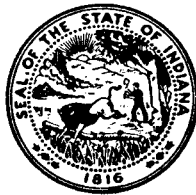


STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER

BULLETIN NO. 28

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

1965

INDIANA DEPARTMENT OF CONSERVATION

John E. Mitchell, Director

BULLETIN NO. 28

OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Fountain County

BY

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

ENGINEERS, U. S. GEOLOGICAL SURVEY

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

CONTENTS

	Page
Abstract-----	1
Introduction-----	2
Purpose and scope-----	2
Location and areal extent-----	2
Well-numbering system-----	4
Acknowledgments-----	5
Data collection and processing-----	5
General geology and sources of ground water-----	6
Confined and unconfined conditions-----	9
Types of wells-----	9
Summary-----	10
Records-----	11
Glossary of drillers' terms-----	12
Selected bibliography-----	12
Publications of the cooperative ground-water program-----	89
Index-----	91

ILLUSTRATIONS

(All plates in pocket)

	Page
Plate 1. Map of Fountain County, Ind. showing location of wells and springs-----	
2. Map of Fountain County showing availability of ground water-----	
3. Map of Fountain County showing hardness of ground water-----	
Figure 1. Map of Indiana showing area covered by this report, areas under investigation, and areas covered by reports published under the cooperative program-----	3
2. Sketch showing well-numbering system-----	4

TABLES

	Page
Table 1. Comparison of quality of ground water by source in Fountain County, Indiana-----	8
2. Significance of selected dissolved mineral constituents and properties of ground water-----	8
3. Grain-size and equivalent screen openings-----	10
4. Records of wells in Fountain County-----	14
5. Selected well logs in Fountain County-----	23
6. Field chemical analyses of water from wells in Fountain County-----	73
7. Records of springs in Fountain County-----	79
8. Field chemical analyses of water from streams in Fountain County-----	80
9. Water levels in observation well in Fountain County-----	82

GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Fountain County

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.

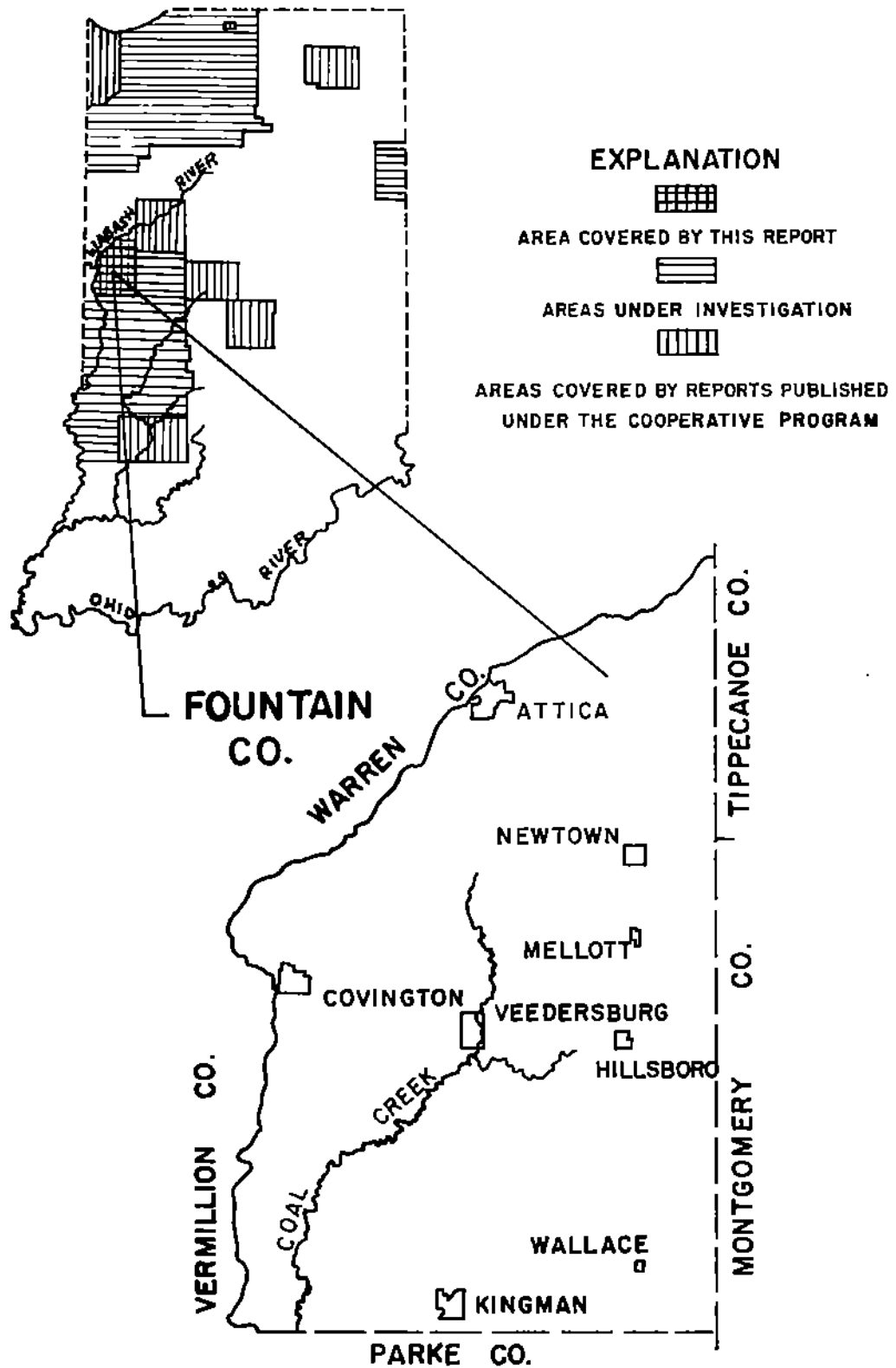


FIGURE 1. -- MAP OF INDIANA SHOWING AREA COVERED BY THIS REPORT, AREAS UNDER INVESTIGATION, AND AREAS COVERED BY REPORTS PUBLISHED UNDER THE COOPERATIVE PROGRAM.

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 SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 20 N., R. 7 W.

