STATE OF INDIANA

INDIANA DEPARTMENT OF CONSERVATION

DIVISION OF WATER RESOURCES

BULLETIN NO. 20

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: Fulton County

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

1964

INDIANA DEPARTMENT OF CONSERVATION

Donald E. Foltz, Director

BULLETIN NO. 20

OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: Fulton County

BY

J. S. ROSENSHEIN AND J. D. HUNN

GEOLOGISTS, 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

1964

CONTENTS

ILLUSTRATIONS

(All plates in pocket)

TABLES

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: Fulton County

By J. S. Rosenshein and J. D. Hunn

ABSTRACT

Fulton County, in northwestern Indiana, has an area of about 370 square miles. Glaciofluvial sand and gravel of Pleistocene age is the chief source of ground water for domestic, stock, industrial, and public supplies. Wells that tap this source generally are less than 150 feet deep and yield from 5 to 1,000 gpm (gallons per minute). The underlying bedrock is not extensively used as a source of ground water. However, the bedrock of Devonian and Devonian and Mississippian (?) age is a potential source of water, although quality and quantity available is uncertain. Field chemical analyses show that the hardness of water from the glaciofluvial sand and gravel generally is greater than 200 and less than 450 ppm (parts per million). Except locally the concentration of iron exceeds maximum concentration recommended in the U. S. Public Health Service drinking-water standard for iron and manganese together. However, in a small area in the north-central part, this standard is not exceeded.

This preliminary report contains tabulated records of about 470 wells and test holes giving information about well construction, water level, condition of occurrence, and characteristics of water-bearing material; selected logs for about 180 wells and test holes giving driller's description of material penetrated and authors' interpretation of their geologic age; results of 260 field chemical analyses giving hardness of water and the bicarbonate, chloride, iron, and sulfate contents; and water levels in 5 observation wells indicating the magnitude of short-term and long-term water level fluctuations of unconsolidated rocks. These basic data include much of the material to be used in an interpretive report on the ground-water resources and geology of the area.

A base map of Fulton County shows the location of each well or test hole listed in this report. Additional maps show the availability of ground water in the county and the areal distribution of hardness of water from the unconsolidated rocks of Pleistocene age.

INTRODUCTION

Purpose and Scope

An investigation of the ground-water resources and geology of 10 counties in northwestern Indiana has been in progress since June 1954. 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 sixth of a series of preliminary reports to be published on the ground-water resources and geology of northwestern Indiana. The purpose of the 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 geology as an aid to development of ground-water resources. A more detailed and comprehensive analysis is in progress and 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

Fulton County is in the northwestern part of Indiana (fig. 1). The county is nearly rectangular and includes about 370 square miles. It is bounded on the north by Marshall County, on the south by Cass and Miami Counties, on the west by Pulaski County, and on the east by Kosciusko, Miami and Wabash Counties.

Well-Numbering System

A numbering system is used to locate and identify the wells and test holes in this report. The number that is assigned each well or test hole indicates its location according to the official rectangular public-land survey. For example, in the number for well 30/4-36H1, the numbers preceding the hyphen indicate that the well is in T. 30 N., R. 4 E. 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 assigned a letter symbol as shown on figure 2. Within the quarter-quarter section the wells and test holes are numbered consecutively. Therefore, well 36H1 is the first well listed in SE¼ NE¼ sec. 36, T. 30 N., R. 4 E.

A narrow strip in the east-central part of the county is subdivided into land grants. In this area the grid of the rectangular public-land survey has been projected through the grants and wells in this area numbered in accordance with the system used in the rectangular survey area.

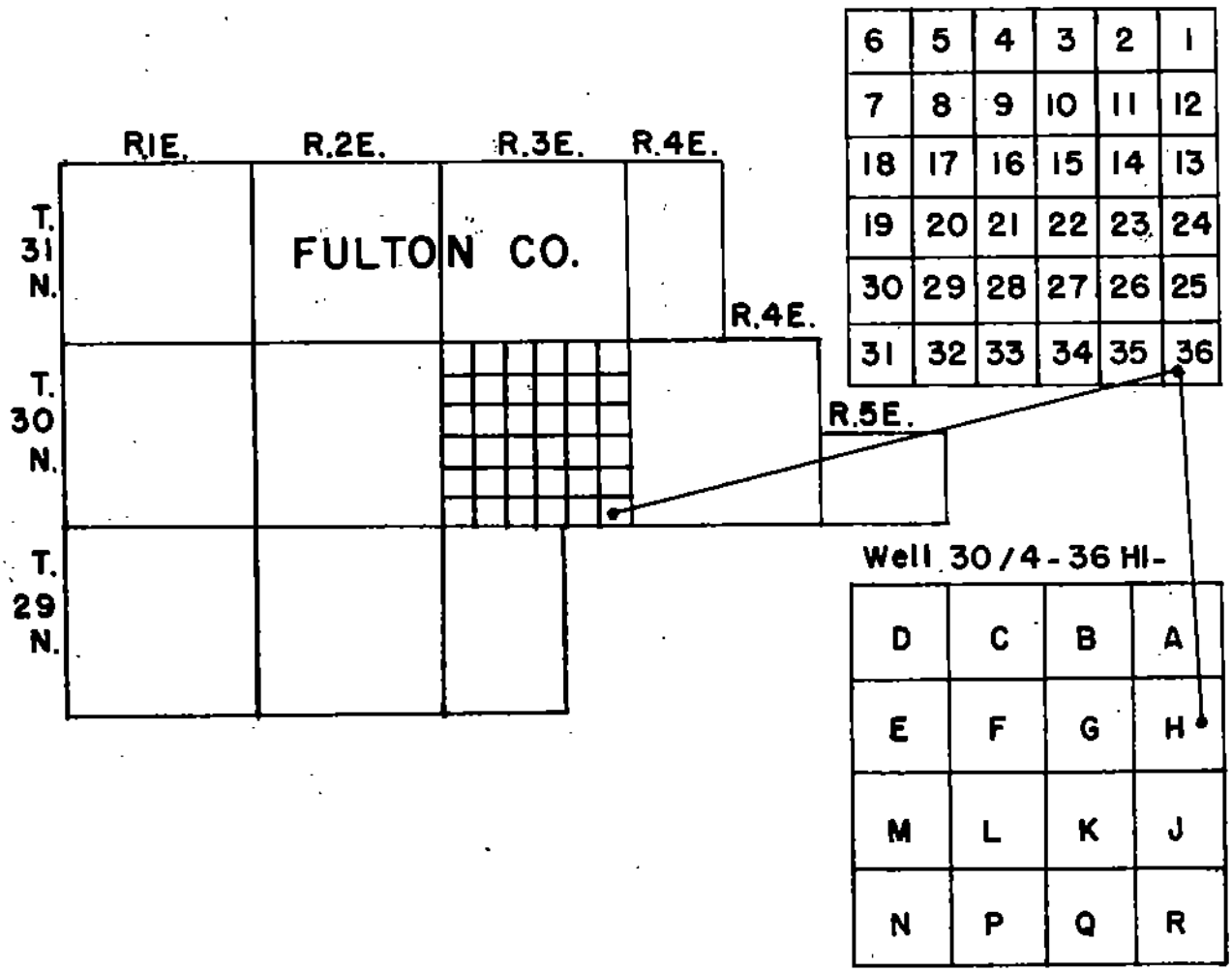


FIGURE 2.-- Sketch showing well-numbering system

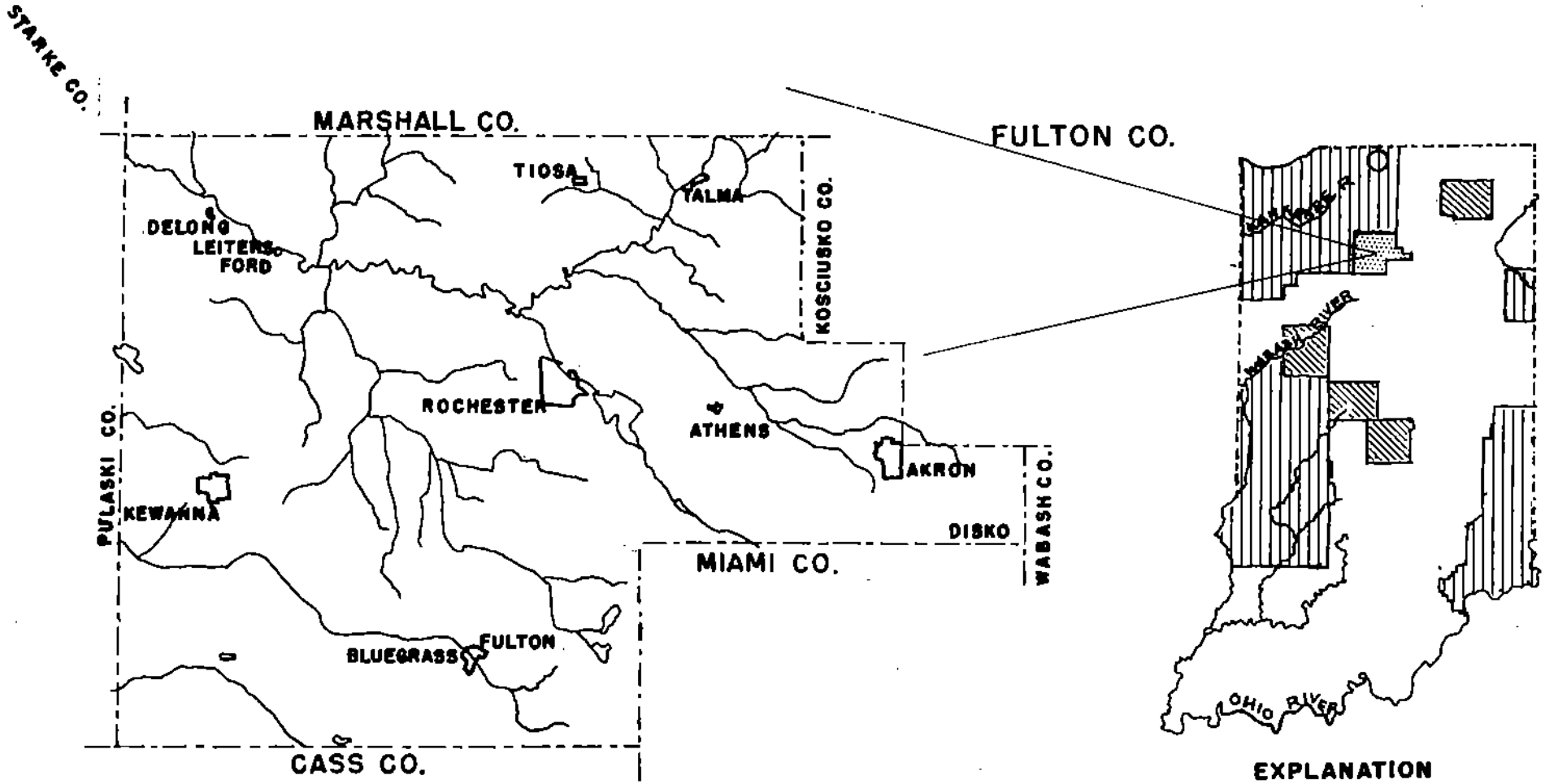


FIGURE 1.-- Map of Indiana showing area covered by this report, areas under investigation, and areas covered by reports published under the cooperative program.

SEE PAGE 80 FOR LIST OF PUBLISHED REPORTS

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. W. J. Steen of the Indiana Department of Conservation assisted in processing the data in the field. Well drillers, whose names are listed in the table of well records, furnished much of the information summarized in tables 3 and 4.

The authors also thank the following government agencies which provided information for the report: Divisions of Oil and Gas and Water Resources, Indiana Department of Conservation; Indiana State Highway Department; and Indiana State Board of Health.

DATA COLLECTION AND PROCESSING

The well data were collected principally from drillers, water-works superintendents, and owners. The well records obtained from the drillers were of two types--written records and reports from memory. Tentative driller's locations were 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 locations of wells were checked further in the field if major discrepancies existed between the reported location and the property record in the plat books, if the location given could not be verified from county records, or if the verified location was not sufficiently accurate to be used.

Plate 1 shows the location of water wells and test holes and test holes drilled for purposes other than water supply. Most of these locations are shown to the nearest 10 acres. The basic data for these wells and test holes are summarized in table 3. In addition, selected driller's logs of wells and test holes are given in table 4.

Samples of water were collected at the time well sites were visited. These water samples were analyzed in the field office for hardness of water and alkalinity (expressed as bicarbonate) and chloride and sulfate contents by standard titration methods. The iron content of the water was determined at the well site immediately after the sample was collected. A visual method was used to determine the iron concentration in parts per million by matching the color of the treated sample to that of a liquid-color standard having a known iron concentration. The results of the field chemical analyses (table 5) were used to select sites for collecting larger water samples for more comprehensive chemical analyses by the laboratory of the U. S. Geological Survey.

Observation wells were established prior to and during the investigation in order to obtain relative changes in storage in the ground-water reservoir. Table 6 contains the water-level data collected from these wells. The observation wells were chosen so as to obtain water-level information from artesian and water-table aquifers consisting of unconsolidated rocks. Wherever possible, the wells were established at sites where the factors affecting the water levels in the aquifer were due chiefly to natural causes.

GENERAL GEOLOGY AND SOURCES OF GROUND WATER

The oldest known consolidated rocks underlying Fulton County are of Ordovician age. These rocks consist of dolomite, dolomitic limestone, and shale and are overlain by dolomitic limestone, shale, and dolomite of Silurian age. The rocks of Ordovician and Silurian age are not used as a source of water supply in the county because these rocks generally lie more than 800 to 900 feet and 400 to 500 feet, respectively, below the surface, and the water they contain generally has a dissolved-solids content of more than 5,000 ppm (parts per million). However, in a small area in the southeastern part of the county the rocks of Silurian age lie directly below the glacial drift and may contain water that is moderately mineralized.

The rocks of Silurian age are overlain by dolomite and dolomitic limestone of Middle Devonian age. These rocks underlie blue-black bituminous shale of Devonian age (Logan, 1932) or Devonian and Mississippian age (Patton, 1956). Few water wells have been drilled into the rocks of Devonian and Devonian and Mississippian(?) age. Although these limestone and shales are not extensively used as a source of water in Fulton County, they are a potential source of water of which the quality and quantity available is uncertain.

The bedrock is overlain by unconsolidated glacial drift of Pleistocene age. The drift forms several prominent topographic features in the county (Leverett and Taylor, 1915, pl. 6; Wayne, 1958) such as the Maxinkuckee moraine in the north-central and western part; the Packerton moraine in the extreme southeastern part; the glaciofluvial plains in the northern part; and the ground moraine in the southern and extreme eastern part.

The unconsolidated rocks of Pleistocene age range in thickness from about 100 (Wayne, 1956, pl. 1) to more than 250 feet. The rocks consist chiefly of glaciofluvial sand and gravel, clayey and sandy till, and some glaciolacustrine clay and silt. The glaciofluvial sand and gravel is locally more than 150 feet thick and is the chief source of ground water for domestic and stock, industrial, and public supplies. Wells that tap this aquifer are generally less than 150 feet deep and yield from 5 to 1,000 gpm (gallons per minute).

The unconsolidated rocks of Pleistocene age are overlain locally by thin alluvium, wind-blown sand and organically rich sand, silt, and clay of Recent age. The deposits of Recent age are too thin to be a source of ground water.

Plate 2 shows the availability of ground water in the unconsolidated rocks underlying the county. Plate 3 shows the areal distribution of hardness of water from the sand and gravel of Pleistocene age. The water is hard to very hard. The hardness is generally greater than 200 and less than 450 ppm. The iron content generally exceeds maximum concentration recommended in the U. S. Public Health Service drinking-water standards for iron and manganese together except locally as in a small area in the north-central part of the county where this standard is not exceeded.

The range in concentration of selected constituents and properties is summarized in the table below. This table shows the minimum, mode, and maximum concentrations of various constituents and properties of water from sand and gravel of Pleistocene age.

Constituent or property	Minimum (ppm)	Mode (ppm)	Maximum (ppm)
Iron (Fe)----------	0.1	1.7	7.5
Bicarbonate (HCO_3)-----	151	426	532
Sulfate (SO_4)----------	5	46	175
Hardness as $CaCO_3$------	180	326	540

Table 1 indicates the signifiance of the various constituents and properties of the water that are listed in table 5.

Table 1.--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.
Chloride (Cl)----------	Gives salty taste to drinking water when present in large amounts in combination with sodium. Increases the corrosiveness of water when present in large amounts.
Hardness as $CaCO_3$ (Calcium and magnesium)----------	Hard water increases amount of soap needed to make lather. Forms scale in boilers, water heaters, and pipes. Leaves curdy film on bathtubs and other fixtures and on materials washed in the water.

a/ Adapted in part from Palmquist and Hall (1961), p. 34-36.

CONFINED AND UNCONFINED CONDITIONS

Ground water occurs in the consolidated and unconsolidated rocks of Fulton County under confined (artesian) conditions or under unconfined (water-table) conditions. Under confined conditions the aquifer (water-yielding material) is overlain directly by relatively impervious material, and the water will rise above the level at which it is encountered in the aquifer. Under unconfined conditions the aquifer is overlain directly by permeable unsaturated material, and the water will not rise above the level at which it is encountered.

TYPES OF WELLS

Drilled, driven, and jetted wells are the principal types of water wells used in Fulton County. Most water wells 3-inches or more in diameter are generally constructed by the cable-tool, or percussion method, but some of these wells have been drilled by the rotary, reverse-rotary, and jetting methods. Where the water-bearing material is sand and gravel, the well is generally finished with a well screen set in the aquifer below the bottom of the well casing. (See Rosenshein and Cosner, 1956, p. 6, for a detailed description of a well screen.) A modification of this type of well, the gravel-packed well, has a gravel lining inserted between the well screen and the water-bearing material.

Water wells less than 3-inches in diameter are constructed in unconsolidated material by driving or jetting. The driven well consists of a small-diameter pipe having a drive point attached to the end, which is driven into shallow water-bearing material. The jetted well is constructed by forcing water under pressure out of a hollow-rod or small-diameter drill pipe that is fitted with a jetting bit. As the material is washed out of the hole ahead of the casing, the casing is driven down into the hole. After the water-bearing material is penetrated the well is generally finished with a well-point screen set in the water-bearing material below the bottom of the casing. Table 2 relates the grain-size in inches and millimeters to the slot and the gauze size of screens commonly used in water wells.

Oil or gas test holes in Fulton County generally were drilled by the cable-tool method. Structure test holes for foundations and bridges generally were drilled by the wash-boring method. Various methods were used in these types of test-hole drilling to recover samples of material penetrated, such as, driving a sampling tube into the material after specific intervals of boring or collecting samples from the bailer after specific intervals of cable-tool drilling.

Table 2.--Grain size and equivalent screen openings

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

SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are available for domestic, stock, public, and industrial supplies from sand and gravel of Pleistocene age. The underlying bedrock is not extensively used as a source of water. However, the rocks of Devonian and Devonian and Mississippian(?) age are a potential source of water, although quality and quantity available is uncertain.

The chemical quality of water from the rocks of Pleistocene age varies. The water is generally hard to very hard. The iron content exceeds the U. S. Public Health Service drinking-water standards for iron and manganese together in much of the county except locally as in a small area in the extreme north-central part where this standard is not exceeded.

RECORDS

The records of about 470 wells and test holes are given in table 3. The table contains information about well construction, water levels, yields and drawdowns, conditions of occurrence, thickness and characteristics of water-bearing materials, type of pump, and other data. The altitude of the land surface at all wells and test holes was interpolated from topographic maps. Altitudes of boring were leveled by the State agency for whom the borings were made.

Table 4 contains the selected logs of about 180 wells and test holes. This table gives the driller's description of the material encountered, pertinent remarks with regard to the material, and authors' interpretation of the geologic age of the material.

The results of 260 partial chemical analyses of water are given in table 5. The analyses were determined in the field office of the Geological Survey. This table gives information about geologic source, temperature, concentration in parts per million of iron, bicarbonate, sulfate, chloride,

and hardness (calcium, magnesium) of water. The U. S. Public Health Service standards for drinking water are given in the table headnotes for iron and manganese together, sulfate and chloride. No official standards have been established for hardness of water. However, water with respect to hardness is generally classified (Lamar, 1942, p. 25-26) as follows: 0-60 ppm soft; 61-120 ppm moderately hard; 121-200 ppm hard; more than 200 ppm very hard.

Table 6 contains the records of five observation wells of which two were established during the investigation and three prior to the investigation. The water levels in the observation wells were measured either by recording gages installed on the well or by manual measurements made with an engineer's steel tape graduated to a hundredth of a foot. The water levels are in feet below land-surface datum. Daily water levels are given for the observation well equipped with a recording gage, and periodic water levels are given for the observation wells measured manually. For additional water levels see water-supply papers listed under U. S. Geological Survey in selected bibliography. Factors affecting the water levels in the observation wells are also indicated. The location of observation wells is shown on plate 1.

SELECTED BIBLIOGRAPHY

Capps, S. R., 1910, The underground waters of north-central Indiana: U. S. Geol. Survey Water-Supply Paper 254, 279 p.

Gutstadt, A. M., 1958, Cambrian and Ordovician stratigraphy and oil and gas possibilities in Indiana: Indiana Dept. Conserv., Geol. Survey Bull. 14, 103 p.

Harrell, Marshall, 1935, Ground Water in Indiana: Indiana Dept. Conserv., Div. Geology Pub. 133, 504 p.

Hem, J. D., 1959, Study and interpretation of the chemical characteristics of natural water: U. S. Geol. Survey Water-Supply Paper 1473, 269 p.

Keech, C. F., and Dresszen, V. H., 1959, Geology and ground-water resources of Clay County, Nebr. with a section on chemical quality of water by F. H. Rainwater: U. S. Geol. Survey Water-Supply Paper 1468, p. 62-86.

Lamar, W. L., 1942, Industrial quality of public water supplies in Georgia, 1940: U. S. Geol. Survey Water-Supply Paper 912, 83 p.

Leverett, Frank, 1899, Wells of northern Indiana: U. S. Geol. Survey Water-Supply and Irrig. Paper 21, 82 p.

Leverett, Frank, and Taylor, F. B., 1915, The Pleistocene of Indiana and Michigan and the history of the Great Lakes: U. S. Geol. Survey Mon. 53, 529 p.

Logan, W. N., 1932, Geologic map of Indiana: Indiana Dept. Conserv., Div. Geology Pub. 112.

Palmquist, W. N., Jr., and Hall, F. R., 1961, Reconnaissance of ground-water resources in the Blue Grass Region Kentucky: U. S. Geol. Survey Water-Supply Paper 1533, 39 p.

Patton, J. B., 1956, Geologic map of Indiana: Indiana Dept. Conserv., Geol. Survey Atlas Mineral Resources Map 9.

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.

U. S. Geological Survey, issued annually, Water levels and artesian pressure in observation wells in the United States: U. S. Geol. Survey Water-Supply Papers 817, 840, 845, 886, 906, 936, 944, 986, 1016, 1023, and 1071.

Wayne, W. J., 1956, Thickness of drift and bedrock physiography of Indiana north of the Wisconsin glacial boundary: Indiana Dept. Conserv., Geol. Survey Prog. Rept. 7, 70 p.

_____, 1958, Glacial Geology of Indiana: Indiana Dept. Conserv., Geol. Survey Atlas Mineral Resources Map 10.

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

Table 3.--Records of wells and test holes in Fulton County, Indiana

Well: See text for description of well-numbering system.
Altitude: Altitude of land-surface datum from topographic map except as noted in text p. 8.
Type of well: B, bored; Dm, driven; Dr, drilled; J, jetted.
Finish: Gp, gravel pack; Oo, open end; Oh, open hole; S, screen; dia, diameter in inches; g, gauze size; p, perforated pipe; sl, slot size.
Character: G, gravel; Sd, sand; Ls, limestone.
Geologic age: D, Devonian; Pl, Pleistocene.
Condition of occurrence: C, confined; U, unconfined; see text for definition.

Water level: In feet below land-surface datum on date of completion of well, except where otherwise noted.
Use: Ac, air conditioning; D, domestic; Do, destroyed; I, industrial; Ir, irrigation; N, not used; O, observation; P, public supply; S, stock; T, test.
Type of pump and horsepower: C, centrifugal; J, jet; L, lift; P, pitcher; S, submersible; T, turbine; numeral indicates rated horsepower of electric motor.
Remarks: Ca, field chemical analysis in table 5; dd, drawdown; gpm, gallons per minute; L, log of well in table 4; S, samples available for inspection.

