
Limestone, blue----------	125	300	
Osage? Series:			
Limestone, sandy, blue----------	35	335	

Well 15/6W-27D1

Type of record: Driller's log. Altitude: About 716 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	0.5	0.5	
Clay, inorganic, low to medium plasticity, damp, firm, brown	8.5	9	
Clay, inorganic, low to medium plasticity, moist, firm, brown----------	10	19	
Sand, silty, wet, pervious, brown----------	2	21	
Sand, clayey, moist, firm, brown (glacial till)----------	14	35	
Clay, inorganic, low to medium plasticity, moist, firm, gray----------	3	38	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, micaceous, silty, hard, dark-gray----------	7.5	45.5	
Siltstone, micaceous, brittle, hard, gray----------	1.5	47	
Shale, silty, hard, gray--------	2	49	
Siltstone, micaceous, hard, gray	4	53	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-27D1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, micaceous, silty, hard, dark-gray	3	56	
Coal	.5	56.5	
Shale, silty, hard, gray, with carbonaceous laminae	6	62.5	
Shale, fine-grained to silty, hard, light-gray	3.5	66	
Siltstone, hard, light-gray	3.5	69.5	
Shale, medium-hard, gray	3	72.5	
Mississippian System:			
Meramec Series:			
Limestone, crystalline, fine-grained, hard, light-gray; syritic (sic.)	6	78.5	Pyritic?
Limestone, argillaceous, fine-grained, hard, gray; with syritic, shale seams (sic.)	3.5	82	Pyritic?

Well 15/6W-27E1

Type of record: Driller's log. Altitude: About 704 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, inorganic, low to medium plasticity, with trace of poorly-graded gravel and sand; firm, brown	5.5	6.5	
Sand, clayey, compact, gray to brown, and weathered sandstone fragments (glacial till)	18.5	25	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, coarse-grained, horizontal bedding planes, medium-hard, brown	5.5	30.5	
Clay, inorganic, low to medium plasticity, soft to hard, brown and gray, with sandstone fragments	1	31.5	
Coal	2	33.5	
Shale, silty, medium-hard, dark-gray with concretions	17	50.5	
Shale, sandy to silty, hard, dark-gray	2.5	53	
Shale, carbonaceous, silty, hard, black	5	58	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-27E1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Siltstone, fine-grained to argillaceous, medium-hard, gray	34	92	
Mississippian System:			
Meramec Series:			
Limestone, fine-grained to lithographic, pyritic, hard to dense, light-gray	12	104	

Well 15/6W-27F2

Type of record: Driller's log. Altitude: About 746 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, moist, firm, gray	0.5	0.5	
Clay, inorganic, low to medium plasticity, firm, brown	5	5.5	
Sand, clayey, firm, brown (glacial till)	11	16.5	
Sand, silty, firm, brown	4	20.5	
Gravel, clayey, firm, brown	5.5	26	
Sand, silty, firm, gray (glacial till)	28	54	
Sand, clayey, firm, gray (glacial till)	1.5	55.5	
Gravel, clayey, firm, gray (glacial till)	1	56.5	

Well 15/6W-27F3

Type of record: Driller's log. Altitude: About 751 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	0.5	0.5	
Clay, inorganic, low to medium plasticity, damp, firm, brown	6.3	6.8	
Sand, clayey, silty, moist, firm, brown	22.5	29.3	
Sand, poorly-graded, gravelly, damp, soft, brown	7	36.3	
Sand, silty, wet, pervious, brown	10	46.3	
Sand, silty, damp, firm, gray	6.5	52.8	
Clay, inorganic, low to medium plasticity, damp, soft, gray	3.2	56	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, dark-gray	4.8	60.8	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-28D1

