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GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Fountain County

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER

DEPARTMENT OF NATURAL RESOURCES

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INDIANA DEPARTMENT OF CONSERVATION

John E. Mitchell, Director

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Charles H. Bechert, Director

GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Fountain County

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

ABSTRACT

Fountain County, in west-central Indiana, has an area of about 397 square miles. Consolidated rocks of Mississippian and Pennsylvanian age and unconsolidated rocks of Pleistocene age are the major sources of ground water for domestic, stock, industrial, and municipal supplies. Wells in Fountain County vary greatly in depth and yield. Wells tapping Mississippian rocks range in depth from about 30 to 400 feet and in yield from less than 1 to about 110 gpm (gallons per minute), while those tapping Pennsylvanian rocks range in depth from about 40 to 300 feet and in yield from less than 1 to about 50 gpm. Some wells tapping the rocks of Pennsylvanian age yield no water. Wells tapping Pleistocene sand and gravel range in depth from about 30 to 190 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 the hardness of water in Fountain County. This method yields the following results for water from aquifers of Mississippian age: sulfate, 14 ppm (parts per million); chloride, 7 ppm; and hardness, 277 ppm; and for water from aquifers of Pennsylvanian age: sulfate, 14 ppm; chloride, 7 ppm; and hardness, 314 ppm; and for water from aquifers of Pleistocene age: sulfate, 15 ppm; chloride, 7 ppm; and hardness, 350 ppm. Generally water from these sources exceeds the U. S. Public Health Service (1962) drinking-water standards for iron.

This preliminary report contains tabulated records of about 392 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 164 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 5 springs giving information about geologic source, yield and temperature of the water; results for 185 field chemical analyses of water from wells, 5 from springs, and 13 from streams, giving iron, bicarbonate, sulfate, and chloride contents, and the hardness of water; and water levels in 1 observation well indicating the magnitude of short and long-term water-level fluctuations in the consolidated rock. 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 Fountain 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 and areas of high sulfate content.

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 ninth 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 C. M. Roberts, district geologist for Indiana.

Location and Areal Extent

Fountain County is in the west-central part of Indiana (fig 1). The county is irregular in shape and has an area of about 397 square miles. It is bounded on the north by Warren County, on the east by Tippecanoe and Montgomery Counties, on the south by Parke County, and on the west by Vermillion County.

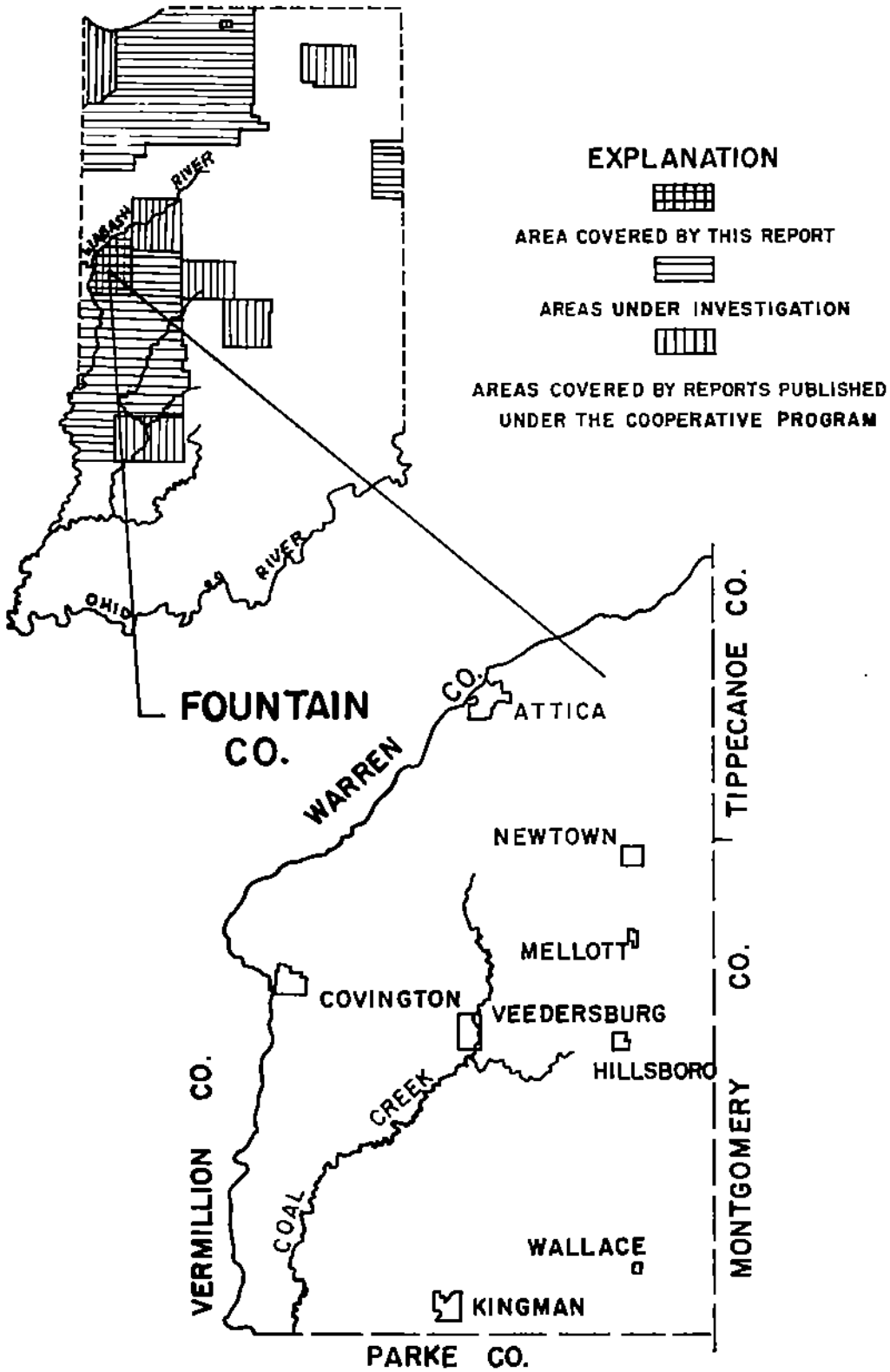

FIGURE 1. --MAP OF INDIANA SHOWING AREA COVERED BY THIS REPORT, AREAS UNDER INVESTIGATION, AND AREAS COVERED BY REPORTS PUBLISHED UNDER THE COOPERATIVE PROGRAM.

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 20/7W-33R1, the part preceding the hyphen indicates that the well is in T. 20 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 20/7W-33R1 is the first well listed in SE¼SE¼ sec. 33, T. 20 N., R. 7 W.

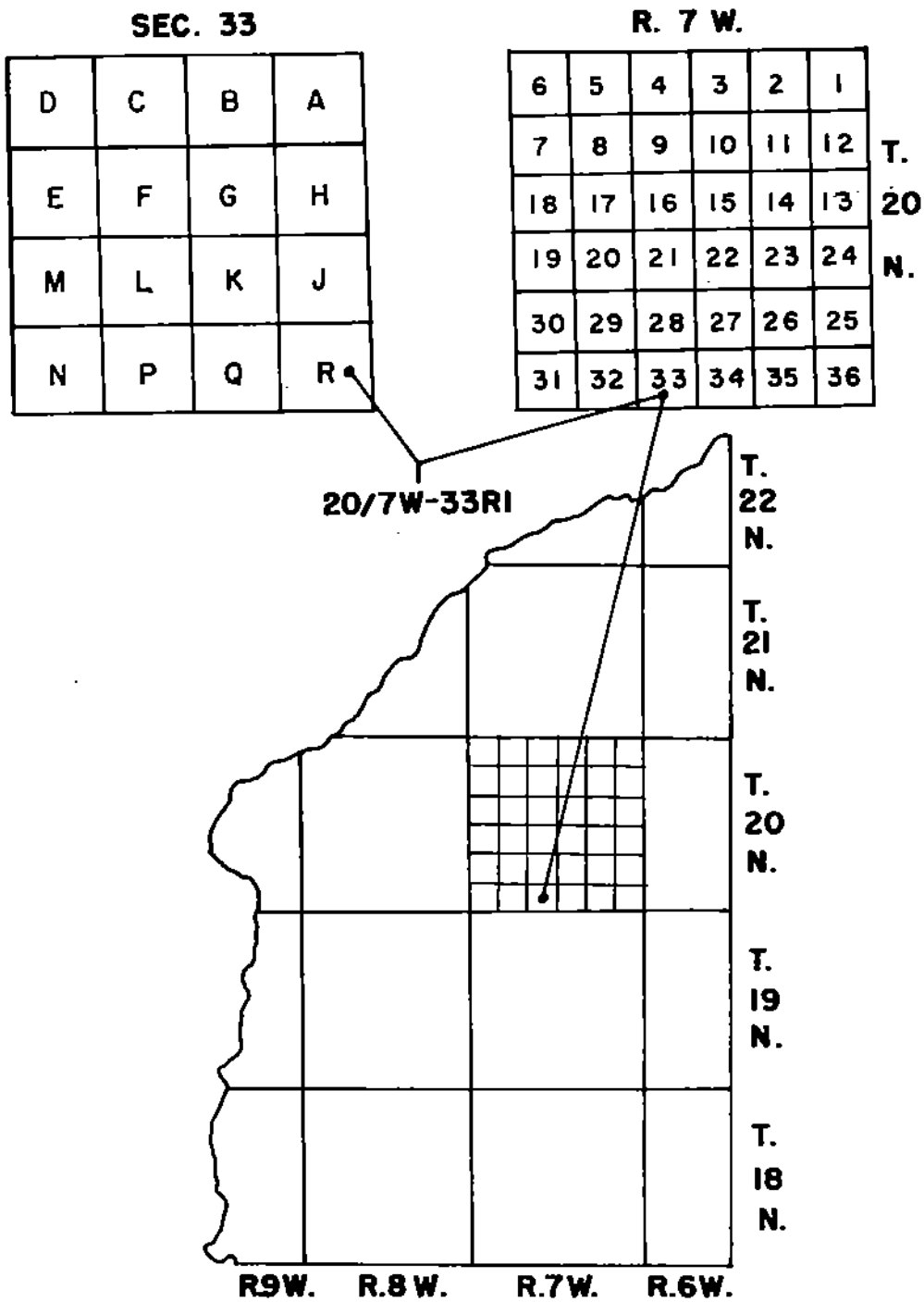

FIGURE 2.-- SKETCH SHOWING WELL-NUMBERING SYSTEM

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of 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 state agencies which provided information for the report: the Division of Oil and Gas, the Division of Water Resources, the Coal Section, and the Geophysics Section of the Geological Survey, all of the Indiana Department of Conservation; and the Indiana State Highway Department.

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, 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 material 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 analyses (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 an observation well was established to measure the fluctuations of water level. Table 9 contains water-level measurements obtained from this well. The data from this observation well show seasonal and longer term variations of the ground-water level.

GENERAL GEOLOGY AND SOURCES OF GROUND WATER

Consolidated rocks of Early and Late(?) Mississippian age and of Early and Middle Pennsylvanian age crop out in Fountain County. Overlying these rocks are unconsolidated glacial deposits of Pleistocene age.

Rocks of Mississippian age form the bedrock surface of the eastern third of the county. These rocks are exposed along the Wabash River and Big and Little Shawnee Creeks in the northern part of the county and in scattered outcrops in the eastern part. Sandstone, shale, and siltstone of Early Mississippian age are the predominate rock types, although considerable limestone of Late(?) Mississippian age is reported in logs of wells drilled in the vicinity of Wallace in the extreme southeast part of the county. All these rock units are water-bearing to various degrees and as a group form a major source of ground water for domestic and stock supplies in the eastern third of the county.

Well depths in the rocks of Early and Late(?) Mississippian age range from about 30 to 400 feet, the most frequent depth being about 90 feet. Yields range from less than 1 to about 110 gpm (gallons per minute).

Rocks of Early and Middle Pennsylvanian age are present in the western two-thirds of the county. The rocks are exposed in bluffs along the Wabash River and along streams flowing into the Wabash River. They consist chiefly of sandstone, shale, and minor amounts of coal, limestone, and fire clay. All these rocks are water-bearing to various degrees with the sandstones being the principal source of water. The rock of Pennsylvanian age is a major source of ground water for domestic and stock supplies in the western part of the county. Well depths range from about 40 to 300 feet, the most frequent depth being about 90 feet. Yields range from less than 1 to about 50 gpm with some dry holes reported.

The variation in depth of the wells tapping aquifers of Mississippian and Pennsylvanian age is due primarily to the thickness of glacial drift overlying the bedrock. The majority of these wells obtain water in the first 30 feet of bedrock penetrated.

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

Preglacial streams eroded valleys in the bedrock surface in Fountain County. Some of these valleys are followed in part by the present valleys of Big Shawnee and Coal Creeks and by the Wabash River. The majority of the preglacial valleys have been completely filled and buried by glacial materials and no surface expression remains.

Deposits of sand and gravel, as much as 80 feet thick, have been penetrated by wells drilled into the preglacial valleys. Few wells completely penetrate the total thickness of sand and gravel. These deposits may be lying on bedrock and overlain by till or Recent deposits or interbedded within the till. The sand and gravel is not necessarily continuous--locally till may completely fill a preglacial valley. The sand and gravel deposits in the preglacial valleys are overlain by till except in a few areas.

Well depths range from about 30 to 190 feet, the most frequent depth being about 90 feet. Yields from these sand and gravel deposits range from about 5 to 1,000 gpm. The saturated thickness and the grain size of the material in the deposits can change rapidly in a short distance, and are two factors controlling potential yield.

Yields sufficient for domestic, stock, and possible small industrial and municipal supplies are available from the sand and gravel deposits associated with the preglacial valleys. Yields sufficient for large industrial and municipal supplies are available in the vicinity of Attica, Covington, Veedersburg, and Wallace and may be available from a small area in the southwestern part of the county from sand and gravel deposits associated with preglacial valleys.

Large amounts of glaciofluvial sand and gravel in the northeastern part of the county are not associated with preglacial valleys. These sand and gravels are interbedded in till or overlie the till as relatively thin but areally extensive sheet-like deposits. Information is not sufficient to determine whether these sands and gravels compose one large mass or are several units, each of which is areally extensive. Yields adequate for domestic and stock supplies may be possible from wells penetrating these deposits.

Deposits of Recent age in Fountain 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 sulfate content exceeds the limits for this constituent as established by the U. S. Public Health Service (1962).

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 these aquifers are given in table 1. 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.

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

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

	Sulfate ppm	Chloride ppm	Hardness ppm
Pleistocene aquifers			
Maximum	230	118	776
Minimum	11	1	92
Mode	15	7	350
Pennsylvanian aquifers			
Maximum	1,180	1,090	1,150
Minimum	7	2	24
Mode	14	7	314
Mississippian aquifers			
Maximum	180	318	448
Minimum	9	2	96
Mode	14	7	277

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 objectionable 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 decomposes 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.

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

Constituent or property	Significance
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.

CONFINED AND UNCONFINED CONDITIONS

In Fountain 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 Fountain County. A small number of dug and driven wells are still in use and occasionally one is constructed. Most water wells are 4-inches or more in diameter and are constructed by the cable-tool or percussion method of drilling. 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 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 either 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 Fountain 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

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

stock wells is becoming more widespread. 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 - .25	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 purpose other than water supply are drilled by either the cable-tool or rotary method in Fountain County.

SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are generally available for domestic, stock, and possibly for small municipal, and small industrial use from the rocks of Mississippian and Pennsylvanian age.

Ground water for domestic, stock, and locally for small industrial and small municipal supplies is available from sand and gravel of Pleistocene age associated with preglacial bedrock valleys. In the vicinity of Attica, Covington, Veedersburg, and Wallace and possibly in a small area in the south-western part of the

county large supplies are available from the afore-mentioned deposits. Ground water for domestic and stock supplies may be available from thin but areally extensive sand and gravel deposits in the northeastern part of the county.

The quality of the water from the rocks of Mississippian, Pennsylvanian, and Pleistocene age varies greatly. Generally water from these sources exceeds the U. S. Public Health Service (1962) drinking-water standards for iron.

RECORDS

The records of about 392 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 164 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 12.

The results of 185 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 contents, and hardness of water. The U. S. Public Health Service (1962) drinking-water standards state that the chemical constituents should not exceed the following concentrations: iron, 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 5 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 13 field chemical analyses of water from streams in Fountain County with other data.

Water levels in 1 observation well in Fountain County are given in table 9. The water levels were measured with an engineers steel tape. Periodic water levels are given for the observation well. The location of this observation well is shown on plate 1.

GLOSSARY OF DRILLERS' TERMS

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

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.

Gumbo.--Sticky clay.

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

Heaving sand.--Water-saturated sand under hydrostatic pressure. Release of the pressure when drilling will cause the sand to move up the drill hole.

Shelly.--Thin and usually hard layers of rock; rock which splits in thin pieces parallel with the bedding surface; a fossiliferous rock.

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

Wild sand.--See heaving sand.

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Table 4.--Records of wells, Fountain County, Indiana

Well number: See text for description of well-numbering system.
Altitude: Altitude of land-surface datum from topographic map.
Type of well: Dr, drilled.
Finish: Co, open end; Oh, open hole; P, perforated casing; S, screen.
Material: C, coal; Cgl, conglomerate; F, fire clay; G, gravel; Ls, limestone; S, sand; Sd-ls, sandy limestone; Sd-sh, sandy shale; Sh, shale; Sh-ss, shaly sandstone; Sls, siltstone; Ss, sandstone.
Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian.

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; De, destroyed; I, industrial; N, not used; O, observation; Og, oil or gas; P, public supply; S, stock; T, test.
Remarks: A, field chemical analyses in Table 6; L, log in Table 5; La, log on file; Lam, log from memory on file; Lm, log from memory in Table 5; S, sample study 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
18/6W- 4B1	Mr. Blue	Swishor & Swank	1956	760	Dr	52	4	44	Oh	44	8	Sh	M	--	---	------	S	Hardpan to 44 ft
5J1	A. Parker	----do----------	1-10-58	750	Dr	100	4	-----	Oh	----	-----	Ss	M	C	20	------	D,S	A
6D1	V. Keller	Warrick & Youngblood	1952	745	Dr	81	4	74	Oh	74	7	Ss	P	C	18	10	D	L, A; Dd 5 ft bailing at 10 gpm
7N1	R. Cork	M. Crabb	12- 1-52	700	Dr	90	4	76	Oh	88	2	Ls	M	C	0	5	D,S	La
7Q1	G. Livengood	Holt Bros.	1-10-61	740	Dr	41	4	26	Oh	26	15	Ls	M	C	15	10	D,S	Clay 0 to 26 ft; Reported Dd 0 ft after 1 hr pumping at 10 gpm
8A1	A. Rodgers	M. Crabb	5-53	745	Dr	76	4	52	Oh	52	24	Sh	M	C	20	------	D	A; Blue clay to 52 ft
8M1	D. Flint	Swishor & Swank	12-12-58	730	Dr	62	4	31	Oh	31	31	Sh	M	C	11	------	D	A; Hardpan to 31 ft
10P1	J. Cloro	----------	--------	720	Dr	104	-----	-----	Oh	79	25	Ss	M?	--	---	------	---	Soil, gravel, and clay to 79 ft; Ashley (1899)
17Q1	W. Gray	M. Crabb	4-10-46	710	Dr	80	4	80	Oo	78	2	G	Pl	C	30	------	D,S	A; Blue clay to 78 ft
18A1	R. Livengood	----do----------	1-54	735	Dr	31	4	26	Oh	26	5	Ls	M	C	10	------	D	A; Blue clay to 26 ft
18C1	I. A. Livengood	----do----------	12-53	730	Dr	112	4	88	Oh	88	24	Ls	M	C	30	7	D,S	Blue clay to 88 ft
18N1	F. Gray	----do----------	1946	725	Dr	54	4	31	Oh	31	23	Ls	M	C	15	------	D	A; Blue clay to 31 ft
19E1	R. Clause	----do----------	1-14-53	710	Dr	187	4	165	Oh	165	22	Ls?	M?	C	25	------	I	La, A
19F1	E. Sowers	----do----------	4-54	690	Dr	150	4	150	Oo	150	-----	G	Pl	C	12	------	D	A; Blue clay to 150 ft
19M1	R. Moyers	----do----------	4-21-50	700	Dr	188	4	188	Oo	188	-----	G	Pl	C	25	------	D	Lm, A
19M2	Harriman & Keller	----do----------	1952	700	Dr	147	4	147	Oo	147	-----	G	Pl	C	15	------	D	Lam, A
19M3	K. Adkins	----do----------	10-51	700	Dr	147	4	147	Oo	147	-----	G	Pl	C	12	------	D	Lam
19M4	B. Roach	----do----------	3-24-50	700	Dr	55	4	55	Oo	54	1	G	Pl	C	12	------	D	Lam, A
19M5	E. Fender	----do----------	4-28-48	700	Dr	84	4	84	Oo	81	3	G	Pl	C	30	------	D	Blue clay to 61 ft
19M6	O. Sowers	----do----------	1934	700	Dr	132	4	132	Oo	132	-----	G	Pl	C	25	------	D	Blue clay to 132 ft
19M7	I. Keller	----do----------	9-53	690	Dr	117	4	117	Oo	117	-----	G	Pl	C	10	------	D	A; Blue clay to 117 ft
19M8	Mr. Phillpott	Holt Bros.	1- 4-61	700	Dr	148	4	148	S	145	3	G	Pl	C	30	10	D	L; Reported Dd 0 ft after 1 hr pumping at 10 gpm; Screen, 2 ft of 3 3/4-in dia, no. 40 slot
20A1	W. Gray	M. Crabb	3-21-57	710	Dr	162	4	125	Oh	125	37	Sh	M?	C	25	------	S	A; Blue clay with fine sand streaks to 125 ft
20D1	R. Livengood	Swishor & Swank	5-12-61	715	Dr	150	4	130	Oh	130	20	Sh	M	C	31	5	D	L, A; Reported Dd 0 ft after 2 hr pumping at 5 gpm
28Q1	C. Payton	M. Crabb	7-24-50	750	Dr	55	4	55	Oo	55	-----	Cgl?	Pl	C	10	------	D,S	Lam, A
29H1	E. Smith	----------	--------	770	Dr	108	-----	-----	-----	105	3	Ss?	P?	--	---	------	---	Drift, gravel and clay to 105 ft; Ashley (1899)
31C1	L. Moyers	M. Crabb	1- 7-48	720	Dr	102	4	55	Oh	102	-----	-----	M?	C	40	------	D,S	Lam, A; Water from sand-filled crevice at 102 ft
31L1	E. Cunningham	W. L. Laughlin	6-49	710	Dr	153	6	98	Oh	98	52	Ls	M	C	43	10	D	L, A; Dd 40 ft pumping at 10 gpm
31N1	----do----------	----do----------	1949	720	Dr	140	6	80	Oh	114	26	Ls	M	C	43	8	D	L; Dd 10 ft pumping at 8 gpm
32L1	D. M. Clark	M. Crabb	1953	730	Dr	180	4	147	Oh	147	33	Ls?	M	C	30	------	S	Lam, A
32P1	----do----------	----do----------	8-20-48	730	Dr	144	4	124	Oh	124	20	Sh	M	C	45	------	D,S	A: Clay to 124 ft
18/7W- 3D1	C. Summers	----do----------	4- 1-48	735	Dr	194	4	194	Oo	192	2	G	Pl	C	35	------	D,S	Lm, A