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
29/1- 1F1	H. Schoid	Rochester Well and Pump Co.	10-26-56	781	J	52	2	S; 3 ft	---	-----	Sd,G	Pl	C	12	D	P	Yield 13 gpm; Ca, L.
3D1	A. Walsh	----do----------	4-13-51	761	J	92	2	S; 2ft, 30sl	---	-----	G	Pl	---	15	D	------	Yield 20 gpm; Ca.
9E1	T. H. White	Fisher Bros. Well Drilling Co.	7-16-58	761	J	86	4½	S; 5ft, 14sl, dia 3	79	8	G	Pl	C	19	D,S	------	Dd 8 ft after 6 hr pumping 14 gpm; Ca, L.
11C1	T. Walsh	----do----------	7-30-59	762	J	90	4½	S; 4ft, 14sl, dia 3	80	10	G	Pl	C	22	D,S	------	Yield 16 gpm; L.
11C2	----do----------	----do----------	8-15-59	762	J	80	4½	S; 8 ft, 14sl, dia 3	25	55	G,Sd	Pl	C	18	D,S	------	Dd 10 ft after 2 hr pumping 40 gpm; L.
13H1	M. Ware	McGrow Well Drilling Co.	11- 6-55	775	J	85	2	S; 2½ft, 10sl	77	8	G,Sd	Pl	C	19	D,S	J½	Yield 15 gpm; fine sand and fine to medium gravel overlain by 77 ft blue soft clay, Ca.
22F1	Trustees, Wayne Township	D. Henderson	9-23-58	762	Dr	115	4	S; 10ft, 25sl	105	10	G	Pl	C	18	P	Sl	Dd 2 ft pumping 40 gpm; Ca, L.
23F1	C. Moss	Rochester Well and Pump Co.	--------	785	J	103	2	S; 3ft, 50g, dia 1¼	100	3	Sd	Pl	C	35	S	------	Ca, L.
32A1	L. Gault	McGrow Well Drilling Co.	1958	758	J	50	2	S	46	4	G	Pl	C	18	---	------	Gravel overlain by 46 ft brown and blue clay.
36G1	E. R. Malone	J. Henderson	7- 9-59	788	J	94	2	S; 3½ft, 60g, dia 1½	67	29	G,Sd	Pl	C	---	D,S	------	Yield 20 gpm; Ca, L.
29/2- 1R1	H. Norris	McGrow Well Drilling Co.	1957	793	J	83	2	S; 3ft, 10sl, dia 1½	79	4	G	Pl	C	15	D	C½	Ca, L.
4D1	Z. Crook	----do----------	1956	788	J	77	2	S	74	3	G	Pl	C	19	---	------	Ca, L.
4F1	N. Yaborg	Fisher Bros. Well Drilling Co.	9-26-59	768	J	73	2½	S; 3ft, 60g, dia 1½	65	8	G	Pl	C	11	D,S	J1/3	Yield 17 gpm; Ca, L.
8P1	H. E. Nickels	McGrow Well Drilling Co.	7-16-59	775	J	59	2	S; 2½ft, 10sl, dia 1½	---	-----	G	Pl	C	20	S	L	Yield 10 gpm; Ca, L.
12A1	E. Tranbarger	Rochester Well and Pump Co.	3-16-55	800	J	74	2	S; 3ft, 50g, dia 1	53	21	Sd,G	Pl	C	19	D	J½	Sand and fine to medium gravel overlain by 53 ft yellow and blue clay; Ca.
13C1	L. Rouch	McGrow Well Drilling Co.	1957	802	J	74	2	S	66	8	G,Sd	Pl	C	23	D	------	L.
14C1	C. Rontschler	----do----------	1956	793	J	69	2	S	66	3	G	Pl	C	22	S	------	Gravel overlain by 66 ft blue hard clay.
14F1	----do----------	----do----------	5-21-55	782	J	63	2	S; 2½ft, 10sl	58	5	G	Pl	C	18	S	------	Yield 15 gpm; fine to medium gravel overlain by 58 ft blue clay with some sand; Ca.
22D1	C. Frad	----do----------	1957	792	J	28	2	S	20	8	G,Sd	Pl	---	20	S	L	Gravel and sand overlain by 20 ft brown clay; Ca.
23G1	P. B. Stewart and Co.	----do----------	7-29-60	790	J	85	2	S; 4ft, 10sl, dia 1½	---	-----	G	Pl	C	12	P,S	J	Yield 40 gpm; Ca, L.
23G2	I. Dewitt	J. Henderson	7-10-59	782	J	20	--	S; 2½ft, 60g, dia 1½	---	-----	G,Sd	Pl	C	12	D	P	See log well 23G1; Ca.
23J1	M. Waltz	McGrow Well Drilling Co.	12-10-55	789	J	52	2	S; 2½ft, 10sl	48	4	G	Pl	C	8	D	J1/4	Yield 15 gpm; see log well 23J4; Ca.
23J2	P. Easterday	----do----------	1956	789	J	53	2	S; 3ft, 10sl, dia 1½	49	4	G	Pl	C	12	D	L1/4	See log well 23J4.
23J3	M. Burns	----do----------	12-22-59	792	J	59	2	S; 2½ft, 10sl, dia 1½	---	-----	G	Pl	C	13	D	------	Yield 10 gpm; Ca, L.
23J4	V. Rouch	J. Henderson	8-20-59	792	J	60	2	S; 3ft, 60g, dia 1½	48	12	Sd,G	Pl	C	18	D	------	Yield 15 gpm; L.

29/2-24D1	P. Zartman	McGrew Well Drilling Co.	1955	790	J	34	2	S; 2½ft, 10sl	32	2	G	Pl	C	---	D	L1/4	Yield 13 gpm; fine gravel overlain by 32 ft blue clay; blue clay at 34 ft; Ca.
24E1	R. E. Mullens	J. Henderson	7-16-59	798	J	65	2	S; 3ft, 60g, dia 1½	60	5	G,Sd	Pl	C	19	D	J1/4	Ca, L.
24N1	O. Baker	McGrew Well Drilling Co.	1957	790	Do	18	1½	---do---	15	4	G	Pl	C	12	S	P	Gravel overlain by 15 ft clay.
26J1	V. Stingley	J. Henderson	9-30-59	802	J	40	2	S; 2½ft, 10sl, dia 1½	36	4	Sd	Pl	C	14	S	L	Yield 15 gpm; sand overlain by 36 ft blue sandy clay; Ca.
30C1	L. Rouch	Rochester Well and Pump Co.	8-16-50	782	J	43	2	S; 3ft, 60g, dia 1½	---	-----	G	Pl	---	21	D	-------	Ca.
32N1	G. Wilson	J. Henderson	2- 2-60	785	J	78	2	S; 3½ft, 60g, dia 1½	71	7	G	Pl	C	24	D	-------	Yield 17 gpm; Ca, L.
32P1	L. Siders	McGrew Well Drilling Co.	12- 7-59	802	J	82	2	S; 2½ft, 10sl, dia 1½	35	27	Sd,G	Pl	---	35	D	-------	Yield 10 gpm; Ca, L.
35H1	E. Richter	----do----------	10- 2-57	802	J	803	2	S; 2½ft, 10sl	54	4	G,Sd	Pl	C	20	D	-------	Ca, L.
35H2	----do----------	----do----------	1957	803	J	49	2	----------	44	5	G	Pl	C	17	---	-------	Coarse blue gravel overlain by 44 ft blue clay.
29/3- 3B1	W. Gottschalk	----do----------	--------	830	J	78	2	S; 2½ft, 10sl	72	6	Sd	Pl	C	45	D,S	J	Yield 10 gpm; Ca, L.
3F1	F. Gottschalk	Rochester Well and Pump Co.	3-29-51	822	J	80	2	S; 3ft, 60g, dia 1½	---	-----	G	Pl	---	32	---	-------	Ca.
3L1	F. Ross	McGrew Well Drilling Co.	7-25-59	821	J	52	2	S; 3ft, 10sl, dia 1½	42	10	G	Pl	C	30	S	-------	Yield 10 gpm; L.
4P1	W. Gottschalk	----do----------	9-19-55	812	J	42	2	S; 3ft, dia 1½	---	-----	G	Pl	---	29	S	J1/2	Gravel overlain by yellow and blue clay.
7P1	C. Jewell	----do----------	10-27-59	800	J	57	2	S; 3ft, 10sl, dia 1½	52	5	G	Pl	C	18	D,S	J	Yield 10 gpm; Ca, L.
10H1	G. Baker	----do----------	1956	832	J	106	2	----do----------	102	4	G	Pl	C	45	D	J	Gravel overlain by 102 ft blue soft clay; Ca.
10N1	C. M. Pearson	----do----------	7-18-60	800	J	86	2	S; 3ft, 12sl, dia 1½	82	4	G	Pl	C	4	D	-------	Yield 10 gpm; L.
15D1	P. Whitesel	Rochester Well and Pump Co.	3-18-57	800	J	181	2	S; 3ft, 50g, dia 1½	---	-----	G,Sd	Pl	---	28	D	-------	Yield 8 gpm; Ca.
15E1	J. Vandiven	----do----------	7- 4-50	810	J	47	2	----------	---	-----	G	Pl	---	7	---	-------	Yield 8 gpm.
15E2	H. A. Hoesler	----do----------	6-15-56	810	J	137	2	S; 3ft, 50g	---	-----	G	Pl	C	8	D	L	Yield 14 gpm; Ca, L.
15E3	L. Emmelman	----do----------	6-13-56	810	J	131	2	----do----------	---	-----	G	Pl	C	8	D	L	Yield 12 gpm; L.
15E4	H. E. Spohn	McGrew Well Drilling Co.	1956	800	J	75	2	----------	71	4	G	Pl	C	2	D	-------	Brown medium gravel overlain by 71 ft blue soft clay.
15E5	Mrs. Gerrard	Rochester Well and Pump Co.	6-13-50	810	J	131	2	----------	125	6	G,Sd	Pl	C	7	D	-------	Yield 13 gpm.
15J1	C. R. Burns	----do----------	5-15-59	823	J	55	2	S	---	-----	G	Pl	---	12	D	-------	Yield 12 gpm.
15M1	W. H. Strauss	----do----------	8-14-59	813	J	41	2	S; 2ft, 30sl, dia 1	29	12	Sd,G	Pl	C	22	D	-------	Yield 16 gpm; Ca, L.
16H1	W. Burns	----do----------	9-25-50	805	J	222	2	S; 3ft, 10sl	---	-----	G	Pl	---	141	D	-------	Yield 13 gpm; Ca.
16H2	E. Shaffer	J. Henderson	9-10-59	805	J	32	--	S; 2ft, 10sl, dia 1½	29	8	G,Sd	Pl	C	9	D	P	L.
16H3	Mr. Robbins	----do----------	7-21-59	805	J	23	--	S; 2½ft, 60g, dia 1½	21	3	G,Sd	Pl	C	8	D	P	L.
16H4	G. King	McGrew Well Drilling Co.	7-16-60	805	J	76	2	S; 3ft, 10sl, dia 1½	73	3	G	Pl	C	15	D	-------	Yield 10 gpm; L.
16J1	Mr. Ehrhardt	Rochester Well and Pump Co.	7- 1-52	800	Dr	46	4	S; 3ft, 25sl	---	-----	G	Pl	---	20	D	L	Ca.
16R1	D. Webster	----do----------	3- 2-56	800	J	46	2	----------	---	-----	G,Sd	Pl	---	2	D	P	Ca.
16R2	----do----------	----do----------	9-27-57	800	J	91	2	S; 2½ft, 50g, dia 1½	78	13	Sd,G	Pl	C	3	D	J	L.
21L1	E. and C. Rontschler	McGrew Well Drilling Co.	1956	810	J	110	2	S; 2½ft, 10sl, dia 1½	---	-----	Sd,G	Pl	---	39	S	L	Yield 15 gpm; Ca.
22D1	E. Kuch	Rochester Well and Pump Co.	6- 7-54	798	J	57	2	S; 3ft, 60g	---	-----	Sd,G	Pl	C	5	D	J1/4	
22D2	J. A. Nellinger	----do----------	4-23-55	798	J	49	2	S; 3ft, 50g, dia 1½	---	-----	G	Pl	---	1	D	J1/4	
22E1	R. Miller	----do----------	4- 9-53	810	J	39	2	S; 3ft, 16sl	---	-----	G	Pl	---	12	D	-------	
22E2	P. and F. Horr	----do----------	4-18-57	810	J	113	2	S; 3ft, 50g, dia 1½	88	25	Sd,G	Pl	C	36	D	-------	Yield 7 gpm; L.
22E3	Mr. Davis	----do----------	5- 7-57	805	J	51	2	----do----------	---	-----	G	Pl	---	3	D	J	Yield 17 gpm; Ca.
27R1	E. Bassler	C. W. Kendall	7-12-49	825	Dr	1,322	8-5½	----------	---	-----	-----	---	---	---	---	-------	Oil test; bedrock at 200 ft.
28F1	O. Hartzler	Rochester Well and Pump Co.	2- 4-54	815	J	57	2	S; 3ft, 10sl	54	3	G	Pl	C	20	D,S	J1/3	Fine to medium gravel overlain by 54 ft blue clay; Ca.
30/1- 1C1	C. L. Geyer	Fisher Bros. Well Drilling Co.	8-28-60	760	J	80	2½	S; 3ft, 60g, dia 1½	44	36	G,Sd	Pl	C	15	D	-------	Yield 12 gpm; Ca, L.
2L1	F. C. Hudkins	Rochester Well and Pump Co.	10-10-55	772	J	111	2	S; 3ft, 50g, dia 1½	---	-----	Sd,G	Pl	---	28	D,S	J1/3	Ca.
5A1	C. Somers	Fisher Bros. Well Drilling Co.	7-10-59	765	J	84	2¼	S; 3ft, 60g, dia 1½	70	14	Sd,G	Pl	C	34	D	L1/4	Yield 14 gpm; Ca, L.
6G1	H. E. Moore	E. Brooker, Jr.	2-24-56	727	J	69	2	S; 3ft, 60g	56	13	Sd,G	Pl	C	---	D	-------	Flows; yield 17 gpm; L.
6G2	Mr. Sholby	----------	--------	728	J	-----	2	----------	---	-----	Sd,G	Pl	C	---	D	-------	Flows; discharge measured 2 gpm, 9-18-57; water level measured 2.8 ft above lsd, 9-18-57; Ca.
6G3	R. Lowe	E. Brooker	About 1925	731	J	84	2	----------	---	-----	G	Pl	C	---	D	-------	Flows; discharge estimated 5 gpm, 9-18-57; Ca.
6H1	Mr. Newton	----------	--------	728	J	-----	2	----------	---	-----	Sd,G	Pl	C	---	D	-------	Flows; discharge measured 12 gpm, 9-18-57; water level measured 0.7 ft above lsd, 9-18-57; Ca.

Table 3.--Records of wells and test holes in Fulton County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
30/1- 6H2	S. Pittenger	Fisher Bros. Well Drilling Co.	8-16-60	724	J	82	2½	----------	30	32	G,Sd	Pl	C	--	D	--------	Flows; L.
6H3	K. Appleman	----do----------	4-22-60	727	J	55	2½	----------	---	-----	G	Pl	C	--	D	--------	Flows; gravel overlain by 52 ft blue clay and sand.
6J1	R. Jones	J. Masters	7- 2-59	733	J	64	2	S; 3½ft, 10sl, dia 1¼	46	18	G,Sd	Pl	C	3	D	--------	Yield 12 gpm; L.
6K1	H. C. Sutton	E. Brooker, Jr.	Spring 1954	727	J	62	2	----------	---	-----	G	Pl	C	--	D	--------	Flows; discharge measured 10 gpm, 9-18-57; water level measured 2.1 ft above lsd, 9-18-57; Ca.
6L1	F. Jahnke	Fisher Bros. Well Drilling Co.	7- 9-60	733	J	66	2½	S; 3½ft, p, dia 2½	60	6	Sd,G	Pl	C	--	D	--------	Flows; sand and gravel overlain by 60 ft blue clay.
6L2	G. Mitchell	----do----------	7-31-59	730	J	65	2½	S; 3ft, 60g, dia 1¼	---	-----	Sd,G	Pl	---	4	D	--------	Yield 14 gpm; sand and gravel overlain by 60 ft sand and clay.
6P1	Mr. Salathe	----------	--------	730	J	-----	2	S; 3ft, 60g, dia 1¼	---	-----	Sd,G	Pl	C	--	D	--------	Flows; discharge measured 3 gpm, 9-18-57; water level measured 1 ft above lsd, 9-18-57; Ca.
6P2	Clark's Park	Rochester Well and Pump Co.	4-12-60	730	J	62	2	S; 3ft, 50g, dia 1¼	9	53	Sd,G	Pl	C	+2	D,P	--------	Yield 18 gpm; Ca, L.
6R1	W. Gollner	----do----------	8-16-57	728	J	72	2	S; 3ft, 25sl	---	-----	Sd	Pl	C	--	D	--------	Flows; yield 17 gpm; L.
9E1	F. Sulak	Fisher Bros. Well Drilling Co.	7-12-60	762	J	88	2	S; 3ft, 60g, dia 1¼	61	27	G,Sd	Pl	C	22	D,S	J1/2	Yield 15 gpm; Ca, L.
12P1	J. M. Holt	----do----------	8-26-59	756	J	90	4½	S; 5ft, 20sl, dia 3	---	-----	Sd,G	Pl	C	10	D,S	--------	Dd 2½ ft after 2 hr pumping 40 gpm; L.
14R1	R. Loebcke	----do----------	9- 8-60	778	J	112	4½	S; 7ft, 18sl, dia 3½	---	-----	G,Sd	Pl	C	31	D,S	--------	Dd 10 ft after 4 hr pumping 60 gpm; L.
27D1	Winamac Coil Spring Corp.	A. L. Cox and Son	--------	772	Dr	117	10	----------	---	-----	Sd,G	Pl	C	--	O	--------	Observation well Fulton 6; water level measured 20.71 ft below lsd, 5-11-56; see log well 27F1.
27F1	Town of Kewanna	Layne-Northern Co., Inc.	7- 5-51	775	Dr	133	12	S; 10ft	119	14	G,Sd	Pl	C	24	P	T15	Dd 6 ft after 8 hr pumping 330 gpm; Ca, L.
34Q1	L. Maddox	Rochester Well and Pump Co.	4- 6-51	782	J	97	2	S; 2ft, 30sl	---	-----	G	Pl	---	15	---	--------	Yield 20 gpm.
30/2- 1E1	O. McMahan	J. Henderson	7-14-59	763	J	38	2	S; 3ft, 60g, dia 1¼	26	13	Sd	Pl	C	15	D,S	J	Ca, L.
3D1	Burton Methodist Church	Rochester Well and Pump Co.	9-21-53	782	J	95	2	S; 3ft, 10sl	---	-----	G	Pl	---	45	P	--------	Yield 10 gpm; Ca.
4K1	W. Konnell	----do----------	10- 8-59	757	J	56	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	---	16	D,S	--------	Yield 14 gpm.
4L1	L. Conover	----do----------	5-26-55	760	J	62	2	S; 3ft, 50g	---	-----	G	Pl	---	11	D,S	L1/4	Yield 13 gpm.
4N1	J. Braman	----do----------	7-17-56	752	J	53	2	S; 3ft	---	-----	Sd	Pl	---	10	S	L	Yield 15 gpm; Ca, L.
5P1	H. J. Darnell	----do----------	11-14-52	750	J	50	2	S; 3ft, 25sl	---	-----	G	Pl	---	8	D	--------	Ca.
8A1	R. Wilson	----do----------	10-18-55	770	J	74	2	S; 3ft	---	-----	G	Pl	C	11	D,S	L	Ca.
8A2	----do----------	----do----------	8-15-56	770	J	38	2	S; 2½ft, 50g	---	-----	Sd	Pl	---	10	D	--------	Yield 11 gpm; Ca, L.
12G1	W. W. Friedrich	----do----------	5- 2-51	777	J	56	2	S; 3ft, 60g	---	-----	G	Pl	---	15	D	--------	Yield 13 gpm; Ca.
12J1	G. Moody	----do----------	11- 2-50	777	J	52	2	S; 3ft, 50g, dia 1¼	27	25	Sd,G	Pl	C	16	D,S	L	Yield 16 gpm; Ca, L.
17C1	J. O. Wells	----do----------	6- 1-50	755	J	48	2	S; 3ft, dia 1¼	---	-----	G	Pl	---	10	S	L	Yield 13 gpm.
17J1	----do----------	----do----------	9- 4-50	751	J	46	2	S; 3ft, 60g	---	-----	G	Pl	---	--	S	L	Ca.
18C1	P. S. Rumley	E. Brooker, Jr.	8-29-53	751	J	47	2	----do----------	34	13	Sd,G	Pl	C	12	D	L	Yield 15 gpm; Ca, L.
18N1	J. McKinney	Fisher Bros. Well Drilling Co.	2-57	772	Dr	185	4	Ou	---	-----	Sd,G	Pl	C	32	D,S	J1	Yield 30 gpm sand and gravel overlain by 166 ft blue sticky clay and 20 ft red sand and clay; Ca.
19E1	H. Johnston	Rochester Well and Pump Co.	1-21-54	767	J	56	2	S; 3ft, dia 1¼	---	-----	G	Pl	---	18	D,S	J1/4	Ca.
20C1	G. Wilson	----do----------	5-26-56	755	J	50	2	S; 3ft, 50g, dia 1¼	10	40	Sd,G	Pl	U	10	D	J	Yield 13 gpm; Ca, L.
23C1	R. Wagoner	----do----------	5-12-52	783	J	50	2	S; 3ft	---	-----	G	Pl	---	4	D,S	J1/2	Ca.
24R1	C. Neff	Fisher Bros. Well Drilling Co.	8-20-59	777	J	43	2½	S; 3ft, 60g, dia 1¼	---	-----	G	Pl	C	14	D	--------	Ca, L.
25H1	G. Carlson	Rochester Well and Pump Co.	4-25-56	781	J	38	2	S; 3ft, 50g, dia 1¼	24	15	Sd,G	Pl	C	5	D	J1/4	Yield 12 gpm; L.

30/2-30N1	T. M. Lamb	Fisher Bros. Well Drilling Co.	9-29-59	762	J	48	2½	S; 3ft, 60g, dia 1½	---	-----	G,Sd	Pl	C	16	D,S	-------	Yield 14 gpm; L.
34D1	W. H. Boose	McGrew Well Drilling Co.	7- 9-59	767	J	83	2	S; 2½ft, 10sl, dia 1½	---	-----	Sd,G	Pl	C	8	D,S	-------	Yield 10 gpm; Ca, L.
35F1	F. Stahler	Rochester Well and Pump Co.	4- 3-58	775	J	55	2	S; 3ft, 18sl	---	-----	Sd	Pl	---	10	D,S	L1/4	Yield 13 gpm; sand from 36-55 ft; record missing from 0-36 ft; Ca.
30/3- 1E1	D. K. Stimson	----do----------	7-22-55	805	Dr	77	4	S; 3ft, 20sl	---	-----	G	Pl	---	30	---	S1	Yield 60 gpm; for bulk milk plant; Ca.
1E2	G. W. Krom	----do----------	4-22-49	808	J	81	2	S; 3ft, 10sl	---	-----	G	Pl	---	23	D,S	-------	
2J1	P. McClung	Fisher Bros. Well Drilling Co.	11- 7-59	802	J	80	2½	S; 3ft, 60g, dia 1½	56	4	G	Pl	C	30	D,S	-------	Yield 14 gpm; gravel overlain by 56 ft blue clay; Ca.
3W1	E. Peterson	Rochester Well and Pump Co.	7-29-57	782	Dr	67	4	S; 4ft, 30sl	---	-----	Sd,G	Pl	---	16	---	J1/2	Yield 13 gpm; Ca, L.
4B1	E. Barkman	----do----------	3-24-50	782	J	60	2	S; 3ft, 60g, dia 1½	---	-----	Sd,G	Pl	---	5	---	J1/2	
4B2	----do----------	----do----------	1-53	782	J	58	2	S; 3ft	---	-----	G	Pl	---	12	S	-------	Ca.
4H1	R. Clinton	----do----------	8- 2-49	783	J	59	2	S; 3ft, 60g	---	-----	G	Pl	---	8	---	-------	Yield 15 gpm.
4N1	Shrehan Pipe Line Co.	----do----------	3-23-57	775	J	42	2	S; 3ft, 50g, dia 1½	---	-----	G	Pl	---	12	Do	-------	Yield 20 gpm.
4Q1	R. Caywood	----do----------	8-10-57	789	J	66	2	----do----------	---	-----	Sd,G	Pl	---	18	D	-------	Yield 13 gpm; Ca, L.
5B1	W. Scott	----do----------	10-17-59	782	J	42	2	----do----------	35	7	Sd,G	Pl	C	12	D	J1/2	Yield 18 gpm; Ca, L.
5D1	City of Rochester	----do----------	3-29-55	783	J	61	4	S; 3ft, 30sl	34	27	Sd,G	Pl	C	--	Ac	J3	Flowed 33 gpm from pipe 6 ft below lsd; L.
5G1	E. Jones	----do----------	2-24-54	773	J	70	2	S; 3ft	8	62	Sd,G	Pl	U	8	D	-------	
5L1	Forrest Farm Products	----------	--------	774	Dr	64	6	----------	---	-----	Sd,G	Pl	U?	--	O	-------	Observation well Fulton 5; water level measured 12.71 ft below lsd, 2-8-56.
5Q1	Rochester Ice and Coal Co.	Rochester Well and Pump Co.	11-15-49	774	J	98	4	S; 6ft, 30sl	---	-----	Sd,G	Pl	---	11	I	C1	Yield 50 gpm.
5Q2	----do----------	----do----------	8-27-55	774	J	51	2	Oo	---	-----	Sd	Pl	---	--	---	-------	Return well.
5R1	Rochester Foundry	----do----------	4-11-57	777	J	62	4	S; 4ft, 20sl	---	-----	G	Pl	---	7	---	-------	Yield 100 gpm.
5R2	Armour Creameries	Strommel and Hill	5- 8-44	778	Dr	62	10	S; 10ft	---	-----	G,Sd	Pl	---	8	J	T15	Dd 20 ft after 5 hr pumping 400 gpm; screen, upper 2 ft 25 sl, 2 ft 35 sl, 4 ft 50 sl, lower 2 ft 20 sl; see log well 5R3.
5R3	----do----------	----do----------	11- 8-45	778	Dr	77	10	S; 20ft	---	-----	Sd,G	Pl	---	--	I	T25	Yield 450 gpm; screen upper 8 ft 50 sl, 2 ft 35 sl, lower 10 ft 20 sl; L.
6D1	T. J. Gaumer	Rochester Well and Pump Co.	1-18-54	746	J	56	2	S; 3ft, dia 1½	---	-----	G	Pl	---	14	D	-------	Ca.
6R1	J. R. Newell	----do----------	8-29-53	775	J	56	2	S; 3ft	---	-----	Sd,G	Pl	---	12	D	-------	Sand and gravel overlain by yellow and blue clay.
7A1	J. Inman	----do----------	2-12-53	779	J	47	2	S; 2½ft, 25sl	---	-----	G	Pl	---	10	D	L1/4	
7A2	Mr. Snyder	McGrew Well Drilling Co.	1956	771	J	55	2	----------	51	4	G	Pl	C	9	D	-------	Blue fine gravel overlain by 51 ft blue clay.
7A3	W. Downs	Rochester Well and Pump Co.	4-12-57	778	J	54	2	S; 3ft, dia 1½	---	-----	G	Pl	---	11	D	J	Yield 25 gpm; Ca.
7B1	D. Farthing	McGrew Well Drilling Co.	1- 2-60	777	J	52	2	S; 3ft, 10sl, dia 1½	34	18	Sd,G	Pl	C	14	D	-------	Yield 10 gpm; Ca, L.
7F1	D. Smiley	Rochester Well and Pump Co.	4-21-56	777	J	51	2	S; 3ft, 12sl	---	-----	G	Pl	---	12	S	J1/4	Yield 15 gpm.
7K1	J. Bick	----do----------	6-23-50	787	J	60	2	S; 3ft, dia 1½	---	-----	G	Pl	---	16	---	J1/2	Yield 12 gpm.
7K2	----do----------	----do----------	4-12-56	787	J	61	4	S; 4ft, 20sl	---	-----	Sd,G	Pl	---	21	---	J1/2	Yield 60 gpm; L.
7Q1	D. D. Lavengood	----do----------	4- 8-54	783	J	58	2	S; 3ft, 10sl	---	-----	G	Pl	---	8	D	J	Yield 14 gpm.
7R1	T. Enyart	----do----------	9- 3-54	792	J	64	2	----do----------	---	-----	G	Pl	---	27	P,I	J1/2	Yield 12 gpm.
7R2	H. R. and E. L. Alspach	----do----------	5- 2-56	783	J	43	2	----------	---	-----	G	Pl	---	13	---	-------	Yield 17 gpm.
7R3	H. Denton	----do----------	5- 4-57	790	J	61	2	S; 3ft, 60g, dia 1½	---	-----	G	Pl	---	13	D	-------	Yield 15 gpm.
8A1	City Rochester	----------	1898	774	Du	42	1¼	----------	---	-----	Sd,G	Pl	U	--	O	-------	Observation well Fulton 2; water level measured 11.57 ft below lsd, 1-15-36.
8A2	----do----------	Layne-Northern Co., Inc.	1-12-34	774	Dr	96	50-26	Gp, S; 25 ft, dia 26	42	56	Sd,G	Pl	C	6	P	T15	Dd 15 ft pumping 1,000 gpm; Ca, L.
8A3	----do----------	Harmon-Ness Co.	1-17-28	774	Dr	100	50-26	S; 25ft, dia 26	---	-----	Sd,G	Pl	C	5	P	T15	Dd 25 ft pumping 800 gpm; see log well 8A2.
8B1	----do----------	----------	--------	780	Du	25	1¼	----------	---	-----	Sd,G	Pl	U	--	O	-------	Observation well Fulton 1; water level measured 17.16 ft below lsd, 10-15-35.
8C1	D. Becker	Rochester Well and Pump Co.	9- 1-52	778	J	55	2	S; 3ft, dia 1½	---	-----	G	Pl	---	12	D	-------	
8D1	L. Baker	----do----------	6-23-56	770	J	57	2	S; 3ft	---	-----	G	Pl	---	6	D	-------	
8E1	L. Bick	----do----------	11-21-54	780	J	49	4	S; 2ft, 30sl	36	13	Sd,G	Pl	---	--	I	-------	Dd 35 ft after 3 hr pumping 60 gpm; L.
8E2	A. Goodrich	----do----------	2-20-52	782	J	61	2	S; 3ft, 50g, dia 1½	---	-----	G	Pl	---	15	P	-------	
8E3	B. Schrome	----do----------	5-16-56	782	J	63	2	S; 2½ft, 50g, dia 1½	---	-----	G,Sd	Pl	---	18	D	J1/4	Yield 12 gpm.
8J1	W. M. Swango	----do----------	3-27-56	783	J	40	2	----do----------	30	10	G	Pl	C	12	D	P	Yield 12 gpm; Ca, L.

