

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

BULLETIN NO. 25

GROUND-WATER RESOURCES OF
NORTHWESTERN INDIANA

Preliminary Report: Jasper 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

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Donald E. Faltz, Director

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Charles H. Bechert, Director

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BY

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GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

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

ABSTRACT

Jasper County, in northwestern Indiana, has an area of about 562 square miles. Glaciofluvial sand and gravel of Pleistocene age is the chief source of ground water in the northern third and the south-central part of the county. Wells that tap this source generally are less than 100 feet deep and yield as much as 500 gpm (gallons per minute). The dolomitic limestone and dolomite of Silurian and Devonian age are used extensively in the southern two-thirds of the county. Wells that tap these sources generally are less than 250 feet deep and yield as much as 1,000 gpm. Water from the rocks of Silurian, Devonian, and Pleistocene age varies somewhat in chemical quality. Field chemical analyses show that the hardness of water from rocks of Silurian and Devonian Age generally is greater than 100 and less than 350 ppm (parts per million). The hardness of water from rocks of Pleistocene age generally is greater than 120 and less than 350 ppm.

This preliminary report contains tabulated records of about 440 wells and test holes giving information about well construction, water level, condition of occurrence, and characteristics of water-bearing material; selected logs for about 70 wells and test holes giving driller's description of material penetrated and authors' interpretation of their geologic age; results of about 310 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 Jasper 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 ninth 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

Jasper County is in the northwestern part of Indiana (fig. 1). The county is roughly rectangular and includes about 562 square miles. It is bounded on the north by Lake and Porter Counties, on the south by Benton and White Counties, on the west by Newton County, and on the east by Pulaski and Starke Counties.

JASPER CO.

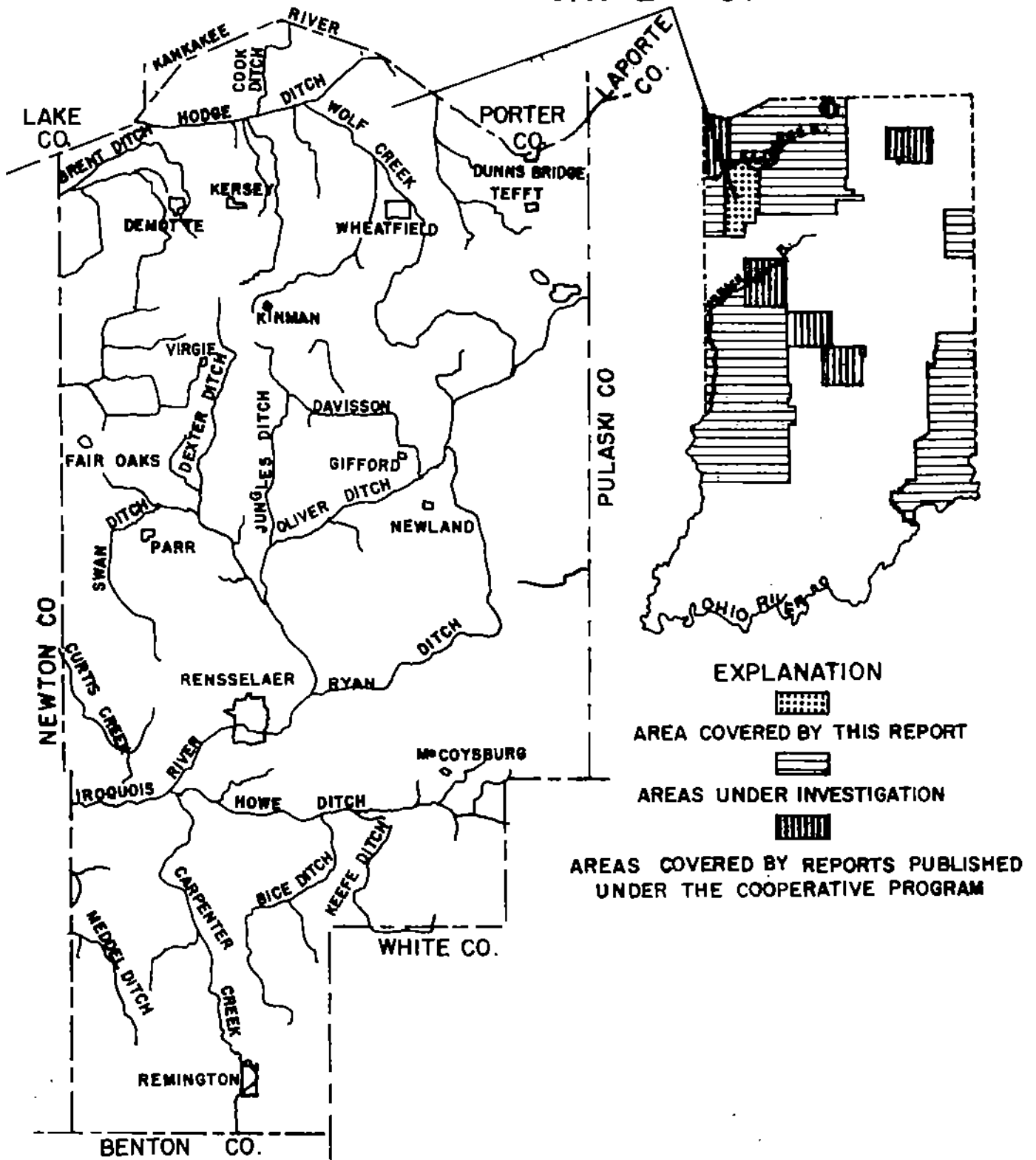


FIGURE I. --Map of Indiana, showing area covered by this report, areas under investigation, and areas covered by reports published under the cooperative program.

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 29/5W-13R1, the numbers preceding the hyphen indicate that the well is in T. 29 N., R. 5 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 13R1 is the first well listed in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 29 N., R. 5 W.

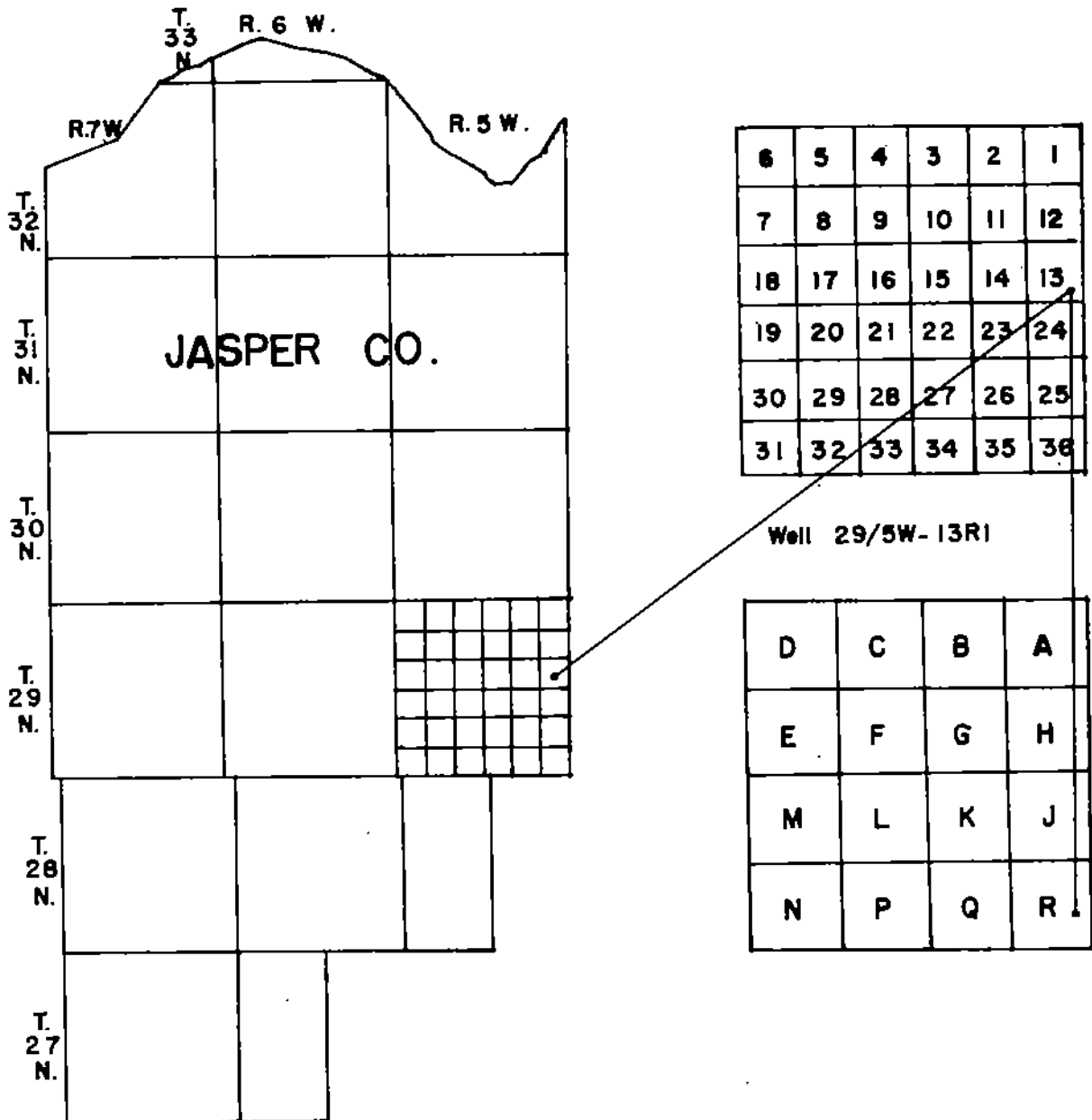


FIGURE 2. -- Sketch showing well-numbering system

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. R. J. Vig, formerly of the Geological Survey, and H. C. Kost of the Indiana Department of Conservation assisted in processing the data in the field. Well drillers, whose names are listed in the table of well records, furnished 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, Water Resources, and the Geological Survey, 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 7½ 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 sketchmaster from aerial photographs using the horizontal control shown on published Army Map Service maps which were photographically enlarged to scale 1:31,680.

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 Jasper County are of Cambrian and Ordovician age. These rocks consist of dolomite, dolomitic limestone, sandstone, shale, and siltstone. The rocks of Cambrian and Ordovician age are not used as a source of water because they generally lie more than 1,300 and 650 feet respectively below the surface and the water they contain is probably highly mineralized.

The rocks of Ordovician age are overlain by dolomitic limestone, shale, and dolomite of Middle Silurian age. These rocks are utilized extensively in the west-central part of the county as a source of water for domestic, stock, and public supplies. Wells that tap this aquifer are generally less than 150 feet deep and yield as much as 600 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 and dolomite 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 southern part of the county for domestic, stock, and public supplies. Wells that tap this aquifer are generally less than 250 feet deep and yield as much as 1,100 gpm. The shale of Devonian and Mississippian(?) age is used as a source of water locally in the southwestern part of the county and wells that tap this source yield from less than 1 to 10 gpm.

The shale of Devonian and Mississippian(?) age is overlain by limestone, shale, and sandstone of Mississippian age. These rocks are used as a source of water in a small area in the extreme southwestern part of the county.

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 Marsailles moraine in the south-central part; the ground moraine in the southwestern and central parts; the glaciolacustrine plains in the southwestern part; and the sand-covered glaciofluvial plains in the northern and southeastern part.

The unconsolidated rocks of Pleistocene age range in thickness from less than 10 to more than 100 feet. The rocks consist chiefly of clayey till, glaciofluvial sand and gravel, some glaciolacustrine clay and silt, and some wind-blown sand. The glaciofluvial sand and gravel is the chief source of ground water in the northern third and the central part of the southern half of the county. Wells that tap this aquifer are generally less than 100 feet deep and yield as much as 500 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 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 moderately hard to very hard. The hardness is generally greater than 150 and less than 300 ppm (parts per million). The range in concentration of selected constituents and properties is summarized in the table below. This table shows the minimum, mode, and maximum concentrations of various constituents and properties of water from rocks of Silurian age.

Constituent or property	Minimum (ppm)	Mode (ppm)	Maximum (ppm)
Iron (Fe)-----	<0.1	---	2.5
Bicarbonate (HCO ₃)-----	224	326	498
Sulfate (SO ₄)-----	<5	15	360
Chloride (Cl)-----	<4	7	72
Hardness as CaCO ₃ -----	84	191	524

Table 1.--Significance of selected dissolved mineral constituents and properties of ground water ^{a/}

Constituent or property	Significance
Iron (Fe)-----	Oxidizes to reddish-brown sediment upon exposure to air. More than about 0.3 ppm stains laundry and utensils reddish-brown. More than 0.5 to 1.0 ppm imparts objectionable taste to water. Larger quantities favor growth of iron bacteria. Objectionable for food processing, textile processing, beverages, ice manufacturing, brewing, and other purposes.
Bicarbonate (HCO ₃)-----	Bicarbonate in conjunction with carbonate (CO ₃) produces alkalinity. Bicarbonate of calcium and magnesium decomposes in steam boilers and hot water facilities to form scale and release corrosive carbon-dioxide gas.
Sulfate (SO ₄)-----	Sulfate in water containing calcium forms hard scale in steam boilers. In large amounts sulfate in combination with other ions gives bitter taste to water. Some calcium sulfate is considered beneficial in the brewing process.

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

Table 1.--Continued

Chloride (Cl)-----	Gives salty taste to drinking water when present in large amounts in combination with sodium. Increases the corrosiveness of water when present in large amounts.
Hardness as CaCO ₃ (Calcium and magnesium)----	Hard water increases amount of soap needed to make lather. Forms scale in boilers, water heaters, and pipes. Leaves curdy film on bathtubs and other fixtures and on materials washed in the water.

Plate 4 shows the areal distribution of hardness of water from the rocks of Devonian age. The water is soft to very hard. The hardness is generally greater than 100 and less than 350 ppm. The range in concentration of 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 (HCO ₃)-----	127	291	844
Sulfate (SO ₄)-----	<5	14	180
Chloride (Cl)-----	<2	9	88
Hardness as CaCO ₃ -----	60	283	520

Plate 5 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 350 ppm. 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 (HCO ₃)-----	68	166	512
Sulfate (SO ₄)-----	<5	64	265
Chloride (Cl)-----	<4	7	64
Hardness as CaCO ₃ -----	32	169	484

CONFINED AND UNCONFINED CONDITIONS

Ground water occurs in the consolidated and unconsolidated rocks of Jasper 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 confined 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 Jasper 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. However, a few wells drilled in shale have been finished with a screen and a gravel pack in order to prevent the shale from caving into the hole after completion of the well.

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

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

SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are available in most of the county for domestic, stock, and locally for public and some types of industrial supplies from the rocks of Silurian, Devonian, and Pleistocene Age. The rocks of Silurian and Devonian Age are the chief source of water in the southern two-thirds of the county and the rocks of Pleistocene Age in the northern third.

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

RECORDS

The records of about 440 wells and test holes are given in table 3. The table contains information about well construction, water levels, yields and drawdowns, conditions of occurrence, thickness and characteristics of water-bearing materials, type of pump, and other data. The altitude of the land surface at wells and test holes was interpolated from topographic maps.

Table 4 contains the selected logs of about 70 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 310 partial chemical analyses of water are given in table 5. The analyses were determined in the field office of the Geological Survey. This table gives information about geologic source, temperature, concentration in parts per million of iron, bicarbonate, sulfate, chloride, and hardness (calcium, magnesium) of water. The U. S. Public Health Service standards for drinking water are given in the table headnotes for iron and manganese together, sulfate, and chloride. No official standards have been established for hardness of water. However, water with respect to hardness is generally classified (Lamar, 1942, p. 25-26) as follows: 0-60 ppm soft; 61-120 ppm moderately hard; 121-200 ppm hard; more than 200 ppm very hard.

Table 6 contains the records of six observation wells of which three were established during the investigation and three 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. Daily highest water levels are given for the observation wells equipped with recording gages, 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 J.--Records of wells and test holes in Jasper County, Indiana

Well: See text for description of well-numbering system.
 Altitude: Altitude of land-surface datum from topographic map.
 Type of well: Dr, driven; Dv, dug; Dr, drilled; J, jetted.
 Finish: Gp, gravel pack; Oo, open end; Oh, open hole; S, screen dia, diameter in inches; G, gauge size; Pp, perforated pipe; si, slot size.
 Character: D, drift; Do, dolomite; G, gravel; Ls, limestone; Sd, sand; Sh, shale; Ss, sandstone.
 Geologic Age: D, Devonian; M, Mississippian; Pl, Pleistocene; S, Silurian.

Condition of occurrence: C, confined; U, unconfined; see text for definition.
 Water level: In our tables, and surface datum on date of completion of well, exact to one foot.
 Use: D, domestic; Pa, distroyed; I, industrial; Ir, irrigation; N, not used; O, observation; P, public supply; S, stock; T, town.
 Type of pump and horsepower: C, centrifugal; J, jet; L, lift; P, pitcher; S, submersible; T, turbine; numeral indicates rated horsepower of electric motor.
 Remarks: Ca, fluid chemical analysis in table 5; dd, drawdown; S, electric log available; G, gamma ray log available; kpm, gallons per minute; L, log of well in table 4.

