

STATE OF INDIANA  
INDIANA DEPARTMENT OF CONSERVATION  
DIVISION OF WATER RESOURCES

BULLETIN NO. 24

**GROUND-WATER RESOURCES OF  
NORTHWESTERN INDIANA**

**Preliminary Report: Pulaski 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

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Charles H. Bechert, Director

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BY

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## GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: Pulaski County

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

### ABSTRACT

Pulaski County, in northwestern Indiana, has an area of about 433 square miles. Glaciofluvial sand and gravel of Pleistocene age is the chief source of ground water for domestic, stock, industrial, and some public supplies. Wells that tap this source generally are less than 150 feet deep and yield from 5 to 800 gpm (gallons per minute). The underlying bedrock also is used as a source of ground water. The rocks of Silurian and Devonian age are extensively used in the southwestern and northwestern parts of the county for domestic, stock, and public supplies. Wells that tap these sources generally are less than 300 feet deep and yield as much as 1,000 gpm. Water from the rocks of Silurian, Devonian, and Pleistocene age varies in chemical quality. Field chemical analyses show that the hardness of water from rocks of Pleistocene age is generally greater than 120 and less than 400 ppm (parts per million). The hardness of water from rocks of Silurian and Devonian age is generally greater than 100 and less than 350 ppm. In much of the county the concentration of iron from the rocks of Pleistocene age exceeds the maximum concentration recommended in the U. S. Public Health Service drinking-water standard for iron and manganese together.

This preliminary report contains tabulated records of about 370 wells and test holes giving information about well construction, water level, condition of occurrence, and characteristics of water-bearing material; selected logs for about 90 wells and test holes giving driller's description of material penetrated and authors' interpretation of their geologic age; results of about 275 field chemical analyses giving hardness of water and the bicarbonate, chloride, iron, and sulfate contents; and water levels in 6 observation wells indicating the magnitude of short-term and long-term water-level fluctuations in the consolidated and unconsolidated rocks. These basic data include much of the material to be used in an interpretive report on the ground-water resources and geology of the area.

A base map of Pulaski 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 consolidated rocks of Silurian and Devonian age and 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 eighth 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

Pulaski County is in the northwestern part of Indiana (fig. 1). The county is rectangular and includes about 433 square miles. It is bounded on the north by Starke County, on the south by Cass and White Counties, on the west by Jasper County, and on the east by Fulton County.

PULASKI CO.

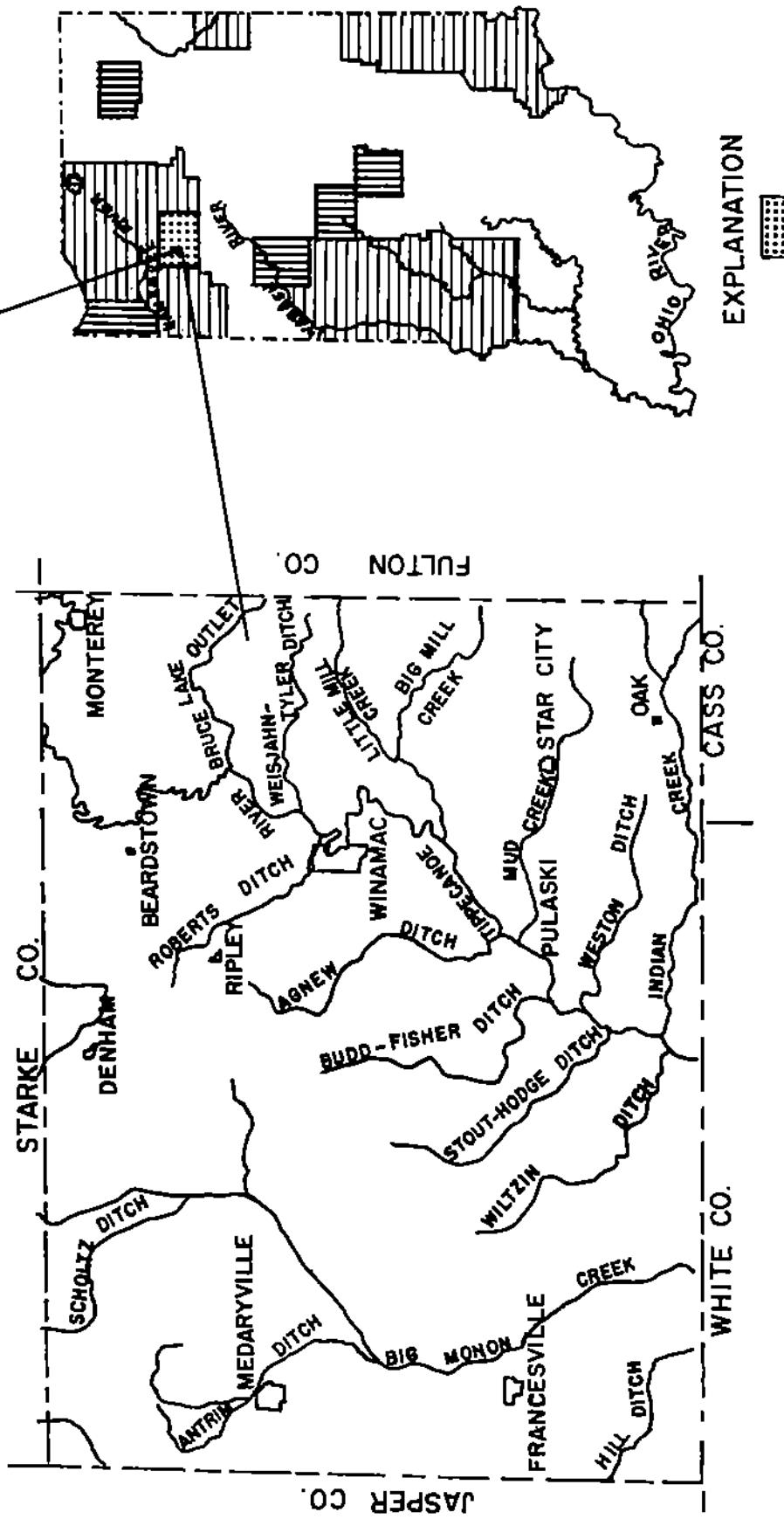


FIGURE I. -- Map of Indiana, showing area covered by this report areas under investigation, and areas covered by reports published under the cooperative program.

AREA COVERED BY THIS REPORT  
[grid pattern]

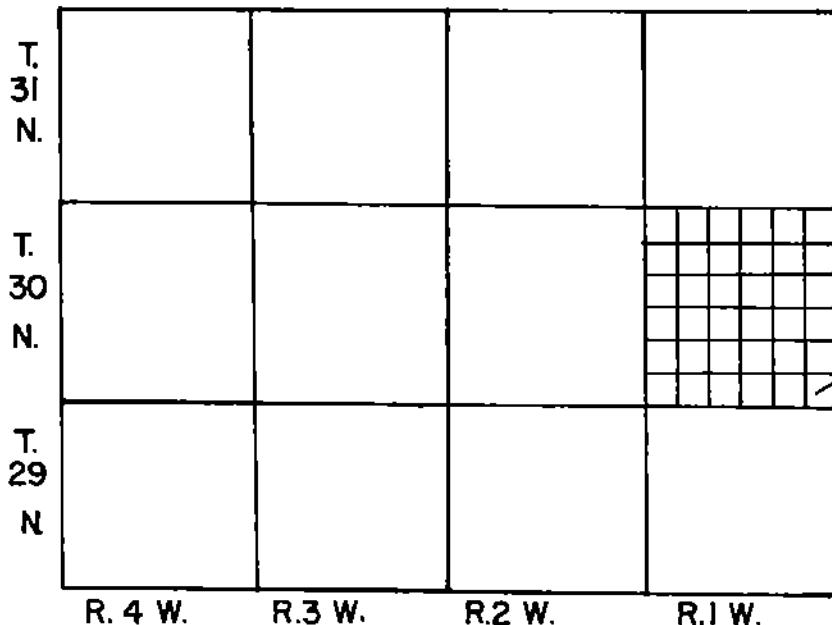
AREAS UNDER INVESTIGATION  
[vertical lines]

AREAS COVERED BY REPORTS PUBLISHED  
UNDER THE COOPERATIVE PROGRAM  
[horizontal lines]

### 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 30/1W-36E1, the numbers preceding the hyphen indicate that the well is in T. 30 N., R. 1 W. The first number after the hyphen indicates the section in which the well is located. Each quarter-quarter section (40-acre tract) within a section is assigned a letter symbol as shown on figure 2. Within the quarter-quarter section the wells and test holes are numbered consecutively. Therefore, well 36E1 is the first well listed in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 30 N., R. 1 W.

### PULASKI CO.



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

Well 30/1W-36E1 -

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

FIGURE 2. - Sketch showing well-numbering system.

### Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. R. J. Vig, formerly of the Geological Survey, assisted in processing the data in the field. Well drillers, whose names are listed in the table of well records, furnished 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 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.

Planimetric maps were prepared for the areas not covered by standard  $7\frac{1}{2}$  minute quadrangle maps of the U. S. Geological Survey so that wells and test holes could be accurately located in the field. These maps were compiled with a vertical sketch-master from aerial photographs using the horizontal control shown on original manuscript copy, scale 1:25,000, of the Army Map Service.

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. 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 Pulaski County are of Ordovician age. These rocks consist of dolomite, dolomitic limestone, and shale. The rocks of Ordovician age are not used as a source of water supply in the county because they generally lie about 550 to 600 feet below the surface and contain water that generally has a dissolved solids content of more than 5,000 ppm (parts per million).

The rocks of Ordovician age are overlain by dolomitic limestone, shale, and dolomite of Middle Silurian age. These rocks are utilized extensively in the southwestern part of the county as a source of water for domestic, stock, and public supplies. Wells that tap this aquifer are generally less than 200 feet deep and yield as much as 150 gpm (gallons per minute). Much of the material of Silurian age listed in table 3 as limestone or limestone (?) is either dolomitic limestone or dolomite.

The rocks of Silurian age are overlain by 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). The dolomitic limestone of Middle Devonian age is used extensively in the northwestern part and locally in other parts of the county for domestic, stock, and public supplies. Wells that tap this aquifer are generally less than 300 feet deep and yield as much as 1,000 gpm. The shale of Devonian and Mississippian (?) age is not extensively used as a source of water in Pulaski County and the quantity and quality of water available from this rock is uncertain.

The bedrock is overlain by unconsolidated glacial drift of Pleistocene age. The drift forms several topographic features in the county (Leverett and Taylor, 1915, pl. 6; Wayne, 1958) such as the ground moraine in the southeastern part; the glaciolacustrine plains in the extreme southwestern part; and the sand-covered glaciofluvial plains in the rest of the county.

The unconsolidated rocks of Pleistocene age range in thickness from less than 10 to more than 200 feet. The rocks consist chiefly of glaciofluvial sand and gravel, clayey till, some glaciolacustrine clay and silt, and wind-blown sand. The glaciofluvial sand and gravel is locally more than 90 feet thick and is the chief source of ground water in most of the county for domestic and stock, industrial, and some public supplies. Wells that tap this aquifer are generally less than 150 feet deep and yield from 5 to 800 gpm.

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 generally too thin to be a source of ground water.

Plate 2 shows the availability of ground water in the consolidated and unconsolidated rocks underlying the county. Plate 3 shows the areal distribution of hardness of water from the rocks of Silurian and Devonian age. Table 1 indicates the significance of the various constituents and properties of the water that are listed in table 5.

The water from the rocks of Silurian age is hard to very hard. The hardness is generally greater than 200 and less than 350 ppm. The range in concentration of selected constituents and properties is summarized in the table below.

Constituent or property	Minimum (ppm)	Mode (ppm)	Maximum (ppm)
Iron (Fe)-----	<0.1	---	3
Bicarbonate ( $\text{HCO}_3$ )-----	205	267	508
Sulfate ( $\text{SO}_4$ )-----	<5	---	170
Chloride ( $\text{Cl}$ )-----	<4	---	64
Hardness as $\text{CaCO}_3$ -----	164	217	652

This table shows the minimum, mode, and maximum concentrations of various constituents and properties of water from rocks of Silurian age.

Table 1.--Significance of selected dissolved mineral constituents  
and properties of ground water <sup>a/</sup>

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 ( $\text{HCO}_3$ )-----	Bicarbonate in conjunction with carbonate ( $\text{CO}_3$ ) 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 ( $\text{SO}_4$ )-----	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 ( $\text{Cl}$ )-----	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.

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

Table 1.--Cont.

Constituent or property	Significance
Hardness as $\text{CaCO}_3$ (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.

The water from the rocks of Devonian age is moderately hard to very hard. The hardness is generally greater than 100 and less than 200 ppm. The range in concentration is selected constituents and properties from this source is summarized in the table below.

Constituent or property	Minimum (ppm)	Mode (ppm)	Maximum (ppm)
Iron (Fe)-----	<0.1	---	7.5
Bicarbonate ( $\text{HCO}_3$ )-----	220	310	893
Sulfate ( $\text{SO}_4$ )-----	<5	8	150
Chloride (Cl)-----	<4	6	80
Hardness as $\text{CaCO}_3$ -----	76	150	332

Plate 4 shows the areal distribution of hardness of water from the rocks of Pleistocene age. The water is soft to very hard. The hardness is generally greater than 120 and less than 400 ppm. In much of the county the iron content from this source exceeds the maximum concentration recommended in the U. S. Public Health Service drinking-water standard for iron and manganese together. The range in concentration of selected constituents and properties is summarized below.

Constituent or property	Minimum (ppm)	Mode (ppm)	Maximum (ppm)
Iron (Fe)-----	<0.1	---	>7.5
Bicarbonate ( $\text{HCO}_3$ )-----	73	323	464
Sulfate ( $\text{SO}_4$ )-----	<5	40	250
Chloride (Cl)-----	<4	6	156
Hardness as $\text{CaCO}_3$ -----	36	288	512

#### CONFINED AND UNCONFINED CONDITIONS

Ground water occurs in the consolidated and unconsolidated rocks of Pulaski 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 Pulaski County. Most water wells 3-inches or more in diameter are constructed by the cable-tool or percussion method. 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. Where the water-bearing material is consolidated rock, the well casing is generally driven a short distance into the rock, and the well is finished as an open hole.

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.

Table 2.--Grain size and equivalent screen openings

Grain size: After Wentworth (1922)

Equivalent screen openings: From  
commercial catalogs for water-well  
supplies.

Slot size: In thousandths (0.001)  
of an inch.

Gauze size: Number of wire strands  
per lineal inch.

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

## SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are available in much of the county for domestic, stock, public, and industrial supplies from sand and gravel of Pleistocene age. The underlying bedrock also is used as a source of water. The dolomite and dolomitic limestone of Silurian and Devonian age are used extensively in the southwestern and northwestern parts of the county for domestic, stock, and public supplies.

The chemical quality of water from the rocks of Silurian, Devonian, and Pleistocene age varies. The water from the rocks of Silurian and Devonian age is moderately hard to very hard. The water from rocks of Pleistocene age is soft to

very hard. In much of the county the iron content from this source exceeds the U. S. Public Health Service drinking-water standards for iron and manganese together.

#### RECORDS

The records of about 370 wells and test holes are given in table 3. The table contains information about well construction, water levels, yields and draw-downs, conditions of occurrence, thickness and characteristics of water-bearing materials, type of pump, and other data. The altitude of the land surface at wells and test holes was interpolated from topographic maps.

Table 4 contains the selected logs of about 90 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 about 275 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, magnesism) of water. The U. S. Public Health Service 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 six observation wells of which one was established during the investigation and the rest prior to the investigation. The water levels in the observation wells were obtained 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 except where otherwise noted. Daily highest 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. Factors affecting the water levels in the observation wells are also indicated. For additional water levels see water supply papers listed under U. S. Geological Survey in selected bibliography. The location of the observation wells is shown on plate 1.

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Table 1.

Records of wells and test holes in Putnam County, Indiana

Well: See text for description of well-nubering system.

Altitude: Altitude of land-surface datum from topographic map.

Type of well: Driven; Drilled; J, jetted.

Pinhole: Co, open end; Ch, open hole; PP, perforated pipe; S, screen,

dis, diatomite; R, crushed rock; M, metal size.

Character: Dr, dolomite; G, gravel; L, lignite; Sh, shale.

Geologic Age: N, Devonian; M, Mississippian; Pl, Pleistocene; S, Silurian.

Condition of occurrence: C, confined; U, unconfined; H, test for definition.

Major level: In feet below land-surface datum on date of completion of well, except

where otherwise noted.

Clay: D, domestic; Da, destroyed; P, public supply; S, rock.

Type of pump and haulpower: C, centrifugal; J, jet; L, lift; P, pitcher; S, numerical:

T, turbine; numberical indicates rated horsepower of electric motor.

Remarks: Ca, fluid chemical analysis in table 5; dd, dredge; E, electric log available;

G, gamma ray log available; gm, gallons per minute; L, tow of well in table 4.