18/7W- 5H1	J. Flint	Swisher & Swank	1957	705	Dr	27	4	27	S	24	3	S,G	Pl	C	22	4.5	D	A; Shop screen, 3-in dia, 1/16-in gauze opening
7H1	H. McKenney	M. Crabb	5-55	710	Dr	170	4	70	Oh	72	-----	Sh	P	C	12	------	N	Water at 72 ft, blue clay to 70 ft
7N1	E. Smith	Swisher & Swank	1956	685	Dr	50	4	20	Oh	20	30	Sh	P	C	11	------	D	L, A
7R1	Mr. Koller	----do----------	1956	690	Dr	90	4	57	Oh	57	33	Sh	P	C	27	------	N	A; Hardpan to 57 ft
8A1	A. Phipps	M. Crabb	9- 4-48	710	Dr	101	4	101	Oo	100	1	G	Pl	C	20	------	S	A; Blue clay to 100 ft
9D1	C. W. Ray	----do----------	7-54	710	Dr	220	4	164	Oh	164	56	Sh	M?	C	30	------	D	Lm, A
12N1	B. Simpson	Swisher & Swank	9- 5-61	730	Dr	70	4	42	Oh	47	10	Ss	P	C	15	9	D,S	L, A; Dd 35 ft after 3 hr pumping at 8 gpm
12R1	G. Livengood	M. Crabb	5- 1-53	715	Dr	133	4	127	Oh	127	6	Sh	M?	C	25	------	D,S	A; Blue clay with sand streaks to 127 ft
13J1	B. Williams	Swisher & Swank	1956	725	Dr	70	4	51	Oh	51	19	Ss	P	--	---	------	D,S	A; Hardpan to 51 ft
17J1	G. Hito	----do----------	--------	720	Dr	179	4	40	Oh	159	11	Ss	P	C	17	10	S	L; Dd 108 ft after 2 hr pumping at 10 gpm
17N1	E. Emerick	----do----------	--------	715	Dr	178	4	50	Oh	-----	-----	Sh,C	P	C	20	3	N	A; Water level 8.48 ft 10-26-61
18P1	L. Prather	H. J. Brenner	12- 8-60	685	Dr	116	4	111	Oh	111	5	Ss,Sh	P	C	10	7	D,S	L, A; Dd 88 ft after 2 hr pumping at 7 gpm
19C1	R. Southard	M. Crabb	6-56	700	Dr	160	4	124	Oh	124	36	Sh	P	C	7	------	D	Lm
19D1	C. L. Smith	----do----------	10-20-49	680	Dr	92	4	64	Oh	64	28	Sh	P	C	0	------	D	A; Blue clay to 64 ft
22A1	C. Gooding	----do----------	5-52	710	Dr	200	4	100	Oh	100	100	Sh,Ss	P	C	40	------	D,S	Lm, A
22B1	Freedom Church	Swisher & Swank	8- 2-61	710	Dr	104	4	48	Oh	48	56	Sh	P	C	20	2.5	P	L, A
23A1	C. Bevers	----do----------	--------	695	Dr	58	4	58	S	-----	-----	G	Pl	--	---	------	D	A; Shop screen, 3-in dia, 1/16-in gauze opening
24G1	C. Simms	----do----------	--------	710	Dr	50	4	50	S	-----	-----	G	Pl	--	---	------	D,S	Shop screen, 3-in dia, 1/16-in gauze opening
24J1	H. Rush	----do----------	1956	685	Dr	134	4	134	S	131	3	G	Pl	C	15	------	D	Hardpan to 131 ft; Shop screen, 3-in dia, 1/8-in gauze opening
24K1	L. McCollum	----do----------	--------	645	Dr	70	4	70	Oo	70	-----	G	Pl	C	21+	800	S	A
24R2	M. Woods	M. Crabb	1952	690	Dr	114	4	114	Oo	114	-----	G	Pl	C	4	------	D	Lm
24R3	J. Starns	----do----------	7-51	685	Dr	105	4	105	Oo	105	-----	G	Pl	C	1+	30	D	Lm
25L1	W. Ireland	Swisher & Swank	--------	710	Dr	137	4	90	Oh	90	47	Ss	P	C	50	------	D,S	A
25R1	C. Cunningham	M. Crabb	1948	710	Dr	125	4	74	Oh	74	51	Ss	P	C	40	------	D	A, Blue clay to 74 ft
27Q1	E. Harvey	Swisher & Swank	1956	695	Dr	110	4	97	Oh	100	10	Ss	P	C?	100	------	D,S	L, A
28K1	K. Cates	M. Crabb	1946	700	Dr	92	4	92	P	80	12	G	Pl	C	30	------	D,S	A; Blue clay to 80 ft
28M1	G. Ingram	----do----------	7-49	700	Dr	101	4	101	Oo	100	1	G	Pl	C	30	------	D,S	Blue clay to 100 ft
30P1	H. Thomas	Swisher & Swank	--------	715	Dr	288	4	160	Oh	-----	-----	-----	P?	C	60	------	D,S	A
30R1	K. Cates	M. Crabb	11-10-48	710	Dr	102	4	80	Oh	80	22	Ss	P	C	25	------	D,S	A; Blue clay to 80 ft
32D1	Mr. Bousfield	----do----------	5-55	715	Dr	102	4	100	Oh	100	2	Ss?	P	C	25	------	P	A; Blue clay to 100 ft
32M1	L. Pithoud	----do----------	1949	700	Dr	100	4	90	Oh	90	10	Ss	P	C	25	------	D,S	A; Blue clay to 90 ft
33E1	G. Harrison	Swisher & Swank	1958	705	Dr	81	4	81	S	41	40	G	Pl	C	2	------	D,S	A; Shop screen, 3-in dia, 1/16-in gauze opening
33J1	R. H. Johnson	M. Crabb	1948	685	Dr	128	3	42	Oh	42	86	Sh	P	C	30	------	D	A; Blue clay to 42 ft
34L1	J. C. Yater	Holt Bros.	1960	810	Dr	112	4	112	S	110	2	G	Pl	C	1+	10	D	A; Clay to 110 ft; Screen, 2 ft of 3 3/4-in dia, no. 40 slot; Dd 5 ft after 1 hr pumping at 10 gpm
36C1	H. Lindquist	H. J. Brenner	11- 3-59	710	Dr	140	4	50	Oh	116	24	Ss	P	C	60	10	D	L, A; Dd 10 ft pumping at 10 gpm
36C2	H. Allen	M. Crabb	9-53	710	Dr	146	4	39	Oh	39	107	Ss	P	C	40	------	S	Blue clay to 39 ft
36J1	R. Meyers	Swisher & Swank	1957	715	Dr	163	4	-----	Oh	-----	-----	Ss	P	C?	62	------	D	A
18/8W- 2M1	T. Glascock	M. Crabb	1949	640	Dr	125	4	125	Oo	123	2	S,G	Pl	C	40	------	D,S	A; Blue clay with few sand streaks to 123 ft
2Q1	----do----------	----do----------	12-53	660	Dr	61	4	61	Oo	61	-----	Sh	P	C	10	------	D,S	A; Blue clay to 61 ft
4G1	I. Perigo	----------	1948	630	Dr	1,928	-----	-----	-----	-----	-----	-----	-----	--	---	------	Og	E. A. Riggs & W. Dico 1; S (partial)
4N1	C. Allen	M. Crabb	12- 1-55	630	Dr	210	4	65	Oh	-----	-----	-----	-----	--	---	------	Do	Lm; Dry hole
4N2	----do----------	----do----------	12-55	625	Dr	80	4	72	P,Oh	14	1	S,G	Pl	C	F	------	D,S	Lm, A
6N1	L. Snoddy	H. J. Brenner	4-10-53	530	Dr	170	4	26	Oh	26	144	Sh,Sd-sh	P	C	30	2	D,S	A; Clay to 26 ft; Dd 70 ft pumping at 2 gpm
7D1	S. Harman	M. Crabb	5- 7-56	530	Dr	90	4	30	Oh	30	60	Sh	P	--	---	------	D,S	A; Blue clay to 30 ft
7E1	----do----------	----do----------	5-56	520	Dr	49	4	49	S	28	24	G	Pl	C	15	10	S	Lm
8R1	R. Allen	Swisher & Swank	--------	640	Dr	55	4	47	Oh	-----	-----	-----	P	C	40	------	D,S	A
9W1	R. Blizzard	----do----------	1956	620	Dr	102	4	102	S	98	4	S,G	Pl	--	---	------	N	Lm; Shop screen, 3-in dia, 1/8-in gauze opening
10A1	T. Harlan	M. Crabb	11-53	640	Dr	72	4	72	Oo	72	-----	G	Pl	C	8	------	D,S	A; Blue clay to 72 ft
10C1	E. Starkey	----do----------	9-53	640	Dr	46	4	46	Oo	46	-----	G	Pl	C	12	------	D,S	A; Blue clay to 46 ft
10K1	T. Glascock	----do----------	11-53	650	Dr	42	4	38	Oh	38	4	Sh	P	C	10	------	D,S	A; Blue clay to 38 ft
10L1	----do----------	----do----------	1953	650	Dr	236	4	64	Oh	-----	-----	-----	-----	--	---	------	Do	Dry hole; Blue clay to 64 ft
10L2	----do----------	----do----------	1953	650	Dr	80	4	80	-----	-----	-----	-----	-----	--	---	------	Do	Dry hole; Blue clay to 80 ft
12D1	C. Palmer	----do----------	12-20-47	655	Dr	88	4	88	Oo	30	58	S	Pl	C	2+	------	D	A; Blue clay to 30 ft
12M1	C. E. Zeigler	----do----------	9-53	660	Dr	85	4	85	Oo	85	-----	-----	Pl	C	15	------	D,S	A; Water at top of rock

Table 4.--Records of wells, Fountain County, Indiana--Cont.

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
18/8W-15N1	P. Baker	Swisher & Swank	6-26-58	650	Dr	87	4	-----	Oh	-----	-----	Sh,C	P	--	---	4	D,S	A
16F1	L. Maris	H. J. Brenner	11- 4-58	645	Dr	143	4	50	Oh	-----	-----	Sh,Ss	P	C	5	15	N	L; Dd 39 ft after 3 hr pumping at 15 gpm
17R1	C. Crowder	M. Crabb	5-55	630	Dr	38	4	30	Oh	30	8	Sh	P	C	3	-----	D	A; Blue clay to 30 ft
18D1	D. Six	Swisher & Swank	8-57	585	Dr	130	4	130	S	98	32	G	Pl	U	112	-----	D	Hardpan to 98 ft; Shop screen, 3-in dia, 1/16-in gauze opening
18F1	B. Starkey	M. Crabb	6-26-46	595	Dr	182	4	64	Oh	-----	-----	-----	----	--	---	-----	N	Lm; Dry hole
19L1	E. Douglas	----do----------	--------	600	Dr	74	4	64	Oh	64	10	Sh,Ss	P	C	25	-----	D	Lm, A
19R1	R. Woodrow	Swisher & Swank	1957	630	Dr	143	4	93	Oh	-----	-----	Sh	P	--	120	2	S	Reported dry 11-1-61
20A1	Cates Grade School	M. Crabb	6-14-46	640	Dr	80	4	60	Oh	60	20	Ss	P	C	35	-----	P	Lm
20A2	----do----------	Swisher & Swank	2-61	640	Dr	202	4	70	Oh	70	132	Sh	P	C	30	4	P	L, A; Dd 70 ft after 2 hr pumping at 4 gpm
20R1	M. Cates	M. Crabb	1947	655	Dr	120	4	109	Oh	120	-----	Cgl	P	--	---	-----	N	Lm
20R2	----do----------	----do----------	5-54	655	Dr	182	4	125	Oh	131	5	Sd-sh?	P	C	35	-----	D,S	Lm, A
21D1	S. Johnson	----do----------	4- 1-46	640	Dr	120	4	89	Oh	119	1	F	P	--	---	-----	P	Lm, A
21M1	R. Woodrow	Swisher & Swank	8-14-57	650	Dr	120	4	-----	Oh	-----	-----	-----	P	--	---	-----	D	A
23R1	Town of Kingman	A. L. Stice	11-53	660	Dr	154	8	154	S	137	17	S,G	Pl	C	15	70	P	L; Screen, 3½ft of 6-in dia, no. 50 slot; Dd 35 ft after 24 hr pumping 70 gpm
24Q1	J. Fabert	M. Crabb	--------	685	Dr	140	4	140	Qa	139	1	G	Pl	--	---	-----	D,S	Lam, A
24Q2	Town of Kingman	Sutherland Drilling Co.	10-48	665	Dr	129	8	129	S	128	1	G,S	Pl	--	---	50	T	L
25C1	----do----------	M. Crabb	2-50	690	Dr	164	4	-----	-----	-----	-----	-----	----	--	---	-----	T	L
25D1	----do----------	----do----------	2-50	690	Dr	125	4	-----	-----	39	.5	G	Pl	--	---	-----	T	L
										49	1	G	Pl					
25E1	----do----------	----do----------	2-50	680	Dr	138	4	-----	-----	92	3	G	Pl	--	---	-----	T	L
										95	3	G	Pl					
25L1	----do----------	----do----------	1-50	690	Dr	138	4	-----	-----	-----	-----	-----	----	--	---	-----	T	L
25L2	----do----------	----do----------	1-50	690	Dr	148	4	-----	-----	-----	-----	-----	----	--	---	-----	T	L
25P1	C. Davis	----do----------	2-53	700	Dr	210	4	182	Oh	182	18	Ss?	P	C	40	-----	N	Lm; Lost water at 210 ft; Well backfilled with cement to 200 ft
26D1	J. L. Sollars	Swisher & Swank	--------	670	Dr	157	4	157	S	-----	-----	G	Pl	--	---	-----	D	Shop screen, 3-in dia, 1/16-in gauze opening
26P1	W. Mann	----do----------	--------	685	Dr	130	4	130	Qo	-----	-----	G	Pl	--	---	-----	D,S	A
27L1	F. Johnson	M. Crabb	1947	675	Dr	168	4	101	Oh	101	67	Sh	P	C	50	-----	D,S	Lam, A
28B1	B. Gritton	----do----------	2-54	635	Dr	110	4	54	Oh	54	56	Sd-sh	P	C	25	-----	D	A; Blue clay to 54 ft
29D1	C. Graves	----do----------	8-24-46	630	Dr	163	4	115	Oh	115	48	Sh	P	C	45	-----	D,S	Lam, A
29K1	E. Clarkston	----do----------	8- 8-46	640	Dr	204	4	94	Oh	145	59	Sh	P	C	45	-----	D,S	Lm, A
							3	145										
31N1	J. Coleman	W. L. Laughlin	7-54	605	Dr	101	6	50	Oh	50	51	Ss	P	C	18	10	D	Lm, A; Dd 10 ft after 4 hr bailing at 10 gpm
32C1	J. Clarkston	M. Crabb	4-54	625	Dr	144	4	108	Oh	108	36	Sh	P	C	65	-----	D	Lm, A
32J1	J. A. Romine	W. L. Laughlin	4- 2-48	625	Dr	170	6	-----	Oh	161	11	Ss	P	--	---	-----	D	L, A
33H1	B. Lewis	----do----------	8-54	635	Dr	155	6	155	Qo	153	2	S,G	Pl	C	40	5	D	L, A; Dd 2 ft after 2 hr pumping 5 gpm; Well backfilled with gravel to 150 ft
34B1	H. Radcliff	M. Crabb	8-57	675	Dr	100	4	100	P	27	3	S,G	Pl	C	12	-----	S	Lm, A
34L1	G. Myers	H. J. Brenner	7-22-59	685	Dr	187	4	162	Oh	175	10	Ss	P	C	40	8	D,S	L, A; Dd 35 ft pumping at 8 gpm
36A1	D. Radcliff	M. Crabb	8- 8-46	710	Dr	100	4	88	Oh	88	12	Cgl	P	C	35	-----	S	A; Blue clay to 88 ft
36B1	Town of Kingman	----do----------	2-50	710	Dr	150	4	-----	-----	56.5	2	S,G	Pl	--	---	-----	T	L
36C1	----do----------	----do----------	1-50	695	Dr	142	4	-----	-----	-----	-----	-----	----	--	---	-----	T	L
36D1	T. Johnson	----do----------	1952	700	Dr	163	4	148	Oh	148	15	Sh-ss?	P	C	30	-----	N	Lam
36D2	M. Crabb	----do----------	6- 1-52	700	Dr	192	4	142	Oh	150	42	Sh-ss?	P	C	40	-----	N	Lm
36D3	Harris & Grubb	----do----------	7-46	700	Dr	150	4	150	S	145	5	S,G	Pl	C	40	-----	N	Lam
18/8W-1G1	R. Johnson	Warrick & Youngblood	1958	620	Dr	138	4	98	Oh	92	46	Ss	P	--	---	10	D	L, A