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone				Type of pump and horsepower	Remarks	
									Depth to top (feet)	Thickness (feet)	Character	Geologic age			Conditions of occurrence
37/6W-4J1	G. Stein	G. Kantor	Spring 1941	700	Dr	65	4	Oh	---	Sh	D, M C	C	8	D, S L	Ca. Dd 60 ft pumping 5 gpm; bedrock at 19 ft; Ca, L. Yield 1 kpm; bedrock at 12 ft; shale overlain by 12 ft clay; Ca. Yield 1 kpm; bedrock at 14 ft; shale overlain by 14 ft drift; Ca. Flowed 1 gpm; bedrock at 14 ft; water-bearing zone near top of shale. Bedrock at 5 ft; originally drilled an oil test; used by town as standby for water supply. Water has moderate odor hydrogen sulfide gas; Ca. Formerly observation well Jasper 2; water level measured 0.87 ft below land, 22-24 ft. Dd 12 ft pumping 20 kpm; Ca, L. Dd 8 ft pumping 20 kpm; Ca, L. Water has strong odor hydrogen sulfide gas; Ca. Dd 16 ft after 1.5 hr pumping 300 kpm; see log well JDL2, L. Dd 20.5 ft after 8 hr pumping 200 kpm; L. Yield 5 kpm; bedrock at 22 ft; water has strong odor hydrogen sulfide gas; see log well JPI; Ca. Dd 84 ft balling 9 gpm; bedrock at 23 ft; water has strong odor hydrogen sulfide gas; Ca. Bedrock at 9 ft; see log well J2D2.
5P1	M. Albert	Hofstetter Bros.	9-13-56	702	Dr	205	4	Oh	135	La	D C	C	30	D, S	
5Q1	M. Carlile	do	6-11-57	702	Dr	94	4	Oh	12	Sh	D, M C	C	6	D, S	
5J1	A. Lohr, Sr.	do	6-3-57	710	Dr	115	4	Oh	14	Sh	D, M C	C	---	D J	
9A1	R. Taylor	do	About 1958	705	Dr	160	6	Oh	---	Sh?	D, M	---	---	D L	
10Q1	D. Hicks	do	---	722	Dr	42	6	Oh	14	Sh	D, M C	C	---	D	
18D1	M. Vanderswall	---	---	724	Dr	99	3	Oh	---	G	P1	---	20	D, S G1/3	
19P1	Town of Remington	---	About 1897	732	Dr	1,205	---	---	---	La	---	C	---	D	
21R1	H. James	---	---	735	Dr	80	5	Oh	---	Sh?	D, M	---	---	D, S S	
28A1	Pierre Estato	---	About 1919	734	Dr	120	4	Oh	---	La?	D	---	---	D J	
30G1	L. Spalding	---	---	728	Du	14	4 1/2	---	---	D	P1 U	---	---	N	
30C2	A. Miller	Hofstetter Bros.	12-56	728	Dr	38	4	S; 2ft, 40x1	35	Sd, G	P1 C	C	12	D	
30M1	F. L. Lough	do	5-1-57	732	Dr	37	2 1/2	S; 40x1	34	Sd, G	P1 C	C	12	P	
30M2	Virginia-Carolina Chemical Corp.	do	---	732	Dr	257	6	Oh	---	La	D C	C	30	I	
30X1	Town of Remington	Layne-Northern Co., Inc.	9-11-56	727	Dr	48	20	Gp; S; 10ft, 80x1, dia 12	35	Sd, G	P1 C	C	1	P	
30L1	do	do	6-22-58	730	Dr	65	6	---	---	Sd, G	P1 C	C	1	T	
30L2	do	do	8-20-58	730	Dr	43	2 1/2	Gp; S; 10ft, 80x1, dia 12	32	Sd, G	P1 C	C	2	P	
31N1	Fairview Hatchery	Hofstetter Bros.	10-41	742	Dr	192	4	Oh	189	La	D C	C	26	I	
31P1	do	do	7-53	738	Dr	202	6	Oh	189	La	D C	C	26	N	
32D1	S. Bahlur	Layne-Northern Co., Inc.	1-25-57	728	Dr	37	12	---	0	La	M C	C	8	T	

Well ID	Owner	Company	Date	Dr	60	6	Oh	8	7g	La, Sh	D, M	C	N	Yield	Notes
27/07-32B2	E. Bahler	Hofstetter Bros.	6-56	748	60	6	Oh			La?	D	C	S	Yield 2 gpm; bedrock at 8 ft.	
32B3				748	200	6	Oh			La?	D	C	S	Water has odor hydrogen sulfide gas; Ca.	
27/77-1R1	A. Dluzek	A. Peith	About 1940	603	130	4	Oh			La?	D	C	15 S		
421	J. Worenda	Hofstetter Bros.	Summer 1959	673	57	12	Op: S; 22ft, dia 4	29	28	Sh	D, M	C	10 D, S	J	Di 15 ft after 10 hr pumping 1 gpm; bedrock at 29 ft; Ca, L
5C1	W. Johnson		6-2-50	670	40								T	No water reported; clay overlain by 10 ft sand.	
5C2				670	179	4	Oh			La	D	C	D, S	Water has odor hydrogen sulfide gas; Ca.	
6S1	Memphis Church	Hofstetter Bros.	Fall 1959	682	200	4	Oh	180	40	La	D	C	23 P	Di 30 ft after 5 hr pumping 7 gpm; bedrock at 36 ft; L.	
7C1	L. Scullione	Hofstetter Bros.	Spring 1960	677	170	4	Oh	142	29	La	D	C	30 S	Di 30 ft after 5 hr pumping 7 gpm; bedrock at 26 ft; Ca, L.	
8D1	G. Green	D. Denton	10-1-59	680	200	4	Oh	103	35	La	D	C	85 N	Little drawdown reported after 2 hr pumping 15 gpm; bedrock at 38 ft; water has odor hydrogen sulfide gas; L.	
8N1	J. Doronda	Hofstetter Bros.	5-12-58	693	40	12	Oh			Sh	D, M		D	Di 20 ft pumping 7 gpm; bedrock at 21 ft; L.	
12D1	C. Luetorhand		10-7-57	696	133		Oh	105	28	La	D	C	35 N	See log well 130Q4.	
10P1	Town of Remington	Layne-Northern Co., Inc.	7-20-47	723	190	6				Sh	M	C	9 T		
13Q1			10-17-47	732	136	12	Oh	19	117	Sh, La	M	U	19 P	Di 17 ft after 8 hr pumping 570 gpm; bedrock at 23 ft.	
13Q2			10-2-47	725	154	12	Oh	14	140	Sh	M	U	14 P	Di 48.5 ft pumping 300 gpm; bedrock at 22 ft.	
13Q3			8-18-47	732	133	6		15	117	Sh	M	U	15 T	Di 61 ft pumping 25 gpm; bedrock at 3 ft; see log well 130Q1.	
13Q4			8-5-47	725	126	6		14	111	Sh	M	U	14 T	Bedrock at 3 ft; L.	
15R1	R. Graff	Hofstetter Bros.	6-6-58	734	30	3	Oh			Sh?	D, M		D, S	Bedrock at 11 ft; Ca, L.	
10H1	G. Sommer		7-04	704	200	3	Oh			La?	M	C	70 D, S	Yield 2 gpm; bedrock at about 19 ft; cannot pump well at fast rate; Ca.	
17E1	G. Alberts	Hofstetter Bros.	Summer 1960	702	130	7	Oh	18	112	Sh	D, M	C	15 S	Di 45 ft after 3 hr pumping 10 gpm; bedrock at 19 ft; shale overlain by 18 ft well and clay; Ca.	
18R1	N. A. Wabbar		7-30-58	717	52	4	Oh			La, Sh?	D, M		D	Yield 1 gpm; bedrock at 12 ft; Ca, L.	
21H1	C. Handcock		9-29-56	728	242	6	Oh	200	42	La	D	C	85 D, S	Di 40 ft pumping 7 gpm; bedrock at 13 ft; water has odor hydrogen sulfide gas; Ca, L.	
22F1	H. R. Wilhois		1949	733	40	4	Oh	18	22	Sh, La?	D, M	C	10 S	Yield about 5 gpm; bedrock at 18 ft; well supplies 200 head of livestock; black shale and limestone (?) overlain by 18 ft clay.	
24B1	Town of Remington	Layne-Northern Co., Inc.	4-13-40	700	102	12-	Oh	19	85	Sh	M	U	10 P	Di 61 ft after 8 hr pumping 135 gpm; bedrock at 4 ft; L.	
24G1	Town of Remington		7-13-47	730	120	6		117	3	La	D		T	Bedrock at 12 ft; L.	
24G2			7-23-47	715	30	6		8	8	Sh	M	U	8 T	Di 41 ft pumping 30 gpm; bedrock at 13 ft; formerly concentration well; Jaeger 6; water level measured 29.91 ft below land, 9-26-60; E, G, L.	
25A1	Crystal Dairy		6-18-47	734	132	10	Oh			La?	D	C	21 N	Bedrock at 14 ft; water reported to have hydrogen sulfide gas; L.	
25B1	Town of Remington		2-8-40	737	185		Oh			La	D	C	64 D	Di 50 ft pumping 10 gpm; bedrock at 11 ft; see well log 25B1; Ca.	
25C1	Von Tobel Lumber Company	Hofstetter Bros.	12-55	737	165	4	Oh	130	26	La	D	C	30 D, P	JU/4	
25J1	Town of Remington	Layne-Northern Co., Inc.	6-28-56	727	53	6							T	Bedrock at 5 ft; Ca.	
28C1	D. Luetorhand			746	35	4	Oh			La?	M	C	16 S	Di 20 ft pumping 6 gpm; bedrock at 12 ft; layer of limestone overlain by 12 ft clay; Ca.	
28H1	E. Wilson			740	265	4	Oh	12	83	La	M	C	10 D, S		
30E1	B. and R. Davidson	Hofstetter Bros.	6-23-58	727	93	4	Oh			La	M	C	10 D, S		

28/W-29/H2	do	do	do	6-58	Dr	20	16-12	Oh	Oh	Oh	Sh	D,M	C	5	D	Ca.
29Q1	O. Morehouse			Winter 1900	680 Dr	50	6	Oh	22	28	Sh	D,M	C	6	D	Do 25 ft bailing 1 gpm; bedrock at 22 ft; Ca, L.
31J1	A. Alberts			2-0-58	682 Dr	133	4	Oh	92	41	Sl	D	C	8	D	Do 72 ft pumping 5 gpm; bedrock at 18 ft; Ca, L.
28/7W-1A1	C. Rubin	E. H. Wingate		4-7-61	658 Dr	113	4	Oh	28	87	La	D	C	20	D	Do 7 ft. scribe 3 hr pumping 15 gpm; overlain by 28 ft. clay; water has slight odor hydro-ferrous sulfide gas; Ca.
1C1	L. Houston	Hofstetter Bros.		Summer 1950	658 Dr	34	4	S; 4ft, 851, dia 4	30	4	Sd	Pl	C	8	D	Do 22 ft after 4 hr pumping 5 gpm; fine sand overlain by 30 ft yellow sandy clay; Ca.
3A1	C. Negro			8-15-59	648 Dr	87	4	Oh			La	D	C	12	D,S	Yield 10 gpm; Ca.
591	O. Wayne	R. Eib		11-2-57	650 Dr	102	4	Oh	85	14	G	Pl	C	8	D	Do 12 ft pumping 20 gpm; Ca, L.
731	D. Scoby	Hofstetter Bros.		5-1-57	651 Dr	90	4	S; 40x1			S4	Pl	C	7	D	Ca.
801	J. Negro			3-7-56	652 Dr	160	4	Oh	120	40	La	D	C	25	Sd	Do 65 ft pumping 5 gpm; bedrock at 70 ft; water has strong odor hydrogen sulfide gas; Ca.
911	C. Kaufman	Mohr and Denton														Do 20 ft after 1 hr pumping 10 gpm; bedrock at 70 ft; water has moderate odor hydrogen sulfide gas; Ca, L.
9Q1	R. G. Baldwin			1-16-58	652 Dr	150	4	Oh	110	40	La	D	C	20	D,S	Do 20 ft after 1 hr pumping 10 gpm; bedrock at 70 ft; water has moderate odor hydrogen sulfide gas; Ca, L.
10E1	P. Laird			About 1910	661 Dr	50	4	S			S4,G	Pl	C	17	D,S	Gravel overlain by 40 ft clay. Ca.
11P1	C. M. Iliff	A. Pettit		8-32	652 Dr	48	4	Oh	40	2	G	Pl	C	8	D	Ca.
12P1	H. Hoover			About 1911	652 Dr	172	4	Oh			La	D	C	8	D	Ca.
10P1	L. Miller	Hofstetter Bros.		Spring 1951	602 Dr	100	4	Oh			La7	D	C	18	D,S	Ca.
20P1	R. Lee			About 1951	607 Dr	73	4	S			Sd	Pl	C	20	D,S	Ca.
21R1	G. Cook	R. Eib		About 1944	600 Dr	236	4	Oh			La	D	C	40	D	Ca.
22P1	V. Michael			About 1946	607 Dr	65	2 1/2	Oh			Sd	Pl	C			Water has odor hydrogen sulfide gas; Ca.
23L1	H. Ward	W. Morrae		0-28-57	666 Dr	200	4	Oh			La	D	C			Yield 2 gpm; water-bearing zone at 150 ft; Ca, L.
25C1	R. Firziuff	Hofstetter Bros.		Fall 1959	670 Dr	280	4	Oh	130	150	La	D	C			Do 10 ft after 4 hr pumping 5 gpm.
26F1	D. Wayne			Summer 1959	668 Dr	40	12	S; 10ft, dia 4			G	Pl	C	12	D	Blue gravelly clay overlain by 12 ft yellow sand. Bedrock at 75 ft; L.
26Y2				Summer 1959	668 Dr	38	4									Ca.
26F3				Summer 1959	668 Dr	100	4									Ca.
29Q1	C. Anteliff			8-15-57	671 Dr	88	3	Oh			Sh?	D,M	C			Bedrock at 38 ft; see log at 32R1.
11P1	D. Peterson			8-15-57	676 Dr	187	3	Oh	38	27	Sh	D,M	C			Bedrock at 38 ft; L.
32N1	A. Laird	Hofstetter Bros.		8-7-57	665 Dr	65		Oh	38	40	Sh	D,M	C			Yield 10 gpm; well gravel packed and screen set to prevent shale from caving into hole; Ca.
32N2				10-57	665 Dr	84	12	Gp; S; pp			Sh	D,M	C			Bedrock at 30 ft; see log wall 32N2; Ca.
32N3					665 Dr	50	12									Ca.
32R1	R. Zarne			3-30-56	672 Dr	45	12	Gp; S; pp	20	15	Sh	D,M	C			Water has odor hydrogen sulfide gas; Ca.
34J1	R. Monbring			Before 1900	676 Dr	106	4	Oh			Sh	D,M	C	15	D,S	Bedrock at 15 ft.
36P1	Mr. Garvin	C. Griffith		Before 1900	680 Dr	108	4	Oh			Sh	D,M	C			Ca.
38P2				Before 1900	680 Dr	70	4	Oh			Sh?	D,M	C			Ca.
26/SW-4C1	W. E. Bond			1920	675 Dr	940	12	Oh			La	D	C	16		Water has odor hydrogen sulfide gas; Ca.
411				1920	675 Dr	15	3	Oh			La	D	C			Flowed; bedrock at 15 ft.
611	A. Davison	Danko and White		1940	700 Dr	40	3	Oh	20	15	La	D	C	20	D,S	Ca.
11B1	L. D. Woelrich	A. Polte			730 Dr	95	4	Oh	30	15	La	D	C	6	D,S	Ca.
12C1	R. Woelrich	O. J. Titus		1057	685 Dr	42	4	Oh	15	20	La	D	C	6	D,S	Well 20 ft deep at house; bedrock at 15 ft.
13M1	B. Kruger				680 Dr	20	4	Oh			La	D?	C	4	D,S	Water has odor hydrogen sulfide gas; Ca.
14E1	J. W. Smith			About 1943	688 Dr	23	3	Oh			La	D	C			Do.

Table 3.--Records of wells and test holes in Jasper County--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
29/3W-16H1	J. A. Richardson		About 1904	890	Dr	33	3	Oh			Ls	D	C	12	D	J1/3	Water has gas; Ca.
21D1	V. Elijah		892	18	Dr	18	6	Oh	15	73	Ls	D	C	12	D,S	J	Bedrock at 15 ft; water has slight odor; hydrogen sulfide gas; Ca.
25K1	W. and G. Rosendahl	Hofstetter Bros.	7-26-51	885	Dr	88	6	Oh			Ls	D	C	12	D	J1/2	Ca.
26N1	D. Stewart		890	30	Dr	30	4	Oh			Ls	D	C	11	S	11/2	Ca.
26C1	do		890	30	Dr	30	4	Oh			Ls	D	C	11	D,S	11/3	Ca.
27E1	S. Cook	Hofstetter Bros.	7-9-58	890	Dr	72	4	Oh	18	34	Ls	D	C	7	D	J1/3	Ca. 23 ft pumping 5 gpm; bedrock at 18 ft; limestone overlain by 18 ft sand and clay; Ca.
27M1	G. Siam	do	15-3-50	890	Dr	34	4	Oh	21	13	Ls	D	C	7	D	J	Ca. 16 ft after 5 hr pumping 20 gpm; Ca, L.
29F1	K. Haskell		About 1910	891	Dr	60	4	Oh			Ls	D	C	13	D	J	Ca.
31Q1	C. Mollie		880	34	Dr	34	4	Oh	12	22	Ls	D	U	14	D,S	L	Bedrock at 12 ft; Ca.
32Q1	J. L. Herr		1918	875	Dr	34	4	Oh	15	55	Ls	D	U	6	D,S	---	Bedrock at 15 ft; limestone overlain by 6 ft. Yellow sand; bedrock at 6 ft.
33D1	Mr. Taylor	R. Sib	1854	886	Dr	68	4	Oh	15	55	Ls	D	U	6	D,S	---	Limestone overlain by soil and sandy clay; Ca.
33D2	do	do	9-54	883	Dr	28	4	Oh	8	26	Ls	D	U	8	D,S	---	Bedrock at about 7 ft; Ca.
34P1	J. Cook	Mr. Hill	1922	878	Dr	26	4	Oh	37	47	Ls	D	U	---	D,S	J	Formerly observation well
35K1	C. McDonald		About 1950	887	Dr	84	3	Oh			Ls	D	U	---	S	L	Jasper 1; water level measured 8.07 below land, 10-18-55.
36P1	Jasper County Highway Department			885	Dr	13	4	Oh			Ls	D	U	---	X	---	
29/6W-2H1	Trustees, Barkley Township	A. Potts	1921	732	Dr	105	3	Oh			Ls	S	C	---	P	L	Ca.
2J1	E. Barkley		About 1900	737	Dr	175	3	Oh			Ls	S	C	---	D,S	11/2	Ca.
36J1	F. Mayhew		734	118	Dr	118	3	Oh			Ls	S	C	55	D,S	J	Ca. 45 ft pumping 5 gpm; bedrock at 96 ft; water has slight odor; hydrogen sulfide gas; Ca, L.
43J1	C. Haysouth	Hofstetter Bros.	12-6-57	721	Dr	123	4	Oh	96	27	Sh	S	C	35	D	---	Ca.
4K1	D. DeWitt	A. Potts	1940	703	Dr	164	4	Oh	102	44	Ls	S	C	---	X	---	Ca.
53J1	J. R. Shook		4-01	608	Dr	47	---	Oh			Ls?	S	C	---	D,S	11/3	Ca.
7P1	M. Carter	R. Hayden	705	Dr	142	---	---	Oh	132	13	Ls	S	C	---	D	J	Bedrock at 132 ft; Ca, L.
8P1	R. D. Ansler	R. Sib	About 1956	688	Dr	36	4	Oh			Ls	S	C	---	D,S	J	Bedrock at 36 ft; Ca.
9K1	C. H. Miller	Hofstetter Bros.	8-9-58	695	Dr	107	4	Oh	64	40	Ls	S	C	40	D,S	---	Ca. 20 ft pumping 15 gpm; bedrock at 64 ft; limestone overlain by 84 ft clay; water has odor; hydrogen sulfide gas; Ca.
10P1	J. Drabson		Before 1914	885	Dr	85	4	Oh			Ls	S	C	---	S	L	Ca.
13P1	L. Harrington		876	18	Dr	18	4	Oh	45	14	Ls	S	C	---	D,S	11/4	Water has slight odor hydrogen sulfide gas; Ca.
14P1	W. Potts, Jr.	A. Potts	1938	880	Dr	59	4	Oh			Ls	S	C	---	D,S	11/3	Bedrock at 11 ft; Ca.
14Q1	J. Parkison	R. Sib	1954	860	Dr	27	4	Oh	12	15	Ls	S	C	0	D,S	J1/2	Ca.
21G1	J. Garland		803	200	Dr	200	4	Oh	8	12	Ls	S	C	8	D,S	---	Ca. 1 ft after 10 hr pumping 8 gpm; bedrock at 8 ft; limestone overlain by 6 ft clay; Ca.
24Q1	Mrs. Kruger	Hofstetter Bros.	Fall 1959	876	Dr	20	4	Oh	8	12	Ls	S?	C	8	D,S	---	Ca.