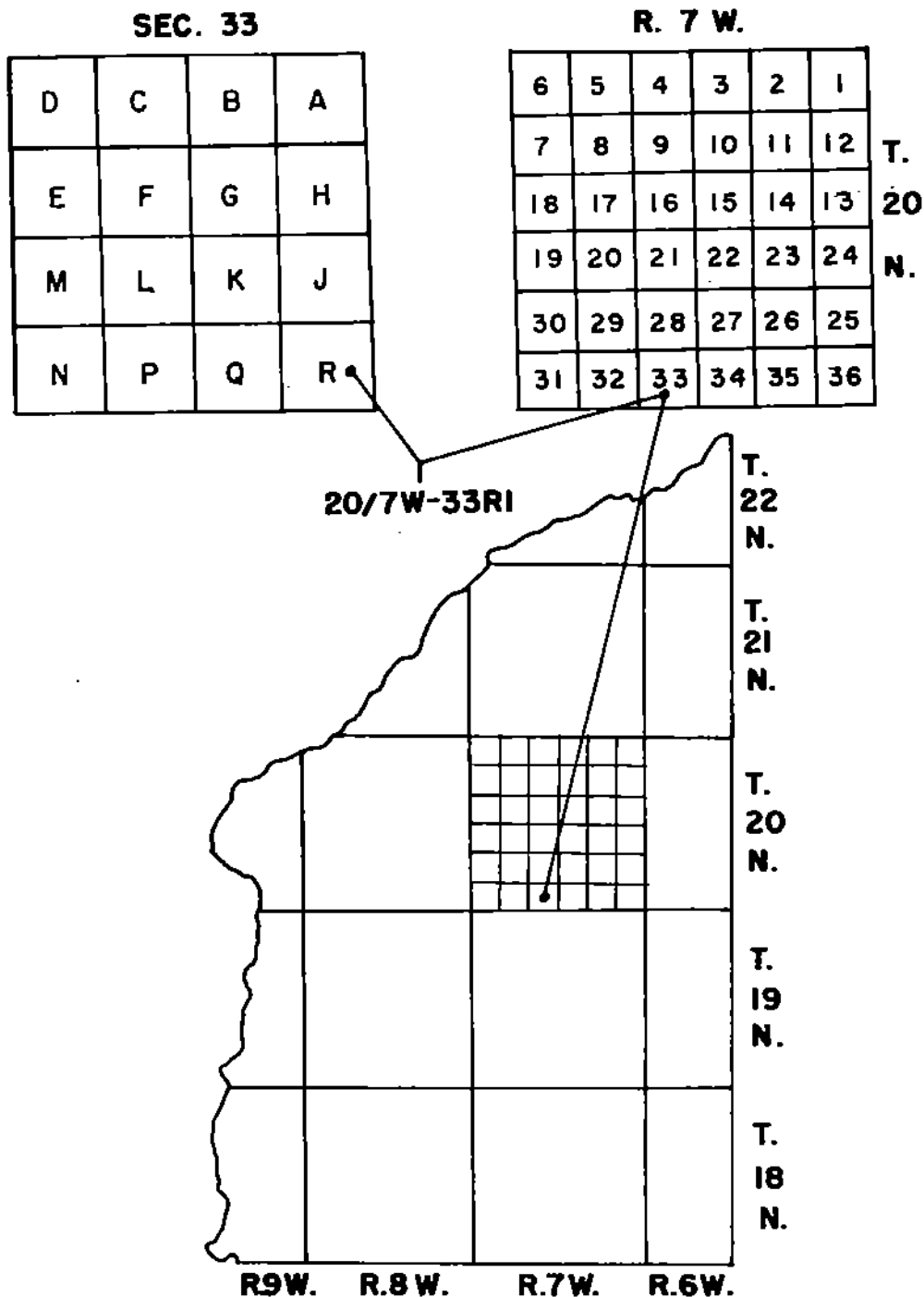


FIGURE 2 .-- SKETCH SHOWING WELL-NUMBERING SYSTEM

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, Veederburg, 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

Pleistocene aquifers			
	Sulfate ppm	Chloride ppm	Hardness ppm
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.

SELECTED BIBLIOGRAPHY

- Ashley, G. H., 1899, The coal deposits of Indiana: Indiana Dept. Geology and Nat. Resources 23rd Ann. Rept., 1,573 p.
- Blatchley, W. S., 1895, A preliminary report on the clays and clay industries of the coal-bearing counties of Indiana: Indiana Dept. Geology and Nat. Resources 20th Ann. Rept., p. 23-185.
- Hem, J. D., 1959, Study and interpretation of the chemical characteristics of natural water: U. S. Geol. Survey Water-Supply Paper 1473, 269 p.
- Hopkins, T. C., 1895, The carboniferous sandstones of western Indiana: Indiana Dept. Geology and Nat. Resources 20th Ann. Rept., p. 186-327.
- Hutchison, H. C., 1961, Distribution, structure, and mined areas of coals in Fountain and Warren Counties and the northern most part of Vermillion County, Indiana: Indiana Dept. Conserv., Geol. Survey Preliminary Coal Map No. 9.
- Lamar, W. L., 1942, Industrial quality of public water supplies in Georgia 1940: U. S. Geol. Survey Water-Supply Paper 912, 83 p.
- Patton, J. B., 1956, Geologic map of Indiana: Indiana Dept. Conserv., Geol. Survey Atlas of Mineral Resources Map 9.

Selected Bibliography--Cont.

Rosenshein, J. S., and Cosner, O. J., 1956, Ground-water resources of Tippecanoe County, Indiana: Appendix, basic data: Indiana Dept. Conserv., Div. Water Resources Bull. 8, 67 p.

Rosenshein, J. S., and Hunn, J. D., 1963, Ground-water resources of Northwestern Indiana, Preliminary report: Marshall County: Indiana Dept. Conserv., Div. Water Resources. Bull. 19.

Stockdale, P. B., 1931, The Borden (knobstone) rocks of Southern Indiana: Indiana Dept. Conserv., Pub. 98, 330 p.

U. S. Geological Survey, issued annually, Water levels and artesian pressure in observation wells in the United States, part 1, Northwestern States: U. S. Geol. Survey Water-Supply Paper 1016, 1023, 1071, 1096, 1126, 1156, 1165, 1191, 1221, 1265, 1321, and 1404.

U. S. Public Health Service, 1962, Drinking Water Standards: Federal Register, Mar. 6, p. 2152-2155.

Wayne, W. J., 1958, Glacial geology of Indiana: Indiana Dept. Conserv., Geol. Survey Atlas of Mineral Resources Map 10.

Wentworth, C. K., 1922, A scale of grade and class terms for clastic sediments: Jour. Geol., Vol. 30, p. 377-392.

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

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					Yield (gpm)	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence		
18/7w-481	M. Blue	Swisher & Swank	1936	760	Dr	52	4	44	Oh		6	Sh	M	C	20	S Hardpan to 44 ft
491	A. Packer	do	1-10-58	750	Dr	100	4	74	Oh		7	Sb	M	C	18	L, A; Dd 5 ft bailing at 10 gpm
501	V. Koller	Warrick & Youngblood	1952	745	Dr	81	4	74	Oh		7	Sb	M	C	10	L, A; Dd 5 ft bailing at 10 gpm
7X1	R. Corak	M. Crabb	12-1-52	700	Dr	90	4	78	Oh		2	Ls	M	C	0	D, S Clay 0 to 26 ft; Reported Dd 0 ft after 1 hr pump-
7Q1	G. Livengood	Holt Bros.	1-10-61	740	Dr	41	4	26	Oh		15	Ls	M	C	15	D, S Clay 0 to 26 ft; Reported Dd 0 ft after 1 hr pump-
8A1	A. Rodgers	M. Crabb	5-53	745	Dr	79	4	52	Oh		24	Sh	M	C	20	D, S Clay 0 to 26 ft; Reported Dd 0 ft after 1 hr pump-
8A1	D. Flint	Swisher & Swank	12-12-58	730	Dr	62	4	31	Oh		31	Sh	M	C	11	A; Blue clay to 52 ft
18P1	J. Cloro	do	12-12-58	720	Dr	104	4	79	Oh		25	Ss	M?	C	11	A; Hardpan to 31 ft
18Q1	W. Gray	M. Crabb	4-10-48	710	Dr	80	4	80	Oh		2	G	P1	C	30	Sd, gravel, and clay to 79 ft; Ashby (1898)
18A1	R. Livengood	do	1-54	735	Dr	31	4	26	Oh		5	Ls	M	C	10	A; Blue clay to 78 ft
18C1	I. A. Livengood	do	12-53	730	Dr	112	4	88	Oh		26	Ls	M	C	30	A; Blue clay to 26 ft
18K1	F. Gray	do	1946	725	Dr	54	4	31	Oh		23	Ls	M	C	15	A; Blue clay to 31 ft
18F1	R. Clauso	do	1-14-53	710	Dr	187	4	165	Oh		22	Ls?	M?	C	25	L, A; Blue clay to 31 ft
18E1	E. Somers	do	4-84	690	Dr	150	4	150	Oh		1	G	P1	C	12	L, A; Blue clay to 150 ft
18M1	R. Moyers	do	4-21-50	700	Dr	188	4	188	Oh		1	G	P1	C	25	L, A; Blue clay to 150 ft
18N2	Harrison & Koller	do	1952	700	Dr	147	4	147	Oh		1	G	P1	C	15	L, A; Blue clay to 150 ft
18K2	K. Adkine	do	10-51	700	Dr	147	4	147	Oh		1	G	P1	C	12	L, A; Blue clay to 150 ft
18M4	B. Ranch	do	3-24-50	700	Dr	84	4	55	Oh		3	G	P1	C	30	Lam, A
18M5	E. Fonger	do	4-28-48	700	Dr	64	4	84	Oh		3	G	P1	C	30	Lam, A
18M6	O. Sowers	do	1934	700	Dr	132	4	132	Oh		1	G	P1	C	25	Lam, A
18M7	I. Koller	do	9-53	690	Dr	117	4	117	Oh		1	G	P1	C	10	Lam, A
18M8	M. Phillipott	Holt Bros.	1-4-61	700	Dr	148	4	148	S		3	G	P1	C	30	Lam, A
20A1	W. Gray	M. Crabb	3-21-57	710	Dr	102	4	125	Oh		37	Sh	M?	C	25	Lam, A
20D1	R. Livengood	Swisher & Swank	5-12-61	715	Dr	150	4	130	Oh		20	Sh	M	C	31	Lam, A
28Q1	C. Payton	M. Crabb	7-24-50	750	Dr	55	4	55	Oh		3	Cg?	P1	C	10	Lam, A
29H1	E. Smith	do	770	Dr	108			105			3	Sb?	P?			Drift, gravel and clay to 105 ft; Ashby (1898)
31C1	L. Moyers	M. Crabb	1-7-58	720	Dr	102	4	55	Oh		52	Ls	M?	C	40	Lam, A; Water from sand-filled crevice at 102 ft
31L1	E. Cunningham	W. L. Laughlin	6-49	710	Dr	153	6	98	Oh		28	Ls	M	C	43	L, A; Dd 40 ft pumping at 10 gpm
31M1	do	do	1949	720	Dr	140	6	60	Oh		28	Ls	M	C	43	L, A; Dd 40 ft pumping at 10 gpm
32L1	D. M. Clark	M. Crabb	1953	730	Dr	180	4	147	Oh		33	Sh	M	C	30	Lam, A
32P1	do	do	8-30-48	730	Dr	144	4	124	Oh		30	Sh	M	C	45	L, A; Clay to 124 ft
18/7w-301	C. Summers	do	4-1-48	735	Dr	194	4	184	Oh		2	G	P1	C	35	L, A; Clay to 124 ft