18/9W- 1G2	J. Huston	M. J. Bronner	3-29-60	635	Dr	185	4	129	Oh	129	38	Sh	P	C	70	7	D	L, A; Dd 79 ft after 2 hr pumping at 7 gpm
1Q1	E. E. Boyer	Warrick & Youngblood	4-20-56	670	Dr	135	4	42	Oh	97	38	Sa	P	C	40	1.5	D	L, A
2L1	P. I. Coleman	Swisher & Swank	6- 7-57	650	Dr	71	4	71	S	68	3	S,G	Pl	--	---	-----	D	Shop screen, 3-in dia, 1/8-in gauze opening
11C1	West Liberty Church	M. Crabb	12-50	650	Dr	90	4	90	Oo	90	-----	G	Pl	C	25	-----	P	Lm, A
11C2	F. Cates	Warrick & Youngblood	--------	635	Dr	145	4	140	Oh	140	5	G	Pl	--	---	10	S	L, A
11F1	F. Coleman	M. Crabb	1951	635	Dr	138	4	138	Oo	138	-----	G	Pl	C	40	-----	D,S	Lm, A
11L1	Coffing Bros. Orchard Co.	Swisher & Swank	11-13-56	645	Dr	50	4	50	S	-----	-----	S,G	Pl	C	0	-----	D,S	A; Shop screen, 3-in dia, 1/8-in gauze opening
12J1	F. Stanton	M. Crabb	--------	525	Dr	60	4	56	Oh	56	4	Sh,Cgl	P	C	18	-----	D,S	Blue clay to 56 ft
34C1	W. Randolph	----do----------	7-48	550	Dr	92	4	23	Oh	74	4.5	C	P	--	---	-----	D,S	Lm, A
34Q1	Mrs. Barnett	M. Crabb	7- 8-48	560	Dr	80	4	36	Oh	-----	-----	-----	P	C	40	-----	D,S	A; Blue clay to 36 ft
35F1	D. Bowman	Swisher & Swank	--------	515	Dr	80	4	32	Oh	32	48	Sh	P	C	30	2.5	D	L
35P1	M. Thompson	W. L. Laughlin	5-28-60	520	Dr	89	6	42	Oh	50	6	Sa	P	C	32	5	D	L, A; Dd 36 ft after 2 hr pumping at 5 gpm
										60	15	Sa	P					
35P2	R. Linder	----do----------	8- 8-61	520	Dr	44	6	44	P	30	14	S,G	Pl	U	30	6	D	L, A; Dd 1 ft after 2 hr pumping at 6 gpm
35P3	S. Koster	M. Crabb	7-51	520	Dr	47	4	47	Gu	30	17	S	Pl	U	30	-----	D	Lm
35Q1	Mr. Curtis	W. L. Laughlin	1949	520	Dr	40	10	40	Oo	31	9	G,S	Pl	U	31	-----	D	La
35Q2	F. Clingan	----do----------	6-18-60	525	Dr	80	8	80	P	40	20	G,S	Pl	U	40	10	D	L; Dd 0.5 ft after 2 hr bailing at 10 gpm
35Q3	R. Robinson	Reynolds Bros.	9- 7-54	520	Dr	71	4	71	Oo	60	8	S,G	Pl	C	30	4	D	L; Dd 20 ft pumping at 4 gpm
35Q4	H. Freemand	Swisher & Swank	1956	525	Dr	53	4	53	S	-----	-----	G	Pl	C	5	7	D	Shop screen, 3-in dia, 1/16-in gauze opening
36H1	R. Keiger	M. Crabb	2-54	610	Dr	74	4	43	Oh	43	31	Sh	P	C	20	----	D,S	
36J1	W. Baysinger	W. L. Laughlin	2-10-55	610	Dr	112	8	50	Oh	50	15	Sa	P	C	18	7	D	L, A; Dd 15 ft after 2 hr bailing at 7 gpm
										108	4	C	P					
36L1	F. Moore	----do----------	7-34	565	Dr	111	4	44	Oh	102	9	La	P	C	30	-----	N	L, A
19/6W- 7J1	Indiana State Highway Department	R. Mark	11- 7-41	710	Dr	126	6	17	Oh	80	46	Sls	M	C	8	-----	P	L, A
7M1	H. Brown	Reynolds Bros.	11-20-53	695	Dr	81	4	20	Oh	60	21	Sh	M	C	13	20	D	L
7N1	M. Maudlin	----------	--------	710	Dr	93	-----	-----	-----	21	72	La	M	--	---	-----	---	Drift to 21 ft; Ashley (1899)
8P1	B. Connor	----------	--------	710	Dr	94	-----	-----	-----	14	80	Sa	P?	--	---	-----	---	Drift to 14 ft; Ashley (1899)
16G1	----do----------	----------	--------	710	Dr	65	-----	-----	-----	-----	-----	-----	----	--	---	-----	---	Drift to 65 ft; Ashley (1899)
17B1	E. Brown	M. Crabb	3-51	710	Dr	44	4	22	Oh	22	22	Sh	M	C	20	-----	D	A; Clay to 22 ft
18P1	L. Starnes	----------	--------	730	Dr	134	-----	-----	-----	-----	-----	Sh	M	--	---	-----	---	Drift to 134 ft; Ashley (1899)
21N1	W. F. Long	Reynolds Bros.	2- 8-54	765	Dr	158	4	120	Oh	120	38	Sh	M	C	24	5	D,S	L, A; Dd 11 ft pumping at 5 gpm
32F1	D. P. Long	----------	--------	765	Dr	80	-----	-----	-----	-----	-----	-----	----	--	---	-----	---	Drift to 80 ft; Ashley (1899)
19/7W- 2L1	Mason & Snyder	----------	6-21-32	760	Dr	1,905	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	Coats-Smith Oil Corp. 1; L (partial)
3D1	M. Cooper	Holt Bros.	1958	680	Dr	108	4	100	Oh	100	8	Ss	M	C	43	10	D,S	A; Drift to 100 ft
4F1	H. Mitton	M. Crabb	10-30-49	680	Dr	70	4	56	Oh	56	14	Ss	P	C	20	-----	D,S	A; Blue clay to 56 ft
6K1	G. Dear	E. E. Doane	8-21	615	Dr	110	-----	-----	Oh	85	25	Ss	M	C	40	10	D	La; Dd 10 ft pumping at 10 gpm
6K2	Sterling Motel	Warrick & Youngblood	--------	615	Dr	125	8	73	Oh	73	52	Ss	M	--	---	12	P	L
6Q1	W. Hollocraft	Reynolds Bros.	12-13-56	615	Dr	124	4	100	Oh	104	20	Ss	M	C	40	5	D	L; Dd 25 ft pumping at 5 gpm
8K1	G. Cox	M. Crabb	1952	670	Dr	120	4	56	Oh	56	64	Ss	P	C	25	-----	D	Lm, A
9F1	J. Galloway	Warrick & Youngblood	--------	675	Dr	67	-----	46	Oh	46	19	Sd-sh	P	--	---	12	D	L, A
11G1	W. Vorhees	Reynolds Bros.	10-11-53	680	Dr	80	4	30	Oh	60	20	La	M	C	20	2	D	L, A; Dd 20 ft pumping at 2 gpm
12B1	Town of Hillsboro	Stremmel & Hill	12-38	715	Dr	208	8	32	Oh	132	50	Sls	M	C	27	110	P	L
12F1	Merchants and Farmers Telephone Co.	----------	--------	705	Dr	59	4	-----	Oh	33	26	Ss	P	U	40	-----	O	Observation well Fountain 1, W
14J1	W. Benefield	Reynolds Bros.	12-28-53	710	Dr	58	4	34	Oh	34	22	Sa	P	C	17	5	D,S	L, A; Dd 13 ft pumping at 5 gpm
15N1	Mr. Willis	M. Crabb	2- 2-52	690	Dr	85	4	61	Oh	61	24	Ss	P	C	25	-----	D,S	Lm
19P1	R. M. Dice	Warrick & Youngblood	1953	660	Dr	355	4	95	Oh	105	19	Ls	M	C	15	-----	D,S	L, A
21E1	C. Stockdale	M. Crabb	5-48	680	Dr	140	4	80	Oh	80	60	Sh	M?	C	27	-----	D,S	A; Blue clay with boulders to 80 ft
22D1	L. Summers	Holt Bros.	7- 7-60	690	Dr	115	4	60	Oh	88	47	Sa	P	C	40	7	D	L, A; Dd 10 ft after 1 hr pumping at 7 gpm
24P1	F. Hosler	Reynolds Bros.	1-20-54	740	Dr	317	4	180	Oh	-----	-----	-----	M	--	---	-----	D	L, A
25F1	E. Summers	Holt Bros.	12-30-60	740	Dr	187	4	153	Oh	153	34	Ss,Sh	M	C	30	7	D,S	L, A; Dd 40 ft after 2 hr pumping at 7 gpm
26C1	H. Hosler	G. Reynolds	9- 9-61	725	Dr	118	4	104	Oh	104	14	Sh	M	C	20	5	S	L; Dd 90 ft after 3 hr bailing at 5 gpm
27P1	T. Booe	----------	--------	710	Dr	-----	-----	-----	-----	178	-----	Ss	M	--	---	-----	---	Ashley (1899); Drift to 178 ft
28F1	V. Pyle	M. Crabb	3-52	690	Dr	130	4	130	Gu	130	-----	G	Pl	C	25	-----	S	A; Blue clay with sand streaks to 130 ft
31E1	J. Darwactor	----do----------	1948	655	Dr	100	4	100	Oo	98	2	G	Pl	C	4	-----	D,S	Blue clay to 98 ft
33Q1	C. W. Dockins	----do----------	1949	700	Dr	70	4	70	Gu	68	2	G	Pl	C	15	-----	D	Blue clay to 68 ft

Table 4.--Records of wells, Fountain County, Indiana--Cont.

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
19/8W- 1C1	E. Forrest	H. J. Brenner	--------	670	Dr	218	-----	-----	Oh	154	85	Sh	M	--	---	9	D,S	A; Clay and hardpan to 154 ft
1L1	C. Keeling	M. Crabb	9-20-49	675	Dr	180	4	-----	Oh	135	25	Sh	M	C	45	-----	D	Lm
2D1	M. Sullivan	----------	--------	690	Dr	33	6	-----	-----	-----	-----	-----	----	--	13	-----	N	Water level 11.95 ft, 3-13-57
2H1	4-H Fairgrounds	H. Crabb	1952	670	Dr	210	4	95	Oh	85	115	Sh	M?	C	45	-----	P	Lm
3B1	A. Forrest	Warrick & Youngblood	1957	675	Dr	60	4	42	Oh	42	18	Ss	P	--	---	12	D,S	L
3N1	R. R. Hunt	E. E. Doane	1921	660	Dr	135	4	82	Oh	82	53	Ss	P?	C	20	15	D,S	A; Overburden to 80 ft
3R1	F. Whorry	Warrick & Youngblood	--------	670	Dr	175	4	102	Oh	102	13	Ss	M?	--	---	8	S	A
5D1	W. C. Martin	----do----------	--------	630	Dr	60	4	32	Oh	32	28	Ss	P	--	---	-----	S	
5F1	Indiana State Highway Department	----------	7-11-58	610	Dr	31	-----	-----	-----	-----	-----	-----	----	U	4	-----	T	Lm
5F2	----do----------	----------	7-11-58	605	Dr	35	-----	-----	-----	-----	-----	-----	----	U	5	-----	T	Lm
5F3	----do----------	----------	7-11-58	603	Dr	31	-----	-----	-----	-----	-----	-----	----	U	7	-----	T	Lm
5F4	----do----------	----------	7-11-58	605	Dr	32	-----	-----	-----	-----	-----	-----	----	U	3	-----	T	Lm
5F5	----do----------	----------	7-11-58	604	Dr	40	-----	-----	-----	-----	-----	-----	----	U	5	-----	T	Lm
5F6	----do----------	----------	7-11-58	604	Dr	32	-----	-----	-----	-----	-----	-----	----	U	6	-----	T	Lm
5K1	C. M. Davidson	Warrick & Youngblood	--------	645	Dr	84	4	84	S	81	3	S	Pl	--	---	8	D,S	L, A
6A1	R. George	----do----------	--------	620	Dr	130	-----	130	-----	-----	-----	S	Pl	C	F	-----	D	A
6D1	W. Kiger	H. J. Brenner	4-18-58	605	Dr	71	4	19	Oh	50	15	Sd-sh	P	C	8	20	D	L, A; Dd 17 ft pumping at 20 gpm
										65	6	Ss	P					
8H1	A. Aldridge	Warrick & Youngblood	--------	620	Dr	80	4	20	Oh	20	60	Ss	P	--	---	15	D,S	A
7H1	T. Hardy	----do----------	--------	640	Dr	80	4	-----	-----	-----	-----	Ss	P	--	---	10	D	
8L1	J. B. Fishor	----do----------	--------	625	Dr	98	4	-----	Oh	68	30	Ss	P	--	---	10	D,S	Lm (partial)
11D1	V. Rogers	----do----------	--------	660	Dr	165	4	-----	Oh	130	35	Ss	M?	--	---	10	D,S	A
12E1	E. Powers	M. Crabb	8-15-50	665	Dr	204	4	75	Oh	75	129	Sh	M?	C	40	5	D	Lm, A; Dd 110 ft bailing at 5 gpm
13H1	W. Meadows	Warrick & Youngblood	12-16-58	595	Dr	74	4	64	Oh	70	4	Sd-ls	M	--	---	10	D	L, A
14F1	W. Corey	M. Crabb	1952	610	Dr	150	4	112	Oh	112	38	Sh-ss?	M	--	---	-----	D,S	A
15B1	O. Howard	H. J. Brenner	7-15-58	670	Dr	184	4	169	Oh	169	15	Ss	M	C	94	4	D,S	L, A; Dd 16 ft pumping at 4 gpm
16A1	A. Bodine	----------	1947	640	Dr	2,417	-----	-----	-----	-----	-----	-----	----	--	---	-----	Og	Aldridge-Banta 1; S (partial)
19N1	J. Garrison	H. J. Bronner	3-27-53	655	Dr	97	4	97	S	77	20	S	Pl	C	17	12	D	L, A; Dd 43 ft pumping 12 gpm; Screen, 4 ft of 4-in dia, no. 18 slot
24G1	C. W. Dice	Warrick & Youngblood	1953	645	Dr	126	4	126	Oo	120	-----	S	Pl	--	---	-----	N	L, A
24L1	Mrs. Stump	G. Reynolds	10-30-51	640	Dr	353	4	136	Oh	160	5	Sh	M	C	37	4	S	L; Dd 300 ft after 5 hr bailing at 4 gpm
										326	27	Ss	M					
26F1	K. Cade	H. J. Brenner	5- 5-58	630	Dr	105	4	72	Oh	85	15	Sh	P	C	30	12	D,S	L, A; Dd 20 ft pumping at 12 gpm
26J1	M. E. Patton	M. Crabb	5-47	650	Dr	115	4	115	Oo	113	2	G	Pl	C	50	-----	D	Blue clay to 113 ft
29H1	Rabb School	E. E. Doane	1921	635	Dr	78	8	43	Oh	43	35	Ss	P	C	38	-----	P	A; Overburden to 43 ft
30Q1	M. Junks	H. J. Bronner	3-27-54	630	Dr	142	4	106	Oh	106	36	Sh	P	C	80	5	D	L; Dd 12 ft pumping at 5 gpm
32A1	E. A. Likins	Warrick & Youngblood	--------	560	Dr	59	4	-----	Oh	11	48	Ss	P	--	---	15	D	A; Soil to 11 ft
32A2	Cooper Chapel Church	----do----------	1956	570	Dr	89	4	80	Oh	60	25	Ss	P	C	32	2	P	L, A
32B1	R. Fox	Swisher & Swank	5-17-58	580	Dr	87	4	87	S	80	7	G	Pl	U	80	8	D	L; Screen, 5 ft of 4-in dia, no. 12 slot
34B1	H. Anderson	M. Crabb	6-56	610	Dr	115	4	65	Oh	85	30	Sh	P	C	40	-----	D	Lm, A
36A1	G. Conner	Holt Bros.	1955	655	Dr	125	4	125	Oo	-----	-----	G	Pl	C	5	10	D	A
36N1	E. A. Gerling	----do----------	1957	645	Dr	79	4	79	S	-----	-----	G	Pl	C	12	10	D	A; Screen, no. 40 slot
36P1	E. Meyers	Warrick & Youngblood	5-52	650	Dr	81	3	79	Oh	79	2	Ss	P	C	25	6	D,S	La, A; Dd 4 ft bailing at 6 gpm
19/9W- 1B1	Mr. Brookshire	----do----------	--------	600	Dr	50	4	-----	-----	50	-----	G	Pl	--	---	15	D	Lm
1C1	E. Ford	----do----------	--------	585	Dr	86	4	-----	Oh	-----	-----	Ss	P	--	---	10	D,S	A
1E1	Indiana State Highway Department	----------	7-11-58	576	Dr	10	-----	-----	-----	-----	-----	-----	----	U	8	-----	T	Lm
1H2	----do----------	----------	7-11-58	573	Dr	10	-----	-----	-----	-----	-----	-----	----	U	2	-----	T	Lm
1H3	----do----------	----------	7-11-58	578	Dr	10	-----	-----	-----	-----	-----	-----	----	U	2	-----	T	Lm
1H4	----do----------	----------	7-11-58	596	Dr	20	-----	-----	-----	-----	-----	-----	----	U	18	-----	T	L
1H5	----do----------	----------	7-11-58	599	Dr	20	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	Lm

19/9W- 1L1	B. Lewis	Warrick & Youngblood	--------	590	Dr	90	4	-----	Oh	32	58	Sa	P	--	---	25	D,S	
2A1	Indiana State Highway Department	----------	7-11-58	507	Dr	20	-----	-----	-----	-----	-----	-----	----	U	2	-----	T	L
2A2	----do----------	----------	7-11-58	507	Dr	15	-----	-----	-----	-----	-----	-----	----	U	2	-----	T	La
2A3	----do----------	----------	7-11-58	507	Dr	15	-----	-----	-----	-----	-----	-----	----	U	4	-----	T	La
2A4	----do----------	----------	7-11-58	507	Dr	10	-----	-----	-----	-----	-----	-----	----	U	3	-----	T	La
2A5	----do----------	----------	7-11-58	508	Dr	16	-----	-----	-----	-----	-----	-----	----	U	2	-----	T	La
2B1	----do----------	----------	3-24-58	496	Dr	40	-----	-----	-----	-----	-----	-----	----	U	5	-----	T	L
2C7	----do----------	----------	1-17-58	480	Dr	33	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
2C8	----do----------	----------	1-22-58	482	Dr	30	-----	-----	-----	-----	-----	-----	----	--	---	-----	T	La
2C9	----do----------	----------	3-24-58	491	Dr	47	-----	-----	-----	-----	-----	-----	----	U	15	-----	T	L
2C10	----do----------	----------	3-24-58	489	Dr	36	-----	-----	-----	-----	-----	-----	----	U	12	-----	T	La
2C11	----do----------	----------	3-24-58	490	Dr	45	-----	-----	-----	-----	-----	-----	----	U	9	-----	T	La
2C12	----do----------	----------	3-24-58	496	Dr	36	-----	-----	-----	-----	-----	-----	----	U	12	-----	T	La
2C13	----do----------	----------	3-24-58	490	Dr	28	-----	-----	-----	-----	-----	-----	----	U	8	-----	T	La
2H1	D. Beaver	Warrick & Youngblood	--------	515	Dr	135	4	29	Oh	87	48	Ss	P	C	20	6	D	L, A; Dd 75 ft bailing at 6 gpm
11C1	Covington Conservation Club	----do----------	--------	485	Dr	75	4	-----	Ob	72	3	Ss	P	C	F	4	P	L, A
26J1	R. Garrison	H. J. Bronner	8-15-59	700	Dr	160	4	122	Oh	145	15	Sd-sh	P	C	80	12	D,S	L, A; Dd 25 ft after 2 hr pumping at 12 gpm
26K1	P. Sultors	Swisher & Swank	1956	665	Dr	68	4	68	S	59	9	S,G	Pl	C	40	-----	D	A; Hardpan to 59 ft
26M1	R. Coleman	----do----------	6- 9-60	500	Dr	61	4	18	Oh	18	43	Ss	P	C	11	10	D	Top soil and clay to 18 ft; Reported Dd 0 ft after 2 hr pumping at 10 gpm
34A1	J. McCord	----do----------	10-24-61	500	Dr	49	4	18	Oh	18	22	Ss	P	C	10	10	D	L; Reported Dd 0 ft after 1 hr pumping at 10 gpm
34A2	R. Walters	----do----------	6-10-60	500	Dr	53	4	15	Oh	15	38	Ss	P	C	6	10	D	A; Clay to 15 ft; Reported Dd 0 ft after 2 hr pumping at 10 gpm
36R1	G. Hadley	M. Crabb	1- 4-52	640	Dr	104	4	47	Oh	52	2	F	P	C	40	-----	D	La
20/6W- 6N1	A. Palin	Swisher & Swank	1961	710	Dr	50	4	28	Oh	28	22	Ss	P?	C	10	10	D	L, A; Reported Dd 0 ft after 3 hr pumping at 10 gpm
6N2	Richland Township School	Holt Bros.	6-25-58	710	Dr	90	6	40	Oh	40	50	Ss	P?	C	12	45	P	A; Clay to 30 ft; Dd 4 ft after 4 hr pumping at 45 gpm
6N3	Mr. Black	Swisher & Swank	--------	710	Dr	57	4	50	Oh	50	7	Ss	P?	--	---	-----	D	
6N4	Mr. Hackston	Holt Bros.	1957	710	Dr	53	4	30	Oh	30	23	Ss	P?	C	14	10	D	
6N5	W. Robinson	----do----------	1956	710	Dr	75	4	30	Oh	30	45	Ss	P?	C	17	10	D	
7D1	L. Boll	----do----------	1958	715	Dr	80	4	-----	-----	-----	-----	Ss	P?	--	34	10	D	
19E1	P. Austin	Warrick & Youngblood	4-19-56	705	Dr	64	4	46	Oh	46	18	Ss	M	C	0	-----	D	L
19E2	Mrs. Brown	Holt Bros.	10-30-59	700	Dr	84	4	81	Oh	81	3	Ss	M	C	15	10	D	Clay to 79 ft; Dd 5 ft after 1 hr pumping at 10 gpm
19M1	I. Gallher	Holt Bros.	1955	700	Dr	75	4	55	Oh	55	20	Ss	M	C	12	10	D	
19M2	R. Furr	----do----------	11- 3-59	700	Dr	72	4	57	Oh	57	15	Ss	M	C	12	10	D	L; Dd 8 ft after 1 hr pumping at 10 gpm
19M3	Mr. Keller	----do----------	11-54	700	Dr	128	4	100	Oh	100	28	Ss	M	C	9	10	D	A; Clay to 100 ft
19N1	Mr. Wiggons	----do----------	1956	710	Dr	75	4	50	Oh	50	25	Ss	M	C	21	10	D	
30E1	D. Allen	Warrick & Youngblood	3-20-56	710	Dr	74	4	38	Oh	38	36	Ss	M	C	10	18	D	L; Dd 5 ft bailing at 18 gpm
30R1	H. Colson	M. Crabb	1949	715	Dr	72	4	68	Oh	68	4	Ss	M	C	30	-----	D,S	A; Blue clay to 68 ft
20/7W- 1J1	F. Kolaisior	----do----------	7-55	705	Dr	51	4	30	Oh	30	21	Ss	P?	C	15	-----	D	Blue clay to 30 ft
1J2	F. Nickleson	Holt Bros.	7- 8-59	710	Dr	50	4	25	Oh	25	25	Ss	P?	C	15	10	D	L; Dd 5 ft after 2 hr pumping at 10 gpm
1J3	Mr. Nelson	Warrick & Youngblood	4-10-56	705	Dr	71	4	30	Oh	30	41	Ss	P?	C	30	18	D	La
1R1	D. Mitchell	H. J. Bronner	3-19-59	715	Dr	77	4	43	Oh	65	10	Ss	M	C	27	10	D	L; Dd 13 ft bailing at 10 gpm
5L1	D. J. Holms & F. C. Brown	----------	--------	645	Dr	88	-----	-----	-----	50	38	Ss	P	--	---	-----	---	Drift to 50 ft; Ashley (1899)
7M1	J. Beasley	----------	--------	640	Dr	50	-----	-----	-----	40	10	Ss	P	--	---	-----	---	L; Ashley (1899)
7R1	O. Drollinger	E. E. Doane	1921	660	Dr	100	4	13	Oh	45	55	Ss	P	C	20	10	D	A; Top soil to 7 ft
8M1	J. Beasley	----------	--------	650	Dr	42	-----	-----	-----	4	38	Ss	P	--	---	-----	---	Ashley (1899)
10M1	L. Haymon	Holt Bros.	7-31-59	680	Dr	63	4	20	Oh	20	43	Sh	M	C	13	15	D	L; Reported Dd 0 ft after 1 hr pumping at 15 gpm
10N1	O. McMurtrie	----------	--------	660	-----	33	-----	-----	-----	8	25	Ss	P?	--	---	-----	---	Drift to 8 ft; Ashley (1899)
13A1	Mrs. Brown	Holt Bros.	8-28-60	700	Dr	82	4	50	Oh	50	32	Ss	M	C	15	10	D	Clay to 50 ft; Reported Dd 0 ft after 1 hr pumping at 10 gpm
15J1	F. Rice	----do----------	1957	695	Dr	50	4	20	Oh	20	30	Sh	M	C	7	10	S	
17C1	J. W. Harnison	----------	--------	665	Dr	-----	-----	-----	-----	16	-----	Ss	P	--	---	-----	---	Drift to 16 ft; Ashley (1899)
18R1	J. Mookor	----------	--------	660	Dr	82	-----	-----	-----	-----	-----	-----	P	--	---	-----	---	L; Ashley (1899)

Table 4.--Records of wells, Fountain County, Indiana--Cont.