REMARKS  
Water-bearing zone  
Geologic age  
Occurrence of fossils  
Depth to top (feet)  
Thickness (feet)  
Diameter of well (inches)  
Depth of well below land-surface (feet)  
Type of well  
Altitude (feet)  
Pds completed  
Driller  
Owner  
Well

Well	Owner	Driller	Pds completed	Type of well	Altitude (feet)	Depth of well below land-surface (feet)	Diameter of well (inches)	Depth to top (feet)	Thickness (feet)	Geologic age Occurrence of fossils Depth to top (feet)			Water level (feet)	Type of pump and haulpower	Major level	Remarks
										P1	U	V				
29/1W-1P1	W. F. Bauman	J. Masters	About 1831	Dr	18	14	S; 3ft	21	20	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	D	L	Ca.	Yield 12 gpm; Ca, L.	
3M1	N. Hatt	J. Masters	10-17-59	J	50	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	S	—	—	Yield 12 gpm; Ca, L.	
4P1	M. Phillips	Pashur Bros., Mdlg Co.	5-24-58	J	100	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	P	30	D, S	Quicksand and gravel over- lain by 20 ft clay; Ga.	
5C1	D. Cahanan	J. Masters	5-24-58	J	52	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	13	P	Ca, L.	
6P1	Mr. Brown	J. Masters	0-3-58	J	54	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	13	P	Ca, L.	
6P2	P. Fritts	D. Henderson	12-4-60	J	57	4	S; 4ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	15	D	Yield 15 gpm; Ca, L.	
6P3	E. Bowitz	J. Masters	12-9-60	J	76	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	14	D	Yield 15 gpm; Ca, L.	
6G1	L. Seibert	J. Masters	8-1-59	J	60	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	14	D	Yield 10 gpm; Ca, L.	
8K1	Pulaski Farm Bureau Coop.	J. D. Ortean and Son	8-53	J	147	4	S	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	14	D	Ca, L.	
8L1	D. Grovins	J. Masters	5-12-58	J	100	2	S; 3ft, 60in	92	9	S; 3ft, 60in	92	C	12	P	Ca, L.	
8L2	Pulaski Farm Bureau Coop.	J. D. Ortean and Son	3-18-53	J	Dr	4	S	—	—	S; 3ft, 60in	92	C	14	P	Ca, L.	
8L3	M. Wirkle	J. Masters	8-1-58	J	64	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	42	22	S; 3ft, 10in, dia 1 $\frac{1}{2}$	42	C	17	D	Yield 11 gpm; water level 14 ft below log, 4-1-61; Ca, L.	
8L4	A. Abbott	J. Masters	—	J	60	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	14	D	Yield 10 gpm; Ca, L.	
8L5	L. Warner	J. Masters	3-31-61	J	60	2	S; 3ft, 12in, dia 1 $\frac{1}{2}$	39	24	S; 3ft, 12in, dia 1 $\frac{1}{2}$	39	C	14	D	Yield 13 gpm; Ca, L.	
8L6	G. Fehrer	J. Masters	4-7-61	J	62	2	S; 3ft, 12in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 12in, dia 1 $\frac{1}{2}$	—	C	15	D	Yield 15 gpm; Ca, L.	
8L7	X. A. Gross	D. Henderson	10-61	J	60	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	12	D	Yield 12 gpm; Ca, L.	
8L8	L. Machnitz	D. Henderson	4-57	J	50	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	10	D	So low well, BFT.	
8P1	Indiana Packing Company	J. Masters	8-37	J	14	4	S; 3ft, 10in, dia 1 $\frac{1}{2}$	105	39	S; 3ft, 10in, dia 1 $\frac{1}{2}$	105	C	27	I	So low well, BFT.	
8P2	P. Ortean	J. Masters	3-31-58	J	50	2	S; 3ft, 12in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 12in, dia 1 $\frac{1}{2}$	—	C	12	D	Yield 12 gpm; water level 14 ft below log, 5-20-60; Ca, L.	
8P3	G. Grasslukor	J. Masters	8-20-59	J	52	14	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	13	D	Yield 12 gpm; Ca, L.	
8P4	H. Wright	J. Masters	7-31-60	J	148	2	S; 3ft, 12in, dia 1 $\frac{1}{2}$	106	42	S; 3ft, 12in, dia 1 $\frac{1}{2}$	106	C	14	P	Yield 12 gpm; Ca, L.	
8P5	K. Lucas	D. Henderson	7-31-60	J	95	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	—	S; 3ft, 10in, dia 1 $\frac{1}{2}$	—	C	10	D	Yield 12 gpm; Ca, L.	
8P6	J. Masters	D. Henderson	4-28-58	J	50	2	S; 3ft, 12in, dia 1 $\frac{1}{2}$	24	26	S; 3ft, 12in, dia 1 $\frac{1}{2}$	24	C	14	P	Yield 12 gpm; Ca, L.	
8P7	Parsonic	D. Henderson	4-11-60	J	79	4	S; 6 ft, dia 3 $\frac{1}{2}$	59	17	S; 6 ft, dia 3 $\frac{1}{2}$	59	C	12	D	red clay.	
8R1	H. Dusko	Fisher Bros., Mdlg Co.	About	J	80	2	S	—	—	S; 2ft, 60in	36	C	14	P	Yield 2d gpm; L.	
11H1	C. and E. Parrot	D. Henderson	8-5-59	J	36	2	S; 3ft, 10in, dia 1 $\frac{1}{2}$	33	3	S; 3ft, 10in, dia 1 $\frac{1}{2}$	33	C	13	D	Yield 12 gpm; Ca, L.	
12H1	J. S. Cappoer	Fisher Bros., Mdlg Co.	About	J	105	2	S; 6 ft	—	—	S; 6 ft	—	C	16	S	Ca, L.	
12H2	M. Zellers	Fisher Bros., Mdlg Co.	1955	J	105	2	S	—	—	S	—	C	16	D	Ca, L.	
13H1	H. Allen	Fisher Bros., Mdlg Co.	1927	J	23	13	S; 2ft, 60in	—	—	S; 2ft, 60in	—	C	14	D	Ca, L.	
14P1	H. Woodko	Fisher Bros., Mdlg Co.	1955	J	18	17	S; 2ft, 60in	—	—	S; 2ft, 60in	—	C	15	D	Ca, L.	
15D1	J. Murphy	Fisher Bros., Mdlg Co.	1955	J	30	17	S; 2ft, 60in	—	—	S; 2ft, 60in	—	C	15	D	Ca, L.	
15Q1	C. H. Fieldrich	Fisher Bros., Mdlg Co.	1955	J	180	4	S	—	—	S	—	C	15	D	Ca, L.	



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

Well	Owner	Driller	Date completed	Type of well	Depth of well (feet)	Surface elevation of well before backfill (feet)	Characteristics of soil	Description of water-bearing zone	Remarks				
									Depth to top (feet)	Geologic age	Occurrence of fractures	Type of pump and bars per square foot	
20/3R-281	L. Novak	R. H. Winkler	7-12-55	J	180	2	S	---	33	Sd, Q	7	J-1/2	
J001	R. Isaacson	R. D. Manderson	9-15-59	Jr	60	4	Dr	---	30	Ca.	---	Ca.	
J002	R. Cook	--do--	9-15-59	Jr	42	4	Dr	---	28	Ca.	---	Yield 12 gpm; L.	
J003	E. Phillips	A. 1941	606	J	84	2	Dr	---	26	Ca.	---	Levee overlain by sand and gravel; Ca.	
J004	J. C. Mount	J. Winkler	1948	J	84	2	Dr	---	24	Ca.	---	Ca.	
J005	L. Isbin	Mr. McKinney	1952	J	208	2	Dr	---	20	Ca.	---	Ca.	
J006	A. Gorlach	--do--	711	J	104	2	Dr	---	18	Ca.	---	Ca.	
J007	D. Korten	D. Manderson	6-59	638	25	20	12	S, Jlt,	15	Ca.	---	Ca.	
J008	D. Korten	J. Winkler	1950	690	25	20	12	S, Jlt,	15	Ca.	---	Ca.	
J009	A. Korten	J. Winkler	6-28-50	697	23	20	12	S, Jlt,	15	Ca.	---	Ca.	
J010	H. Johnson	D. Manderson	11-15-59	705	20	90	12	S, Jlt,	15	Ca.	---	Ca.	
J011	H. Seidler	--do--	700	Dr	62	4	Dr	---	13	Ca.	---	Ca.	
J012	E. H. Ready	R. Fout	7-51	697	Dr	80	12	S, Jlt,	15	Ca.	---	Ca.	
J013	R. R. Young	--do--	690	Dr	28	51	12	S, Jlt,	15	Ca.	---	Ca.	
J014	J. T. Olson	--do--	690	Dr	20	51	12	S, Jlt,	15	Ca.	---	Ca.	
J015	W. W. Price	Before	690	Dr	160	--	Dr	---	13	Ca.	---	Ca.	
J016	S. Kusner	1921	687	Dr	104	4	Dr	---	10	Ca.	---	Dredged at 64 ft; Ca.	
J017	H. Seidler	1917	687	Dr	110	4	Dr	---	9	Ca.	---	Ca.	
J018	U. Dardor	About	1915	693	Dr	20	12	S, Jlt,	15	Ca.	---	Ca.	
J019	F. Tucker	--do--	697	Dr	18	12	S, Jlt,	15	12	Ca.	---	Ca.	
J020	P. H. Blatz	1919	702	Dr	20	12	S, Jlt,	15	10	Ca.	---	Ca.	
J021	P. Lederer	1916	698	Dr	64	12	Dr	---	6	Ca.	---	Ca.	
J022	E. Korten	1946	688	Dr	70	12	S, Jlt,	60%	11	Ca.	---	Ca.	
J023	G. Korten	--do--	688	Dr	47	12	S, Jlt,	60%	11	Ca.	---	Ca.	
J024	B. Schaffer	1930	680	Dr	86	2	Dr	---	12	Ca.	---	Ca.	
J025	H. Polakovic	6-10-45	684	J	45	2	S, Jlt,	60%	5	Ca.	---	Ca.	
J026	H. Polakovic	G. E. Crail	1947	684	Dr	58	4	Dr	---	13	Ca.	---	Ca.
J027	A. Jordan	Pleasant Beach, Well	7-21-55	682	Dr	112	4	S, Jlt, 4ft. dia 3½	10	Ca.	---	Ca.	
J028	L. Flitz	R. H. Winkler	1953	682	Dr	114	4	S, Jlt, 4ft. dia 3½	9	Ca.	---	Ca.	
J029	L. Flitz	--do--	680	Dr	60	12	S, Jlt,	60%	10	Ca.	---	Ca.	
J030	L. Flitz	W. Dahl	681	Dr	68	17	S, Jlt,	60%	10	Ca.	---	Ca.	
J031	S. Concell	--do--	685	Dr	69	12	S, Jlt,	60%	14	Ca.	---	Ca.	
J032	L. Nico	--do--	685	Dr	69	12	S, Jlt,	60%	8	Ca.	---	Ca.	
J033	Portion County Wall Service Co., Inc.	1941	682	J	81	2	S, Jlt,	60%	9	Ca.	---	Ca.	
J034	Portion County Wall Service Co., Inc.	1941	682	J	81	2	S, Jlt,	60%	9	Ca.	---	Ca.	
J035	Q. Odgen	8-28-53	674	Dr	200	10	Dr	---	190	Ca.	---	Yield 20 gpm; L.	
J036	Town of Francesville	8-28-53	674	Dr	626	8	Dr	---	190	Ca.	---	Do 91 ft after 6 hr pumping 150 gpm; bedrock at 0 ft; Ca.	
J037	B. Oettemeyer	10-10-41	681	Dr	145	9	Dr	---	138	Ca.	---	Original borehole 6 ft; originally drilled to 603 ft; water level measured 8.5 ft below bedrock; 7.5 ft; Ca.	
J038	W. Ebb	8-8-41	691	Dr	821	2	Dr	---	821	Ca.	---	Oil test; bedrock at 45 ft; Ca.	
J039	S. Geyer	8-8-41	694	Dr	912	8	Dr	---	912	Ca.	---	Oil test; bedrock at 14 ft; Ca.	
J040	G. H. Roehm	3-27-53	683	Dr	61	12	Dr	---	61	Ca.	---	Oil test; bedrock at 14 ft; Ca.	
J041	P. R. Garwood	--do--	683	Dr	145	9	Dr	---	145	Ca.	---	Oil test; bedrock at 14 ft; Ca.	
J042	L. Nico	12-23-57	681	Dr	145	9	Dr	---	145	Ca.	---	Oil test; bedrock at 14 ft; Ca.	
J043	H. Krab	12-4-41	683	Dr	933	15	Dr	---	933	Ca.	---	Oil test; bedrock at 14 ft; Ca.	
J044	G. Partoll	--do--	683	Dr	145	9	Dr	---	145	Ca.	---	Spring issuing from contact of sand underlie by clay and silt; do 150 ft; Ca.	



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

Well	Owner	Driller	Date completed	Altitude to top (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Diameter of well (inches)	Type of pump and boreage	Water level (feet)	Water-bearing zone				Remarks	
											Cretaceous (6000')		Oligocene (4000')			
											Thickness	Depth to bottom (feet)	Thickness	Depth to bottom (feet)		
30/1M-3201	H. Blue	J. Mastors	10-7-60	721	J	57	2	3 ft., 12 in., dia $\frac{1}{4}$	3 ft., 10 in., dia $\frac{1}{4}$	P1	4	Q	15	D, J	Yield 12 gpm; Ca, L.	
32M1	C. Skillen	-----	7-30-59	710	J	24	2	3 ft., 10 in., dia $\frac{1}{4}$	do	P1	12	Sd, G	11	S	Yield 12 gpm; sand and gravel overlain by 12 ft. clay.	
32M2	do	-----	-----	895	J	51	2	3 ft., 10 in., dia $\frac{1}{4}$	do	P1	6	G	6	S	Yield 12 gpm;	
32M3	do	J. Mastors	6-2-58	708	J	100	2	3 ft., 10 in.	10	P1	6	D	6	D	Sand and gravel overlain by 90 ft. clay; Ca.	
34M1	D. Mitchell	-----	About 1951	733	In	32	14	3 ft.	3 ft., 10 in., dia $\frac{1}{4}$	P1	34	G	6	S	Ca.	
36M1	C. Arnes	Fisher Driv. Well Drilling Co.	3-30-60	708	J	41	19	3 ft., 6 in., dia $\frac{1}{4}$	3 ft., 6 in., dia $\frac{1}{4}$	P1	17	4	10	D	Ca. Yield 15 gpm; sand and gravel overlain by 37 ft. sand and blue clay; Ca.	
36/2M-2A1	M. Gideman	-----	About 1951	705	In	25	14	3 ft., 6 in., dia $\frac{1}{4}$	do	P1	10	D	8	D	Yield 15 gpm; sand and gravel overlain by 37 ft. sand and blue clay; Ca.	
3M1	L. Thomas	-----	-----	705	In	15	14	do	do	P1	10	D	8	D	Yield 15 gpm; sand and gravel overlain by 37 ft. sand and blue clay; Ca.	
3M2	do	-----	-----	705	In	15	14	do	do	P1	10	D	8	D	Yield 15 gpm; sand and gravel overlain by 37 ft. sand and blue clay; Ca.	
52M1	O. Rodell	J. Johnson	5-15-52	703	In	400	4	Qh	170	P1	50	C	10	D, S	Ca.	
7D1	J. Sanchez	Sanchez	706	In	15	2	8	do	do	P1	10	S	10	S	Ca.	
- 16 -	8M1	T. Powers	5-7-54	703	J	39	2	3 ft., 60 in., dia $\frac{1}{4}$	3 ft., 60 in., dia $\frac{1}{4}$	P1	30	G	12	D, S	Ca.	
10P1	R. Swartzel	J. Mastors	5-9-59	715	J	38	2	3 ft., 10 in., dia $\frac{1}{4}$	do	P1	18	G	12	S	Ca.	
11A1	B. and C. Hatchery	G. Crisai	1948	703	In	24	2	3 ft., 60 in., dia $\frac{1}{4}$	3 ft., 60 in., dia $\frac{1}{4}$	P1	17	Sd, G	10	N	Ca.	
12G1	W. Owens	D. Henderson	7-13-59	703	J	52	2	3 ft., 60 in., dia $\frac{1}{4}$	3 ft., 60 in., dia $\frac{1}{4}$	P1	69	18	18	U	Ca.	
12G2	R. Fry	do	4-4-60	703	In	87	4	do	do	P1	18	G	16	S	Ca.	
12M1	Town of Winamac	J. Illinois	-----	706	In	410	10	Qh	126	P1	239	Lu	126	S	Ca.	
12M2	do	do	-----	706	In	397	10	Qh	126	P1	219	Lu	126	S	Ca.	
12P1	Church of the Nazarene	J. Mastors	9-4-59	702	J	50	2	3 ft., 12 in., dia $\frac{1}{4}$	3 ft., 12 in., dia $\frac{1}{4}$	P1	35	16	220	P	Ca.	
13E1	F. H. Williams and E. H. Williams	H. J. Rossmill	2-20-61	704	In	192	4	Qh	91	P1	101	Lu	10	D	Ca.	
13P1	H. Morrison	do	10-1-57	686	In	187	4	3 ft., 60 in., dia $\frac{1}{4}$	3 ft., 60 in., dia $\frac{1}{4}$	P1	144	Sd, G	11	D	Ca.	
13P2	K. J. Tovar	D. Henderson and Son	1-10-60	686	J	20	4	3 ft., 10 in., dia $\frac{1}{4}$	3 ft., 10 in., dia $\frac{1}{4}$	P1	34	Lu	6	D	Ca.	
14P1	Mr. McElroy	do	-----	725	In	178	4	do	do	P1	144	Lu	31	Ir	Ca.	
14L1	D. Lovery	J. Mastors	-----	718	J	95	2	3 ft., 10 in., dia $\frac{1}{4}$	do	P1	85	G	15	D	Ca.	
15A1	F. Knarr	J. Mastors	6-20-58	712	J	22	2	3 ft., 60 in., dia $\frac{1}{4}$	3 ft., 60 in., dia $\frac{1}{4}$	P1	63	Lu	14	S	Ca.	
15K1	W. F. Niemi	do	-----	717	J	63	2	3 ft., 60 in., dia $\frac{1}{4}$	do	P1	15	Lu	14	S	Ca.	
16M1	W. Schalckow	do	-----	701	J	45	2	3 ft., 12 in., dia $\frac{1}{4}$	do	P1	78	Lu	15	S	Ca.	
18H1	T. Balander	Fisher Bros. Well Co.	5-5-58	702	J	90	2	3 ft., 60 in.	do	P1	65	Lu	7	S	Ca.	
19A1	C. Rifo	do	-----	711	In	77	2	2 ft.	do	P1	65	Lu	7	S	Ca.	
19H1	C. Holl	do	-----	703	J	77	2	2 ft.	do	P1	65	Lu	30	S	Ca.	
20H1	R. Depoy	do	-----	1953	J	40	2	3 ft.	do	P1	65	Lu	6	D	Ca.	
21J1	E. Zellers	G. Crisai	6-20-60	711	In	124	4	3 ft., 12 in., dia $\frac{1}{4}$	3 ft., 12 in., dia $\frac{1}{4}$	P1	55	Sd, G	26	D	Ca.	
24B1	R. Deltz	D. Henderson	3-8-61	702	J	55	2	3 ft., 12 in., dia $\frac{1}{4}$	3 ft., 12 in., dia $\frac{1}{4}$	P1	40	Sd, G	15	D	Ca.	
24C1	H. Rossmill	J. Mastors	do	do	do	do	do	do	do	P1	do	do	do	do	Ca.	

29/BR-25L1	Mr. Bandy	Hofstetter Bros.																	
26P1	Talbert Manufactur- ing Corp.	E. H. Wangalo	Summer 1950	692	Dr	35	4	Oh	10	25	La	D	U	10	S	-----	-----	-----	-----
26P2	Co-op Fertilizer Plant	Mr. Morrok	8-23-57	693	Dr	46	6	cm	10	36	La	87	U	10	I	S1 1/2	-----	-----	-----
26Q1	C. Bricker	C. Coy	-----	694	Dr	150	6	ch	-----	-----	La	57	-----	-----	I	-----	-----	-----	-----
26K1	Mr. Meisum	E. Elb	-----	695	Dr	32	3	ch	-----	-----	Do	9	-----	-----	N	-----	-----	-----	-----
27M1	City of Ronkslager	Layne-Northburn Co., Inc.	1-26-55	696	Dr	553	16-	Oh	8	122	La	S	C	0	---	0,S	B	-----	-----
30E1	do	do	About 1950	696	Dr	1,725	4	-----	-----	-----	La	530	La	S	U	17	P	-----	-----
33E1	V. Siegrist	Hofstetter Bros.	About 1950	696	Dr	1,733	4	-----	-----	-----	La	530	La	5	Pl	5	D,9	J1/J2	-----
34L1	F. Neulius	R. Kib	1945	696	Dr	30	4	ch	10	20	La	D	U	10	D,3	-----	-----	-----	-----
35M1	R. Zacher	R. Kib	-----	694	Dr	101	4	ch	-----	-----	La	11	La	D	-----	D,3	-----	-----	-----
29/7W-59L1	V. W. Wingate	E. H. Wingate	8-16-60	703	Dr	112	4	ch	90	52	La	70	La	D	C	12	D,S	Li/J2	-----
66L1	L. Lano	-----	-----	704	Dr	151	4	ch	110	41	La	11	La	D	C	36	D	-----	-----
68L1	A. Brausch	-----	8-24-60	704	Dr	142	4	ch	122	20	La	10	La	D	C	38	D	-----	-----
81R2	J. Miller	-----	-----	718	Dr	100	4	ch	-----	-----	La	70	La	D	C	12	D,S	Li/J2	-----
11A1	Mr. Kolper	-----	8-23-57	705	Dr	130	4	ch	126	1	La?	5	La?	S	-----	D,9	-----	-----	-----
12D1	G. Reinhising	-----	do	717	Dr	130	4	ch	30,Q	1	La	40	La	P1	C	40	D,S	J1/J2	-----
13M1	J. Zimmer	-----	do	718	Dr	120	6	ch	-----	-----	La	20	La	D	C	20	D	Li,J4	-----
14C1	C. Schliemann	A. Potts	1941	891	Dr	116	4	ch	74	42	La	D	C	-----	D	-----	-----	-----	-----
18G1	S. Dargor	-----	-----	702	Dr	110	4	ch	-----	-----	La	104	La	D	C	11	D	-----	-----
20B1	Trustees, Illinoisan Feltato	Hofstetter Bros.	1954	678	Dr	121	4	ch	104	17	La	104	La	D	C	11	D	-----	-----
20D1	C. T. Askren	-----	Spring 1950	679	Dr	100	4	ch	-----	-----	La	126	La	D	C	11	D	-----	-----
22B1	H. McLean	D. J. Titus	-----	677	Dr	152	6	ch	-----	-----	La	126	La	D	C	11	D	-----	-----
23Q1	Jasper County High- way Department	R. Elb	-----	680	Dr	100	4	ch	90	100	La	105	La	D	C	10	P,S	Li,J4	-----
23J1	Jasper County Fair Association	-----	7-22-59	683	Dr	121	1	ch	16	105	La	55	40	D	C	16	P,6	-----	-----
26A1	do	do	1954	682	Dr	125	4	ch	-----	-----	La	40	La	D	C	15	D	-----	-----
27P1	W. Burrell	-----	do	6-30	686	Dr	28	1	ch	-----	-----	La	80	La	P1	-----	D	Li,J4	-----
28C1	O. W. Ilchman, Jr. Curtis Creek Country Club	-----	-----	683	Dr	13	5	ch	-----	-----	La	80	La	P1	-----	P,L	-----	-----	
29L1	do	do	do	688	Dr	100	4	ch	80	13	La	147	5	La	C	-----	P,L	-----	-----
31C1	C. Battleday	-----	1941	689	Dr	93	4	ch	147	5	La	147	5	La	D	-----	C,D	-----	-----
32C1	Mr. Prior	-----	1940	675	Dr	152	4	ch	28	6	La	147	5	La	P1	-----	C,D	-----	-----
36H1	St. Joseph College	-----	9-4-53	663	Dr	34	6	ch	-----	-----	La	40	La	P1	-----	C,D	-----	-----	-----
36J1	do	do	do	8-18-45	605	Dr	43	6	ch	-----	-----	La	54,G	La	P1	-----	T	-----	-----
36J2	do	do	do	8-28-45	603	Dr	29	6	ch	-----	-----	La	54,G	La	P1	-----	T	-----	-----
36J3	do	do	do	8-30-45	603	Dr	30	6	ch	-----	-----	La	54,G	La	P1	-----	T	-----	-----

Det 15 ft after 2 hr pumping  
15 ft; bedrock at 6 ft;  
limstone overlain by 6 ft  
soil and clay.