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, 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: P1, 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; Dr, destroyed; I, industrial; M, not used; O, observation; Og, oil or gas; P, public supply; S, stock; T, test.
 Remarks: A, field chemical analysis 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.

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					Yield (gpm)	Remarks	
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence			Water level (feet)
18/8W-14N1	F. Baker	Swisher & Swank	6-28-58	850	Dr	87	4	---	Oh	---	---	---	---	---	---	---	---
18P1	L. Maris	H. J. Brenner	11-4-58	845	Dr	143	4	50	Oh	---	---	---	---	---	---	---	---
17A1	C. Crandor	M. Crabb	5-35	830	Dr	38	4	30	Oh	---	---	---	---	---	---	---	---
18D1	D. Six	Swisher & Swank	8-57	885	Dr	130	4	130	S	---	---	---	---	---	---	---	---
18P1	B. Starkoy	M. Crabb	6-28-48	595	Dr	182	4	64	Oh	---	---	---	---	---	---	---	---
19L1	Z. Douglas	---do---	600	Dr	74	4	84	Oh	---	---	---	---	---	---	---	---	---
19H1	R. Nodorex	Swisher & Swank	1937	830	Dr	143	4	93	Oh	---	---	---	---	---	---	---	---
20A1	Cates Grade School	M. Crabb	6-14-48	840	Dr	80	4	60	Oh	---	---	---	---	---	---	---	---
20A2	---do---	Swisher & Swank	2-61	840	Dr	202	4	70	Oh	---	---	---	---	---	---	---	---
20R1	M. Cates	M. Crabb	1947	855	Dr	120	4	109	Oh	---	---	---	---	---	---	---	---
20R2	---do---	---do---	5-54	855	Dr	182	4	125	Oh	---	---	---	---	---	---	---	---
21D1	S. Johnson	---do---	4-1-46	840	Dr	120	4	69	Oh	---	---	---	---	---	---	---	---
21K1	R. Nodorex	Swisher & Swank	8-14-57	850	Dr	120	4	---	Oh	---	---	---	---	---	---	---	---
23R1	Town of Kingman	A. B. Stiles	11-53	860	Dr	154	8	154	S	---	---	---	---	---	---	---	---
24Q1	J. Fabert	M. Crabb	---	885	Dr	140	4	140	Oh	---	---	---	---	---	---	---	---
24Q2	Town of Kingman	Southland Drilling Co.	10-48	865	Dr	129	8	129	S	---	---	---	---	---	---	---	---
25C1	---do---	M. Crabb	2-30	890	Dr	184	4	---	---	---	---	---	---	---	---	---	---
25D1	---do---	---do---	2-50	890	Dr	125	4	---	---	---	---	---	---	---	---	---	---
25E1	---do---	---do---	2-50	880	Dr	138	4	---	---	---	---	---	---	---	---	---	---
25L1	---do---	---do---	1-50	890	Dr	108	4	---	---	---	---	---	---	---	---	---	---
25L2	---do---	---do---	1-50	890	Dr	148	4	---	---	---	---	---	---	---	---	---	---
25P1	C. Davis	---do---	2-53	700	Dr	210	4	182	Oh	---	---	---	---	---	---	---	---
26D1	J. L. Sollars	Swisher & Swank	---	870	Dr	157	4	157	S	---	---	---	---	---	---	---	---
26P1	W. Mann	---do---	885	Dr	130	4	130	Oh	---	---	---	---	---	---	---	---	---
27L1	F. Johnson	M. Crabb	1947	875	Dr	168	4	101	Oh	---	---	---	---	---	---	---	---
28B1	B. Gritton	---do---	2-54	835	Dr	130	4	54	Oh	---	---	---	---	---	---	---	---
29D1	C. Graves	---do---	8-24-46	830	Dr	163	4	115	Oh	---	---	---	---	---	---	---	---
29K1	E. Clarkston	---do---	8-B-46	840	Dr	204	4	94	Oh	---	---	---	---	---	---	---	---
31N1	J. Coleman	W. L. Laughlin	7-54	805	Dr	101	6	50	Oh	---	---	---	---	---	---	---	---
32C1	J. Clarkston	M. Crabb	4-54	825	Dr	144	4	106	Oh	---	---	---	---	---	---	---	---
32J1	J. A. Posine	W. L. Laughlin	4-2-48	825	Dr	170	6	153	Oh	---	---	---	---	---	---	---	---
33H1	B. Lewis	---do---	8-34	835	Dr	195	6	135	Oh	---	---	---	---	---	---	---	---
34B1	H. Radcliff	M. Crabb	9-57	875	Dr	100	4	100	P	---	---	---	---	---	---	---	---
34L1	G. Myers	H. J. Brenner	7-22-59	865	Dr	187	4	162	Oh	---	---	---	---	---	---	---	---
36A1	D. Radcliff	M. Crabb	8-48	710	Dr	100	4	88	Oh	---	---	---	---	---	---	---	---
36B1	Town of Kingman	---do---	2-50	710	Dr	142	4	---	---	---	---	---	---	---	---	---	---
36C1	---do---	---do---	1-50	685	Dr	150	4	56.5	---	---	---	---	---	---	---	---	---
36D1	T. Johnson	---do---	1952	700	Dr	163	4	148	Oh	---	---	---	---	---	---	---	---
36E1	M. Crabb	---do---	1-52	700	Dr	192	4	142	Oh	---	---	---	---	---	---	---	---
36F1	H. Crabb	---do---	7-46	700	Dr	150	4	150	S	---	---	---	---	---	---	---	---
36G1	Harris & Grubb	---do---	---	700	Dr	150	4	145	S	---	---	---	---	---	---	---	---
36H1	Warrick & Youngblood	---do---	1958	820	Dr	136	4	96	Oh	---	---	---	---	---	---	---	---