Well No.	Owner	Depth (ft)	Drilling Date	Drilling Co.	Well Description	Flow Rate (gpm)	Flow Duration	Yield (gpm)	Notes
30/78-247A	G. Boutabagh	75	10-25-61	J. Masters	2 8; 3ft, 12ml, dia 1 1/2	8	70	Yield 10 gpm; L.	
247B	E. BeFoy	75	7-21-61	D. Henderson	2 8; 3ft, 10ml, dia 1 1/2	10	85	Yield 10 gpm; Ca, L.	
251A	W. and M. E. Doty	33	9-18-59	G. Crist	21 8; 3ft, 40g, dia 1 1/2	4	29	Yield 10 gpm; L.	
251B	G. O'Brian	240	8-3-57	Fraser Bros. Well Drilling Co.	4 0a	12	228	Yield 18 gpm; bedrock at 228 ft; Ca, L.	
271A	M. E. Kerr	44	3-26-61	D. Henderson	2 8; 3ft, 10ml, dia 1 1/2	3	41	Yield 10 gpm; Ca, L.	
271B	J. E. Kruzick	95	3-8-57	D. Henderson	12 8; 20 ft, dia 10	25	70	Yield 17 gpm; Ca, L.	Discharge estimated 2 gpm; 7-10-58; Ca.
291A	B. Coast	74	5-7-61	D. Henderson	2 8; 3ft, 10ml, dia 1 1/2	8	30	Yield 12 gpm; L.	
317A	G. Poor	28	11-56	D. Henderson	1 1/2 3; 3ft	67	---	Yield 25 gpm; Ca.	
341A	M. O'Connor	189	11-56	Fisher Bros. Well Drilling Co.	4 0a	---	---	Yield 12 gpm; gravel overlain by 30 ft blue clay; Ca.	
351A	G. R. Lebo	44	8-14-60	J. Masters	21 8; 3ft, 60g, dia 1 1/2	14	30	Yield 9 gpm; Ca.	
351B	O. Lowery	20	1 1/2	D. Henderson	1 1/2 0a	5	---	Yield 17 gpm; L.	
351C	O. C. Koller	155	1859	D. Henderson	4 0a	---	---	Flow: Ca.	
30/78-311	B. E. Mays	28	About 1930	D. Henderson	1 1/2 9	---	---	Spelling flowing from sand at contact with underlying clay; discharge estimated 2 gpm;	
681	B. Hahn	23	1925	D. Henderson	1 1/2 8; 3ft, 80g	5	---	7-10-58; Ca.	
671	B. Blinlock	23	1925	D. Henderson	1 1/2 8; 3ft, 80g	5	---	Sand and gravel overlain by blue clay; Ca.	
821	F. Shaffer	73	4-30-55	G. Crist	2 8; 3ft, 80g	13	80	Well at barn 23 ft deep; Ca.	
9A1	L. Lan	23	About 1955	---	1 1/2 8	---	---	---	
1311	E. J. Johnston	45	7-04	---	2 0a	---	---	---	
1441	A. C. Olson	60	1931	---	3 9	---	---	---	
1443	---	12	1943	---	1 1/2 8; 3ft	---	---	---	
1641	D. Abbott	34	7-60	---	1 1/2 8; 3ft	---	---	---	
1641	C. Bhardt	23	About 1931	---	1 1/2 8; 3ft, 80g	9	14	---	
1781	K. Cast	80	7-07	---	4 8	---	---	---	
2221	A. Tarr	109	3-25-53	Bechteler Well and Pump Co.	2 9	---	---	---	
2311	J. H. Fritz	109	About 1921	---	2 9	---	---	---	
251A	O. E. Crawford	64	1941	---	1 1/2 8; 3ft, 80g	---	---	---	
251B	---	18	1941	---	1 1/2 0a	---	---	---	
2671	K. Stall	15	---	---	2 8	---	---	---	
3111	W. Kofka	19	---	---	3 84	---	---	---	
3281	E. Bohlhoff	19	---	---	4 8	---	---	---	
341B	Z. E. Strattler	30	1939	---	1 1/2 8; 3ft	---	---	---	
3531	C. Gleason	16	---	---	1 1/2 8; 3ft	---	---	---	
30/78-181	P. Cupch	15	Spring 1960	---	1 1/2 8; 3ft, 90g	---	---	---	
371	O. E. Clark	---	Summer 1960	---	1 1/2 8; 3ft	---	---	---	
381	J. Nichols	60	1960	---	2 0a	---	---	---	
382	---	124	1910	---	6 0a	---	---	---	
541	Tom of Madburyville	72	1928	---	8 8	---	---	---	
581	---	100	1948	---	3 0a	---	---	---	
681	C. Wilcoxon	694	About 1946	J. Nichols	3 0a	---	---	---	
771	A. Rueda	77	1951	J. Nichols	1 1/2 8; 7ft	32	92	Bedrock at 90 ft; limestone overlain by 2 ft shale.	
961	O. Carling	124	1952	J. Nichols	3 0a	---	---	Well at barn 16 ft deep; Ca.	
1181	G. Pelton	678	---	---	1 1/2 8; 3ft	---	---	Ca. 15 ft after 20 hr pumping	
1681	J. Gels	600	---	---	2 0a	---	---	8 gpm; Ca, L.	
1681	E. McKee	90	---	Bechteler Bros.	4 0a	---	---	---	
2201	K. Fox	481	1960	---	4 8	---	---	---	
2481	P. Whitman	685	About 1956	O. J. Winsa	100 4 8	---	---	---	
2801	E. Kerton	80	---	---	3 2	---	---	---	
3081	L. Carpenter	80	---	---	3 5	---	---	---	
3181	E. Miller	88	---	---	3 3	---	---	---	
3281	E. Lemus	90	---	---	4 4	---	---	Flow: water contains hydrogen sulfide gas; Ca.	
341A	E. Carling	73	1-6-56	Bechteler Bros.	4 0a	8	85	Discharge estimated 2 gpm; 7-10-58; Ca.	
3501	J. Kessler	678	1-25-57	B. E. Winata	4 5; 3ft, dia 3 1/2	---	---	Discharge estimated 2 gpm; 7-10-58; Ca.	

Table 3. --Records of wells and test holes in Jasper County--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone				Water level (feet)	Use	Type of pump and horsepower	Remarks	
									Depth to top (feet)	Thickness (feet)	Character	Geologic age					Conditions of occurrence
29/7W-36K1	St. Joseph's	Layno-Northern Co., Inc.	9-25-53	803	Dr	50	18	Op; S; 10ft, dia 9	Pl	59	Sh, G	Pl	U	11	P	Dr 13 ft after 2.5 hr pumping 270 gpm; L, Ca.	
30/9W-2A1	R. Buckley	A. Potts	1940	717	Dr	160	4	Ob	Pl	2	C	Pl	C	10	D, S	Dr 10 ft after 2.5 hr pumping 270 gpm; L, Ca.	
201	V. Hornbush	Jasper County Enterprise, Inc.	12-20-50	702	Dr	108	5	---	D, M	4	Sh, Ls	D	---	---	J	Ob 99 test; L.	
4F1	C. and M. Dobson	---	---	685	Dr	104	---	---	D	---	---	---	---	---	---	---	---
4R1	L. Nichols	A. Potts	1951	687	Dr	84	4	Oh	D	73	Ls	D	C	---	D	Water has odor hydrogen sulfide gas.	
5Q1	E. Partridge	---	1037	684	Dr	86	4	Oh	D	65	Ls	D	C	---	D	Yield 1100 gpm; bedrock at 103 ft; water has strong odor hydrogen sulfide gas; Ca, L.	
9L1	W. Gehring Inc.	J. P. Miller Artesian Well Co.	8-15-48	685	Dr	200	10	Oh	D	103	Ls	D	C	30	Ir	760	
9L2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11X1	R. Freshour	O. J. Titus	11-30-48	688	Dr	105	6	Op; S; 10ft	Pl	20	Sh, G	Pl	C	14	P	---	
12E1	H. Berger	---	About 1950	694	Dr	102	4	---	C	---	---	---	---	---	J	---	
10A1	A. Gutz	J. P. Miller Artesian Well Co.	4-13-48	705	J	104	2	---	D, M	---	Sh, Ls	D, S	C	40	D, S	3 1/4	
17L1	W. Gehring Inc.	---	About 1947	680	Dr	300	10	Oh	Ls	---	---	D	C	---	O	---	
18B1	---	A. Potts	---	686	Dr	88	4	Oh	Ls	18	Ls	D	C	---	N	Observation well Jasper 4; water level measured 9.87 ft below land, 7-5-58.	
19J1	L. Kornik	R. Elb	About 1945	685	Dr	102	4	Oh	Ls	---	---	D	C	5	D, S	33	
19Q1	W. Gehring Inc.	J. P. Miller Artesian Well Co.	5-24-48	681	Dr	280	12	Oh	Sh, G, Ls	---	---	S, Pl	C	8	Ir	T	
21M1	B. Olson	---	---	692	Dr	16	1 1/2	S	Pl	---	---	Pl	C	---	J	---	
25O1	J. Corbett	---	---	693	J	170	2	Ob	Ls	---	---	Pl	C	---	D, S	---	
23C1	Truett, Gillan Township	---	---	725	Dr	110	4	S; 3ft, 60g, dia 2 1/2	Sh, G	---	---	Pl	C	13	P	---	
26C1	L. Logan	Hofstetter Bros.	8-2-58	711	Dr	101	4	---	G, Sh	2	G, Sh	Pl	C	45	D	---	
28P1	T. Logan	---	1940	710	Dr	98	---	---	Sh	4	Sh	Pl	C	45	D	---	
28K1	H. Corbin	---	---	690	Dr	104	4	---	Ls	---	---	D	C	---	D, S	J	
29N1	R. Salzwall	---	---	692	Dr	107	3	Oh	Ls	---	---	D	C	18	D, S	LL/3	
34L1	S. E. Lowry	E. H. Whipple	11-24-55	702	Dr	130	4	Oh	Ls	30	Ls	D	C	40	D, S	---	
35C1	V. Stevens	Hofstetter Bros.	Winter 1960	702	Dr	115	4	Oh	Ls	49	Ls	D	C	25	D	J	
30/9W-1D1	Mr. Rosenkranz	A. Potts	1949	685	Dr	71	4	Oh	Ls	2	Ls	D	C	---	D	---	
1Q1	A. Snyder	---	---	686	Dr	73	4	Oh	Ls	6	Ls	D	C	---	F	Bedrock at 69 ft.	
1Q2	---	---	---	688	Dr	77	4	Oh	Ls	14	Ls	D	C	---	N	Bedrock at 65 ft.	
1R1	J. Brown	---	---	685	Dr	90	4	Oh	Ls	34	Ls	D	C	---	D	Bedrock at 56 ft; water has odor hydrogen sulfide gas; Ca.	
1R2	---	---	---	680	Dr	74	4	Oh	Ls	12	Ls	D	C	---	S	Bedrock at 62 ft.	
2Q1	J. Davy	---	---	687	Dr	67	4	Oh	Ls	10	Ls	D	C	---	D, S	Bedrock at 57 ft; Ca.	
4C1	D. Lakin Chamberlain Estate	---	---	695	Dr	52	4	Oh	G	---	---	Pl	C	---	D	Bedrock at 70 ft; water has odor hydrogen sulfide gas; Ca.	
4R1	F. Chapman	A. Potts	1935	696	Dr	84	4	Oh	Ls	24	Ls	S	C	---	N	Water has odor hydrogen sulfide gas.	

30/6W-561	A. Childers	1933	692	Dr	113	Oh	70	L4	S	C	10	D,S	31/3	Ca.
561	A. Childers	1933	692	Dr	82	4	07	J	S	C	---	D	J	Bedrock at 79 ft.; Ca.
562	G. Tanner	1933	692	Dr	84	3	07	L4	S	C	---	D	J	at 1 ft. pumping 6 gpm; bedrock at 67 ft.; Ca.
563	R. Coover	1042	700	Dr	30	4	20	C	Pl	C	12	D,S	J	Ca.
564	Defettor Bros.	8-22	700	Dr	30	4	20	C	Pl	C	12	D,S	J	Bedrock at 51 ft.
565	A. Pettit	1954	691	Dr	35	4	51	L4	D	C	---	D	---	Bedrock at 30 ft.
566	F. Howard	1953	683	Dr	35	4	51	L4	D	C	---	D	---	Bedrock at 38 ft.
567	T. Hancock	1948	683	Dr	64	4	59	L4	D	C	---	D	---	Bedrock at 77 ft.
568	Mr. Snyder	1948	683	Dr	64	4	59	L4	D	C	---	D	---	Water has odor hydrogen sulfide gas; Ca.
569	E. Haver	1948	683	Dr	117	4	77	L4	D	C	---	D	---	Oil tank; L.
570	Mr. Drake	1942	685	Dr	126	---	---	L4	S	C	---	---	---	Bedrock at 100 ft.; Ca.
571	S. Jordan	1945	685	Dr	3,330	---	---	L4	S	C	---	---	---	Ca.
572	State Bank of Bensenville	1945	685	Dr	100	4	---	L4	S	C	---	---	---	Ca.
573	T. Arnold	1948	695	Dr	100	4	---	L4	S	C	---	---	---	Ca.
574	V. Torbett	About	695	Dr	100	4	---	L4	S	C	---	---	---	Ca.
575	F. L. Bittur	1945	706	Dm	34	2	---	Sg, G	Pl	C	---	---	---	Ca.
576	C. Torbett	1940	705	Dr	151	3	---	L4	S	C	---	---	---	Ca.
577	M. Schultz, Sr.	About	693	Dr	80	4	---	L4	S	C	---	---	---	Ca.
578	H. Lakin	1939	692	Dr	191	4	---	L4	S	C	---	---	---	Ca.
579	O. J. Titum	About	695	Dr	128	4	---	L4	S	C	---	---	---	Ca.
580	A. Pettit	1955	688	Dr	115	4	---	G	Pl	C	10	D	J	Bedrock at 118 ft.
581	C. Ciapp	1955	686	Dr	130	4	---	L4	S	C	26	D,S	J1/2	Bedrock at 142 ft.; limestone overlain by about 60 ft. very fine sand; Ca.
582	F. Markin	1955	686	Dr	130	4	---	L4	S	C	26	D,S	J1/2	Bedrock at 122 ft.; Ca.
583	L. Price	About	693	Dr	61	4	---	L4	S	C	12	D,S	J1/3	Water has odor hydrogen sulfide gas; Ca.
584	R. Elb	1945	692	Dr	164	4	---	L4	S	C	---	---	---	Ca.
585	A. Pettit	1938	692	Dr	154	4	---	L4	S	C	---	---	---	Ca.
586	L. Syora	1934	678	Dr	158	4	---	L4	S	C	---	---	---	Ca.
587	K. Hurley	1934	672	Dr	91	4	---	L4	S	C	---	---	---	Ca.
588	R. Williams	1939	705	Dr	85	5	---	L4	S	C	---	---	---	Ca.
589	R. Elb	1939	705	Dr	85	5	---	L4	S	C	---	---	---	Ca.
590	H. Elb	About	703	Dr	124	4	---	L4	S	C	20	D,S	J1/2	Ca.
591	E. McFadden	1955	684	Dr	160	4	---	L4	S	C	---	---	---	Ca.
592	E. L. Campbell	About	690	Dr	53	---	---	Sd	Pl	C	6	Tr	---	Yield 150 gpm; bedrock at 42 ft. fine log wash; Ca.
593	R. Kohlhaas	7-26	690	Dr	598	---	---	L4	S	C	7	Tr	---	DM 125 ft. pump 540 gpm; L.
594	do	7-26	690	Dr	15	11	---	L4	S	C	---	---	---	Ca.
595	do	7-26	690	Dr	132	4	---	L4	S	C	---	---	---	Ca.
596	A. Pettit	1938	700	Dr	20	11	---	L4	S	C	---	---	---	Ca.
597	do	1938	700	Dr	20	11	---	L4	S	C	---	---	---	Ca.
598	Fair Oaks Farm	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
599	do	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
600	do	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
601	do	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
602	do	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
603	do	---	698	Dm	20	11	---	L4	S	C	---	---	---	Ca.
604	L. Warne	Fall	695	Dm	20	11	---	L4	S	C	---	---	---	Ca.
605	K. Schultz	1954	690	Dm	30	11	---	L4	S	C	---	---	---	Ca.
606	R. Schultz, Jr.	---	681	Dr	80	4	---	L4	S	C	---	---	---	Ca.
607	do	---	681	Dr	80	4	---	L4	S	C	---	---	---	Ca.
608	H. Matlock	---	695	Dm	12	11	---	L4	S	C	---	---	---	Ca.
609	Fair Oaks Farm	---	682	Dm	20	11	---	L4	S	C	---	---	---	Ca.
610	P. Andy	1956	684	Dm	11	11	---	L4	S	C	---	---	---	Ca.
611	F. Thompson	1938	684	Dr	100	4	---	L4	S	C	---	---	---	Ca.
612	L. L. McCurtain	1937	686	Dr	100	4	---	L4	S	C	---	---	---	Ca.
613	L. Syora	1934	693	Dr	111	4	---	L4	S	C	---	---	---	Ca.
614	G. Doll	1938	699	Dr	104	4	---	L4	S	C	---	---	---	Ca.
615	J. Longatrotch	1940	701	Dr	98	4	---	L4	S	C	---	---	---	Ca.
616	L. Longatrotch	6-30	701	Dr	104	4	---	L4	S	C	---	---	---	Ca.
617	Trantec, Union Township	1939	692	Dr	115	4	---	L4	S	C	---	---	---	Ca.
618	T. E. Coover	About	685	Dr	90	3	---	L4	S	C	16	D,S	L	Water has slight odor hydrogen sulfide gas; Ca.