Det 15 ft pumping; do same;  
bedrock at 4 ft; limestone  
overlain by 4 ft clay.

Bedrock at 2 ft; water has  
odd taste.

Bedrock at 2 ft; water has  
odor hydrogen sulfide gas;

Cl. test; bedrock at 30 ft.  
Ca.

Yield to atm; bedrock at 6 ft;  
limestone overlain by 6 ft  
sand and rocky clay; Ca.

Bedrock at 8 ft; sand and  
clay; water has odor hydro-  
gen sulfide gas; Ca.

Bedrock at 90 ft; water has  
slight odor hydrogen sul-  
fide gas; Ca.

Det 12 ft after 4 hr pumping  
20 gpm; bedrock at 110 ft;  
Ca.

Det 10 ft after 5 hr pumping  
25 gpm; bedrock at 112 ft;  
water has slight odor hydro-  
gen sulfide gas; Ca.

Sand and gravel overlain by  
128 ft clay; Ca.

Bedrock at 74 ft.  
Ca.

Bedrock at 104 ft; Ca.

Water has slight odor hydro-  
gen sulfide gas; Ca.

Bedrock at 63 ft; water has  
odor hydrogen sulfide gas; Ca.

Water has odor hydrogen sul-  
fide gas; Ca.

Bedrock at 54 ft; Penetrated  
5 ft croyico at 80 ft; Ca.

Bedrock at 34 ft; L.

Det 9 ft after 2 hr pumping  
230 gpm; bedrock at 47 ft;  
jasper 5; water level  
measured 11.10 ft below lad,  
9-20-55.

Bedrock at 28 ft; L.

Bedrock at 30 ft; sand  
wall 36ft.

Table 3.—Records of wells and test holes in Polk County, Indiana—Continued

Well	Owner	Driller	Date completed	Type of well	Depth of well (feet)	Depth to top of well (feet)	Thickness (feet)	Geologic age	Determination of occurrence	Water-bearing zone	Remarks				
								Test		Pump test					
								Type of pump and power	Use	Rate of pump (gpm)	Yield (gpm)				
31/1M-1E1	C. Giddio	Fisher Bros. Well	7- 0-60	717	J	86	2	S; 3ft., 60ft., dia 14	---	33	G, Sd	P1	C	1	D
1N1	Buckeye Food and Supply	Laygo-Northern Co., Inc.	6- 1-48	718	Dr	80	8	S; 3ft., 60ft.	5	47	---	---	N	T	L.
3B1	A. Fisher	G. C. Hilt	4- 7-55	737	J	70	2	S; 3ft., 60ft.	6	6	G	P1	C	31	D, S
3D1	J. Becker	T. Brecker, Jr.	10-30-53	748	J	66	2	do	do	57	Sd	P1	C	34	J
4R1	C. Eila	Fisher Bros. Well Drilling Co.	1-30-50	749	J	89	24	S; 3ft., 60ft., dia 14	70	19	Sd	P1	C	37	D, S
5M1	P. J. Lang	D. Mendenhall	5-25-60	715	Dr	20	14	S	do	10	41	G	P1	---	J
7B1	W. Star	711	715	Dr	51	4	do	do	do	do	Sd, G	P1	---	Ca.	
8H1	S. A. Freeman	725	725	Dr	40	13	5	do	do	do	do	do	---	Ca.	
10R1	P. Dauer	721	721	Dr	27	13	5	do	do	do	do	do	---	Ca.	
11D1	L. Faustlich	1061	721	Dr	24	13	5	do	do	do	do	do	---	Ca.	
12R1	Mr. Lightfoot	Fisher Bros. Well Drilling Co.	740	J	45	2	S; 3ft., 60ft.	40	5	G	P1	C	10	D	
-	E. McInran	1058	742	J	155	2	S	do	do	do	do	do	---	D, S	
17B1	P. Van Daele	718	718	Dr	45	2	S	do	do	do	do	do	---	D, S	
18P1	E. Wallers	1051	705	Dr	53	14	S; 6 ft., 14ft., dia	do	do	do	do	do	---	Ca.	
21A1	T. Reinholz	11-21-60	728	J	134	45	S; 3ft., 14ft., dia	do	do	do	do	do	---	J	
23C1	B. Smith	Spring	759	Do	25	13	S	do	do	do	do	do	---	Ca.	
23N1	H. Jolly	1050	737	Dr	48	13	S; 3ft., 60ft.	do	do	do	do	do	---	Ca.	
24D1	R. Danli	About	778	J	65	2	S; 6ft.	do	do	do	do	do	---	D, S	
25M1	V. Peterson	10- 5-40	740	J	75	21	S; 3ft., 60ft., dia 14	64	11	Sd, G	P1	C	20	D, S	
26D1	R. S. Coleman	714	714	Dr	30	14	S	100ft.	do	do	do	do	---	D, S	
28S1	J. Z. Wendorff	About	1058	705	Dr	28	13	S	do	do	do	do	---	D, S	
29B1	R. Hirsh	6-28-60	704	J	40	2	S; 3ft., 60ft., dia 14	18	22	Sd, G	P1	C	12	S	
31P1	W. A. Mankey	11-22-60	705	J	101	24	do	do	do	do	do	do	---	D, S	
32P1	C. Brucker	11-17-60	705	J	43	24	S; 3ft., 60ft., dia 14	24	19	G, Sd	P1	C	11	D, S	
30B1	--do--	10-25-60	726	Dr	39	24	S; 3ft., 60ft., dia 14	16	9	G, Sd	P1	C	11	D, S	
31/2M-1E1	A. Davis	9- 2-59	718	J	25	24	S; 3ft., 60ft., dia 14	do	do	do	do	do	---	D, S	
-	G. C. Hilt	About	1053	722	Dr	28	14	S; 3ft.	20	8	Sd	P1	U	20	D
24D1	I. N. Stoebel	1050	711	Dr	15	14	do	do	do	do	do	do	---	J	
4P1	P. Fuchner	1930	710	Dr	23	14	S; 3ft.	do	do	do	do	do	---	J	
6R1	C. Peden	11- 5-49	711	Dr	100	1	Oh	do	do	do	do	do	---	T3	
7R1	R. Ganz	I. Johnson	10-02	710	Dr	21	14	S; 3ft.	do	do	do	do	do	---	T3
8M1	A. Kramm	10-02	713	Dr	22	14	S; 3ft., 100ft.	do	do	do	do	do	---	T3	
11C1	J. S. Nutbert	10-02	713	Dr	104	6	Oh	do	do	do	do	do	---	T3	
12P1	State of Indiana	Laygo-Northern Co., Inc.	10-22-50	713	Dr	284	6	Oh	do	do	do	do	do	---	T3
13C1	--do--	10-22-50	707	Dr	249	6	Oh	do	do	do	do	do	---	T3	
13P1	--do--	10-24-52	710	J	42	2	S; 3ft.	do	do	do	do	do	---	T3	
13M1	H. Schlesinger	Bachmuth Well and Pump Co.	4-24-52	710	J	42	2	S; 3ft.	do	do	do	do	do	---	T3



Table 3.—Records of wells and test holes in Putnam County, Indiana—Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land	Diameter of well (inches)	Thickness to top (feet)	Geologic age	Geofluids or occurrence	Master level (feet)	Type of pump and horsepower used	Remarks	Water-bearing zone				
														Depth to top (feet)	Thickness (feet)	Geofluids (age)	Diameter or occurrence	
31/3W-3001	P. Altan	L. Johnson	7- 2-45	636	Dr.	147	6	0h	—	—	35	112	1w	Ind. 6 ft pumping 20 min; bedrock at 36 ft.	—	—	—	—
30N1	T. Knobell	Mr. Shaw	About 1939	638	Dr.	65	4	—	—	—	—	1w	D	C	—	D, S	J	Ca.
31/4W- 202	E. Skonkowich	Testville Well Co.	1939	702	Dr.	14	5	—	—	—	3	15	Sd	P1	—	—	—	Ca.
431	O. Saituk	Springfield	1933	711	Dr.	65	—	5	—	—	—	—	Sd	P1	—	—	—	Ca.
5A1	C. Alberding	—	—	700	Dr.	95	6	—	—	—	—	—	Sd	P1	—	—	—	Ca.
5J1	do	State of Indiana	—	1927	707	Dr.	15	14	S; Jft., BOR	—	—	—	—	—	—	—	—	Ca.
BR1	do	State of Indiana	—	—	700	Dr.	160	0	0h	—	—	—	—	—	—	—	—	Ca.
5M1	D. Moyer	O. J. Tilton	1932	707	Dr.	96	1	0h	—	—	76	20	Sh	D, M	C	—	X	—
10P1	C. Justak	—	1932	707	Dr.	13	14	S; 2½ ft.	—	—	—	—	—	—	—	—	—	Ca.
11C1	R. Eckert	—	1938	701	Dr.	21	14	0h	—	—	—	—	—	—	—	—	—	Ca.
12D1	R. C. Nelson	—	1936	698	Dr.	13	14	0h	—	—	—	—	—	—	—	—	—	Ca.
14G1	L. Kracht	—	1936	708	Dr.	13	14	S; Jft., BOR	—	—	—	—	—	—	—	—	—	Ca.
16M1	P. M. Moyer	—	1932	708	Dr.	18	13	S; Jft., BOR	—	—	—	—	—	—	—	—	—	Ca.
17K1	F. Romu	—	1938	722	Dr.	148	14	S; Jft., BOR	—	—	—	—	—	—	—	—	—	Ca.
18G1	State of Indiana	—	—	708	Dr.	148	4	—	—	—	—	—	—	—	—	—	—	Ca.
18G2	do	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Ca.
18G3	L. Adams	—	1950	702	Dr.	12	14	S; 4 ft.	—	—	—	—	—	—	—	—	—	Ca.
21M1	L. Stump	—	About 1910	710	Dr.	16	14	S; Jft., GOR	—	—	—	—	—	—	—	—	—	Ca.
23R1	A. Garling	J. Nichols	8-20-43	712	Dr.	128	3	Ch	—	—	—	—	—	—	—	—	—	Ca.
24C1	M. Lally	Boettiger Bros.	1936	707	Dr.	23	6	0h	—	—	—	—	—	—	—	—	—	Ca.
26R1	E. Tustec	—	1931	712	Dr.	200	3	0h	—	—	—	—	—	—	—	—	—	Ca.
27F1	M. Wirsam	—	1951	710	Dr.	16	14	S; Jft.	—	—	—	—	—	—	—	—	—	Ca.
29R1	O. G. Darley	—	1940	686	Dr.	21	—	0h	—	—	—	—	—	—	—	—	—	Ca.
30G1	E. T. Wedde	—	1922	682	Dr.	169	—	0h	—	—	—	—	—	—	—	—	—	Ca.
30L1	D. L. Brown	E. H. Winkler	1-14-40	686	Dr.	98	41	S; 2½ ft. 0h, dis. 24	94	4	Sd, G	P1	C	—	D, S	J	Ca.	
31P1	C. E. Tetzlaff	J. Nichols	1940	710	Dr.	130	4	0h	—	—	—	—	—	—	—	—	—	Ca.
34P1	Mr. Kraft	—	1940	711	Dr.	126	3	—	—	—	100	26	—	—	—	—	—	Ca.

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

Well 29/1W-3M1

Type of record: Driller's log. Altitude: 726 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	17	17	
Sand-----	1	18	
Clay, blue-----	3	21	
Sand-----	4	25	
Gravel-----	25	50	

Well 29/1W-8F2

Type of record: Driller's log. Altitude: 718 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow-----	11	11	
Clay, blue-----	4	15	
Sand-----	3	18	
Clay, blue-----	28	46	
Gravel-----	11	57	

Well 29/1W-8F3

Type of record: Driller's log. Altitude: 718 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow, and sand-----	13	13	
Clay, blue-----	9	22	
Sand, fine-----	2	24	
Clay-----	18	42	
Sand-----	34	76	

Well 29/1W-8L1

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

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	78	78	
Sand-----	7	85	
Clay, blue-----	7	92	
Gravel-----	8	100	

Well 29/1W-8L3

Type of record: Driller's log from memory. Altitude: 719 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, blue-----	27	27	
Gravel-----	8	35	
Clay, blue-----	7	42	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/1W-8L3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	2	44	
Gravel-----	20	64	

Well 29/1W-8L5

Type of record: Driller's log.	Altitude: 719 feet.	
Quaternary System:		
Recent and Pleistocene Series:		
Clay-----	36	36
Gravel, sandy-----	9	45
Clay-----	1	46
Gravel-----	14	60

Well 29/1W-8L6

Type of record: Driller's log.	Altitude: 719 feet.	
Quaternary System:		
Recent and Pleistocene Series:		
Clay-----	22	22
Gravel, sandy-----	16	38
Clay-----	2	40
Gravel-----	5	45
Clay-----	8	53
Sand-----	2	55
Gravel-----	7	62

Well 29/1W-8L7

Type of record: Driller's log.	Altitude: 719 feet.	
Quaternary System:		
Recent and Pleistocene Series:		
Clay, yellow-----	12	12
Gravel and sand-----	30	42
Clay, blue-----	11	53
Gravel-----	7	60

Well 29/1W-8P2

Type of record: Driller's log.	Altitude: 715 feet.	
Quaternary System:		
Recent and Pleistocene Series:		
Clay-----	24	24
Gravel-----	5	29
Clay, blue-----	9	38
Gravel-----	12	50

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/1W-8P4

Type of record: Driller's log. Altitude: 713 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	18	18	
Sand-----	1	19	
Clay-----	2	21	
Sand-----	15	36	
Clay, blue, with streaks of gravel-----	70	106	
Sand-----	4	110	
Gravel, yellow-----	25	135	
Gravel, yellow, with sand-----	5	140	
Gravel-----	8	148	

Well 29/1W-8P5

Type of record: Driller's log. Altitude: 713 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	3	3	
Clay-----	9	12	
Sand-----	6	18	
Clay-----	69	87	
Gravel-----	8	95	

Well 29/1W-8R1

Type of record: Driller's log. Altitude: 713 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow, and sand-----	13	13	
Gravel-----	1	14	
Clay, white, and stone-----	9	23	
Sand-----	4	27	
Clay, white-----	32	59	
Sand-----	17	76	

Well 29/1W-11H1

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

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	10	10	
Clay, yellow-----	6	16	
Clay, blue-----	17	33	
Sand-----	3	36	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/1W-19M1

Type of record: Driller's log. Altitude: 711 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	20	20	
Clay-----	5	25	
Sand-----	20	45	
Sand and gravel-----	17	62	

Well 29/1W-28G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	12	12	
Gravel, yellow-----	5	17	
Sand, yellow-----	18	35	
Clay, blue-----	2	37	
Sand-----	13	50	
Sand, coarse-----	8	58	

Well 29/1W-28R1

Type of record: Driller's log. Altitude: 726 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	13	13	
Clay-----	5	18	
Sand-----	6	24	
Clay-----	5	29	
Sand-----	4	33	
Clay-----	42	75	
Sand-----	5	80	
Gravel-----	6	86	

Well 29/1W-33D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	12	12	
Sand-----	6	18	
Clay, blue-----	60	78	
Sand-----	30	108	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/1W-33J1

Type of record: Driller's log. Altitude: 722 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Top soil-----	4	4	
Sand and clay; mixed-----	76	80	
Clay, gray-----	5	85	
Sand, fine-----	8	93	
<b>Silurian System:</b>			
Middle Silurian Series:			
Limestone, broken, with gravel-----	4	97	Dolomitic lime-stone or dolomite.
Limestone-----	10	107	Do.

Well 29/1W-36C1

Type of record: Driller's log. Altitude: 739 feet.