18/9W-1G2	J. Huston	H. J. Bronner	3-28-60	635	Dr	105	4	128	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	4-20-58	370	Dr	135	4	42	Oh	97	38	Sa	P	C	40	1.5	D	L, A
2L1	P. I. Coleman	Swisher & Swank	8-7-37	530	Dr	71	4	71	Oh	68	U	S, G	Pl	C	---	---	D	Shop screen, 3-in dia, 1/8-in gauze opening
11G1	West Liberty Church	M. Crabb	12-30	530	Dr	80	4	90	Oh	90	---	G	Pl	C	25	---	P	Lam, A
11C2	F. Caros	Warrick & Youngblood	1991	535	Dr	145	4	140	Oh	140	5	G	Pl	C	40	10	S	Lam, A
11F1	F. Coleman	M. Crabb	1991	535	Dr	128	4	138	Oh	138	---	G	Pl	C	40	---	D, S	Lam, A
11L1	Coffing Bros, Orchard Co.	Swisher & Swank	11-13-36	545	Dr	30	4	30	Oh	---	---	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, 4.5	Sh, G, L	P	C	18	---	D, S	Blue clay to 36 ft
34C1	W. Randolph	---	7-48	530	Dr	52	4	23	Oh	74	---	C	P	C	---	---	D, S	Lam, A
34Q1	Mrs. Barnatt	M. Crabb	7-9-48	560	Dr	30	4	16	Oh	---	---	---	P	C	40	---	D, S	A; Blue clay to 38 ft
35F1	D. Swanson	Swisher & Swank	5-15	515	Dr	80	6	32	Oh	32	48	Sh	P	C	30	2.5	D	L
35P1	M. Thompson	W. L. Laughlin	5-28-80	520	Dr	89	6	42	Oh	60	15	Sa	P	C	32	5	D	L, A; Dd 36 ft after 2 hr pumping at 5 gpm
35Q3	R. Linder	---	8-8-61	520	Dr	44	6	44	P	30	14	S, G	Pl	U	30	0	D	L, A; Dd 1 ft after 2 hr pumping at 6 gpm
35P2	S. Koster	M. Crabb	7-51	520	Dr	47	4	47	Oh	30	17	S	Pl	U	30	---	D	Lam
35P3	Mr. Curtis	W. L. Laughlin	1949	520	Dr	40	10	40	Oh	31	9	C, S	Pl	U	31	---	D	L; Dd 0.5 ft after 2 hr balling at 10 gpm
35Q1	F. Clingan	---	6-18-80	525	Dr	00	8	80	Oh	40	20	G, S	Pl	U	40	10	D	L; Dd 20 ft pumping at 4 gpm in gauze opening
35Q3	R. Robinson	Reynolds Bros.	9-7-54	520	Dr	71	4	71	Oh	63	8	S, G	Pl	C	30	4	D	L; Dd 20 ft pumping at 4 gpm in gauze opening
35Q4	H. Freeman	Swisher & Swank	1956	525	Dr	53	4	53	S	---	---	G	Pl	C	5	7	D	L, A; Dd 1 ft after 2 hr pumping at 6 gpm
36H1	R. Koiger	M. Crabb	2-54	610	Dr	74	4	43	Oh	43	31	Sh	P	C	20	---	D, S	Lam
36J1	W. Bysinger	W. L. Laughlin	2-10-55	610	Dr	112	8	50	Oh	48	15	Sa	P	C	18	7	D	L; Dd 15 ft after 2 hr balling at 7 gpm
36L1	F. Moore	---	7-34	365	Dr	111	4	44	Oh	102	9	L	P	C	30	---	N	L, A
19, 0V-7J1	Indiana State Highway Department	R. Riark	11-7-41	710	Dr	126	6	17	Oh	80	48	S, Sa	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	Ls	M	C	---	---	---	Drift to 21 ft; Ashley (1899)
8P1	B. Connor	---	710	Dr	94	---	---	---	---	14	80	Sa	P?	C	---	---	---	Drift to 14 ft; Ashley (1899)
16G1	---	---	---	710	Dr	65	---	---	---	---	---	---	---	C	---	---	---	Drift to 65 ft; Ashley (1899)
17B1	E. Brown	M. Crabb	J-51	710	Dr	44	4	22	Oh	22	22	Sh	M	C	20	---	D	A; Clay to 22 ft; Ashley (1899)
18P1	L. Starves	---	730	Dr	134	---	---	---	---	---	---	---	M	C	---	---	---	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
22F1	D. P. Long	---	6-21-02	760	Dr	80	---	---	---	---	---	---	---	C	---	---	---	Drift to 80 ft; Ashley (1899)
19, 7N-2L1	Mason & Snyder	---	---	760	Dr	1,905	---	---	---	---	---	---	---	C	---	---	---	Conte-Smith Oil Corp. 1; L (partial)
3D1	M. Cooper	Holt Bros.	1948	680	Dr	70	4	100	Oh	100	8	Sa	M	C	43	10	D, S	A; Drift to 100 ft
4F1	W. Martin	M. Crabb	10-30-48	680	Dr	70	4	58	Oh	58	14	Sa	P	C	20	---	D, S	A; Blue clay to 36 ft
6K1	C. Dear	E. E. Doane	5-21	615	Dr	110	---	---	Oh	85	25	Sa	M	C	40	10	D	L; Dd 10 ft pumping at 10 gpm
6K2	Sterling Hotel	Warrick & Youngblood	---	615	Dr	125	8	73	Oh	73	52	Sa	M	C	---	---	P	L; Dd 25 ft pumping at 5 gpm
6Q1	W. Hallowcraft	Reynolds Bros.	12-13-58	615	Dr	124	4	100	Oh	104	20	Sa	M	C	40	5	D	Lam, A
8K1	C. Cox	M. Crabb	1852	670	Dr	120	4	36	Oh	56	84	Sa	P	C	25	---	D	L, A
8P1	J. Galloway	Warrick & Youngblood	---	675	Dr	67	---	46	Oh	48	19	Sd-sh	P	C	20	2	D	L, A
11G1	W. Verheea	Reynolds Bros.	10-11-53	680	Dr	80	4	30	Oh	60	20	Ls	M	C	20	2	D	L, A; Dd 20 ft pumping at 2 gpm
12B1	Town of Hillsboro	Strenzel & Hill	12-38	715	Dr	208	8	32	Oh	132	50	S, Sa	M	C	27	110	P	L
12F1	Mechanics and Farmers Telephone Co.	---	---	765	Dr	59	4	---	Oh	33	26	Sa	P	U	40	---	O	Observation well Fountain
14J1	W. Benefield	Reynolds Bros.	12-28-51	710	Dr	58	4	34	Oh	34	22	Sa	P	C	17	5	D, S	L, A; Dd 13 ft pumping at 5 gpm
15V1	Mr. Willis	M. Crabb	2-2-52	690	Dr	85	4	61	Oh	61	24	Sa	P	C	25	---	D, S	Lam
19P1	R. H. Dice	Warrick & Youngblood	1951	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	80	Oh	88	47	Sa	P	C	40	7	D	L, A; Dd 10 ft after 1 hr pumping at 7 gpm
24P1	F. Hestor	Reynolds Bros.	1-23-54	740	Dr	317	4	180	Oh	---	---	---	M	C	---	---	D	L, A
25F1	E. Summers	Holt Bros.	12-30-80	740	Dr	187	4	153	Oh	153	34	Sa, Sh	M	C	30	7	D, S	L, A; Dd 40 ft after 2 hr pumping at 7 gpm
26C1	R. Hoelar	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 balling at 5 gpm
27P1	T. Eason	---	---	710	Dr	---	---	---	---	178	---	---	M	C	---	---	---	Ashley (1899); Drift to 178 ft
28F1	V. Pyle	M. Crabb	3-52	680	Dr	130	4	130	Oh	130	---	G	Pl	C	25	---	S	A; Blue clay with sand streaks to 130 ft
31E1	J. Darwactor	---	1948	695	Dr	100	4	100	Oh	98	2	G	Pl	C	4	---	D, S	Blue clay to 98 ft
33Q1	C. W. Dockins	---	1949	700	Dr	70	4	70	Oh	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)	Flint	Water-bearing zone					Yield (gpm)	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence		
19/8W-101	E. Forrest	H. J. Brenner	670	Dr	218	4	154	65	Sh	M	C	43	9	A; Clay and hardpan to 154 ft		
101	C. Keeling	M. Crabb	475	Dr	180	4	135	25	Sh	M	C	43	---	Water level 11.95 ft, 3-13-37		
201	M. Sullivan	M. Crabb	490	Dr	21	6	13	---	Sh	M	C	43	---			
211	4-11 Fairgrounds	M. Crabb	1552	Dr	210	4	85	115	Sh	M?	C	43	12			
301	Warrick & Youngblood	Warrick & Youngblood	670	Dr	80	4	42	18	Sh	P?	C	20	15	A; Overburden to 80 ft		
311	A. R. Hunt	E. E. Deane	1921	Dr	135	4	82	53	Sh	M?	C	8	8			
321	Warrick & Youngblood	Warrick & Youngblood	670	Dr	175	4	182	13	Sh	M?	C	4	---			
331	F. Wherry	Warrick & Youngblood	670	Dr	60	4	32	28	Sh	P	U	---	---			
341	W. C. Martin	Warrick & Youngblood	630	Dr	31	---	---	---	---	---	---	---	---			
351	Indiana State Highway Department	Warrick & Youngblood	610	Dr	31	---	---	---	---	---	---	---	---			
361	---	Warrick & Youngblood	605	Dr	35	---	---	---	---	---	---	---	---			
371	---	Warrick & Youngblood	603	Dr	31	---	---	---	---	---	---	---	---			
381	---	Warrick & Youngblood	603	Dr	32	---	---	---	---	---	---	---	---			
391	---	Warrick & Youngblood	604	Dr	40	---	---	---	---	---	---	---	---			
401	---	Warrick & Youngblood	604	Dr	32	---	---	---	---	---	---	---	---			
411	---	Warrick & Youngblood	604	Dr	32	---	---	---	---	---	---	---	---			
421	---	Warrick & Youngblood	645	Dr	84	4	84	3	S	P1	C	---	8			
431	C. M. Davidson	Warrick & Youngblood	620	Dr	130	4	130	15	Sh	P1	C	---	20	A; Dd 17 ft pumping at 20 gpm		
441	E. George	Warrick & Youngblood	620	Dr	71	4	19	85	Sh	P	C	---	---			
451	W. Kiger	H. J. Brenner	603	Dr	60	4	20	60	Sh	P	---	---	15			
461	---	Warrick & Youngblood	640	Dr	80	4	80	30	Sh	P	---	---	10			
471	A. Aldridge	Warrick & Youngblood	640	Dr	80	4	88	30	Sh	P	---	---	10	Lam (partial)		
481	T. Hardy	Warrick & Youngblood	625	Dr	98	4	130	35	Sh	P	---	---	10			
491	J. E. Fisher	Warrick & Youngblood	660	Dr	165	4	75	128	Sh	M?	C	---	5	Lm, A; Dd 110 ft bailing at 5 gpm		
501	V. Rogers	Warrick & Youngblood	665	Dr	204	4	75	128	Sh	M?	C	---	10			
511	E. Powers	M. Crabb	615-50	Dr	665	4	70	38	Sh	M	---	---	4			
521	---	Warrick & Youngblood	595	Dr	74	4	64	48	Sh	M	---	---	---			
531	W. Meadows	Warrick & Youngblood	610	Dr	150	4	112	38	Sh	M	---	---	---			
541	W. Corey	M. Crabb	1992	Dr	184	4	169	15	Sh	M	---	---	---			
551	O. Howard	H. J. Brenner	670	Dr	184	4	169	15	Sh	M	---	---	---			
561	A. Bodine	Warrick & Youngblood	640	Dr	2,417	---	---	---	---	---	---	---	---			
571	J. Garrison	H. J. Brenner	655	Dr	97	4	97	20	S	P1	C	---	12	Aldridge-Banta 1; 5 (partial) L, A; Dd 43 ft pumping 12 gpm; Screen, 3 ft of 4-in dia, no. 18 slot		
2461	C. W. Dice	Warrick & Youngblood	1953	Dr	126	4	126	5	Sh	P1	C	---	4	L, A; Dd 300 ft after 5 hr bailing at 4 gpm		
2471	Mrs. Stump	G. Reynolds	10-30-81	Dr	353	4	136	27	Sh	M	C	---	12	L, A; Dd 20 ft pumping at 12 gpm		
2681	K. Cade	H. J. Brenner	5-5-58	Dr	105	4	72	15	Sh	P	C	---	---			
2691	M. E. Patton	M. Crabb	5-47	Dr	115	4	115	2	G	P1	C	---	---	Blue clay to 113 ft		
2901	Tabb School	E. E. Doane	1921	Dr	176	6	43	35	Sh	P	C	---	---	A; Overburden to 43 ft		
3001	M. Jenks	H. J. Brenner	3-27-54	Dr	142	4	106	36	Sh	P	C	---	5	L; Dd 12 ft pumping at 5 gpm		
3201	E. A. Likins	Warrick & Youngblood	1958	Dr	89	4	80	48	Sh	P	C	---	15	A; Soil to 11 ft		
3211	Cooper Chapel Church	Warrick & Youngblood	1958	Dr	87	4	80	25	Sh	P	C	---	2	L, A		
3221	---	Warrick & Youngblood	5-17-58	Dr	87	4	87	7	G	P1	U	---	8	L; Screen, 5 ft of 4-in dia, no. 12 slot		
3231	R. Fox	Swisher & Swank	5-17-58	Dr	360	4	65	50	Sh	P	C	---	40	Lm, A		
3401	H. Anderson	M. Crabb	6-56	Dr	115	4	65	50	Sh	P	C	---	10	Lm, A		
3601	G. Conner	Holt Bros.	1955	Dr	123	4	125	5	C	P1	C	---	10	A; Screen, no. 40 slot		
3611	E. A. Gerling	Warrick & Youngblood	1957	Dr	81	3	70	---	S	P1	C	---	6	Lm, A; Dd 4 ft bailing at 6 gpm		
3621	E. Meyers	Warrick & Youngblood	5-52	Dr	81	3	79	2	G	P	C	---	25			
19/8W-101	Mr. Brookshire	Warrick & Youngblood	600	Dr	86	4	50	---	C	P1	---	---	15			
101	E. Ford	Warrick & Youngblood	585	Dr	96	4	---	---	Sh	P	---	---	10			
111	Indiana State Highway Department	Warrick & Youngblood	576	Dr	10	---	---	---	---	---	---	---	8			
112	---	Warrick & Youngblood	573	Dr	10	---	---	---	---	---	---	---	2			
113	---	Warrick & Youngblood	578	Dr	10	---	---	---	---	---	---	---	18			
114	---	Warrick & Youngblood	596	Dr	20	---	---	---	---	---	---	---	---			
115	---	Warrick & Youngblood	599	Dr	20	---	---	---	---	---	---	---	---			