Table 3.--Records of wells and test holes in Fulton County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
30/3- 8J2	E. MacFarland	Rochester Well and Pump Co.	8-10-59	783	J	43	2	S; 3ft, 50g, dia 1¼	33	10	G,Sd	Pl	C	14	D	P	Yield 16 gpm; Ca, L.
8H1	A. K. Smith	----do----------	8- 3-52	785	J	55	2	S; 3ft, 18sl	---	-----	G	Pl	---	14	D	J1/2	Yield 13 gpm; Ca.
8P1	Borghoff Cafe	----do----------	5-25-50	787	J	61	2	S; 3ft, dia 1¼	---	-----	G	Pl	---	13	Ac	-------	Yield 14 gpm; Ca.
8R1	R. Flynn	----do----------	3- 1-57	793	J	40	2	S; 3ft, 60g, dia 1¼	---	-----	G	Pl	---	16	---	P	Yield 12 gpm.
9K1	City of Rochester	----------	--------	777	Du	28	1½	----------	---	-----	Sd,G	Pl	U	--	O	-------	Observation well Fulton 3; water level measured 10.24 ft below lsd, 10-17-35.
9K2	U. S. Government	Rochester Well and Pump Co.	6-16-53	778	Dr	88	4	S; 3ft, 25sl	8	58	Sd,G	Pl	U	8	---	T3	Yield 60 gpm; for fish hatchery; sand and gravel from 0-86 ft.
9K3	Bessler Drug Store	----do----------	5- 5-54	778	J	82	2	S; 3ft	8	54	Sd,G	Pl	U	8	Ac	-------	Yield 12 gpm; sand and gravel from 0-82 ft.
9H1	M. Fesco	----do----------	6-21-51	784	J	56	2	S; 2ft, 30sl	---	-----	G	Pl	---	--	D	-------	Yield 5 gpm.
9J1	Schroer Root Beer Stand	----do----------	5- 3-54	783	J	42	2	S; 3ft	---	-----	G	Pl	---	10	P	-------	Yield 12 gpm.
9J2	D. Mkendzich	----do----------	9-21-56	787	J	43	2	S; 2½ft, 60g	12	31	Sd,G	Pl	U	12	D	J	Yield 12 gpm; Ca, L.
9J3	Mr. Bowdinburg	McGrew Well Drilling Co.	1957	785	Du	39	1½	S; 3ft, 10sl, dia 1½	6	33	G,Sd	Pl	U	6	--	-------	Yield 12 gpm; sand and gravel from 0-39 ft.
9J4	D. Harvey	Rochester Well and Pump Co.	7-11-57	784	J	42	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	---	7	D	J	Yield 15 gpm.
9K1	A. Sherbondy	----do----------	5-16-52	782	J	64	2	S; 3ft, dia 1¼	---	-----	G	Pl	---	6	D	-------	
9K2	O. Rockwell	----do----------	8-12-52	782	J	60	2	----do----------	---	-----	G	Pl	---	5	D	-------	
9K3	W. Howe	----do----------	6-23-58	785	J	67	2	S; 4ft	10	57	Sd	Pl	U	10	D	C	Yield 17 gpm; L.
9K4	W. P. Sindlinger	----do----------	8- 4-58	782	J	56	2	S; 3ft, 60g, dia 1¼	6	50	Sd,G	Pl	U	6	D	L	Yield 15 gpm; pea-sized gravel overlain by 53 ft sand and gravel.
9K5	J. Barnett	----do----------	7-30-56	786	J	67	2	----do----------	9	58	Sd,G	Pl	U	9	Do	-------	Yield 14 gpm; L.
9K6	W. Billman	----do----------	10- 2-57	782	J	61	2	S; 2½ft, 50g, dia 1¼	7	54	Sd,G	Pl	U	7	D	L	Yield 30 gpm; sand and gravel from 0-61 ft.
9Q1	Mr. Ahnert	----do----------	8-16-54	782	J	61	2	S; 3ft, 12sl	---	-----	Sd,G	Pl	---	10	D	-------	
9Q2	L. Rishling	----do----------	12-13-54	782	J	61	2	S; 3ft, 50g	4	57	Sd,G	Pl	U	4	D	-------	Sand and gravel from 0-61 ft; Ca.
9Q3	M. Jilbert	----do----------	12- 4-56	783	J	61	2	S; 3ft, dia 1	12	49	Sd,G	Pl	U	12	D	-------	Yield 15 gpm; L.
9R1	Dr. Mitchell	----do----------	8-23-56	785	J	90	2	S; 2½ft, 12sl	10	80	Sd,G	Pl	U	10	D	J1/4	Yield 12 gpm; sand and gravel from 0-90 ft.
9R2	H. O. Cooper	----do----------	5-10-57	780	J	60	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	---	4	D	J1/2	Yield 50 gpm; Ca.
10E1	Airport Grocery	----do----------	4-28-54	789	J	42	2	S; 3ft, 25sl	---	-----	G	Pl	---	10	P	J1/4	
10E2	Mrs. Kosling	----do----------	9-11-56	786	J	38	2	S; 3ft, 60g	5	33	Sd,G	Pl	U	5	D	L	Yield 13 gpm; sand and gravel overlain by 35 ft soil and sand.
10F1	H. Munneshagen	----do----------	3-10-56	782	J	103	2	S; 3ft, 50g, dia 1¼	---	-----	Sd,G	Pl	---	10	D	-------	Yield 13 gpm; Ca, L.
10F2	G. Dolon	----do----------	5-14-56	785	J	77	2	----do----------	---	-----	Sd,G	Pl	---	7	D	-------	Yield 15 gpm; Ca, L.
10G1	L. P. Moore	----do----------	9-22-54	792	J	43	2	----do----------	---	-----	G	Pl	---	15	D	-------	
10J1	R. Miller	----do----------	8-25-59	787	J	40	2	----do----------	29	11	Sd,G	Pl	C	10	D	-------	Yield 16 gpm; Ca, L.
10J2	C. Alstrom	----do----------	3-30-56	790	J	39	2	S; 2½ft, 50g, dia 1¼	12	27	Sd,G	Pl	U	12	D	-------	Yield 13 gpm; Ca, L.
10K1	R. Moore	----do----------	5-18-50	790	J	44	4	S; 25sl	---	-----	G	Pl	---	10	D	-------	Yield 60 gpm.
10K2	J. W. Pyle	----do----------	6- 2-50	785	J	36	2	----------	---	-----	G	Pl	---	12	D	-------	Yield 10 gpm.
10K3	H. Rossington	----do----------	3-20-53	785	J	37	2	S; 3ft	---	-----	G	Pl	---	--	D	J1/4	
10K4	D. Nightlonger	----do----------	11- 7-55	790	J	72	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	C	16	D	J1/4	L.
10K5	V. Smith	----do----------	4-17-52	785	J	39	2	----------	---	-----	G	Pl	---	--	D	-------	Yield 10 gpm; Ca.
10L1	A. Gray	----do----------	9- 8-49	785	J	78	2	S; 3ft, 60g, dia 1¼	---	-----	G	Pl	---	12	D	-------	Yield 15 gpm.
10L2	L. Babcock	----------	1955	787	J	62	2	S; 3ft, dia 1	45	17	Sd,G	Pl	C	15	I	J	Yield 13 gpm; originally drilled to 51 ft; deepened 3-29-56; water level 12 ft below lsd, 3-29-56; L.
10L3	----do----------	Rochester Well and Pump Co.	3-12-56	787	J	42	2	S	10	32	Sd,G	Pl	U	10	D	L1/4	Yield 13 gpm; gravel overlain by 36 ft fine sand.
10M1	Mr. Griffon	----do----------	7-11-54	785	J	80	2	S; 3ft, 50g, dia 1¼	13	67	Sd,G	Pl	U	13	P	J1/4	Yield 12 gpm; sand and gravel from 0-80 ft.
10M2	R. C. Brown	----do----------	12- 7-56	780	J	41	2	S; 2ft, 18sl	6	35	Sd,G	Pl	U	6	D	-------	Yield 13 gpm; gravel overlain by 38 ft top soil and sand.

30/3-10M3	Trustees, H. E. Miller Estate	Rochester Well and Pump Co.	4-18-57	780	J	42	2	S; 3ft, 50g, dia 1¼	---	-----	Sd	Pl	---	10	D	J	Yield 14 gpm; Ca.
10M4	W. Baily	----do----------	6-20-56	780	J	61	2	S; 3ft, 80g	9	52	Sd,G	Pl	U	9	D	-------	Yield 15 gpm; Ca, L.
10M5	P. Wielman	----do----------	4- 6-57	780	J	40	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	---	5	D	L	Yield 13 gpm.
10M6	----do----------	----do----------	4- 8-57	780	J	43	2	----do----------	---	-----	G	Pl	---	6	D	J	Yield 15 gpm.
10M7	C. Milton	----do----------	12-13-54	785	J	39	2	S; 3ft, 18sl	---	-----	Sd,G	Pl	U	--	D	-------	Gravel overlain by red and gray sand.
10M8	J. Nowell	----do----------	8- 3-59	783	J	43	2	S; 3ft, 50g, dia 1¼	8	35	Sd,G	Pl	U	8	D	-------	Yield 16 gpm; Ca, L.
12N1	R. Worner	----do----------	9-19-57	793	J	57	2	----do----------	11	46	Sd,G	Pl	U	11	D	L1/4	Yield 17 gpm; coarse gravel overlain by 53 ft top soil and sand; Ca.
13D1	H. Moore	----do----------	2-28-53	792	J	82	2	S; 25sl	---	-----	G	Pl	---	10	S	L1/4	Yield 13 gpm.
13D2	----do----------	----do----------	9- 5-53	792	J	80	2	S; 3ft, dia 1¼	---	-----	G	Pl	---	12	D	J1/4	Ca.
14E1	Mr. Stephen	----do----------	9-15-54	795	J	85	2	S; 3ft, 12sl	55	30	Sd	Pl	---	--	D,S	J1/3	Ca.
15A1	H. C. Percival	----do----------	9-21-57	790	J	81	2	S; 3ft, 50g, dia 1¼	47	34	Sd	Pl	C	5	D	J1/3	Yield 16 gpm; Ca, L.
15E1	Mr. Butts	----do----------	4-17-54	780	J	73	2	S; 3ft	---	-----	Sd,G	Pl	U	--	D	-------	Yield 15 gpm; sand and gravel from 0-73 ft.
15E2	N. Kendig	----do----------	12- 3-55	780	J	55	2	S; 2½ft, 60g, dia 1½	6	49	Sd	Pl	U	6	D	L1/4	Sand from 0-55 ft.
15E3	W. Moeller	----do----------	10-30-56	780	J	56	2	S; 4ft, 60g	---	-----	G, Sd	Pl	C	5	D	-------	Yield 30 gpm; L.
15E4	R. Blue	----do----------	11- 2-56	780	J	58	2	S; 2ft, 18sl	---	-----	Sd,G	Pl	---	10	D	J	Yield 14 gpm; L.
15E5	C. W. Shaffer	McGrow Well Drilling Co.	7-17-59	780	J	58	2	S; 2½ft, 10sl, dia 1½	---	-----	Sd,G	Pl	C	10	D	-------	Yield 10 gpm; Ca, L.
15F1	Mr. Muller	Rochester Well and Pump Co.	3-16-54	787	J	67	2	S; 3ft, 10sl	---	-----	Sd,G	Pl	---	9	Ir	-------	Yield 15 gpm.
15F2	C. D. Moseley	----do----------	5- 1-56	785	J	41	2	S; 2ft, 12sl	6	35	Sd,G	Pl	U	6	D	J1/4	Yield 11 gpm; gravel overlain by 28 ft sand.
15F3	R. Cloar	----do----------	6- 4-58	783	J	74	2	S; 3ft, 18sl	---	-----	Sd,G	Pl	C	8	D	L	Yield 15 gpm; L.
15F4	Mrs. A. Huddleston	----do----------	11-19-58	787	J	71	2	S; 2ft, 18sl	---	-----	Sd,G	Pl	---	10	D	J1/3	Yield 13 gpm; see log well 15F3.
15F5	N. Gorbon	----do----------	7-30-56	784	J	70	2	S; 3ft, 60g, dia 1¼	---	-----	Sd,G	Pl	C	8	D	J	Yield 17 gpm; L.
15G1	C. Kreigbaum	----do----------	9- 1-53	792	J	50	2	S; 3ft, dia 1½	---	-----	G	Pl	---	--	D	J1/4	
15J1	D. Zimmerman	----do----------	6-16-55	790	J	58	2	S; 3ft, 50g, dia 1	---	-----	G,Sd	Pl	---	10	D	L1/4	Yield 13 gpm.
15R1	J. Tippy	----do----------	3-17-54	790	J	42	2	S; 3ft	---	-----	G	Pl	---	10	D	L1/4	Ca.
16A1	Loyal Order of Moose	Layne-Northern Co., Inc.	8-28-48	778	Dr	64	4	S; 10ft	4	60	Sd,G	Pl	U	4	P	-------	Dd 1.2 ft pumping 14 gpm; L.
16B1	O. E. Henderson	Rochester Well and Pump Co.	6- 2-55	782	J	83	2	S; 3ft, 50g, dia 1¼	---	-----	Sd,G	Pl	---	9	D	J1	Yield 17 gpm.
16F1	K. Zartman	McGrow Well Drilling Co.	1957	814	J	70	2	----------	39	31	G,Sd	Pl	U	39	D	-------	Brown sandy gravel overlain by 35 ft blue clay.
16F2	F. K. Jones	Rochester Well and Pump Co.	11-17-58	820	J	102	2	S; 3ft, 50g, dia 1¼	---	-----	Sd,G	Pl	---	50	D,S	J	Yield 15 gpm; L.
16F3	R. Hopper	----do----------	7- 6-59	805	J	82	2	S; 3ft, 50g, dia 1¼	51	11	Sd,G	Pl	C	36	D	-------	Yield 15 gpm; L.
16F4	E. F. Router	----do----------	7- 7-59	810	J	80	2	S; 2½ft, 50g, dia 1¼	43	17	Sd,G	Pl	C	43	D	-------	Yield 16 gpm; see log well 16F4.
16G1	L. Cullivan	----do----------	9-26-57	800	J	50	2	S; 3ft, 50g, dia 1¼	24	26	G,Sd	Pl	U	24	--	-------	L.
16H1	N. R. Goodman	----do----------	8- 3-55	786	J	55	2	S; 2½ft, 50g, dia 1½	4	51	Sd,G	Pl	U	4	D	J1/4	Yield 13 gpm; sand and gravel from 0-55 ft.
16H2	W. E. Sipson	----do----------	9- 6-55	787	J	55	2	S; 3ft, 50g, dia 1¼	---	-----	G	Pl	---	16	D	J1/4	
16H3	D. Davis	----do----------	8-18-58	778	J	68	2	S; 3ft, 60g	48	19	Sd,G	Pl	C	4	D	J	Yield 14 gpm; L.
16H4	L. Miller	----do----------	10-20-56	778	J	62	2	----do----------	---	-----	Sd,G	Pl	---	6	D	J	Yield 12 gpm; L.
16H5	O. J. Barger	McGrow Well Drilling Co.	1957	787	J	52	2	S; 3ft, 10sl, dia 1½	---	-----	G	Pl	---	5	D	-------	L.
16H6	E. W. Sea	Rochester Well and Pump Co.	10-10-56	778	J	58	2	S; 3ft, 60g, dia 1¼	0	52	Sd,G	Pl	U	6	D	J	Coarse gravel overlain by 54 ft sand; Ca.
16K1	W. Morris	McGrow Well Drilling Co.	8-18-57	872	J	125	2	S; 2½ft	100	25	G	Pl	---	100	D	J2	Yield 12 gpm; Ca, L.
16M1	J. Vrana	Rochester Well and Pump Co.	10-17-56	808	J	59	2	S; 2½ft, 50g, dia 1¼	40	19	Sd	Pl	U	40	D	J1/2	Yield 12 gpm; Ca, L.
17A1	R. McGriff	----do----------	9-30-52	802	J	46	2	S; 3ft, 10sl	---	-----	G	Pl	---	30	D	-------	
17B1	K. Castleman	----do----------	1949	797	J	46	2	S; 3½ft, 60g	---	-----	Sd	Pl	---	25	--	J1/2	
17C1	A. Oldfather	----do----------	10-22-57	787	J	43	2	S; 2ft, 50sl	12	31	Sd	Pl	U	12	D	L	Yield 12 gpm; Ca, L.
17H1	A. Weaver, Jr.	----do----------	8-22-53	803	J	57	2	S; 3ft, 10sl	---	-----	G	Pl	---	40	S	J1/2	Yield 12 gpm.
17K1	R. Smiley	----do----------	5- 4-50	807	J	64	2	----------	---	-----	Sd	Pl	---	27	--	-------	
17K2	----do----------	----do----------	9-20-56	808	J	49	2	S; 3ft, 60g, dia 1¼	---	-----	G	Pl	---	34	--	J1/2	Yield 10 gpm.
17P1	C. Richardson	----do----------	8-15-51	802	J	40	2	S; 25sl	---	-----	G	Pl	---	--	D	J1/2	
17P2	----do----------	----do----------	9-11-51	802	J	82	2	S; 10sl	---	-----	G	Pl	---	30	D	-------	
18B1	C. Blek	----do----------	10-15-51	783	J	47	2	----do----------	---	-----	G	Pl	---	13	D	-------	Yield 13 gpm.
18H1	H. Sinnamon	----do----------	5-13-55	795	J	38	2	S; 2½ft, 50sl, dia 1½	---	-----	G	Pl	---	33	N	-------	Yield 12 gpm.
20E1	O. McMahan	J. Henderson	7-26-59	796	J	34	2	S; 3ft, 10sl, dia 1½	---	-----	G	Pl	---	--	S	J	Yield 20 gpm; Ca, L.
21F1	L. Swick	McGrow Well Drilling Co.	6- 2-60	810	J	37	2	S; 2½ft, 10sl, dia 1½	21	16	Sd,G	Pl	C	15	S	J	Yield 10 gpm; Ca, L.
21L1	H. Carruthers	Rochester Well and Pump Co.	3-28-51	811	J	38	2	S; 3ft, 60g, dia 1¼	---	-----	G	Pl	---	18	D	-------	Ca.
23E1	B. Burton	----do----------	4-11-55	787	Dr	149	4	S; 3ft, 30sl	7	142	Sd,G	Pl	U	7	D	91-1/2	Sand and gravel from 0-149 ft; blue clay at 149 ft; Ca.
24H1	T. Robers	----------	11- 1-49	802	Dr	1,263	8½-6½	----------	---	-----	-----	---	---	--	--	-------	Oil test; bedrock at 248(?) ft.
28J1	G. S. Van Hman	Rochester Well and Pump Co.	3-13-56	790	J	61	2	S; 3ft	---	-----	G,Sd	Pl	---	--	P	J1/2	Ca.

Table 3.--Records of wells and test holes in Fulton County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
30/3-28M1	H. Taylor	Rochester Well and Pump Co.	10-20-55	808	J	44	2	S; 3ft, dia 1¼	41	3	G	Pl	C	22	D,S	L1/4	Gravel overlain by 41 ft yellow clay; Ca.
26N1	Mr. Ankerstrand	----do----------	8-26-55	823	J	83	2	S; 2½ft, 10sl	70	13	Sd,G	Pl	C	33	D	L	Sand and gravel overlain by 70 ft blue clay; Ca.
27J1	C. C. Wagoner	----do----------	9-19-51	832	J	103	2	S; 2ft, 30sl	---	------	G	Pl	---	--	D	J1	Yield 8 gpm; Ca.
27N1	M. C. Severns	----do----------	8-29-52	828	J	68	2	S; 3ft	---	------	G	Pl	---	37	D	-------	Ca.
28B1	L. Washburn	----do----------	10-28-55	812	J	43	2	S; 3ft, 50g, dia 1¼	---	------	G	Pl	C	18	D	L1/4	Gravel overlain by clay; Ca.
28F1	D. Felto	----do----------	11- 7-59	810	J	78	2	----do----------	61	15	Sd,G	Pl	C	10	S	-------	Yield 15 gpm; L.
30F1	M. Reed	----do----------	1-19-54	792	J	65	2	S; 3ft, dia 1¼	---	------	G	Pl	---	18	D,S	J1/2	
30N1	J. Brown	----do----------	9- 1-59	795	J	78	2	S; 3ft, 50g, dia 1¼	---	------	Sd,G	Pl	C	18	D	-------	Yield 16 gpm; Ca, L.
31G1	S. H. Brower	----------	---------	803	J	50	2	S; 3ft, 60g, dia 1¼	---	------	Sd,G	Pl	---	22	--	J	Ca.
32B1	H. Lowe	Rochester Well and Pump Co.	4- 2-57	817	Dr	62	4	S; 20sl, dia 3½	---	------	G	Pl	---	32	--	J	Yield 70 gpm; Ca.
33Q1	H. Keim	----do----------	9-14-54	832	J	83	2	S; 3ft, 12sl	---	------	G	Pl	---	50	D,S	J1/4	Yield 13 gpm; Ca.
34C1	I. Baker	----do----------	11-21-59	832	J	76	4	S; 4ft, 25sl, dia 3½	---	------	Sd,G	Pl	C	30	S	J	Yield 80 gpm; Ca, L.
34J1	G. O. McMillen	----do----------	2-16-48	835	J	------	2	S; 3½ft, 10sl	---	------	G	Pl	---	37	--	-------	
34M1	H. Sampsell	----do----------	8- 3-54	837	J	70	2	S; 3ft, 12sl	---	------	G	Pl	---	52	D	J1/3	
34M2	C. Sampsell	----do----------	4-23-56	835	J	72	2	S; 3ft, 50g, dia 1¼	---	------	G	Pl	---	42	D	-------	Yield 10 gpm; originally drilled to 62 ft; blue and yellow gravel from 62-72 ft; record missing from 0-62 ft; Ca.
34N1	R. Cook	McGraw Well Drilling Co.	7-56	830	J	50	2	----------	35	15	Sd,G	Pl	U	35	D	J1/2	Ca, L.
34Q1	Mr. Brubaker	Rochester Well and Pump Co.	4-27-50	840	J	88	2	S; 10sl	---	------	Sd	Pl	---	40	--	-------	
35A1	D. Showley	McGraw Well Drilling Co.	1956	822	J	75	2	S; 3ft, 10sl, dia 1¼	35	40	G,Sd	Pl	---	35	S	-------	Fine to coarse gravel and sand overlain by 35 ft clay; Ca.
35D1	Mr. Davidson	Rochester Well and Pump Co.	10-20-49	832	J	58	2	S; 3ft, 60g	---	------	G	Pl	---	30	D	-------	
35J1	N. Meiser	----do----------	11-13-56	825	J	97	2	S; 3ft, 10sl	---	------	G	Pl	C	40	S	L	Yield 10 gpm.
35Q1	A. Powell	McGraw Well Drilling Co.	10- 1-58	832	J	75	2	S; 2½ft, 10sl, dia 1¼	---	------	G	Pl	C	43	D,S	J1/3	Yield 10 gpm; Ca, L.
35R1	R. L. Ogle	----do----------	9-29-59	840	J	75	2	S; 3ft, 10sl, dia 1¼	---	------	G	Pl	C	45	D,S	-------	Yield 5 gpm; see log well 35Q1; Ca.
36L1	M. Rouch	----------	10- 5-54	830	J	68	2	S; 3ft	---	------	Sd	Pl	---	12	D	J1/4	
30/4- 1A1	W. Bowen	H. Saner and Sons	5- 2-60	898	J	48	2	S; 3½ft, 12sl, dia 1¼	33	15	G	Pl	C	32	D,S	-------	Yield 20 gpm; Ca, L.
1H1	----do----------	----do----------	7- 3-51	804	J	28	---	S; 3ft	24	4	G	Pl	C	20	--	-------	Yield 11 gpm; gravel overlain by 24 ft yellow clay.
2N1	H. Funnell	----do----------	4-15-60	855	J	83	2	S; 3½ft, 12sl, dia 1¼	---	------	G	Pl	---	30	D,S	J	Yield 15 gpm; Ca, L.
4D1	W. Safford	Rochester Well and Pump Co.	11-24-54	820	J	73	2	S; 3ft, 12sl	70	3	G	Pl	C	16	D,S	L1/4	L.
5E1	D. D. Peterson	----do----------	11-21-56	815	J	80	2	S; 2ft, 18sl	43	37	Sd,G	Pl	C	30	D,S	J	Yield 15 gpm; Ca, L.
5H1	R. Bacon	H. Saner and Sons	11- 9-52	812	J	43	2	S; 3ft, 12sl	40	3	G	Pl	C	18	S	C	Yield 17 gpm; Ca, L.
5K1	M. Blumenthal	Rochester Well and Pump Co.	5-22-57	816	J	81	4	S; 4ft, 25sl, dia 4	---	------	G	Pl	---	19	S	S1	Yield 20 gpm; Ca.
7C1	J. Burns	P. Cox	8-18-60	797	J	40	2	S; 3½ft, 12sl, dia 1¼	---	------	G	Pl	C	11	D,S	-------	Yield 15 gpm; Ca, L.
7F1	O. Miller	Rochester Well and Pump Co.	3-28-51	808	J	45	2	S; 3ft, 60g, dia 1¼	---	------	Sd	Pl	---	10	D	-------	Ca.
7F2	H. Maddux	----do----------	6-19-56	809	J	53	2	S; 3ft, dia 1¼	25	28	Sd	Pl	---	25	D	J	Yield 13 gpm; L.
7N1	A. Srivor	----do----------	3- 2-55	808	J	42	2	----do----------	10	32	G,Sd	Pl	U	11	D	P	Yield 13 gpm; gravel overlain by sand.
7P1	C. H. Meredith	----do----------	8-11-49	807	J	33	2	S; 60g	---	------	G	Pl	---	7	D	-------	
7P2	Oliver Farm Machinery Co.	----do----------	11-10-49	808	J	43	2	S	---	------	G	Pl	---	12	P	J1/4	Ca.
7P3	R. Bowers	----do----------	2- 1-55	803	J	38	2	S; 2½ft, 50g, dia 1¼	12	24	Sd,G	Pl	U	12	D	-------	Yield 13 gpm; gravel overlain by sand.