Quaternary System:			
<b>Recent and Pleistocene Series:</b>			
Clay-----			
Clay-----	26	26	
Sand-----	10	36	
Clay-----	27	63	
Sand-----	2	65	
Gravel-----	7	72	

Well 29/2W-3C1

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

Quaternary System:			
<b>Recent and Pleistocene Series:</b>			
Sand-----			
Sand-----	4	4	
Hardpan-----	6	10	
Clay, blue-----	17	27	
Sand, white-----	3	30	
Gravel, blue-----	4	34	

Well 29/2W-3F1

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

Quaternary System:			
<b>Recent and Pleistocene Series:</b>			
Sand, yellow-----			
Sand, yellow-----	6	6	
Clay and rocks-----	4	10	
Gravel-----	3	13	
Clay, blue-----	6	19	
Gravel-----	2	21	
Clay-----	30	51	
Gravel and sand-----	67	118	
Clay, white-----	15	133	
Gravel-----	2	135	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/2W-3M1

Type of record: Driller's log. Altitude: 672 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow-----	8	8	
Sand, medium-----	4	12	
Clay, blue-----	33	45	
Sand, fine-----	2	47	
Clay, blue-----	18	65	
Sand, medium to coarse-----	7	72	

Well 29/2W-4Q1

Type of record: Driller's log. Altitude: 676 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	12	12	
Clay, yellow-----	3	15	
Sand, yellow-----	6	21	
Clay, blue, and broken gravel-----	15	36	
Clay, hard, white-----	14	50	
Gravel-----	3	53	

Well 29/2W-9M1

Type of record: Driller's log. Altitude: 692 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	2	2	
Clay, yellow-----	14	16	
Gravel, reddish-----	6	22	
Clay, soft, blue-----	38	60	
Clay, hard, gray-----	20	80	
Clay, soft, blue-----	7	87	
Gravel, blue-----	4	91	

Well 29/2W-11E1

Type of record: Driller's log. Altitude: 696 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay and gravel-----	13	13	
Sand-----	52	65	
Gravel-----	3	68	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/2W-18B1

Type of record: Driller's log from memory. Altitude: 688 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	22	22	
Clay, blue-----	3	25	
Sand, fine, grading into gravel---	4	29	

Well 29/2W-23F1

Type of record: Driller's log. Altitude: 709 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	59	59	
Clay-----	1	60	
Sand-----	35	95	
Gravel-----	3	98	

Well 29/2W-30D2

Type of record: Driller's log. Altitude: 687 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	12	12	
Clay, yellow-----	19	31	
Clay, blue-----	4	35	
Gravel-----	7	42	

Well 29/3W-9B1

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

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	38	38	
Clay-----	4	42	
Gravel-----	1	43	
Clay-----	2	45	
Sand-----	5	50	
Clay-----	2	52	
Sand-----	5	57	
Clay-----	1	58	
Sand-----	2	60	
Clay-----	20	80	
Sand-----	10	90	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 29/3W-9R1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	12	12	
Sand, blue-----	31	43	
Clay, blue-----	15	58	
Gravel-----	4	62	

## Well 29/4W-1N1

Type of record: Driller's log from memory. Altitude: 682 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	20	20	
Clay, blue-----	22	42	
Hardpan; clay, sand, gravel and rock-----	7	49	
Gravel and clay; mixed-----	6	55	
Gravel, coarse-----	6	61	

## Well 29/4W-4K1

Type of record: Driller's log. Altitude: 674 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil and clay-----	9	9	
Silurian System:			
Middle Silurian Series:			
Limestone, weathered-----	1	10	Dolomitic limestone or Dolomite.
Limestone, hard-----	190	200	Do.

## Well 29/4W-4P1

Type of record: Driller's log. Altitude: 681 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil-----	10		
Silurian System:			
Middle Silurian Series:			
Lime, gray-----	35	45	Dolomitic lime-stone or Dolomite.
Lime, green-----	539	584	Do.
Lime, brown-----	11	595	Do.
Ordovician System:			
Upper Ordovician Series:			
Shale-----	40	635	
Lime-----	28	663	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 29/4W-5R1

Type of record: Driller's log.	Altitude: 681 feet.		
Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel-----	20	20	
Clay-----	6	26	
Clay and Limestone-----	19	45	
Silurian System:			
Middle Silurian Series:			
Dolomite-----	105	150	
Shale-----	8	158	
Dolomite-----	416	574	
Ordovician System:			
Upper Ordovician Series:			
Clay-----	10	584	Weathered shale?
Shale-----	20	604	
Dolomite-----	27	631	

## Well 29/4W-8D1

Type of record: Driller's log.	Altitude: 683 feet.		
Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift-----	14	14	
Silurian System:			
Middle Silurian Series:			
Limestone-----	576	590	Dolomitic limestone or Dolomite.
Ordovician System:			
Upper Ordovician Series:			
Shale-----	20	610	
Limestone---	3	613	
Shale-----	16	629	
Lime-----	26	655	
Shale-----	4	659	
Limestone-----	29	688	
Shale-----	210	898	
Middle Ordovician Series:			
Limestone-----	14	912	

## Well 29/4W-9C1

Type of record: Driller's log.	Altitude: 681 feet.		
Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay-----	9	9	
Silurian System:			
Middle Silurian Series:			
Limerock, gray-----	39	48	Dolomitic limestone or dolomite.

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 29/4W-9C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Silurian System:			
Middle Silurian Series:			
Limerock, white-----	49	97	Dolomitic limestone or Dolomite.
Limerock, broken-----	4	101	Do.
Limerock, white-----	26	127	Do.
Record missing-----	18	145	

Well 29/4W-14A1

Type of record:	Driller's log.	Altitude:	671 feet.
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	38	38	
Sand and gravel-----	2	40	
Clay, sandy-----	7	47	
Silurian System:			
Middle Silurian Series:			
Limestone-----	10	57	Dolomitic limestone or Dolomite.

Well 29/4W-17J1

Type of record:	Driller's log.	Altitude:	684 feet.
Quaternary System:			
Recent and Pleistocene Series:			
Soil-----	5	5	
Silurian System:			
Middle Silurian Series:			
Dolomite-----	395	400	
Limestone-----	150	550	
Ordovician System:			
Upper Ordovician Series:			
Shale-----	70	620	
Limestone-----	20	640	
Shale-----	10	650	
Limestone-----	30	680	
Shale-----	20	700	
Limestone-----	75	775	
Shale-----	120	895	
Middle Ordovician Series:			
Dolomite-----	15	910	
Shale-----	10	920	
Dolomite-----	15	935	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 30/1W-1H1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, blue-----	60	60	
Clay, blue, and sand-----	10	70	
Sand-----	5	75	
Gravel-----	4	79	

Well 30/1W-1J2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, blue-----	36	36	
Sand and gravel-----	14	50	
Sand and blue clay-----	17	67	
Sand and gravel-----	5	72	

Well 30/1W-2A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow-----	16	16	
Clay, blue-----	15	31	
Sand-----	9	40	
Gravel-----	5	45	

Well 30/1W-4Q1

Type of record: Driller's log. Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	12	12	
Sand-----	2	14	
Clay-----	14	28	
Sand-----	2	30	
Clay-----	9	39	
Gravel-----	5	44	

Well 30/1W-6N1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	12	12	
Clay, blue-----	18	30	
Sand-----	18	48	
Clay-----	11	59	
Sand-----	10	69	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 30/1W-8C1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	18	18	
Clay, blue-----	17	35	
Clay, stoney, blue-----	31	66	
Sand-----	12	78	
Gravel, pea-sized and larger-----	3	81	

Well 30/1W-9D1

Type of record: Driller's log. Altitude: 714 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----			
Sand-----	30	30	
Sand and clay, blue-----	10	40	
Sand and gravel-----	35	75	
Sand and gravel-----	12	87	

Well 30/1W-18M1

Type of record: Driller's log. Altitude: 698 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, red-----			
Sand, yellow-----	15	15	
Clay, blue-----	16	31	
Sand-----	11	42	
Sand-----	4	46	

Well 30/1W-22C1

Type of record: Driller's log. Altitude: 721 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow and sand-----			
Clay, blue-----	16	16	
Sand-----	8	24	
Clay, blue-----	2	26	
Sand-----	26	52	
Sand and gravel-----	18	70	

Well 30/1W-27F1

Type of record: Driller's log. Altitude: 721 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----			
Clay, blue-----	18	18	
Gravel-----	18	36	
Gravel-----	23	59	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 30/1W-31H1

Type of record: Driller's log.

Altitude: 706 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	35	35	
Sand-----	1	36	
Gravel-----	6	42	

Well 30/1W-32B1

Type of record: Driller's log.

Altitude: 721 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	18	18	
Sand-----	5	23	
Clay-----	30	53	
Gravel-----	4	57	

Well 30/2W-10P1

Type of record: Driller's log.

Altitude: 715 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	15	15	
Clay-----	15	30	
Gravel-----	6	36	

Well 30/2W-12G1

Type of record: Driller's log.

Altitude: 700 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	5	5	
Clay, blue-----	30	35	
Sand, fine-----	5	40	
Sand, coarse-----	8	48	
Gravel, coarse, blue-----	4	52	

Well 30/2W-12G2

Type of record: Driller's log.

Altitude: 700 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	30	30	
Clay, blue-----	26	56	
Hardpan, gray-----	13	69	
Gravel-----	18	87	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 30/2W-12P1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	10	10	
Clay-----	10	20	
Sand-----	5	25	
Clay-----	2	27	
Sand-----	3	30	
Clay-----	5	35	
Sand and gravel-----	15	50	

## Well 30/2W-13F2

Type of record: Driller's log.

Altitude: 688 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----			
Clay, yellow-----	5	5	
Sand, gray-----	10	15	
Clay, blue-----	25	40	
Clay, hard, gray-----	10	50	
Sand-----	17	67	
Sand-----	3	70	

## Well 30/2W-14G1

Type of record: Driller's log.

Altitude: 725 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----			
Clay, blue-----	12	12	
Sand, blue-----	36	48	
Clay, gray and sand-----	4	52	
Clay, sticky, light-brown-----	22	74	
Sand-----	14	88	
Clay, sticky, light-brown-----	2	90	
Sand-----	23	113	
Clay, sticky, light-brown-----	3	116	
Sand and gravel-----	28	144	
Clay, sticky, light-brown-----			
Devonian System:			
Middle Devonian Series:			
Limestone-----	34	178	

## Well 30/2W-14L1

Type of record: Driller's log.

Altitude: 718 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----			
Clay, yellow-----	10	10	
Gravel-----	7	17	
Gravel-----	16	33	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 30/2W-14L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	2	35	
Gravel-----	5	40	
Clay, gray-----	9	49	
Clay, blue-----	26	75	
Gravel-----	10	85	

Well 30/2W-24B1

Type of record:	Driller's log.	Altitude:	711 feet.
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	18	18	
Clay-----	18	36	
Sand-----	44	80	
Clay-----	7	87	
Sand-----	14	101	
Clay-----	7	108	
Sand-----	10	118	
Clay-----	2	120	
Gravel-----	4	124	

Well 30/2W-24C1

Type of record:	Driller's log.	Altitude:	702 feet.
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	25	25	
Clay-----	15	40	
Sand-----	8	48	
Gravel-----	7	55	

Well 30/2W-24F1

Type of record:	Driller's log.	Altitude:	708 feet.
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	22	22	
Clay-----	13	35	
Sand-----	1	36	
Clay-----	18	54	
Sand-----	2	56	
Clay-----	14	70	
Gravel-----	6	76	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 30/2W-24F2

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

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	18	18	
Gravel and rock-----	17	35	
Clay, blue-----	17	52	
Clay, blue, and sand-----	13	65	
Sand-----	10	75	

## Well 30/2W-25A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	4	4	
Hardpan-----	10	14	
Sand, white-----	1	15	
Clay, blue-----	14	29	
Gravel, blue-----	4	33	

## Well 30/2W-26A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	18	18	
Sand and gravel-----	5	23	
Clay and sand; mixed-----	205	228	
Devonian System:			
Middle Devonian Series:			
Limestone-----	12	240	

## Well 30/2W-27A1

Type of record: Driller's log. Altitude: 707 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	10	10	
Clay, yellow-----	6	16	
Clay, blue-----	14	30	
Sand-----	1	31	
Clay-----	10	41	
Sand-----	3	44	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 30/2W-27E1

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

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Top soil-----	2	2	
Clay, yellow, and sand-----	12	14	
Clay, blue-----	8	22	
Sand, dirty, gray-----	16	38	
Hardpan, yellow-----	10	48	
Sand, dirty, and gravel-----	10	58	
Clay, blue-----	12	70	
Sand, yellow-----	6	76	
Sand, gray, and gravel-----	19	95	

Well 30/2W-29L1

Type of record: Driller's log. Altitude: 698 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	22	22	
Clay, soft, blue-----	19	41	
Sand, white-----	5	46	
Clay, soft, blue-----	14	60	
Gravel, bluish-gray-----	1	61	
Clay, hard, gray-----	7	68	
Gravel-----	6	74	

Well 30/2W-35L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	50	50	
Sand, very fine-----	2	52	
Clay-----	98	150	
Gravel-----	5	155	

Well 30/4W-16H1

Type of record: Driller's log. Altitude: 683 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and sand-----	12	12	
Clay, gray-----	60	72	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	12	84	
Devonian System:			
Middle Devonian Series:			
Limestone-----	6	90	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 31/1W-1E1

Type of record: Driller's log.

Altitude: 717 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Gravel and sand-----	29	29	
Clay, blue-----	5	34	
Gravel-----	16	50	
Clay, blue, and sand-----	22	72	
Sand-----	13	85	
Gravel-----	3	88	

## Well 31/1W-1N1

Type of record: Driller's log.

Altitude: 719 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Sand, red-----	9	10	
Sand, red, and gravel-----	8	18	
Gravel, red, and sand-----	9	27	
Sand, coarse, gray, and fine gravel-----	6	33	
Clay, blue, with boulders-----	2	35	
Clay, gravelly, with boulders-----	5	40	
Clay, sandy, with gravel-----	7	47	
Gravel, coarse, gray, and medium sand; not clean-----	6	53	
Gravel, medium, and sand-----	7	60	
Gravel, coarse, and boulders with some sand-----	5	65	
Gravel, medium, with some sand-----	9	74	
Sand, medium, gray-----	6	80	Clay and muddy sand at 80 feet.

## Well 31/1W-3D1

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand and yellow clay-----	18	18	
Clay, stony, blue-----	39	57	
Sand-----	6	63	
Gravel, pea-sized-----	3	66	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 31/1W-4R1

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, blue-----	38	38	
Gravel-----	2	40	
Clay, blue-----	30	70	
Sand-----	16	86	
Gravel-----	3	89	

Well 31/1W-7B1

Type of record: Driller's log.

Altitude: 711 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay-----	10	10	
Sand-----	32	42	
Gravel-----	9	51	

Well 31/1W-21A1

Type of record: Driller's log.

Altitude: 726 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	28	28	
Gravel-----	20	48	
Clay, blue, and gravel-----	75	123	
Gravel-----	11	134	

Well 31/1W-25M1

Type of record: Driller's log.

Altitude: 740 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	25	25	
Clay, yellow-----	25	50	
Clay, blue, and gravel-----	14	64	
Sand-----	8	72	
Gravel-----	3	75	

Well 31/1W-31P1

Type of record: Driller's log.

Altitude: 704 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow-----	18	18	
Sand-----	18	36	
Gravel-----	4	40	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 31/1W-32F1

Type of record: Driller's log. Altitude: 706 feet.

Material.	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay, yellow-----	20	20	
Clay, blue, and rocks-----	34	54	
Sand-----	11	65	
Clay, blue-----	25	90	
Sand and gravel-----	8	98	
Gravel-----	3	101	

Well 31/1W-36E1

Type of record: Driller's log. Altitude: 726 feet.

Quaternary System:	Thickness (feet)	Depth (feet)	Remarks
Recent and Pleistocene Series:			
Clay, yellow-----	16	16	
Clay and gravel-----	8	24	
Sand and gravel-----	14	38	
Gravel-----	5	43	

Well 31/2W-12P1

Type of record: Driller's log. Altitude: 734 feet.

Quaternary System:	Thickness (feet)	Depth (feet)	Remarks
Recent and Pleistocene Series:			
Sand, yellow to gray-brown-----	80	80	
Clay, whitish-blue and yellow-----	84	164	
Devonian System:			
Middle Devonian Series:			
Limestone, white and brown-----	140	304	

Well 31/2W-13C1

Type of record: Driller's log. Altitude: 713 feet.

Quaternary System:	Thickness (feet)	Depth (feet)	Remarks
Recent and Pleistocene Series:			
Sand-----	28	82	
Clay-----	2	30	
Sand, muddy-----	18	48	
Clay-----	22	70	
Sand, not clean-----	2	72	
Clay-----	23	95	
Sand, muddy-----	5	100	
Clay-----	33	133	
Sand and gravel-----	1	134	
Clay, hard-----	7	141	
Clay and muddy sand-----	8	149	
Sand and gravel-----	2	151	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 31/2W-13C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Devonian System:			
Middle Devonian Series:			
Limestone, hard-----	20	171	
Limestone, muddy-----	94	265	
Limestone-----	15	280	
Limestone, muddy-----	14	294	

Well 31/2W-13F1

Type of record: Driller's log. Altitude: 707 feet.

Quaternary System:

Recent and Pleistocene Series;			
Sand, yellow-----	18	18	
Gravel-----	2	20	
Sand, gray-----	15	35	
Sand-----	6	41	
Clay, grayish-----	19	60	
Hardpan-----	5	65	
Clay, gray-----	5	70	
Hardpan, gray-----	12	82	
Sand, fine, gray-----	10	92	
Clay, white-----	12	104	
Clay, red-----	56	160	
Devonian System:			
Middle Devonian Series:			
Limestone, blue-----	3	163	
Limestone, brown-----	14	177	
Limestone, blue-----	3	180	
Limestone, white-----	10	190	
Limestone, gray-----	10	200	
Limestone, white-----	5	205	
Sandstone-----	4	209	
Limestone, white-----	6	215	
Limestone, blue-----	44	259	

Well 31/2W-15P1

Type of record: Driller's log. Altitude: 714 feet.

Quaternary System:

Recent and Pleistocene Series:			
Sand, yellow-----	21	21	
Sand and gravel; gray-----	9	30	
Clay, blue, and hardpan-----	2	32	
Sand, black-----	10	42	
Clay, sandy, blue-----	10	52	
Sand, fine, gray-----	18	70	
Sand and gravel-----	8	78	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 31/2W-33H1

Type of record: Driller's log.

Altitude: 705 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	38	38	
Sand, gravel, and blue clay-----	4	42	
Sand and stone-----	11	53	
Clay, stoney, and blue soft clay--	18	71	
Sand, fine-----	17	88	
Sand with particles of wood-----	7	95	
Gravel-----	3	98	

## Well 31/2W-36J1

Type of record: Driller's log.

Altitude: 711 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	21	21	
Clay-----	4	25	
Sand-----	14	39	
Clay-----	4	43	
Sand-----	4	47	
Clay-----	2	49	
Gravel, sandy-----	2	51	
Clay-----	10	61	
Gravel-----	5	66	

## Well 31/3W-4A1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand, yellow-----	35	35	
Clay, blue-----	30	65	
Clay, sandy, blue-----	20	85	
Sand, fine, blue-----	15	100	
Clay-----	5	105	
Sand, clayey-----	10	115	
Sand and small gravel-----	8	123	
Clay, stiff, blue-----	32	155	
<b>Devonian and Silurian Systems:</b>			
Undifferentiated:			
Lime-----	3	158	
Lime, hard, gray-----	27	185	
Lime, gray-----	25	210	
Lime, blue-----	50	260	
Lime, hard, gray-----	25	285	
Lime, gray-----	20	305	
Lime, hard, gray-----	65	370	
Lime, gray-----	20	390	
Lime, hard, gray-----	28	418	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

## Well 31/3W-8R1

Type of record: Driller's log.

Altitude: 685 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Clay and sand-----	25	25	
Sand, heaving-----	25	50	
Clay-----	10	60	
Clay and sand-----	20	80	
Gravel and clay-----	7	87	
Sand and gravel-----	17	104	
Clay, blue-----	4	108	
<b>Devonian System:</b>			
Middle Devonian Series:			
Lime, brown-----	32	140	
Lime, hard, gray-----	17	157	
Lime, broken, blue-----	18	175	
Lime, blue and gray-----	20	195	
Lime, blue-----	45	240	
Lime, brown-----	25	265	

## Well 31/3W-9R1

Type of record: Driller's log.

Altitude: 692 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay-----	25	25	
Clay, blue, and sand-----	25	50	
Sand and clay-----	20	70	
Clay-----	5	75	
Sand, gravelly-----	11	86	
Sand and gravel-----	19	105	
Clay and shale-----	15	120	
Lime and shale-----	12	132	
Record missing-----	6	138	
Clay and sand-----	7	145	
Sand and gravel-----	2	147	
<b>Devonian System:</b>			
Middle Devonian Series:			
Lime, hard, brown-----	23	170	
Lime, blue-----	70	240	
Lime, blue, and shale-----	20	260	

## Well 31/3W-16C1

Type of record: Driller's log.