18/9W- 1L1	19/9W- 2A1	2A2	2A3	2A4	2A5	2A6	2C7	2C8	2C9	2C10	2C11	2C12	2C13	2H1	11C1	26J1	26K1	26M1	34A1	34A2	36R1	20/6W- 6N1	6N2	6N3	6N4	6N5	7D1	19E1	19E2	19M1	19M2	19M3	30E1	30E2	20/7W- 1J1	1J2	1R1	5L1	7U1	8W1	10H1	10M1	13A1	15J1	17C1	18R1			
	B. Lewis Indiana State Highway Department																																																
	Warrick & Youngblood																																																
	7-11-58	7-11-58	7-11-58	7-11-58	7-11-58	7-11-58	1-17-58	1-22-58	3-24-58	3-24-58	3-24-58	3-24-58	3-24-58	3-24-58	7-11-58	8-15-59	1956	6-9-60	10-24-61	6-10-60	1-4-62	1961	6-25-68	1955	11-3-58	11-54	1956	3-20-56	1949	7-55	7-8-59	4-10-56	3-19-58		1921	7-31-58		6-28-60		1957									
	580	507	507	507	507	480	482	481	489	489	496	496	513	485	485	700	685	500	500	500	640	710	710	700	700	700	700	710	715	715	715	715	715	640	680	680	680	680	700	685	685	680							
	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	
	80	20	15	15	18	40	30	36	36	45	28	28	135	75	160	86	81	49	53	104	50	90	75	72	128	75	74	72	50	71	77	88	50	42	63	33	82	50	685	685	680								
	Oh																																																
	32																																																
	58																																																
	Ss																																																
	P																																																
	U																																																
	25																																																
	D,S																																																
	L																																																
	L, A: Dd 25 ft after 2 hr pumping at 12 gpm A: Hardpan to 59 ft Top soil and clay to 18 ft; Reported Dd 0 ft after 2 hr pumping at 10 gpm L: Reported Dd 0 ft after 1 hr pumping at 10 gpm A: Clay to 15 ft; Reported Dd 0 ft after 2 hr pump- ing at 10 gpm L, A: Reported Dd 0 ft after 3 hr pumping at 10 gpm A: Clay to 30 ft; Dd 4 ft after 4 hr pumping at 45 gpm L: Clay to 78 ft; Dd 5 ft after 1 hr pumping at 10 gpm L: Dd 8 ft after 1 hr pump- ing at 10 gpm A: Clay to 100 ft L: Dd 5 ft bailing at 18 gpm A: Ddug clay to 68 ft Ddug clay to 20 ft L: Dd 3 ft after 2 hr pump- ing at 10 gpm L, A: Dd 13 ft bailing at 10 gpm Dd 1 ft to 50 ft; Ashley (1898) L: Ashley (1898) A: Top soil to 7 ft Ashley (1898) L: Reported Dd 0 ft after 1 hr pumping at 15 gpm Dd 1 to 8 ft; Ashley (1898) Clay to 50 ft; Reported Dd 0 ft after 1 hr pump- ing at 10 gpm Dd 1 to 18 ft; Ashley (1898) L: Ashley (1898)																																																