Table 3. -- *Reports of wells and test holes in Jasper County--Continued.*

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone				Use	Type of pump and horsepower	Remarks
									Thickness (feet)	Character	Geologic age	Conditions of occurrence			
30/7W-25D1	P. Hordman	A. Potts	1941	887	Dr	163	4	Oh	89	Ls	S	C	D	D	Bedrock at 74 ft. Oil test; L. Water has odor hydrogen sulfide gas; Ca.
25J1	A. Davison	A. Potts	1943	653	Dr	1,101	4	Do	---	G?	P?	---	D,S	J1/2	---
28Q1	W. Todd	A. Potts	1943	602	Dr	82	4	Do	---	---	---	---	---	---	---
28L1	Mrs. Schroeg	do	11-28-32	695	Dr	118	4	Oh	31	Ls	S	C	D	---	Formerly observation well. Formerly used for water. Level measured 8.40 ft below land, 6-10-48.
28K2	H. E. Henton	do	690	Dr	36	4	---	---	---	S4,G	P1	---	---	---	---
29Q1	J. Kostka	A. Potts	1928	890	Dr	111	4	Oh	19	Ls	S	C	D	D,S	Water has moderate odor hydrogen sulfide gas; Ca.
32M1	F. Zickmund	R. Eib	1937	653	Dr	92	4	Oh	---	Ls	S	C	D	J1/3	---
32Q1	T. Prohnsky	A. Potts	1939	693	Dr	94	4	Oh	43	G	P1	C	N	---	Water reported to have odor hydrogen sulfide gas.
39D1	D. E. Grov	do	1932	686	Dr	130	4	Oh	87	Ls	D	C	S	L	---
33R1	C. Kallmar	do	1937	691	Dr	155	4	Oh	48	Ls	D	C	D	---	---
31/2W-7L1	A. Kallmar	do	1941	704	Dr	14	1 1/2	Oh	107	S4	P1	U	D	---	---
7L1	C. J. Durak	do	9-47	699	Dr	12	1 1/2	S; 3ft	---	84	P1	U	D	---	---
8L1	C. M. Mauck	do	1954	692	Dr	22	1 1/2	---	---	84	P1	U	D	---	---
8L1	C. M. Mauck	do	1954	692	Dr	22	1 1/2	---	---	84	P1	U	D	---	---
10C1	State of Indiana	Spring	1961	697	Dm	18	1 1/2	---	---	84	P1	U	P	J2	---
15E1	H. C. Deorberg	do	1948	695	Dm	24	1 1/2	---	---	84	P1	U	D	L	Oil test; bedrock at 84 ft; L.
16G1	Cain and Hughes	Oak Ridge Oil Co.	11-11-49	692	Dr	98	1 1/2	S; 3ft	---	84	P1	U	D	J1/2	Oil test; bedrock at 84 ft; L.
16R1	W. Dresher	do	1936	702	Dm	30	1 1/2	S	---	C,84	P1	---	D,S	J	---
21N1	L. Hornham	do	About 1938	693	Dm	38	1 1/2	---	---	---	---	---	---	---	---
22N1	R. Schultz	J. L. Cowan	11-14-52	685	Dr	985	8	---	---	Ls	D	---	---	---	Oil test; bedrock at 88 ft; L.
24D1	R. Ballard	C. A. Davin	3-4-52	691	Dr	1,020	4 1/2	---	---	S4	P1	C	D	J1/2	Oil test; water-bearing limestone from 110-124 ft.
26J1	S. Lykins	Mr. Nichols	About 1936	682	J	108	2	S	---	S4	P1	C	D	J1/2	---
27D1	W. Clawson	do	About 1937	687	---	60	2	---	---	SH?	D,M	---	D	J1/2	---
27E1	C. Becker	do	1938	687	Dr	47	4	---	---	SH?	D,M	---	---	---	---
28F1	H. A. Nelson	B and H Oil Co.	8-20-38	692	Dr	128	4	Oh	---	Ls	D	---	---	---	Oil test; bedrock at 50 ft; L.
28P1	O. and W. Woodruff	do	10-28-39	685	Dr	370	1 1/2	---	---	G,84	P2	U	D	P	Oil test.
28S2	H. Stone	do	About 1937	689	Dm	147	1 1/2	S	---	---	---	---	---	---	---
29D1	R. Florence	do	About 1937	690	Dm	147	1 1/2	S	---	---	---	---	---	---	---
30M1	G. Callaway	A. Potts	1944	689	Dr	86	4	Oh	66	Ls	D	C	D	J	Bedrock at 66 ft.
30R2	A. Kallor	do	1940	680	Dr	83	4	Oh	20	Ls	D	C	D	---	Bedrock at 87 ft.
31P1	W. Tinsley	do	1938	686	Dr	113	4	Oh	10	Ls	D	C	D	---	Bedrock at 60 ft.
31F2	do	do	1942	686	Dr	76	4	Oh	60	Ls	D	C	D	---	Bedrock at 80 ft.
31L1	J. Stebbins	do	1944	688	Dr	147	4	Oh	58	Ls	D	C	D	---	Bedrock at 80 ft.
32F1	O. Kershman	do	1959	690	Dr	147	4	Oh	58	Ls	S?	C	D	---	Originally drilled an oil well; Ca.
33G1	J. Kruek	do	692	J	---	55	2	S	---	S4	P1	---	D	---	Oil test; bedrock at 62 ft; L.
33K1	G. Galrin	H. M. Kimo	7-20-31	663	Dr	128	1 1/2	---	---	S4	P1	---	Do	---	Oil test; water-bearing sand from 0-30 ft and 45-80 ft;
33P1	W. Kershman	do	7-20-31	690	Dr	138	1 1/2	---	---	---	---	---	---	---	water-bearing shale from 122-130 ft and 140-148 ft.
31/6W-2E1	Mr. Schultz	do	---	679	Dr	667	12	Oh	591	Ls	S,D	C	S	---	Flows water from 32-58; 2 ft above land. Bedrock 68 ft. See Logan (1931, p. 376); Ca., L.

Well No.	Owner/Company	Location	Depth (ft)	Completion	Flow	Production	Remarks
31/8K- 521	A. Kaplan		8	1 1/2	S; 3ft	---	Ca.
321	A. Reisman		20	1 1/2	S; 3ft	---	Ca.
141	J. S. Stewart		28	1 1/2	S	---	Ca.
1301	K. C. Stewart	Westville Well Co.	32	0	S; 15ft, dia 6	5	Ca.
1501	H. Patton		25	1 1/2	S	---	Ca.
1601	M. Vander Holten	E. H. Wingate	48	4	S; 20ft, 18in, dia	7	Ca.
1601	L. Myers		24	1 1/2	S; 3ft	---	Ca.
1701	J. Polizzotto		25	1 1/2	S; 4ft	---	Ca.
1701	F. Jungala		20	1 1/2	S	---	Ca.
1801	J. Hoffman	Gunke's Well and Pump Co.	48	2	S; 4ft, dia 1 1/2	---	Ca.
1802	A. Hoffman		65	4	S	---	Ca.
2001	J. E. Middlecamp		20	1 1/2	S; 4ft	---	Ca.
2101	W. Gehring Inc.		260	18	Oh	103	Ca. Yield 220 gpm; sand from 0-48 ft.
2401	Mr. Glover	J. P. Miller Artesian Well Co.	84	4	Oh	67	Ca.
2501	J. Wynkoop	A. Pettis	84	4	Oh	63	Ca.
2501	G. Meyer		65	4	Oh	67	Ca.
2701	W. Gehring Inc.	J. P. Miller Artesian Well Co.	280	10	Oh	70	Ca. Bedrock at 78 ft; L.
2702			280	10	Oh	90	Ca. Bedrock at 86 ft; L.
3001	C. Crawford		20	1 1/2	S	---	Ca.
3101	R. E. David		23	1 1/2	S	---	Ca.
3201	J. Stevens		65	19	S	---	Ca.
3301	J. W. Jungo	Summer	30	1 1/2	S; 3ft	---	Ca.
3501	W. Gehring Inc.	J. P. Miller Artesian Well Co.	280	18	Oh	78	Ca. Bedrock at 78 ft; L.
3502			280	16	Oh	60	Ca. Bedrock at 69 ft; L.
3503			310	12	Oh	72	Ca. Bedrock at 72 ft; water has odor or hydrogen sulfide gas; Ca.
3502			83	4	Oh	75	Ca. Bedrock at 75 ft.
3501	D. Fyncoop	A. Pettis	100	4	Oh	70	Ca. Bedrock at 70 ft; water has odor hydrogen sulfide gas; Ca, L.
31/7K- 101	J. Takacs		25	1 1/2	S; 3ft	---	Ca.
31/7K- 301	P. Matrafah		20	1 1/2	S; 3ft	---	Ca.
401	S. Namstra	J. Bonstra	52	4	S; 7ft	---	Ca.
501	G. C. Namstra		35	2	S	---	Ca.
701	A. R. Eck		14	1 1/2	S; 3ft	---	Ca.
801	G. W. Namstra		24	1 1/2	S; 4ft	---	Ca.
901	Mike's Phosamat Ranch		25	1 1/2	S; 3ft	---	Ca.
1101	A. Chieki		21	1 1/2	---	---	Ca.
1101	E. Griefon		40	1 1/2	---	---	Ca.
1201	W. DeGraff Inc.		22	1 1/2	S	---	Ca.
1201	DeGraff Inc.		17	1 1/2	S; 3ft	---	Ca.
1301	D. H. Odie, Sr.		20	1 1/2	S	---	Ca.
1501	V. Petrovas		20	1 1/2	S; 4ft	---	Ca.
2001	H. Hoffman		18	1 1/2	---	---	Ca.
2101	D. Sipkora		33	1 1/2	S	---	Ca.
2201	A. Brown		20	1 1/2	S	---	Ca.
2401	P. Richards		18	1 1/2	S	---	Ca.
2601	W. DeGraff		60	1 1/2	S	---	Ca.
2601	Trustees, Olim Estato		28	1 1/2	S; 3ft	---	Ca. Well 12 ft deep at barn; Ca.

Table 3.--Records of wells and test holes in Jasper County--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Remarks	
									Depth to top (feet)	Thickness (feet)	Character	Geologic No	Conditions of occurrence		Water level (feet)
31/7W-32N1	Trustees, Oil & Lignite		9-37	696	Dr	24	2	8; 4ft, 90g, dia 1 1/2	Sd	PI	U	4	Dr	J1/2	Ca.
34B1	G. Anderson		1944	696	Dr	25	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/3	Well 25 ft deep at barn; Ca.
35N1	Y. Chover		1949	690	Dr	18	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/3	Ca.
35N1	Y. Chover		1949	690	Dr	18	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/3	Ca.
32/5W-8Q1	W. Boarder		About 1949	682	Dr	20	1 1/2	8	Sd	PI	U		Dr	L	Ca.
14N1	C. Stalbaum		1930	660	Dr	8	1 1/2	8; 3ft	Sd	PI	U		Dr	J	Water has odor hydrogen sulfide gas.
14N1	C. Stalbaum		About 1930	667	Dr	170	4	8; 3ft	Ls	PI	U		Dr	L	Water has odor hydrogen sulfide gas.
14N1	S. Galovic		1920	664	Dr	15	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/3	Flow: discharge estimated 1 gpm, 3-12-50; oil tint; water has very strong odor hydrogen sulfide gas; Ca.
15J1	Mr. Dunn		6-60	662	Dr		8		Ls	S, D	C		Dr		Well 7 ft deep at barn; Ca.
15N1	Z. Johnson		About 1956	663	Dr	12	1 1/2	8; 3ft	Sd	PI	U		Dr	L	Ca.
16Q1	Mr. Fowre		About 1956	664	Dr	17	1 1/2	8; 3ft	Sd	PI	U		Dr	J1/2	Ca.
19B1	P. C. Knight	Porter County Well Co.	1952	664	Dr	30	4	8; 10ft, 30ul	C	PI	U	4	Dr	C	Ca.
22F1	J. Tonta		Fall 1958	672	Dr	40	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/4	Ca.
26M1	K. Miller		Spring 1958	667	Dr	15	1 1/2	8	Sd	PI	U		Dr	J	Ca.
27R1	W. F. Holland		1958	678	Dr	14	1 1/2	8	Sd	PI	U		Dr	J	Ca.
27R1	W. Forgrine		About 1958	682	Dr	161	2	8	Sd	PI	U		Dr	J	Has gas in well.
28J1	E. Jamison		1955	674	Dr	20	1 1/2	8; 3ft	Sd, G	PI	U		Dr	L1/3	Ca.
30R1	A. Cowgill		1950	676	Dr	18	1 1/2	8; 3ft	Sd	PI	U		Dr	J1/4	Ca.
30R2	---do---		Fall 1960	670	Dr	18	1 1/2	8	Sd	PI	U		Dr	J1/4	Ca.
34G1	J. W. Davis		About 1920	692	Dr	85	4		C	PI	U		Dr	J1/2	Oil tint; bedrock at 44 ft.
34J1	D. T. Allen	Clapham and Harris	6-5-40	609	Dr	1,130	10-		Sd, G	PI	U		Dr		Oil tint; bedrock at 60 ft; see Logan (1931, p 374); L.
34J2	E. T. Biggs		1927	695	Dr	441	5		Sd, G	PI	U		Dr		Ca.
34M1	C. Gulbranson		8-39	712	Dr	18	1 1/2	8; 3ft	Sd	PI	U		Dr	L1/4	Ca.
35H1	C. Okinski		1940	604	Dr	20	1 1/2	8; 3ft	Sd	PI	U		Dr	J1/3	Ca.
32/6W-1D1	H. Stewart		1951	601	Dr	25	1 1/2	8	Sd, G	PI	U	15	Dr	J1/2	Ca.
32/6W-1D1	A. Misch		About 1951	691	Dr	30	1 1/2	8	Sd	PI	U		Dr	L	Ca.
6J1	C. Sampson		1960	651	Dr	125	3	8	Sd	PI	U		Dr	G1/3	Water not potable.
6J2	---do---	Lowell Well and Pump Co.	1960	651	Dr	125	3	8	Ls	D	C		Dr		Water not potable.
15K1	J. Smith		About 1945	662	Dr	50	1 1/2	8	Sd	PI	U		Dr	L1/2	Ca.
15K2	---do---		1945	662	Dr	20	1 1/2	8; 3ft	Sd	PI	U		Dr	P	Ca.
17B1	Y. Danon		5-59	656	Dr	10	1 1/2	8	Sd, G	PI	U	10	Dr	J1/3	Ca.
18B1	A. Misch		5-59	656	Dr	10	1 1/2	8	Sd, G	PI	U	10	Dr	J1/4	Ca.
18B1	A. Misch		1951	657	Dr	36	1 1/2	8; 3ft	Sd	PI	U	4	Dr	J	Ca.
21D1	C. Dattler	Layne-Northern Co., Inc.	3-11-60	657	Dr	38	0		Sd, G	PI	U		Dr	T	Bedrock 34 ft; L.
21G1	C. Stalbaum		Winter 1960	662	Dr	25	1 1/2	8; 3ft	Sd	PI	U		Dr	C	Ca.
25K1	Trustees, Whosfield Township		1960	668	Dr	42	2	8; 5ft, 60g	Sd	PI	U	18	Dr	T 1/2	Ca.
26Q1	Fitzgerald Well and Pump Co.		Spring 1967	662	J	31	2	8; 3ft, 60g	Sd, G	PI	C		Dr	J	Ca.

Table 3.---Records of wells and test holes in Jasper County---Continued

Well	Owner	Driller	Data completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone						Remarks		
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence	Water level (feet)		Use	Type of pump and horsepower
33/6W-33N1	C. D. Schoon	A. Potts	1946	852	Dr	68	4	Oh	38	32	Ls	D	C	--	N	-----	Bedrock at 36 ft; water has bitter taste and is black as "ink".
33R1	C. W. Dargatz	-----	About 1954	857	Dn	15	1 1/2	B	-----	-----	Sd,G	P1	U	--	D	1 1/4	
34Q1	H. Martin	-----	1960	854	Dn	16	1 1/2	S; 3ft	-----	-----	Sd	P1	U	--	D	J1/2	
33/7W-33R1	O. Johnson	K and D Well Service	5-20-60	852	J	40	4	S; 3ft, 13ft, dia 3 1/2	30	11	Sd,G	P1	C	G	Dr	J	Yield 50 gpm; bedrock at 43 ft; Ca, I.