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
20/7W-19B1	W. M. Allen	E. E. Doane	1921	620	Dr	63	4	48	Oh	55	8	Ss	P	C	40	5	D	La; Dd 15 ft bailing at 5 gpm
19C1	Mr. Greenburg	Reynolds Bros.	1-11-54	625	Dr	57	4	36	Oh	36	21	Ss	P	C	12	5	D	La; Dd 20 ft pumping at 5 gpm
19C2	C. Lightle	----do----------	7-19-56	620	Dr	52	4	32	Oh	32	20	Ss	P	C	14	15	D	L
19C3	C. Haynes	----do----------	1- 8-54	630	Dr	57	4	45	Oh	45	12	Ss	P	C	12	5	D	La; Dd 10 ft pumping at 5 gpm
19C4	G. Hancock	Warrick & Youngblood	--------	620	Dr	55	4	43	Oh	43	12	Ss	P	--	---	10	D	La
19C5	K. Payne	Reynolds Bros.	7-20-56	625	Dr	51	4	51	Oo	51	-----	G	Pl	C	12	5	D	La
19C6	H. Storkey	----do----------	7-20-54	620	Dr	55	4	31	Oh	31	24	Ss	P	C	18	10	D	L; Dd 12 ft pumping at 10 gpm
19C7	C. McClain	Warrick & Youngblood	--------	630	Dr	60	-----	36	Oh	36	23	Ss	P	C	14	12	D	La; Dd 20 ft bailing at 12 gpm
19C8	F. Hancock, Jr.	Reynolds Bros.	--------	625	Dr	46	4	34	Oh	34	12	Ss	P	C	18	5	D	La; Dd 18 ft pumping at 5 gpm
19C9	C. Hancock	----do----------	7-18-56	620	Dr	52	4	52	Oo	12	40	G,S	Pl	U	12	5	D	L, A
19C10	G. Kunkle	Warrick & Youngblood	--------	620	Dr	78	4	56	Oh	56	22	Ss	P	--	---	10	D	La
19C11	R. VanHook	Reynolds Bros.	--------	610	Dr	72	4	29	Oh	40	10	Ss	P	C	20	4	D	L, A; Dd 20 ft pumping at 4 gpm
19G1	A. Minick	----do----------	3-14-56	620	Dr	37	4	26	Oh	26	11	Ss	P	C	14	10	D	L, A; Dd 10 ft pumping at 10 gpm
21C1	W. Harrison	H. Lamb	12-21-48	670	Dr	141	8	-----	Oh	78	57	Ss	P	C	62	70	D	L
22Q1	E. Death	----------	--------	685	Dr	-----	-----	-----	-----	100	-----	Ss	M?	--	---	-----	---	Drift to 100 ft; Ashley (1899)
24B1	F. Cramley	Holt Bros.	12- 7-60	700	Dr	84	4	36	Oh	36	28	Ss	M	C	12	10	D	L; Dd 2 ft after 1 hr pumping at 10 gpm
24H1	Mallott Methodist Church	----do----------	1957	700	Dr	85	4	50	Oh	50	35	Ss	M	C	15	10	P	
24H2	W. Moigers	Swisher & Swank	9-20-60	700	Dr	72	4	52	Oh	52	20	Ss	M	C	30	9	D	L; Reported Dd 0 ft after 2 hr pumping at 9 gpm
25A1	C. Rice	Holt Bros.	1957	710	Dr	95	4	50	Oh	50	45	Ss	M	C	21	-----	S	Clay to 50 ft
25M1	C. E. Hamilton	M. Crabb	1956	700	Dr	48	4	42	Oh	42	6	Sd-sh	M	C	20	-----	D	Blue clay to 42 ft
26K1	J. Carroll	Holt Bros.	8-29-60	685	Dr	100	4	70	Oh	80	20	Ss	M	C	1	10	D	La, A; Dd 10 ft after 1 hr pumping at 10 gpm
26N1	A. Ingalsbe	----do----------	9-30-60	710	Dr	84	4	64	Oo	63	1	G	Pl	C	38	10	D,S	L, A; Reported Dd 0 ft after 1 hr pumping at 10 gpm
26R1	Mr. Wattenburger	----do----------	10- 1-58	690	Dr	79	4	-----	Oh	54	25	Ss	M	C	15	10	D	L, A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
28F1	C. Crane	----------	--------	670	Dr	208	-----	-----	-----	-----	-----	-----	----	--	---	-----	---	La; Ashley (1899)
33R1	F. Wildman	A. Waldron	9-17-60	665	Dr	92	4	-----	Oh	74	18	Ss	P	C	20	10	S	L, A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
34N1	E. Rodgers	M. Crabb	4- 1-50	670	Dr	100	4	47	Oh	47	53	Sh	M?	C	35	-----	D,S	Lam, A
35B1	A. Ingalsbe	Holt Bros.	1955	710	Dr	114	4	-----	-----	-----	-----	Ss	M?	C?	31	10	D,S	
20/8W-1D1	Briggs Trust	G. Hyynolds	7- 7-60	660	Dr	82	4	57	Oh	57	25	Ss	P	C	23	5	D,S	L, A; Dd 42 ft after 2 hr bailing at 5 gpm
2P1	K. Rayburn	Warrick & Youngblood	--------	665	Dr	55	4	30	Oh	30	20	Ss	P	C	18	10	D	L, A; Reported Dd 0 ft pumping at 10 gpm
4D1	Boy Scouts of America	----do----------	--------	600	Dr	403	-----	-----	Oh	-----	-----	-----	----	--	90	7	N	L
9G1	E. Waldron	A. Waldron	--------	630	Dr	130	4	-----	-----	-----	-----	Ss?	P?	--	---	-----	D	A
9K1	----do----------	----------	--------	635	Dr	104	4	-----	-----	-----	-----	Ss?	P?	--	---	-----	N	Water level 48.04 ft, 3-12-57
14R1	G. Labau	Reynolds Bros.	1954	670	Dr	140	-----	-----	-----	-----	-----	Ss?	P?	--	---	-----	S	A; Deepened by Reynolds Bros.
17A1	F. Coffing	H. J. Bronner	12- 6-56	640	Dr	87	4	83	Oo	-----	-----	-----	----	--	---	-----	Og	L; Gas well in (gravel)
18N1	L. Sholby	G. Reynolds	10-21-60	640	Dr	188	4	142	Oh	179	9	Ss	P	--	---	5	D,S	L, A; Dd 156 ft after 5 hr bailing at 5 gpm

20/8W-22K1	N. White	Warrick & Youngblood	1952	660	Dr	80	4	31	Oh	52	28	Sd-sh	P	C	16	5	S	La
23B1	G. Labau	Reynolds Bros.	1954	670	Dr	92	4	45	Oh	82	10	Ss	P	C	23	4	D,S	L, A; Dd 32 ft pumping at 4 gpm
25F1	S. C. Santman	Warrick & Youngblood	--------	670	Dr	115	4	-----	-----	-----	-----	Ss	P	--	---	15	D	
26L1	J. Campbell	----do----------	--------	680	Dr	150	4	-----	-----	-----	-----	Sh	P	--	---	6	D,S	A; Deepened by Warrick & Youngblood
26R1	T. Board	----do----------	--------	675	Dr	80	4	-----	Oh	48	15	Ss	P	--	---	20	D	La, A
27G1	C. O. Smith	----do----------	--------	680	Dr	60	-----	-----	Oh	37	23	Ss	P	C	11	25	D	Deepened by Warrick & Youngblood
28H1	W. B. Coffing	----------	--------	650	Dr	2,590	-----	-----	-----	36	62	Ss	P	--	---	-----	Og	L (partial)
28Q1	W. Gants	----------	--------	635	Dr	1,807	-----	-----	-----	150	10	Ss	P	--	---	-----	Og	A. E. Davis 1; L (partial)
29N1	City of Covington	Layne-Northern Co., Inc.	12- 8-46	620	Dr	114	6	-----	-----	14	32	S	Pl	C	9	-----	T	L
										99	10	Ss	P	C	18			
29N2	----do----------	----do----------	12-17-46	620	Dr	56	6	-----	-----	7	45	S	Pl	C	6	-----	T	La
30Q1	T. E. Hunt	Warrick & Youngblood	--------	630	Dr	115	4	112	Oh	112	3	Ss	P	C	30	15	D,S	Lm
31C1	Q. Abernathy	----do----------	--------	635	Dr	160	4	36	Oh	129	31	Ss	P	--	---	7	D	L, A
31C2	City of Covington	Layne-Northern Co., Inc.	11-26-46	635	Dr	85	6	-----	-----	-----	-----	-----	----	--	---	-----	T	La
31M1	H. Hanna																	
31M1	H. Hanna	Warrick & Youngblood	--------	595	Dr	90	4	-----	Oh	68	22	Ss	P	C	20	40	D	Lm, A
31M2	Sycamore Lanes Bowling Alley	----do----------	--------	595	Dr	115	6	62	Oh	62	53	Sd-sh	P	C	14	50	P	Lm; Dd 26 ft pumping at 50 gpm
32L1	O. E. Lapo	----do----------	--------	615	Dr	122	4	103	Oh	103	19	Ss	P	C	5	5	D	L, A
33C1	R. Little	H. J. Brenner	1- 8-54	645	Dr	130	4	58	Oh	58	72	Sd-sh	P	C	20	15	D	L; Dd 35 ft pumping at 15 gpm
33R1	K. Glover	----do----------	1953	670	Dr	135	4	-----	Oh	65	70	Sh,Ss	P	C	12	-----	D,S	La
34F1	R. Nichols	Warrick & Youngblood	--------	680	Dr	60	4	30	Oh	30	30	Ss	P	--	---	15	D,S	
34K1	----do----------	----do----------	--------	685	Dr	40	4	11	Oh	11	29	Ss	P	--	---	15	D,S	
34L1	W. N. White	----do----------	1953	670	Dr	80	4	32	Oh	48	32	Ss	P	C	15	-----	S	L
35P1	M. M. McKenna	H. J. Brenner	2-27-54	695	Dr	400	4	78	Oh	-----	-----	-----	M?	C	50	.5	S	L, A
35P2	----do----------	----do----------	1954	695	Dr	225	4	72	Oh	65	160	Sh	P,M?	C	60	1.5	S	La
35R1	C. Moxey	----do----------	1953	690	Dr	185	4	72	Oh	70	115	Sh	P?	C	15	8	D,S	L, A
36F1	G. Minnick	Warrick & Youngblood	--------	680	Dr	200	4	-----	-----	184	16	Sd-sh	M?	--	---	7	D	
36L1	H. Morrill	----------	--------	680	Dr	62	2	62	S	58	4	G	Pl	C	25	-----	D,S	A; Clay to 58 ft
20/9W-14D1	R. Hunt	Warrick & Youngblood	3-52	515	Dr	130	4	128	Oh	130	-----	Ss	P	C	30	8	D	L, A; Dd 15 ft pumping at 8 gpm
23A1	D. Shelby	----do----------	--------	530	Dr	150	4	-----	-----	115	35	Ss	P	--	---	10	D,S	A
25H1	J. Meeker	----do----------	12-16-58	620	Dr	243	4	137	Oh	137	20	Ss	P	C	70	10	S	L
										240	3	Ss	P					
25K1	J. Stout	----do----------	1951	605	Dr	102	3	102	Co	-----	-----	-----	----	--	---	-----	Og	L
25K2	----do----------	----do----------	1950	605	Dr	178	4	-----	Oh	-----	-----	Ss?	P	--	---	-----	D	A
35B1	D. Noble	----do----------	--------	515	Dr	86	4	20	Oh	25	71	Ss	P	U?	25	-----	N	Lm
35B2	R. Bodine	M. Crabb	1947	535	Dr	98	4	34	Oh	40	58	Ss	P	U?	40	-----	N	Sand to 34 ft
35H1	Coffing Bros. Orchard Co.	----do----------	--------	555	Dr	86	4	66	S	24	42	G	Pl	U	24	85	I	Lm
35H2	Covington Food Locker	H. J. Brenner	4-26-49	550	Dr	255	4	85	Oh	85	155	Ss,Sh	P	C	35	10	I	L, A; Dd 15 ft pumping at 10 gpm
36B1	City of Covington	Layne-Northern Co., Inc.	11-14-46	610	Dr	59	6	-----	-----	25	14	S,G	Pl	C	17	-----	T	L
										57	2	Ls	P	C	25	-----		
36G1	Mr. Stringer	Warrick & Youngblood	8-52	610	Dr	111	4	53	Oh	58	39	Ss	P	C	40	8	N	L; Dd 20 ft pumping at 8 gpm
36J1	L. Bellis	----do----------	1952	610	Dr	41	4	20	Oh	41	-----	Cgl?	P	C	20	8	D	La, A; Reported Dd 0 ft pumping at 8 gpm
36J2	M. Holland	----do----------	--------	600	Dr	60	4	42	Oh	42	18	Ss	P	--	---	10	D	Surface to 42 ft
36J3	C. Hale	----do----------	1952	600	Dr	77	4	46	Oh	49	28	Sd-sh	P	C	40	8	D	La; Dd 10 ft pumping at 8 gpm
36K1	R. Gieger	----do----------	--------	600	Dr	305	4	50	Oh	130	175	Ss	P	--	---	4	D	LA, A
21/7W- 2M1	J. Bossaer	Holt Bros.	1954	705	Dr	100	4	70	Oh	70	30	Sh	M	C?	70	7	S	
5K1	A. Farling	H. J. Brenner	11-15-54	660	Dr	83	4	58	Oh	58	25	Ss	P	C	50	7	D	L, A; Dd 20 ft pumping at 7 gpm
6G1	Attica Ice Co.	H. J. Brenner	5-23-44	520	Dr	105	8	105	S	-----	-----	G	Pl	U	40	100	N	Screen, 6 ft of 7-in dia, no. 60 slot; Dd 5 ft pumping at 100 gpm
6G2	City of Attica	H. Lamb	1947	515	Dr	125	16	125	S	88	37	S,G	Pl	--	---	-----	P	L; Screen, 10 ft no. 100 slot, 10 ft no. 80 slot, 10 ft no. 70 slot
6G3	----do----------	Clark Drilling Co.	6- 8-55	515	Dr	104	16	104	S	49	55	S,G	Pl	--	---	1,040	P	La; Screen, 32 ft of 16-in dia, no. 150 slot; Dd 7 ft after 5 hr pumping at 1,040 gpm
6L1	----do----------	H. J. Brenner	4-54	510	Dr	103	-----	-----	-----	83	53	G,S	Pl	C	16	-----	T	L
7C1	Harrison Steel Casting Co.	H. Lamb	12-21-48	505	Dr	158	10	158	S	70	88	S,G	Pl	U	70	-----	I	L; Screen, 12 ft of 10-in dia, no. 80 slot
8A1	N. Galloway	H. J. Brenner	4- 2-58	660	Dr	81	4	44	Oh	60	20	Ss	P	C	40	12	D	L; Dd 6 ft pumping at 12 gpm

Table 4.--Records of wells, Fountain County, Indiana--Cont.

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
21/7W- 8H1	L. Nathon	A. Waldron	7-24-60	680	Dr	146	4	-----	Oh	140	6	Ls	M	C	26	3	D	Ls (partial), A; Dd 20 ft pumping at 3 gpm
10F1	E. Branigan	Holt Bros.	1955	700	Dr	105	4	55	Oh	55	80	Ss	P	C?	60	10	D	A
14C1	A. Crawford	H. J. Brenner	1-22-55	675	Dr	138	4	128	Oh	128	10	Sh	M	C	15	5	D	L, A; Dd 65 ft pumping at 5 gpm
14D1	J. Crawford	----do----------	11-17-60	680	Dr	52	4	52	S	51	3	S,G	Pl	C	10	10	S	L; Screen, 4 ft of 2-in dia, no. 20 slot; Dd 10 ft after 2 hr pumping at 10 gpm
14M1	D. Crawford	----do----------	10- 8-46	685	Dr	80	6	38	Oh	38	42	Ss	P	C	12	20	S	Clay, boulders, and hardpan to 38 ft; Dd 3 ft pumping at 20 gpm
18C1	J. Hayden	A. Waldron	7-12-60	595	Dr	98	4	42	Oh	82	16	Ss	M	C	50	10	D,S	L, A; Dd 10 ft after 3 hr bailing at 10 gpm
18M1	J. L. Doeden	Reynolds Bros.	10-20-53	595	Dr	63	4	38	Oh	38	25	Sh	M	C	11	6	D	La, A; Dd 25 ft pumping at 6 gpm
19J1	H. Catos	H. J. Brenner	7-26-58	645	Dr	80	4	33	Oh	50	25	Ss	M	C	18	25	D	L, A; Dd 7 ft pumping at 25 gpm
19R1	Shawnee Lanes Bowling Alley	----do----------	10-15-54	640	Dr	62	4	26	Oh	47	8	Ss	M	C	30	15	P	L, A; Dd 15 ft pumping at 15 gpm
20E1	Attica Flying Service	----do----------	5- 8-48	645	Dr	78	6	50	Oh	50	28	Ss	M?	C	35	10	P	Clay to 50 ft; Dd 5 ft pumping at 10 gpm
21H1	M. Mushaw	Holt Bros.	1953	650	Dr	62	4	62	S	-----	-----	G	Pl	C	20	10	D	A; Screen, no. 60 slot
26R1	W. Cookins	----do----------	1954	690	Dr	134	4	104	Oh	104	30	Sh	M	C	14	10	S	
30H1	T. Gustus	----do----------	6-57	635	Dr	35	4	35	S	33	2	G	Pl	C	27	-----	D	A; Screen, 2 ft, no. 40 slot
30H2	J. Gustus	----do----------	10-29-59	635	Dr	94	4	94	S	85	9	G,S	Pl	C	48	10	D	L, A; Screen, 2 ft of 3 3/4-in dia, no. 40 slot; Reported Dd 0 ft after 1 hr pumping at 10 gpm
30K3	Mr. Snell	H. J. Brenner	4-26-54	635	Dr	171	6	118	Oh	118	53	Sh,Ss	M	C	30	30	P	L, A; Dd 55 ft pumping at 30 gpm
30H4	O. Marlett	A. Waldron	10-20-59	635	Dr	174	4	172	Oh	172	2	Ss	M	C	30	5	S	L; Dd 50 ft after 4 hr pumping at 5 gpm
31H1	Mr. Knowles	Holt Bros.	1956	625	Dr	35	4	17	Oh	17	18	Sh	M	C	14	10	D	
31M1	Shawnee Township School	Warrick & Youngblood	1954	670	Dr	80	6	-----	Oh	48	12	Ss	M	C	30	8	P	L, A
36E1	L. Slaughter	Holt Bros.	9- 6-60	700	Dr	63	4	26	Oh	26	37	Ss	M	C	10	10	D	L, A; Dd 5 ft after 1 hr bailing at 10 gpm
21/8W-26D1	H. Cole	----------	--------	570	Dr	89	-----	-----	Oh	43	46	Ss	P	--	---	-----	---	L; Ashley (1899)
27G1	R. L. Coffing	----------	--------	550	Dr	20	-----	-----	-----	-----	-----	-----	P	--	---	-----	---	La; Ashley (1899)
32H1	J. C. Price	A. Waldron	10- 1-61	510	Dr	60	4	8	Oh	50	10	Ss	P	C	30	5	D	L; Dd 15 ft after 3 hr bailing at 5 gpm
33C1	E. Lornezo	----do----------	9-30-61	500	Dr	60	4	8	Oh	52	8	Ss	P	C	30	4	D	La; Dd 15 ft after 3 hr pumping at 4 gpm
33C2	R. Smart	Reynolds Bros.	8-17-54	525	Dr	47	4	6	Oh	-----	-----	Ss	P	C	20	3	D	La; Dd 20 ft pumping at 3 gpm
33E1	J. Roberts	A. Waldron	7- 1-60	520	Dr	70	4	-----	Oh	40	29	Ss	P	--	---	10	D	L; Dd 20 ft after 3 hr pumping at 10 gpm
33E2	Mr. Franklin	Warrick & Youngblood	1952	580	Dr	60	4	15	Oh	-----	-----	Ss	P	C	30	6	D	Yellow clay to 15 ft; Dd 15 ft bailing at 6 gpm
36D1	R. M. Smith	----------	--------	680	Dr	223	-----	-----	-----	-----	-----	-----	----	--	---	-----	---	L; Ashley (1899)
22/6W-29R1	J. Larson	G. Reynolds	4-15-60	700	Dr	105	4	87	Oh	87	18	Ls	M	C	10	3	D	L, A; Dd 50 ft bailing at 3 gpm
32L1	H. Dillman	A. Waldron	12- 6-60	705	Dr	62	4	58	Oh	58	4	Ss	P	C	12	10	D,S	L, A
22/7W-36J1	A. H. Solder	H. J. Brenner	6- 1-59	660	Dr	104	4	93	Oh	93	7	Ss	M	C	45	12	D	L; Dd 10 ft pumping at 12 gpm

Table 5.--Selected well logs, Fountain County, Indiana
Remarks: T. D., total depth in feet, complete log not given; W. B., water bearing

Well 18/6W-6D1

Type of record Driller's log. Altitude: About 745 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	4	4	
Sand, fine	70	74	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	7	81	W. B.