30/4-11M1	Trustees, Swick Estate	H. Sauer and Sons	10- 3-49	839	J	44	2	S; 3½ft, 12sl, dia 1¼	39	5	G	Pl	C	16	S	L	Yield 15 gpm; Ca, L.
11N1	H. Page	----do----------	8-12-52	833	J	46	2	S; 3ft, 12sl	43	2	Sd	Pl	C	18	D	J	Yield 17 gpm; sand overlain by 43 ft yellow and blue clay.
13L1	E. Terrell	----do----------	12-27-55	857	J	55	2	S; 3ft, 10sl	52	13	G	Pl	C	24	D,S	J1/4	Yield 17 gpm; Ca, L.
15M1	C. Utter	----do----------	10-25-52	850	J	66	2	S; 3ft, 12sl	62	4	Sd,G	Pl	C	20	D	J	Yield 15 gpm; Ca, L.
17E1	E. Koster	Rochester Well and Pump Co.	3- 1-54	816	J	44	2	S; 4ft	30	14	Sd, G	Pl	C	15	D	J1/3	Yield 12 gpm; sand and fine gravel overlain by 30 ft hard clay; Ca.
17Q1	W. Zimmerman	----do----------	8- 3-57	812	J	40	2	S; 3ft, 50g, dia 1½	---	------	G	Pl	---	5	S	P	Yield 12 gpm; Ca.
18C1	Evangelican United Brothren Church	--------------------	--------	808	Du	30	1½	S; 60g	---	------	Sd	Pl	---	--	P	-------	
19C1	F. W. Bowers	Rochester Well and Pump Co.	4-22-60	810	J	27	2	S; 3ft, 50g, dia 1½	15	12	Sd	Pl	C	10	D	-------	Yield 18 gpm; Ca, L.
22D1	R. Riley	P. Cox	7-12-60	827	J	26	2	S; 3ft, 10sl, dia 1½	---	------	G	Pl	---	15	D,S	-------	Yield 15 gpm; Ca, L.
23C1	Mr. Mazgalski	Rochester Well and Pump Co.	10-11-54	837	Dn	35	1½	S	---	------	Sd	Pl	---	16	D	J	
23D1	Mr. McBroom	H. Sauer and Sons	7- 8-52	832	J	39	2	S; 3ft	36	3	G	Pl	C	12	--	-------	Yield 17 gpm; Ca, L.
24D1	H. Hartman	----do----------	4- 4-55	840	J	38	2	S; 3½ft, 10sl	34	4	G	Pl	C	12	D	-------	Yield 15 gpm; L.
24G1	Town of Akron	--------------------	1944	849	Dr	70	8	S; 13ft, 60sl	---	------	G	Pl	---	23	P	T15	
24G2	----do----------	--------------------	1944	849	Dr	70	8	S	---	------	G	Pl	---	23	P	T15	Dd 16 ft pumping 240 gpm.
24H1	T. Robinson	H. Sauer and Sons	10-11-58	862	J	52	2	S; 3½ft, 12sl, dia 1¼	47	6	G	Pl	C	17	D	J1/3	Yield 15 gpm; Ca, L.
24J1	D. A. Pike Lumber Co.	Stremmel and Hill	7- 8-40	868	Dr	92	4	S	---	------	Sd,G	Pl	---	35	N	-------	Sand and gravel overlain by 45 ft gravel, mud, and top soil.
24K1	E. Hoffman	H. Sauer and Sons	4-11-57	852	J	42	2	S; 2ft, 10sl, dia 1½	---	------	G	Pl	---	19	D	L	Yield 15 gpm; Ca.
24L1	F. Walgamuth	----do----------	1951	850	J	39	2	--------------------	36	3	G	Pl	C	3	D	-------	Yield 15 gpm; gravel overlain by 36 ft clay; Ca.
25F1	A. A. Gast	----do----------	1-18-52	852	J	57	2	S; 3ft	54	3	G	Pl	C	18	D	-------	Yield 20 gpm; gravel overlain by 54 ft yellow and blue clay with some stones; Ca.
25M1	W. K. Gast	----do----------	1951	830	J	23	2	----do----------	20	3	G,Sd	Pl	C	4	S	P	Yield 14 gpm; L.
26H1	O. Sausaman	Rochester Well and Pump Co.	4- 6-54	855	J	165	2	S; 3ft, 10sl	161	4	G	Pl	C	35	D,S	J1/2	Yield 13 gpm; Ca, L.
26Q1	A. C. Hammerel	H. Sauer and Sons	1951	852	J	114	2	S; 3ft	---	------	G,Sd	Pl	C	3	D	-------	Yield 17 gpm; originally drilled to 74 ft; Ca, L.
28K1	G. Bowon	Rochester Well and Pump Co.	1-26-54	860	J	49	2	S; 2ft	---	------	Sd	Pl	---	26	N	-------	
30B1	H. Mastellar	----do----------	8- 9-55	830	J	112	2	S; 3ft	---	------	G	Pl	C	16	S	-------	Yield 12 gpm; gravel overlain by clay.
32D1	E. Runkle	----do----------	9-10-56	825	J	120	4	S; 4ft, 20sl	90	30	Sd,G	Pl	C	18	D	J1	Yield 70 gpm; Ca, L.
32E1	W. Doturk	----do----------	1-25-57	832	J	57	2	S; 3ft, 50g	53	4	G	Pl	C	30	D,S	J	Yield 15 gpm; Ca, L.
34E1	D. Stinson	----do----------	3-26-56	847	Dr	64	4	S; 2ft, 30sl	54	10	Sd	Pl	C	25	D,S	S1	Yield 55 gpm; Ca, L.
35G1	E. Artor	----do----------	5- 5-60	865	J	108	2	S; 3ft, 10sl, dia 1½	91	15	G,Sd	Pl	C	40	D,S	-------	Yield 15 gpm; Ca, L.
36H1	E. L. Opple	H. Sauer and Sons	5- 3-57	860	J	58	2	S; 3½ft, 10sl, dia 1¼	---	------	G	Pl	---	50	S	L	Yield 12 gpm.
36J1	M. Clark	Rochester Well and Pump Co.	8-29-57	885	J	188	2	S; 3ft, 50g, dia 1½	137	48	Sd,G	Pl	C	70	D,S	J3/4	Yield 12 gpm; Ca, L.
30/5-20M1	R. Harlan	H. Sauer and Sons	7-55	873	J	54	2	S; 3ft, 10sl	43	11	G	Pl	U	43	D	J	Yield 15 gpm; Ca, L.
21C1	E. Boone	----do----------	7-24-52	862	Dn	26	1½	S; 3ft, 12sl	19	7	G	Pl	U	19	N	-------	Yield 12 gpm; gravel overlain by 5 ft clay and sand.
21F1	B. Shireman	----do----------	1951	869	J	95	2	S; 3ft	92	3	G	Pl	C	42	D	-------	Yield 15 gpm; Ca, L.
27R1	C. Goarhart	----do----------	8- 5-55	855	J	42	---	S; 3ft, 12sl	---	------	G	Pl	---	36	N	-------	Yield 14 gpm.
27R2	----do----------	Rochester Well and Pump Co.	4- 1-57	852	J	43	2	S; 2½ft, 25sl	---	------	G	Pl	---	22	D	J	Yield 17 gpm; Ca.
28G1	E. Floor	H. Sauer and Sons	3-57	892	J	84	3	S; 4ft, 12sl	---	------	G	Pl	---	80	D,S	J1-1/2	Yield 40 gpm.
28K1	A. Bammerlin	Rochester Well and Pump Co.	11-15-51	908	J	92	2	S; 3ft, 25sl	73	19	G,Sd	Pl	U	73	D	-------	Yield 15 gpm; gravel with some sand from 86-92 ft; Ca.
28N1	J. Kroft	H. Sauer and Sons	5-18-60	872	J	46	2	S; 3½ft, 12sl, dia 1¼	---	------	G	Pl	---	--	D,S	-------	Yield 15 gpm; L.
30P1	J. Miller	----do----------	3-11-60	878	J	96	2	S; 6ft, 60g, dia 1	90	6	G	Pl	C	50	D,S	-------	Do.
31/1- 1K1	W. Kraft	E. W. Schroeder	3-29-57	787	J	87	2	S; 3ft, 60g, dia 1½	70	17	Sd,G	Pl	C	30	S	L	Yield 13 gpm; Ca, L.
1R1	----do----------	Rochester Well and Pump Co.	2-23-51	792	J	99	4	S; 3½ft, 20sl	---	------	Sd,G	Pl	---	31	D	J	Yield 50 gpm; Ca.
2N1	E. Goodman	Fisher Bros. Well Drilling	9-24-59	748	J	73	4½	S; 5ft, 20sl, dia 3	---	------	G	Pl	---	15	D,S	S3/4	Dd 7 ft after 2 hr pumping 30 gpm; gravel overlain by 63 ft sand, blue clay, and gravel; Ca.
2P1	D. DeWitt	----do----------	8-20-59	764	J	78	2½	S; 3ft, 60g, dia 1½	---	------	Sd,G	Pl	C	14	D	-------	L.
6K1	A. Conclon	----do----------	7-23-60	731	J	128	2	----do----------	125	3	G	Pl	C	14	D	-------	Yield 12 gpm; Ca, L.
7A1	H. Langenbahn	----do----------	1- 4-60	750	J	137	3	S; 5ft, 18sl, dia 2½	132	5	G	Pl	C	37	D	J1/2	Yield 30 gpm; Ca, L.
8H1	L. Hopple	R. Price	5-20-60	720	J	78	2	S; 3ft, 40g, dia 1¼	70	8	G, Sd	Pl	C	44	D	-------	Flows 15 gpm; Ca, L.
8R1	Indiana State Highway Department	Wentville Engineering Co.	2-12-59	751	B	52	2½	--------------------	16	1	G,Sd	Pl	C	12	T	-------	L, S.
8R2	----do----------	----do----------	2-12-59	752	B	38	2½	--------------------	---	------	------	---	---	---	T	-------	L, S.
8R3	----do----------	----do----------	2-11-59	757	B	52	2½	--------------------	24	28	Sd,G	Pl	C	13	T	-------	L. S.

Table 3.--Records of wells and test holes in Fulton County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
31/1- 9N1	Indiana State Highway Department	Westville Engineering Co.	2-12-59	751	D	32	2½	----------	9	6	Sd	Pl	C	8	T	-------	L, S.
9N2	----do----------	----do----------	2-11-59	753	B	32	2½	----------	---	------	-----	---	---	--	T	-------	See log well 8R2; S.
9N3	----do----------	----do----------	2-11-59	756	B	32	2½	----------	20	12	Sd	Pl	C	7	T	-------	L, S.
12L1	B. Borryman	Fisher Bros. Well Drilling Co.	7- 5-60	762	J	82	2	S; 3ft, 60g, dia 1½	48	16	G,Sd	Pl	C	20	D	J1/2	Yield 16 gpm; Ca, L.
14N1	J. F. Seal	D. Hendorson	6-20-47	724	Dr	52	4	----------	---	------	Sd	Pl	---	6	D	-------	Dd 3 ft after 1 hr. bailing 20 gpm; sand overlain by 12 ft top soil, clay and sand.
16D1	F. Ditmire	Fisher Bros. Well Drilling Co.	4-12-60	776	J	101	3½	S; 8 ft, 16sl, dia 3	90	11	G,Sd	Pl	C	50	D,S	-------	Yield 40 gpm; Ca, L.
16D2	Indiana State Highway Department	Westville Engineering Co.	2-11-59	759	B	32	2½	----------	28	4	Sd,G	Pl	C	6	T	-------	See log well 8R3; S.
16H1	A. N. McIntire	Fisher Bros. Well Drilling Co.	12-10-59	745	J	64	2½	S; 3ft, 60g, dia 1½	40	24	G,Sd	Pl	C	22	D	-------	Yield 11 gpm; Ca, L.
16H2	Erie Railroad Co.	M. Zollers	1948	742	J	80	2	S; 3ft	---	------	G	Pl	---	--	P	L	Ca.
16J1	J. Miller	Fisher Bros. Well Drilling Co.	7- 4-60	745	J	58	2½	S; 3ft, 60g, dia 1½	---	------	G	Pl	C	19	D	-------	Yield 12 gpm; L.
16M1	E. Jackson	----do----------	6- 8-60	755	J	78	2	----do----------	73	5	G	Pl	C	36	D	-------	Yield 14 gpm; gravel overlain by 73 ft yellow clay and sand.
16Q1	O. Tate	----do----------	1- 6-60	742	J	79	2	----do----------	12	67	G,Sd	Pl	C	12	D	-------	Yield 15 gpm; L.
17A1	W. Clark	D. Harvey	9- 8-60	780	J	87	2	S; 3½ft, 60g, dia 1½	80	7	G	Pl	C	54	D	L	L.
17A2	Indiana State Highway Department	Westville Engineering Co.	2-11-59	765	B	30	2½	----------	26	4	G,Sd	Pl	C	12	T	-------	L, S.
18B1	W. Faulstitch	Fisher Bros. Well Drilling Co.	11-18-59	742	J	69	2½	S; 3ft, 60g, dia 1½	65	4	G,Sd	Pl	C	29	D,S	-------	Yield 14 gpm; L.
19J1	C. Widman	----do----------	6- 1-60	787	Dr	161	4	S; 6ft, 14sl, dia 3¼	145	16	Sd,G	Pl	C	54	D,S	S	Dd 20 ft after 3 hr pumping 50 gpm; Ca, L.
21B1	P. M. Dennis	Kennedy's Well Service	9-17-59	787	J	101	2	S; 3ft, 60g, dia 1½	94	7	Sd,G	Pl	C	52	D	-------	Yield 15 gpm; L.
21B2	W. Jones	E. W. Schroeder	7- 3-59	743	J	141	2½	S; 4ft, 80g, dia 1½	120	21	G,Sd	Pl	C	10	D	-------	Do.
21F1	L. Brassell	Fisher Bros. Well Drilling Co.	6-25-60	777	J	91	2½	S; 3ft, 60g, dia 1½	85	6	Sd,G	Pl	C	38	D	-------	Yield 12 gpm; sand and gravel overlain by 85 ft blue clay.
21F2	A. Batchelar	----do----------	7-17-60	782	J	86	3	S; 6ft, 18sl	78	8	Sd,G	Pl	C	48	D	-------	Yield 40 gpm; L.
23F1	Loiters Ford Methodist Church	D. Hendorson	8- 7-47	743	Dr	58	4	S; 4ft, 20sl	24	32	Sd	Pl	U	24	D,P	J	Yield 20 gpm; L.
23G1	Trustees, Aubbeenaubbee Township	---do----------	7- 7-50	743	J	128	---	S; 6ft, 16sl	33	89	Sd	Pl	C	17	P	J1	Yield 40 gpm; Ca, L.
24M1	Mr. Wacker	Rochester Well and Pump Co.	9-13-56	755	J	61	2	S; 3ft, 60g	40	21	Sd,G	Pl	U	40	D	-------	Yield 11 gpm; Ca, L.
33F1	E. Rouch	Fisher Bros. Well Drilling Co.	6- 1-60	767	J	101	2	S; 3ft, 60g, dia 1½	85	6	Sd,G	Pl	C	38	S	L1/4	Yield 14 gpm; sand and gravel overlain by 95 ft blue clay and sand; Ca.
34D1	R. Zoider	----do----------	2-16-60	787	J	91	2½	----do----------	78	13	G,Sd	Pl	C	27	D,S	-------	Ca, L.
36P1	R. Brown	McGrow Well Drilling Co.	8-28-59	755	J	55	2	S; 2½ft, 10sl, dia 1½	34	21	Sd,G	Pl	C	14	S	-------	Yield 10 gpm; Ca, L.
31/2- 1N1	R. Scheid	Rochester Well and Pump Co.	8-15-55	905	J	92	2	S; 3ft, 50g, dia 1	---	------	G	Pl	---	82	D	L1/2	Yield 12 gpm; Ca.
1N2	----do----------	----do----------	8- 5-55	903	J	211	4	S; 3ft, 20sl	---	------	G	Pl	---	82	S	S1	Yield 60 gpm.
3D1	V. Stayton	R. Price	8- 3-59	876	J	194	2	----------	---	------	Sd,G	Pl	U	--	N	-------	L.
3D2	----do----------	----do----------	8-19-59	876	J	84	2	S; 3ft, 12sl, dia 1½	70	14	Sd,G	Pl	U	70	D	-------	See log well 3D1; Ca.
4B1	P. C. Ward	J. Payne	8-20-59	827	J	73	2	S; 3ft, 60g, dia 1½	48	25	G,Sd	Pl	U	48	S	-------	Yield 14 gpm; L.
4P1	E. Fishor	Rochester Well and Pump Co.	6-29-53	799	J	57	2	----------	---	------	G,Sd	Pl	---	24	D,S	J1/2	Ca.
4Q1	R. Dunn	----do----------	4-10-56	812	J	74	2	S; 3ft, 50g, dia 1½	40	34	Sd,G	Pl	U	40	D	-------	Yield 12 gpm; Ca, L.
7A1	L. Graves	----do----------	2-12-51	781	J	86	2	S; 2ft, 30sl	---	------	G	Pl	---	11	D	J1/2	Yield 15 gpm; Ca.
7C1	R. Stotler	Fisher Bros. Well Drilling Co.	8- 5-59	775	J	68	2½	S; 3ft, 60g, dia 1½	---	------	Sd,G	Pl	C	16	D,S	L1/2	Yield 14 gpm; Ca, L.

31/2- 7E1	R. Overmyer	Rochester Well and Pump Co.	5-27-57	775	J	44	2	----------	---	------	G	Pl	---	12	D,S	L	Ca.
8A1	K. Strong	----do----------	3-27-56	796	J	74	2	S; 3ft, 50g, dia 1½	70	4	G	Pl	C	25	D	J1/2	Yield 12 gpm; Ca, L.
10A1	L. Dawson	----do----------	5-12-55	842	J	127	2	----do----------	---	------	G,Sd	Pl	---	42	D,S	J1/2	Yield 11 gpm; Ca.
10R1	R. Warner	Fisher Bros. Well Drilling Co.	--------	825	J	70	2	----do----------	---	------	G	Pl	---	62	S	J3/4	Ca.
11B1	Trustees, Richland Township	----------	--------	877	Dr	176	3½	S	---	------	Sd,G	Pl	---	--	P	L3-1/2	
11N1	R. Fishor	Rochester Well and Pump Co.	8-23-57	838	J	62	2	S; 2ft, 30sl	44	18	G,Sd	Pl	U	44	D,S	J	Yield 15 gpm; Ca, L.
12J1	O. B. Conrad	McGrew Well Drilling Co.	--------	886	J	147	2	S; 2½ft, 10sl	140	7	Sd	Pl	C	74	D,S	J1	Yield 13 gpm; Ca, L.
14R1	C. Deahler	----do----------	1952	840	J	75	2	----do----------	44	31	G	Pl	C	40	D	J1/3	Gravel overlain by 44 ft blue clay; Ca.
15D1	H. Ault	----do----------	1956	798	J	48	2	----------	39	9	Sd,G	Pl	C	16	S	--------	Ca.
16N1	J. Richard	Rochester Well and Pump Co.	7- 9-56	807	J	70	2	S; 3ft, 50g	48	24	Sd	Pl	U	46	D	J	Yield 12 gpm; Ca, L.
18N1	H. J. Overmyer	Fisher Bros. Well Drilling Co.	9-10-60	765	J	118	2½	S; 3ft, 60g, dia 1¼	94	24	G,Sd	Pl	C	34	D	J	Yield 10 gpm; Ca, L.
19R1	R. Garner	Rochester Well and Pump Co.	11- 6-53	732	J	59	2	S; 3ft, 25sl	---	------	G	Pl	C	--	D	L1/4	Flowed 1 gpm from pipe 2 ft below lsd.
19R2	W. Moore	----do----------	7- 5-52	737	J	61	2	S; 3ft, 16sl	---	------	G	Pl	C	0	P	P	
19R3	R. Jones	----do----------	8-27-52	737	J	75	2	----do----------	---	------	G	Pl	C	--	D	P	
19R4	E. Krantz and J. Smith	W. F. Fulwider	5-15-60	732	Dr	179	4	Ob	157	22	Ls	D?	C	8	D	-------	Dd 50 ft after 2 hr pumping 10 gpm; bedrock at 157 ft; Ca, L.
20N1	H. Gaumer	Willard and Son	7-12-60	742	Dm	43	1½	S; 2ft, 60g, dia 1½	---	------	Sd	Pl	---	20	D	P	Ca.
22E1	E. M. Mercer	Rochester Well and Pump Co.	11- 8-56	762	J	43	2	S; 3ft, 18sl	39	4	Sd,G	Pl	C	27	D,S	J	Ca, L.
22H1	C. Rookstool	Fisher Bros. Well Drilling Co.	--------	805	J	70	2	----------	---	------	Sd	Pl	---	--	D,S	J1/2	Ca.
22L1	Mr. Rhoades	Rochester Well and Pump Co.	11- 7-52	767	J	48	2	S; 3ft, dia 1½	---	------	G	Pl	---	--	P	L1/4	
23F1	Mr. Dawson	----do----------	--------	793	J	56	2	S; 2ft	32	24	G	Pl	U	32	D	-------	Yield 15 gpm; gravel from 0-56 ft.
23F2	C. Moore	----do----------	8-27-55	787	J	77	2	S; 2½ft, 60g, dia 1½	15	62	G,Sd	Pl	U	15	D	J1/3	Yield 14 gpm; gravel overlain by yellow sand; Ca.
24G1	G. Brewer	----do----------	5- 7-54	809	J	80	2	S; 3ft	---	------	G	Pl	---	40	D,S	-------	Yield 12 gpm; Ca.
25R1	Izaak Walton League	----do----------	10-23-54	751	J	87	2	S; 3ft, 50g	---	------	G	Pl	---	4	P	L1/4	
27H1	A. J. Horn	----do----------	4- 7-54	762	J	65	2	S; 3ft	---	------	G	Pl	---	10	S	P	Ca.
27L1	C. Castleman	----do----------	9-53	753	J	73	2	S; 10sl	---	------	G	Pl	---	7	S	P	Yield 13 gpm.
30R1	W. Baldwin	----do----------	4- 1-52	747	J	49	2	S; 3ft	---	------	G	Pl	---	10	D	-------	Ca.
31G1	E. Lockhart	----do----------	4-23-57	748	J	45	2	S; 3ft, 50g, dia 1½	---	------	G	Pl	---	10	S	P	Yield 13 gpm.
31K1	----do----------	----do----------	9-20-57	748	J	43	2	S; 2½ft, 60g	---	------	Sd,G	Pl	---	14	D	L	Yield 13 gpm; Ca, L.
31Q1	Mr. Barkman	----do----------	8-30-49	747	J	32	2	S; 3ft, 60g	---	------	G	Pl	---	5	D	-------	Ca.
34N1	Mr. Byfield	----do----------	3-25-49	790	J	108	2	S; 3ft, 10sl	---	------	Sd,G	Pl	---	44	--	-------	
36G1	R. Holt	----do----------	5-29-52	765	J	75	2	S; 3ft, 30sl	---	------	G	Pl	---	16	D	-------	Yield 13 gpm; Ca.
31/3- 1J1	J. Duzon	----do----------	6-11-53	775	J	49	2	S; 3ft, 16sl	30	19	Sd,G	Pl	C	--	D,S	J1/4	Sand and gravel overlain by 30 ft clay; Ca.
1N1	H. Coggins	----do----------	8-18-49	792	J	61	2	S; 3ft, 60g, dia 1½	---	------	Sd	Pl	---	13	D	-------	Yield 10 gpm; Ca.
1P1	J. Grass	----do----------	5- 5-51	795	J	170	2	S; 2ft, 30sl	---	------	G	Pl	---	24	D	J1/2	Ca.
3C1	Mr. Beddingor	----do----------	8-24-53	815	J	115	2	S; 10sl	111	4	G	Pl	C	25	D,S	J1/2	Yield 12 gpm; L.
3D1	W. Mathias	----do----------	3-13-54	827	J	129	2	S; 3ft	126	3	G	Pl	C	35	N	-------	Fine gravel overlain by 126 ft clay.
7R1	R. Stollhorn	Kaser Plumbing and Heating, Ind.	7- 1-60	865	J	43	2	S; 4ft, 60g, dia 1	26	17	Sd,G	Pl	U	26	D	-------	Yield 15 gpm; sand and gravel overlain by 20 ft clay; Ca.
8D1	D. Mow	Rochester Well and Pump Co.	3-21-56	867	J	145	2	S; 2½ft, 50g	117	28	Sd,G	Pl	C	58	D,S	L1/3	Yield 13 gpm; Ca, L.
10E1	R. Overmyer	Fisher Bros. Well Drilling Co.	12-56	817	Dr	150	4	Oo	100	50	Sd,G	Pl	C	35	D,S	J3/4	Dd 30 ft pumping 25 gpm; Ca, L.
11J1	Mr. Lantz	Rochester Well and Pump Co.	7- 1-49	767	J	47	2	S; 3ft	---	------	G	Pl	C	--	D	P	Flowed 3 gpm; Ca.
12A1	Trustees, Newcastle Township	----------	--------	777	J	56	2	S; 4ft, 30sl	---	------	Sd,G	Pl	---	--	P	J1	At Talma School
12B1	L. Myers	Rochester Well and Pump Co.	8-14-58	774	J	56	2	S; 3ft, 60g	38	18	G,Sd	Pl	C	2	D	-------	Yield 17 gpm; Ca, L.
12B2	Freeman Manufacturing Co.	----------	--------	778	J	82	2	S	---	------	Sd	Pl	---	--	P	J1/2	
12C1	Mr. Hatfield	Rochester Well and Pump Co.	6-23-52	765	J	51	2	S; 2ft, 30sl	---	------	G,Sd	Pl	C	--	S	-------	Flowed 8 gpm.
12E1	Mr. Posey	----------	--------	763	J	-----	2	----------	---	------	Sd,G	Pl	C	--	D	-------	Flows; discharge measured 38 gpm, 8-6-57; water level measured 9 ft above lsd, 8-6-57; Ca.
12F1	L. Smith	H. Sauer and Sons	1955	765	J	44	2	Oo	---	------	Sd,G	Pl	C	--	D	-------	Flows; discharge estimated 5 gpm, 8-6-57; water level measured 6 ft above lsd, 8-6-57; Ca.
12G1	R. Hatfield	Rochester Well and Pump Co.	6- 3-49	772	J	40	2	S; 3ft	---	------	G,Sd	Pl	C	--	---	------	Flowed 5 gpm from pipe 4 ft below lsd.