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

Well 27/6W-021

Type of record: Driller's log. Altitude: 702 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and yellow clay-----	19	19	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate, dark-----	86	105	Shale.
Shale, slaty, light-----	30	135	Fissile shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	70	205	

Well 27/6W-30G2

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

Quaternary System:			
Recent and Pleistocene Series:			
Dirt and clay-----	12	12	
Clay, gritty, and sand-----	23	35	
Sand and gravel-----	3	38	

Well 27/6W-30H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Dirt and yellow clay-----	15	15	
Clay, gritty-----	15	30	
Clay and slate-----	4	34	Clay with gravel- sized shale fragments.
Sand and gravel-----	3	37	

Well 27/6W-30L1

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

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan-----	4	4	
Clay, yellow, and boulders-----	7	11	
Clay, gray, and gravel-----	13	24	
Sand and gravel-----	5	29	
Clay, brown-----	5	34	
Sand and gravel-----	4	38	
Clay, brown-----	15	53	
Clay, brown, and gravel-----	12	65	

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

Well 27/6W-30L2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	12	12	
Clay and gravel-----	7	19	
Gravel-----	3	22	
Clay and boulders-----	10	32	
Sand and gravel-----	11	43	

Well 27/6W-31P1

Type of record: Driller's log. Altitude: 738 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Dirt and clay-----	23	23	
Mississippian System:			
Lower Mississippian and Upper Devonian Series:			
Slate, light-----	45	70	Shale. Do.
Slate, dark-----	119	189	
Devonian System:			
Middle Devonian Series:			
Limestone-----	13	202	

Well 27/6W-32B2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand-----	8	8	
Mississippian System:			
Lower Mississippian Series:			
Limestone-----	12	20	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	60	80	

Well 27/7W-4E1

Type of record: Driller's log. Altitude: 673 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	6	6	
Clay, gritty, gray-----	12	18	
Sand, loose, clayey-----	7	25	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	28	57	

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

Well 27/7W-6R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	10	10	
Clay, gray-----	28	38	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	122	160	
Devonian System:			
Middle Devonian Series:			
Limestone-----	40	200	

Well 27/7W-7C1

Type of record: Driller's log. Altitude: 677 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	10	10	
Clay, sandy, gray-----	16	26	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	104	130	Shale.
Limestone-----	2	132	
Slate-----	10	142	Shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	28	170	

Well 27/7W-8D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, black-----	5	5	
Sand, yellow-----	20	25	
Clay, blue-----	7	32	
Sand-----	3	35	
Clay-----	3	38	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate, black-----	14	52	Shale.
Slate, gray-----	113	165	Do.
Devonian System:			
Middle Devonian Series:			
Limestone, brown-----	7	172	
Limestone, white-----	8	180	
Limestone, light-brown-----	13	193	
Limestone, gray to black-----	7	200	

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

Well 27/7W-12D1

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

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	15	15	
Clay-----	6	21	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	84	105	Shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	28	133	

Well 27/7W-13Q4

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy-----	3	3	
Mississippian System:			
Lower Mississippian Series:			
Sandstone, rotten-----	7	10	
Sandstone, hard, clean, tight-----	41	51	
Sandstone, soft, clean-----	5	56	
Sandstone, hard, clean-----	8	64	
Sandstone, soft, clean-----	2	66	
Sandstone, hard, tight-----	50	116	
Sandstone with blue shale-----	9	125	

Well 27/7W-15R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	11	11	
Mississippian System:			
Lower Mississippian Series:			
Limestone-----	10	21	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	29	50	Shale.

Well 27/7W-18R1

Type of record: Driller's log. Altitude: 717 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, gritty-----	12	12	

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

Well 27-7W-18R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian System:			
Lower Mississippian Series:			
Limestone in layers-----	23	35	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	17	52	Shale.

Well 27/7W-21H1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	13	13	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Rock, yellow-----	20	33	Weathered limestone?
Shale, blue-----	17	50	
Slate, gray-----	125	175	Shale.
Slate, white-----	25	200	Do.
Devonian System:			
Middle Devonian Series:			
Limestone-----	42	242	

Well 27/7W-24B1

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

Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay-----	4	4	
Mississippian System:			
Lower Mississippian Series:			
Sandrock-----	100	104	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	3	107	

Well 27/7W-24G1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Clay, red-----	11	12	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, brown-----	77	89	
Shale, light-blue-----	28	117	

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

Well 27/7W-24G1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Devonian System:			
Middle Devonian? Series:			
Limestone, black-----	3	120	

Well 27/7W-24G2

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	Clay?
Shale-----	3	4	
Sand-----	1	5	
Clay-----	3	8	
Mississippian System:			
Lower Mississippian Series:			
Sandstone with pebbles-----	5	13	
Sandstone-----	3	16	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, hard, blue-----	14	30	

Well 27/7W-25A1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	2	2	
Clay-----	11	13	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, soft, black-----	7	20	Shale and lime- stone?
Shale, medium, black-----	47	67	
Shale, hard, brown-----	30	97	
Shale, soft to hard, brown-----	15	112	
Soapstone-----	26	138	
Limestone, hard-----	11	149	
Limestone, gray-----	19	168	
Limestone, hard-----	56	224	
Limestone, hard, white-----	60	284	
Limestone, hard, brown-----	32	316	
Shale and limestone-----	188	504	

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

Well 27/7W-25B1

Type of record: Driller's log.

Altitude: 737 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay-----	14	14	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, black-----	91	105	
Shale, blue-----	25	130	
Devonian System:			
Middle Devonian Series:			
Limestone, gray-----	35	165	
Rock, broken-----	1	166	Crevice limestone.
Limestone, gray-----	14	180	

Well 27/7W-25J1

Type of record: Driller's log.

Altitude: 727 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	2	2	
Clay, yellow-----	17	19	
Clay, gray-----	31	50	
Silt, clay, and gravel-----	3	53	

Well 28/6W-16Q1

Type of record: Driller's log.

Altitude: 673 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	22	22	
Clay, sandy, blue-----	35	57	
Gravel, coarse, and sand-----	1	58	
Clay, blue-----	1	59	

Well 28/6W-23H1

Type of record: Driller's log.

Altitude: 675 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	15	15	
Clay, sandy, gray-----	20	35	
Clay with gravel and boulders-----	13	48	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	4	52	Shale.

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

Well 28/6W-28H1

Type of record: Driller's log. Altitude: 677 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	15	15	
Clay, gritty-----	10	25	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, slaty-----	15	40	Fissile shale.

Well 28/6W-29Q1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	6	6	
Clay, gray-----	16	22	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	28	50	

Well 28/6W-31J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay; yellow-----	16	16	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	76	92	Shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	41	133	

Well 28/7W-7J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	20	20	
Clay and sand-----	60	80	
Clay, sandy-----	5	85	
Sand, fine-----	5	90	
Sand, coarse-----	9	99	

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

Well 28/7W-9L1

Type of record: Driller's log. Altitude: 662 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	15	15	
Clay, blue-----	50	65	
Sand, fine, gray-----	5	70	
Mississippian and Devonian System:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	50	120	
Devonian System:			
Middle Devonian Series:			
Limestone, gray-----	40	160	

Well 28/7W-9Q1

Type of record: Driller's log. Altitude: 662 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift and sand-----	10	10	
Clay, blue-----	13	23	
Quicksand-----	4	27	
Hardpan-----	2	29	
Clay, blue-----	21	50	
Hardpan-----	8	58	
Gravel, dirty-----	1	59	
Clay-----	11	70	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, gray and black-----	40	110	
Devonian System:			
Middle Devonian Series:			
Lime, hard, black-----	5	115	
Dolomite, white-----	10	125	
Limestone, salt and pepper-----	25	150	

Well 28/7W-25C1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	5	5	
Clay, smooth-----	18	23	
Clay, gritty-----	15	38	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	92	130	Shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	150	280	

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

Well 28/7W-26F3

Type of record: Driller's log. Altitude: 668 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	16	16	
Clay, gravelly, blue-----	6	22	
Clay, gravelly, sandy-----	16	38	
Clay-----	37	75	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	25	100	

Well 28/7W-32N2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	18	18	
Clay, gritty-----	20	38	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	46	84	Shale.

Well 29/5W-27M1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	15	15	
Clay, sandy, gray-----	6	21	
Devonian System:			
Middle Devonian Series:			
Limestone-----	13	34	

Well 29/6W-4J1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Dirt and sand-----	20	20	
Clay, gray-----	76	96	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	27	123	

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

Well 29/6W-7P1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	25	25	
Clay, blue-----	93	118	
Clay, gray-----	7	125	
Sand and gravel-----	1	126	
Clay, brown-----	6	132	
Silurian System:			
Middle Silurian Series:			
Limestone-----	13	145	Dolomitic lime- stone or dolomite.

Well 29/6W-30E1

Type of record: Driller's log. Altitude: 651 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	4	4	
Silurian System:			
Middle Silurian Series:			
Lime, broken-----	8	12	Dolomitic lime- stone or dolomite.
Lime, coarse, gray-----	138	150	Do.
Lime, medium, gray-----	15	165	Do.
Lime, coarse, gray-----	85	250	Do.
Lime, brown-----	60	310	Do.
Lime, white-----	130	440	Do.
Lime, brown-----	36	476	Do.
Lime, hard, dark-gray-----	44	520	Do.
Lime, very hard, brown-----	33	553	Do.

Well 29/7W-8R2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	112	112	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale-----	10	122	
Devonian System:			
Middle Devonian Series:			
Limestone-----	20	142	

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

Well 29/7W-36H1

Type of record: Driller's log. Altitude: 663 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	3	3	
Clay, red-----	3	6	
Clay, sandy-----	3	9	
Sand-----	2	11	
Clay-----	5	16	
Sand and clay-----	12	28	
Gravel, coarse-----	6	34	Limestone at 34 feet.

Well 29/7W-36J1

Type of record: Driller's log. Altitude: 662 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Gravel, red-----	4	5	
Sand and clay; red-----	13	18	
Sand, clean-----	10	28	
Sand and gravel; clean-----	11	39	
Sand, clean-----	8	47	Limestone at 47 feet.

Well 29/7W-36J2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Sand, red-----	8	9	
Clay, sandy, red-----	5	14	
Clay, soft, blue-----	15	29	
Sand, coarse, with clay-----	4	33	
Sand, coarse, with some gravel---	6	39	
Sand, coarse, with clay-----	3	42	Limestone at 42 feet.

Well 29/7W-36J3

Type of record: Driller's log. Altitude: 663 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Clay, sandy, red-----	14	15	
Sand, fine-----	9	24	
Sand and clay-----	2	26	
Gravel-----	3	29	Hard limestone at 29 feet.

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

Well 29/7W-36K1

Type of record: Driller's log.

Altitude: 663 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy-----	10	10	
Sand, dirty-----	10	20	
Sand, white-----	20	40	
Sand and gravel-----	10	50	

Well 30/5W-4F1

Type of record: Driller's log.

Altitude: 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil, black-----	3	3	
Clay, brown-----	13	16	
Clay, gray-----	26	42	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, blue-----	23	65	
Shale, brown-----	33	98	
Shale mixed with sand-----	6	104	
Devonian System:			
Middle Devonian Series:			
Limestone, dolomitic-----	2	106	
Dolomite-----	2	108	

Well 30/5W-9L1

Type of record: Driller's log.

Altitude: 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and muck-----	18	18	
Clay, blue-----	85	103	
Devonian System:			
Middle Devonian Series:			
Lime, blue-----	99	202	
Lime, brown-----	32	234	
Lime, broken, brown-----	14	248	
Lime, blue-----	12	260	

Well 30/5W-9L2

Type of record: Driller's log.

Altitude: 688 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	8	8	
Clay, blue-----	22	30	
Clay, sandy, blue-----	15	45	

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

Well 30/5W-9L2--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	25	70	
Clay, blue, with some fine sand---	15	85	
Sand and gravel-----	20	105	

Well 30/5W-16A1

Type of record: Driller's log.

Altitude: 680 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay-----	25	25	
Clay, blue, and sand-----	25	50	
Sand and clay-----	35	85	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Lime and shale-----	10	95	
Devonian and Silurian Systems:			
Lime, gray-----	30	125	Dolomitic lime- stone or dolomite.
Lime, blue-----	155	280	Do.
Lime, hard, gray-----	12	292	Do.
Lime, gray and blue-----	18	310	Do.
Lime, brown-----	5	315	Do.

Well 30/5W-19Q1

Type of record: Driller's log.

Altitude: 681 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Record missing-----	20	20	
Mud and sand-----	40	60	
Sand and gravel-----	20	80	
Gravel-----	18	98	
Silurian System:			
Middle Silurian Series:			
Lime, black-----	7	105	Dolomitic limestone or dolomite.
Lime, black and gray-----	30	135	Do.
Lime, hard, blue-----	20	155	Do.
Lime, brown-----	23	178	Do.
Lime, hard, gray-----	92	270	Do.
Lime, brown-----	10	280	Do.

Well 30/5W-26C1

Type of record: Driller's log.

Altitude: 711 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy-----	70	70	
Clay, smooth, blue-----	25	95	
Clay, sandy-----	4	99	
Gravel and sand-----	2	101	

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

Well 30/5W-34L1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	72	72	
Mississippian and Devonian System:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	28	100	Shale.
Devonian System:			
Middle Devonian Series:			
Stone-----	30	130	Limestone.

Well 30/5W-35C1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	7	7	
Clay, gray-----	59	66	
Devonian System:			
Middle Devonian Series:			
Limestone-----	49	115	

Well 30/6W-14R1

Type of record: Sample study by G. F. Fix, 5-8-46.