Well 18/6W-19M1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	106	121	
Sand, wild, heaving	15	136	
Clay, blue, and soft muddy drift	20	156	
Sand, wild	15	171	
Clay, blue, and mud	17	188	
Gravel	--	188	W. B.

Well 18/6W-19M8

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

Dug well	40	40	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy	105	145	
Gravel, coarse	3	148	W. B.

Well 18/6W-20D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	20	20	
Hardpan	110	130	
Mississippian System:			
Osage Series:			
Shale	20	150	W. B.

Well 18/6W-31L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, yellow	16	16	
Clay and sand, blue	69	85	
Gravel and sand	2	87	W. B.
Hardpan and gravel	10.5	97.5	
Mississippian System:			
Meramec? Series:			
Limestone, gray	52.5	150	W. B.
Limestone, white	3	153	

Well 18/6W-31N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay, yellow	20	20	
Clay, blue	20	40	
Quicksand	10	50	
Clay, blue	10	60	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, yellow	15	75	
Mississippian System:			
Meramec? Series:			
Lime and shale, mixed	23	98	
Sandstone, white	16	114	
Limestone, gray	26	140	W. B.

Well 18/7W-3B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, and streaks of sand	180	180	
Gumbo, blue	12	192	
Gravel	2	194	W. B.

Well 18/7W-7N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Dirt, black	7	7	
Hardpan	13	20	
Pennsylvanian System:			
Lower Pennsylvanian? Series:			
Shale	30	50	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/7W-9D1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	60	60	
Clay, yellow	72	132	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Sandstone	6	138	
Mississippian? System:			
Osage? Series:			
Clay, yellow, soft, and sand	25	163	
Shale, black, and cream-colored rock	57	220	W. B.

Well 18/7W-12H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Surface	42	42	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, yellow	5	47	
Sandstone, white	10	57	W. B.
Shale	13	70	

Well 18/7W-17J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and clay	15	15	
Hardpan and gray mud	25	40	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray and blue	119	159	
Sandstone	11	170	W. B.
Mississippian? System:			
Osage? Series:			
Shale, gray	9	179	

Well 18/7W-18P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and blue clay	15	15	
Sand and gravel	30	45	Dry
Clay, sandy, brown	10	55	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/7W-18P1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, green	55	110	
Clay, red-brown	1	111	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone and shale, red	5	116	W. B.

Well 18/7W-22B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	22	22	
Hardpan	26	48	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	56	104	W. B.

Well 18/7W-27Q1

Type of record: Driller's log. Altitude: About 695 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	95	95	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	5	100	
Sandstone	10	110	W. B.

Well 18/7W-36C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, hard, yellow	18	18	
Clay and hardpan, blue	20	38	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Gumbo shale, black	12	50	
Shale, dark-gray	22	72	
Shale, gritty, gray	21	93	
Gumbo shale, brown	3	96	
Shale, light-gray	8	104	
Shale, sandy, gray	12	116	
Sandstone	24	140	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-4G1

Type of record: Sample study. Altitude: About 630 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
No sample	20	20	
Till, calcareous, sandy, brown	28	48	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, micaceous, carbonaceous, sandy, gray	2	50	
No sample	8	58	
Shale, micaceous, carbonaceous, sandy, gray	12	70	
Shale, micaceous, carbonaceous, sandy, gray and brown, mottled-	10	80	
Shale, micaceous, carbonaceous, dark-gray; little shale, micaceous, light-gray	10	90	
Shale, micaceous, carbonaceous, sandy, very light-gray, siderite spherules	30	120	
Shale, carbonaceous, tough, black	20	140	
Conglomerate; shale, carbonaceous, sandy, light-gray; sandstone, white, medium; shale, calcareous, weak; chert; and sand	20	160	
Mississippian System:			
Osage Series:			
Shale, calcareous, weak; limestone; scattered glauconite, dolomitic, cherty, silty, very fine, buff; siltstone, calcareous, glauconitic, gray	20	180	
Shale, dark-gray; shale, brown-gray, little sandstone; coal, under clay; some siltstone, calcareous, glauconitic, gray	20	200	May be cavern fill in preceding limestone T. D. 1,928 ft

Well 18/8W-4N2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	14	14	
Sand and gravel	1	15	W. B.

Well 18/8W-4N2--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	54	69	
Gravel, cemented	1	70	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	2	72	
Coal	3	75	
Fire clay	3	78	
Shale	12	90	Gas

Well 18/8W-7E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	28	28	
Gravel	24	52	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Fire clay, white	--	52	

Well 18/8W-9M1

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

Quaternary System:			
Recent and Pleistocene Series:			
Loam, black	12	12	
Hardpan	86	98	
Sand and gravel	4	102	W. B.

Well 18/8W-16F1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, yellow	3	5	
Sand and gravel	7	12	
Clay, blue	2	14	
Gravel, sandy	16	30	
Clay, yellow and blue	5	35	
Clay, blue	3	38	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, soft, black	12	50	
Shale, gritty, black	8	58	
Coal	2	60	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-16F1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, gray	5	65	
Shale, white	5	70	
Shale, gritty, white	10	80	
Lower Pennsylvanian Series:			
Shale, black	10	90	
Sandstone	6	96	
Shale, dark-brown	5	101	
Shale, sandy	8	109	
Shale, flakey, black	31	140	
Shale, gritty, gray	3	143	

Well 18/8W-19L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	55	55	
Clay, red	8	63	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale with streaks of sandstone	11	74	W. B.

Well 18/8W-20A2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	20	20	
Hardpan	50	70	
Pennsylvanian System:			
Lower Pennsylvanian? Series:			
Shale	132	202	W. B.

Well 18/8W-20R2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	65	65	
Clay, red	60	125	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Rock, white	57	182	Sandy shale?; W. B. 133-138 ft

Well 18/8W-21D1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	68	68	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, hard	46	114	
Coal	5	119	
Fire clay, white	1	120	W. B.

Well 18/8W-23R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, yellow	10	10	
Hardpan	40	50	
Clay, gravelly, blue	33	83	
Sand and gravel	10	93	W. B.
Clay, blue, and gravel	44	137	
Sand and gravel	14	151	W. B.
Gravel, coarse	3	154	W. B.

Well 18/8W-24Q2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	3	3	
Clay	5	8	
Clay and gravel	5	13	
Hardpan	4	17	
Sand and gravel, fine, and wood	2	19	W. B.
Gumbo, blue-black	8	27	
Shale, green, and gravel	3	30	Clay?
Shale, sandy, solid	11	41	Do
Shale, sandy, soft, light-gray	10	51	Do
Hardpan	10	61	
Shale, gray; fine sand and pebbles	24	85	Do
Shale, sandy, light-gray	30	115	Do
Shale, soft, green	13	128	Do
Gravel and sand, medium-coarse	1	129	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-25C1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Hardpan and blue clay	95	110	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	4	114	
Coal	4.5	118.5	
Fire clay	21.5	140	
Coal	3.5	143.5	
Fire clay, white	20.5	164	

Well 18/8W-25D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Hardpan and blue clay	24	39	
Gravel	.5	39.5	W. B.
Clay, blue	9.5	49	
Gravel	1	50	W. B.
Clay, blue	43	93	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, hard, black	5	98	
Sandstone	15	113	
Coal cutout	5	118	
Fire clay	7	125	

Well 18/8W-25E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Hardpan and blue clay	77	92	W. B.; 1.5 ft at 65 ft
Gravel	3	95	
Hardpan	1	96	
Gravel	3	99	W. B.
Mud, soft, and glacial drift	39	138	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-25L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	7	22	
Sand, trace	--	22	
Clay, blue	26	48	
Sand, trace	2	50	
Clay, blue	35	85	
Sand, trace	--	85	
Drift, soft, blue	59	144	Log at 138 ft

Well 18/8W-25L2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Hardpan and blue clay	22	37	
Gravel	.5	37.5	
Hardpan and streaks of sand	72.5	110	
Drift, soft, and pieces of wood and coal	36	146	

Well 18/8W-25P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, and streaks of sand	140	140	
Mud, wood, and drift	42	182	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Rock	18	200	Sandstone?; W. B.
Rock	10	210	Lost water; sandstone?

Well 18/8W-29K1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	40	40	
Clay, reddish-pink	54	94	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Shale	36	130	
Sandstone	4	134	
Shale, blue-gray	70	204	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-32C1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	56	56	
Clay, pink----------	50	106	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black----------	38	144	W. B.

Well 18/8W-32J1

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

Dug well----------	30	30	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	15	45	
Shale, red----------	35	80	Clay?
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue----------	12	92	
Limestone, blue----------	35	127	
Limestone, gray----------	22	149	
Shale, blue----------	12	161	
Sandstone, white----------	11	172	W. B.

Well 18/8W-33H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	3	3	
Clay, yellow----------	15	18	
Clay, sticky, blue----------	62	80	
Clay, sandy, blue----------	73	153	
Sand and gravel----------	2	155	W. B.

Well 18/8W-34B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, red----------	25	25	
Clay, blue----------	2	27	
Sand and fine gravel----------	3	30	W. B.
Clay, blue, with streaks of sand-	55	85	
Gumbo, yellow----------	15	100	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/8W-34L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Clay, green	10	30	
Hardpan, brown	19	49	
Sand and gravel, fine	1	50	
Hardpan, brown	26	76	
Sand, fine, dirty	1	77	
Hardpan, brown	23	100	
Sand, gravel, and mud balls	1	101	
Clay, brown	19	120	
Clay, gravelly, brown	15	135	
Clay, green	25	160	
Sand and gravel, hard	1	161	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	14	175	
Sandstone	10	185	W. B.
Shale	2	187	

Well 18/8W-36B1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	8	23	
Sand, coarse, red	3	26	
Hardpan and blue clay	30.5	56.5	
Sand and gravel	2	58.5	W. B.
Clay, blue	39.5	98	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	6	104	
Sandstone	9	113	
Coal cutout	5	118	
Fire clay	13	131	
Rock	2	133	Limestone?
Shale	17	150	

Well 18/8W-36C1

Type of record: Driller's log. Altitude: About 695 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	10	25	
Sand, trace	--	25	
Clay, blue	113	138	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

18/8W-36C1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, hard, blue	4	142	

Well 18/8W-36D2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	115	130	
Mud, limbs, and wood	12	142	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	8	150	
Rock, hard, white	42	192	Shaly sandstone?; W. B.

Well 18/9W-1G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	20	20	
Sand	72	92	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	46	138	W. B.

Well 18/9W-1G2

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	5	5	
Clay, sandy, yellow	15	20	
Sand, fine, brown	20	40	Dry
Clay, gravelly, blue	9	49	
Gravel	4	53	Dry
Clay, sandy, yellow	7	60	
Sand, fine	10	70	
Clay, sandy, brown	37	107	
Sand and gravel	18	125	Dry
Sand, fine, hard	3	128	Dry
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	37	165	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/9W-1Q1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	16	16	
Pennsylvanian System:			
Middle Pennsylvanian? Series:			
Sandstone	24	40	
Shale, tough, blue	15	55	
Shale, gray	18	73	
Lower Pennsylvanian? Series:			
Rock, hard, dark	10	83	Limestone?
Shale, dark-gray	14	97	
Sandstone and some shale	38	135	W. B.

Well 18/9W-11C2

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil	18	18	
Sand, brown	12	30	
Clay, sandy, gray	74	104	
Clay, very sandy	25	129	
Sand, very fine, silty	1	130	
Sand and gravel, fine	3	133	
Clay, sandy	2	135	
Shale, heavy, gummy	2	137	Clay?
Shale, sandy	3	140	Sandy clay?
Gravel	5	145	W. B.

Well 18/9W-35F1

Type of record: Driller's log. Altitude: About 515 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	15	15	
Hardpan	17	32	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, blue	48	80	W. B.

Well 18/9W-35P1

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

Dug well	35	35	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Clay, white	5	40	
Limestone, white	10	50	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/9W-35P1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	6	56	W. B.
Limestone, dense, gray	4	60	
Sandstone, fine, white	15	75	W. B.
Slate, blue	5	80	
Slate and shale, mixed	9	89	

Well 18/9W-35P2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, black	2	2	
Clay, yellow, and boulders	18	20	
Sand, yellow	16	36	W. B. at 30 ft
Pea gravel, yellow	7.5	43.5	W. B.

Well 18/9W-35Q2

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

Dug well	18	18	
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, yellow	21.5	39.5	
Gravel and sand, yellow	10.5	50	W. B.
Gravel, coarse, yellow	10	60	W. B.

Well 18/9W-35Q3

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, black	2	2	
Clay, gravelly, brown	61	63	
Sand and gravel	8	71	W. B.

Well 18/9W-36J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy	2	2	
Clay, yellow	16	18	
Clay, blue, and large gravel	32	50	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Sandstone	15	65	W. B.
Slate and streaks of sandstone	25	90	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 18/9W-36J1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, blue	18	108	
Coal	4	112	W. B.

Well 18/9W-36L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	38	38	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale, blue	6	44	
Coal	3	47	
Shale, blue	5	52	
Shale, limy	18	70	
Slate, black	15	85	
Lower Pennsylvanian Series:			
Shale, black	7	92	
Limestone, gray	10	102	
Limestone, honey-combed, white	9	111	W. B.

Well 19/6W-7J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	5	5	Dry
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, brown	25	30	Slight seepage
Sandstone, blue	10	40	Dry
Mississippian System:			
Osage Series:			
Siltstone	40	80	
Siltstone	46	126	

Well 19/6W-7M1

Type of record: Driller's log. Altitude: About 695 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark	4	4	
Hardpan, brown	16	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	10	30	
Sandstone, brown	27	57	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/6W-7M1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Osage Series:			
Limestone	3	60	
Shale, gray	21	81	W. B.

Well 19/6W-21N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	14	14	
Hardpan, gray	46	60	
Hardpan, yellow	12	72	
Hardpan, gray	26	98	
Sand, muddy	19	117	
Mississippian System:			
Osage Series:			
Shale, gray	41.5	158.5	W. B.

Well 19/7W-2L1

Type of record: Driller's log. Altitude: About 760 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay	20	20	
Shale, blue	25	45	Clay
Gravel	20	65	
Sand, light	15	80	
Gravel and sand	22	102	
Sand and silt	6	108	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	10	118	
Mississippian System:			
Osage Series:			
Sandstone, light	177	295	
Shale, blue	5	300	
Sandstone	5	305	
Shale	20	325	T. D. 1,905 ft

Well 19/7W-6K2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	4	4	
Sand, fine, brown	36	40	
Hardpan, brown	15	55	
Gravel	2	57	
Hardpan, gray	13	70	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/7W-6K2--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Osage Series::			
Sandstone, gray----------	55	125	W. B.

Well 19/7W-6Q1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	12	12	
Clay, gray----------	16	28	
Hardpan, gray----------	24	52	
Hardpan, gravelly, black------	4	56	
Shale, green----------	6	62	Clay?
Mississippian System:			
Osage Series:			
Shale, gray----------	42	104	
Sandstone----------	20	124	W. B.

Well 19/7W-8K1

Type of record: Driller's log from memory. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	15	15	
Clay, blue----------	40.5	55.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white----------	64.5	120	W. B.

Well 19/7W-9F1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, gravelly----------	8	8	
Gravel----------	22	30	
Hardpan, gray, with gravel----	15	45	
Gravel, fine----------	.5	45.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy----------	19.5	65	W. B.
Shale, gummy, heavy----------	2	67	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/7W-11G1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Boulders and clay	15	30	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, brown	10	40	
Mississippian System:			
Osage Series:			
Shale, gray	20	60	
Limestone	20	80	W. B.

Well 19/7W-12B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	15	15	
Gravel, muddy	3	18	
Hardpan	7	25	
Gravel, muddy	3	28	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, red	34	62	
Mississippian System:			
Osage Series:			
Bluestone, soft	70	132	
Bluestone, porous	50	182	W. B.
Stone, hard, white	3	185	Limestone?
Bluestone	23	208	

Well 19/7W-14J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil and brown clay	4	4	
Hardpan, gray	27	31	
Sand, pink	3	34	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	22	56	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/7W-15N1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	12	12	
Clay, blue	48.5	60.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	24.5	85	W. B.

Well 19/7W-19P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	9	9	
Quicksand	9	18	
Hardpan	6	24	
Sand	3	27	Dry
Hardpan	17	44	
Pea gravel	1	45	Dry
Hardpan, brown	50	95	
Mississippian System:			
Osage Series:			
Shale, hard, blue	10	105	
Limestone	19	124	W. B.
Shale, gray	3	127	
Limestone	8	135	
Shale, gray	220	355	

Well 19/7W-22D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, sandy, and hardpan	26	44	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	24	68	
Sandstone, white	47	115	W. B.

Well 19/7W-24P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay	14	14	
Hardpan	21	35	
Sand	5	40	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/7W-24P1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, gray	3	43	
Clay, green	7	50	
Hardpan	30	80	
Mississippian System:			
Osage Series:			
Shale, gray	10	90	
Sandstone	14	104	
Shale, gray	36	140	
Shale, brown	39	179	
Shale, gray	20	199	
Sandstone	4	203	
Shale, gray	2	205	
Sandstone	13	218	
Shale, gray	42	260	
Limestone	4	264	
Clay, gray	53	317	

Well 19/7W-25F1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Hardpan and clay, gray	125	140	
Clay, brown	10	150	
Sand, fine	1	151	
Mississippian System:			
Osage Series:			
Sandstone and shale	36	187	W. B.

Well 19/7W-26C1

Type of record: Driller's log. Altitude: About 725 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark	2	2	
Clay, yellow	10	12	
Clay, soft, gray	17	29	
Sand, hard	3	32	Dry
Hardpan, soft, gray	7	39	
Shale, soft, green	9	48	Clay?
Gravel	1	49	Dry
Hardpan, hard, gray	24	73	
Hardpan, hard, brown	15	88	
Mississippian System:			
Osage Series:			
Shale, gray	30	118	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-1L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, and streaks of sand--	110	110	
Clay, red----------	25	135	
Mississippian? System:			
Osage? Series:			
Shale, light-blue----------	25	160	W. B.

Well 19/8W-2H1

Type of record: Driller's log from memory. Altitude: About 670 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	15	15	
Clay, blue----------	35	50	
Shale, light-blue; boulder-------	6	56	Clay
Clay, yellow, and mud----------	12	68	
Clay, soft, blue----------	27	95	
Mississippian? System:			
Osage? Series:			
Shale, black----------	115	210	W. B.

Well 19/8W-3B1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	13	13	
Sand----------	6	19	
Hardpan, sandy, gray----------	17	36	
Sand, gray----------	5	41	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	19	60	W. B.

Well 19/8W-5F5

Type of record: Driller's log. Altitude: About 604 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt, some clay, trace of sand; loose, gray----------	6	6	
Sand, fine to medium, some silt; loose, gray----------	3	9	
Silt and clay, layered, some sand; yellow and brown---------	4.5	13.5	
Sand, fine to medium, some silt; gray----------	5	18.5	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-5F5--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt, sand, and clay; layered, gray	5	23.5	
Silt, trace of silt; very tough, gray	5	28.5	
Sand, fine to coarse, some silt, trace of gravel; light-brown	11.5	40	

Well 19/8W-5K1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	16	16	
Hardpan and yellow clay	9	25	
Sand and gravel	10	35	
Hardpan	36	71	
Gravel, fine	6	77	
Hardpan, yellow	4	81	
Sand	3	84	W. B.

Well 19/8W-6D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Clay, blue	9	12	
Clay, shaly	3	15	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gritty, blue	35	50	
Shale, sandy	15	65	W. B.
Sandstone	6	71	W. B.
Shale, white	--	71	

Well 19/8W-12E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	12	12	
Clay, blue	62.5	74.5	
Mississippian? System:			
Osage? Series:			
Shale, black	129.5	204	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-13H1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay	5	5	
Sand, brown	55	60	
Mississippian System:			
Osage Series:			
Limestone, sandy	10	70	
Limestone, sandy	4	74	W. B.

Well 19/8W-15B1

Type of record: Driller's log. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, sandy, yellow	13	15	
Clay, sandy	5	20	
Clay, gravelly, blue	10	30	
Clay, brown	15	45	
Gravel and sand, brown	1	46	Dry
Clay, blue	9	55	
Sand, gravel, and mud	15	70	
Clay, sandy, hard, brown	20	90	
Hardpan, gritty	25	115	
Clay, gray	15	130	
Clay, gritty, gummy, gray and brown	29	159	
Clay, with streaks of green fine sand and pebbles	20	179	
Mississippian System:			
Osage Series:			
Sandstone	15	184	W. B.

Well 19/8W-16A1

Type of record: Sample study. Altitude: About 640 feet.

Quaternary System:			
Recent and Pleistocene Series:			
No sample	117	117	
Gravel and sand, silty, clayey, brown	8	125	
Clay, brown, with sand and gravel grains, calcareous	5	130	
Sand, fine to coarse, and granule gravel, green	10	140	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, fine to coarse, incoherent, yellow; sideritic	25	165	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-16A1--Cont

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Osage Series:			
Dolomite, glauconitic, cherty, extra fine, light-gray to green and buff; quartz---------	27	192	T. D. 2,417 ft

Well 19/8W-19N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy----------	30	30	
Clay, blue----------	25	55	
Hardpan----------	22	77	
Sand----------	20	97	W. B.