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					Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
20/7W-1981	W. M. Allen	E. E. Doane	1921	820	Dr	63	4	48	Oh	55	8	Ss	P	C	40	5	D	Ls; Dd 15 ft boiling at 5 gpm Ls; Dd 20 ft pumping at 5 gpm
1961	Mr. Greenburg	Reynolds Bros.	1-11-54	825	Dr	57	4	38	Oh	36	21	Ss	P	C	12	5	D	Ls; Dd 10 ft pumping at 5 gpm
1962	C. Lightle	-----do-----	7-19-56	820	Dr	52	4	32	Oh	32	20	Ss	P	C	14	15	D	Ls; Dd 10 ft pumping at 5 gpm
1963	C. Haynes	-----do-----	1- 8-54	830	Dr	57	4	45	Oh	45	12	Ss	P	C	12	5	D	Ls; Dd 10 ft pumping at 5 gpm
1964	G. Hancock	Warrick & Youngblood	-----	820	Dr	55	4	43	Oh	43	12	Ss	P	C	---	10	D	Ls; Dd 12 ft pumping at 10 gpm
1965	X. Payne	Reynolds Bros.	7-20-56	825	Dr	51	4	51	Oh	51	51	G	P	C	18	10	D	Ls; Dd 20 ft boiling at 10 gpm
1966	H. Storkey	-----do-----	7-20-54	830	Dr	55	4	31	Oh	31	24	Ss	P	C	18	10	D	Ls; Dd 20 ft boiling at 10 gpm
1967	C. McClain	Warrick & Youngblood	-----	830	Dr	60	---	36	Oh	36	23	Ss	P	C	14	12	D	Ls; Dd 18 ft pumping at 5 gpm
1968	P. Hancock, Jr.	Reynolds Bros.	-----	825	Dr	46	4	34	Oh	34	12	Ss	P	C	18	5	D	Ls; Dd 18 ft pumping at 5 gpm
1969	C. Hancock	-----do-----	7-18-56	820	Dr	52	4	52	Oh	12	40	G, S	Pl	U	12	5	D	Ls; A; Dd 20 ft pumping at 5 gpm
1970	G. Kunkle	Warrick & Youngblood	-----	830	Dr	78	4	56	Oh	58	22	Ss	P	C	20	4	D	Ls; A; Dd 10 ft pumping at 5 gpm
1971	R. Vanhook	Reynolds Bros.	-----	810	Dr	72	4	29	Oh	40	40	Ss	P	C	---	10	D	Ls; A; Dd 10 ft pumping at 5 gpm
1972	A. Minick	-----do-----	3-14-58	820	Dr	37	4	26	Oh	26	11	Ss	P	C	14	10	D	Ls; A; Dd 10 ft pumping at 5 gpm
21C1	W. Harrison	H. Lamb	12-21-48	870	Dr	141	8	---	Oh	78	57	Ss	P	C	62	70	D	Dr (ft to 100 ft; Ashby (1898))
22Q1	E. Death	-----do-----	-----	895	Dr	---	---	---	---	100	---	Ss	M7	---	---	---	---	---
24B1	F. Gramley	Holt Bros.	12- 7-80	700	Dr	64	4	36	Oh	26	28	Ss	M	C	12	10	D	Ls; Dd 2 ft after 1 hr pumping at 10 gpm
24H1	Mellett Methodist Church	-----do-----	1887	700	Dr	85	4	50	Oh	50	35	Ss	M	C	15	10	P	Ls; Reported Dd 0 ft after 2 hr pumping at 9 gpm
24H2	W. Meigera	Swisher & Swank	9-20-50	700	Dr	72	4	62	Oh	52	20	Ss	M	C	30	9	D	Clay to 50 ft Blue clay to 42 ft
25A1	C. Rice	Holt Bros.	1947	710	Dr	95	4	50	Oh	30	45	Ss	M	C	21	---	S	Ls; A; Dd 10 ft after 1 hr pumping at 10 gpm
25B1	C. E. Hamilton	M. Crabb	1958	700	Dr	48	4	42	Oh	42	6	Sd-sh	M	C	20	---	S	Ls; A; Reported Dd 0 ft after 1 hr pumping at 10 gpm
26K1	J. Carroll	Holt Bros.	8-29-80	685	Dr	100	4	70	Oh	80	20	Ss	M	C	1	10	D	Ls; A; Reported Dd 0 ft after 1 hr pumping at 10 gpm
26M1	A. Ingalsbo	-----do-----	9-30-80	710	Dr	64	4	64	Oh	63	1	G	Pl	C	38	10	D, S	Ls; A; Reported Dd 0 ft after 1 hr pumping at 10 gpm
26R1	Mr. Mattenburger	-----do-----	10- 1-58	690	Dr	79	4	---	Oh	34	25	Ss	M	C	15	10	D	Ls; A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
28F1	C. Crane	A. Waldron	9-17-50	670	Dr	208	4	---	Oh	74	18	Ss	P	C	20	10	S	Ls; Ashby (1899)
29J1	F. Wildman	-----do-----	-----	685	Dr	92	---	---	---	---	---	---	---	---	---	---	---	---
20/8V- 1D1	E. Rodgers	M. Crabb	4- 1-80	670	Dr	100	4	47	Oh	47	50	Ss	M7	C	35	---	D, S	Ls; A; Dd 42 ft after 2 hr pumping at 5 gpm
20/8V- 1D1	Briggs Trust	Holt Bros.	1955	710	Dr	114	4	---	---	---	---	---	---	---	---	---	---	---
20/8V- 1D1	Briggs Trust	G. Reynolds	7- 7-80	660	Dr	82	4	57	Oh	57	25	Ss	P	C	23	5	D, S	Ls; A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
2P1	X. Rayburn	Warrick & Youngblood	-----	685	Dr	55	4	30	Oh	30	20	Ss	P	C	18	10	D	Ls; A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
4D1	Boy Scouts of America	-----do-----	-----	600	Dr	403	---	---	Oh	---	---	---	---	---	90	7	N	Ls; A; Reported Dd 0 ft after 2 hr pumping at 10 gpm
9G1	E. Waldron	A. Waldron	-----	630	Dr	130	4	---	---	---	---	---	---	---	---	---	---	---
9K1	-----do-----	-----do-----	-----	635	Dr	104	4	---	---	---	---	---	---	---	---	---	---	---
14R1	G. Labau	Reynolds Bros.	1954	870	Dr	140	4	83	Oh	---	---	---	---	---	---	---	---	---
17A1	F. Coffing	H. J. Bronner	12- 8-36	640	Dr	87	4	142	Oh	---	---	---	---	---	---	---	---	---
18R1	L. Shelby	G. Reynolds	10-21-80	640	Dr	188	4	---	Oh	179	9	Ss	P	---	---	---	---	---