Altitude: 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
No sample-----	97	97	
Devonian and Silurian Systems:			
Dolomite, coarsely crystalline, pyritic, vuggy, brown to black--	8	105	
Dolomite, crystalline, nonporous, light-brown, with white to buff chert and tripoli-----	5	110	
Dolomite, sucrose, light-gray to buff, with abundant white rounded and frosted quartz sand-	5	115	
Dolomite, finely crystalline to coarsely sucrose, pyritic, vuggy, light-gray-----	25	140	
Dolomite, light-gray to white----	55	195	
Dolomite, coarsely sucrose, vuggy, white-----	20	215	
Dolomite, finely crystalline, with trace of dolomitized fossils-----	10	225	
Dolomite, light to medium-gray----	15	240	
Dolomite, white to gray, with trace of buff-----	30	270	
Dolomite, medium-crystalline, very vuggy, medium to dark-gray-	100	370	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Devonian and Silurian Systems:			
Dolomite, crystalline, vuggy, light-buff, with abundant white chert and tripoli-----	33	403	
Dolomite, buff to gray-buff, with white and gray chert and tripoli-	47	450	
Dolomite, very vuggy, buff to gray-	40	490	
Dolomite, slightly vuggy, medium- gray-----	15	505	
Dolomite, crystalline, slightly vuggy, light-gray-white-----	35	540	
Dolomite, very vuggy, buff to gray-	50	590	
Dolomite, slightly vuggy, medium- gray-----	15	605	
Dolomite, crystalline, slightly vuggy, light-gray-white-----	35	640	
Dolomite, coarsely sucrose, buff to gray, with very abundant gray chert-----	20	660	
Dolomite, gray and buff, with chert	10	670	
Dolomite, finely crystalline, slightly vuggy, light-brown to gray-brown-----	40	710	
Ordovician System:			
Upper Ordovician Series:			
Record missing-----	30	740	
Shale, gray-green, interbedded with brown to gray-brown pyritic dense dolomite-----	10	750	
Record missing-----	45	795	
Dolomite, coarsely crystalline, vuggy, white mottled with gray---	13	808	
Dolomite, crystalline, slightly vuggy, mottled gray to gray- brown-----	7	815	
Record missing-----	10	825	
Shale, hard, medium-gray-----	15	840	
Shale, dark-gray to green-----	50	890	
Shale, dark-gray to black-----	53	943	
Middle Ordovician Series:			
Dolomite, coarsely crystalline, pyritic, slightly vuggy, mottled light-to dark-brown-----	7	950	
Dolomite, less crystalline, non- porous, light-to dark-brown-----	25	975	
Record missing-----	25	1,000	
Dolomite, medium-to coarsely crystalline, slightly vuggy, medium-to dark-brown-----	12	1,012	
Dolomite, buff with dark-brown streaks-----	13	1,025	
Dolomite, brown-----	20	1,045	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician System:			
Middle Ordovician Series:			
Dolomite, buff with dark-brown streaks-----	20	1,065	
Record missing-----	160	1,225	
Limestone, lithographic, brown and buff, with very abundant buff to brown chalky sucrose dolomite-----	10	1,235	
Dolomite, medium-sucrose, buff----	15	1,250	
Dolomite, finely crystalline to coarsely sucrose-----	10	1,260	
Dolomite, crystalline, brown, with fine to medium rounded and frosted grains of white sand and trace of gray to green argillaceous dolomite-----	10	1,270	
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, fine to coarse, non-coherent, white, with rounded and frosted grains-----	30	1,300	
Sandstone with some buff argillaceous chalky dolomite----	27	1,327	
Sandstone, fine to coarse, non-coherent, white, with rounded and frosted grains-----	33	1,360	
Dolomite, crystalline, slightly pyritic, light-buff to gray-white, with abundant white chert, some rounded and frosted grains of fine to medium sand, and green flaky metabentonite-----	30	1,390	
Dolomite with abundant rounded and frosted grains of fine to coarse sand, some chert, and white tripoli-----	30	1,420	
Dolomite with abundant, white opaque to translucent chert-----	15	1,435	
Record missing-----	15	1,450	
Dolomite, crystalline, pink to buff, with very abundant white clear quartz, white crystalline calcite, and abundant white opaque chert-----	20	1,470	
Dolomite and chert; white to buff, with abundant calcite and trace of sand and asphalt-----	30	1,500	
Dolomite, crystalline, buff, with 30 percent white mottled opaque chert, abundant oolitic chert, and siliceous calite-----	16	1,516	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Dolomite, darker, with less oolitic chert and siliceous calcite-----	12	1,528	
Dolomite, crystalline, buff to gray-buff, with some white chert, trace of brown chert, and sand-----	7	1,535	
Record missing-----	10	1,545	
Dolomite, crystalline, white to buff, with 20 percent white, gray, and brown opaque to sub-translucent chert, and trace of tripoli, clean quartz, and pink dolomite-----	10	1,555	
Dolomite, finely crystalline, white to buff, with some white, gray, and brown opaque to sub-translucent chert and trace of white to dark-red oolitic chert-----	5	1,560	
Dolomite, crystalline, white, with some white crystalline calcite-----	30	1,590	
Dolomite, finely crystalline, slightly vuggy-----	10	1,600	
Dolomite with 30 percent rounded and frosted to sub-angular grains of fine to coarse quartz-sand-----	20	1,610	
Dolomite, finely crystalline, slightly sandy, light-to medium-gray-buff, with trace of tar----	30	1,650	
Dolomite, crystalline, white, with abundant white subtranslucent chert, abundant rounded and frosted grains of fine to medium sand, and trace of white oolitic chert-----	5	1,655	
Record missing-----	10	1,665	
Dolomite, crystalline, white, with 30 percent angular to rounded and frosted grains of fine to very fine sand, very abundant white opaque to sub-translucent chert, and trace of tar-----	10	1,675	
Dolomite with some sand and trace of chert-----	35	1,710	
Dolomite, white to light-gray, with abundant white crystalline calcite and clear angular grains of quartz-sand-----	20	1,730	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Dolomite, white-----	15	1,745	
Dolomite, crystalline, buff to light-gray, with trace of white chert-----	10	1,755	
Dolomite with white clear angular quartz-----	20	1,775	
Dolomite, argillaceous, chalky, yellow-buff-----	15	1,790	
Dolomite, chalky, buff, with some quartz-----	30	1,820	
Dolomite, crystalline, white, with trace of white chert and sand---	25	1,845	
Dolomite, medium-buff, with trace of quartz-----	30	1,875	
Dolomite, light-to dark-buff,with some quartz and trace of tar----	25	1,900	
Dolomite, light-buff, with some quartz and trace of tar-----	20	1,920	
Dolomite, crystalline, light-to medium-buff,with trace of quartz	30	1,950	
Dolomite, crystalline, mottled dark-gray-buff to black, with trace of slightly resinous dark- gray shale and trace of mottled chert-----	25	1,975	
Dolomite, crystalline, buff-gray--	7	1,982	
Dolomite, crystalline resinous, mottled medium-to dark-gray and gray-buff-----	20	2,002	
Dolomite, finely crystalline, medium-gray-buff, with dark- gray argillaceous streaks-----	16	2,018	
Siltstone, very fine, gray, mottled with various shades of buff; with abundant granular glauconite and streaks of buff to gray silty dolomite-----	12	2,030	
Siltstone with dark-gray-buff resinous crystalline dolomite---	6	2,036	
Siltstone, very fine, dolomitic, gray to gray-buff, with abundant granular glauconite, streaks of brown to gray-brown silty crystalline dolomite, and thin partings of gray hard micace- out shale-----	14	2,050	
Siltstone with streaks of very glauconitic siltstone and trace of tar-----	27	2,077	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, fine to medium-coarse, non-coherent to very coherent, very glauconitic, white to gray, with rounded and frosted to sub- angular sand grains cemented with dolomite-----	3	2,080	
Sandstone coarser, with less dolomite-----	5	2,085	
Sandstone, non-coherent, with 75 percent clear subrounded to angular quartz, some gray to brown sandy dolomite, trace of glauconite, trace of dark- gray slaty shale, and tar-----	11	2,096	
Dolomite, crystalline, mottled brown and gray, with frosted rounded to sub-angular grains of fine to medium sand and thin streaks of green-gray flaky metabentonite-----	4	2,100	
Sandstone, mostly fine to very fine, non-coherent, white, with angular to subrounded grains of clear fine to very fine sand, 20 percent rounded and frosted grains of medium to coarse sand, and streaks of coherent fine to medium sand cemented with dolomite	5	2,105	
Sandstone, coarser, with some pyrite-----	7	2,112	
Dolomite, crystalline, mottled buff, brown, and gray, with white fine to medium sand and pyrite-----	5	2,117	
Sandstone, fine to medium, semi- coherent, with white clear angular to subrounded grains----	8	2,125	
Sandstone, same as above, but coarser, non-coherent-----	5	2,130	
Sandstone, same as above, but mostly fine, with abundant rounded frosted grains of coarse sand and thin streaks of dark-brown and gray-brown sandy crystalline dolomite-----	8	2,138	
Sandstone, same as above, with more sandy dolomite, trace of white chert, and gray to green hard shale-----	12	2,150	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, same as above, with trace of dolomite and shale-----	10	2,160	
Sandstone, fine to coarse, non-coherent, white with frosted rounded to subangular grains----	51	2,211	
Sandstone, coherent, white, with clear angular grains of uniform size, cemented with dolomite, and small concentrations of sandy crystalline dolomite-----	4	2,215	
Sandstone, same as above, speckled with darker rounded, frosted grains of fine sand, trace of tarry residue in lower part-----	11	2,226	
Sandstone, very fine, non-coherent, white, with angular grains-----	5	2,231	
Sandstone, coarse, coherent, white to dark-gray and gray-brown, with thin streaks of dark-gray to black carbonaceous micaceous shale-----	9	2,240	
Dolomite, finely crystalline, mottled light-to very dark-gray, with very high concentration of white, clear silt; trace of dark-gray hard shale and small pieces of tar in lower 2 feet-----	12	2,252	
Record missing-----	13	2,265	
Dolomite, light-to very dark-gray, with very abundant light-brown-gray finely crystalline dolomite	3	2,268	
Siltstone, very hard, slightly micaceous, pinkish-gray-brown, with very abundant gray to green micaceous slaty hard shale and trace of glauconite-----	24	2,292	
Siltstone, same as above, very glauconitic-----	10	2,302	
Siltstone, same as above, with some dark-maroon-gray shale and less glauconite-----	15	2,317	
Siltstone, same as above, with 30 percent dark-maroon-gray to dark-gray shale and very little glauconite-----	28	2,345	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Siltstone, same as above, mottled and speckled dark-red and pink, with some glauconite and much less shale-----	12	2,357	
Siltstone, same as above, with 30 percent shale-----	33	2,390	
Siltstone, same as above, with some dark-brown to gray silty crystalline dolomite-----	21	2,411	
Siltstone, same as above, with 50 percent shale and thin streaks of silty dolomite-----	60	2,471	
Siltstone, glauconitic, gray, buff, and green, and dark-gray and dark-green hard shale; with streaks of gray, brown, and dull red slightly vuggy crystalline dolomite-----	16	2,487	
Siltstone, gray, buff, and green, and dark-maroon to gray shale; with trace of dolomite-----	9	2,496	
Siltstone, fine, coherent, white, green, and pink; with very abundant glauconite, white to buff crystalline dolomite, and some dark-gray to green hard shale-----	17	2,513	
Siltstone, same as above, with much more glauconite-----	5	2,518	
Siltstone, same as above, with much less glauconite, more dolomite, and no shale-----	36	2,554	
Siltstone, same as above, with very abundant glauconite-----	11	2,565	
Siltstone, light-gray to pink, with very abundant glauconite and trace of tar-----	33	2,598	
Siltstone, coarser, white to pink with small concentrations of buff-pink glauconitic crystalline sandy dolomite-----	20	2,618	
Sandstone, coherent, dolomitic, glauconitic, white to light- pink, with angular clear grains and some rounded frosted grains-	17	2,635	
Sandstone, very fine, non-coherent to slightly coherent, very slightly dolomitic and glau- conitic, white to pink, with angular grains-----	20	2,655	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, same as above, but more coherent and glauconitic---	12	2,667	
Sandstone, same as above, but non-coherent to very slightly coherent-----	15	2,682	
Siltstone, sandy, non-coherent, with some tar-----	16	2,698	
Sandstone, more coherent, dolomitic, glauconitic, argillaceous in part, gray, with some tar----	11	2,709	
Siltstone, coherent, very glauconitic, mottled gray, with very abundant dark-gray to dull maroon-gray hard shale-----	18	2,727	
Siltstone grading to angular to rounded frosted noncoherent to semi-coherent very fine sand; with very abundant glauconite and some shale-----	7	2,734	
Siltstone interbedded with sandstone; non-coherent to very coherent less glauconite-----	17	2,751	
Siltstone, coherent, with streaks of glauconite-----	58	2,809	
Siltstone, darker, shaly-----	5	2,814	
Siltstone with very abundant streaks of gray rounded frosted coherent fine sand-----	4	2,818	
Sandstone, fine to very fine, coherent to non-coherent, white to gray, with angular to partly rounded frosted grains, some dolomite, and dark-gray shale---	8	2,826	
Sandstone, same as above, with some medium to coarse sand and gray very coherent siltstone----	10	2,836	
Sandstone with very abundant rounded frosted grains of coarse sand interbedded with siltstone; argillaceous in part, slightly dolomitic with some dark-gray shale-----	17	2,853	
Sandstone, non-coherent, white, with angular to sub-rounded clear grains of fine to medium sand, some rounded frosted grains of coarse sand, and some iron-staining-----	12	2,865	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, same as above, but mostly fine, slightly coherent in part-----	10	2,875	
Sandstone, non-coherent, with mostly sub-rounded to angular grains of fine to coarse sand---	17	2,892	
Sandstone, same as above, with some very coarse sand-----	12	2,904	
Sandstone, same as above, mostly angular fine grains with some subangular medium to coarse grains-----	5	2,909	
Sandstone, same as above, but 50 percent medium to coarse-----	5	2,914	
Sandstone, pebbly, non-coherent white, with some subrounded to rounded frosted grains of medium to coarse sand and some iron-staining-----	7	2,921	
Sandstone, same as above, but fine to coarse, subangular-----	7	2,928	
Sandstone, same as above, but mostly fine-----	5	2,933	
Siltstone, hard, medium to dark-gray, with interbedded dark-gray slaty, slightly micaceous, shale-----	19	2,952	
Shale, silty, dark-gray, with 30 percent siltstone-----	19	2,971	
Sandstone, white, with subangular clear grains of fine sand-----	5	2,976	
Sandstone, same as above, interbedded with gray to pink siltstone; with some gray hard shale and trace of pyrite-----	7	2,983	
Sandstone, fine to coarse, non-coherent to slightly coherent, white, with angular clear grains-----	6	2,989	
Sandstone, same as above, with subangular grains and slight iron-stain-----	9	2,998	
Sandstone, same as above, but more coherent and some very coarse grains-----	7	3,005	
Sandstone, same as above, but non-coherent-----	15	3,020	
Sandstone, same as above, but mostly fine to medium-----	10	3,030	

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

Well 30/6W-14R1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, same as above, with some pebbles-----	12	3,042	
Sandstone, same as above, with 20 percent medium to coarse sand-----	36	3,078	
Sandstone, mostly fine, with 30 percent medium to coarse sand; non-coherent, white to pink, with angular clear grains-----	13	3,091	
Sandstone, same as above, but mostly coarse-----	13	3,104	
Sandstone, same as above, but more coherent, with some pebbles	5	3,109	
Sandstone, same as above, but non-coherent, with streaks of very coarse to pebbly sand; slightly iron-stained-----	36	3,145	
Sandstone, same as above, but mostly fine-----	7	3,152	
Sandstone, same as above, but fine to very coarse, slightly coherent in part-----	12	3,164	
Sandstone, same as above, but mostly fine, with some medium to coarse sand-----	6	3,170	
Sandstone, same as above, but more coarse sand, pebbly, and slightly coherent in part-----	2	3,172	
Sandstone, same as above, but mostly fine to medium, non- coherent to slightly coherent---	33	3,205	
Sandstone, same as above, with more coarse sand-----	7	3,212	
Sandstone, same as above, but fine to medium-----	3	3,215	
Sandstone, fine to medium, with angular grains and coarse to very coarse sand with rounded grains-----	21	3,236	
Sandstone, same as above, but mostly fine to medium-----	13	3,249	
Sandstone, same as above, but more pebbly-----	26	3,275	
Sandstone, same as above, but mostly fine to medium-----	33	3,308	
Sandstone, fine to coarse, very slightly arkosic, with some tar-----	3	3,311	

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

Well 30/6W-14R1--Cont.

Material	Thickness (feet)	Depth (feet)	Remarks
Ordovician and Cambrian Systems:			
Lower Ordovician and Upper Cambrian Series:			
Sandstone, with abundant grains of gneiss and mica schist and some heavy minerals-----	7	3,318	
Sandstone, mostly fine, with trace of gneiss and mica schist-----	7	3,325	
Sandstone, mostly fine to very fine, non-coherent, with angular clear grains-----	5	3,330	

Well 30/7W-1K1

Type of record: Driller's log.

Altitude: 690 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	40	40	
Clay-----	5	45	
Gravel-----	2	47	
Silurian System:			
Middle Silurian Series:			
Limestone-----	381	428	Dolomitic limestone or dolomite.
Shale, brown-----	40	468	
Lime, blue-----	32	500	Dolomitic limestone or dolomite.
Lime, gray-----	98	598	Do.

Well 30/7W-25J1

Type of record: Sample study by unknown person.

Altitude: 663 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift-----	--	--	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, silty, calcareous, red to brown, with spores-----	--	85	
Shale, pyritic, light-gray with amber specks-----	5	90	
Devonian and Silurian Systems:			
Dolomite, crystalline, pyritic, buff to white, with some limestone-----	12	102	
Dolomite, light-brown mottled with white to gray, with some limestone-----	2	104	
Dolomite, pyritic, gray to brown, with translucent calcite and bryozoa-----	11	115	

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

Well 30/7W-25J1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Devonian and Silurian Systems:			
Dolomite, crystalline, pyritic, brown, with some limy streaks and chert-----	15	130	
Dolomite, very finely sucrose, white, with some limestone, gray shale, and bryozoa-----	5	135	
Dolomite, argillaceous, white to gray-----	30	165	
Dolomite, shaly at base-----	560	725	
Ordovician System:			
Upper Ordovician Series:			
Shale, gray, with some dolomite---	6	731	
Dolomite, coarse, mottled, white--	9	740	
Dolomite, coarse, white to buff, shaly at base, with some chert--	30	770	
Shale, gray to brown-----	183	953	
Middle Ordovician Series:			
Dolomite, crystalline, coarse, light-buff to light-brown-----	148	1,101	

Well 31/5W-16G1

Type of record: Driller's log.

Altitude: 692 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift-----	64	64	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, dark-----	11	75	
Devonian and Silurian Systems:			
Lime, black-----	25	100	Dolomitic limestone or dolomite. Do.
Lime, black-----	583	683	
Ordovician System:			
Upper Ordovician Series:			
Shale, blue-----	20	703	
Lime-----	59	762	
Shale-----	93	855	
Shale, light-brown-----	91	946	
Shale, gray-----	11	957	
Middle Ordovician Series:			
Limestone-----	32	989	

Well 31/5W-22N1

Type of record: Driller's log.

Altitude: 685 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	30	30	
Drift-----	38	68	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 31/5W-22N1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, red-----	7	75	
Shale, blue-----	20	95	
Devonian and Silurian Systems:			
Lime-----	14	109	Dolomitic limestone or dolomite.
Lime, sandy-----	5	114	Do.
Lime-----	91	205	Dolomitic limestone or dolomite.
Lime, broken, and shale-----	7	212	Do.
Lime-----	8	220	Do.
Lime, broken, and shale-----	10	230	Do.
Lime-----	42	272	Do.
Lime, broken, and shale-----	46	318	Do.
Shale and lime-----	17	335	
Limestone-----	10	345	Dolomitic limestone or dolomite.
Limestone, sandy-----	3	348	Do.
Limestone-----	12	360	Do.
Limestone, broken-----	25	385	Do.
Limestone-----	165	550	Do.
Limestone, white-----	45	595	Do.
Limestone, sandy, brown-----	10	605	Do.
Limestone-----	20	625	Do.
Limestone, white-----	4	629	Do.
Limestone, brown-----	8	637	Do.
Sand and broken limestone-----	1	638	
Ordovician System:			
Upper Ordovician Series:			
Shale, blue-green-----	12	650	
Shale-----	27	677	
Limestone-----	23	700	
Sand, brown-----	5	705	
Shale, gray-----	4	709	
Limestone, broken-----	16	725	
Shale-----	13	738	
Limestone-----	2	740	
Shale-----	8	748	
Limestone-----	2	750	
Shale-----	15	765	
Shale, gray-----	40	805	
Limestone, broken, and shale-----	10	815	
Shale, gray-----	75	890	
Shale, brown-----	41	931	
Middle Ordovician Series:			
Limestone, brown-----	23	954	
Sand-----	1	955	
Limestone, brown-----	5	960	
Limestone-----	25	985	

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

Well 31/5W-28F1

Type of record: Driller's log.

Altitude: 692 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Dirt and gravel-----	50	50	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Slate-----	62	112	Shale.
Devonian System:			
Middle Devonian Series:			
Limestone-----	16	128	

Well 31/5W-33K1

Type of record: Driller's log.

Altitude: 689 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	62	62	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, blue-----	27	89	
Shale, brown-----	5	94	
Devonian System:			
Middle Devonian Series:			
Lime-----	32	126	

Well 31/6W-2E1

Type of record: Driller's log.

Altitude: 679 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy, black-----	5	5	
Sand, white-----	10	15	
Gravel and sand-----	15	30	
Clay, sandy, yellow-----	10	40	
Clay, sandy, white-----	15	55	
Sand, blue-----	10	65	
Gravel and sand-----	3	68	
Devonian and Silurian Systems:			
Limestone, brown, with pyrite----	40	108	Dolomitic limestone or dolomite.
Limestone, hard, white-----	40	148	Do.
Limestone, hard, brown-----	60	208	Do.
Sandstone, white-----	7	215	
Limestone-----	444	659	Dolomitic limestone or dolomite.
Ordovician System:			
Upper Ordovician Series:			
Shale, black-----	5	664	
Shale, white-----	3	667	

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

Well 31/6W-21J1

Type of record: Driller's log.

Altitude: 683 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and muck-----	18	18	
Gravel, hard-----	2	20	
Sand, fine-----	17	37	
Clay, blue-----	49	86	
Gravel-----	2	88	
Sand, gravel, and clay-----	15	103	
Silurian System:			
Middle Silurian Series:			
Lime, blue-----	92	195	Dolomitic limestone or dolomite.
Lime, brown-----	10	205	Do.
Lime, gray-----	55	260	Do.