Well 19/8W-24G1

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

Old well----------	29	29	
Quaternary System:			
Recent and Pleistocene Series:			
Sand----------	14	43	
Hardpan, gray----------	83	126	
Sand, loose----------	--	126	W. B.

Well 19/8W-24L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark----------	3	3	
Hardpan, gravelly, brown---------	15	18	
Clay, soft, gray----------	111	129	
Mississippian System:			
Osage Series:			
Shale, gray----------	55	184	W. B. 160 to 165 ft
Shale, black----------	20	204	
Shale, dark-gray----------	20	224	
Limestone, hard, gray----------	33	257	
Shale, dark-gray----------	14	271	
Sandstone----------	2	273	
Shale, light-gray----------	29	302	
Shale, dark----------	7	309	
Shale, light-gray----------	17	326	
Sandstone, gray----------	27	353	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-26F1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, yellow	12	14	
Clay, gravelly, brown	31	45	
Clay, gravelly, green	10	55	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black, and coal	3	58	
Shale, gummy, blue	21	79	
Shale, black, and coal	3	82	
Shale, gritty, gray	5	87	W. B. 85 to 100 ft
Shale, gritty, brown	6	93	
Shale, gray	10	103	
Shale, black	2	105	

Well 19/8W-30Q1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	8	8	
Clay, sandy	17	25	
Hardpan	73	98	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	44.5	142.5	W. B.

Well 19/8W-32A2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	16	16	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, rotten, red	8	24	
Shale	35	59	
Sandstone, fine, hard	1	60	
Sandstone, hard, white	25	85	W. B.
Shale	4	89	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/8W-32B1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	7	7	
Sand, red	63	70	
Gravel, gray	17	87	W. B. 80 to 87 ft

Well 19/8W-34B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	53	53	
Gumbo, tough, yellow	12	65	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Shale, black	50	115	W. B.

Well 19/9W-1B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	48	48	
Limestone	2	50	Cemented gravel?
Gravel	--	50	W. B.

Well 19/9W-1H4

Type of record: Driller's log. Altitude: About 596 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, and silt; medium-dense, brown	4	4	
Silt, clay, trace of sand; medium-dense, brown	2	6	
Silt, fine sand and clay; loose, brown	3	9	
Sand, fine to coarse, silt, trace of gravel; dense, brown	4.5	13.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Silt, laminated, micaceous, and sandstone; very dense, yellow and gray	4	17.5	
Siltstone, laminated, micaceous, sandstone, and shale; weakly cemented	3	20.5	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/9W-2A1

Type of record: Driller's log. Altitude: About 507 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel, trace of silt; dense, brown	2	2	
Silt, fine, sand, trace of clay; dense, brown	2	4	W. B.
Silt, laminated, micaceous, sand, and clay; very dense, brown and gray	4.5	8.5	
Silt and clay, trace of mica; very dense, dark-gray	3.5	12	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Siltstone and shale; dense, gray-	8	20	

Well 19/9W-2B1

Type of record: Driller's log. Altitude: About 496 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, some clay, trace of sand; loose, brown	4	4	
Silt, some clay, trace of sand; medium-dense, brown	2	6	
Silt, some clay, trace of sand; loose, brown	7.5	13.5	
Silt, some clay, trace of sand and organic material; loose, gray	5	18.5	
Silt and clay, trace of sand and organic material; loose, gray	5	23.5	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, soft, and fine sandstone; alternate layers, very dense, black and gray	5	28.5	
Shale, clayey, and clay; alternate layers, very dense	6.5	35	
Sandstone, and clayey shale; alternate layers, dense, gray--	5	40	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/9W-2C9

Type of record: Driller's log. Altitude: About 491 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	0.5	0.5	
Sand, fine to medium, and silt; loose, brown	1.5	2	
Silt, some clay, trace of sand; loose, brown	12	14	
Sand, fine to medium, trace of silt and organic material; medium-dense, gray	3.5	17.5	W. B. 15 to 38 ft
Sand and gravel, fine to coarse, trace of silt; medium-dense, brown	6	23.5	
Sand, fine to coarse, some gravel, trace of silt; very-dense, brown	5	28.5	
Sand, fine to coarse, some gravel, trace of silt; dense, brown	5	33.5	
Sand, fine to coarse, some gravel, trace of silt; very dense, brown	4.5	38	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Silt and shale; alternate layers, dense	4	42	
Sandstone, dense, gray and white, with clay seams	5	47	

Well 19/9W-2H1

Type of record: Driller's log. Altitude: About 515 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Rocks and gravel	14	14	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	4	18	
Sandstone	2	20	
Shale, gray	15	35	
Rock, hard	3	38	Limestone?
Shale, dark-blue	49	87	
Sandstone	48	135	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 19/9W-11C1

Type of record: Driller's log. Altitude: About 485 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Old well	35	35	
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	30	65	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	7	72	
Sandstone	3	75	W. B.

Well 19/9W-26J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, yellow	18	20	
Clay, sandy, brown	73	93	
Sand and gravel	1	94	
Clay, blue	7	101	
Clay, brown	9	110	
Clay, hard, brown	9	119	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy, blue	26	145	
Shale, sandy, blue	15	160	W. B.

Well 19/9W-34A1

Type of record: Driller's log. Altitude: About 500 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	18	18	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	22	40	W. B.
Shale	9	49	

Well 19/9W-36R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	10	10	
Clay, blue	37	47	
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Shale	4	51	
Coal	1	52	

Well 19/9W-36R1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Middle Pennsylvanian Series:			
Fire clay	2	54	W. B.
Shale	50	104	

Well 20/6W-6N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	18	18	
Hardpan	10	28	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Sandstone	22	50	W. B.

Well 20/6W-19E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	10	10	
Sand	32	42	
Mississippian System:			
Osage Series:			
Sandstone	22	64	W. B.

Well 20/6W-19M2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	12	12	
Sand	3	15	
Clay	42	57	
Mississippian System:			
Osage Series:			
Sandstone	15	72	W. B.

Well 20/6W-30E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	10	10	
Sand	20	30	
Shale, gray	2	32	Clay?
Sand, fine	6	38	

Well 20/6W-30E1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Osage Series:			
Sandstone----------	36	74	W. B.

Well 20/7W-1J2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	8	8	
Hardpan, gray----------	15	23	
Pennsylvanian? System:			
Lower Pennsylvanian? Series;			
Sandstone, brown----------	27	50	W. B.

Well 20/7W-1R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	1	1	
Clay, gravelly, yellow----------	12	13	
Hardpan----------	17	30	
Hardpan, gravelly----------	12	42	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Sandstone, brown----------	18	60	
Mississippian System:			
Osage Series:			
Sandstone, gray----------	5	65	
Sandstone, gray----------	10	75	W. B.
Sandstone, gray----------	2	77	

Well 20/7W-7H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Drift----------	25	25	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	15	40	
Coal, bone, trace----------	--	40	
Sandstone----------	10	50	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/7W-10H1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, yellow	9	10	
Sand, muddy	3	13	
Mississippian System:			
Osage Series:			
Shale, blue	50	63	W. B.

Well 20/7W-18R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil and gravel	30	30	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	30	60	
Coal, trace	--	60	
Sandstone	20	80	
Coal, trace	--	80	
Fire clay	2	82	

Well 20/7W-19C2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, black	2	2	
Clay, gravelly, brown	26	28	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, gray	2	30	
Sandstone, white	22	52	W. B.

Well 20/7W-19C6

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark-gray	4	4	
Clay, brown, and gravel	19	23	
Clay, gray, and gravel	6	29	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	26	55	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/7W-19C9

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark	3	3	
Clay, yellow	6	9	
Gravel, brown	19	28	W. B. 12 to 52 ft
Gravel, gray	8	36	
Sand, gray	16	52	
Gravel	--	52	

Well 20/7W-19C11

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

Open well	25	25	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	15	40	
Sandstone	10	50	W. B.
Shale, gray	17	67	
Shale, black	5	72	

Well 20/7W-19G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, gravelly	20	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	6	26	Dry
Sandstone	11	37	W. B.

Well 20/7W-21C1

Type of record: Driller's log. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, red	6	6	
Sand, dirty	7	13	
Hardpan	2	15	
Sand and gravel	13	28	
Sand, fine	5	33	
Gravel and some clay	17	50	
Gravel, very clean	5	55	
Gravel, hard	8	63	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Clay, blue, with streaks of sandstone	8.5	71.5	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/7W-21C1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, white	6.5	78	
Sandstone, yellow, and some yellow clay	57	135	W. B.
Mississippian System:			
Osage Series:			
Shale, blue	6	141	

Well 20/7W-24B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, black	3	3	
Clay, brown	9	12	
Gravel and boulders	11	23	
Clay, sandy	10	33	
Mississippian System:			
Osage Series:			
Sandstone, brown	31	64	W. B.

Well 20/7W-24H2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	20	20	
Hardpan and muck	32	52	
Mississippian System:			
Osage Series:			
Sandstone	20	72	W. B.

Well 20/7W-26M1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	18	18	
Clay and hardpan	32	50	
Sand	1	51	
Clay	12	63	
Gravel	1	64	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/7W-26R1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, yellow	15	15	
Clay, sandy, brown	5	20	
Sand	2	22	
Clay, sandy	10	32	
Mississippian System:			
Osage Series:			
Clay and soft shale	13	45	
Shale and sandstone	9	54	
Sandstone	25	79	W. B.

Well 20/7W-33R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	2	2	
Clay, yellow	14	16	
Spongy material, gray	4	20	
Sand, yellow	11	31	Little water
Clay, hard, gray	15	46	
Clay, sandy, soft	19	65	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, brown	9	74	
Sandstone, soft, white	18	92	W. B.

Well 20/8W-1D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, gray	3	3	
Clay, yellow	14	17	
Clay, soft, gray	14	31	
Hardpan, sandy, brown	2	33	
Hardpan, gray	19	52	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, soft, brown	4	56	
Sandstone, hard, brown	26	82	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/8W-2P1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, sandy, clayey----------	30	30	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	20	50	W. B.
Shale, sandy----------	5	55	

Well 20/8W-4D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, hard, brown---------	79	79	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	81	160	
Mississippian System:			
Osage Series:			
Shale----------	100	260	
Sandstone----------	23	283	
Shale----------	65	348	
Sandstone----------	50	398	
Shale----------	5	403	

Well 20/8W-17A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	1	1	
Clay, yellow----------	8	9	
Clay, sandy, yellow----------	13	22	
Sand and clay, hard----------	22	44	
Dirt, sandy, brown----------	41	85	Sandy silt?
Sand, hard----------	2	87	Gas.

Well 20/8W-18N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark-gray----------	4	4	
Clay, hard, yellow----------	12	16	
Hardpan, hard, gray----------	23	39	
Hardpan, hard, brown----------	8	47	
Hardpan, hard, gray----------	26	73	
Hardpan, hard and soft, brown----	13	86	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/8W-18N1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan, hard spots, gray--------	16	102	
Shale, medium-soft, gray---------	32	134	Clay?
Sand and gravel-----------------	1	135	W. B.; gas
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, hard, gray----------------	18	153	
Sandstone, hard, brown-----------	8	161	
Shale, hard, gray----------------	18	179	
Sandstone, soft, white-----------	9	188	W. B.

Well 20/8W-23B1

Type of record: Driller's log. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark-----------------------	4	4	
Hardpan, yellow------------------	15	19	
Hardpan, brown-------------------	8	27	
Gravel, gray---------------------	2	29	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray----------------------	32	61	
Shale, black---------------------	8	69	
Sandstone------------------------	6	75	
Shale, black---------------------	7	82	
Sandstone------------------------	10	92	W. B.

Well 20/8W-26R1

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

Dug well-------------------------	44	44	
Quaternary System:			
Recent and Pleistocene Series:			
Gravel---------------------------	2	46	
Clay-----------------------------	2	48	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone------------------------	15	63	W. B.

Well 20/8W-28H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Loam, black----------------------	4	4	
Clay, yellow---------------------	10	14	
Gravel, fine---------------------	6	20	

Well 20/8W-28H1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, shelly	5	25	
Slate, blue	5	30	
Slate, black	6	36	
Sandstone, white	62	98	W. B.
Shale, blue	3	101	
Shale, gray	4	105	
Limestone, broken, gray	17	122	
Slate, black	13	135	
Limestone, gray	8	143	
Shale, blue	4	147	T. D. 2,590 ft

Well 20/8W-28Q1

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift	28	28	
Shale, sandy	3	31	Sandy clay?
Sand, heavy	29	60	
Quicksand	40	100	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Slate, blue	3	103	
Shale, sandy	17	120	
Limestone, broken	30	150	
Sandstone	10	160	W. B.; T. D. 1,807 ft

Well 20/8W-29N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and clay	2.5	2.5	
Gravel and clay	2.5	5	
Gravel and sand with mud balls	2	7	
Clay, gritty	2	9	
Sand, loose, and clay balls	1	10	
Clay, sandy	4	14	
Quicksand	26	40	W. B.
Sand, fine, and boulders	5	45	W. B.
Quicksand	1.5	46.5	W. B.
Clay	1.5	48	
Quicksand	2	50	W. B.
Clay and gravel strips	4	54	
Clay, gritty	8	62	
Clay, green, some grit	37	99	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/8W-29N1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, soft	10	109	W. B.
Shale, blue	5	114	

Well 20/8W-30Q1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	19	19	
Gravel	2	21	
Hardpan	11	32	
Sand	80	112	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	3	115	W. B.

Well 20/8W-31C1

Type of record: Driller's log. Altitude: About 635 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay	15	15	
Sand, fine	16	31	
Limestone, sandy, hard, light-brown	5	36	Cemented gravel?
Hardpan	2	38	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, gray	22	60	
Shale, gray	12	72	
Shale, blue	48	120	
Shale, light-gray	9	129	
Sandstone	31	160	W. B.

Well 20/8W-31M1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Record missing	62	62	
Sand	2	64	W. B.
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	4	68	
Sandstone	22	90	W. B.

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/8W-32L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	75	75	
Sand	1	76	
Hardpan	27	103	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	19	122	W. B.

Well 20/8W-33C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay	10	10	
Clay, sandy	5	15	
Clay and sand, blue	31	46	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, sandy	84	130	W. B.

Well 20/8W-34L1

Type of record: Driller's log. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay	10	10	
Sand and gravel	20	30	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, broken	18	48	
Sandstone, gray	32	80	W. B.

Well 20/8W-35P1

Type of record: Driller's log. Altitude: About 695 feet.

Dug well	23	23	
Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay, yellow	10	33	
Clay, blue	45	78	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, gray	82	160	
Shale, dark	30	190	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/8W-35P1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian? System:			
Osage? Series:			
Shale and fragments of sandstone-	30	220	
Shale, gray----------	40	260	
Shale, sandy----------	36	296	
Shale, gritty----------	87	383	
Shale----------	17	400	

Well 20/8W-35R1

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

Dug well----------	15	15	
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan----------	25	40	
Gravel----------	5	45	Dry
Clay, sandy----------	25	70	
Pennsylvanian? System:			
Lower Pennsylvanian? Series:			
Shale----------	115	185	W. B.

Well 20/9W-14D1

Type of record: Driller's log. Altitude: About 515 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay and boulders----------	15	15	
Sand, fine----------	35	50	
Muck, soft, broken----------	5	55	
Sand, fine----------	57	112	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	18	130	
Sandstone----------	--	130	W. B.

Well 20/9W-25H1

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

Dug well----------	47	47	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, gravelly----------	88	135	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	22	157	Little water
Shale, heavy----------	16	173	
Shale, sandy----------	8	181	
Shale, heavy, gray----------	42	223	
Sandstone, brown----------	3	226	

Well 20/9W-25H1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, light-gray----------	14	240	
Sandstone, white----------	3	243	W. B.

Well 20/9W-25K1

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

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan----------	50	50	
Gravel----------	1	51	W. B.
Hardpan----------	50	101	
Gravel----------	1	102	Gas

Well 20/9W-35H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy----------	10	10	
Boulders----------	3	13	
Gravel----------	53	66	W. B. 24 to 66 ft
Clay, blue----------	--	66	

Well 20/9W-35H2

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

Quaternary System:			
Recent and Pleistocene Series:			
Gravel----------	40	40	Dry
Gravel and hardpan----------	45	85	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone and shale----------	155	240	W. B.
Sandstone----------	15	255	

Well 20/9W-36B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay---------	6	6	
Gravel and sand with clay--------	6	12	
Clay, gray and blue----------	11	23	
Clay, gravelly, hard----------	2	25	
Sand and boulders, muddy---------	1	26	W. B. 25 to 39 ft
Sand and gravel, coarse, with mud balls----------	9	35	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 20/9W-36B1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, medium, yellow	3	38	Very muddy
Sand, yellow, with mud balls	1	39	Muddy
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, blue	18	57	
Limestone, brown	2	59	W. B.

Well 20/9W-36G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	30	30	
Sand	3	33	
Hardpan	20	53	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale	5	58	
Sandstone	39	97	W. B.
Shale, sandy	14	111	

Well 21/7W-5K1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Sand and gravel	43	58	Dry
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	25	83	W. B.

Well 21/7W-6G2

Type of record: Driller's log. Altitude: About 515 feet.

Cinder fill	16	16	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	6	22	
Sand, red, and hardpan	13	35	
Sand and gravel	17	52	W. B.
Clay, dark-blue	16	68	
Sand	7	75	W. B.
Sand and gravel, coarse	30	105	W. B.
Sand and gravel, small	20	125	W. B.

Well 21/7W-6L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Sand and red clay	29	32	
Gravel, red	10	42	Dry
Clay, blue	21	63	
Gravel, blue	11	74	W. B. 63 to 116 ft
Gravel, red	30	104	
Sand	10	114	
Gravel and sand	2	116	
Mississippian System:			
Osage Series:			
Limestone	60	176	
Shale	6	182	
Limestone and shale	11	193	

Well 21/7W-7C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Cement and gravel	2	2	
Clay	6	8	
Sand and gravel	4	12	
Sand, gravel, and some clay	8	20	
Gravel	34	54	
Gravel, coarse, and boulders	2	56	
Sand, fine	14	70	
Sand and gravel	22	92	W. B. 70 to 157.5 ft
Sand, very fine	27	119	
Sand, fine, sharp, clean	7	126	
Sand and small gravel streaks	10	136	
Sand and gravel	3	139	
Sand and small gravel	3	142	
Sand and gravel	15.5	157.5	

Well 21/7W-8A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, yellow	20	20	
Clay, blue	17	37	
Gravel, sandy, dirty	2	39	

Well 21/7W-8A1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Shale, black	21	60	
Sandstone	20	80	W. B.
Mississippian System:			
Osage Series:			
Shale, gray	1	81	

Well 21/7W-14C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay	20	20	
Clay, sandy, gray	10	30	
Hardpan	30	60	
Clay, sandy, gray	37	97	
Clay, sandy, and sand, green	25	122	
Sand, yellow	6	128	
Mississippian System:			
Osage Series:			
Shale	10	138	W. B.

Well 21/7W-14D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Clay and large boulders	12	15	
Clay, gravelly, hard	5	20	
Clay, blue	20	40	
Clay, blue, and hardpan	11	51	
Sand and gravel	3	54	W. B.

Well 21/7W-18C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Gravel and sand	42	42	
Mississippian System:			
Osage Series:			
Shale and limestone, hard, dark	40	82	
Sandstone, white	16	98	W. B.

Well 21/7W-19J1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	4	4	
Gravel	28	32	Dry
Mississippian System:			
Osage Series:			
Shale	8	40	
Sandstone and streaks of shale	10	50	
Sandstone	25	75	W. B.
Sandstone and streaks of shale	5	80	

Well 21/7W-19R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Gravel	15	15	Dry
Hardpan	10	25	
Mississippian System:			
Osage Series:			
Sandstone	1.5	26.5	
Shale	20.5	47	
Sandstone	8	55	W. B.
Shale, gray	8	63	

Well 21/7W-30H2

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy	6	6	
Gravel	19	25	Dry
Hardpan	60	85	
Gravel and sand	9	94	W. B.

Well 21/7W-30H3

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Dirt	3	3	
Sand and gravel	29	32	
Clay, sandy	18	50	
Hardpan and clay	42	92	
Gravel	1	93	Dry
Clay, sandy	9	102	
Sand	2	104	
Clay, blue	12	116	
Sand	1	117	

Well 21/7W-30H3--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Mississippian System:			
Osage Series:			
Shale and streaks of sandstone---	54	171	W. B.

Well 21/7W-30H4

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy----------	2	2	
Gravel----------	38	40	Dry
Sand, dirty, and soft yellow clay, with wood----------	30	70	Some water
Hardpan, gray----------	70	140	
Sand, gray, and wood bark--------	20	160	
Sand, brown----------	2	162	
Sand----------	2	164	Gas
Quicksand and wood----------	8	172	Gas
Mississippian System:			
Osage Series:			
Sandstone, grainy, solid---------	2	174	W. B.

Well 21/7W-31M1

Type of record: Driller's log. Altitude: About 670 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel----------	22	22	
Hardpan, gray----------	16	38	
Quicksand----------	3	41	
Mississippian System:			
Osage Series:			
Shale, broken, blue----------	5	46	
Sandstone----------	2	48	
Sandstone----------	12	60	W. B.

Well 21/7W-36E1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	15	15	
Sand----------	5	20	
Mississippian System:			
Osage Series:			
Sandstone----------	5	25	
Sandstone, solid----------	38	63	W. B.