Type of record: Driller's log. Altitude: About 691 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	0.5	0.5	
Clay, inorganic, low to medium plasticity, damp, moderately-firm, brown	12	12.5	
Clay, inorganic, low to medium plasticity, gray (glacial till)	10.5	23	
Clay, inorganic, low to medium plasticity, brown	3	26.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, weathered, moist, compact, gray	6.8	33.3	
Shale, medium-hard, gray, with thin interbeds of sandstone	9	42.3	
Shale, conglomerate, cherty, poorly-cemented, with sandstone	2.5	44.8	

Well 15/6W-28G2

Type of record: Driller's log. Altitude: About 708 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	.5	.5	
Clay, inorganic, low to medium plasticity, moist, brown	11.6	12.1	
Sand, clayey, moderately-compact, brown	1.9	14	
Clay, inorganic, low to medium plasticity, moist, moderately-firm, brown	1.3	15.3	
Sand, clayey, wet, compact, brown	27.9	43.2	
Sand, gravelly, wet, gray	1	44.2	
Sand, clayey, moist, compact, gray (glacial till)	18.4	62.6	
Sand, gravelly, wet, compact, brown	.5	63.1	
Clay, inorganic, low to medium plasticity, moist, firm, gray	5	68.1	
Sand, gravelly, slightly compact, gray	1	69.1	
Clay, inorganic, low to medium plasticity, moist, firm, gray	6.5	75.6	
Clay, inorganic, high plasticity, moderately firm, brown	3.1	78.7	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-28G2--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Meramec Series:			
Limestone, medium-grained, oolitic, slightly weathered, buff	2.2	80.9	
Limestone, hard, vaughnitic, with calcite inclusions, stylolitic, unhealed, buff	9.3	90.2	
Limestone, fine-grained, crystalline, oolitic, pyritic, dense, hard, light-gray; cherty near bottom	3.4	93.6	

Well 15/6W-28G3

Type of record: Driller's log. Altitude: About 686 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	.5	.5	
Clay, inorganic, low to medium plasticity, moist, moderately firm, brown	14.5	15	
Sand, gravelly, wet, firm, brown	.5	15.5	
Clay, moist, hard, brown	1.5	17	
Sand, well-graded, wet, compact, brown	2	19	
Clay, inorganic, low to medium plasticity, moist firm, brown and gray	16.5	35.5	
Clay, inorganic, high plasticity, moist, moderately firm, reddish-brown	14.5	50	
Limestone, coarse-grained, hard, brown and gray	1	51	float
Clay, inorganic, high plasticity, moderately firm, brown; with limestone fragments	3.2	54.2	
Mississippian System:			
Meramec Series:			
Limestone, fine-grained, dense, medium-hard, light-gray	8.1	62.3	
Limestone, medium to fine-grained, hard, light-gray	23.5	85.8	
Limestone, pyritic, medium-hard, dark-gray	2.5	88.3	
Limestone, argillaceous, medium-hard, gray	19.5	107.8	
Limestone, fine-grained, dense, hard, gray	12	119.8	

Well 15/6W-28G3--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Meramec Series:			
Limestone, dense to earthy, hard, gray	17.5	137.3	
Limestone, argillaceous to earthy, hard, gray to buff	7	144.3	
Limestone, dense, hard, gray to buff	25	169.3	

Well 15/6W-28H1

Type of record: Driller's log. Altitude: About 609 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, inorganic, low to medium plasticity, damp, firm, brown-	3.5	3.5	
Clay, inorganic, low to medium plasticity, moist, firm, brown and gray	6.1	9.6	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, fine to medium-grained, weathered, buff to gray	2.4	12	
Sandstone, fine-grained, carbonaceous, shaly, light-gray	10	22	
Mississippian System:			
Meramec Series:			
Limestone, fine-grained, dense, argillaceous, light-gray	21.7	43.7	

Well 15/6W-28Q1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	10	10	
Sand	40	50	Dry
Mississippian System:			
Meramec Series:			
Limestone	49	129	
Shale, limy	5	134	
Limestone	6	140	