Altitude: 690 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, gray-----	22	22	
Clay, sandy-----	13	35	
Sand, heaving-----	20	55	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 31/3W-16C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay-----	5	60	
Clay and sand-----	25	85	
Clay and gravel-----	15	100	
Gravel-----	10	110	
Sand and gravel; with clay-----	32	142	
Clay and gravel-----	13	155	
Devonian System:			
Middle Devonian Series:			
Lime, brown-----	25	180	
Lime, hard, gray-----	20	200	
Lime, blue-----	60	260	
Lime, brown-----	50	310	

Well 31/3W-25C1

Type of record: Driller's log.	Altitude: 702 feet.		
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	13	13	
Sand and gravel-----	7	20	
Sand-----	76	96	
Gravel-----	3	99	

Well 31/3W-25M1

Type of record: Driller's log.	Altitude: 696 feet.		
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	23	23	
Clay and sand-----	41	64	
Gravel-----	5	69	

Well 31/3W-34A1

Type of record: Driller's log.	Altitude: 692 feet.		
Quaternary System:			
Recent and Pleistocene Series:			
Sand, black-----	4	4	
Sand and gravel-----	2	6	
Sand, fine, gray-----	3	9	
Clay, blue, and fine gravel-----	3	12	
Clay, blue, and some gravel-----	13	25	
Clay, blue-----	44	69	
Clay, blue, and gravel-----	7	76	
Gravel-----	42	118	

Table 4.--Selected logs of wells and test holes in Pulaski County--Cont.

Well 31/4W-8R1

Type of record: Driller's log.

Altitude: 707 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
<b>Quaternary System:</b>			
Recent and Pleistocene Series:			
Sand-----	37	37	
Clay, blue-----	39	76	
<b>Mississippian and Devonian Systems:</b>			
Lower Mississippian and Upper Devonian Series:			
Rock-----	20	96	Shale.

Table 5.--Field chemical analyses of water from wells in Pulaski 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; Sh, shale.  
 Geologic Age: D, Devonian; M, Mississippian; P1, Pleistocene; S, Silurian.

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (Fe)		Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Hardness as CaCO <sub>3</sub> (Calcium, magnesium)
					0.1	337	55	60	4	
29/1W- 1F1	G	P1	6-21-61	--	0.1	337	55	60	4	272
3M1	G,Sd	P1	6-13-61	59	1.0	259	40	40	4	216
4F1	Sd	P1	6-13-61	57	1.0	278	40	40	4	192
8C1	Sd,G	P1	5-22-59	56	3.0	327	60	60	16	328
8F1	Sd,G	P1	5-22-59	55	1.2	390	105	105	24	364
8F2	G	P1	6- 9-61	58	2.0	249	100	100	20	272
8K1	Sd,G	P1	6-18-59	59	2.0	268	<5	<5	8	220
8L1	G	P1	5-22-59	59	4.0	342	55	55	12	316
8L2	Sd,G	P1	6-18-59	58	1.5	307	60	60	12	312
8L3	G,Sd	P1	5-22-59	56	1.3	337	80	80	16	352
8L5	G,Sd	P1	6- 9-61	--	1.5	342	55	55	8	272
8L6	Sd,G	P1	6- 9-61	--	5.0	293	75	75	12	272
8L7	G	P1	6- 9-61	59	1.0	317	65	65	8	296
8P2	G	P1	6- 9-61	--	.3	366	57	57	20	316
8P4	G,Sd	P1	6- 9-61	--	.1	405	10	10	4	248
10H1	Sd	P1	6-21-61	--	2.0	410	10	10	<4	280
11H1	Sd	P1	6-13-61	--	3.0	425	185	185	60	452
12H1	G	P1	6-21-61	--	3.0	366	35	35	4	280
12H2	G	P1	6-21-61	--	.5	176	45	45	8	144
13J1	G	P1	6-21-61	--	1.5	312	60	60	4	264
14P1	G	P1	6-21-61	--	4.0	356	65	65	24	296

29/1W-15D1	G	P1	6-21-61	55	.5	256
15Q1	Ls?	D	6-21-61	55	2.0	284
15Q2	G	P1	6-20-61	56	3.0	224
17J1	G	P1	6-21-61	56	1.5	240
19M1	Sd,G	P1	6-13-61	--	288	50
22Q1	G	P1	6-21-61	--	50	16
24Q1	G	P1	6-21-61	55	16	316
26B1	Sd	P1	6-21-61	--	50	12
28R1	G,Sd	P1	6-13-61	--	55	8
29B1	G	P1	6-21-61	--	75	12
					75	308
					50	252
					10	280
					70	260
					8	
						184
					40	4
					5	4
					361	212
					5	4
					366	296
					<5	8
					--	20
					278	216
					400	232
					307	368
					5.0	236
					386	
					1.0	
					317	
					50	
					70	
					16	
					4.0	
					371	
					5	
					4	
					317	
					5	
					4	
						200
						204
					5	240
					10	
					8	
					371	
					<5	
					244	
					1.7	
					356	
					1.1	
					307	
					1.3	
					351	
					2.0	
					351	
					2.0	
					298	
					1.2	
					351	
					1.5	
					303	
					1.5	
					1.25	
					322	
					40	
					8	
						240
						292
						380
						400
						408
						148

Table 5.--Field chemical analyses of water from wells in Pulaski County--Cont.

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sulf- ate (SO <sub>4</sub> )	Chlo- ride (Cl)	Hardness as CaCO <sub>3</sub>
									(Ca/Ca, magnesium)
29/2W-19R1	Sd	P1	6-20-61	57	<.1	317	140	32	396
21D1	Sd	P1	6-20-61	--	.1	322	85	12	352
22M1	G	P1	6-20-61	--	2.0	346	85	4	292
23F1	Sd,G	P1	6-12-61	--	1.0	298	85	8	288
24J1	Sd,G	P1	6-12-61	58	1.0	346	60	4	292
25J1	G	P1	6-20-61	56	1.5	268	40	4	200
25N1	Sd	P1	6-20-61	52	.1	381	50	12	292
26D1	Sd,G	P1	6-20-61	--	3.0	356	65	4	312
28N1	Sd	P1	6-20-61	54	.7	390	<5	<4	260
29C1	Sd	P1	6-20-61	--	1.0	322	10	<4	212
30D1	Sd,G	P1	6-12-61	--	.1	288	10	<4	168
31E1	Ls	S	6-20-61	--	.1	351	<5	8	296
33R1	Sd	P1	6-20-61	--	2.0	234	40	4	176
34H1	Ls	S	6-20-61	--	1.0	322	15	<4	216
35R1	Sd,G	P1	6-22-61	--	1.0	283	50	4	236
29/3W- 4M1	Sd	P1	6-15-61	--	<.1	249	125	24	280
6A1	G	P1	6-14-61	--	1.0	342	<5	<4	208
7D1	Sd	P1	6-15-61	57	.1	142	30	<4	120
9B1	Sd	P1	6- 8-61	--	.3	273	10	<4	152
10H1	Sd	P1	6-19-61	59	4.0	317	35	4	236
11A1	G,Sd	P1	6-19-61	--	.5	244	64	32	260
14A1	G?	P1?	6-19-61	56	1.5	303	5	<4	180
15H1	Ls	S	6-20-61	--	.7	415	10	<4	268
16A1	Sd,G	P1	6-18-59	57	.2	137	<5	<4	116
17R1	Sd	P1	6-20-61	52	.7	303	85	24	296
18Q1	Sd	P1	6-15-61	--	<.1	293	55	24	304
19J1	Sd	P1	6-15-61	55	.1	337	120	68	512



Table 5.--Field chemical analyses of water from wells in Pulaski County--Cont.

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Hardness as CaCO <sub>3</sub> (Calcium, magnesium)
30/1W-18R1 19Q1	Sd G	P1 P1	6-15-61 6-16-59	-- 59	0.5 1.5	346 298	20 15	4 8	232 256
20M1	G	P1	6-16-59	59	1.5	366	<5	8	276
21M1	G	P1	6-21-61	--	1.0	342	110	8	336
22C1	Sd,G	P1	6-14-61	--	1.0	337	40	4	260
23R1	Sd,G	P1	6-15-59	53	.8	268	65	8	288
27F1	G	P1	6-15-61	59	1.0	312	90	8	300
28M1	Sd	P1	6-21-61	56	.7	434	160	28	476
31H1	G,Sd	P1	6-15-61	55	1.0	317	55	8	252
32B1	G	P1	6-15-61	57	1.0	312	45	4	248
32N1	Sd,G	P1	6-15-59	57	1.5	322	30	8	292
34F1	Sd,G	P1	6-21-61	53	<.1	288	85	12	284
36E1	G	P1	6-21-61	57	.1	293	100	12	256
30/2W-2A1	Sd,G	P1	6-14-61	--	5.0	342	115	24	340
3M2	Sd	P1	6-16-61	55	.1	239	85	156	372
5R1	Ls,D	P1	6- 8-61	59	.1	293	215	92	152
7D1	Sd	P1	6-16-61	--	.2	210	60	44	284
8N1	G	P1	6-17-59	58	6.0	376	120	24	440
10P1	G	P1	6-14-61	--	4.0	239	130	40	336
12G1	Sd,G	P1	6-14-61	--	2.0	264	60	8	228
12P1	Sd,G	P1	6- 1-61	--	1.5	332	75	8	304
13D1	Ls	D	6- 1-61	59	.1	307	10	32	200
13F1	Sd,G	P1	6-17-59	59	1.0	298	5	48	264
13F2	Sd	P1	6-15-61	--	.1	317	10	20	172
14L1	G	P1	6-14-61	--	.3	215	15	<4	160
15K1	G,Sd	P1	6-14-61	--	1.0	283	75	8	248
16M1	Sd	P1	6-14-61	--	5.0	278	75	4	240
18B1	G	P1	6-17-61	55	1.5	146	<5	8	180



Table 5.--Field chemical analyses of water from wells in Pulaski County--Cont.

Well	Ma- teri- al	Geo- logic Age	Date of Collect- ion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Hardness as CaCO <sub>3</sub> (Calcium, magnesium)
30/4W-	3H1	Sh?	D,M	7-11-58	--	2.2	317	--	160
	3H1	Sh?	D,M	6-7-61	--	1.0	307	5	136
	3H2	Ls	D	7-11-58	55	1.7	893	--	168
	3H2	Ls	D	6-7-61	53	7.5	644	150	156
	6K1	G	P1	6-13-61	--	.1	342	<5	156
	7P1	Sd	P1	6-13-61	--	.1	137	135	172
	11M1	Sd	P1	6-14-61	57	.7	254	80	256
	16E1	Sd	P1	6-13-61	--	1.0	278	5	164
	16H1	Ls	D	6-7-61	58	.3	395	5	244
	22Q1	Sd	P1	6-14-61	--	2.0	386	5	212
	24E1	G	P1	6-14-61	--	.7	429	5	236
	28D1	Sd	P1	6-13-61	--	2.0	317	35	240
	30B1	Ls?	D?	6-13-61	54	.5	259	.5	136
	31R1	Sd	P1	6-13-61	52	.1	239	125	292
	32R1	Ls	S	6-13-61	--	.2	293	75	276
	34A1	Ls	S	6-17-59	55	.5	273	<5	184
	35Q1	Sd,G	P1	6-17-59	59	1.0	264	<5	192
31/1W-	3B1	G	P1	6-15-59	54	1.0	386	15	20
	3D1	Sd,G	P1	6-15-59	59	1.2	288	<5	236
	5M1	G	P1	6-22-61	59	.7	254	50	208
	7B1	Sd,G	P1	6-13-61	--	.3	298	15	192
	9R1	G	P1	6-22-61	54	5.0	337	60	296
	10R1	Sd	P1	6-22-61	56	.1	249	85	264
	11D1	G	P1	6-22-61	--	.2	264	55	224
	13L1	G	P1	6-22-61	--	.5	381	40	292
	17R1	Sd	P1	6-22-61	--	.5	190	45	156
	18F1	Sd	P1	6-22-61	--	.5	190	45	148
	21A1	G	P1	6-13-61	--	--	420	10	276

31/1W-23C1	Sd,G	P1	6-22-61	--	0.1	50	8
	Sd	P1	6-22-61	--	2.0	283	4
	G	P1	6-22-61	--	1.0	449	45
	Sd,G	P1	6-13-61	58	2.0	356	45
	25M1	Sd	P1	6-22-61	.2	30	4
	28D1	Sd	P1	6-22-61	55	190	12
	28J1	Sd,G	P1	6-22-61	59	307	12
	32F1	G,Sd	P1	6-13-61	58	332	8
	36E1	G,Sd	P1	6-13-61	1.5	298	4
				--		35	4
31/2W-1D1	G	P1	6-22-61	--	.1	244	28
	G,Sd	P1	6-1-61	59	<.1	35	28
	Sd	P1	6-23-61	--	.1	137	20
	2M1	Sd	P1	6-23-61	--	151	20
	4P1	Sd	P1	6-23-61	--	5.0	120
	6R1	Sd	P1	6-23-61	--	215	108
	9N1	Sd	P1	6-23-61	55	298	68
	11C1	Sd,G	P1	6-22-61	--	80	8
	12P1	Ls	D	5-17-60	52	170	424
	15P1	Sd,G	P1	6-23-61	59	215	268
31/2W-1R1	Sd	P1	6-23-61	--	1.0	215	268
			--	--	.3	293	16
					1.5	10	4
					1.0	45	196
					1.0	45	144
					.2	176	4
						50	136
31/3W-1R1	Sd	P1	6-16-61	57	1.0	185	4
	Sd	P1	6-16-61	--	.1	224	4
	20Q1	Sd	P1	6-16-61	58	65	20
	21Q1	Sd	P1	6-16-61	--	35	180
	26G1	Sd	P1	6-22-61	53	146	12
	30K1	Sd	P1	6-16-61	--	60	104
	32A1	Sd	P1	6-13-61	54	166	12
	33H1	Sd,G	P1	6-16-59	54	40	140
	36J1	G	P1	6-13-61	--	<4	140
31/3W-2H1	Sd	P1	6-23-61	54	.1	171	24
	Sd,G	P1	6-8-61	58	.1	190	<4
	Sd	P1	6-12-61	--	.1	181	4
	3Q2	Sd	P1	6-12-61	--	.3	45
	4R1	Sd	P1	6-12-61	--	93	4
	7N1	Sd	P1	6-12-61	--	342	20
	8R1	Ls	D	6-8-61	.7	220	12
	13D2	Sd	P1	6-12-61	--	161	108
	14D1	Sd	P1	6-12-61	58	95	124
	15R1	Sd	P1	6-12-61	59	105	224
31/3W-3Q2	Sd	P1	6-23-61	54	.1	249	1.2
	Sd,G	P1	6-8-61	--	.1	3.0	276
	Sd	P1	6-12-61	--	.1	1.0	172

Table 5.--Field chemical analyses of water from wells in Pulaski County--Cont.

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Hardness as CaCO <sub>3</sub> (Calcium, magnesium)
31/3W-19C1	Ls	D	6-13-61	--	0.2	307	10	<4	128
20A1	Ls	D	6-13-61	--	<.1	381	20	80	164
21R1	Sd	P1	6-12-61	--	1.0	307	10	8	172
22D1	Ls	D	6-13-61	57	1.0	303	5	12	168
23D1	Sd,G	P1	6-12-61	--	.3	185	15	<4	124
23P1	Sd,G	P1	6-12-61	--	3.5	317	5	4	256
24B1	Sd	P1	6-12-61	53	<.1	122	55	20	140
25C1	Sd,G	P1	6- 8-61	--	>7.5	395	5	<4	256
25M1	G	P1	6- 8-61	--	5.0	429	10	<4	296
30A1	Sd?	P1	6-14-61	--	.3	298	5	<4	160
32C1	Sd	P1	6-14-61	--	1.0	181	45	8	156
34D1	Sd	P1	6-14-61	--	.2	264	85	12	252
36N1	Ls	D	6-15-61	--	1.0	259	5	<4	152
31/4W- 2E1	Sd	P1	6-12-61	--	<.1	146	55	8	128
4J1	Sd	P1	6-12-61	57	1.0	205	25	4	156
5J1	Sd	P1	6-13-61	--	.1	88	35	4	84
9M1	Sd	P1	6-13-61	59	.2	185	50	52	88
10P1	Ls	D	6-12-61	--	.1	303	20	4	156
11C1	Sd	P1	6-12-61	--	<.1	93	30	<4	60
12D1	Sd	P1	6-12-61	--	.1	293	205	56	448
14G1	Sd	P1	6-13-61	59	.1	117	40	16	100
17K1	Sd	P1	6-13-61	--	<.1	137	35	8	116
18L1	Sd	P1	6-13-61	53	.1	54	55	8	100
21M1	Sd	P1	6-13-61	52	<.1	151	50	12	160
23R1	Ls	D	6-16-59	59	.1	224	<5	8	112
24C1	Sd	P1	6-13-61	51	1.0	161	55	20	152
26R1	Ls	D	6-14-61	54	.1	327	45	4	140
27E1	Sd	P1	6-14-61	59	.1	132	35	12	140

31/4W-29R1	Sd	P1	6-13-61	--	0.2	234	85	12	228
30L1	Sd,G	P1	6- 7-61	58	<.1	454	30	12	152
31P1	Ls	D	6-13-61	--	.3	366	85	4	192
34F1	Ls	D	6-16-59	56	.4	268	<5	8	76

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

Pulaski 1. (31/4W-18G1). State of Indiana. Jasper-Pulaski State Game Preserve. SW<sub>1/4</sub>NE<sub>1/4</sub> sec. 18, T. 31 N., R. 4 W. Drilled unused artesian well in limestone, diameter 4 inches, reported depth 148.5 feet. Land-surface datum is about 706 feet above msl. Highest water level is 4.23 below lsd, Oct. 20, 1954 and Jan. 12, 1955; lowest 12.14 below lsd, Dec. 1, 1935. Records available: 1935-42 and 1944-60.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1935		Feb. 2	9.46	Nov. 16	10.22	July 25	8.54
		14	9.76	30	10.49	Aug. 6	8.89
Dec. 1	12.14	28	9.11	Dec. 14	10.02	16	9.29
16	11.99	May 2	9.98			Oct. 3	9.99
		16	10.14	1940		16	9.68
1936		30	9.92			Nov. 4	9.07
		June 16	9.22	Jan. 2	10.21	15	8.29
Jan. 1	11.83	July 1	8.91	15	10.29	29	8.28
16	11.94	16	9.69	Feb. 1	9.69	Dec. 16	8.14
Dec. 2	11.45	Aug. 16	9.69	15	10.09		
14	11.23	31	9.79	Mar. 1	9.93	1942	
		Sept. 16	9.54	14	9.49		
1937		30	9.19	Apr. 1	9.43	Jan. 2	8.06
		Oct. 16	9.29	16	9.04	21	8.18
Jan. 2	7.83	31	9.29	May 1	8.42	Feb. 5	7.59
16	10.63	Nov. 15	9.29	15	7.99	Apr. 30	6.67
30	10.08	30	9.19	31	7.65		
Feb. 16	10.43	Dec. 14	8.69	June 15	7.49	1944	
Mar. 1	10.33	31	9.39	July 2	8.36		
15	11.21			15	8.72	May 22	6.14
Apr. 1	10.61	1939		Aug. 1	9.19	27	6.13
15	9.92			17	9.59	Aug. 1	8.79
May 1	9.58	Jan. 14	9.19	31	9.69	Nov. 2	10.05
15	10.13	30	8.79	Sept. 14	9.67		
June 2	9.73	Feb. 15	7.96	30	10.09	1945	
15	9.98	Mar. 1	8.01	Oct. 15	9.89		
July 1	9.98	14	7.73	30	9.47	Aug. 17	8.09
15	10.06	31	7.49	Nov. 18	8.99	27	8.47
30	10.40	Apr. 14	7.59	Dec. 4	8.61	Sept. 3	8.60
Aug. 14	10.63	29	7.39	17	8.69	10	8.61
21	10.91	May 14	7.85			17	8.83
Sept. 14	11.01	30	8.09	1941		24	8.73
Oct. 2	11.06	June 10	8.35			Oct. 1	8.18
16	9.06	29	8.17	Jan. 2	8.19	8	7.73
20	10.69	July 14	8.69	15	8.09	15	7.92
Nov. 15	10.57	30	9.01	Feb. 1	9.09	22	7.99
Dec. 2	10.69	Aug. 14	9.34	15	9.13	29	7.99
14	10.16	25	9.72	28	8.07	Nov. 5	7.78
		Sept. 15	9.99	Mar. 15	7.77	12	7.77
1938		30	10.02	Apr. 15	7.68	19	7.67
		Oct. 16	10.34	May 1	7.63	26	7.72
Jan. 14	10.20	Nov. 2	9.27	19	8.88	Dec. 3	7.44

Table 6.--Water levels in observation wells in Pulaski County--Cont.  
Pulaski 1--Cont.