Well 21/8W-26D1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand----------	4	4	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone----------	38	42	
Coal----------	1	43	
Sandstone----------	46	89	

Well 21/8W-32H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, soft, yellow----------	8	8	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, hard, brown----------	20	28	
Sandstone, hard, white----------	22	50	
Sandstone, hard, white----------	10	60	W. B.

Well 21/8W-33E1

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

Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, hard, brown----------	40	40	
Sandstone, white----------	29	69	W. B.
Mississippian System:			
Osage Series:			
Shale, gray----------	1	70	

Well 21/8W-36D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Drift----------	34	34	
Clay, blue----------	16	50	
Mississippian? System:			
Osage? Series:			
Shale, blue----------	25	75	
Shale, lighter----------	30	105	
Sandstone----------	3	108	
Shale----------	95	203	
Sandstone, white----------	20	223	

Table 5.--Selected well logs, Fountain County, Indiana--Cont.

Well 22/6W-29R1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	8	8	
Hardpan, brown	16	24	Dry spots
Hardpan, brown	15	39	Dry
Hardpan, gray	32	71	
Hardpan, gravelly, soft, gray	4	75	
Hardpan, gray	7	82	
Mississippian System:			
Osage Series:			
Shale, medium-hard, gray	4	86	
Limestone, hard, gray	19	105	W. B.

Well 22/6W-32L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil	1	1	
Clay, yellow	20	21	
Hardpan, gray	19	40	
Sand and hardpan	18	58	Little water
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, hard, brown	4	62	W. B.

Well 22/7W-36J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Hardpan	7	27	
Sand and gravel	28	55	Dry
Clay, blue	5	60	
Gumbo clay, brown	26	86	
Gumbo clay, green	7	93	
Mississippian System:			
Osage Series:			
Sandstone	7	100	W. B.
Shale	1	101	

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana
(Results in parts per million)

Well number: See text for description of well-numbering system.
Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian.
Material: C, coal; Cgl, conglomerate; F, fire clay; G, gravel; Ls, limestone; S, sand; Sd-ls, sandy-limestone; Sd-sh, sandy-shale; Sh, shale; Sh-ss, shaly-sandstone; Sls, siltstone; Ss, sandstone.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
18/6W- 5J1	Ss	M	10-25-61	--	1.0	454	15	4	308	
6D1	Ss	P	10-25-61	--	2.0	503	14	6	360	
8A1	Sh	M	10-25-61	55	2.5	425	12	6	292	
9M1	Sh	M	10-25-61	55	4.0	517	15	6	344	
17Q1	G	Pl	10-25-61	--	2.5	459	15	6	340	
18A1	Ls	M	10-25-61	56	5.0	542	23	22	448	
18K1	Ls	M	10-25-61	57	1.0	508	53	12	416	
19E1	Ls?	M?	10-25-61	56	>7.5	488	13	24	280	
19F1	G	Pl	10-25-61	--	4.0	468	13	8	336	
19M1	G	Pl	10-25-61	55	4.0	464	12	8	336	
19M2	G	Pl	10-25-61	56	5.0	498	13	8	360	
19M4	G	Pl	10-25-61	56	1.5	576	185	38	588	
19M7	G	Pl	10-25-61	--	3.0	498	14	6	372	
20A1	Sh	M?	10-25-61	--	.3	464	12	8	256	
20D1	Sh	M	10-25-61	--	.5	464	12	8	328	
28Q1	Cgl?	Pl	10-25-61	--	2.5	576	29	10	464	
31C1	------	M?	10-25-61	--	1.0	561	14	4	412	Filled solution cavity in limestone?
31L1	Ls	M	10-25-61	--	4.0	556	28	10	396	
32L1	Ls?	M	10-25-61	53	1.0	532	12	4	360	
32P1	Sh	M	10-25-61	54	1.5	566	15	2	364	
18/7W- 3B1	G	Pl	10-26-61	--	2.0	337	18	2	184	
5H1	S,G	Pl	10-26-61	--	7.5	683	230	80	776	
7N1	Sh	P	10-26-61	54	.3	566	55	8	340	
7R1	Sh	P	10-26-61	--	7.5	454	1,180	12	1,150	
8A1	G	Pl	12- 5-61	54	6.0	425	12	1	332	
9D1	Sh	M?	12- 5-61	--	.1	503	13	8	328	Hydrogen sulfide gas

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana--Cont.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
18/7W-12H1	Ss	P	12- 5-61	--	1.5	454	9	6	320	
12R1	Sh	M?	10-25-61	56	2.5	434	12	12	236	
13J1	Ss	P	10-26-61	56	.5	498	16	6	364	
17N1	Sh,C	P	10-26-61	--	.3	683	435	74	964	
18P1	Ss,Sh	P	10-26-61	55	.5	630	15	10	136	
19D1	Sh	P	10-26-61	--	.5	381	38	14	80	
22A1	Sh,Ss	P	10-26-61	--	.1	547	300	124	776	
22B1	Sh	P	10-26-61	55	.1	439	12	10	252	
23A1	G	P1	10-26-61	54	.5	561	130	26	552	
24K1	G	P1	10-26-61	57	3.0	483	22	6	368	
25L1	Ss	P	10-26-61	53	.1	571	17	4	424	
25R1	Ss	P	10-26-61	55	1.0	556	17	6	396	
27Q1	Ss	P	10-26-61	53	.1	586	11	4	416	
28K1	G	P1	10-26-61	52	3.0	488	47	4	392	
30P1	------	P?	10-26-61	54	.1	688	11	246	60	
30R1	Ss	P	10-26-61	56	3.0	503	12	4	288	
32D1	Ss?	P	10-26-61	56	2.5	566	18	4	364	
32M1	Ss	P	10-26-61	--	4.0	512	16	4	360	
33E1	G	P1	10-26-61	52	1.0	566	22	4	388	
33J1	Sh	P	10-25-61	52	.2	527	15	10	376	
34L1	G	P1	10-25-61	56	1.0	478	14	8	228	
36C1	Ss	P	10-25-61	54	.1	537	15	6	372	
36J1	Ss	P	10-25-61	56	.5	537	15	8	384	
18/8W- 2M1	S,G	P1	12- 5-61	--	1.0	517	11	118	176	
2Q1	Sh	P	10-27-61	55	3.0	517	14	6	356	
4N2	S,G	P1	10-27-61	--	.1	439	220	10	480	
6N1	Sh, Sd-sh	P	10-27-61	--	<.1	464	41	1,090	224	
7D1	Sh	P	10-27-61	--	<.1	415	52	6	24	
8R1	------	P	10-27-61	--	3.0	454	445	10	608	
10A1	G	P1	10-27-61	55	5.0	517	28	8	364	
10C1	G	P1	10-27-61	55	2.0	586	13	4	360	
10K1	Sh	P	10-27-61	--	.1	517	18	4	344	
12D1	S	P1	10-31-61	56	5.0	639	15	56	260	
12M1	------	P1	10-31-61	54	.5	429	14	16	172	Water at top of rock

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana--Cont.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
18/8W-15N1	Sh,C	P	11- 2-61	56	1.0	473	14	4	324	
17R1	Sh	P	11- 1-61	--	<.1	498	15	4	276	
19L1	Sh,Ss	P	11- 1-61	54	3.0	517	13	4	312	
20A2	Sh	P	11- 1-61	--	.1	512	14	40	112	
20R2	Sd-sh?	P	11- 1-61	54	<.1	439	14	12	100	
21D1	F	P	11- 1-61	--	.1	586	13	48	34	
21M1	------	P	11- 1-61	55	.1	425	12	4	120	
24Q1	G	P1	11- 1-61	56	3.0	654	15	42	92	
26P1	G	P1	11- 1-61	--	1.5	600	17	6	164	
27L1	Sh	P	11- 1-61	--	.5	620	13	18	200	
28B1	Sd-sh	P	11- 1-61	--	.1	478	12	12	172	
29D1	Sh	P	11- 1-61	--	<.1	605	14	68	54	
29K1	Sh	P	11- 1-61	--	.1	547	11	72	196	
31N1	Ss	P	11- 2-61	54	1.0	439	24	6	316	
32C1	Sh	P	11- 1-61	--	.1	561	12	36	212	
32J1	Ss	P	11- 2-61	56	1.0	498	13	10	332	
33H1	S,G	P1	11- 1-61	--	5.0	605	13	12	344	
34B1	S,G	P1	11- 1-61	57	7.5	537	95	30	472	
34L1	Ss	P	11- 1-61	--	1.5	620	12	44	288	
36A1	Cgl	P	11- 1-61	56	1.5	532	15	6	136	
18/9W- 1G1	Ss	P	11- 2-61	--	7.5	605	430	6	732	
1G2	Sh	P	11- 2-61	--	1.0	561	230	4	540	
1Q1	Ss	P	11- 2-61	55	>7.5	508	35	8	396	
11C1	G	P1	11- 2-61	55	2.5	537	16	6	412	
11C2	G	P1	11- 2-61	54	2.5	571	12	4	412	
11F1	G	P1	11- 1-61	--	5.0	610	12	4	400	
11L1	S,G	P1	11- 1-61	--	2.0	551	26	6	444	
34C1	C	P	11- 1-61	54	.1	454	75	12	388	
34Q1	------	P	11- 1-61	--	3.0	449	65	4	240	
35P1	Ss	P	11- 1-61	55	<.1	468	28	12	184	
35P2	S,G	P1	11- 1-61	55	.3	361	180	14	432	
36J1	Ss,C	P	11- 1-61	55	.1	483	14	6	260	
36L1	Ls	P	11- 1-61	57	2.5	752	200	24	104	Water bright blue

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana--Cont.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
19/6W- 7J1	Sls	M	11-27-61	53	0.8	386	17	4	272	
17B1	Sh	M	11-27-61	--	2.0	439	55	10	376	
21N1	Sh	M	11-24-61	52	2.5	527	13	12	332	
19/7W- 3D1	Ss	M	11-27-61	50	.1	429	10	6	292	
4F1	Ss	P	11-27-61	52	.8	512	12	6	352	
8K1	Ss	P	11-21-61	--	.3	449	7	8	324	
9F1	Sd-sh	P	12- 6-61	--	.5	444	11	4	296	
11G1	Ls	M	11-21-61	--	.1	371	9	4	276	
14J1	Ss	P	11-21-61	--	.3	415	14	4	316	
19P1	Ls	M	11-21-61	--	.1	390	10	48	196	
21E1	Sh	M?	11-21-61	--	.8	303	14	6	176	
22D1	Ss	P	12- 6-61	--	.2	346	10	4	240	
24P1	------	M	11-25-61	--	2.5	459	13	14	164	
25F1	Ss,Sh	M	12- 6-61	--	1.5	630	11	14	296	
28F1	G	P1	11-21-61	53	1.0	322	15	6	188	
19/8W- 1C1	Sh	M	11-20-61	--	1.5	444	15	4	208	
3N1	Ss	P?	11- 2-61	--	1.5	439	18	6	340	
3R1	Ss	M?	11-20-61	46	.3	429	22	4	256	
5K1	S	P1	11- 2-61	54	2.0	532	10	2	340	
6A1	S	P1	11- 2-61	--	.3	322	55	10	288	
6D1	Sd-sh, Ss	P	12- 5-61	--	.1	395	11	4	296	
6H1	Ss	P	11- 2-61	--	.1	405	30	6	328	
11D1	Ss	M?	11-20-61	--	5.0	454	13	4	316	
12E1	Sh	M?	11-20-61	--	.1	478	15	12	96	
13H1	Sd-ls	M	12- 4-61	--	1.0	542	12	8	380	
14F1	Sh-ss?	M	11-20-61	--	.1	566	16	318	224	
15B1	Ss	M	12- 5-61	--	1.0	493	9	6	344	
19N1	S	P1	11-21-61	--	1.0	361	22	6	280	
24G1	S	P1	11-20-61	55	.3	244	90	18	284	
26F1	Sh	P	11-20-61	--	.5	410	14	22	184	
29H1	Ss	P	11-21-61	--	.5	444	15	8	284	
32A1	Ss	P	11-21-61	--	.1	293	70	10	288	
32A2	Ss	P	11-21-61	53	1.5	337	14	30	160	
34B1	Sh	P	11-21-61	--	.1	454	13	60	144	
36A1	G	P1	11-21-61	--	1.5	346	15	78	240	

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana--Cont.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
19/8W-36N1	G	Pl	11-21-61	--	3.0	420	14	24	236	
36P1	Ss	P	11-21-61	53	3.0	376	13	34	192	
19/9W- 1C1	Ss	P	11- 2-61	--	.1	381	62	16	336	
2H1	Ss	P	11- 2-61	--	.3	366	18	4	280	
11C1	Ss	P	11- 2-61	54	.5	273	23	2	228	
26J1	Sd-sh	P	11- 2-61	56	1.0	381	55	6	340	
26K1	S,G	Pl	11- 2-61	56	2.0	381	43	4	336	
34A2	Ss	P	12- 5-61	--	1.0	517	18	8	416	
20/6W- 6N1	Ss	P?	11-28-61	--	.1	317	82	12	320	
6N2	Ss	P?	11-28-61	52	.1	342	50	8	296	
19M3	Ss	M	11-28-61	52	3.0	376	14	12	264	
30R1	Ss	M	11-28-61	54	4.0	390	41	18	336	
20/7W- 7R1	Ss	P	12- 6-61	--	.1	381	24	16	312	
19C9	G,S	Pl	11-28-61	--	1.0	312	48	8	300	
19C11	Ss	P	11-28-61	--	4.0	400	82	16	384	
19G1	Ss	P	11-28-61	--	.5	342	82	12	316	
26K1	Ss	M	11-28-61	51	.5	376	12	6	236	
26M1	G	Pl	11-28-61	54	.3	459	17	1	316	
26R1	Ss	M	11-28-61	52	.5	371	12	4	244	
33R1	Ss	P	11-28-61	54	5.0	454	20	4	344	
34N1	Sh	M?	11-28-61	--	3.0	381	14	6	228	
20/8W- 1D1	Ss	P	11-28-61	53	.3	356	26	6	284	
2P1	Ss	P	11-28-61	--	.1	322	58	6	288	
9G1	Ss?	P?	11-29-61	--	5.0	508	14	8	260	
14R1	Ss?	P?	11-28-61	--	.1	756	35	12	96	
18N1	Ss	P	11-29-61	--	.4	532	12	8	308	
23B1	Ss	P	11-28-61	--	.1	483	13	6	268	
26L1	Sh	P	11-28-61	53	.1	625	21	6	476	
26R1	Ss	P	11-28-61	--	.1	522	14	4	356	
31C1	Ss	P	11-29-61	--	.1	439	14	6	312	
31M1	Ss	P	11-27-61	--	.3	395	21	4	308	
32L1	Ss	P	11-29-61	--	5.0	478	18	6	356	
35P1	------	M?	11-29-61	52	1.0	581	14	4	348	
35R1	Sh	P?	11-29-61	51	1.0	449	14	4	264	
36L1	G	Pl	11-29-61	--	7.5	512	14	6	380	

Table 6.--Field chemical analyses of water from wells, Fountain County, Indiana--Cont.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
20/9W-14D1	Ss	P	11-29-61	54	0.1	322	43	6	292	
23A1	Ss	P	11-29-61	52	.1	532	12	24	300	
25K2	Ss?	P	11-29-61	51	.3	517	18	6	312	
35H2	Ss,Sh	P	11-29-61	--	3.0	366	46	18	268	
36J1	Cgl?	P	11-29-61	--	.3	327	73	12	312	
36K1	Ss	P	11-29-61	--	.1	420	15	4	332	
21/7W- 5K1	Ss	P	11-30-61	--	.1	400	60	8	352	
8H1	Ls	M	11-30-61	53	3.0	303	180	34	432	
10F1	Ss	P	11-30-61	51	.1	346	57	6	308	
14C1	Sh	M	11-30-61	53	.8	405	14	8	228	
18C1	Ss	M	11-30-61	52	.1	390	22	8	116	
18M1	Sh	M	12- 6-61	--	.5	322	20	4	156	
19J1	Ss	M	11-29-61	--	.1	361	82	18	360	
19R1	Ss	M	11-30-61	--	.1	351	80	78	396	
21H1	G	P	11-29-61	54	.1	337	29	6	264	
30H1	G	Pl	11-29-61	--	.1	307	71	10	316	
30H2	G,S	Pl	11-29-61	--	1.5	395	12	6	260	
30H3	Ss,Sh	M	11-29-61	--	1.3	483	11	16	260	
31M1	Ss	M	11-29-61	53	.1	322	34	6	240	
36E1	Ss	M	11-29-61	--	.1	327	42	4	264	
22/6W-29R1	Ls	M	11-30-61	50	.2	332	65	8	312	
32L1	Ss	P	11-30-61	--	---	420	65	18	388	

Table 7:--Records of springs, Fountain County, Indiana

Spring number: See text for well-numbering system.
Altitude: Altitude of land-surface datum from topographic map.
Water-bearing material: G, gravel.
Geologic age: Pl, Pleistocene.
Flow: e, estimated.
Use: N, none; P, public supply.
Field chemical analyses: In parts per million: water sample collected on date of measurement.

Spring	Owner	Altitude (feet)	Water-bearing material	Geologic age	Flow (gpm)	Date of measurement	Use	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium and magnesium)	Remarks
18/7W-24R1	Fountain County Highway Department	650	S,G	Pl	20e	10-26-61	P	54	3.0	508	12	6	356	
19/8W-17N1	J. I. Yerkes	585	S,G	Pl	3e	6- 7-61	N	52	.1	278	35	16	268	At contact with underlying sandstone.
21/7W- 5M1	City of Attica	600	S,G	Pl	25e	1-30-62	N	54	.1	449	70	18	388	At contact with underlying till; once used for city water supply.
21/7W-29C1	R. Harrison	605	S,G	Pl	1e	11-30-61	N	52	.1	537	43	10	300	Calcareous tuffa being deposited.
21/8W-24K1	K. Burlington	590	S,G	Pl	100e	11-27-61	N	47	.1	327	50	10	316	In gravel pit.

Table 8.--Field chemical analyses of water from streams, Fountain County, Ind.
(Results in parts per million)

Name	Location	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium and magnesium)	Remarks
			T. 18 N., R. 6 W.						
Mill Creek	NW¼NW¼ sec.30	10- 4-60	65	0.2	303	21	12	300	Sample taken at bridge on state highway.
			T. 18 N., R. 8 W.						
Do	SE¼NE¼ sec.28	10- 4-60	65	.2	278	33	14	260	Sample taken at bridge on county road.
			T. 18 N., R. 9 W.						
Coal Creek	NW¼SW¼ sec.36	9-13-61	77	.2	322	55	10	292	Sample taken at bridge on state highway.
			T. 19 N., R. 7 W.						
East Fork Coal Creek	SE¼NW¼ sec.12	9-13-61	77	.3	356	47	12	320	Do.
			T. 19 N., R. 8 W.						
Do	NW¼NE¼ sec.13	9-13-61	74	<.1	327	65	12	292	Sample taken at bridge on county road.
Graham Creek	NE¼SW¼ sec.29	9-13-61	74	.8	327	63	8	288	Sample taken at bridge on state highway.
			T. 20 N., R. 7 W.						
North Fork Coal Creek	NE¼NE¼ sec.15	9-13-61	76	.2	307	53	8	276	Sample taken at bridge on county road.
Do	NW¼NW¼ sec.19	9-13-61	77	.2	303	50	10	272	Do.

Table 8.--Field chemical analyses of water from streams, Fountain Co.,--Cont.

Name	Location	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium and magnesium)	Remarks
			T. 20 N., R. 9 W.						
Wabash River	NE¼NW¼ sec.35	9-13-61	80	0.3	273	70	18	260	Sample taken at bridge on federal highway.
			T. 21 N., R. 7 W.						
Big Shawnee Creek	SE¼SE¼ sec.13	9-13-61	76	.2	332	65	10	324	Sample taken at bridge on state highway.
			T. 21 N., R. 8 W.						
Do	NW¼SE¼ sec.23	9-13-61	75	.1	317	48	10	296	Sample taken at bridge on county road.
Bear Creek	NE¼SE¼ sec.32	9-13-61	72	.1	337	72	8	312	Do.
			T. 22 N., R. 7 W.						
Wabash River	NE¼SE¼ sec.23	9-13-61	78	.2	278	68	16	256	Do.