Table 5.--Selected well logs, Parke County--Continued

Well 15/6W-34D1

Type of record: Driller's log. Altitude: About 611 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel, fine to coarse, brown, with some cobbles	2.5	2.5	
Clay, sandy, and trace of fine gravel	5.5	8	
Sand, fine to medium, gray	3	11	
Clay, shaly, very hard, brown and gray	3	14	
Mississippian System:			
Meramec Series:			
Limestone	5	19	

15/6W-35H1

Type of record: Driller's log. Altitude: About 710 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	20	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	22	42	
Shale	16	58	

Well 15/7W-3H1

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	18	18	
Gravel, dirty	10	28	W. B.
Gravel, clean, coarse	4	32	W. B.

Well 15/7W-4K1

Type of record: Driller's log from memory. Altitude: About 620 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	40	40	
Clay, yellow	4	44	
Clay, blue	18	62	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	40	102	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 15/7W-9D1

Type of record: Driller's log. Altitude: About 680 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Hardpan	20	40	
Sand	28	68	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Slate, black, and trace of coal-	31	99	
Sandstone	21	120	W. B.

Well 15/7W-9K3

Type of record: Driller's log. Altitude: About 570 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Mud	5	5	
Mud, silty, sandy	5	10	
Sand, silty, red	10	20	
Clay, shaly, hard, dark	3	23	
Sand and gravel	44	67	W. B.

Well 15/7W-9J2

Type of record: Driller's log. Altitude: About 570 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, hard	3	5	
Clay, light-blue	8	13	
Sand and gravel, some silt	7	20	W. B.
Gravel	47	67	W. B.
Pennsylvanian(?) System:			
Lower(?) Pennsylvanian Series:			
Rock	--	67	

Well 15/7W-10A2

Type of record: Driller's log. Altitude: About 575 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay	5	5	
Sand and gravel	5	10	
Sand and medium gravel	5	15	
Gravel, small, and sand	20	35	W. B. 23 to 53 ft.
Gravel, large and small	5	40	
Sand, fine, and small gravel	5	45	
Gravel, large, and medium sand	8	53	

Table 5.--Selected well logs, Parke County--Continued

Well 15/7W-13B2

Type of record: Driller's log. Altitude: About 715 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	20	20	
Hardpan	30	50	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	32	82	
Sandstone	2	84	
Shale, light-gray	3	87	
Sandstone	2	89	
Shale, light-gray	21	110	
Sandstone	2	112	
Shale, sandy, light-gray	22	134	
Shale, sandy, dark-gray	3	137	
Sandstone	4	141	W. B.

Well 15/7W-16B1

Type of record: Driller's log. Altitude: About 565 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Mud	10	10	
Sand, silty, and mud	10	20	
Sand, silty, fine	5	25	W. B.
Sand and gravel, gray	35	60	W. B.

Well 15/7W-18L1

Type of record: Driller's log. Altitude: About 680 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift, hardpan	142	142	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Coal	1	143	
Sandstone	1	144	
Shale	120	264	
Mississippian System:			
Meramec Series:			
Limestone	140	404	W. B.

Well 15/7W-20Q1

Type of record: Driller's log. Altitude: About 550 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, brown	10	10	
Clay, sandy, gray	5	15	
Clay, with fine gravel	5	20	

Well 15/7W-20Q1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, gray	5	25	
Clay, silty, gray	5	30	
Clay, sandy, gray	5	35	
Clay, sandy, with fine gravel; gray	5	40	

Well 15/7W-27R1

Type of record: Driller's log. Altitude: About 660 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	16	16	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Slate, soft, blue	4	20	
Slate, blue	28	48	
Coal	2	50	
Fire clay	2	52	
Slate, sandy, gray	12	64	
Limestone, hard	2	66	
Mine opening	--	66	