20/8W-22K1 23B1	Y. White G. Labau	Warrick & Youngblood Reynolds Bros.	1952 1954	860 870	Dr Dr	80 92	4 4	41 45	Oh Oh	52 82	28 10	Sd-sh Ss	P P	C C	16 23	5 4	S D,S	L L, A; Dd J2 ft pumping L, at 4 gpm
25F1	S. C. Seaman	Warrick & Youngblood		670	Dr	115	4					Ss	P			15	D	A; Deponed by Warrick & Youngblood
26A1	J. Campbell	do		680	Dr	150	4					Ss	P			6	D,S	
26R1	T. Board	do		675	Dr	60	4		Oh	48	15	Ss	P	C	11	20	D	Lm, A Deponed by Warrick & Youngblood
27G1	C. O. Smith	do		680	Dr	60	4		Oh	37	23	Ss	P			25	D	Lm, A Deponed by Warrick & Youngblood
28H1	W. B. Coffing			650	Dr	2,590				36	62	Ss	P				Ok	L (partial)
29Q1	W. Gaits			635	Dr	1,607				150	10	Ss	P				Ok	A. E. Davis 1; L (partial)
29R1	City of Covington	Layne-Northern Co., Inc.	12-8-46	820	Dr	114	6			99	32	S	P	C	18		T	L
29N2	do	do	12-17-46	620	Dr	56	6			7	45	S	P	C	6		T	Lm
30Q1	T. E. Hunt	Warrick & Youngblood		630	Dr	115	4	112	Oh	112	3	Ss	P	C	30	15	D,S	Lm
31C1	G. Abernathy	do		635	Dr	180	4	36	Oh	128	31	Ss	P			7	T	L, A
31C2	City of Covington	Layne-Northern Co., Inc.	11-26-48	635	Dr	85	6					Ss	P				T	Lm
31M1	H. Hanna	Warrick & Youngblood		595	Dr	90	4		Oh	68	22	Ss	P	C	20	40	D	Lm, A
31M2	Sycamore Lanes Dowling	do		595	Dr	125	6	62	Oh	82	50	Sd-sh	P	C	14	50	P	Lm, A; Dd 26 ft pumping at 30 gpm
32L1	O. E. Lago	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
37R1	H. Glover	do	1951	670	Dr	135	4		Oh	65	70	Ss	P	C	12		D,S	Lm
34F1	R. Nichols	Warrick & Youngblood		680	Dr	60	4	50	Oh	30	30	Ss	P			15	D,S	
34K1	W. A. Gault	do		685	Dr	40	4	11	Oh	11	29	Ss	P			15	D,S	
34L1	W. N. White	do	1951	670	Dr	80	4	32	Oh	48	32	Ss	P	C	15		S	L, A
35F1	M. M. McKenna	H. J. Brenner	2-27-54	695	Dr	400	4	78	Oh	65	160	Ss	M7	C	50	15	S	L, A
35F2	C. Mosoy	do	1953	690	Dr	225	4	72	Oh	70	115	Ss	M7	C	60	8	D,S	L, A
35R1	G. Minick	Warrick & Youngblood		680	Dr	185	4	72	Oh	184	16	Sd-sh	M7	C	15	7	D,S	L, A
36J1	H. Morfill	do		680	Dr	62	2	62	S	58	4	C	P	C	25		D,S	A; Clay to 58 ft
36J2	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
22A1	D. Sholby	do		530	Dr	150	4	137	Oh	115	35	Ss	P	C	70	10	D,S	A
25R1	J. Meeker	do	12-16-58	620	Dr	243			Oh	137	2	Ss	P	C	25		S	L
28K1	J. Stout	do	1951	605	Dr	102	3	102	Oh			Ss	P				Ok	L
28K2	do	do	1960	615	Dr	178	4	20	Oh			Ss	P				Ok	L
35B1	D. Noble	do		515	Dr	66	4	34	Oh	25	71	Ss	P	U7	25		N	Lm
25B2	R. Bading	M. Crabb	10-17	535	Dr	98	4	68	Oh	40	58	Ss	P	U7	40		N	Lm
35J1	Chick Bros. Orchard Co.	do		555	Dr	86	4	68	S	24	42	C	P	U	24	65	I	Lm
35J2	Covington Food Locker	H. J. Brenner	4-25-49	550	Dr	255	4	85	Oh	85	155	Ss	P	C	15	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	P	C	17		T	L
36G1	Mr. Stringer	Warrick & Youngblood	8-52	610	Dr	111	4	50	Oh	57	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		Cg1?	P	C	20	8	D	Lm, A; Reported Dd 0 ft pumping at 8 gpm
36J2	M. Holland	do		600	Dr	60	4	42	Oh	42	18	Ss	P	C	40	10	D	Surface to 42 ft
36J3	C. Hale	do	1952	600	Dr	77	4	46	Oh	48	28	Sd-sh	P	C	40	8	D	Lm; Dd 10 ft pumping at 8 gpm
38K1	R. Gloger	do		600	Dr	305	4	50	Oh	130	175	Ss	P	C	70	4	D	Lm, A
21/7W-2M1	J. Bossard	Holt Bros.	1951	705	Dr	100	4	70	Oh	70	30	Ss	M	C	70	7	D	L, A; Dd 20 ft pumping at 7 gpm
5K1	A. Farling	H. J. Brenner	11-15-54	680	Dr	83	4	58	Oh	58	25	Ss	P	C	50	7	D	Screen, 6 ft of 7-in dia. no. 60 slot; Dd 5 ft. pumping at 100 gpm
6G1	Attica Ice Co.	H. J. Brenner	5-23-44	520	Dr	105	8	105	S			G	P	U	40	100	N	L, A; Dd 20 ft pumping at 7 gpm
6G2	City of Attica	H. Laeb	1947	515	Dr	125	16	125	S	68	37	S,G	P				P	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	P			1,040	P	Lm; 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	1-54	510	Dr	193				83	50	S,G	P	U	15		T	L
7C1	Harrison Steel Casting Co.	H. Laeb	12-21-48	505	Dr	158	10	158	S	70	88	S,G	P	U	70		I	L; Screen, 12 ft of 10-in dia. no. 80 slot
8A1	N. Galloway	H. J. Brenner	4-2-58	680	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)	Filling	Water-bearing zone					Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
21/7W-381	L. Nathan	A. Waldron	7-24-60	680	Dr	146	4	---	Oh	140	6	La	M	C	26	3	D	La (partial), A; Dd 20 ft pumping at 3 gpm
1071	E. Branigan	Molt Bros.	1954	700	Dr	105	4	55	Oh	55	80	Ss	P	C7	60	10	D	L, A; Dd 65 ft pumping at 5 gpm
14C1	A. Crawford	H. J. Brenner	1-22-55	675	Dr	138	4	128	Oh	128	10	Sh	M	C	15	5	D	L; Screen, 4 ft of 2-in dia, no. 20 slot; Dd 10 ft after 2 hr pumping at 10 gpm
14D1	J. Crawford	---do---	11-17-60	680	Dr	52	4	52	S	51	3	S,G	P1	C	10	10	S	Clay, boulders, and hardpan to 36 ft; Dd 3 ft pumping at 20 gpm
14K1	D. Crawford	---do---	10- 8-48	685	Dr	80	6	38	Oh	38	42	Ss	P	C	12	20	S	L, A; Dd 10 ft after 3 hr bailing at 10 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 15 ft pumping at 25 gpm
18M1	J. L. Doeden	Reynolds Bros.	10-20-53	595	Dr	63	4	38	Oh	38	23	Sh	M	C	11	6	D	L, A; Dd 25 ft pumping at 6 gpm
19J1	H. Catos	H. J. Brenner	7-26-58	645	Dr	60	4	33	Oh	50	23	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- 9-48	645	Dr	78	6	50	Oh	50	28	Ss	M7	C	25	10	P	Clay to 50 ft; Dd 5 ft pumping at 10 gpm
21H1	M. Fushaw	Molt Bros.	1952	650	Dr	62	4	62	S	---	---	G	P1	C	20	10	D	A; Screen, no. 60 slot
26R1	M. Cookins	---do---	1951	690	Dr	134	4	104	Oh	104	30	Sh	M	C	14	10	S	L, A; Screen, 2 ft of 3/4-in dia, no. 40 slot; Reported Dd 0 ft after 1 hr pumping at 10 gpm
30H1	T. Gustus	---do---	8-57	635	Dr	35	4	35	S	33	2	G	P1	C	27	---	D	L, A; Dd 55 ft pumping at 30 gpm
30H2	J. Gustus	---do---	10-29-59	635	Dr	84	4	84	S	85	9	G,S	P1	C	48	10	D	L, A; Dd 55 ft pumping at 30 gpm
30H3	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 50 ft after 4 hr pumping at 5 gpm
30H4	O. Mariott	A. Waldron	10-20-59	635	Dr	174	4	172	Oh	172	2	Ss	M	C	30	5	S	L, A; Dd 5 ft after 1 hr bailing at 10 gpm
31H1	Mr. Knowles	Molt Bros.	1956	825	Dr	35	4	17	Oh	17	18	Sh	M	C	14	10	D	L, A; Dd 15 ft after 3 hr bailing at 5 gpm
31M1	Shawnee Township School	Warrick & Youngblood	1934	870	Dr	80	6	48	Oh	48	12	Ss	M	C	30	8	P	L, A; Dd 15 ft after 3 hr bailing at 5 gpm
36E1	L. Slaughter	Molt Bros.	9- 8-60	700	Dr	63	4	26	Oh	26	37	Ss	M	C	10	10	D	L, A; Dd 15 ft after 3 hr bailing at 5 gpm
21/8W-26D1	H. Cole	---do---	---	370	Dr	89	---	---	Oh	43	46	Ss	P	---	---	---	---	---
27E1	H. L. Coffing	---do---	---	550	Dr	20	---	---	Oh	50	10	Ss	P	C	30	5	D	L, A; Dd 15 ft after 3 hr pumping at 4 gpm
32H1	J. C. Price	A. Waldron	10- 1-61	510	Dr	60	4	8	Oh	50	10	Ss	P	C	30	5	D	L, A; Dd 20 ft pumping at 3 gpm
33C1	E. Lornezo	---do---	9-30-61	600	Dr	60	4	8	Oh	52	6	Ss	P	C	30	4	D	L, A; Dd 20 ft after 3 hr pumping at 10 gpm
33C2	R. Smart	Reynolds Bros.	9-17-54	525	Dr	47	4	6	Oh	40	29	Ss	P	---	---	---	---	
33E1	J. Roberts	A. Waldron	7- 1-60	620	Dr	70	4	---	Oh	---	---	Ss	P	C	30	6	D	Yellow clay to 15 ft; Dd 15 ft bailing at 6 gpm
33E2	Mr. Franklin	Warrick & Youngblood	1952	560	Dr	60	4	15	Oh	---	---	Ss	P	C	30	6	D	L, A; Dd 50 ft bailing at 3 gpm
38D1	R. M. Saitb	---do---	---	660	Dr	223	---	---	Oh	67	18	La	M	C	10	3	D	L, A
22/6W-28R1	J. Larson	G. Reynolds	4-15-60	700	Dr	103	---	---	Oh	87	4	Sh	M	C	12	10	D,S	L; Dd 10 ft pumping at 12 gpm
32L1	H. Dillman	A. Waldron	12- 6-60	705	Dr	62	4	58	Oh	58	4	Sh	P	C	12	10	D	L, A
22/7W-36L1	A. H. Snider	H. J. Brenner	6- 1-59	660	Dr	104	4	83	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	Thick- ness (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.