Well 31/6W-27B1

Type of record: Driller's log.

Altitude: 686 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	25	25	
Sand and gravel-----	20	45	
Mud-----	10	55	
Clay, blue-----	15	70	
Sand and gravel-----	8	78	
Devonian System:			
Middle Devonian Series:			
Lime, blue-----	47	125	
Lime, sandy-----	80	205	
Lime, gray-----	55	260	

Well 31/6W-27B2

Type of record: Driller's log.

Altitude: 686 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and clay-----	40	40	
Clay and sand-----	28	68	
Clay-----	15	83	
Gravel-----	3	86	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, black-----	4	90	
Devonian System:			
Middle Devonian Series:			
Limestone, gray-----	85	175	
Lime, sandy-----	100	275	
Lime, gray-----	5	280	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 31/6W-35G1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil and sand-----	5	5	
Sand, yellow-----	23	28	
Clay, blue-----	22	50	
Clay, blue, and hardpan-----	15	65	
Clay, blue, with some gravel-----	13	78	
Devonian and Silurian Systems:			
Limestone, brown-----	12	90	Dolomitic limestone or dolomite.
Limestone, hard-----	5	95	Do.
Limestone, brown-----	10	105	Do.
Lime, hard, gray-----	35	140	Do.
Lime, blue-----	15	155	Do.
Lime, gray-----	30	185	Do.
Lime, blue-----	25	210	Do.
Lime, brown-----	15	225	Do.
Lime, hard, gray-----	10	235	Do.
Lime, gray-----	32	267	Do.
Lime, hard, gray-----	11	278	Do.
Lime, gray-----	2	280	Do.

Well 31/6W-35G2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, blue-----	30	30	
Sand and gravel-----	20	50	
Clay, blue, with some fine sand---	19	69	
Devonian and Silurian Systems:			
Lime, brown-----	18	87	Dolomitic limestone or dolomite.
Lime, hard, brown-----	21	108	Do.
Lime, hard, gray-----	13	121	Do.
Lime, blue and gray-----	15	136	Do.
Lime, hard, gray-----	20	156	Do.
Lime, blue and gray-----	30	186	Do.
Lime, blue-----	29	215	Do.
Lime, hard, gray-----	3	218	Do.
Lime, hard, brown-----	55	273	Do.
Lime, gray and brown-----	7	280	Do.

Well 31/6W-35J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Surface-----	5	5	
Sand, yellow-----	10	15	
Clay, blue, and hardpan-----	5	20	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 31/6W-35J1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, gray-----	10	30	
Clay, blue-----	42	72	
Devonian and Silurian Systems:			
Lime, broken-----	4	76	Dolomitic limestone or dolomite.
Lime, blue and gray-----	49	125	Do.
Lime, blue-----	100	225	Do.
Lime, gray-----	20	245	Do.
Lime, blue-----	20	265	Do.
Lime, gray-----	18	283	Do.
Lime, blue-----	27	310	Do.

Well 31/6W-36J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, gray-----	4	4	
Till, clayey, hard, compact, with shale fragments-----	14	18	
Clay, blue-gray, with few gravel and pebbles-----	52	70	
Devonian System:			
Middle Devonian Series:			
Limestone-----	30	100	

Well 32/5W-34J2

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	60	60	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, blue-----	80	140	
Limestone-----	10	150	
Shale, black-----	150	300	
Devonian System:			
Middle Devonian Series:			
Limestone-----	141	441	

Well 32/6W-21D1

Type of record: Driller's log. Altitude: 657 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Dirt, black-----	1	1	
Sand, muddy, black-----	3	4	
Sand, muddy, fine-----	12	16	
Sand and gravel-----	5	21	

Table 4.--Selected logs of wells and test holes in Jasper County--Cont.
Well 32/6W-21D1--Cont.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, medium, brown-----	10	31	
Sand and gravel-----	3	34	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series:			
Shale, black-----	4	38	

Well 32/7W-14R1

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

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sand, and clay-----	4	4	
Sand, fine-----	6	10	
Sand, medium, clean-----	20	30	
Sand with some fine gravel-----	7	37	
Sand, fine, tight-----	4	41	
Clay-----	1	42	

Well 32/7W-22A1

Type of record: Driller's log. Altitude: 647 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	30	30	
Clay-----	14	44	
Gravel-----	20	64	

Well 33/7W-35R1

Type of record: Driller's log. Altitude: 652 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Soil, sandy, black-----	6	6	
Sand, yellow-----	22	28	
Clay, gray-----	2	30	
Sand, coarse, and gravel-----	11	41	Shale at 41 feet.

Table 5.--Field chemical analyses of water from wells in Jasper County, Indiana
(Results in parts per million. Analyses by U. S. Geological Survey)

Well: See text for description of well-numbering system. U. S. Public Health Service drinking-water standards:
Iron (Fe) - 0.3 ppm for iron and manganese together; Sulfate (SO₄) - 250 ppm; Chloride (Cl) - 250 ppm.

Material: Do, dolomite; G, gravel; Ls, limestone; Sd, sand; Sh, shale.

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

Well No.	Material	Geologic Age	Date of Collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
27/6W-4J1	Sh	D,M	6-29-61	57	0.4	351	40	16	224	
5P1	Ls	D	5-19-59	57	.2	278	120	48	336	
5Q1	Sh	D,M	5-11-60	57	1.0	649	205	84	704	
8J1	Sh	D,M	5-19-59	56	<.1	581	35	48	176	
9A1	Sh?	D,M	6-30-61	54	.5	415	45	8	260	
18D1	G	Pl	6-29-61	--	.1	161	180	36	256	
21R1	Sh?	D,M	6-30-61	--	.2	429	10	16	208	
28A1	Ls?	D	6-30-61	57	1.2	366	80	48	312	
30G2	Sd,G	Pl	5-19-59	55	1.0	468	<5	12	332	
30H1	Sd,G	Pl	6-29-61	--	1.0	468	5	4	316	
30H2	Ls	D	5-8-59	56	.1	498	30	24	308	
30H2	Ls	D	6-29-61	57	<.1	498	45	20	264	
31N1	Ls	D	6-29-61	--	<.1	527	40	16	220	
32B3	Ls?	D	5-19-59	56	.5	586	85	40	296	
27/7W-1R1	Ls?	D	6-29-61	57	.3	356	75	52	316	
4E1	Sh	D,M	6-28-61	--	2.5	317	115	48	268	
5C2	Ls	D	4-14-59	50	.5	522	95	52	108	
7C1	Ls	D	6-28-61	--	<.1	610	100	68	60	
9N1	Sh	D,M	5-19-59	59	.2	478	75	40	392	

27/7W-15K1	Ls, Sh?	D, M	5-19-59	55	<0.1	420	155	24	508
16H1	Ls?	M	6-29-61	--	.1	508	20	16	112
17E1	Sh	D, M	6-29-61	58	<.1	854	5	12	16
18R1	Ls, Sh?	D, M	4-14-59	54	.1	229	355	124	744
21H1	Ls	D	5-19-59	59	.2	639	5	20	224
25C1	Ls	D	5-19-59	64	.2	439	5	4	292
28C1	Ls?	M?	6-29-61	52	<.1	405	90	16	280
29M1	Ls	D	6-29-61	--	<.1	434	25	20	140
27/7W-30G1	Ls	M?	4-14-59	53	.5	322	65	12	244
31Q1	Sh	M?	6-29-61	--	.2	429	25	12	236
32A1	Ls?	D	6-29-61	58	<.1	298	100	44	360
34P1	Ls?	-----	6-29-61	--	.2	361	35	<4	220
35R1	G	P1	6-29-61	--	.2	483	75	8	356
28/5W-4M1	Ls	D	6-26-61	54	<.1	376	45	8	288
8N1	Ls	D	6-28-61	52	.2	259	15	<4	164
9N1	Ls	D	6-28-61	53	1.0	386	15	12	256
17H1	Ls	D	6-28-61	--	.3	220	10	<4	128
20B1	Ls?	D	6-28-61	59	1.5	234	40	4	172
29Q1	Ls	D	6-20-61	56	.2	708	15	8	236
28/6W-1G1	Ls	D	5-04-59	50	---	434	40	8	368
1Q1	Ls	D	6-26-61	59	1.0	234	35	8	176
2M1	Ls	D	6-28-61	--	.1	371	85	16	284
7P1	Sd	P1	6-61	58	1.5	249	120	24	280
9H1	Sd	P1	6-28-61	--	.3	351	190	20	412
11N1	Sd, G	P1	6-28-61	--	.2	190	70	4	140
16Q1	G, Sd	P1	6-28-61	57	1.5	371	10	4	232
19D1	Sd	P1	6-29-61	--	.1	264	90	16	184
20N1	Sd	P1	6-29-61	56	.1	268	90	28	240
23H1	Sh	D, M	5-04-59	54	1.0	220	15	4	168
24C1	G	P1	6-28-61	--	<.1	151	60	4	136
25J1	Sd?	P1	6-20-61	59	.2	400	50	24	176
25J2	Ls?	D	6-20-61	59	.2	127	95	12	172
27R1	G, Sd	P1	6-20-61	56	.2	200	160	40	288
28H1	Sh	D, M	5-04-59	55	.5	298	15	8	164

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

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (F°)	Iron (Fe)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
28/6W-28N1	Ls	D	5-04-59	56	<.1	508	55	88	328	
29H2	Sh	D,M	5-04-59	--	<.1	410	75	32	436	
29Q1	Sh	D,M	6-28-61	--	.3	273	15	4	152	
31J1	Ls	D	5-04-59	--	<.1	439	20	44	304	
28/7W-1A1	Ls	D	8-28-61	--	.5	268	40	8	216	
1C1	Sd	P1	8-28-61	57	<.1	234	80	8	220	
3A1	Ls	D	6-29-61	--	1.0	395	5	8	252	
5B1	G	P1	6-28-61	58	.3	327	15	<4	204	
7J1	Sd	P1	4-17-59	54	1.0	346	10	8	216	
8E1	Sd,G	P1	6-29-61	57	1.5	356	15	8	212	
9L1	Ls	D	7-18-57	57	.1	381	--	18	300	
9L1	Ls	D	6-28-61	--	<.1	425	45	16	260	
9Q1	Ls	D	3-12-58	55	<.1	405	--	<2	336	
10E1	Sd,G	P1	6-29-61	56	1.2	405	5	4	244	
12F1	Ls	D	6-29-61	58	1.0	298	10	16	188	
19P1	Ls?	D	6-29-61	59	<.1	493	50	48	116	
20P1	Sd	P1	6-29-61	--	1.5	317	5	<4	196	
21R1	Ls	D	6-29-61	--	1.5	556	5	<4	252	
22F1	Sd	P1	6-29-61	--	1.0	420	10	<4	248	
23L1	Ls	D	6-29-61	--	.2	488	10	8	144	
25C1	Ls	D	4-16-59	48	.6	761	10	16	76	
25C1	Ls	D	6-28-61	--	<.1	844	10	16	108	
29Q1	Sh?	D,M	6-29-61	--	.1	498	10	4	68	
31P1	Sh	D,M	6-29-61	--	.2	342	10	<4	104	
32N3	Sh	D,M	6-28-61	58	1.0	278	10	<4	136	
32R1	Sh	D,M	4-16-59	57	.8	254	10	8	148	

28/7W-32R1	Sh	D,M	6-28-61	55	0.5	283	15	12	160
34J1	Sh	D,M	6-29-61	--	.2	444	15	4	260
36P1	Sh	D,M	6-29-61	59	<.1	185	45	8	136
36P2	Sh?	D,M	6-29-61	57	<.1	293	25	12	136
29/5W-4L1	Ls	D	6-28-61	56	.2	327	75	16	276
6L1	Ls	S	6-27-61	--	<.1	366	175	4	304
11B1	Ls	D	6-27-61	--	.7	273	120	24	324
13R1	Ls	D?	6-27-61	56	<.1	410	180	44	520
14E1	Ls	D	6-27-61	--	.1	293	65	32	284
16H1	Ls	D	6-28-61	59	.3	298	135	24	308
21D1	Ls	D	6-28-61	58	<.1	283	145	36	416
25K1	Ls	D?	1957	58	.8	281	---	20	304
25K1	Ls	D?	6-26-61	57	.1	312	30	8	236
26B1	Ls	D	6-27-61	52	<.1	283	100	28	320
26C1	Ls	D	6-27-61	--	<.1	288	145	28	312
27E1	Ls	D	4-16-59	53	.5	171	25	8	140
27M1	Ls	D	6-26-61	--	1.5	351	80	12	316
29F1	Ls	D	6-28-61	58	.1	293	115	16	320
31Q1	Ls	D	6-28-61	--	.1	332	80	12	276
32Q1	Ls	D	6-28-61	--	7.5	342	10	16	248
33D2	Ls	D	6-26-61	59	<.1	264	90	16	224
34P1	Ls	D	6-27-61	--	.1	268	25	12	196
29/6W-2J1	Ls	S	6-28-61	57	.1	410	50	4	196
3G1	Ls	S	6-28-61	58	.1	366	30	4	220
4J1	Sh	D,M	4-16-59	52	.2	283	10	8	92
5D1	Ls?	S	6-29-61	--	.2	337	5	4	120
7P1	Ls	S	6-22-61	54	1.0	425	25	4	304
8P1	Ls	S	6-29-61	58	.2	420	15	4	220
9N1	Le	S	5-7-59	54	.2	488	20	4	328
10P1	Ls	S	6-29-61	53	<.1	346	90	12	264
13P1	Ls	S	6-28-61	--	.1	312	110	20	316
14B1	Ls	S	3-12-58	55	1.0	415	---	8	348
14Q1	Ls	S	6-28-61	54	1.0	264	115	24	292
21C1	Ls	S	6-29-61	56	<.1	327	20	8	216

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

Well	Ma- teri- al	Geo- logic Age	Date of collec- tion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
29/6W-23Q1	Ls	S7	6-27-61	--	0.3	337	100	32	340	
26F2	Ls	S7	4-16-59	57	.1	303	110	20	376	
26K1	Do, Ls	S	6-26-61	--	.1	498	175	72	524	
33E1	Sd, G	P1	6-28-61	--	.7	332	10	4	204	
34L1	Ls	D	4-16-59	58	.1	220	100	20	---	
35M1	Ls	D	6-28-61	--	.1	288	60	8	264	
29/7W-5R1	Ls	D	6-28-61	--	<.1	327	15	4	88	
6G1	Ls	D	6-29-61	55	.1	298	15	4	104	
8R1	Ls	D	6-28-61	--	<.1	332	5	4	104	
8R2	Ls	D	6-28-61	--	<.1	322	5	4	100	
11A1	Ls	D	6-29-61	58	.8	381	10	4	200	
12D1	Ls?	S	6-29-61	--	.5	371	10	<4	168	
13M1	Sd, G	P1	4-16-59	56	.8	346	45	8	204	
14C1	Le	D	6-29-61	54	.4	351	10	<4	116	
20B1	Ls	D	6-29-61	54	.3	473	20	4	280	
20D1	Ls	D	6-29-61	59	.4	493	10	<4	280	
22P1	Ls	D	6-29-61	59	.8	429	25	<4	260	
23Q1	Ls	D	5- 8-59	55	<.1	488	60	8	392	
26A1	Ls	D	6-28-61	--	.1	366	50	8	284	
27P1	Ls	D	6-29-61	--	.1	239	<5	4	104	
28C1	Sd	P1	6-29-61	--	2.0	512	120	8	472	
29F1	Sd	P1	5- 7-59	53	1.0	220	5	4	140	
29F1	Sd	P1	6-28-61	54	<.1	244	15	<4	140	
30/5W-2A1	G	P1	7-17-57	59	.5	312	---	18	176	
2A1	G	P1	6-23-61	58	.5	361	50	4	168	
2D1	Sh	D, M	6-26-61	--	.3	376	5	8	96	
4R1	Ls	D	6-23-61	--	1.0	556	45	16	288	
9L1	Ls	D	6-26-61	54	1.0	337	60	36	156	
11N1	G	P1	6-26-61	59	.2	356	35	4	168	

30/5W-12E1	Sh?	D,M	6-26-61	--	.5	346	20	4	192
19J1	Ls	D?	6-26-61	--	.5	366	50	12	220
21M1	Sd	P1	6-26-61	57	.7	366	70	12	204
23G1	Sd,G	P1	6-22-61	--	.5	356	170	4	280
26C1	G,Sd	P1	4-15-59	54	.2	307	35	8	184
28M1	Ls	D	6-27-61	--	.1	303	55	16	180
29N1	Ls	D	6-27-61	--	<.1	298	25	4	108
34L1	Ls	D	6-22-61	--	<.1	449	105	<4	368
35C1	Ls	D	6-26-61	58	.3	371	65	4	260
30/6W-									
1Q1	Ls	D	7-17-57	54	.1	283	---	28	208
1R1	Ls	D	6-27-61	58	<.1	366	25	8	200
2P1	Ls	D	7-17-57	59	.2	249	---	2	140
4C1	Ls	S	6-27-61	54	1.0	303	360	8	424
5G1	Ls	S	6-28-61	55	.5	356	5	4	176
6Q1	Ls	S	7-17-57	--	.5	295	---	6	160
7P1	Ls	S	6-27-61	59	.5	332	10	8	140
8Q1	G	P1	6-28-61	--	.4	293	55	12	272
9A1	G	P1	6-27-61	53	1.0	312	5	<4	176
13M1	Ls	S	6-27-61	58	<.1	327	20	4	196
14R2	Ls	S	6-27-61	59	.1	332	45	4	212
15E1	Ls	S	6-27-61	--	<.1	327	10	<4	120
16D1	Sd,G	P1	6-27-61	--	.5	234	60	4	204
16Q1	Ls	S	6-27-61	53	1.0	322	15	4	188
18Q1	Ls	S	6-28-61	58	.4	366	75	8	248
20J1	G	P1	6-27-61	58	.5	327	10	4	160
22P1	Ls	S	6-27-61	--	<.1	322	10	<4	164
23N1	G	P1	6-61	--	.5	327	5	4	132
29J1	Ls	S	6-27-61	--	.1	356	5	4	140
30B1	Ls	S	7-17-57	--	1.5	327	---	14	244
30L1	Ls	S	6-27-61	--	1.0	381	30	12	228
33A1	Ls	S	6-27-61	--	.1	346	10	4	140
35C1	Ls	S	6-27-61	--	.1	361	10	4	84
36J1	Ls	S	6-27-61	--	<.1	366	<5	4	160
30/7W-									
3R1	Sd	P1	6-28-61	--	.1	176	60	64	244