Well 15/7W-32H1

Type of record: Driller's log. Altitude: About 540 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	18	18	
Clay, blue	62	80	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, blue	52	132	
Mississippian System:			
Meramec Series:			
Shale, gray, with limestone streak	18	150	
Limestone, gray	30	180	
Limestone, gray, with black flint	40	220	
Limestone, soft, white	30	250	

Well 15/8W-1M1

Type of record: Driller's log. Altitude: About 730 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	5	5	
Clay, gray	5	10	

Table 5.--Selected well logs, Parke County--Continued

Well 15/8W-1M1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, gray	5	15	
Clay, gray to brown	5	20	
Clay, brown	10	30	
Clay, gray	25	55	
Clay, gray and brown	10	65	
Hardpan, green to gray	5	70	
Sand and gravel, hard	14	84	Dry
Hardpan, gray	6	90	
Hardpan, sandy, brown	5	95	
Hardpan, brown	5	100	
Hardpan, sandy	10	110	
Hardpan, brown	15	125	
Gravel, shale, and hardpan	3	128	
Gravel, muddy	2	130	
Hardpan, brown	4	134	
Hardpan	8	142	
Sand, medium coarse	4	146	W. B.
Gravel, medium coarse and some sand	4	150	W. B.
Gravel, medium coarse	14	164	W. B.
Gravel	8	172	W. B.

Well 15/8W-4P1

Type of record: Driller's log. Altitude: About 660 feet.

Open well	30	30	
Quaternary System:			
Recent and Pleistocene Series:			
Pan, sandy	12	42	
Sandstone	1	43	Boulder?
Shale, gray	4	47	Clay?
Pan	11	58	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, gray	40	98	
Coal	1	99	
Shale, sandy, gray	6	105	
Slate, black	14	119	
Shale, sandy, gray	10	129	
Sandstone	21	150	
Shale, sandy, gray	70	220	
Sandstone	30	250	
Shale, gray	80	330	
Sandstone	25	355	

Table 5.--Selected well logs, Parke County--Continued

Well 15/8W-5J1

Type of record: Driller's log. Altitude: About 540 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand, yellow	44	44	
Sand	14	58	
Hardpan, blue	2	60	
Sand and gravel, gray	3	63	W. B.

Well 15/8W-5J2

Type of record: Driller's log. Altitude: About 540 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	21	21	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Fire clay, white	4	25	
Shale, light-blue	15	40	
Limestone, broken, gray	12	52	
Slate, gray	10	62	
Shale, blue, with limestone streaks	76	138	
Shale, blue	6	144	
Sandstone, dense, gray	26	170	
Shale, gray	2	172	
Slate, brown	1	173	
Shale, blue	22	195	
Sandstone, white	17	212	W. B.
Lower? Pennsylvanian Series:			
Slate, blue	5	217	
Shale, sticky, blue	18	235	

Well 15/8W-12D1

Type of record: Driller's log. Altitude: About 690 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and wash	18	18	
Clay, sandy, blue	82	100	
Hardpan, shaly, blue	50	150	
Mississippian? System:			
Meramec? Series:			
Limestone, blue to gray	43	193	

Well 15/8W-14E1

Type of record: Driller's log. Altitude: About 620 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand	12	12	
Shale, blue	6	18	Clay?
Sand	28	46	W. B.
Shale, blue	9	55	Clay?
Clay, gummy	33	88	
Pennsylvanian? System:			
Lower? Pennsylvanian Series:			
Shale, dark	14	102	
Shale, light	173	275	
Sandstone	28	303	T. D. 1,444 ft.

Well 15/8W-19A1

Type of record: Driller's log. Altitude: About 540 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and sand	22	22	
Clay, sandy, blue	28	50	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, light-blue	50	100	
Sandstone, gray	25	125	W. B.

Well 15/8W-19R1

Type of record: Driller's log. Altitude: About 640 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	2	2	
Hardpan	59	61	W. B. at 45 ft
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale	29	90	
Coal	2	92	W. B.