Table 3.--Records of wells and test holes in Fulton County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
31/3-12G2	Rochester Hardware	Rochester Well and Pump Co.	5-26-54	772	J	54	2	S; 3ft	---	------	G	Pl	C	--	I	--------	Flowed 5 gpm from pipe 3 ft below lsd.
14K1	P. Wheadon	----do----------	8-16-56	767	J	57	2	S; 3ft, 60g	31	26	Sd,G	Pl	C	12	D	--------	Yield 13 gpm; Ca, L.
14P1	F. Hibbs	----do----------	7-15-49	765	J	54	2	S; 3ft	---	------	G	Pl	---	5	--	--------	
17B1	R. Rogers	----do----------	2- 9-53	868	J	44	2	S; 10sl	---	------	G	Pl	---	36	D,S	J1/2	Yield 10 gpm; Ca.
17H1	D. Parsons	----do----------	5-23-51	877	J	185	2	S	---	------	G	Pl	---	80	--	J1	Ca.
18A1	F. M. Polley	----do----------	8-28-56	870	J	52	2	----------	---	------	G	Pl	---	38	D	--------	
18H1	E. Russell	----------	-------	875	J	85	2	S; 3ft, dia 1½	---	------	G,Sd	Pl	---	40	D,S	--------	Ca.
19G1	W. G. Evans	McGrew Well Drilling Co.	9-13-55	840	J	68	2	S; 2½ft, 10sl	50	18	G	Pl	---	50	S	L	Yield 15 gpm; L.
19J1	Indiana Metal Products Corp.	Sriver Drilling Co.	4-25-46	813	Dr	56	4	S; 6ft, 60g, dia 2½	---	------	Sd,G	Pl	---	24	I	T3	Ca.
19J2	----do----------	----do----------	8-12-52	813	Dr	80	4	S; 10ft, 10sl	---	------	G	Pl	---	29	I	--------	Ca.
19K1	----do----------	----------	--------	870	J	180	2	S; 10sl	---	------	G	Pl	---	100	D	--------	Ca.
20G1	G. Gruenberg	Rochester Well and Pump Co.	7-14-52	850	J	75	2	S; 3ft, 35sl	---	------	G	Pl	---	19	S	L1/4	Ca.
20K1	----do----------	----do----------	7-31-56	800	J	60	2	S; 2ft	---	------	G	Pl	---	26	S	J	Yield 10 gpm; L.
22B1	E. M. Wagoner	----do----------	7-30-55	755	J	60	2	S; 3ft	---	------	G	Pl	C	--	D	P	Flowed 2 gpm; pumped 12 gpm; Ca.
22B2	Camp Shohola	----do----------	7-11-52	755	J	79	2	S; 3ft, 30sl	---	------	G	Pl	C	--	P	L	Flowed 5 gpm; Ca.
22B3	F. Givan	----do----------	7-29-55	757	J	81	2	S; 3ft	---	------	G	Pl	C	+2	D	P	Flowed 3 gpm; pumped 17 gpm.
22G1	M. Moiser	----do----------	5-27-52	767	J	44	2	S; 3ft, 35sl	---	------	G	Pl	---	12	D	--------	Yield 18 gpm; Ca.
22N1	J. Haimbaugh	----do----------	2-28-55	772	J	54	2	S; 60g, dia 1	---	------	G	Pl	---	14	S	P	Yield 12 gpm.
23D1	W. Rozanski	----do----------	1-31-57	770	J	58	2	S; 3ft, 50g, dia 1¼	14	44	Sd,G	Pl	U	14	D	L	Yield 15 gpm; Ca, L.
24E1	D. Borrior	McGrew Well Drilling Co.	1956	780	J	60	2	S	57	6	G	Pl	C	24	D	--------	Gravel overlain by 57 ft blue clay; Ca.
24J1	----do----------	Rochester Well and Pump Co.	6- 4-52	810	Dr	102	6	S; 2ft, 30sl	---	------	G	Pl	---	19	D	--------	
25M1	R. Koch	----do----------	8-14-53	782	J	58	2	S; 3ft	---	------	Sd	Pl	---	12	S	P	Yield 10 gpm.
25Q1	L. Swich	----do----------	--------	803	J	52	2	S; 3½ft	---	------	G	Pl	---	22	D,S	--------	Ca.
26D1	D. Pfeiffer	----do----------	1- 7-57	782	J	114	2	S; 3ft, 50g, dia 1¼	63	51	Sd,G	Pl	C	11	D	J1/2	Yield 14 gpm; Ca, L.
26N1	N. Baldwin	----do----------	2-13-53	781	J	60	2	S; 3ft	---	------	G	Pl	---	--	N	--------	
27D1	J. Haimbaugh	----do----------	4-54	772	J	78	2	----do----------	---	------	G	Pl	---	--	D	--------	Yield 13 gpm; Ca.
28A1	P. Eilor	McGrew Well Drilling Co.	2-18-57	773	J	43	2	S; 2½ft, 10sl	16	27	Sd,G	Pl	---	16	D	--------	Yield 15 gpm; Ca, L.
28E1	Q. A. Vandegrift	Rochester Well and Pump Co.	9-15-55	772	J	57	2	S; 3ft, 50g, dia 1¼	---	------	G	Pl	---	15	D	J1/2	Ca.
28G1	P. Eilor	----do----------	1954	772	J	39	2	S; 3ft	---	------	G	Pl	---	8	N	--------	Yield 12 gpm.
28R1	----do----------	----do----------	2-18-54	775	J	72	2	S; 3ft	---	------	G	Pl	---	4	D,S	--------	Yield 17 gpm; Ca.
28R2	----do----------	----do----------	4-20-53	775	J	68	2	S; 2½ft, 16sl	35	31	Sd,G	Pl	C	15	S	J1/4	
29L1	F. Bastow	----do----------	1- 1-53	757	J	43	2	S; 3ft	---	------	G	Pl	---	24	D,S	J1/2	
29M1	I. O. Pfeiffer	----do----------	10-12-53	757	J	40	2	----do----------	8	32	Sd,G	Pl	U	8	D,S	J	Gravel overlain by sand; Ca.
30P1	Kentucky Farms	----do----------	1- 1-49	785	J	99	2	S; 3ft, 60g	---	------	G	Pl	---	40	S	--------	Ca.
31F1	H. Hoishman	----do----------	3-18-54	767	J	60	2	S; 3ft, dia 1	---	------	G	Pl	---	22	D,S	--------	Ca.
31N1	J. Eshelman	----do----------	7-26-38	767	J	43	2	S; 2½ft, 50g, dia 1¼	10	33	Sd	Pl	U	10	D	--------	Yield 16 gpm; Ca, L.
32C1	L. Norris	McGrew Well Drilling Co.	1957	767	J	48	2	S; 3ft, 10sl, dia 1¼	29	17	Sd,G	Pl	C	10	S	--------	L.
32E1	J. Barts	Rochester Well and Pump Co.	12-11-54	767	J	81	2	S; 3ft, 50g, dia 1¼	---	------	G	Pl	---	26	D	J1/3	Ca.
32E2	R. Rodewald	----do----------	9-18-56	765	J	79	2	S; 3ft, 18sl	70	9	G,Sd	Pl	C	16	D	J1/2	Yield 13 gpm; Ca, L.
32G1	M. Haworth	----do----------	7-11-48	775	J	58	2	S; 3ft, 10sl	---	------	G	Pl	C	10	D	--------	Yield 8 gpm.
32K1	T. Fontaine	----do----------	6- 7-55	765	J	48	1	S; 3ft, 20sl	8	42	Sd,G	Pl	U	6	D	--------	Yield 30 gpm; fine to medium gravel overlain by sand.
32N1	Trustees, C. Bouck Estate	----do----------	10-20-50	768	J	49	2	S; 3ft, 60g, dia 1¼	---	------	Sd,G	Pl	---	22	N	--------	
32Q1	J. Zoppo	----do----------	9-30-57	778	J	44	2	----------	11	33	Sd	Pl	U	11	D	L	Coarse sand overlain by top soil and gray sand; Ca.
32Q2	B. Brock	McGrew Well Drilling Co.	7-14-59	776	J	50	2	S; 2½ft, 10sl, dia 1¼	10	40	G,Sd	Pl	U	10	D	L1/2	Yield 10 gpm; Ca, L.
32R1	M. Thompson	Rochester Well and Pump Co.	8- 3-59	780	J	42	2	S; 3ft, 50g, dia 1¼	8	34	G,Sd	Pl	U	8	D	--------	Yield 16 gpm; Ca, L.

31/3-33P1	R. Smith	Rochester Well and Pump Co.	8- 3-59	782	J	39	2	S; 3ft, 18sl	10	29	G,Sd	Pl	U	10	D,S	J1/4	Yield 13 gpm; sand and grave from 0-39 ft; Ca.
34D1	J. Holt	----do----------	10-19-56	778	J	93	2	S; 2ft, 18sl	85	8	Sd,G	Pl	C	10	D,S	C1/2	Yield 14 gpm; Ca, L.
35K1	N. R. Anderson	----do----------	11-18-55	785	J	108	2	S; 3ft, 50g, dia 1¼	---	-----	G,Sd	Pl	---	16	D,S	L1/4	Ca.
31/4- 5B1	A. Krymis	----do----------	5-10-49	792	J	58	2	----------	---	-----	G	Pl	---	--	D	J1/3	Ca.
9M1	E. Bussenburg	----do----------	7-24-53	802	J	45	2	S; 2½ft	---	-----	G	Pl	---	15	D,S	J	Ca.
16K1	L. Norris	P. Cox	7-21-60	822	J	76	2	S; 3½ft, 12sl, dia 1½	---	-----	G	Pl	C	30	D,S	-------	Yield 12 gpm; Ca, L.
18P1	D. I. Eaton	Rochester Well and Pump Co.	9-11-50	800	J	81	2	S; 3ft	---	-----	G	Pl	---	26	D,S	J1/2	Ca.
21G1	A. A. Miller	H. Sauer and Sons	2-28-57	867	J	39	2	S; 21sl	21	18	Sd,G	Pl	U	21	D	J	Yield 15 gpm; sand and grave from 0-39 ft; Ca.
29P1	C. Hinton	McGraw Well Drilling Co.	1958	830	J	63	2	S	59	4	Sd	Pl	C	43	D,S	L	Yield 13 gpm; Ca, L.
29Q1	R. Peterson	Rochester Well and Pump Co.	3-15-56	830	J	82	2	S; 2ft, 18sl	---	-----	Sd,G	Pl	---	44	D,S	J1/2	Yield 12 gpm; sand and grave from 61-82 ft; record miss ing from 0-61 ft; Ca.
31Q1	A. E. Stinson	----do----------	5-25-49	802	J	45	2	----------	---	-----	G	Pl	---	18	S	-------	Ca.
31Q2	----do----------	----do----------	11-17-52	802	J	55	2	S; 3ft	---	-----	G,Sd	Pl	---	--	S	-------	Ca.
31Q3	----do----------	----do----------	2- 7-53	806	J	55	2	----------	---	-----	Sd,G	Pl	---	--	D	J1/4	Ca.

Table 4.--Selected logs of wells and test holes in Fulton County, Indiana

Well 29/1- 1F1

Type of record: Driller's log. Altitude: 761 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	19	19	
Silt sand----------	28	47	
Gravel, medium----------	5	52	

Well 29/1- 9E1

Type of record: Driller's log. Altitude: 761 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay---------	10	10	
Clay, blue----------	40	50	
Clay, blue, and sand----------	10	60	
Clay, blue----------	10	70	
Clay, blue, sand, and gravel-----	9	79	
Gravel----------	8	87	

Well 29/1-11C1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	70	70	
Clay, blue, and sand----------	10	80	
Gravel----------	10	90	

Well 29/1-11C2

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	25	25	
Sand and gravel----------	45	70	
Gravel----------	10	80	

Well 29/1-22F1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Fill----------	4	4	
Clay, red----------	4	8	
Clay, blue----------	21	29	
Sand, fine----------	1	30	
Clay, blue----------	21	51	
Sand, fine----------	2	53	
Clay, blue----------	18	71	

Table 4.--Selected logs of wells and test holes in Fulton County, Indiana--Cont.

Well 29/1-22F1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine	2	73	
Clay, blue	32	105	
Gravel, large	10	115	

Well 29/1-23F1

Type of record: Driller's log. Altitude: 785 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow and dark	15	15	
Clay, yellow	12	27	
Clay and hardpan	4	31	
Clay, blue	49	80	
Sand	1	81	
Sand, coarse, sharp	3	84	
Clay, blue	16	100	
Sand, coarse	3	103	Clover-seed size.

Well 29/1-36G1

Type of record: Driller's log. Altitude: 788 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Record missing	6	6	
Clay, sandy, blue	61	67	
Gravel, muddy, sandy, becoming cleaner and coarser with depth	18	85	
Gravel, coarse, clean	11	96	

Well 29/2- 1R1

Type of record: Driller's log from memory. Altitude: 793 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, with trace of sand	60	60	
Sand and gravel	5	65	
Clay	14	79	
Gravel, coarse	4	83	

Well 29/2- 4D1

Type of record: Driller's log from memory. Altitude: 768 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and silt	22	22	
Clay, blue	3	25	

Well 29/2- 4D1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel	3	28	
Clay	46	74	
Gravel	3	77	

Well 29/2- 4F1

Type of record: Driller's log. Altitude: 768 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Clay, blue, and gravel	45	65	
Gravel	8	73	

Well 29/2- 9P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, brown	6	6	
Clay, brown	6	12	
Clay, blue	16	28	
Gravel, gray, and clay; mixed	26	54	
Gravel, coarse, blue	5	59	

Well 29/2-13C1

Type of record: Driller's log from memory. Altitude: 802 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	18	18	
Gravel, brown	6	24	
Clay, blue	42	66	
Sand, fine	3	69	
Gravel, blue	5	74	

Well 29/2-23G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, brown	16	17	
Gravel, coarse, blue	3	20	
Clay, blue	4	24	
Gravel, medium, blue	4	28	
Clay, blue	8	36	
Clay, blue, and sand; mixed	14	50	

Table 4.--Selected logs of wells and test holes in Fulton County, Indiana--Cont.

Well 29/2-23G1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, medium, blue	14	64	
Clay, gray	24	88	
Gravel, medium, blue	7	95	

Well 29/2-23J3

Type of record: Driller's log. Altitude: 792 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	14	14	
Clay, blue	11	25	
Clay, hard, blue, and gravel; mixed	9	34	
Clay, blue	15	49	
Sand and blue clay	5	54	
Gravel, medium, blue	5	59	

Well 29/2-23J4

Type of record: Driller's log. Altitude: 792 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, hard, blue	16	18	
Sand and gravel	4	22	
Clay, blue, with sandy gravel	26	48	
Sand and gravel; gray	12	60	

Well 29/2-24E1

Type of record: Driller's log. Altitude: 798 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top and sub soil	10	10	
Clay, hard, sandy, blue	8	18	
Gravel, blue	3	21	
Clay, hard, sandy, blue	39	60	
Gravel, medium to coarse, sandy, gray	5	65	

Well 29/2-32N1

Type of record: Driller's log. Altitude: 785 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, muck, and peat	11	11	
Clay, bluish-gray	44	55	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 29/2-32N1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, muddy	2	57	
Clay, blue	14	71	
Gravel, blue-gray	7	78	

Well 29/2-32P1

Type of record: Driller's log. Altitude: 802 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	23	23	
Clay, blue	12	35	
Gravel, medium, brown	5	40	
Gravel, coarse, blue	2	42	
Sand, fine, yellow	16	58	
Gravel, fine, blue	4	62	

Well 29/2-35H1

Type of record: Driller's log. Altitude: 803 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	25	25	
Clay, blue, and sand	15	40	
Hardpan	14	54	
Gravel, coarse, blue	3	57	
Gravel, fine, and coarse sand	1	58	

Well 29/3- 3B1

Type of record: Driller's log. Altitude: 830 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	20	20	
Clay, sandy	40	60	
Clay, blue	12	72	
Sand, medium, brown	6	78	

Well 29/3- 3L1

Type of record: Driller's log. Altitude: 821 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	14	14	
Hardpan, brown	7	21	
Clay, blue	6	27	
Hardpan	3	30	
Clay, soft, blue	12	42	
Gravel, medium, brown	10	52	

Well 29/3- 7P1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	18	18	
Gravel, brown	2	20	
Clay, blue, and fine gravel	25	45	
Clay, soft, blue	7	52	
Gravel, medium, blue	5	57	

Well 29/3-10N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, blue	10	10	
Clay, blue, and gravel; mixed	25	35	
Clay, gray, and sand	47	82	
Gravel, medium, blue	4	86	

Well 29/3-15E2

Type of record: Driller's log. Altitude: 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and small stone	10	10	
Clay, blue	36	46	
Sand, fine, with some gravel	1	47	
Clay, blue	73	120	
Silt	10	130	
Record missing	4	134	
Gravel, fine, brown	3	137	

Well 29/3-15E3

Type of record: Driller's log. Altitude: 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and small rocks	10	10	
Clay, blue	36	46	
Gravel	1	47	
Clay, blue	65	112	
Silt sand	14	126	
Gravel, medium	5	131	

Well 29/3-15M1

Type of record: Driller's log. Altitude: 813 feet

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	16	16	
Hardpan with embedded pebbles	13	29	

Well 29/3-15M1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine gray	8	37	
Gravel, pea-sized	4	41	

Well 29/3-16H2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, gravelly, sandy, yellow	14	14	
Clay, sandy, blue	11	25	
Gravel, sandy	2	27	
Clay, blue, with some sand	2	29	
Gravel, sandy, grayish-yellow	6	35	

Well 29/3-16H3

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay	4	4	
Clay, hard, sandy, blue	17	21	
Gravel, slightly sandy, blue-gray	3	24	

Well 29/3-16H4

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	2	2	
Gravel, brown	12	14	
Clay	6	20	
Clay, blue, and gravel; mixed	26	46	
Gravel, fine, blue	3	49	
Clay, blue, and sand; mixed	24	73	
Gravel, medium, blue	3	76	

Well 29/3-16R2

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

Quaternary System:			
Recent and Pleistocene Series:			
Fill, muck, and sand with peat	37	37	
Clay, blue	11	48	
Clay and stone	9	57	
Clay, blue	21	78	
Sand, fine, light	5	83	

Well 29/3-16R2--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, dark----------	3	86	
Gravel, coarse----------	5	91	

Well 29/3-22E2

Type of record: Driller's log. Altitude: 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sand, and yellow clay--	36	36	
Clay, blue----------	23	59	
Silt sand----------	12	71	
Clay, blue----------	17	88	
Sand and stone----------	4	92	
Gravel----------	1	93	
Sand, fine, gray----------	16	109	
Gravel----------	4	113	

Well 30/1- 1C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, red, and gravel----------	20	20	
Sand and gravel----------	10	30	
Clay, blue, and gravel----------	14	44	
Sand, fine, and gravel----------	26	70	
Gravel----------	10	80	

Well 30/1- 5A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	50	50	
Clay, blue, and sand----------	20	70	
Sand and gravel----------	14	84	

Well 30/1- 6G1

Type of record: Driller's log. Altitude: 727 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and stony clay----------	14	14	
Clay, stony, blue----------	7	21	
Clay and gravel; blue----------	1	22	
Clay, stony, blue and brown soft clay----------	14	36	
Clay, stony, blue, with sand-----	3	39	

Well 30/1- 6G1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, soft, blue, and sand mixed-	17	56	
Sand----------	9	65	
Gravel, pea-sized and larger-----	4	69	

Well 30/1- 6H2

Type of record: Driller's log. Altitude: 724 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	30	30	
Sand and gravel----------	29	59	
Gravel----------	3	62	

Well 30/1- 6J1

Type of record: Driller's log. Altitude: 733 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	10	10	
Gravel----------	4	14	
Clay, red----------	2	16	
Sand----------	1	17	
Clay, blue----------	10	27	
Sand----------	2	29	
Clay, blue----------	3	32	
Sand----------	1	33	
Clay, blue----------	13	46	
Sand----------	3	49	
Gravel----------	15	64	

Well 30/1- 6P2

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, clayey----------	9	9	
Sand, fine, packed----------	9	18	
Sand, gray----------	36	54	
Sand, sharp, dark----------	4	58	
Gravel----------	4	62	

Well 30/1- 6R1

Type of record: Driller's log. Altitude: 728 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	2	2	
Marsh bog----------	16	18	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/1- 6R1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt sand	18	36	
Sand, gray	18	54	
Clay, blue	7	61	
Sand, fine	5	66	
Sand, dark-gray	3	69	
Sand, coarse, heavy	3	72	

Well 30/1- 9E1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	16	16	
Clay, blue	15	31	
Sand	10	41	
Clay, blue, and gravel	20	61	
Gravel and sand	24	85	
Gravel	3	88	

Well 30/1-12P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	30	30	
Sand with clay and gravel	40	70	
Sand and gravel	20	90	

Well 30/1-14R1

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	54	54	
Sand and gravel	34	88	
Clay, blue, and sand	10	98	
Gravel	14	112	

Well 30/1-27F1

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

Quaternary System:			
Recent and Pleistocene Series:			
Loam, sandy	3	3	
Clay, yellow	24	27	
Clay, sandy, blue	15	42	
Hardpan; blue clay	7	49	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/1-27F1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, and clay----------	18	67	
Sand, dirty----------	15	82	
Clay, blue----------	14	96	
Gravel, coarse, with clay balls--	8	104	
Clay----------	1	105	
Sand, medium----------	6	111	
Clay, blue----------	8	119	
Gravel with clay balls----------	1	120	
Gravel and sand with large rocks-	13	133	Bedrock at 133 feet.