Date	Water level						
1945		Dec. 2	8.80	Nov. 17	9.12	Oct. 18	9.45
		9	8.72	24	8.66	Nov. 23	8.90
Dec. 10	7.40	17	8.59	Dec. 2	8.50	29	8.80
17	7.62	30	8.51	8	8.60	Dec. 6	8.78
24	7.54			15	8.23	13	8.86
31	7.33	1947		22	8.24	20	8.32
				29	8.25	27	8.38
1946		Jan. 7	8.12				
		13	8.15	1948		1949	
Jan. 7	7.15	20	7.67				
14	6.70	27	7.85	Jan. 5	8.30	Jan. 3	8.07
21	6.95	Feb. 3	7.58	14	8.11	17	7.64
28	7.14	10	7.92	27	8.44	24	7.08
Feb. 4	7.18	17	7.89	Feb. 2	8.47	31	6.67
11	7.28	24	7.83	9	8.71	Feb. 7	6.83
18	7.18	Mar. 3	8.07	16	8.58	14	6.74
25	6.60	10	8.28	23	8.55	21	6.34
Mar. 4	6.67	18	8.13	Mar. 1	8.16	Mar. 1	6.22
11	6.66	24	7.54	8	8.71	7	6.33
18	6.27	31	7.47	15	7.64	14	6.31
25	6.21	Apr. 7	7.33	22	7.27	22	6.18
Apr. 1	6.56	14	6.80	29	6.67	28	6.18
9	6.86	21	6.79	Apr. 5	6.68	Apr. 29	6.48
16	6.96	28	6.65	19	6.54	May 9	6.60
22	6.85	May 5	6.36	26	6.69	16	6.88
29	6.96	12	6.54	May 4	6.65	23	6.59
May 6	6.91	20	6.30	10	6.27	30	6.50
13	6.76	27	6.10	17	5.79	June 6	6.49
27	6.45	June 3	5.99	24	6.14	13	6.58
June 3	6.79	9	5.75	31	6.59	20	6.10
10	7.04	16	6.05	June 7	6.61	27	6.13
July 9	7.38	23	6.34	14	6.65	July 4	6.60
22	8.05	30	6.53	21	6.76	11	6.98
29	8.41	July 7	6.96	28	6.32	Aug. 1	7.49
Aug. 6	8.71	15	7.15	July 5	6.60	8	7.88
12	9.03	21	7.50	12	6.87	15	7.89
19	9.06	Aug. 4	7.90	19	7.22	22	8.40
26	9.29	18	8.58	26	7.28	29	8.60
Sept. 2	9.38	25	8.66	Aug. 2	7.57	Sept. 5	8.90
9	9.48	Sept. 1	8.74	9	7.75	12	8.99
16	9.68	8	9.01	16	7.86	19	9.10
23	9.60	15	9.01	23	8.13	26	9.34
Oct. 7	9.88	30	9.11	30	8.28	Oct. 3	9.44
14	10.04	Oct. 6	9.04	Sept. 7	8.43	10	9.84
21	10.05	13	9.22	14	8.85	17	9.12
28	10.08	20	9.30	20	8.78	24	9.14
Nov. 11	9.29	27	9.19	27	9.17	31	9.08
18	9.11	Nov. 3	9.26	Oct. 5	9.07	Nov. 7	9.14
25	8.76	11	9.11	11	9.05	14	9.07

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Pulaski 1--Cont.

Date	Water level						
1949		Oct. 16	8.30	Sept. 3	6.76	July 21	6.94
		23	8.32	10	6.80	28	7.19
Nov. 21	9.17	30	8.63	17	6.89	Aug. 4	7.45
28	9.02	Nov. 5	8.69	24	7.99	11	7.51
Dec. 12	9.16	13	8.75	Oct. 1	8.14	18	7.48
19	9.02	20	8.73	8	8.28	25	7.24
26	7.52	27	8.25	15	8.30	Sept. 1	6.98
1950		Dec. 4	8.08	22	8.30	8	8.53
		11	8.06	29	8.46	15	8.64
		18	8.10	Nov. 5	8.71	22	8.80
Jan. 2	7.47	25	8.06	12	7.29	29	8.94
9	7.08			19	7.32	Oct. 6	9.09
16	6.89	1951		26	7.96	13	9.47
23	6.55			Dec. 3	8.00	20	9.59
30	5.86	Jan. 1	8.12	10	6.97	26	9.78
Feb. 6	6.16	8	8.35	17	6.91	Nov. 3	9.90
13	5.96	15	8.20	24	6.88	10	9.88
20	5.92	22	8.16	31	6.56	17	9.50
27	5.98	29	8.16			24	9.75
Mar. 6	5.97	Feb. 5	7.70	1952		Dec. 1	9.64
13	5.52	12	7.82			8	9.60
20	5.48	17	7.78	Jan. 7	6.45	15	9.23
27	5.37	26	7.80	14	6.38	22	9.13
Apr. 3	5.66	Mar. 5	8.05	21	6.32	29	9.09
10	5.31	12	7.90	28	6.24		
17	5.47	19	8.03	Feb. 4	6.26	1953	
24	5.59	26	8.10	11	6.29		
May 1	5.86	Apr. 1	6.08	18	6.27	Jan. 5	9.07
8	6.24	9	5.92	25	6.24	12	9.12
15	6.55	16	5.98	Mar. 3	6.47	19	8.88
29	6.47	23	6.04	10	6.49	26	8.85
June 5	6.68	30	5.90	17	6.55	Feb. 2	8.62
19	6.43	May 7	5.86	24	6.56	9	8.58
26	6.53	14	5.82	31	6.48	16	8.60
July 3	6.54	21	5.98	Apr. 7	6.48	23	8.52
10	6.55	28	5.82	14	6.48	Mar. 2	8.49
17	7.44	June 4	5.86	21	6.42	9	8.51
24	7.06	11	6.52	28	6.40	16	8.46
31	7.16	18	6.48	May 5	6.40	23	8.50
Aug. 7	7.66	25	6.50	12	6.46	30	7.41
14	7.75	July 2	6.60	19	6.42	Apr. 6	7.11
21	7.95	9	6.58	26	5.99	13	7.01
28	7.99	16	6.60	June 2	6.02	20	7.12
Sept. 4	7.96	23	6.62	9	6.20	27	7.06
11	8.39	30	6.64	16	5.98	May 4	7.02
18	8.74	Aug. 6	6.76	23	6.00	11	6.98
25	8.50	13	6.72	30	6.04	18	6.99
Oct. 2	8.44	20	6.70	July 7	6.10	25	6.80
9	8.25	27	6.76	14	6.97	June 1	6.98

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Pulaski 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1953		Aug. 18	8.54	Aug. 23	8.94	Aug. 15	8.97
		25	8.99	Sept. 13	9.04	22	8.96
June 8	7.92	Sept. 1	8.59	21	9.01	29	8.98
14	7.91	8	8.83	Oct. 6	9.50	Sept. 5	9.96
21	7.95	22	9.22	12	8.81	12	9.92
29	7.95	29	9.34	19	8.82	19	10.92
July 6	7.93	Oct. 12	8.99	26	8.83	26	10.94
13	7.95	20	4.23	Nov. 2	8.84	Oct. 3	10.00
18	7.97	27	8.37	9	8.87	10	10.92
26	8.92	Nov. 3	8.46	16	8.62	17	10.94
Aug. 2	8.94	10	8.56	25	8.81	24	10.94
9	8.97	17	8.58	Dec. 3	8.83	31	10.94
16	8.97	24	8.56	14	8.79	Nov. 7	10.96
23	9.91	Dec. 1	8.84	21	9.01	14	10.96
31	9.94	15	4.59	29	9.01	21	10.95
Sept. 7	9.94	22	8.63			28	10.94
Nov. 4	10.38	29	8.62	1956		Dec. 5	10.94
						12	10.98
1954		1955		Jan. 4	8.98	26	10.97
				10	9.14		
Feb. 2	10.14	Jan. 5	8.07	18	9.14	1957	
9	10.14	12	4.23	25	9.18		
16	10.05	19	7.74	Feb. 1	9.21	Jan. 2	10.92
24	9.33	26	7.77	8	9.26	9	10.95
Mar. 3	9.27	Feb. 2	7.86	15	9.30	16	10.96
10	8.97	16	7.99	22	9.10	23	10.97
17	9.10	28	8.03	28	8.94	30	10.94
24	8.99	Mar. 2	7.69	Mar. 7	8.00	Feb. 6	10.92
31	8.05	16	7.24	14	7.98	13	10.91
Apr. 7	7.65	23	7.17	21	7.96	20	10.90
14	7.05	30	7.19	28	7.94	Mar. 6	9.96
21	6.97	Apr. 6	7.13	Apr. 4	7.98	13	9.96
28	6.61	13	7.09	11	8.00	20	9.95
May 5	6.97	20	7.00	25	8.92	27	9.93
12	6.79	27	6.75	May 2	8.00	Apr. 3	9.93
19	6.93	May 4	6.93	8	7.97	10	9.00
25	5.89	11	7.00	16	7.94	17	8.95
June 2	5.08	18	6.99	23	7.91	23	8.91
9	7.21	25	7.91	31	7.00	May 1	7.94
10	7.24	June 8	7.91	June 7	7.35	8	7.93
16	7.35	15	6.98	13	8.00	15	6.99
23	7.32	22	6.99	18	7.97	22	6.96
30	7.31	29	6.99	27	6.93	31	6.98
July 7	7.58	July 6	6.99	July 5	7.00	June 5	7.00
14	5.63	13	7.95	11	7.10	12	7.91
21	7.36	27	7.96	18	8.98	July 3	7.92
28	7.90	Aug. 3	7.99	25	8.94	10	7.93
Aug. 4	8.22	10	8.91	Aug. 1	8.96	17	7.07
11	4.51	16	9.30	8	8.98	24	7.90

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Pulaski 1--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1957		Aug. 20	7.00	Apr. 29	6.98	Mar. 9	6.94
		27	6.94	May 6	6.99	24	6.95
Sept. 6	8.94	Sept. 10	7.02	13	6.99	Apr. 13	6.96
19	8.94	17	7.03	20	6.97	20	6.98
23	8.95	24	7.05	27	6.96	May 4	6.99
Oct. 3	8.96	Oct. 2	7.08	June 18	7.02	12	6.97
Nov. 6	7.60	8	7.07	24	7.03	18	6.98
13	7.93	16	7.07	July 15	8.01	June 1	6.97
21	7.00	Nov. 5	7.08	22	8.08	8	7.00
Dec. 6	7.91	12	7.08	28	8.07	15	6.99
20	6.97	19	7.09	Aug. 5	8.05	July 6	6.98
		26	7.09	12	8.07	13	6.99
1958		Dec. 3	7.08	25	8.09	27	6.98
		10	7.09	Sept. 2	8.07	Aug. 3	6.99
Jan. 7	6.92	17	7.08	9	9.01	10	6.98
17	7.00	31	8.00	16	9.01	17	6.98
Feb. 26	7.93			Oct. 14	9.01	24	6.97
Mar. 5	7.92	1959		Nov. 4	8.07	31	6.97
12	6.98			18	8.05	Sept. 7	6.96
27	6.99	Jan. 13	7.07	Dec. 2	7.09	14	6.91
Apr. 4	6.98	28	7.05	9	7.05	Oct. 6	7.01
10	6.97	Feb. 5	7.05	16	7.05	12	7.00
June 4	7.59	18	7.06			19	7.02
11	6.95	25	7.05	1960		26	7.01
18	7.93	Mar. 4	7.00			Nov. 3	7.02
24	7.91	18	7.00	Jan. 6	7.01	23	7.02
July 9	6.93	25	7.01	13	6.04	30	7.03
16	6.97	Apr. 1	6.91	Feb. 10	6.09	Dec. 7	7.03
23	6.94	8	6.95	18	6.08	14	7.04
29	6.93	15	6.96	24	6.93	28	7.05
Aug. 6	6.91	22	6.97				

Pulaski 2. (31/4W-18G2). State of Indiana. Jasper-Pulaski Game Preserve. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 31 N., R. 4 W. Driven unused water-table well in sand, diameter 1 $\frac{1}{4}$  inches, depth 9 feet. Land-surface is about 705 feet above msl. Highest water level is +0.40 above lsd, Jan. 2, 1937; lowest 3.42 below lsd, Oct. 16, 1937. Records available: 1935-38.

1935		1937		May 15	.09	Oct. 20	2.85
Dec. 1	2.03	Jan. 2	+.40	June 2	1.59	Nov. 15	2.17
16	1.75	16	.10	15	1.80	Dec. 2	1.10
		30	.35	July 7	1.82	14	1.00
1936		Feb. 16	.52	15	1.26		
		Mar. 1	2.01	30	2.03	1938	
Jan. 1	1.96	15	1.44	Aug. 14	1.80		
16	1.60	Apr. 1	1.48	21	1.96	Jan. 14	3.12
Dec. 2	1.15	15	.68	Sept. 14	2.80	Feb. 2	2.23
14	1.84	May 1	.65	Oct. 2	3.25	14	1.72
				16	3.42	28	.50

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Pulaski 3. (31/4W-6G1). State of Indiana. Jasper-Pulaski State Game Preserve. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 31 N., R. 4 W. Drilled unused artesian well in limestone, diameter 6 inches, depth 160 feet. Land-surface datum is about 700 feet above ms1. Highest water level is 3.50 below lsd, June 15, 1937; lowest 7.30 below lsd, Oct. 16, 1941. Records available: 1935-42.

Date	Water level						
1935		Oct. 20	5.75	Apr. 14	4.90	Aug. 17	6.50
		Nov. 15	5.46	29	4.70	31	6.62
Dec. 1	6.75	Dec. 2	6.02	May 14	5.36	Sept. 14	6.55
16	5.56	14	5.80	30	5.40	30	6.93
				June 10	5.46	Oct. 15	6.91
1936		1938		29	5.48	30	6.37
				July 14	5.60	Nov. 18	6.48
Jan. 1	5.35	Jan. 14	5.55	30	5.80	Dec. 4	6.14
16	5.93	Feb. 2	4.30	Aug. 14	5.37	17	6.32
Dec. 2	5.58	28	5.20	25	6.26		
14	5.70	May 2	4.90	Sept. 15	6.30	1941	
		16	5.30	30	6.10		
1937		30	5.10	Oct. 16	6.44	Jan. 2	5.92
		June 16	5.00	Nov. 2	6.74	15	5.94
Jan. 2	5.10	July 1	4.90	16	6.55	Feb. 1	5.98
16	5.56	16	5.30	30	6.28	15	6.10
30	5.20	Aug. 16	5.50	Dec. 14	6.68	28	6.13
Feb. 16	5.22	31	6.06			Mar. 15	5.66
Mar. 1	4.28	Sept. 16	5.60	1940		Apr. 15	5.75
15	5.24	30	5.87			May 1	5.67
Apr. 1	4.93	Oct. 16	5.66	Jan. 2	6.60	19	5.67
15	4.79	31	5.90	15	6.72	July 25	6.50
May 1	4.97	Nov. 15	5.64	Feb. 1	6.75	Aug. 6	6.80
15	5.00	30	5.41	15	6.72	16	6.90
June 2	4.90	Dec. 14	5.64	Mar. 1	6.63	Oct. 3	7.04
15	3.50	31	5.90	14	6.40	16	7.30
July 1	5.18			Apr. 1	6.40	Nov. 4	6.88
15	5.35	1939		16	6.02	15	6.45
30	5.34			May 1	5.85	29	6.72
Aug. 14	5.54	Jan. 14	5.40	15	5.55	Dec. 16	6.39
21	5.60	30	5.68	31	5.40		
Sept. 14	5.43	Feb. 15	5.16	June 15	5.77	1942	
Oct. 2	5.85	Mar. 1	5.13	July 2	6.15		
16	6.00	14	4.60	15	5.10	Jan. 2	6.20
		31	4.70	Aug. 1	6.59	21	6.44
						Feb. 5	6.18

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Pulaski 4. (31/4W-5A1). Charles Alberding. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T. 31 N., R. 4 W. Drilled unused artesian well in shale?, diameter 6 inches, depth 96.9 feet. Land-surface datum is 700 feet above msl. Highest water level is 3.75 below lsd, June 15, 1937; lowest 7.71 below lsd, Dec. 14, 1939. Records available: 1935-42.

Date	Water level						
1935		Oct. 20	6.33	Mar. 31	4.30	Aug. 1	6.32
Dec. 1	6.17	Nov. 15	6.08	Apr. 14	4.60	17	6.84
16	6.73	Dec. 2	5.77	29	4.30	31	6.88
		14	6.35	May 14	5.05	Sept. 14	6.97
				30	5.01	30	7.29
1936		1938		June 10	5.37	Oct. 15	7.09
				29	5.33	30	6.80
Jan. 1	4.65	Jan. 14	6.05	July 14	5.75	Nov. 18	6.45
16	5.95	Feb. 2	4.90	30	6.15	Dec. 4	6.05
Dec. 2	5.46	14	5.35	Aug. 14	6.45	17	6.15
14	5.55	28	5.15	25	6.80		
		May 2	4.65	Sept. 15	7.13	1941	
1937		16	5.05	30	7.09		
		30	4.65	Oct. 16	7.09	Jan. 2	5.79
Jan. 2	4.93	June 16	4.15	Nov. 2	6.94	15	5.58
16	4.83	July 1	4.55	16	7.29	Feb. 1	5.65
30	4.70	16	5.81	30	7.07	15	5.39
Feb. 16	5.00	Aug. 16	5.94	Dec. 14	7.71	28	5.64
Mar. 1	4.26	31	6.17			Mar. 15	4.85 <sup>b</sup>
15	5.07	Sept. 16	5.78	1940		Apr. 15	5.35
Apr. 1	4.91	30	5.55			May 1	5.30
15	4.85	Oct. 16	5.80	Jan. 2	7.49	19	5.23
May 1	4.23	31	6.03	15	6.89	July 25	6.35
15	4.67	Nov. 15	5.81	Feb. 1	6.83	Aug. 6	6.75
June 2	4.65	30	5.63	15	7.07	16	6.91
15	3.75	Dec. 14	5.42	Mar. 1	6.80	Oct. 3	7.38
July 1	4.87	31	6.13	14	6.45	16	7.19
15	5.35			Apr. 1	6.34	Nov. 4	6.53
30	5.71	1939		16	6.28	15	5.94
Aug. 14	6.03			May 1	5.60	29	5.90
21	6.28	Jan. 14	5.13	15	5.24	Dec. 16	5.80
Sept. 14	6.21	30	5.41	31	5.03		
Oct. 2	6.60	Feb. 15	4.79	June 15	5.05	1942	
16	6.65	Mar. 1	4.74	July 2	5.55		
		14	4.29	15	5.89	Jan. 2	5.51
						21	5.65
						Feb. 5	5.64

Pulaski 5. (29/4W-31N1). James Wiley. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 29 N., R. 4 W. Drilled unused artesian (?) well in limestone, diameter 4 inches, depth 22 feet. Highest water level is 2.36 below lsd, Apr. 9, 1938; lowest 7.68 below lsd, Aug. 17, 1936. Records available: 1935-38.