Well 15/8W-23Q1

Type of record: Driller's log. Altitude: About 645 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	10	10	
Sand	2	12	
Hardpan	90	102	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	28	130	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 15/8W-24D1

Type of record: Driller's log. Altitude: About 650 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	11	11	
Hardpan, sandy, blue	74	85	
Sand and gravel	2	87	W. B.

Well 15/8W-24N1

Type of record: Driller's log. Altitude: About 650 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	20	20	
Pan	8	28	
Sand	3	31	
Pan	72	103	
Gravel	1	104	W. B.

Well 15/8W-26F1

Type of record: Driller's log. Altitude: About 640 feet.

Well pit	4	4	
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	99	103	
Sand and gravel	1	104	W. B.

Well 15/8W-27H1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand, yellow	20	20	
Hardpan, blue	68	88	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	2	90	
Sandstone	20	110	W. B.

Well 15/8W-32D1

Type of record: Driller's log. Altitude: About 520 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	18	18	
Sand and gravel	9	27	
Gravel, coarse	1	28	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Slate, blue	50	78	

Table 5.--Selected well logs, Parke County--Continued

Well 15/8W-32L1

Type of record: Driller's log. Altitude: About 505 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	10	10	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, black	10	20	
Slate	8	28	
Shale	10	38	
Limestone, gray	4	42	
Fire clay	2	44	

Well 15/8W-33L1

Type of record: Driller's log. Altitude: About 640 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and yellow sand	5	5	
Sand and yellow clay	13	18	
Clay, pebbly, blue	117	135	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, blue	15	150	
Shale, gray, with slate streaks	100	250	
Shale, sandy, gray to white	35	285	
Sandstone, fine, white	24	309	W. B.

Well 15/9W-2A1

Type of record: Driller's log. Altitude: About 490 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and boulders	21	21	
Sand, fine	17	38	W. B.
Sand and gravel, dirty	59	97	W. B.
Gravel, medium	1	98	W. B.

Well 15/9W-13P1

Type of record: Driller's log from memory. Altitude: About 490 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	42	42	
Clay, blue	14	56	
Sand and gravel	3	59	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 15/9W-13Q1

Type of record: Driller's log. Altitude: About 480 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and sand	42	42	
Gravel and sand	18	60	W. B.
Pennsylvanian System:			
Lower? Pennsylvanian Series:			
Soapstone, soft, caving	40	100	W. B.
Shale, blue	15	115	

Well 15/9W-36R1

Type of record: Driller's log from memory. Altitude: About 540 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy	18	18	
Hardpan, green to blue-green	65	83	
Sand and gravel, dirty	5	88	W. B.
Hardpan, gray	22	110	

Well 16/6W-12H1

Type of record: Driller's log. Altitude: About 756 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, brown	5	5	
Sand, brown	4	9	
Sand and gravel	5	14	
Clay, gray, and sand	15	29	
Clay, gray, and gravel	4	33	
Mississippian System:			
Osage Series:			
Shale, hard, gray	7	40	

Well 16/6W-12J1

Type of record: Driller's log. Altitude: About 775 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, hard, yellow	11	12	
Clay, soft, black	7	19	
Clay, gritty, blue	11	30	
Clay, gritty, gray	9	39	
Sand, dirty, fine	2	41	
Clay, gritty	28	69	
Sand and clay	6	75	
Gravel, coarse, and sand	5	80	W. B.
Clay	--	80	

Table 5.--Selected well logs, Parke County--Continued

Well 16/6W-18C1

Type of record: Driller's log. Altitude: About 655 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Muck; blue	6	24	
Sand, dirty, gray	2	26	
Mississippian System:			
Meramec Series:			
Limestone, gray	100	126	
Osage Series:			
Shale, blue	15	141	
Bluestone, with trace of shale	59	200	

Well 16/6W-23E1

Type of record: Driller's log. Altitude: About 697 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	.3	.3	
Sand, clayey, brown, and fine to coarse gravel	8.7	9	
Sand, silty, soft, brown	2	11	
Sand and gravel, fine to coarse, brown	17	28	
Sand, fine to coarse, clayey, hard, gray (hardpan)	12	40	

Well 16/6W-28B1

Type of record: Driller's log. Altitude: About 735 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	10	10	
Hardpan	48	58	
Gravel	2	60	
Hardpan	17	77	
Gravel	3	80	W. B.