Well 30/2- 1E1

Type of record: Driller's log. Altitude: 763 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top and sub soil----------	12	12	
Clay, blue----------	14	26	
Sand, fine, light-gray----------	7	33	
Sand, fine to medium, gray-------	6	39	

Well 30/2- 4N1

Type of record: Driller's log. Altitude: 752 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and blue clay----------	36	36	
Sand, fine----------	11	47	
Sand, fine to coarse----------	6	53	

Well 30/2- 8A2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand----------	6	6	
Rock, hard, gray----------	4	10	Clay layer or boulder.
Sand, gray----------	22	32	
Sand, coarse, with some fine-----	6	38	

Well 30/2-12J1

Type of record: Driller's log. Altitude: 777 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow----------	8	8	
Sand, fine, gray----------	6	14	
Sand, fine----------	2	16	

Well 30/2-12J1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan; clay and stone----------	11	27	
Sand, fine, gray----------	20	47	
Gravel, coarse----------	5	52	

Well 30/2-18C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil and yellow clay----------	18	18	
Clay, blue----------	16	34	
Sand----------	10	44	
Gravel, pea-sized and larger-----	3	47	

Well 30/2-20C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow----------	18	18	
Sand, fine, gray----------	22	40	
Sand and gravel; gray----------	5	45	
Gravel, medium----------	5	50	

Well 30/2-24R1

Type of record: Driller's log. Altitude: 777 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	30	30	
Sand and clay----------	9	39	
Gravel----------	5	43	

Well 30/2-25H1

Type of record: Driller's log. Altitude: 781 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	18	18	
Clay, blue----------	6	24	
Sand, silty, gray----------	9	33	
Gravel with some fine sand-------	3	36	
Gravel----------	3	39	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/2-30N1

Type of record: Driller's log. Altitude: 762 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	19	19	
Sand and gravel; red	11	30	
Clay, blue	12	42	
Gravel	6	48	

Well 30/2-34D1

Type of record: Driller's log. Altitude: 767 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, brown	46	46	
Sand	3	49	
Sand, fine, and blue soft clay	8	57	
Gravel, medium to coarse, blue	6	63	

Well 30/3- 3M1

Type of record: Driller's log. Altitude: 792 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sand, and clay	36	36	
Sand, fine, silty	21	57	
Sand, dark-gray	5	62	
Gravel, pea-sized (3/8-inch)	5	67	

Well 30/3- 4Q1

Type of record: Driller's log. Altitude: 789 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, clay, gravel, and stone	36	36	
Sand, fine	26	62	
Gravel, medium-sized	4	66	

Well 30/3- 5B1

Type of record: Driller's log. Altitude: 782 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	8	8	
Sand, fine, gray	15	23	
Clay, hard, blue	12	35	
Sand, fine, gray	4	39	
Gravel, coarse, blue	3	42	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3- 5D1

Type of record: Driller's log. Altitude: 763 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Fill and soil	18	18	
Sand with trace of gravel	11	29	
Clay, blue	5	34	
Sand, fine	20	54	
Sand, coarse	3	57	
Gravel, coarse	4	61	

Well 30/3- 5R3

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	30	30	
Sand, muddy	22	52	
Gravel, coarse, with chunks of blue clay	5	57	
Gravel, coarse, clean	8	65	
Gravel, clean	5	70	
Sand, clean	7	77	

Well 30/3- 7B1

Type of record: Driller's log. Altitude: 777 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	4	4	
Gravel, brown	12	16	
Clay, blue	18	34	
Sand, fine, gray	12	46	
Gravel, fine, gray	3	49	
Gravel, medium, gray	3	52	

Well 30/3- 7K2

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	16	16	
Gravel, coarse	8	24	
Silt sand, gray	30	54	
Gravel, fine	7	61	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3- 8A2

Type of record: Driller's log. Altitude: 774 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Fill	4	4	
Soil	2	6	
Muck	4	10	
Clay	20	30	
Gravel	3	33	
Clay, sandy	9	42	
Sand, coarse, and gravel	38	80	
Sand, coarse, yellow	5	85	
Sand, coarse, and gravel	13	98	
Clay	2	100	

Well 30/3- 8E1

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, hard, blue, with stones	18	18	
Clay, soft, blue	18	36	
Sand	9	45	
Gravel	4	49	

Well 30/3- 8J1

Type of record: Driller's log. Altitude: 783 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, loose	18	18	
Hardpan; clay and stone	12	30	
Gravel, coarse	10	40	

Well 30/3- 8J2

Type of record: Driller's log. Altitude: 783 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sandy	5	5	
Gravel and stones	13	18	
Sand, fine, gray	7	25	
Hardpan	8	33	
Sand, coarse, gray	5	38	
Gravel, gray-blue	5	43	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3- 9J2

Type of record: Driller's log. Altitude: 787 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and sand	37	37	
Gravel	3	40	
Sand, fine	3	43	

Well 30/3- 9K3

Type of record: Driller's log. Altitude: 785 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, loose	10	10	
Silt sand, fine	15	25	
Sand	5	30	
Sand, gray	32	62	
Sand, coarse	5	67	

Well 30/3- 9K5

Type of record: Driller's log. Altitude: 786 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	54	54	
Sand, gray	4	58	
Clay, blue	2	60	
Sand, fine	3	63	
Gravel, medium, with some silt	4	67	

Well 30/3- 9Q3

Type of record: Driller's log. Altitude: 783 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil and yellow sand	6	6	
Sand, gray	20	26	
Sand	3	29	
Sand, packed, gray	26	55	
Gravel	6	61	

Well 30/3-10F1

Type of record: Driller's log. Altitude: 792 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy, loose	10	10	
Sand, gray	15	25	
Gravel, pea-sized	5	30	
Sand, fine	50	80	

Well 30/3-10F1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, coarse	3	83	
Record missing	20	103	

Well 30/3-10F2

Type of record: Driller's log. Altitude: 785 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	8	8	
Sand, gray	20	28	
Sand, coarse	6	34	
Gravel	5	39	
Silt sand, gray	35	74	
Sand, coarse	3	77	

Well 30/3-10J1

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sandy	11	11	
Hardpan; clay	18	29	
Sand, fine, gray	8	37	
Gravel, coarse, blue	3	40	

Well 30/3-10J2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, red	10	10	
Sand, gray	8	18	
Sand	12	30	
Gravel	9	39	

Well 30/3-10K4

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, red	27	27	
Sand	13	40	
Clay, blue	29	69	
Gravel	3	72	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3-10L2

Type of record: Driller's log. Altitude: 787 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	20	20	
Clay and sand; mixed	25	45	
Sand, medium to coarse	2	47	
Sand, fine, gray	12	59	
Gravel, very coarse	3	62	

Well 30/3-10M4

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, gray, and gravel	54	54	
Sand, fine, gray	4	58	
Sand, medium to coarse	3	61	

Well 30/3-10M8

Type of record: Driller's log. Altitude: 783 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand; yellow	5	5	
Sand, fine, white	14	19	
Sand, gray	20	39	
Gravel, coarse, blue	4	43	

Well 30/3-15A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and gray fine sand	41	41	
Clay, blue	6	47	
Sand, fine to coarse, gray, becoming darker with depth	34	81	

Well 30/3-15E3

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sand, and gravel	36	36	
Clay, blue	6	42	
Silt sand, fine	7	49	
Gravel, coarse	7	56	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3-15E4

Type of record: Driller's log. Altitude: 780 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand	36	36	
Sand	2	38	
Sand, fine	13	51	
Record missing	3	54	
Gravel, very coarse	4	58	

Well 30/3-15E5

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	12	12	
Gravel, brown	22	34	
Clay, blue	12	46	
Sand	8	54	
Gravel, medium, blue	4	58	

Well 30/3-15F3

Type of record: Driller's log. Altitude: 783 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	10	10	
Silt sand	18	28	
Sand, coarse	4	32	
Clay, blue	13	45	
Silt sand, gray	23	68	
Gravel, medium to coarse	6	74	

Well 30/3-15F5

Type of record: Driller's log. Altitude: 784 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand; loose	18	18	
Sand, fine	3	21	
Silt sand, gray	7	28	
Clay, blue	21	49	
Silt sand, fine, gray	17	66	
Gravel, medium	4	70	

Well 30/3-16A1

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel; dirty	25	25	
Sand, medium, and gravel; clean	13	38	

Well 30/3-16A1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, medium	2	40	
Sand, fine, dark-gray	9	49	
Sand, fine to medium	6	55	
Sand, medium	3	58	
Sand, medium, with few gravel	2	60	
Sand, coarse	6	66	Fine sand at 66 feet.

Well 30/3-16F2

Type of record: Driller's log. Altitude: 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	82	82	
Silt, gray	11	93	
Sand, fine	5	98	
Gravel, coarse	4	102	

Well 30/3-16F3

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	16	16	
Sand	2	18	
Hardpan, blue-gray	20	38	Clay ?
Silt, fine	13	51	
Sand, medium, gray	7	58	
Gravel, coarse, blue	4	62	

Well 30/3-16G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and coarse sand	14	14	
Gravel	24	38	
Sand, light	4	42	
Sand, dark	3	45	
Sand, fine	5	50	

Well 30/3-16H3

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	10	10	
Silt sand, gray	22	32	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3-16H3--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan; clay	7	39	
Clay, blue	10	49	
Sand, fine, gray	15	64	
Gravel, very coarse	4	68	

Well 30/3-16H4

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, gravel, and silt	54	54	"Bad water".
Sand, fine, gray	4	58	
Gravel, coarse	4	62	

Well 30/3-16H5

Type of record: Driller's log from memory. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel, coarse	33	33	
Clay, blue	15	48	
Gravel	4	52	

Well 30/3-16K1

Type of record: Driller's log. Altitude: 872 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel and brown clay	60	60	
Clay, blue	40	100	
Gravel, medium, brown	25	125	

Well 30/3-16M1

Type of record: Driller's log. Altitude: 808 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil	4	4	
Clay, hard, red	29	33	
Sand, hard, and stone	7	40	
Sand, coarse	2	42	
Sand, fine	12	54	
Sand, fine to medium	5	59	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/3-17C1

Type of record: Driller's log. Altitude: 787 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	8	8	
Sand, fine, gray	29	37	
Sand	3	40	
Sand, medium	3	43	

Well 30/3-20E1

Type of record: Driller's log. Altitude: 769 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay	5	5	
Clay, hard, sandy, blue	13	18	
Gravel, hard, coarse, yellow to gray	16	34	

Well 30/3-21F1

Type of record: Driller's log. Altitude: 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	1	1	
Clay, brown	20	21	
Sand, medium, brown	9	30	
Gravel, medium, brown	4	34	
Gravel, coarse, brown	3	37	

Well 30/3-28F1

Type of record: Driller's log. Altitude: 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	12	12	
Sand, fine, gray	15	27	
Clay and stone; hard	7	34	
Silt, fine, and gray quicksand	27	61	
Sand, coarse	9	70	
Gravel, coarse, gray-blue	6	76	

Well 30/3-30N1

Type of record: Driller's log. Altitude: 795 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand	4	4	
Clay, yellow	17	21	
Clay, blue, with stones	14	35	

Well 30/3-30N1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Hardpan; clay	12	47	
Silt and sand; gray	16	63	
Sand, fine	8	71	
Gravel, medium to coarse, blue-gray	7	78	

Well 30/3-34C1

Type of record: Driller's log. Altitude: 832 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	23	23	
Clay, blue	12	35	
Sand, fine, rusty	7	42	
Gravel, coarse, rust-covered	4	46	
Sand, fine, gray	10	56	
Hardpan; clay and stone	10	66	
Sand, coarse, sharp	4	70	
Gravel, pea-sized	6	76	

Well 30/3-34N1

Type of record: Driller's log from memory. Altitude: 830 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	18	18	
Gravel, brown	3	21	
Sand, brown, and silt	19	40	
Sand, fine, brown	6	46	
Gravel	4	50	

Well 30/3-35Q1

Type of record: Driller's log. Altitude: 832 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown	14	14	
Clay, blue	31	45	
Sand, brown	5	50	
Sand, brown, and clay	20	70	
Gravel, coarse, blue	5	75	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/4- 1A1

Type of record: Driller's log. Altitude: 898 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	10	10	
Gravel	20	30	
Clay, blue	3	33	
Gravel	15	48	

Well 30/4- 2N1

Type of record: Driller's log. Altitude: 855 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	29	29	
Gravel	13	42	
Clay, blue	17	59	
Gravel	5	64	

Well 30/4- 4D1

Type of record: Driller's log. Altitude: 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	34	34	
Sand	6	40	
Clay	30	70	
Gravel	3	73	

Well 30/4- 5E1

Type of record: Driller's log. Altitude: 815 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, blue	22	37	
Hardpan	6	43	
Sand	8	51	
Gravel	3	54	
Sand	24	78	
Gravel	2	80	

Well 30/4- 5H1

Type of record: Driller's log. Altitude: 812 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and yellow clay	10	10	
Clay, blue	30	40	
Gravel	3	43	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/4- 7C1

Type of record: Driller's log. Altitude: 797 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand	10	10	
Clay, blue	8	18	
Clay, blue, sand, and gravel	18	36	
Gravel	4	40	

Well 30/4- 7F2

Type of record: Driller's log. Altitude: 809 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	7	25	
Sand	23	48	
Sand, coarse	5	53	

Well 30/4-11M1

Type of record: Driller's log. Altitude: 839 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Gravel	11	26	
Clay, blue, and gravel; mixed	13	39	
Gravel	5	44	

Well 30/4-13L1

Type of record: Driller's log. Altitude: 857 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	4	4	
Clay, yellow	12	16	
Clay, blue	36	52	
Gravel	13	65	

Well 30/4-15H1

Type of record: Driller's log. Altitude: 850 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and yellow clay	12	12	
Clay, blue, with some small stones	50	62	
Sand and gravel	4	66	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/4-19C1

Type of record: Driller's log. Altitude: 810 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Sand, fine	8	23	
Sand, coarse	4	27	

Well 30/4-22D1

Type of record: Driller's log. Altitude: 827 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel	18	18	
Hardpan	5	23	
Gravel	3	26	

Well 30/4-23D1

Type of record: Driller's log. Altitude: 832 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Gravel, coarse	1	21	
Clay, blue	15	36	
Gravel, gray	3	39	

Well 30/4-24D1

Type of record: Driller's log. Altitude: 840 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and sand	12	12	
Clay, sandy, pebbly, blue	22	34	
Gravel, fine to medium	4	38	

Well 30/4-24H1

Type of record: Driller's log. Altitude: 862 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	17	17	
Gravel	4	21	
Clay, blue	26	47	
Gravel	6	53	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/4-25M1

Type of record: Driller's log. Altitude: 830 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Muck	6	6	
Marl	14	20	
Gravel, marl, and sand; mixed	3	23	

Well 30/4-26H1

Type of record: Driller's log from memory. Altitude: 855 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	80	80	
Sand	10	90	
Clay, blue	71	161	
Gravel	4	165	

Well 30/4-26Q1

Type of record: Driller's log. Altitude: 852 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	14	14	
Clay, blue	48	62	
Gravel	4	66	
Stones	4	70	
Clay, yellow	2	72	
Gravel, yellow	2	74	
Record missing	40	114	

Well 30/4-32B1

Type of record: Driller's log. Altitude: 825 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and hard clay	16	16	
Clay, soft, blue	20	36	
Clay, hard, blue, with stone	54	90	
Sand, coarse, sharp, and silt	18	108	
Sand, sharp	3	111	
Gravel, coarse, dirty	4	115	
Sand, fine, and very coarse, big gravel	5	120	

Well 30/4-32E1

Type of record: Driller's log. Altitude: 832 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	5	5	
Clay, yellow	10	15	
Clay, blue	11	26	
Sand, fine	4	30	
Clay, blue	23	53	
Gravel, coarse	4	57	

Well 30/4-34E1

Type of record: Driller's log. Altitude: 847 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	18	36	
Sand, medium	2	38	
Hardpan; clay with stones	16	54	
Sand	6	60	
Sand, very coarse	4	64	

Well 30/4-35G1

Type of record: Driller's log. Altitude: 865 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	37	37	
Gravel	4	41	
Sand, fine	21	62	
Hardpan; clay and stone	13	75	
Clay, blue	16	91	
Sand, sharp	5	96	
Gravel, coarse, blue	10	106	

Well 30/4-36J1

Type of record: Driller's log. Altitude: 885 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	20	38	
Sand and gravel	28	66	
Sand and stone	41	107	
Gravel	3	110	
Clay, blue	27	137	
Sand and stone	31	168	
Sand, fine	12	180	
Sand and fine gravel	6	186	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 30/5-20M1

Type of record: Driller's log. Altitude: 873 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand----------	4	4	
Clay, blue----------	36	40	
Gravel----------	14	54	

Well 30/5-21F1

Type of record: Driller's log. Altitude: 869 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay----------	4	4	
Gravel----------	23	27	
Clay, blue----------	65	92	
Gravel, coarse----------	3	95	

Well 30/5-28N1

Type of record: Driller's log. Altitude: 872 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	15	15	
Gravel----------	15	30	
Clay, blue----------	11	41	
Gravel----------	5	46	

Well 30/5-30P1

Type of record: Driller's log. Altitude: 878 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	30	30	
Gravel----------	25	55	
Clay, blue----------	35	90	
Gravel----------	6	96	

Well 31/1- 1K1

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow----------	21	21	
Clay, blue----------	21	42	
Sand, fine----------	6	48	
Clay, blue----------	22	70	
Sand and pea-sized gravel--------	17	87	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/1- 2P1

Type of record: Driller's log. Altitude: 764 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	25	25	
Sand and blue clay	45	70	
Sand and gravel	8	78	

Well 31/1- 6K1

Type of record: Driller's log. Altitude: 731 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand	30	30	
Clay, blue	60	90	
Clay, blue, sand, and gravel	35	125	
Gravel	3	128	

Well 31/1- 7A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	75	75	
Clay, blue, and sand	57	132	
Gravel	5	137	

Well 31/1- 8H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand with streak of yellow clay	18	18	
Sand	10	28	
Sand, gray, and gravel; dirty	20	48	
Clay, blue	22	70	
Sand with some gravel	4	74	
Gravel, pea-sized	4	78	

Well 31/1- 8R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil; black organic silty clay with trace of sand	4	4	
Clay, silty, brown and gray, with trace of sand and gravel	5	9	
Clay, silty, gray, with trace of sand and gravel	7	16	

Well 31/1-8R1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, sandy, gray, with trace of silt and clay	1	17	
Clay, silty, gray, with trace of sand and gravel	35	52	

Well 31/1-8R2

Type of record: Driller's log. Altitude: 752 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil; organic silty clay with trace of sand and gravel	2	2	
Clay, silty, brown and gray with trace of sand and gravel	3	5	
Clay, silty, sandy, brown with gravel	6	11	
Clay, silty, gray, with trace of sand and gravel	25	36	

Well 31/1-8R3

Type of record: Driller's log. Altitude: 757 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, organic, brown, with trace of sand	2	2	
Clay, sandy, impervious, brown, with trace of silt	4	6	
Clay, silty, sandy, brown, with trace of gravel	4	10	
Sand, brown, with trace of silt	5	15	
Clay, silty, with gravel	1	16	
Clay, silty, gray with trace of sand and gravel	8	24	
Sand, gravelly, brown, with trace of clay	23	47	
Sand, gray, with trace of gravel	5	52	

Well 31/1- 9N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil; black organic silty clay with trace of sand	2	2	
Clay, silty, organic, mottled black, brown, and gray	2	4	

Well 31/1 9N1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, mottled brown and gray, with trace of sand and gravel	5	9	
Sand, gray, with trace of silt	6	15	
Clay, silty, gray, with trace of sand and gravel	17	32	

Well 31/1- 9N3

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil; brown organic silty clay with trace of sand	3	3	
Clay, silty, sandy, brown, with trace of gravel	9	12	
Clay, silty, gray, with trace of sand and gravel	8	20	
Sand, gray, with trace of silt	12	32	

Well 31/1-12L1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow and blue, and sand	46	46	
Sand and gravel	13	59	
Gravel	3	62	

Well 31/1-16D1

Type of record: Driller's log. Altitude: 776 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, and sand	90	90	
Sand and gravel	4	94	
Gravel	7	101	

Well 31/1-16H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	26	26	
Clay, blue	10	36	
Clay, blue, and gravel	4	40	
Sand and gravel	19	59	
Gravel	5	64	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/1-16J1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Gravel and blue clay	35	55	
Gravel	3	58	

Well 31/1-16Q1

Type of record: Driller's log. Altitude: 742 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, white	40	40	
Gravel and sand	35	75	
Gravel	4	79	

Well 31/1-17A1

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	7	7	
Clay	6	13	
Gravel	50	63	
Clay, blue	17	80	
Gravel	7	87	

Well 31/1-17A2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, sandy, brown, with trace of gravel	2	2	
Clay, silty, brown, with trace of sand and gravel	4	6	
Sand, silty, brown, with trace of clay and gravel	9	15	
Clay, silty, sandy, brown, with trace of gravel	5	20	
Clay, silty, gray, with trace of sand and gravel	6	26	
Gravel, sandy, brown and gray	4	30	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/1-18B1

Type of record: Driller's log. Altitude: 742 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue----------	40	40	
Sand and gravel----------	6	46	
Clay, blue----------	19	65	
Gravel and sand----------	4	69	

Well 31/1-19J1

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	75	75	
Clay and sand----------	45	120	
Clay, blue----------	25	145	
Sand----------	10	155	
Gravel----------	6	161	

Well 31/1-21B1

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, with sand and gravel-	70	70	
Sand, fine----------	4	74	
Clay, hard, and sand----------	20	94	
Sand, coarse, and gravel---------	7	101	

Well 31/1-21B2

Type of record: Driller's log. Altitude: 743 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Muck----------	10	10	
Clay, blue----------	30	40	
Clay, blue, and gravel; mixed----	80	120	
Quicksand----------	10	130	
Gravel----------	11	141	

Well 31/1-21F2

Type of record: Driller's log. Altitude: 782 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	20	20	
Gravel and blue clay----------	25	45	
Clay, blue----------	33	78	
Sand and gravel----------	8	86	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/1-23F1

Type of record: Driller's log. Altitude: 743 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand	8	8	
Clay	12	20	
Sand	36	56	

Well 31/1-23G1

Type of record: Driller's log. Altitude: 743 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel	30	30	
Clay, yellow	3	33	
Sand, fine, gray	19	52	
Sand, fine, yellow	19	71	
Sand, fine, gray	39	110	
Sand, gray	12	122	

Well 31/1-24M1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	14	14	
Sand and rust-colored gravel	28	42	
Sand, gray, and some gravel	13	55	
Gravel, medium to coarse	6	61	

Well 31/1-34D1

Type of record: Driller's log. Altitude: 767 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	22	22	
Clay, blue, and gravel	23	45	
Sand	20	65	
Clay, blue, and gravel	13	78	
Sand and gravel	10	88	
Gravel	3	91	

Well 31/1-36P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Gravel, hard, brown	25	25	
Clay, soft, gray	9	34	
Gravel, coarse, blue	8	42	
Sand, fine, yellow	8	50	
Sand, coarse, white	5	55	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/2- 3D1

Type of record: Driller's log. Altitude: 876 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	10	10	
Gravel with stones	11	21	
Gravel and sand	59	80	
Sand, coarse	20	100	
Sand, fine	80	180	
Sand, coarse	14	194	

Well 31/2- 4B1

Type of record: Driller's log. Altitude: 827 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	30	30	
Gravel, dirty	35	65	
Sand, coarse	8	73	

Well 31/2- 4Q1

Type of record: Driller's log. Altitude: 812 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	16	34	
Sand, yellow	25	59	
Sand, blue, and silt	8	67	
Sand, yellow	3	70	
Gravel, fine	4	74	

Well 31/2- 7C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	40	40	
Sand and clay	15	55	
Sand and gravel	13	68	

Well 31/2- 8A1

Type of record: Driller's log. Altitude: 796 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	52	70	
Gravel, fine to medium	4	74	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/2-11N1

Type of record: Driller's log. Altitude: 838 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and boulders	18	18	
Gravel	18	36	
Gravel and yellow sand	15	51	
Sand, fine	8	59	
Gravel, coarse	3	62	

Well 31/2-12J1

Type of record: Driller's log. Altitude: 886 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	25	25	
Sand and gravel	3	28	
Clay, blue	64	92	
Gravel, medium	3	95	
Sand, fine to medium	2	97	
Clay, blue, and hardpan	43	140	
Sand, medium	7	147	Blue clay at 147 feet.

Well 31/2-16N1

Type of record: Driller's log. Altitude: 807 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, blue	17	35	
Sand, fine	31	66	
Sand, coarse	4	70	

Well 31/2-18N1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Clay, and gravel	18	38	
Clay, blue, and rocks	56	94	
Sand and gravel	8	102	
Gravel	16	118	

Well 31/2-19R4

Type of record: Driller's log. Altitude: 732 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Loam, sandy, and clay	60	60	
Sand	5	65	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/2-19R4--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	20	85	
Clay, reddish-brown	71	156	
Gravel, coarse	1	157	
Devonian System:			
Middle Devonian? Series:			
Limestone	22	179	

Well 31/2-22E1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	39	39	
Sand	2	41	
Gravel and sand	2	43	

Well 31/2-31K1

Type of record: Driller's log. Altitude: 748 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow	8	8	
Silt sand, fine, dark	26	34	
Sand and stone; hard	4	38	
Gravel, coarse	5	43	

Well 31/3- 3C1

Type of record: Driller's log from memory. Altitude: 815 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow and blue	50	50	
Record missing	10	60	
Sand	10	70	
Clay, blue	41	111	
Gravel	4	115	

Well 31/3- 8D1

Type of record: Driller's log. Altitude: 867 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Record missing	70	70	
Silt sand, fine	8	78	
Clay, blue	17	95	
Sand	13	108	
Clay with stone	9	117	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/3- 8D1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand with stone----------	14	131	
Sand----------	12	143	
Gravel----------	2	145	

Well 31/3-10E1

Type of record: Driller's log from memory. Altitude: 817 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel, red, and clay----------	45	45	
Clay, blue----------	55	100	
Sand mixed with some blue clay---	45	145	
Gravel with some sand----------	5	150	

Well 31/3-12B1

Type of record: Driller's log. Altitude: 774 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, gravelly, red, with clay---	18	18	
Sand, white----------	18	36	
Clay, blue----------	2	38	
Sand, fine, and gravel----------	7	45	
Gravel, coarse----------	11	56	

Well 31/3-14K1

Type of record: Driller's log. Altitude: 767 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, red, and clay----------	10	10	
Sand, gray----------	18	28	
Clay, blue----------	3	31	
Sand, fine, light-colored--------	23	54	
Gravel, medium----------	3	57	

Well 31/3-19G1

Type of record: Driller's log from memory. Altitude: 840 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown----------	18	18	
Gravel----------	4	22	
Sand----------	11	33	
Clay, blue----------	17	50	
Gravel, medium----------	18	68	Blue clay at 68 feet.

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/3-20K1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel	36	36	
Sand	10	46	
Clay, blue	12	58	
Gravel, fine to very coarse	2	60	

Well 31/3-23D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand	36	36	
Sand, fine	18	54	
Gravel, coarse	4	58	

Well 31/3-26D1

Type of record: Driller's log. Altitude: 782 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and clay	11	11	
Sand, gray	25	36	
Silt	9	45	
Sand	3	48	
Clay, blue	15	63	
Sand, packed	48	111	
Gravel, clover-seed-sized	3	114	

Well 31/3-28A1

Type of record: Driller's log. Altitude: 773 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	15	15	
Sand	24	39	
Gravel, coarse	4	43	

Well 31/3-31N1

Type of record: Driller's log. Altitude: 767 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, light	8	8	
Sand, fine, gray	32	40	
Sand, gray-blue	3	43	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/3-32C1

Type of record: Driller's log. Altitude: 767 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, soft, brown and blue-------	16	16	
Gravel, coarse-------------------	10	26	
Clay, blue-----------------------	3	29	
Quicksand------------------------	4	33	
Sand-----------------------------	10	43	
Gravel, medium-------------------	3	46	

Well 31/3-32E2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, yellow and gray, and blue clay------------------	54	54	
Clay, blue-----------------------	16	70	
Gravel, coarse, sharp------------	6	76	
Gravel, pea-sized, with some gray fine sand-----------------	3	79	

Well 31/3-32Q2

Type of record: Driller's log. Altitude: 776 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown----------------------	9	9	
Gravel, hard, brown--------------	6	15	
Gravel, medium, brown------------	15	30	
Sand, white----------------------	3	33	
Gravel, medium, gray-------------	17	50	

Well 31/3-32R1

Type of record: Driller's log. Altitude: 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand----------------	7	7	
Sand and gravel------------------	32	39	
Gravel, pea-sized----------------	3	42	

Well 31/3-34D1

Type of record: Driller's log. Altitude: 778 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Record missing-------------------	44	44	
Sand, fine, gray-----------------	2	46	
Sand and stone; very hard--------	22	68	

Table 4.--Selected logs of wells and test holes in Fulton County, Ind.--Cont.

Well 31/3-34D1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue	17	85	
Sand, fine, sharp	5	90	
Gravel, coarse	3	93	

Well 31/4-16H1

Type of record: Driller's log. Altitude: 822 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand	18	18	
Clay, blue	36	54	
Gravel and clay; mixed	18	72	
Gravel	4	76	

Well 31/4-29P1

Type of record: Driller's log. Altitude: 830 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay	45	45	
Gravel, coarse	4	49	
Clay	10	59	
Sand	4	63	

Table 5.--Field chemical analyses of water from wells in Fulton County, Indiana

(Results in parts per million. Analyses by U. S. Geological Survey, except where otherwise noted.)

Well: See text for description of well-numbering system.
Material: G, gravel; Ls, limestone; Sd, sand.
Geologic age: D, Devonian; Pl, Pleistocene.