Table 6.--Water levels in observation wells in Pulaski County--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1935		Oct. 3	7.05	June 26	4.80	1938	
Oct. 16	6.99	.. 16	6.39	July 3	5.32		
31	7.09	31	5.31	10	5.54	Jan. 7	4.94
Nov. 15	5.10	Nov. 14	4.07	17	5.67	14	5.16
30	5.08	Dec. 1	4.91	24	5.87	21	5.18
Dec. 16	4.64	15	5.32	31	6.05	29	4.56
31	5.22	31	2.94	Aug. 7	6.22	Feb. 5	4.75
				14	6.18	12	3.13
				21	6.45	18	2.64
1936				28	6.61	26	2.87
Jan. 15	4.29	Jan. 15	2.53	Sept. 4	6.76	Mar. 4	3.16
Feb. 1	5.29	Feb. 1	3.90	11	5.74	12	3.23
15	5.52	15	4.03	18	6.06	19	2.83
29	3.61	Mar. 1	4.12	25	6.17	25	2.89
Mar. 16	3.90	15	4.22	Oct. 2	6.27	Apr. 1	2.97
31	3.37	31	4.20	9	6.27	9	2.36
Apr. 15	4.15	Apr. 10	3.58	15	6.33	16	2.63
30	3.80	17	3.42	Nov. 12	5.53	23	4.16
May 15	4.70	.. 24	3.78	19	5.70	30	4.56
June 15	6.35	May 1	3.24	26	5.72	May 7	4.92
30	6.68	8	4.08	Dec. 4	5.25	13	5.10
July 15	7.20	15	4.34	10	5.30	20	4.24
Aug. 3	7.48	22	4.26	17	5.03	28	3.59
17	7.68	29	4.34	23	5.00	June 3	4.10
Sept. 3	7.57	June 5	4.98	31	4.90	14	4.85
15	7.41	12	4.80			17	5.05
		19	4.74			24	5.27
						July 1	3.07

Pulaski 6. (29/4W-4P1). Earl Overmyer. Francisville. SE $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 4, T. 29 N., R. 4 W. Drilled unused artesian well in limestone, diameter 8 inches, depth 626 feet. Land-surface datum is about 685 feet above msl. Recording gage installed July 4, 1956. Highest water level is 4.03 below 1sd, June 15, 1958; lowest 16.82 below 1sd, Jan. 17-18, 1957. Records available: 1956-60. Affected by earthquakes, barometric pressure, and by nearby pumping.

(Daily highest water level from recorder graph, 1956)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	----	----	----	----	----	----	----	----	----	13.92	----	----
2	----	----	----	----	----	----	----	10.36	----	13.87	----	----
3	----	----	----	----	----	----	----	----	12.42	14.09	----	15.51
4	----	----	----	----	----	----	----	10.47	12.44	14.08	----	15.56
5	----	----	----	----	----	----	8.51	10.53	12.47	14.22	15.06	15.45
6	----	----	----	----	----	----	8.55	10.65	12.60	14.08	14.98	15.57
7	----	----	----	----	----	----	8.83	10.79	12.76	----	15.03	15.65
8	----	----	----	----	----	----	8.65	10.87	12.85	14.25	15.16	15.66
9	----	----	----	----	----	----	8.60	11.62	12.85	----	15.14	15.65
10	----	----	----	----	----	----	8.85	11.05	12.74	----	15.07	15.43

Table 6.--Water Levels in observation wells in Pulaski County--Cont.

Pulaski 6--Cont.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	-----	-----	-----	-----	-----	-----	8.95	10.92	12.78	-----	15.03	15.42
12	-----	-----	-----	-----	-----	-----	-----	10.95	12.95	-----	15.23	-----
13	-----	-----	-----	-----	-----	-----	8.96	10.94	12.95	-----	15.14	-----
14	-----	-----	-----	-----	-----	-----	9.06	-----	13.08	-----	15.14	15.55
15	-----	-----	-----	-----	-----	-----	9.21	h11.00	13.11	14.57	15.13	15.50
16	-----	-----	-----	-----	-----	-----	9.23	-----	13.13	14.61	15.36	15.66
17	-----	-----	-----	-----	-----	-----	9.30	-----	13.29	14.64	15.29	15.60
18	-----	-----	-----	-----	-----	-----	9.45	-----	13.31	14.62	15.28	15.76
19	-----	-----	-----	-----	-----	-----	9.47	-----	13.20	14.69	15.27	15.61
20	-----	-----	-----	-----	-----	-----	9.45	-----	13.48	14.62	15.09	15.59
21	-----	-----	-----	-----	-----	-----	-----	-----	13.41	14.67	15.10	15.62
22	-----	-----	-----	-----	-----	-----	-----	-----	13.41	14.66	15.38	15.69
23	-----	-----	-----	-----	-----	-----	-----	-----	13.62	14.81	15.38	15.57
24	-----	-----	-----	-----	-----	-----	-----	-----	13.70	14.90	15.09	15.71
25	-----	-----	-----	-----	-----	-----	h9.80	-----	13.72	14.83	15.06	15.80
26	-----	-----	-----	-----	-----	-----	-----	h11.99	-----	14.82	15.40	15.66
27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	15.34	15.60
28	-----	-----	-----	-----	-----	-----	-----	-----	13.88	14.87	15.21	15.59
29	-----	-----	-----	-----	-----	-----	-----	-----	13.88	-----	-----	15.78
30	-----	-----	-----	-----	-----	-----	-----	-----	14.00	-----	-----	15.55
31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	15.68

(Daily highest water level from recorder graph, 1957)

1	15.95	15.53	-----	14.13	5.27	-----	-----	7.21	9.62	11.22	7.89	7.31
2	15.84	15.50	-----	14.27	5.45	7.20	-----	7.34	10.03	11.40	7.87	7.48
3	15.64	15.43	-----	14.05	5.72	-----	-----	7.42	9.65	11.50	7.92	7.36
4	15.81	15.69	14.73	-----	5.93	7.10	-----	7.49	9.66	11.60	8.04	7.49
5	15.92	15.66	14.71	-----	6.07	7.06	-----	7.75	9.92	11.68	8.02	7.48
6	15.77	15.61	14.66	-----	6.20	7.06	-----	7.87	9.97	11.70	8.12	7.29
7	15.77	15.59	14.71	11.55	6.33	7.11	-----	7.93	9.88	11.67	7.92	7.23
8	15.77	15.34	14.63	11.00	6.41	7129	6.62	7.96	9.94	11.78	7.62	6.87
9	15.84	15.27	14.58	-----	6.54	7.35	6.88	7.99	9.97	11.87	8.19	6.48
10	15.93	15.48	14.61	-----	6.48	7.32	7.19	7.99	10.05	11.98	8.52	6.40
11	15.94	15.48	14.44	-----	6.59	7.18	7.24	8.03	10.17	12.04	8.36	6.55
12	15.80	15.17	14.68	-----	6.70	7.27	7.36	8.14	10.12	12.16	8.14	6.60
13	15.92	15.16	14.69	-----	6.65	7.05	6.77	8.18	10.27	12.15	7.91	6.50
14	15.99	15.21	14.57	8.13	6.30	6.83	6.34	8.16	10.42	12.12	7.51	6.72
15	15.95	15.09	14.68	7.87	6.28	6.88	6.31	8.27	10.33	12.08	7.24	6.92
16	16.01	15.09	14.72	7.75	6.50	6.83	6.32	8.42	10.47	11.90	7.15	6.96
17	15.87	15.12	14.68	-----	6.58	6.84	-----	8.59	10.75	11.88	6.93	6.85
18	16.21	15.03	14.53	-----	6.30	6.83	-----	8.63	10.72	11.93	6.38	6.46
19	16.03	15.14	14.50	-----	6.18	6.85	-----	8.68	10.66	11.93	6.46	5.81
20	15.92	15.13	14.73	-----	6.38	6.87	-----	8.77	10.66	11.96	6.75	5.25
21	15.88	15.05	14.54	6.10	6.43	6.87	h5.20	8.90	10.71	11.87	6.92	5.25
22	15.82	15.03	14.49	5.99	6.27	7.01	-----	9.08	10.85	11.80	7.04	5.15

Table 6.--Water levels in observation wells in Pulaski County--Cont.  
Pulaski 6--Cont.

(Daily highest water level from recorder graph, 1957)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	15.95	15.09	14.60	5.97	6.15	7.23	----	8.91	11.87	10.30	6.69	5.07
24	15.67	----	14.61	6.05	6.33	7.25	----	8.78	----	----	6.78	5.46
25	15.58	----	14.47	6.06	6.01	7.27	----	8.90	----	----	6.97	5.05
26	15.73	----	14.48	5.89	5.95	----	----	9.10	----	----	7.05	5.06
27	15.62	----	14.65	5.70	6.21	----	----	9.29	----	----	7.01	5.17
28	15.47	----	14.51	5.42	6.58	----	----	9.30	----	7.94	7.11	5.15
29	15.52	----	14.46	5.25	6.62	----	6.67	9.33	----	7.62	7.19	5.56
30	15.62	----	14.57	5.24	6.61	5.47	6.83	9.46	11.22	7.68	7.23	5.55
31	15.49	----	14.33	----	----	----	7.04	9.59	----	7.77	----	5.37

(Daily highest water level from recorder graph, 1958)

1	5.57	6.88	8.46	7.81	----	9.76	5.69	7.46	8.67	10.01	10.82	9.01
2	5.78	7.04	8.19	7.69	8.38	9.65	5.95	7.49	8.76	10.27	10.86	9.12
3	6.07	7.18	8.09	7.73	8.33	9.55	6.15	7.52	8.75	9.95	10.94	8.17
4	6.28	7.22	8.12	7.78	8.50	9.47	6.40	7.62	8.90	9.83	10.93	8.06
5	6.17	7.10	8.01	7.57	8.44	9.45	6.45	7.80	8.94	10.12	10.82	----
6	5.87	7.25	7.97	7.54	8.40	9.58	6.81	7.85	8.91	10.06	11.15	----
7	6.16	7.41	7.91	7.75	8.35	9.52	6.92	7.77	9.02	10.12	11.23	----
8	6.45	7.60	7.73	----	8.32	8.79	7.02	7.77	9.09	10.10	10.97	8.47
9	6.59	7.68	7.67	7.83	8.37	6.60	7.21	7.87	9.02	10.47	10.93	8.67
10	6.61	7.61	7.80	7.66	8.55	5.35	7.21	7.83	9.16	10.47	11.25	8.86
11	6.89	7.64	7.85	7.64	8.60	4.67	7.21	7.84	9.38	10.65	11.44	8.63
12	7.06	7.74	7.83	7.77	8.71	4.51	7.24	7.85	9.37	10.62	11.50	8.60
13	6.96	8.87	7.66	7.89	----	4.29	7.39	7.90	9.38	10.42	11.38	8.97
14	6.91	7.94	7.91	7.89	8.83	4.08	7.09	8.01	9.43	10.53	11.26	8.98
15	7.08	7.89	7.72	7.88	8.67	4.03	6.42	7.89	9.49	10.79	11.66	9.00
16	7.17	8.13	7.66	7.97	8.64	4.20	6.01	7.39	9.50	10.43	11.81	8.80
17	7.18	8.31	7.72	7.98	8.62	4.52	5.84	7.18	9.28	10.49	11.21	----
18	7.29	8.40	7.82	8.03	8.65	4.83	5.77	7.29	9.44	10.58	10.82	----
19	7.29	8.56	7.80	8.12	8.85	5.09	5.88	7.40	9.42	10.49	10.46	----
20	7.24	8.61	7.74	8.00	8.93	5.20	6.07	7.48	9.27	10.50	10.12	----
21	6.82	8.33	7.74	8.06	9.00	5.34	6.19	7.56	9.27	11.28	9.96	----
22	6.87	8.39	7.86	8.05	8.84	5.50	6.27	7.70	9.44	11.64	9.85	9.24
23	7.06	8.38	7.95	7.96	9.15	5.51	6.42	7.83	9.56	11.04	9.68	9.15
24	----	8.26	7.78	7.95	9.00	5.74	6.60	7.82	9.53	10.75	9.59	9.52
25	----	8.50	7.79	8.50	9.00	5.75	6.60	7.94	9.59	10.65	9.68	9.65
26	----	8.39	7.65	8.42	9.20	5.09	----	8.31	9.75	10.68	9.42	9.51
27	6.78	8.22	7.62	8.25	9.55	4.98	----	8.17	9.80	10.73	9.40	9.40
28	6.99	8.25	7.61	8.17	9.49	5.01	6.98	8.17	9.84	10.83	8.93	9.53
29	6.94	----	7.66	----	9.43	5.19	7.17	8.21	9.73	10.91	8.95	9.60
30	6.88	----	7.63	----	9.43	5.42	7.22	8.41	9.69	11.00	9.34	9.88
31	6.84	----	7.66	----	9.42	----	7.30	8.49	----	10.89	----	9.48

Table 6.--Water levels in observation wells in Pulaski County--Cont.  
Pulaski 6--Cont.

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.23	9.48	----	5.70	4.96	7.91	9.72	----	14.07	14.86	14.01	8.36
2	9.31	9.05	7.60	5.43	5.06	8.08	9.91	----	14.05	14.84	14.09	8.46
3	9.40	8.53	7.66	5.33	5.33	8.20	9.99	12.76	14.27	14.83	14.01	8.45
4	9.50	----	7.94	5.63	5.53	8.30	9.86	12.71	14.35	14.97	13.81	8.40
5	9.85	----	7.29	5.59	5.73	8.32	9.89	12.92	14.44	14.89	13.73	8.50
6	9.55	9.57	7.06	5.90	5.85	8.38	10.12	13.00	14.54	14.87	13.63	8.45
7	9.40	9.36	7.69	6.00	6.15	8.53	10.40	13.04	14.57	14.90	13.25	8.46
8	9.55	9.42	7.38	5.98	6.45	8.65	10.42	13.19	14.78	14.84	13.10	8.49
9	----	9.05	7.22	5.97	6.36	8.84	10.70	13.34e	15.07	14.97	12.95	8.71
10	9.72	8.74	7.10	5.98	6.28	8.80	----	13.46	14.89	14.86	12.84	8.69
11	9.77	8.84	6.93	6.04	6.44	8.72	10.64	13.62	14.84	14.69	12.85	8.35
12	9.64	8.21	6.86	6.00	6.76	----	10.63	13.42	14.85	14.50	----	8.20
13	9.64	8.07	7.62	6.02	6.73	----	10.67	13.12	14.83	14.35	----	8.42
14	9.46	----	7.97	6.10	6.90	9.18	10.89	13.21	14.77	14.29	----	8.32
15	9.37	7.98	6.44	6.26	6.97	9.14	10.95	13.06	14.78	14.28	10.43	8.05
16	9.24	7.89	5.70	6.32	7.12	9.26	11.08	13.00	14.99	14.24	9.97	7.99
17	9.29	7.82	5.66	6.50	7.18	9.42	10.90	12.97	15.12	14.35	9.70	8.01
18	9.17	7.89	5.61	6.54	7.19	9.53	10.83	13.12	15.13	14.26	9.14	8.04
19	9.07	8.26	5.43	6.64	7.24	9.52	10.91	13.24	15.17	14.29	9.05	8.18
20	9.25	8.44	5.41	6.52	7.49	9.72	11.03	13.24	15.22	14.31	8.72	8.06
21	8.91	8.44	5.54	6.35	7.51	9.55	11.16	13.48	15.23	14.33	8.66	8.04
22	----	8.16	5.86	6.24	7.72	9.49	11.23	12.80	15.20	14.29	8.61	8.12
23	9.58	8.00	5.94	6.27	7.63	9.64	11.30	13.58	15.22	14.07	8.42	8.09
24	----	8.28	5.94	6.29	7.73	9.69	11.30	----	15.25	14.01	8.26	8.11
25	e9.22	8.08	6.09	6.37	7.60	10.01	11.40	----	15.17	14.12	8.43	8.12
26	9.24	8.04	e5.91	6.66	7.57	9.67	11.46	----	15.10	14.18	8.60	8.03
27	9.36	----	5.77	5.90	7.65	9.56	11.47	----	15.16	14.26	8.60	7.77
28	9.32	----	----	5.15	7.87	9.57	11.50	13.76	15.17	14.31	8.54	7.62
29	9.12	----	----	4.99	7.96	9.65	11.55	13.81	15.15e	14.23	8.56	7.59
30	9.15	----	5.70	4.78	7.90	9.73	11.69	13.95	14.87	14.19	8.40	7.65
31	9.52	----	5.70	----	7.88	----	11.79	13.98	----	14.05	----	7.71

(Daily highest water level from recorder graph, 1960)

1	7.43	7.66	7.85	5.38	7.72	7.34	8.30	10.01	11.15	11.98	12.91	----
2	7.13	7.73	7.45	5.36	7.67	7.29	8.08	10.06	11.24	11.87	12.91	----
3	7.18	7.69	7.40	5.61	7.77	7.34	7.89	9.96	11.43	12.12	13.16	----
4	7.42	7.58	7.66	5.62	7.87	7.48	8.04	9.79	11.42	12.13	13.60	----
5	7.42	7.22	7.90	5.76	7.45	7.67	7.92	9.90	11.45	11.98	13.45	12.01
6	7.32	7.17	8.04	5.77	7.85	8.23	8.07	9.73	11.60	12.10	13.24	12.19
7	7.31	6.91	7.98	----	7.75	8.58	8.42	9.81	11.71	12.36	13.58	12.23
8	7.50	6.48	8.03	----	8.01	8.35	8.42	9.68	11.89	12.38	13.45	----
9	7.80	6.34	e7.83	----	7.42	8.47	8.26	9.75	11.96	12.63	13.50	----
10	7.75	5.96	7.92	6.77	7.28	8.53	8.18	9.82	12.03	12.63	13.68	----

Table 6.--Water levels in observation wells in Pulaski County--Cont.  
Pulaski 6--Cont.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	7.95	5.87	8.06	6.47	7.46	8.49	8.58	10.08	11.91	12.62	13.50	----
12	7.61	5.94	8.16	6.67	7.61	8.52	8.43	10.07	11.90	12.56	13.50	----
13	7.59	5.70	8.24	6.71	7.94	8.57	8.58	10.07	12.00	12.55	13.47	----
14	7.08	5.75	8.21	6.78	7.72	8.27	8.92	10.48	12.24	12.60	13.48	----
15	6.94	6.03	7.98	5.96	7.72	8.20	8.73	10.40	12.26	12.69	13.24	----
16	7.25	6.05	7.71	5.46	7.68	7.60	8.66	10.39	12.44	12.68	13.00	----
17	7.03	6.14	7.82	4.97	7.60	7.29	8.68	10.38	12.45	12.59	12.51	----
18	6.81	6.33	8.07	4.96	8.70	7.03	8.76	10.38	12.30	12.72	12.27	----
19	7.09	6.56	8.08	4.89	8.88	6.96	8.84	10.39	11.95	12.67	12.27	----
20	----	6.91	8.28	4.85	8.61	6.91	9.08	10.43	11.73	12.85	12.03	----
21	----	6.56	8.02	5.23	8.70	6.92	9.26	10.45	11.57	12.96	11.93	----
22	7.59	6.60	7.95	5.74	8.41	6.91	9.27	10.61	11.46	12.71	11.84	----
23	7.60	----	8.09	6.74	7.87	6.92	9.34	10.50	----	13.33	12.06	----
24	7.53	----	8.01	6.44	7.64	7.05	9.27	10.53	11.47	13.29	11.87	----
25	7.38	----	8.17	6.27	7.61	7.42	9.38	10.61	11.58	13.33	11.85	12.62
26	7.63	----	8.10	6.33	7.64	7.49	9.39	10.63	11.80	13.30	11.88	12.58
27	7.58	----	7.96	6.81	----	7.50	9.42	10.75	11.76	13.23	11.82	13.13
28	7.75	e7.58	7.10	----	----	7.51	9.63	10.81	11.75	13.22	11.75	12.94
29	7.87	7.66	6.30	7.35	e7.93	7.56	9.59	10.85	11.72	13.40	11.89	12.75
30	7.80	----	5.77	7.69	7.84	7.94	9.60	10.99	----	13.18	----	12.77
31	7.66	----	----	----	7.55	----	9.91	11.06	----	12.90	----	12.75

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 the 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.