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

Well 18/6W-31L1

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

Material	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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	Thick- ness (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	Thick- ness (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	Thick- ness (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, mica- ceous, light-gray-----	10	90	
Shale, micaceous, carbonaceous, sandy, very light-gray, sider- ite spherules-----	30	120	
Shale, carbonaceous, tough, black Conglomerate; shale, carbonace- ous, sandy, light-gray; sand- stone, white, medium; shale, calcareous, weak; chert; and sand-----	20	140	
Shale, carbonaceous, tough, black Conglomerate; shale, carbonace- ous, sandy, light-gray; sand- stone, white, medium; shale, calcareous, weak; chert; and sand-----	20	160	
Mississippian System:			
Osage Series:			
Shale, calcareous, weak; lime- stone; 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 pre- ceding lime- stone T. D. 1,928 ft

Well 18/8W-4N2			
Type of record: Driller's log from memory.		Altitude: About 625 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	14	14	
Sand and gravel-----	1	15	W. B.

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

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

Material	Thick- ness (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	Thick- ness (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

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

Well 18/8W-21D1

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

Material	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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; sand- stone?

Well 18/8W-29K1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
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	Thick-ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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 sand- stone?; 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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
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	Thick-ness (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.

Quaternary System:			
Recent and Pleistocene Series:			
Dug well-----	18	18	
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	Thick-ness (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 19/7W-6K2--Cont.

Material	Thick-ness (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	Thick-ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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, in- coherent, yellow; sideritic----	25	165	

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

Well 19/8W-16A1--Cont

Material	Thick-ness (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	W. B.
Clay, blue-----	25	55	
Hardpan-----	22	77	
Sand-----	20	97	

Well 19/8W-24G1

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

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

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	

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

Well 19/8W-26F1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick-ness (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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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	Thick- ness (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.

Material	Thick- ness (feet)	Depth (feet)	Remarks
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 sand- stone; 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	Thick- ness (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	Thick-ness (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	

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

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

Material	Thick- ness (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	Thick- ness (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	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil, dark-----	3	3	W. B. 12 to 52 ft
Clay, yellow-----	6	9	
Gravel, brown-----	19	28	
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	W. B.	
Pennsylvanian System:				
Lower Pennsylvanian Series:				
Shale, black-----	15	40		
Sandstone-----	10	50		
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	Dry W. B.	
Pennsylvanian System:				
Lower Pennsylvanian Series:				
Sandstone, white-----	6	26		
Sandstone-----	11	37		

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	