U. S. Public Health Service drinking-water standards: Iron (Fe) - 0.3 ppm for iron and manganese together; Sulfate (SO_4) - 250 ppm; Chloride (Cl) - 250 ppm.
Remarks: IFC, analysis by International Filter Co.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
29/1- 1F1	Sd,G	Pl	7-26-60	53	1.0	415	25	4	288	
3D1	G	Pl	7-26-60	--	3.0	264	45	4	212	
9E1	G	Pl	7-26-60	--	3.0	337	35	8	264	
13H1	G,Sd	Pl	7-26-60	--	3.0	444	15	4	324	
22F1	G	Pl	7-26-60	--	.1	415	50	16	344	
23F1	Sd	Pl	7-26-60	53	1.0	356	5	4	200	
36G1	G,Sd	Pl	1-19-61	--	1.0	468	30	4	336	
29/2- 1R1	G	Pl	1-20-61	57	1.5	425	20	4	288	
4D1	G	Pl	7-19-60	--	1.0	337	10	4	228	
4F1	G	Pl	1-19-61	--	2.0	434	10	4	284	
9P1	G	Pl	7-27-60	--	3.0	400	15	4	292	
12A1	G,Sd	Pl	7-26-60	--	1.5	400	25	8	324	
14F1	G	Pl	7-27-60	54	1.5	420	15	4	304	
22D1	G,Sd	Pl	7-27-60	53	2.0	322	65	8	316	
23G1	G	Pl	1- 6-61	54	1.5	464	10	4	208	
23G2	G,Sd	Pl	1- 6-61	52	4.0	488	175	32	540	
23J1	G	Pl	7-26-60	--	2.0	317	40	4	244	
23J3	G	Pl	1- 6-61	--	2.0	429	25	4	312	
24D1	G	Pl	7-26-60	56	3.0	337	55	16	288	
24E1	G,Sd	Pl	1- 6-61	54	2.0	425	10	4	284	
26J1	Sd	Pl	1- 6-61	52	3.0	468	55	20	404	
30C1	G	Pl	7-27-60	--	4.0	395	105	20	428	

29/2-32N1	G	P1	1- 6-61	--	0.5	454	10	4	320
32P1	Sd,G	P1	1- 6-61	--	>5.0	459	95	8	428
35H1	G,Sd	P1	10-24-57	51	2.0	---	-----	32	-----
29/3- 3B1	Sd	P1	10-24-57	55	3.0	---	-----	28	-----
3F1	G	P1	7-28-60	--	5.0	459	10	8	396
7P1	G	P1	10-28-60	54	2.0	361	10	4	240
10H1	G	P1	10-24-57	58	1.5	317	-----	12	232
10H1	G	P1	7-28-60	--	1.0	415	5	4	280
15D1	G,Sd	P1	7-28-60	--	.5	468	20	4	352
15E2	G	P1	7-28-60	--	.5	381	10	4	288
15M1	Sd,G	P1	7-28-60	59	1.5	307	60	8	288
16H1	G	P1	7-28-60	--	1.0	439	10	4	328
16J1	G	P1	7-28-60	--	1.5	327	55	8	284
16R1	G,Sd	P1	7-28-60	58	1.0	342	30	4	244
21L1	Sd,G	P1	7-28-60	54	3.0	386	20	4	280
22E3	G	P1	7-29-60	--	1.0	312	50	8	288
28F1	G	P1	8-15-57	--	1.0	273	-----	18	236
30/1- 1C1	G,Sd	P1	1-18-61	--	3.0	376	60	4	308
2L1	Sd,G	P1	11-17-60	--	2.0	410	20	4	324
5A1	Sd,G	P1	1-19-61	--	1.5	425	85	8	376
6G2	Sd,G	P1	9-18-57	53	2.0	190	-----	10	180
6G3	G	P1	9-18-57	--	1.5	210	-----	14	180
6H1	Sd,G	P1	9-18-57	55	1.0	288	-----	24	244
6K1	G	P1	9-18-57	55	1.7	264	-----	10	224
6P1	Sd,G	P1	9-18-57	55	3.0	342	-----	10	288
6P2	Sd,G	P1	1-19-61	55	.1	483	15	<4	344
9E1	G,Sd	P1	1-19-61	--	1.5	449	40	4	368
27F1	G,Sd	P1	3-19-57	--	-----	210	-----	-----	208
30/2- 1E1	Sd	P1	12-15-60	56	1.5	342	50	4	284
3D1	G	P1	11-16-60	57	1.0	346	35	4	332
4N1	Sd	P1	8-10-56	--	-----	266	-----	<2	240
5P1	G	P1	11-16-60	58	1.5	361	75	12	340
8A1	G	P1	8-10-56	--	-----	298	-----	<2	244
8A2	Sd	P1	11-17-60	54	1.0	425	15	4	316
12G1	G	P1	8-10-56	--	-----	227	-----	2	240
12J1	Sd,G	P1	12-15-60	58	1.5	361	40	8	296

Table 5.--Field chemical analyses of water from wells in Fulton County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
30/2-17J1	G	Pl	11-16-60	--	----	356	15	4	260	
18C1	Sd,G	Pl	11-07-57	56	1.5	---	----	24	---	
18N1	Sd,G	Pl	11-16-60	58	1.0	381	15	8	264	
19E1	G	Pl	10-25-57	56	1.0	---	----	4	---	
20C1	Sd,G	Pl	8-09-56	--	----	317	----	2	272	
23C1	G	Pl	11-16-60	57	.3	439	35	4	---	
24R1	G	Pl	12-15-60	--	2.0	429	25	8	348	
34D1	Sd,G	Pl	12-16-60	52	1.0	454	5	<4	316	
35F1	Sd	Pl	12-16-60	57	2.0	434	10	<4	328	
30/3- 1E1	G	Pl	10-25-60	54	4.0	376	85	4	344	
2J1	G	Pl	12-16-60	--	2.0	425	35	8	332	
3M1	Sd,G	Pl	10-25-60	--	1.0	342	45	4	280	
4B2	G	Pl	10-27-60	58	2.0	381	50	4	304	
4Q1	Sd,G	Pl	10-27-60	--	2.0	337	40	8	276	
5B1	Sd,G	Pl	10-28-60	57	1.5	332	85	4	336	
6D1	G	Pl	10-25-60	56	2.0	332	45	4	256	
7A3	G	Pl	10-26-60	--	1.0	376	55	8	316	
7B1	Sd,G	Pl	12-16-60	58	1.0	395	55	8	332	
8A2	Sd,G	Pl	--------	--	.7	288	----	---	291	IFC.
8J1	G	Pl	10-26-60	56	.3	351	100	12	376	
8J2	G,Sd	Pl	10-27-60	57	1.5	322	80	8	304	
8N1	G	Pl	10-28-60	59	1.0	371	55	4	296	
8P1	G	Pl	10-27-60	--	1.5	371	50	8	312	
9J2	Sd,G	Pl	10-25-60	--	1.5	400	5	12	284	
9Q2	G	Pl	11-05-57	--	1.0	322	----	16	280	
9R2	G	Pl	11-05-57	58	.8	332	----	16	268	
10F1	Sd,G	Pl	10-22-57	58	1.0	283	----	32	280	
10F1	Sd,G	Pl	10-25-60	59	2.0	351	40	4	260	
10F2	Sd,G	Pl	10-25-60	58	1.5	332	55	8	276	
10J1	Sd,G	Pl	10-27-60	--	2.0	395	90	12	368	

30/3-10J2	Sd,G	P1	10-25-60	--	2.0	434	10	4	292
10K5	G	P1	10-27-60	--	2.0	405	60	12	336
10M3	Sd	P1	10-27-60	--	2.0	371	15	8	276
10M4	Sd,G	P1	11- 5-57	59	1.0	342	-----	20	276
10M8	Sd,G	P1	10-27-60	--	4.0	386	10	8	280
12N1	Sd,G	P1	10-25-60	54	3.0	390	110	<4	372
13D2	G	P1	10-25-60	--	2.0	400	10	4	284
14E1	Sd	P1	10-25-60	59	3.0	429	5	4	308
15A1	Sd	P1	10-25-60	--	.3	390	25	4	220
15E5	Sd,G	P1	10-27-60	54	2.0	390	45	8	304
15R1	G	P1	10-25-60	--	3.0	400	45	132	436
16H6	Sd,G	P1	10-26-60	59	3.0	429	5	8	296
16K1	G	P1	11-17-60	--	.1	381	50	8	328
16M1	Sd	P1	10-26-60	--	.5	405	50	4	352
17C1	Sd	P1	10-26-60	--	.3	395	60	8	348
20E1	G	P1	12-16-60	--	.3	405	80	8	404
21F1	Sd,G	P1	11-18-60	50	.1	434	40	20	392
21L1	G	P1	10-26-60	54	.1	395	45	24	364
23E1	Sd,G	P1	12-16-60	--	2.0	478	20	4	344
26J1	G,Sd	P1	11- 6-57	58	1.0	---	-----	16	-----
26M1	G	P1	10-22-57	53	1.0	---	-----	16	-----
26N1	Sd,G	P1	10-26-60	52	5.0	498	75	8	408
27J1	G	P1	10-26-60	56	2.0	444	50	8	380
27N1	G	P1	10-22-57	58	.5	---	-----	4	-----
28B1	G	P1	10-22-57	58	1.5	---	-----	12	-----
30N1	Sd,G	P1	12-16-60	52	2.0	464	15	4	372
31G1	Sd,G	P1	10-26-60	--	3.0	439	50	4	352
32B1	G	P1	10-26-60	55	3.0	464	45	4	356
33Q1	G	P1	8- 8-56	58	-----	278	-----	4	256
33Q1	G	P1	10-26-60	56	.1	381	45	8	328
34C1	Sd,G	P1	11-17-60	52	1.5	473	90	16	494
34M2	G	P1	10-26-60	56	1.5	464	40	4	364
34N1	Sd,G	P1	7-28-60	--	.3	522	90	16	456
35A1	G,Sd	P1	10-26-60	56	1.2	488	70	20	444
35Q1	G	P1	1- 5-61	--	1.5	493	55	4	400
35R1	G	P1	1- 5-61	--	0.5	512	40	4	388
30/4- 1A1	G	P1	12- 8-60	50	.1	425	30	12	408

Table 5.--Field chemical analyses of water from wells in Fulton County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
30/4- 2N1	G	Pl	12- 8-60	52	3.0	434	55	4	372	
5E1	Sd,G	Pl	12- 8-60	--	.1	429	50	4	364	
5H1	G	Pl	12- 8-60	--	1.0	439	25	4	344	
5K1	G	Pl	10-23-57	56	1.5	---	-----	8	-----	
7C1	G	Pl	12- 8-60	58	1.5	415	55	8	364	
7F1	Sd	Pl	8- 8-56	--	-----.	256	-----	4	248	
7P2	G	Pl	12- 9-60	50	-----	420	65	64	340	
11M1	G	Pl	12- 8-60	--	1.5	454	90	12	428	
13L1	G	Pl	12- 9-60	--	3.0	386	55	4	320	
15H1	Sd,G	Pl	8-15-57	--	.5	351	-----.	14	340	
15H1	Sd,G	Pl	12- 9-60	--	1.5	415	45	4	340	
17E1	Sd,G	Pl	12- 9-60	55	3.0	390	50	4	308	
17Q1	G	Pl	8-15-57	--	1.5	171	-----	12	232	
19C1	Sd	Pl	12- 9-60	51	2.0	468	65	8	408	
22D1	G	Pl	11-18-60	54	2.0	429	45	8	344	
23D1	G	Pl	11-18-60	54	1.0	454	60	20	376	
24H1	G	Pl	11-18-60	56	2.0	390	50	8	332	
24K1	G	Pl	11-18-60	--	1.5	464	45	8	368	
24L1	G	Pl	8-16-57	--	.5	151	-----	56	220	
25F1	G	Pl	12- 9-60	50	3.0	468	50	4	404	
26H1	G	Pl	8-16-57	--	.1	312	-----	10	228	
26H1	G	Pl	12- 9-60	--	.3	190	10	<4	-----	
26Q1	G,Sd	Pl	10-23-57	57	2.0	386	-----	8	312	
32B1	Sd,G	Pl	12- 9-60	--	.3	395	40	4	336	
32E1	G	Pl	12- 9-60	55	.5	381	45	4	324	
34E1	Sd	Pl	8- 8-56	--	-----	261	-----	4	268	
34E1	Sd	Pl	3-19-57	--	-----	351	-----	4	356	
34E1	Sd	Pl	12- 9-60	--	.3	454	30	4	368	
35G1	G,Sd	Pl	12- 9-60	52	3.0	434	10	4	308	
36J1	Sd,G	Pl	12- 9-60	55	1.5	493	20	4	356	

30/5-20M1	G	P1	12-15-60	56	.5	488	55	12	432
21F1	G	P1	12-15-60	52	7.5	444	30	4	348
27R2	G	P1	12-15-60	50	.1	434	35	8	348
28K1	G,Sd	P1	12-15-60	--	3.0	439	100	8	436
31/1- 1K1	Sd,G	P1	1-18-61	--	2.5	307	10	4	204
1R1	Sd,G	P1	1-18-61	--	1.0	386	35	4	304
2N1	G	P1	10-13-60	--	1.0	312	55	8	240
6K1	G	P1	11-17-60	--	2.0	337	10	4	240
7A1	G	P1	11-17-60	59	-----	444	5	4	320
8H1	G,Sd	P1	11-16-60	--	1.0	532	5	4	404
12L1	G,Sd	P1	10-13-60	--	1.5	303	65	4	280
16D1	G,Sd	P1	11-16-60	56	1.0	503	35	4	372
16H1	G,Sd	P1	11-16-60	--	-----	420	90	4	-----
16H2	G	P1	1956	--	-----	---	-----	10	304
19J1	Sd,G	P1	11-17-60	--	1.0	439	20	4	324
23G1	Sd	P1	11-17-60	54	3.0	366	20	4	288
24M1	Sd,G	P1	11-15-60	56	1.5	361	25	4	268
33F1	Sd,G	P1	11-17-60	54	5.0	503	15	4	372
34D1	G,Sd	P1	11-17-60	56	3.0	434	40	8	348
36P1	Sd,G	P1	11-17-60	54	2.0	366	60	4	328
31/2- 1N1	G	P1	10-13-60	--	4.0	439	20	8	296
3D2	Sd,G	P1	10-12-60	57	.3	449	60	4	332
4P1	G,Sd	P1	10-12-60	--	.1	425	60	8	328
4Q1	Sd,G	P1	7-26-56	--	-----	325	-----	6	368
4Q1	Sd,G	P1	10-13-60	57	.3	395	70	8	352
7A1	G	P1	7-26-56	--	-----	276	-----	<2	272
7C1	Sd,G	P1	10-13-60	--	.3	425	40	8	316
7E1	G	P1	10-13-60	54	1.5	425	75	16	400
8A1	G	P1	10-13-60	56	.3	400	60	4	332
10A1	G,Sd	P1	10-13-60	58	.3	366	30	4	296
10R1	G	P1	7-18-56	--	-----	364	-----	<2	356
11N1	G,Sd	P1	10-13-60	58	.1	405	45	8	336
12J1	Sd	P1	10-12-60	55	3.0	410	40	4	324
14R1	G	P1	10-13-60	--	2.0	444	40	4	328
15D1	Sd,G	P1	11- 4-57	53	.1	---	-----	12	-----
16N1	Sd	P1	7-26-56	--	-----	329	-----	<2	332

Table 5.--Field chemical analyses of water from wells in Fulton County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
31/2-16N1	Sd	Pl	10-13-60	--	0.5	381	40	4	348	
18N1	G,Sd	Pl	10-13-60	--	.5	405	25	4	296	
19R4	Ls	D?	12-16-60	52	.1	361	80	16	260	
20N1	Sd	Pl	10-14-60	53	2.0	337	15	4	240	
22E1	Sd,G	Pl	11-15-60	--	.1	381	35	4	272	
22H1	Sd	Pl	12-16-60	--	2.0	420	40	4	332	
23F2	G,Sd	Pl	11-15-60	58	1.5	293	25	<4	216	
24G1	G	Pl	10-24-57	58	.1	293	-----	16	328	
27H1	G	Pl	12-16-60	54	1.0	405	35	4	328	
30R1	G	Pl	8- 9-56	--	-----	246	-----	8	276	
31K1	Sd,G	Pl	11- 4-57	58	1.0	244	-----	12	272	
31Q1	G	Pl	11-15-60	--	.3	254	140	4	304	
36G1	G	Pl	11-15-60	--	1.0	283	40	4	236	
31/3- 1J1	Sd,G	Pl	7-18-56	--	-----	329	-----	<2	328	
1N1	Sd	Pl	7-27-56	--	-----	342	-----	2	292	
1N1	Sd	Pl	10-11-60	56	4.0	420	5	4	292	
1P1	G	Pl	7-18-56	--	-----	388	-----	< 2	340	
1P1	G	Pl	10-13-60	--	3.0	434	10	4	300	
7R1	Sd,G	Pl	10-13-60	58	.1	395	85	16	356	
8D1	Sd,G	Pl	10-12-60	55	3.0	415	15	4	308	
10E1	Sd,G	Pl	11- 5-57	53	1.5	---	-----	20	-----	
10E1	Sd,G	Pl	10-13-60	--	.5	425	10	4	312	
11J1	G	Pl	8- 6-57	--	3.0	381	-----	<4	320	
12B1	G,Sd	Pl	10-12-60	57	4.0	366	15	4	276	
12E1	Sd,G	Pl	8- 6-57	52	1.5	361	-----	2	316	
12F1	Sd,G	Pl	8- 6-57	52	1.5	373	-----	6	332	
14K1	Sd,G	Pl	10-12-60	--	3.0	351	15	4	248	
17B1	G	Pl	10-12-60	--	.3	410	80	16	396	
17H1	G	Pl	10-13-60	59	1.5	381	55	8	316	

31/3-18H1	G,Sd	P1	12-12-60	--	3.0	376	75	8	308
19J1	Sd,G	P1	10-26-60	--	.1	415	40	4	320
19J2	G	P1	10-24-60	--	1.0	400	40	4	324
19K1	G	P1	10-24-60	--	.5	386	40	4	308
20G1	G	P1	7-26-56	--	-----	251	-----	4	300
22B1	G	P1	10-14-60	54	1.5	395	10	4	264
22B2	G	P1	7-27-56	--	-----	378	-----	2	336
22B2	G	P1	8- 6-57	53	1.2	386	-----	4	328
22G1	G	P1	10-14-60	--	1.0	376	30	4	264
23D1	Sd,G	P1	10-14-60	--	.3	371	20	4	272
24E1	G	P1	10-14-60	56	2.0	371	20	4	252
25Q1	G	P1	10-24-60	54	2.0	390	50	4	340
26D1	Sd,G	P1	10-24-60	--	2.0	429	20	4	312
27D1	G	P1	10-24-60	--	1.0	376	20	4	280
28A1	Sd,G	P1	10-24-60	--	.3	307	70	8	268
28E1	G	P1	10-21-57	56	3.5	312	-----	4	252
28R1	G	P1	10-24-60	--	7.5	264	50	4	232
29M1	Sd,G	P1	10-14-60	--	1.0	395	30	4	300
30F1	G	P1	7-26-56	57	-----	354	-----	2	336
31F1	G	P1	10-24-60	--	2.0	376	30	4	292
31N1	Sd	P1	12-15-60	56	.5	307	50	4	276
32E1	G	P1	11- 7-57	57	2.0	244	-----	20	208
32E2	G,Sd	P1	10-25-60	57	1.0	361	30	4	264
32Q1	Sd	P1	11- 4-57	59	1.3	281	-----	24	312
32Q2	G,Sd	P1	10-28-60	--	3.0	395	45	4	308
32R1	G,Sd	P1	10-27-60	54	.3	351	50	8	304
33P1	G,Sd	P1	10-24-60	57	.1	415	35	8	356
34D1	Sd,G	P1	10-21-57	56	3.0	---	-----	4	-----
35K1	G,Sd	P1	10-21-57	56	1.5	351	-----	4	296
35K1	G,Sd	P1	10-24-60	--	3.0	386	30	4	292
31/4- 5B1	G	P1	7-25-56	--	-----	300	-----	<2	312
9M1	G	P1	1- 5-61	59	3.0	439	25	4	332
16H1	G	P1	1- 5-61	--	1.5	429	10	4	300
18P1	G	P1	1- 5-61	59	4.0	454	5	<4	308
21G1	Sd,G	P1	12- 8-60	54	.3	425	100	12	440
29P1	Sd	P1	12- 8-60	58	.3	464	20	4	356
29Q1	Sd,G	P1	12- 8-60	54	3.0	483	20	4	368

Table 5.--Field chemical analyses of water from wells in Fulton County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
31/4-31Q1	G	Pl	7-26-56	55	----	368	-----	≤ 2	328	
31Q2	G,Sd	Pl	7-26-56	--	----	368	-----	≤ 2	336	
31Q3	Sd,G	Pl	7-19-56	--	----	361	-----	2	340	

Table 6.--Water levels in observation wells in Fulton County, Indiana
(In feet below land-surface datum. Water level:
e, estimated; h, tape measurement)

Fulton 1. (30/3-8B1). City of Rochester. In basement of City Hall. NW¼NE¼ sec. 8, T. 30 N., R. 3 E. Driven unused water-table well in sand and gravel, diameter 1¼ inches, depth 25 feet. Highest water level is 14.73 below lsd, Apr. 15, 1938; lowest 17.42 below lsd, Sept. 2, 1936. Records available: 1935-38.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1935		Aug. 1	17.12	May 15	14.84	Mar. 1	15.98
		15	17.25	June 1	16.21	15	15.78
Oct. 15	17.16	Sept. 2	17.42	15	16.19	Apr. 1	15.59
Nov. 2	17.24	15	17.20	July 1	16.20	15	14.73
Dec. 2	17.24	Oct. 1	16.90	15	16.18	May 2	15.87
3	17.21	15	16.70	Aug. 1	16.60	16	15.28
		Nov. 1	16.56	15	16.71	June 1	15.50
1936		15	16.54	Sept. 1	16.89	15	15.60
		Dec. 1	16.52	15	16.63	July 1	15.20
Jan. 15	17.20	15	16.48	Oct. 1	16.52	15	15.42
Feb. 1	17.16			15	16.30	Aug. 1	15.69
15	17.17	1937		Nov. 1	16.26	15	16.02
Mar. 2	17.15			15	16.24	Sept. 1	16.15
16	16.60	Jan. 2	16.44	Dec. 1	16.68	16	16.32
Apr. 1	16.42	15	15.91	15	16.47	Oct. 1	16.57
15	16.30	Feb. 2	15.68			15	16.83
May 2	16.27	15	15.68	1938		Nov. 1	16.97
15	16.22	Mar. 1	15.68			15	16.82
June 1	16.17	15	15.82	Jan. 1	16.67	Dec. 1	16.91
15	16.15	Apr. 1	15.94	15	16.71		
July 1	16.16	15	16.10	Feb. 1	16.61		
15	16.20	May 1	15.62	15	16.32		

Fulton 2. (30/3-8A1). City of Rochester. In water works building. NE¼NE¼ sec. 8, T. 30 N., R. 3 E. Driven unused water-table well in sand and gravel, diameter 1¼ inches, depth 42 feet. Highest water level is 4.06 below lsd, Apr. 15, 1938; lowest 8.67 below lsd, Sept. 15, 1937. Records available: 1936-38.

1936		July 1	7.95	1937		June 15	7.82
		15	[illegible]69			July 1	7.85
Jan. 15	8.07	Aug. 1	7.60	Jan. 2	7.79	15	7.43
Feb. 1	8.34	15	8.65	15	7.18	Aug. 1	7.50
15	8.30	Sept. 2	8.14	Feb. 2	7.01	15	7.67
Mar. 2	6.98	15	8.55	15	6.90	Sept. 1	8.17
16	6.10	Oct. 1	8.05	Mar. 1	6.56	15	8.67
Apr. 1	7.65	15	7.95	15	6.34	Oct. 1	8.43
15	7.60	Nov. 1	7.91	Apr. 1	6.18	15	8.12
May 2	7.54	15	7.89	15	6.54	Nov. 1	8.01
15	7.74	Dec. 1	7.87	May 1	5.55	15	8.03
June 1	7.94	15	7.83	15	4.55	Dec. 1	7.96
15	7.90			June 1	7.86	15	7.91

Table 6.--Water levels in observation wells in Fulton County--Continued

Fulton 2--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1938		Apr. 1	5.01	Aug. 1	4.86	Nov. 1	7.88
		15	4.06	15	5.19	15	7.88
Jan. 1	7.84	May 2	6.70	Sept. 1	5.24	Dec. 1	7.81
15	7.80	16	5.40	16	5.62		
Feb. 1	7.81	June 1	6.39	Oct. 1	5.91		
15	7.55	15	6.40	15	7.06		
Mar. 1	7.18	July 1	4.45				
15	6.42	15	4.64				

Fulton 3. (30/3-9E1). City of Rochester. At Federal Fish Hatchery. SW¼ NE¼ sec. 9, T. 30 N., R. 3 E. Driven unused water-table well in sand and gravel, diameter 1¼ inches, depth 26 feet. Highest water level is 4.27 below lsd, June 3, 1943; lowest 11.18 below lsd, Jan. 15, 1944. Records available: 1935-47.