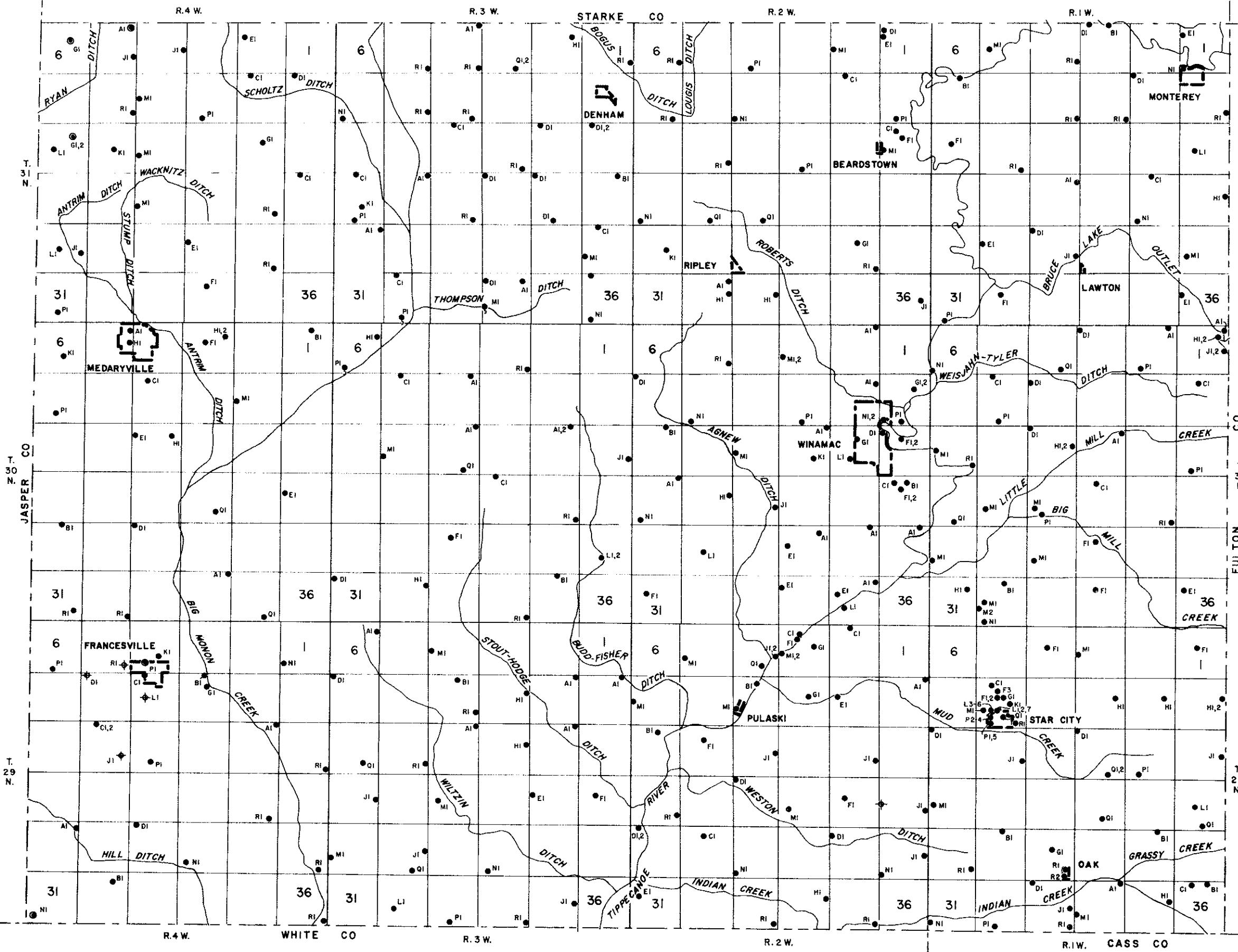
Publications of cooperative ground-water programs--Continued

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. 1963.
- 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. 1963.
- 21 Ground-water resources of west-central Indiana. Preliminary Report: Putnam County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.
- 22 Ground-water resources of northwestern Indiana. Preliminary Report: Starke County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1963.

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EXPLANATION

- AI Water well or test hole
- FI Observation well
- ◆ MI Spring
- ♦ HI Oil or gas well or test hole

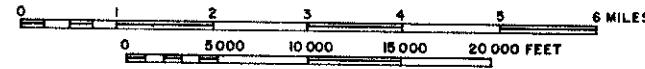
D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

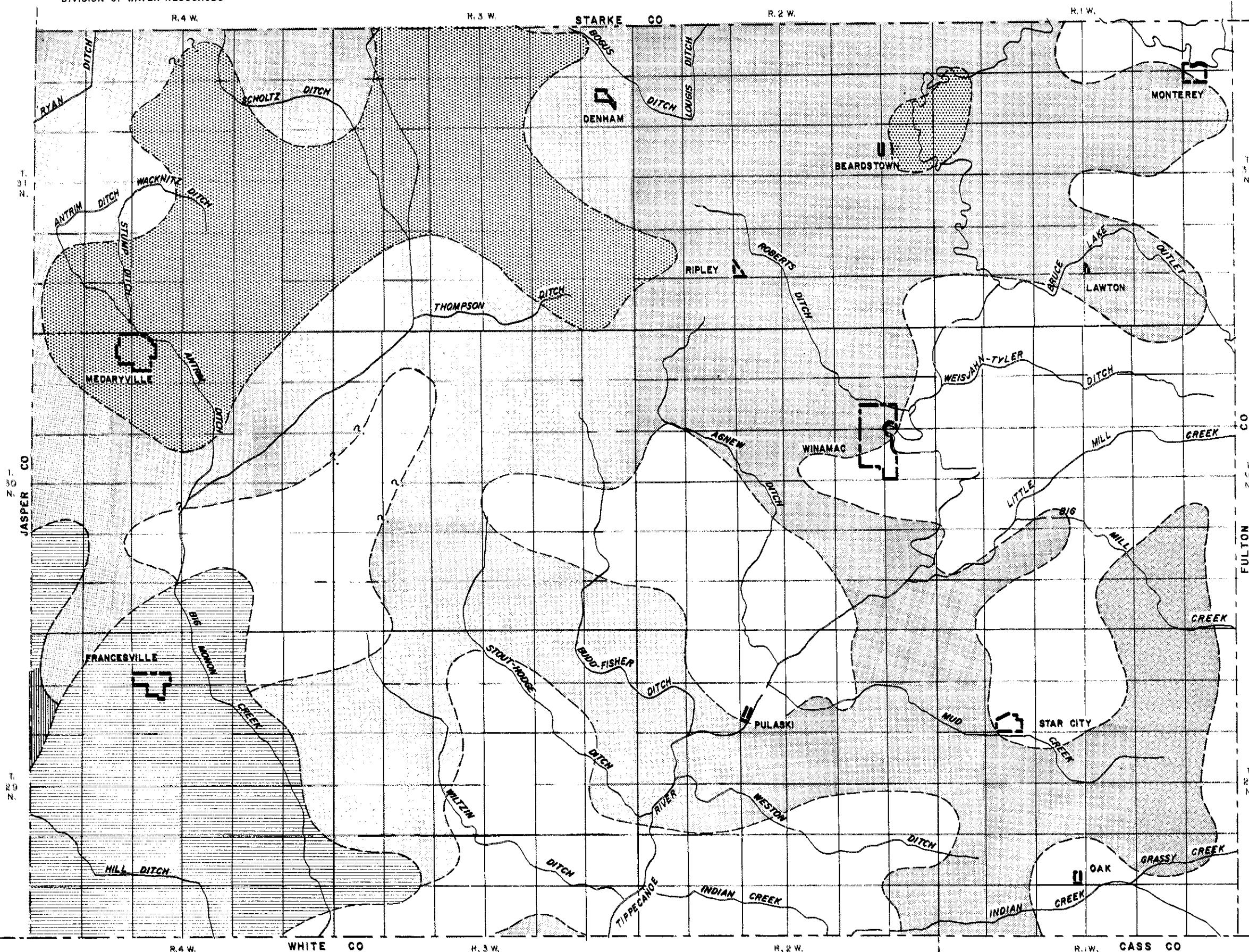
SECTION LETTER SYMBOLS  
IN WELL-NUMBERING  
SYSTEM

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

DIAGRAM OF TOWNSHIP

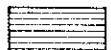
Base from modified General Highway  
and Transportation Map revised to  
July, 1953. Drainage and Town  
boundaries in part from U.S.  
Geological Survey topographic maps





EXPLANATION

Production from bedrock



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



Well depths generally from 50 to 100 feet. Yields adequate to more than adequate for domestic use. Larger yields possible locally.

Production from bedrock, glacioluvial sand and gravel, and some wind-blown sand



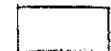
Well depths in bedrock from 90 to 300 feet. Well depths in glacioluvial sand and gravel from 50 to 100 feet. Wells depths in wind-blown sand generally less than 25 feet. Yields adequate to more than adequate for domestic use. Larger yields possible locally from bedrock and glacioluvial sand and gravel.

Production from glacioluvial sand and gravel and wind-blown sand



Well depths generally less than 50 feet. Many domestic wells driven to depths less than 25 feet and in places where improperly located may be subject to contamination by septic wastes. Yields adequate to more than adequate for domestic use. Larger yields possible locally.

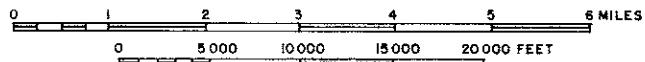
Production from glacioluvial sand and gravel



Well depths generally from 50 to 100 feet. Some shallower and deeper production locally. Yields adequate to more than adequate for domestic use. Larger yields possible.

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

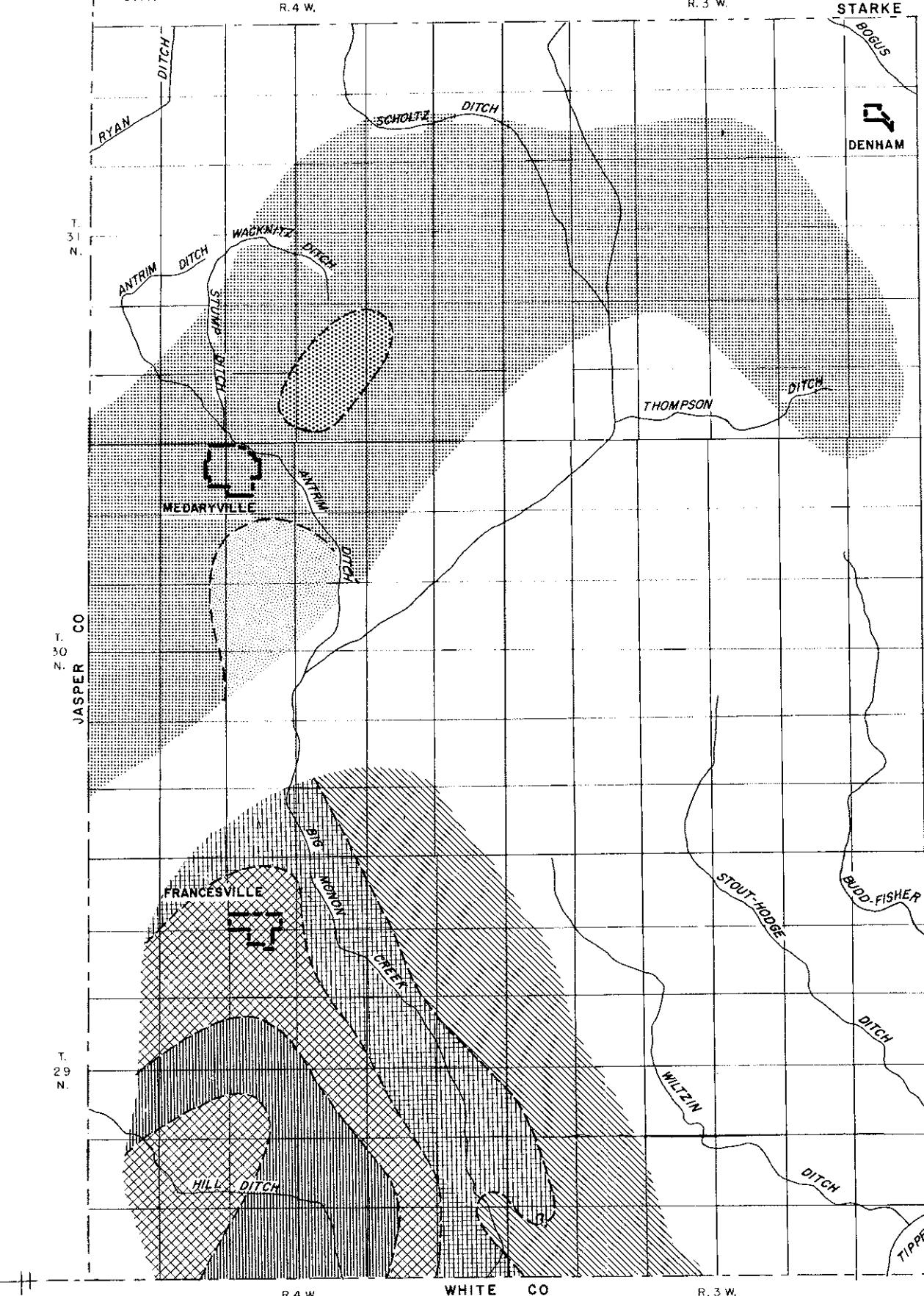
MAP OF PULASKI COUNTY, INDIANA, SHOWING AVAILABILITY OF GROUND WATER



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

6	5	4	3	2	1
7	8	9	10	11	12
13	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 PULASKI COUNTY, INDIANA, SHOWING HARDNESS OF WATER IN  
ROCKS OF SILURIAN AND DEVONIAN AGE

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

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

#### EXPLANATION

Hardness of water, in parts per million

Rocks of Devonian age



less than 100



100 - 200



More than 200



Data not sufficient to show hardness

Rocks of Silurian age



less than 200



200 - 300



300 - 400



More than 400



Data not sufficient to show hardness

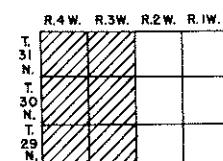
— — —  
Boundary approximate

— ? — ? —  
Boundary uncertain

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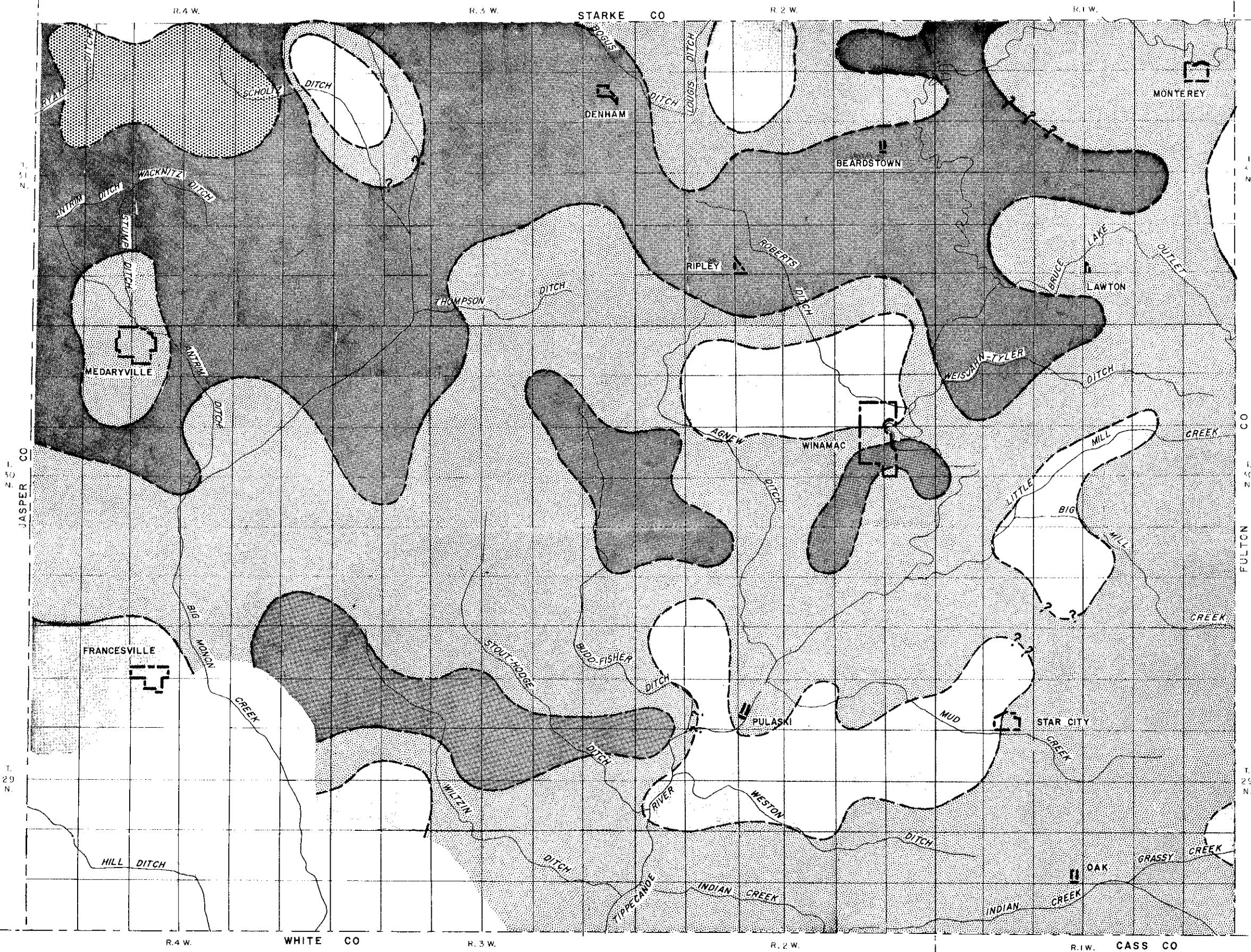


Index map of Pulaski County showing  
area covered by plate

STATE OF INDIANA  
INDIANA DEPARTMENT OF CONSERVATION  
DIVISION OF WATER RESOURCES

PREPARED BY THE  
UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

BULLETIN 24 PLATE 4

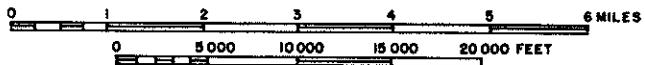


6	5	4	3	2	1
7	8	9	10	11	12
13	17	16	15	14	13
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30	29	28	27	26	28
31	32	33	34	35	36

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



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