Table 9.--Water levels in observation well in Fountain County, Indiana
(In feet below land-surface datum)

Fountain 1. (19/7W-12F1). Merchants and Farmers Telephone Company. SE¼ NW¼ sec. 12, T. 19 N., R. 7 W. Drilled unused water-table well in sandstone, diameter 4 inches, depth 59 feet. Land-surface datum is about 705 feet above msl. Highest water level is 33.28 below lsd, March 7, 1950; lowest, 44.5 below lsd, Dec. 17, 1954. Records available 1944 to 1961.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1944		Feb. 7	42.33	Dec. 6	40.76	Oct. 22	41.10
		14	42.45	12	41.10	29	41.17
May 26	40.68	21	42.20	19	40.97	Nov. 5	41.29
31	40.68	Mar. 2	42.39	26	41.05	11	41.30
June 7	40.77	7	42.45			20	41.20
14	34.32	14	42.14	1946		26	41.30
21	37.75	20	42.17			Dec. 3	41.32
28	39.51	28	42.15	Jan. 1	40.26	10	41.35
July 5	40.14	Apr. 4	41.45	10	40.35	17	41.60
12	40.56	11	41.09	16	40.07	24	41.45
19	40.81	18	41.24	23	40.17	31	41.40
26	40.98	25	41.14	31	40.15		
Aug. 3	41.33	May 9	41.26	Feb. 6	40.35	1947	
9	41.50	17	40.85	13	40.37		
16	41.30	23	40.57	25	39.36	Jan. 7	41.50
23	41.76	31	40.44	Mar. 27	39.45	14	41.52
30	41.76	June 6	40.66	Apr. 4	39.68	23	41.50
Sept. 6	41.89	13	41.57	13	39.67	28	41.60
13	41.94	20	40.25	17	39.69	Feb. 4	41.62
21	42.09	26	39.96	May 6	39.50	11	41.73
27	42.12	July 4	40.07	8	39.44	18	41.66
Oct. 4	42.14	12	40.22	14	39.53	25	41.68
10	42.08	18	40.62	21	39.59	Mar. 5	41.86
17	42.09	24	40.55	28	39.23	12	41.85
25	42.11	Aug. 4	40.82	June 4	39.33	18	41.85
Nov. 1	42.14	9	40.87	11	39.38	26	41.88
8	42.03	15	40.50	18	39.15	Apr. 1	41.82
15	42.07	21	40.09	25	37.49	9	41.89
24	42.19	30	40.78	July 2	38.15	15	41.72
29	42.09	Sept. 7	41.00	11	38.28	22	41.70
Dec. 6	42.14	12	41.13	16	38.75	May 1	39.75
20	42.06	19	41.14	23	38.94	6	40.45
27	42.06	27	41.21	30	39.20	13	40.27
		Oct. 3	40.88	Aug. 7	39.49	21	40.67
1945		10	39.95	14	39.94	27	40.14
		17	40.23	20	40.04	June 3	40.24
Jan. 4	42.31	24	40.47	29	40.30	10	39.71
10	42.23	31	40.55	Sept. 3	40.46	17	39.64
17	42.34	Nov. 7	40.74	10	40.50	25	39.82
24	42.29	15	40.95	17	40.74	July 2	40.04
31	42.27	21	40.42	Oct. 1	41.00	8	40.09
		28	40.84	8	40.95	16	40.25
				15	41.15	24	40.68

Table 9.--Water levels in observation well in Fountain County, Ind.--Cont.

Fountain 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1947		May 25	38.74	Apr. 26	38.82	Mar. 14	34.89
		June 1	39.05	May 3	38.87	21	34.98
July 30	40.71	8	39.04	10	38.90	28	35.06
Aug. 6	40.72	16	39.72	17	38.18	Apr. 6	34.75
12	40.82	23	39.75	24	39.24	12	34.26
19	41.02	29	38.72	June 1	38.60	18	34.26
28	41.24	July 6	39.28	9	38.85	25	34.55
Sept. 2	41.36	13	38.85	14	38.75	May 3	34.98
10	41.49	20	39.23	22	39.12	9	35.22
16	41.65	27	38.72	28	39.22	17	36.00
23	41.37	Aug. 3	39.42	July 5	39.42	23	36.27
30	41.32	10	39.83	12	39.55	31	36.62
Oct. 8	41.44	17	39.90	20	39.80	June 6	36.58
15	41.70	24	40.10	26	39.45	13	36.50
21	41.79	Sept. 1	40.44	Aug. 2	39.78	21	33.40
28	41.82	7	40.37	11	39.88	28	36.40
Nov. 4	41.78	21	40.20	17	40.00	July 5	36.42
11	41.79	28	40.92	23	40.28	11	36.83
18	41.75	Oct. 5	40.95	30	40.20	18	37.22
25	41.74	13	41.18	Sept. 8	40.42	26	37.30
Dec. 2	41.75	19	41.08	13	40.31	Aug. 1	37.75
9	41.71	26	40.86	20	40.55	9	38.09
16	41.84	Nov. 2	40.72	27	40.45	15	38.34
23	41.87	10	40.85	Oct. 4	40.70	22	38.76
31	41.95	16	40.54	11	39.05	29	38.95
		23	40.28	18	39.55	Sept. 5	39.10
1948		30	41.07	25	39.45	12	38.90
		Dec. 8	41.20	Nov. 1	39.25	19	39.12
Jan. 6	41.76	15	41.06	8	39.55	26	39.02
13	41.72	21	41.32	16	39.85	Oct. 3	38.88
21	41.55	28	41.17	22	39.82	11	38.72
28	41.60			29	39.76	17	38.99
Feb. 3	41.92	1949		Dec. 7	40.18	24	38.94
10	42.02			20	40.09	31	39.06
17	41.88	Jan. 4	41.09	24	40.37	Nov. 8	39.08
24	41.99	12	40.48			14	39.29
Mar. 2	41.72	25	35.75	1950		21	39.25
10	41.92	Feb. 1	36.80			28	39.32
16	41.90	8	37.49	Jan. 2	39.35	Dec. 5	39.29
25	41.29	15	38.17	10	36.40	12	38.97
Apr. 1	40.71	22	37.86	17	35.42	19	38.94
8	39.50	Mar. 1	37.37	24	34.90	26	39.37
14	35.40	8	38.16	31	37.35		
21	40.60	15	38.50	Feb. 7	35.52		
27	38.71	22	38.30	15	35.05		
May 5	39.06	29	38.86	22	36.30		
12	38.88	Apr. 12	38.40	Mar. 1	34.20		
18	38.72	19	38.50	7	33.28		

Table 9.--Water levels in observation well in Fountain County, Ind.--Cont.

Fountain 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1951		Nov. 20	40.15	Sept. 30	40.52	Oct. 2	41.68
		27	40.12	Oct. 7	40.63	9	41.69
Jan. 2	39.00	Dec. 4	40.19	14	40.72	16	41.70
9	39.19	11	40.10	21	40.73	23	41.68
16	39.45	18	40.15	28	40.71	30	41.61
24	39.37	26	40.57	Nov. 4	40.52	Nov. 4	41.64
30	39.55			11	40.72	6	41.70
Feb. 7	39.73	1952		18	40.81	13	41.50
13	39.71			25	40.50	20	41.40
20	39.32	Jan. 2	40.23	Dec. 3	40.82	27	41.30
27	38.72	8	39.73	9	40.72	Dec. 4	41.40
Mar. 6	38.05	15	40.16	16	40.85	11	41.30
13	37.76	22	39.90	23	40.83	18	41.70
20	38.39	29	40.20	30	40.85	25	41.70
27	38.15	Feb. 5	39.87				
Apr. 3	38.25	12	39.42	1953		1954	
10	38.50	19	39.22				
17	38.54	26	39.32	Jan. 6	40.90	Jan. 1	42.61
24	38.30	Mar. 4	39.41	13	40.96	8	40.90
May 1	38.48	11	39.73	20	40.98	15	41.70
8	38.53	19	39.18	27	40.96	22	41.90
15	38.55	25	38.85	Feb. 3	41.06	29	40.80
22	38.09	Apr. 1	38.81	10	41.17	Feb. 5	41.70
29	38.40	8	38.88	17	41.26	12	41.70
June 5	38.48	16	38.82	24	41.10	19	42.62
12	38.46	22	38.34	Mar. 4	41.12	26	41.70
18	38.53	29	38.36	10	41.02	Mar. 5	41.70
26	38.53	May 6	38.39	17	40.92	12	42.63
July 3	39.02	13	38.52	24	40.55	19	42.64
10	39.10	20	38.42	31	39.20	26	42.63
17	38.55	June 3	38.48	Apr. 8	40.08	Apr. 2	42.64
24	38.78	10	38.50	14	40.14	9	42.65
31	38.60	17	38.50	21	40.12	16	41.70
Aug. 7	38.52	25	38.22	May 5	40.12	23	42.61
14	39.29	July 1	38.24	13	40.08	30	41.70
21	39.46	8	38.18	26	40.27	May 7	41.70
28	39.40	9	38.26	June 2	40.35	14	41.70
Sept. 4	39.80	15	38.22	9	40.49	21	42.61
11	39.90	22	38.40	17	40.45	28	42.63
18	39.89	29	38.40	23	40.72	June 4	42.64
25	39.95	Aug. 5	39.28	July 13	40.65	11	42.65
Oct. 2	39.89	12	39.46	21	40.64	18	42.66
9	40.13	19	39.56	28	40.66	25	42.62
16	40.15	26	39.75	Aug. 28	41.25	July 2	42.65
23	39.99	Sept. 2	39.90	Sept. 4	42.25	16	42.50
31	40.35	9	40.15	11	41.25	23	42.67
Nov. 6	40.15	17	40.05	18	41.70	30	42.69
13	39.92	23	40.44	25	41.68	Aug. 6	42.69

Table 9.--Water levels in observation well in Fountain County, Ind.--Cont.

Fountain 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1954		Aug. 19	42.10	July 27	41.00	May 31	41.6
		26	42.10	Aug. 3	41.20	June 7	40.8
Aug. 13	43.60	Sept. 2	42.20	10	41.10	14	39.7
20	41.70	9	42.30	17	41.10	21	39.1
27	42.70	16	42.55	24	41.10	24	39.08
Sept. 3	42.80	23	42.40	31	41.20	28	38.9
10	42.80	30	42.50	Sept. 7	41.20	July 5	37.7
17	42.90	Oct. 7	42.70	14	41.70	19	37.7
24	42.90	14	42.70	21	41.80	26	37.7
Oct. 1	42.80	21	42.30	28	41.80	Aug. 2	38.5
8	42.80	28	42.40	Oct. 5	41.90	16	43.3
14	42.70	Nov. 4	42.30	12	41.90	23	39.7
29	42.50	11	42.20	19	41.90	30	39.9
Nov. 5	42.50	18	42.20	26	41.90	Sept. 6	40.0
12	42.60	25	42.20	Nov. 2	41.80	13	40.2
19	41.70	Dec. 2	42.30	9	41.80	20	40.2
26	42.50	9	42.30	16	41.90	27	40.1
Dec. 3	42.40	16	42.30	23	41.90	Oct. 4	40.1
10	42.40	24	42.30	30	41.70	12	39.9
17	44.50	30	42.40	Dec. 7	41.70	18	41.0
24	42.30			14	41.70	25	39.3
31	42.20	1956		21	41.80	Nov. 1	39.3
				28	41.70	8	39.8
1955		Jan. 6	41.90			15	39.8
		13	42.00	1957		22	41.3
Jan. 7	41.70	20	42.40			29	41.3
14	41.60	27	42.10	Jan. 4	41.7	Dec. 6	41.2
21	41.50	Feb. 2	42.10	11	41.6	13	41.2
28	41.50	10	41.90	18	41.7	20	41.0
Mar. 11	42.50	17	41.80	25	41.7	27	41.0
18	42.40	24	41.80	Feb. 1	41.6		
25	42.30	Mar. 2	41.80	8	41.7	1958	
Apr. 1	42.30	9	41.80	15	41.8		
22	42.45	16	41.70	22	41.7	Jan. 3	41.0
29	42.20	23	41.70	Mar. 1	41.8	10	40.2
May 6	41.70	30	41.70	8	41.8	17	40.4
13	41.70	Apr. 6	41.70	13	41.7	24	40.3
20	41.70	13	41.90	15	41.7	31	40.3
27	40.70	May 4	41.80	22	41.7	Feb. 7	40.2
June 3	41.70	11	41.80	29	41.7	14	40.0
10	41.70	18	41.90	Apr. 5	41.6	21	40.0
17	42.20	25	41.80	13	41.6	28	40.1
24	41.70	June 1	41.70	19	41.6	Mar. 7	40.4
July 15	40.70	8	41.60	26	41.2	14	40.2
22	40.70	15	41.70	May 3	41.6	21	40.2
29	41.70	22	41.00	10	41.7	28	41.5
Aug. 5	41.90	July 13	41.00	17	41.7	Apr. 4	42.7
12	42.00	20	40.09	24	41.6	11	41.3

Table 9.--Water levels in observation well in Fountain County, Ind.--Cont.

Fountain 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1958		Feb. 20	39.5	Jan. 12	41.11	Dec. 6	41.29
		27	38.2	19	41.30	13	41.36
Apr. 18	41.2	Mar. 6	38.1	26	40.70	20	41.28
25	41.1	13	38.1	Feb. 2	41.30	27	41.48
May 2	41.1	20	38.1	9	41.10		
8	41.5	27	37.8	16	40.76	1961	
16	41.5	Apr. 3	37.8	23	41.08		
30	41.5	10	37.9	Mar. 1	41.30	Jan. 3	41.45
June 6	41.4	17	37.9	8	41.10	10	41.30
13	41.2	24	37.7	15	41.30	17	41.30
20	40.0	May 1	37.7	22	41.08	24	41.50
27	39.7	8	37.9	29	41.08	31	41.45
July 4	39.3	15	38.1	Apr. 5	41.09	Feb. 7	41.40
11	38.7	22	38.5	12	41.12	14	41.60
18	36.4	29	38.5	19	41.08	21	41.50
25	34.1	June 5	38.7	26	41.09	28	41.60
Aug. 9	34.4	12	38.7	May 3	41.08	Mar. 7	41.45
15	35.1	19	38.3	10	40.80	14	41.40
22	34.9	26	38.3	17	40.68	21	41.35
29	35.7	July 3	38.5	24	40.48	28	41.20
Sept. 5	36.3	10	39.5	31	40.36	Apr. 4	41.35
12	36.5	17	39.6	June 7	40.70	11	41.10
19	36.7	24	39.7	14	40.60	18	41.00
26	36.7	31	40.0	21	40.50	25	40.80
Oct. 3	37.2	Aug. 7	40.0	28	39.70	May 2	40.70
10	37.7	14	40.2	July 5	39.80	9	40.59
17	37.8	21	40.2	12	39.70	16	40.30
24	38.3	28	40.4	19	39.80	23	40.40
31	38.7	Sept. 4	40.5	26	39.00	30	40.30
Nov. 7	39.2	11	41.0	Aug. 2	38.80	June 6	41.05
14	39.7	18	40.9	9	38.90	13	39.50
21	38.7	25	41.1	16	38.80	20	39.70
28	38.7	Oct. 2	41.1	23	39.00	27	40.50
Dec. 5	38.6	9	41.4	30	39.40	July 4	39.20
12	38.6	16	41.2	Sept. 6	39.50	11	40.10
19	38.7	23	41.2	13	39.80	18	39.10
26	38.9	30	41.3	20	40.30	25	39.30
		Nov. 7	41.3	27	40.50	Aug. 1	39.60
1959		Dec. 1	41.01	Oct. 4	40.75	8	39.90
		8	41.06	11	40.90	15	40.10
Jan. 2	39.1	15	41.05	18	41.10	22	40.20
9	39.5	22	41.24	25	41.08	29	40.50
16	39.7	29	41.11	Nov. 1	41.18	Sept. 5	40.50
23	39.7			8	41.28	12	40.70
30	39.5	1960		15	41.22	19	40.90
Feb. 6	39.7			22	41.25	26	41.00
13	39.5	Jan. 5	41.10	29	41.30	Oct. 3	41.10

Table 9.--Water levels in observation well in Fountain County, Ind.--Cont.

Fountain 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1961		Oct. 24	41.30	Nov. 7	41.10	Dec. 5	40.70
		31	41.00	14	41.00	12	40.50
Oct. 10	41.20			21	41.10	19	40.60
17	41.10			28	41.10	26	40.50

PUBLICATIONS OF COOPERATIVE GROUND-WATER PROGRAM

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INDEX

STATE OF INDIANA
DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EXPLANATION

B1
Water well

F1
Observation well

R1
Spring

H1
Oil well, test hole, or hole drilled for purposes other than water supply.

P1
Well for which log is listed in table 5.

C2
Well or spring for which field chemical analysis is listed in table 6 or 7.

Stream—water sampling site—field chemical analysis of water in table 8.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

SECTION LETTER SYMBOLS IN WELL NUMBERING SYSTEM

MAP OF FOUNTAIN COUNTY, INDIANA, SHOWING LOCATION OF WELLS AND SPRINGS

0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 FEET

BY F.A. WATKINS, JR. AND D.G. JORDAN
1962

BASE MODIFIED FROM INDIANA DEPARTMENT OF CONSERVATION GEOLOGICAL SURVEY, BASE MAP OF FOUNTAIN COUNTY, NO. 23 SEPTEMBER 25, 1953

STATE OF INDIANA
DEPARTMENT OF CONSERVATION
DIVISION OF, WATER RESOURCES

PREPARED BY
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EXPLANATION

Production from sand and gravel

Water from sand and gravel of Pleistocene age overlain by till or interbedded with till. Well depths range from 70 to 160 feet. Yields more than adequate for domestic and stock use. Areas of municipal production and relatively large yields or in which large yields may be possible.

Water from sand and gravel lenses and stringers of Pleistocene age interbedded with till or overlain by Recent alluvium. Well depths range from 30 to 190 feet. Yields more than adequate for domestic and stock use. Some wells cased through the sand and gravel and tap the underlying bedrock.

Production from bedrock

Water predominately from sandstone of Pennsylvanian age. Well depths range from 40 to 300 feet. Yields generally adequate for domestic and stock use.

Water from sandstone, shale, and limestone of Mississippian age. Well depths range from 30 to 400 feet. Yields generally adequate for domestic and stock use.

Boundary approximate

Boundary uncertain

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

MAP OF FOUNTAIN COUNTY, INDIANA, SHOWING AVAILABILITY OF GROUND WATER

BASE MODIFIED FROM INDIANA DEPARTMENT OF CONSERVATION GEOLOGICAL SURVEY, BASE MAP OF FOUNTAIN COUNTY, NO. 23 SEPTEMBER 25, 1953

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY F.A. WATKINS, JR. AND D.G. JORDAN
1962

STATE OF INDIANA
DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

EXPLANATION

Hardness 0 to 60 ppm

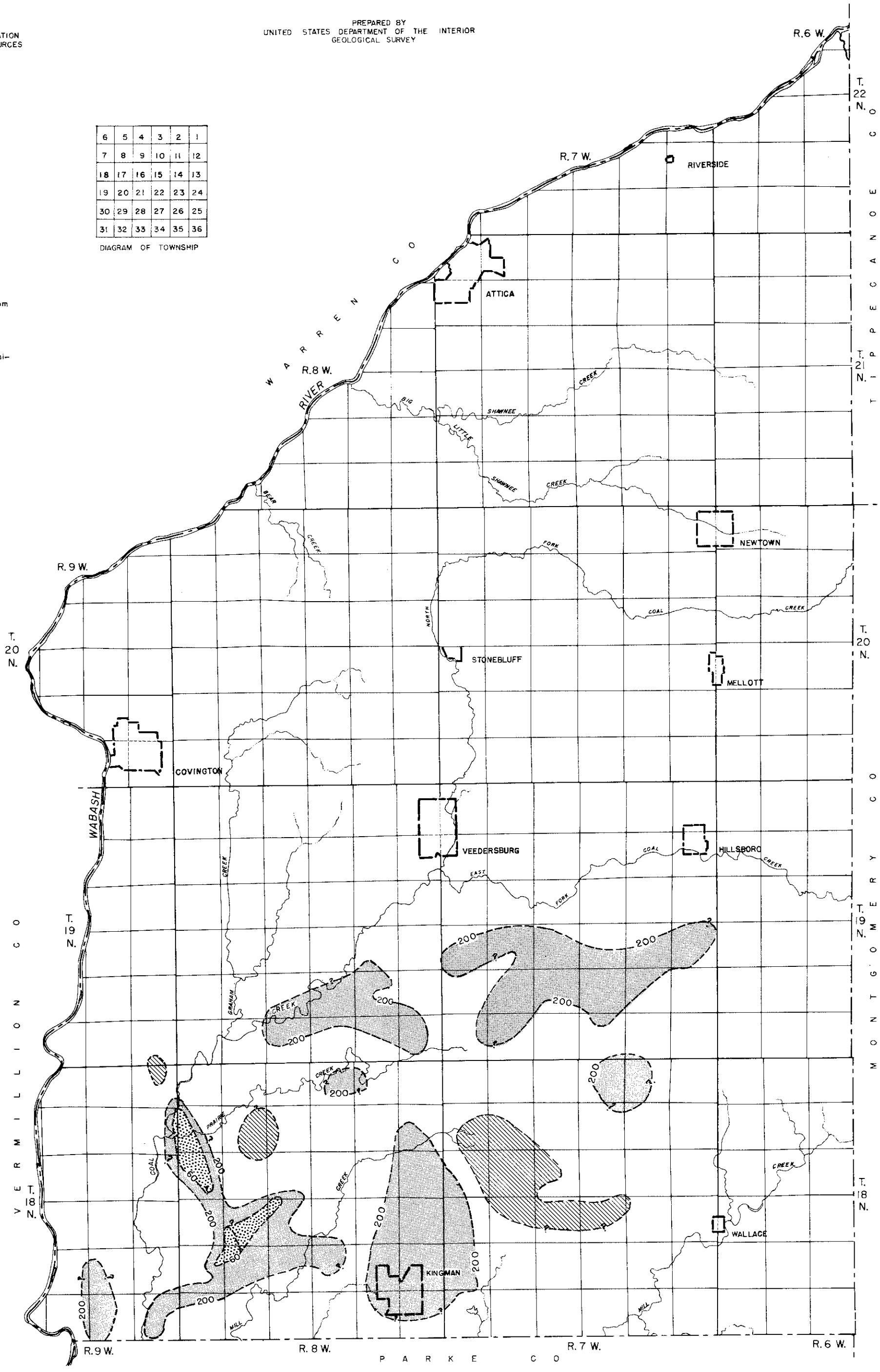
Hardness 61 to 200 ppm

Hardness more than 200 ppm

Area of sulfate content in excess of 250 ppm at minimum depth of 55 feet

Boundary approximate

Boundary uncertain



MAP OF FOUNTAIN COUNTY, INDIANA, SHOWING

HARDNESS OF GROUND WATER

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY E.A. WATKINS, JR. AND D.G. JORDAN
1962

BASE MODIFIED FROM INDIANA DEPARTMENT OF CONSERVATION GEOLOGICAL SURVEY, BASE MAP OF FOUNTAIN COUNTY, NO. 23 SEPTEMBER 25, 1953