1935		Apr. 1	8.65	Apr. 1	9.2	Dec. 10	9.41
		15	6.27	May 1	7.08		
Oct. 17	10.24	May 5	5.84	June 1	7.37	1943	
Nov. 2	10.60	June 11	5.98	July 1	8.00		
15	10.48	July 2	6.60	Aug. 1	8.79	Jan. 4	8.84
Dec. 2	10.50	17	6.17	Sept. 1	8.82	Feb. 2	9.30
16	10.00	31	6.90	Oct. 1	9.18	Mar. 1	9.30
		Dec. 1	9.91	Nov. 1	10.55	Apr. 5	7.38
1936				20	10.50	May 1	5.20
		1938		Dec. 1	10.60	June 3	4.27
Jan. 2	9.95					July 5	5.97
16	9.36	May 4	6.0	1941		Aug. 2	6.88
Feb. 1	9.75	June 1	7.4			Sept. 6	7.27
15	9.98	July 1	5.7	Jan. 1	10.41	Oct. 6	8.72
Mar. 6	9.42	Sept. 1	8.6	Feb. 12	10.3	Nov. 1	9.00
17	9.70			Mar. 12	10.33	15	9.05
Apr. 16	7.64	1939		Apr. 9	6.34	Dec. 1	9.05
May 4	6.47			May 3	5.50	15	9.01
16	6.40	Jan. 1	9.6	June 3	6.45		
June 1	7.30	Feb. 1	9.4	Aug. 4	7.60	1944	
18	8.00	Mar. 1	8.3	Sept. 2	8.39		
July 3	8.90	Apr. 1	8.3	29	9.23	Jan. 1	9.26
Nov. 18	9.63	May 1	7.45	Nov. 3	9.72	15	11.18
Dec. 1	10.00	June 1	7.0			Feb. 1	10.88
17	10.16	Aug. 1	7.5	1942		15	10.05
		21	7.98			Mar. 1	8.06
1937		Sept. 1	9.1	Feb. 9	7.32	15	7.77
		Oct. 20	9.83	June 11	6.78	Apr. 1	7.37
Jan. 4	9.64			July 2	6.31	10	8.81
16	9.16	1940		Aug. 6	6.32	17	7.02
Feb. 1	9.27			Sept. 4	6.70	24	5.37
16	9.48	Feb. 1	11.10	Oct. 1	7.48	May 1	5.79
Mar. 2	9.56	Mar. 1	8.4	Nov. 9	9.38	8	5.93

Table 6.--Water levels in observation wells in Fulton County--Continued

Fulton 3--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1944		1945		Aug. 20	8.17	Apr. 15	8.09
				27	8.49	22	7.89
May 15	5.47	Jan. 1	10.40	Sept. 4	8.35	29	7.74
22	5.64	8	10.45	10	6.40	May 6	7.60
29	6.00	15	10.44	17	9.07	14	7.50
June 5	5.90	Feb. 5	10.52	24	9.09	June 17	6.91
12	6.38	12	10.41	Oct. 2	8.69	24	7.29
14	6.44	19	10.25	10	8.78	July 1	7.50
19	6.60	27	10.10	15	9.15	8	7.55
26	6.91	Mar. 5	10.00	22	9.23	15	7.67
July 3	6.98	12	9.74	29	9.21	23	7.88
10	7.06	19	9.71	Nov. 4	9.19	Aug. 5	8.00
17	7.08	26	8.69	14	9.23	12	8.20
24	7.21	Apr. 2	7.75	26	9.24	19	8.25
31	7.21	9	6.53	Dec. 3	9.21	26	8.40
Aug. 7	7.50	16	6.15	10	9.30	Sept. 9	8.90
14	8.00	23	5.67	17	9.40	30	8.95
21	8.20	30	5.61			Oct. 21	8.92
28	8.21	May 7	5.24	1946		Nov. 4	8.79
Sept. 4	8.32	14	5.78			18	8.89
18	8.84	22	4.80	Jan. 2	8.89	Dec. 2	8.90
25	9.33	28	5.58	7	8.68	9	8.76
Oct. 4	9.27	June 4	5.89	Feb. 4	8.99	23	8.72
9	9.17	11	6.31	11	8.77	31	8.50
23	9.58	18	5.96	18	7.96		
Nov. 3	10.25	25	6.10	26	8.40	1947	
6	10.25	July 2	6.41	Mar. 4	8.37		
20	10.14	9	6.76	11	8.30	Jan. 2	8.12
27	10.28	16	7.23	18	7.50	Feb. 10	8.56
Dec. 5	10.42	24	7.50	25	8.30	24	8.80
11	10.40	30	7.59	Apr. 1	8.29	Mar. 3	8.99
18	10.42	Aug. 6	7.37	8	8.40		
26	10.45	13	7.72				

Fulton 5. (30/3-5L1). Forest Farm Products, Fulton St., Rochester. NE¼ SW¼ sec. 5, T. 30 N., R. 3 E. Drilled unused water-table (?) well in sand and gravel, diameter 6 inches, depth 64 feet. Highest water level is 8.16 below lsd, Aug. 2, 1960; lowest 12.71 below lsd, Feb. 8, 1956. Records available: 1956-60.

1956		Mar. 20	12.30	May 18	10.26	July 11	11.44
		27	12.20	22	10.25	20	11.50
Feb. 8	12.71	Apr. 5	12.20	28	10.31	27	11.60
15	12.63	13	11.86	June 7	10.69	Aug. 1	11.70
22	12.60	20	11.86	14	10.91	9	11.83
29	12.49	26	11.86	21	10.97	15	12.00
Mar. 6	12.60	May 2	11.41	25	10.97	23	12.08
13	12.40	9	11.21	July 2	11.29	29	11.70
						Sept. 7	11.90

Table 6.--Water levels in observation wells in Fulton County--Continued

Fulton 5--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1957		Oct. 1	8.75	June 12	8.70	Mar. 8	10.06
		8	8.85	19	8.70	15	10.05
Apr. 15	12.26	14	8.90	26	8.75	22	10.04
June 14	11.73	24	9.00	July 3	9.00	29	10.02
17	11.33	29	9.10	11	9.08	Apr. 8	9.92
21	11.83	Nov. 5	9.15	18	9.17	13	9.90
July 26	11.47	12	9.30	24	9.20	21	9.81
Aug. 9	11.80	19	9.40	31	9.28	27	9.65
10	11.92	26	9.20	Aug. 7	9.50	May 5	9.51
24	10.35	Dec. 2	9.40	15	9.50	12	9.40
Sept. 10	10.11	10	9.45	22	9.70	19	9.25
20	10.20	17	9.50	30	9.87	25	9.04
21	9.96	22	9.54	Sept. 6	9.99	June 1	8.90
		29	9.66	11	10.06	7	8.70
1958				19	10.16	15	8.84
		1959		26	10.28	23	8.79
Feb. 28	9.93			Oct. 3	10.34	July 1	8.80
Mar. 28	9.95	Jan. 5	9.70	10	10.35	8	8.79
Apr. 11	9.92	12	9.73	19	10.30	16	8.84
18	9.92	20	9.79	25	10.40	25	8.34
May 5	9.94	26	9.65	30	10.47	Aug. 2	8.16
22	10.03	Feb. 3	9.64	Nov. 5	10.42	11	8.51
28	10.07	10	9.60	11	10.44	18	8.72
June 5	10.11	18	9.20	18	10.42	25	8.80
12	9.80	24	9.17	24	10.42	Sept. 2	9.28
21	9.10	Mar. 2	9.15	30	10.40	9	9.53
26	9.05	9	9.10	Dec. 11	10.42	16	9.60
July 5	8.92	16	9.07	24	10.41	23	9.72
9	8.92	21	9.02	30	10.44	28	9.80
18	8.83	26	9.04			Oct. 4	9.87
24	8.78	Apr. 3	9.02	1960		12	10.01
31	8.78	11	8.88			20	10.11
Aug. 7	8.80	18	8.88	Jan. 4	10.45	27	10.20
14	8.80	29	8.79	9	10.33	Nov. 3	10.23
20	8.80	May 5	8.72	16	10.30	10	10.40
26	8.79	13	8.70	23	10.25	16	10.43
Sept. 4	8.72	19	8.60	30	10.25	23	10.45
13	8.75	25	8.64	Feb. 5	10.15	30	10.52
23	8.70	June 2	8.70	12	10.05	Dec. 7	10.55
				19	10.05	14	10.60
				27	10.06	21	10.65
						28	10.68

Table 6.--Water levels in observation wells in Fulton County--Continued

Fulton 6. (30/1-27D1). Winamac Coil Spring Corp. Kewanna. NW¼NW¼ sec. 27, T. 30 N., R. 1 E. Drilled unused artesian well in sand and gravel, diameter 10 inches, depth 117 feet. Recorder installed May 9, 1956, removed May 13, 1957. Highest water level is 20.40 below lsd, May 14, 1960; lowest 25.20 below lsd, Jan. 2, 1957 and Dec. 23, 1960. Records available: 1956-60. Affected by nearby pumping and by trains.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1956(1/)		Oct. 30	24.05	1958		Oct. 25	22.65
		31	24.00			Nov. 1	23.00
May 11	20.71	Nov. 1	24.05	Jan. 3	22.10	8	23.10
12	20.56	2	24.15	10	22.15	15	23.15
13	20.45	3	24.30	18	22.30	22	23.00
July 7	21.51	Dec. 28	24.56	25	22.20	29	22.95
8	21.44	29	24.78	Feb. 1	22.40	Dec. 6	23.10
9	21.47	30	24.55	8	22.52	13	23.00
10	21.68	31	24.58	15	22.60	20	23.00
11	21.75			22	22.90	27	23.33
12	21.72	1957		Mar. 1	23.10		
13	21.67			8	23.05	1959	
29	22.15	Jan. 1	25.01	15	22.85		
30	22.20	2	e25.10	22	22.63	Jan. 3	23.00
31	22.15	May 9	22.05	29	22.95	10	23.30
Aug. 1	22.15	10	22.01	Apr. 5	23.00	17	23.15
2	22.20	11	22.06	12	23.12	24	23.15
3	22.20	12	22.14	19	22.80	30	23.40
4	22.15	Aug. 17	23.36	26	22.95	Feb. 7	23.10
5	22.10	24	23.51	May 3	23.05	14	22.60
6	22.20	31	23.53	10	23.20	21	22.65
7	22.30	Sept. 7	23.80	17	23.40	28	22.70
8	22.35	14	24.00	24	23.45	Mar. 7	22.35
9	22.30	21	24.89	31	23.40	14	22.10
10	22.35	28	24.37	June 7	23.60	21	22.05
11	22.35	Oct. 4	24.40	14	21.95	28	21.70
Sept. 7	23.25	12	24.44	21	21.05	Apr. 4	21.80
8	23.25	19	24.40	28	20.95	11	21.60
9	23.20	26	24.30	July 5	20.90	18	21.20
10	23.00	Nov. 2	24.36	12	21.00	25	21.25
11	23.00	9	24.36	19	20.80	May 2	20.90
12	23.05	16	24.12	26	20.70	9	20.70
28	h23.66	23	23.90	Aug. 15	21.30	16	20.90
Oct. 23	24.00	30	23.76	Sept. 6	22.00	23	21.10
24	24.15	Dec. 7	23.18	13	21.95	30	21.35
25	24.00	14	23.39	20	21.90	June 6	21.50
26	23.95	21	22.90	27	22.00	13	21.75
27	24.20	28	h22.20	Oct. 4	22.25	20	21.95
28	24.15			11	22.50	27	22.10
29	24.15			18	22.45	July 3	22.45

1/ Daily highest water level from recorder graph from May 11, 1956 through May 12, 1957.

Table 6.--Water levels in observation wells in Fulton County--Continued

Fulton 6--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1959		Nov. 14	24.05	Mar. 12	22.10	Aug. 5	22.60
		21	23.45	19	22.20	12	22.70
July 11	22.75	28	23.65	26	22.15	19	22.75
18	22.60	Dec. 4	23.50	Apr. 2	21.90	26	23.05
24	23.10	12	23.45	9	21.38	Sept. 2	23.28
Aug. 1	23.35	19	23.55	16	20.90	9	23.40
8	23.40	26	22.80	23	20.55	16	23.64
15	23.55			30	20.60	23	23.61
22	23.60	1960		May 7	20.90	30	23.84
29	23.75			14	20.40	Oct. 7	23.90
Sept. 5	23.90	Jan. 2	22.95	21	20.90	14	24.07
12	24.10	9	23.10	28	21.00	21	24.28
19	24.45	16	22.85	June 4	21.10	28	24.41
26	24.25	23	22.75	11	21.40	Nov. 4	24.68
Oct. 6	24.50	30	22.60	18	21.60	11	24.58
10	24.60	Feb. 6	22.55	24	21.40	18	24.62
17	24.40	13	22.15	July 1	21.80	25	24.62
24	23.95	19	22.10	8	21.75	Dec. 2	24.90
31	24.10	26	22.20	15	22.00	16	25.10
Nov. 2	24.65	Mar. 5	22.05	22	22.10	23	25.20
				29	22.25	30	25.04

PUBLICATIONS OF COOPERATIVE GROUND-WATER PROGRAM

Report

Ground-water resources of the Indianapolis area, Marion County, Indiana. C. L. McGuinness. Indiana Department of Conservation, Division of Geology. 1943.

Bulletins

No. 1 Memorandum concerning a pumping test at Gas City, Indiana. J. G. Ferris, Indiana Department of Conservation, Division of Water Resources. 1945.

2 A preliminary report of ground-water levels of the State based on records of twenty-six observation wells for which long time records are available. Indiana Department of Conservation, Division of Water Resources. 1946 (Out of print).

3 Ground-water resources of St. Joseph County, Indiana. Part 1, South Bend area. F. H. Klaer, Jr., and R. W. Stallman. Indiana Department of Conservation, Division of Water Resources. 1948.

4 Ground-water resources of Boone County, Indiana. E. A. Brown. Indiana Department of Conservation, Division of Water Resources. 1949.

5 Ground-water resources of Noble County, Indiana. R. W. Stallman and F. H. Klaer, Jr. Indiana Department of Conservation, Division of Water Resources. 1950.

7 Water-level records of Indiana. Indiana Department of Conservation, Division of Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Indiana. Appendix, Basic Data. J. S. Rosenshein and O. J. Cosner. Indiana Department of Conservation, Division of Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Indiana. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1958 (1959).

9 Ground-water resources of Adams County, Indiana. F. A. Watkins, Jr., and P. E. Ward. Indiana Department of Conservation, Division of Water Resources. 1962.

10 Ground-water resources of northwestern Indiana. Preliminary Report: Lake County. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1961.

11 Ground-water resources of west-central Indiana. Preliminary Report: Greene County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1961.

Bulletins--Continued

12 Ground-water resources of northwestern Indiana. Preliminary Report: Porter County. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1962.

13 Ground-water resources of northwestern Indiana. Preliminary Report: La Porte County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.

14 Ground-water resources of west-central Indiana. Preliminary Report: Sullivan County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.

15 Ground-water resources of northwestern Indiana. Preliminary Report: St. Joseph County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.

16 Ground-water resources of west-central Indiana. Preliminary Report: Clay County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.

17 Ground-water resources of west-central Indiana. Preliminary Report: Vigo County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.

18 Ground-water resources of west-central Indiana. Preliminary Report: Owen County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.

19 Ground-water resources of northwestern Indiana. Preliminary Report: Marshall County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.

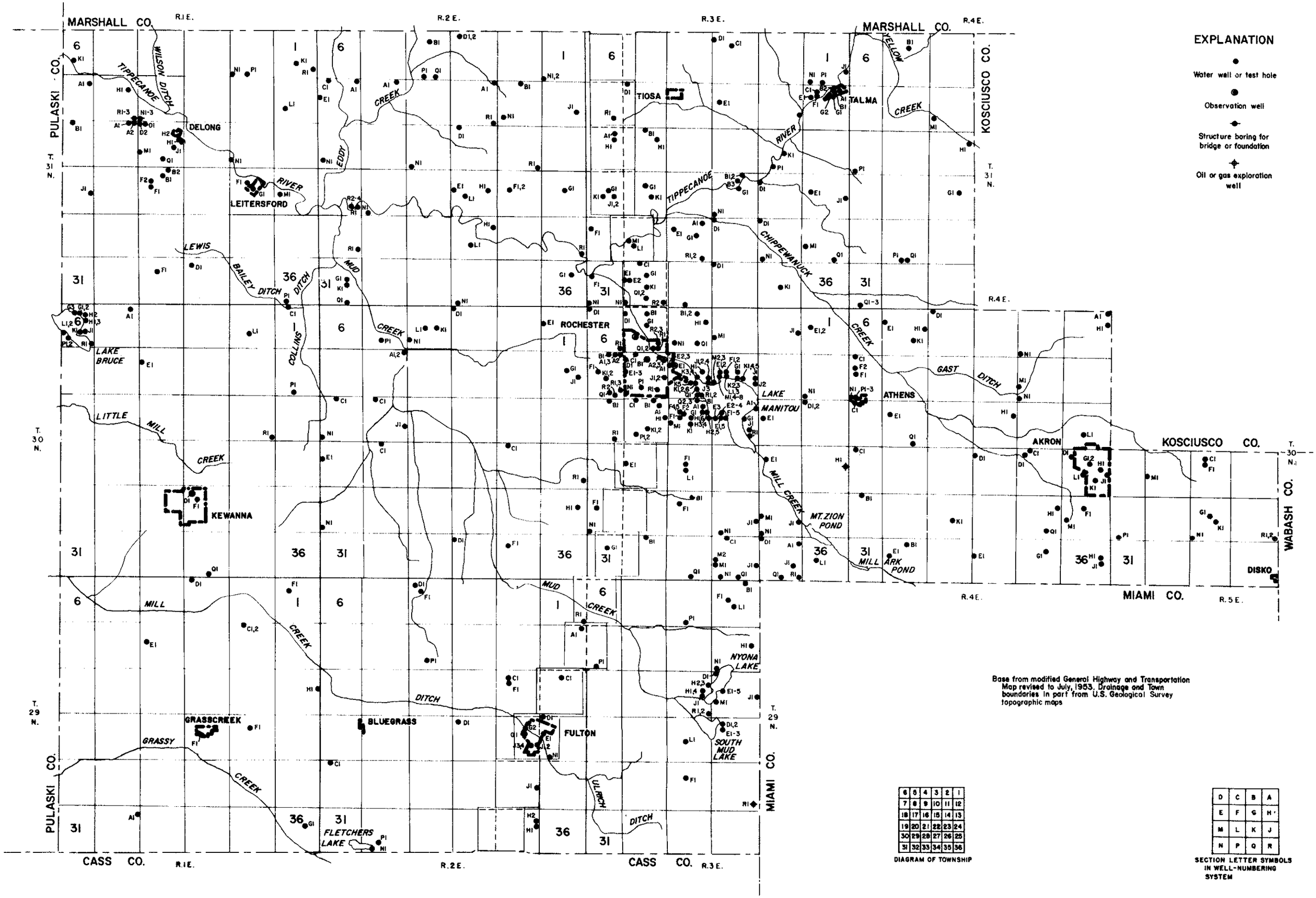
20 Ground-water resources of northwestern Indiana. Preliminary Report: Fulton County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.

INDEX

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 20 PLATE I



EXPLANATION

- Water well or test hole
- Observation well
- Structure boring for bridge or foundation
- Oil or gas exploration well

Base from modified General Highway and Transportation Map revised to July, 1953. Drainage and Town boundaries in part from U.S. Geological Survey topographic maps

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

DIAGRAM OF TOWNSHIP

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

SECTION LETTER SYMBOLS IN WELL-NUMBERING SYSTEM

MAP OF FULTON COUNTY, INDIANA, SHOWING LOCATION OF WELLS AND TEST HOLES

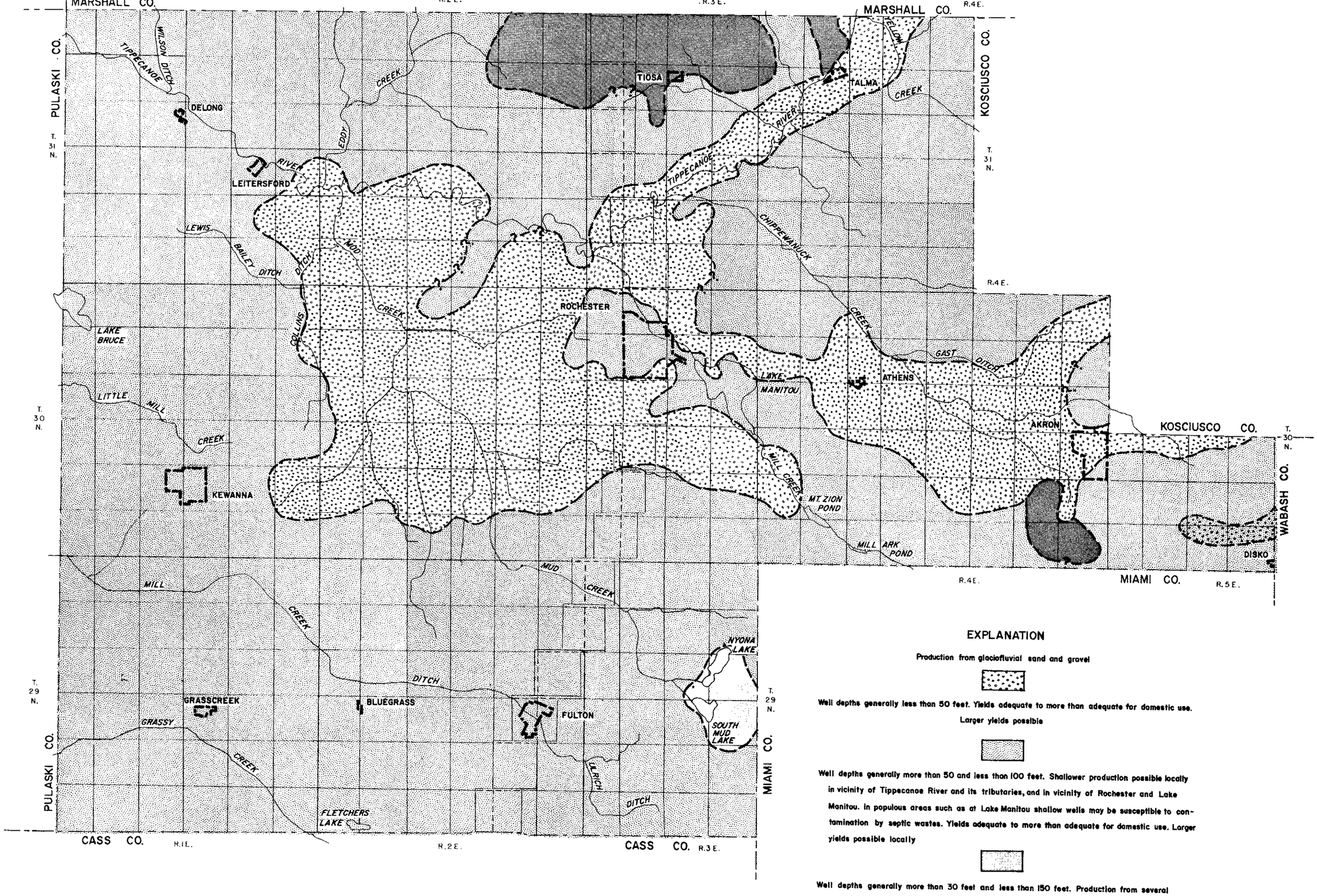
0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 FEET

BY J. S. ROSENSHEIN AND J. D. HUNN
1961

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 20 PLATE 2



EXPLANATION

Production from glaciofluvial sand and gravel

Well depths generally less than 50 feet. Yields adequate to more than adequate for domestic use. Larger yields possible

Well depths generally more than 50 and less than 100 feet. Shallower production possible locally in vicinity of Tippecanoe River and its tributaries, and in vicinity of Rochester and Lake Manitou. In populous areas such as at Lake Manitou shallow wells may be susceptible to contamination by septic wastes. Yields adequate to more than adequate for domestic use. Larger yields possible locally

Well depths generally more than 30 feet and less than 150 feet. Production from several shallow and deep sand and gravel units. Yields adequate to more than adequate for domestic use. Larger yields possible

Well depths generally more than 100 feet and less than 150 feet. Yields adequate to more than adequate for domestic use. Larger yields possible

Boundary approximate

Boundary uncertain

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

DIAGRAM OF TOWNSHIP

Base from modified General Highway and Transportation Map revised to July 1953. Drainage and Town boundaries in part from U.S. Geological Survey topographic maps

MAP OF FULTON COUNTY, INDIANA SHOWING AVAILABILITY OF GROUND WATER

0 1 2 3 4 5 6 MILES

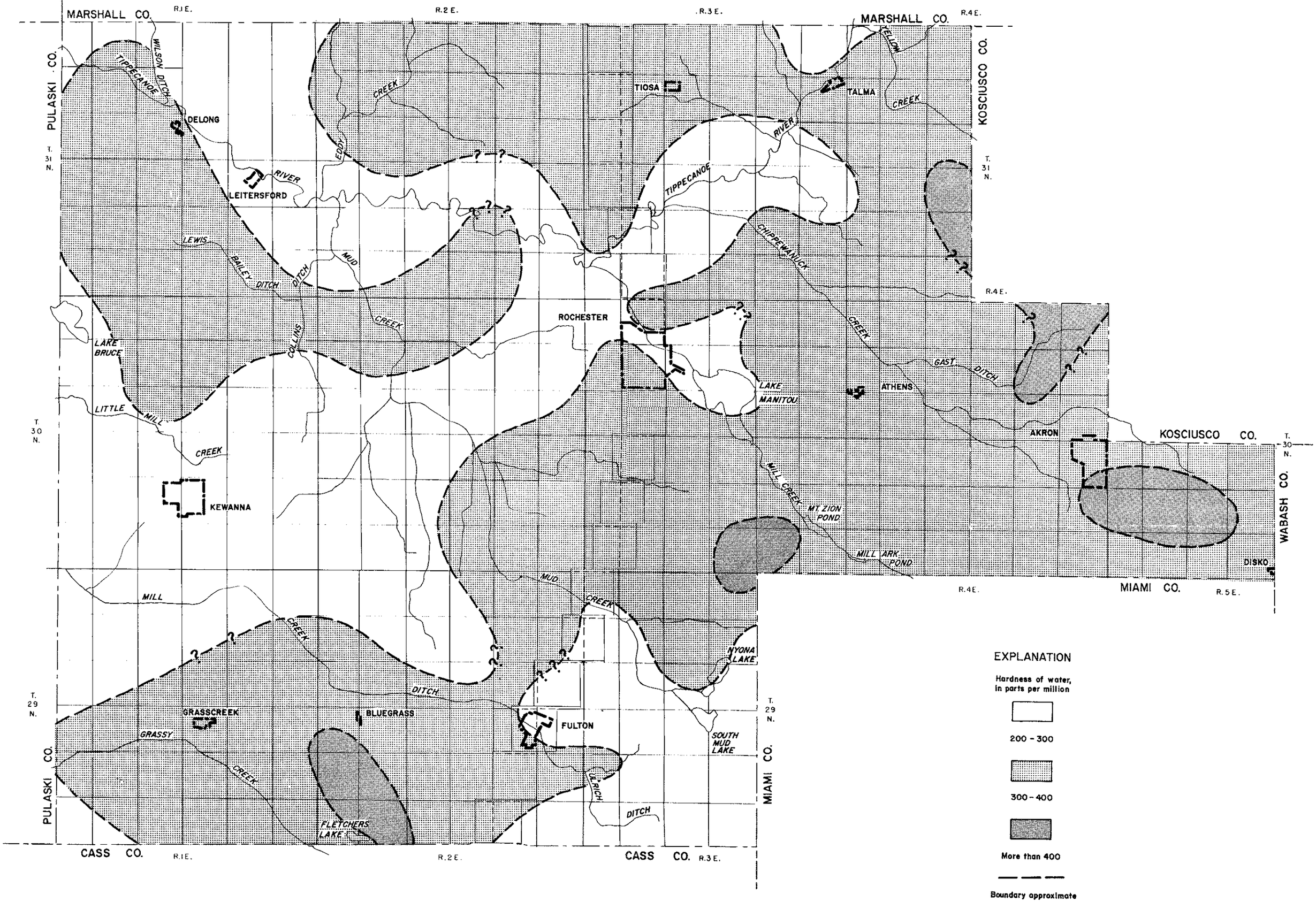
0 5000 10000 15000 20000 FEET

By J. S. Rosenshein and J. D. Hunn
1961

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 20 PLATE 3



EXPLANATION

Hardness of water, in parts per million

- 200 - 300
- 300 - 400
- More than 400

Boundary approximate

Boundary uncertain

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

DIAGRAM OF TOWNSHIP

MAP OF FULTON COUNTY, INDIANA, SHOWING HARDNESS OF WATER IN SAND AND GRAVEL OF PLEISTOCENE AGE

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

By J. S. Rosenshein and J. D. Hunn
1961

Base from modified General Highway and Transportation Map revised to July, 1953. Drainage and Town boundaries in part from U.S. Geological Survey topographic maps