Well 16/6W-28P1

Type of record: Driller's log from memory. Altitude: About 740 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	12	12	
Clay, blue, with sand streaks	48	60	
Mississippian System:			
Osage Series:			
Shale, bluish-gray	128	188	W. B.

Table 5.--Selected well logs, Parke County--Continued

Well 16/6W-31Q1

Type of record: Driller's log. Altitude: About 730 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and hardpan	48	48	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Slate, black, with trace of coal	22	70	
Sandstone	43	113	
Mississippian System:			
Meramec Series:			
Limestone, white	15	128	W. B.

Well 16/6W-34N1

Type of record: Driller's log. Altitude: About 740 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	15	15	
Pan, sandy	35	50	
Sand	35	85	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, dark-gray	23	108	
Shale, sandy, gray	82	190	
Sandstone	35	225	
Shale, sandy, gray	5	230	

Well 16/6W-35M1

Type of record: Driller's log. Altitude: About 750 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	14	14	
Clay, gray	16	30	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	8	38	
Sandstone, hard, with trace of limestone	12	50	
Shale and sandstone	25	75	
Sandstone	15	90	
Sandstone and shale	15	105	

Table 5.--Selected well logs, Parke County--Continued

Well 16/7W-3K1

Type of record: Driller's log. Altitude: 705 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, yellow	15	16	
Clay, blue, with streaks of sand	69	85	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, gray	13	98	
Limestone, dense, hard, gray	6	104	
Sandstone, fine, soft, white	8	112	W. B.

Well 16/7W-4G2

Type of record: Driller's log. Altitude: About 650 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan, blue	58	58	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	5	63	
Slate, gray	4	67	
Limestone, dense, blue	3	70	
Coal	3	73	W. B.
Fire clay, white	3	76	

Well 16/7W-4H3

Type of record: Driller's log. Altitude: About 675 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	65	80	
Sand and gravel	4	84	
Pennsylvanian System:			
Middle? Pennsylvanian Series:			
Shale, blue	20	104	
Lower Pennsylvanian Series:			
Fire clay	9	113	
Slate and shale, blue	47	160	
Sandstone, blue	20	180	W. B.
Coal	2	182	
Fire clay	8	190	
Shale, blue	10	200	

Table 5.--Selected well logs, Parke County--Continued

Well 16/7W-4K2

Type of record: Driller's log. Altitude: About 675 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and sand	29	29	
Sand, fine	5	34	
Clay, bouldery, blue	46	80	
Gravel, very coarse	1	81	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	--	81	

Well 16/7W-4L2

Type of record: Driller's log. Altitude: About 680 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	8	8	
Gravel	1	9	
Clay, blue	.5	9.5	
Sand and gravel	7	16.5	
Clay, blue	17.5	34	
Sand and gravel, medium	9	43	W. B.

Well 16/7W-6D1

Type of record: Driller's log. Altitude: About 640 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	14	14	
Sand, yellow	1	15	W. B.
Clay, yellow	9	24	
Clay, gray	52	76	
Clay, sandy, gray	8	84	
Clay, gray	6	90	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, soft, dirty	8	98	
Sandstone	18	116	
Sandstone and streak of coal	30	146	
Shale	--	146	
Shale, blue	4	150	
Sandstone, white, with trace of shale	30	180	
Mississippian System:			
Meramec Series:			
Limestone, light-tan	15	195	
Limestone, brown	15	210	
Limestone, blue-speckled	28	238	
Limestone	52	290	
Limestone, blue, with trace of shale	8	298	