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

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (Fe)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
30/7W-6N1	Sd	P1	4-16-59	51	<.1	98	25	8	96	
7M1	Sd	P1	4-16-59	51	1.0	137	65	8	164	
9D1	Sd	P1	6-28-61	59	.4	239	105	12	248	
12N1	Sd	P1	6-28-61	--	.7	312	155	20	384	
13R1	Ls	S	6-28-61	54	.5	327	65	8	292	
15L1	Sd	P1	6-28-61	--	.2	224	95	4	208	
20R1	Sd	P1	6-28-61	--	.2	317	110	24	364	
21R2	Ls	S	7-16-57	56	.3	305	---	4	204	
22N1	Ls	S	6-27-61	--	<.1	307	10	4	108	
22N4	Ls	S	4-16-59	58	.1	264	120	8	192	
24D1	Ls	S	6-28-61	56	.1	405	45	8	208	
26Q1	G?	P1?	7-16-57	59	.1	300	---	6	116	
26Q1	G?	P1?	6-26-61	58	<.1	351	25	4	104	
32M1	Ls	S	6-29-61	57	.1	312	40	4	232	
35R1	Ls	D	7-16-57	54	.8	315	---	10	164	
35R1	Ls	D	6-28-61	54	.5	366	10	4	156	
31/5W-4N1	Sd	P1	6-27-61	--	.5	107	25	4	32	
7R1	Sd	P1	6-27-61	--	.1	268	65	40	248	
9H1	Sd	P1	6-27-61	--	.1	132	40	4	92	
13C1	Sd	P1	6-27-61	--	<.1	259	80	8	240	
15E1	Sd	P1	6-27-61	--	<.1	117	65	8	128	
18R1	Sd	P1	6-27-61	--	<.1	132	40	4	92	
21N1	G,Sd	P1	6-27-61	--	5.0	68	70	4	72	
26J1	Sd	P1	6-26-61	--	1.5	483	5	12	136	
27D1	Sh?	D,M	6-27-61	55	1.0	561	5	12	116	
28P2	G,Sd	P1	6-27-61	--	.2	176	35	12	144	
29D1	Sd,G	P1	6-27-61	--	<.1	151	55	4	128	
32F1	Ls	S?,D	6-27-61	52.5	.7	361	5	12	108	

31/5W-33G1	Sd	P1	6-27-61	52	.2	332	5	4	88
31/6W-2E1	Ls	S,D	3-12-58	55	<.1	371	---	20	296
5D1	Sd	P1	6-22-61	54	.1	122	35	4	84
5P1	Sd	P1	6-22-61	54	.1	166	85	16	164
11Q1	Sd	P1	6-27-61	58	.1	303	80	48	288
15D1	Sd	P1	6-23-61	58	.4	234	115	24	208
16N1	Sd	P1	6-23-61	57	<.1	171	50	16	172
17D1	Sd	P1	6-22-61	--	.1	307	100	40	252
17H1	Sd	P1	6-23-61	--	<.1	166	100	24	208
19N1	G	P1	6-28-61	58	4.0	307	85	8	284
19H2	G	P1	6-28-61	56	4.0	293	110	16	304
20J1	Sd	P1	6-27-61	58	.1	132	55	32	180
25A1	Ls	D	6-22-61	58	<.1	312	150	4	232
25A2	Ls	D	3-12-58	53	<.1	312	---	4	296
26A1	Sd	P1	6-27-61	63	.1	88	90	<4	80
30E1	Sd	P1	6-27-61	56	<.1	176	65	16	236
31L1	Sd	P1	6-28-61	--	3.0	142	50	4	116
32B1	Sd	P1	6-27-61	--	<.1	142	55	4	116
33C1	Sd	P1	6-27-61	--	.2	127	40	8	116
36J1	Ls	D	4-15-59	51	.1	317	55	8	100
31/7W-1D1	Sd	P1	6-22-61	55	.3	132	75	8	136
3A1	Sd	P1	6-23-61	57	.2	142	40	<4	100
4B1	Sd,G	P1	6-61	55	.5	181	70	4	144
5N1	Sd	P1	6-22-61	58	.1	268	90	20	376
7N1	Sd	P1	6-22-61	--	.1	98	30	12	100
8E1	Sd	P1	6-22-61	56	.1	176	75	20	232
9P1	Sd	P1	6-22-61	58	.1	137	45	4	100
11A1	Sd	P1	6-22-61	58	<.1	117	40	4	88
11P1	Sd	P1	6-22-61	59	1.0	220	40	12	172
12A1	Sd	P1	6-22-61	58	.1	132	90	16	172
13R1	Sd	P1	6-22-61	58	1.0	278	145	40	320
15B1	Sd	P1	6-22-61	--	<.1	190	140	44	260
20N1	Sd	P1	6-28-61	--	.5	317	80	44	308
21M1	Sd	P1	6-28-61	--	.1	181	85	24	148

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

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temper- ature (°F)	Iron (fe)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
31/7W-22N1	Sd	P1	6-27-61	56	0.2	161	40	4	128	
24N1	Sd	P1	6-27-61	59	<.1	176	55	20	172	
26C1	Sd	P1	6-28-61	55	.1	151	90	24	220	
29Q1	Sd	P1	6-28-61	--	.2	278	195	32	368	
32N1	Sd	P1	6-28-61	56	.1	249	85	36	324	
34R1	Sd	P1	6-28-61	--	<.1	181	95	16	192	
35D1	Sd	P1	6-28-61	59	.1	83	55	4	84	
35R1	Sd	P1	6-28-61	--	.1	234	115	56	340	
32/5W-8Q1	Sd	P1	6-21-61	--	.1	190	105	12	216	
14H1	Sd	P1	6-27-61	57	.4	264	150	32	296	
14M1	Sd	P1	6-27-61	--	.3	195	90	16	216	
15J1	Ls	S, D	3-12-58	55	<.1	834	235	500	196	
15J1	Ls	S, D	6-21-61	58	<.1	688	150	456	144	
15R1	Sd	P1	6-27-61	--	<.1	249	65	24	192	
16Q1	Sd	P1	6-27-61	51	3.0	322	130	28	348	
22F1	Sd	P1	6-27-61	56	.4	176	60	4	152	
26M1	Sd	P1	6-27-61	--	4.0	268	140	16	336	
27H1	Sd	P1	6-23-61	58	.3	259	115	12	284	
28J1	Sd, G	P1	6-27-61	55	1.5	239	95	8	280	
30R1	Sd	P1	6-23-61	57	2.0	239	90	20	248	
34G1	G	P1	6-27-61	56	.1	317	5	4	108	
34M1	Sd	P1	6-27-61	59	.5	176	65	8	164	
35H1	Sd	P1	6-27-61	56	.5	181	30	4	132	
32/6W-1D1	Sd, G	P1	6-21-61	--	.1	171	60	20	140	
3M1	Sd	P1	6-21-61	59	.1	205	75	12	204	
15K1	Sd	P1	6-21-61	58	.5	181	55	8	140	
16E1	Sd, G	P1	3-12-58	55	.5	181	--	12	220	
16E1	Sd, G	P1	6-21-61	--	<.1	156	70	12	144	

32/6W-18R1	Sd	P1	6-21-61	58	2.0	234	100	8	240
21G1	Sd	P1	6-23-61	57	.5	200	110	16	212
25K1	Sd	P1	4-16-59	--	.1	181	75	12	288
26Q1	Sd,G	P1	6-23-61	59	4.0	264	170	28	356
28L1	Sd,G	P1	6-23-61	--	<.1	112	30	4	76
30L1	Ls	S	10-14-58	54	2.5	224	---	16	144
30L2	Ls	S	4-16-59	59	.5	278	5	8	212
30L2	Ls	S	6-21-61	54	<.1	288	10	4	184
30L3	Sd	P1	4-16-59	56	3.0	224	150	12	340
32A1	Sd	P1	6-23-61	58	.5	161	100	20	188
33N1	Sd	P1	6-23-61	--	<.1	117	35	<4	84
32/7W- 1P1	Sd	P1	6-20-61	56	.4	224	55	4	192
2R1	Sd	P1	6-21-61	--	1.5	268	160	36	332
3A1	Ls	D	6-21-61	--	1.0	454	5	28	156
3Q2	Sd	P1	6-21-61	--	1.5	317	225	28	472
11E1	Sd	P1	6-21-61	56	2.0	254	100	20	252
14R1	Sd,G	P1	4-15-59	53	3.0	166	80	12	212
14R1	Sd,G	P1	5-11-60	51	3.5	215	70	8	200
15N1	Sd	P1	6-21-61	--	.1	156	65	8	164
17N1	Ls	S	6-22-61	59	.1	390	15	12	224
18R1	Ls	S	6-22-61	59	.4	317	10	12	180
20V1	Ls	S	6-21-61	--	.1	400	15	12	252
21L1	Sd	P1	6-21-61	--	1.0	190	95	12	228
21M1	Sd	P1	6-21-61	58	.5	190	115	24	256
23N1	Sd	P1	6-21-61	57	.1	176	65	8	168
24D1	Sd	P1	4-15-59	53	3.0	93	105	16	168
25D1	Sd	P1	6-22-61	59	.2	195	45	4	124
27J1	Ls	S	4-15-59	57	.1	303	20	20	208
27J2	Ls	S	4-15-59	56	.1	268	15	20	180
27R1	Sd	P1	4-15-59	58	4.0	112	80	16	188
27R2	Sd	P1	4-15-59	53	>7.5	83	85	16	152
28N1	Sd	P1	6-22-61	--	.2	234	115	16	240
30H1	Sd	P1	6-22-61	--	.1	137	10	8	176
31E1	Sd	P1	6-22-61	54	1.0	137	135	20	232
33R1	Sd	P1	6-22-61	--	.3	220	235	52	364

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

Well	Ma- teri- al	Geo- logic Age	Date of Collec- tion	Temp- ature (°F)	Iron (Fe)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Hardness as CaCO ₃ (Calcium, magnesium)	Remarks
33/6W-29R1	Sd	P1	6-21-61	58	1.0	220	150	20	280	
31P1	Sd	P1	6-21-61	56	4.0	215	145	12	296	
32P1	Sd	P1	6-21-61	56	.2	181	75	4	160	
33R1	Sd,G	P1	6-21-61	65	<.1	137	55	8	124	
34Q1	Sd	P1	6-21-61	56	4.0	381	160	44	408	
33/7W-35R1	Sd,G	P1	6-21-61	--	5.0	400	265	4	484	

Table 6.--Water levels in observation wells in Jasper County, Indiana

(In feet below land-surface datum. Water level: e, estimated; h, tape measurement)

Jasper 1. (29/5W-35P1). Jasper County Highway Department. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 29 N., R. 5 W. Drilled unused water-table well in limestone, diameter 4 inches, reported depth 13 feet. Land-surface datum is about 685 feet above msl. Highest water level is 1.94 below lsd, April 9, 1938; lowest 8.31 below lsd, October 31, 1935. Records available: 1935-38.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1935		Oct. 3	8.17	July 3	4.87	1938	
		16	7.21	10	5.21		
Oct. 16	8.07	31	6.10	17	5.41	Jan. 7	5.88
31	8.31	Nov. 14	4.14	24	5.72	14	5.92
Nov. 15	7.36	Dec. 1	4.66	31	5.89	21	5.98
30	6.80	15	5.08	Aug. 7	6.12	29	5.62
Dec. 16	6.28	31	3.76	14	6.08	Feb. 5	5.66
31	6.25			21	6.25	12	4.85
1936		1937		28	6.46	18	3.97
				Sept. 4	6.52	26	3.32
Jan. 15	5.74	Jan. 15	2.51	11	5.84	Mar. 4	3.12
Feb. 1	5.91	Feb. 1	2.84	18	6.05	12	3.11
15	6.12	15	3.21	25	6.16	19	2.65
29	5.10	Mar. 1	3.29	Oct. 2	6.35	25	2.46
Mar. 16	5.14	15	3.50	9	6.46	Apr. 1	2.42
31	4.22	31	3.76	15	6.62	9	1.94
Apr. 15	4.03	Apr. 10	3.36	23	6.17	16	2.30
30	4.02	17	3.22	29	6.16	23	2.80
May 15	3.79	24	2.64	Nov. 6	6.24	30	3.25
June 15	5.53	May 1	2.70	12	6.23	May 7	3.64
30	6.20	8	2.99	19	6.35	13	3.92
July 15	6.92	15	3.18	26	6.44	20	3.74
Aug. 3	7.63	22	3.36	Dec. 4	6.40	28	3.40
17	8.00	29	3.42	10	6.31	June 3	3.46
Sept. 3	8.17	June 5	3.72	17	6.14	14	3.85
15	8.17	12	3.88	23	6.16	17	4.07
		19	4.04	31	5.98	24	4.42
		26	4.35			July 1	3.27

Jasper 2. (27/6W-30G1). Lottie Spalding. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 27 N., R. 6 W. Dug unused water-table well in drift, diameter 48 inches, depth 14 feet. Highest water level is 0.87 below lsd, May 24, 1944; lowest 8.20 below lsd, Jan. 3, 1945. Records available 1944-45.

1944		June 28	3.32	Aug. 16	5.15	Sept. 27	7.34
		July 5	4.01	23	5.41	Oct. 4	6.97
May 24	0.87	12	4.17	30	5.72	10	6.84
31	1.61	19	4.42	Sept. 6	5.79	18	6.40
June 7	2.56	26	4.64	13	5.98	25	6.40
14	2.36	Aug. 2	4.81	20	6.32	Nov. 1	6.82
21	2.96	9	5.31	26	6.97	8	6.98

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

Jasper 2--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1944		Nov. 29	6.82	Dec. 20	6.60	1945	
Nov. 15	6.62	Dec. 6	6.78	27	6.58	Jan. 3	8.20
22	6.65	13	6.74				
29	6.82						

Jasper 3. (30/7W-28A2). Harry E. Brunton. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 30 N., R. 7 W. Drilled unused artesian well in sand and gravel, diameter 4 inches, depth 36 feet. Land-surface datum is about 690 feet above msl. Highest water level is 6.44 below lsd, June 16, 1952; lowest 12.15 below lsd, Nov. 14, 1949. Records available: 1948-59.

1948		Jan. 24	10.55	Oct. 10	11.81	July 3	9.73
		31	10.34	17	11.83	10	10.00
June 10	9.40	Feb. 7	10.22	24	11.90	17	10.20
14	9.53	14	10.18	31	11.93	24	9.07
21	9.48	21	10.18	Nov. 14	12.15	31	10.10
28	9.66	28	10.00	21	11.90	Aug. 7	10.38
July 5	9.68	Mar. 7	10.02	28	11.95	14	10.28
12	9.62	14	9.96	Dec. 5	12.04	21	10.37
19	9.72	21	9.74	12	12.06	28	10.37
26	9.71	28	9.72	19	11.99	Sept. 5	10.54
Aug. 2	10.07	Apr. 4	9.75	26	11.66	11	10.47
9	10.19	11	9.73			17	10.72
16	10.10	18	9.54	1950		25	10.56
23	10.16	25	9.81	Jan. 2	11.26	Oct. 2	10.59
30	10.51	May 2	9.60	9	10.98	9	10.32
Sept. 6	10.33	9	9.68	16	10.53	23	9.89
13	10.92	16	9.78	23	10.17	30	10.42
20	10.59	23	9.72	30	10.28	Nov. 6	10.39
27	11.00	31	9.95	Feb. 6	9.94	13	10.58
Oct. 4	11.15	June 6	9.87	13	9.46	20	10.25
11	10.87	13	9.98	22	9.26	27	10.31
18	11.00	20	10.00	28	9.03	Dec. 4	10.35
25	11.14	27	9.99	Mar. 6	9.56	11	10.29
Nov. 1	11.13	July 5	10.54	13	9.26	18	10.37
8	11.37	11	10.55	19	9.27	26	10.21
15	11.24	18	10.18	27	8.68		
22	11.20	25	10.72	Apr. 3	9.03	1951	
29	11.40	Aug. 1	10.36	8	8.65	Jan. 2	10.00
Dec. 6	11.43	8	10.77	17	9.00	9	10.20
13	11.33	15	10.61	24	8.95	15	9.60
20	10.50	22	10.78	May 1	8.96	22	10.24
		29	10.89	29	9.21	29	10.31
1949		Sept. 6	11.21	June 5	9.48	Feb. 5	10.17
Jan. 3	10.90	12	11.37	12	9.63	12	9.93
10	10.60	23	11.53	19	9.40	21	10.00
17	10.79	26	11.77	26	9.45	26	9.80
		Oct. 3	11.62				

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

Jasper 3--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1951		Feb. 4	8.00	1953		Dec. 16	10.20
						28	11.36
Mar. 5	9.90			Jan. 5	11.38		
				12	11.39	1954	
		Mar. 3	9.42	19	10.87		
				26	10.86	Jan. 4	11.49
						11	11.04
Apr. 2	9.56			Feb. 2	11.03	18	11.35
				9	11.05	25	11.38
				16	11.05	Feb. 1	11.44
		Apr. 7	9.16	23	9.94	8	11.76
						15	11.71
May 7	9.56			Mar. 2	10.34	22	11.23
				9	9.55		
		May 5	8.97	23	9.99	Mar. 1	11.11
						8	11.20
				Apr. 6	10.14	15	11.09
June 4	9.74			13	10.13	22	10.75
				20	10.10	29	9.85
		June 2	8.97	27	10.11	Apr. 5	10.26
						12	9.82
				May 4	10.10	19	9.61
July 2	9.73			10	10.10	26	9.30
				16	10.11	3	8.56
		July 7	9.00	25	10.10	10	9.00
						17	9.32
				June 1	10.12	24	9.52
				8	10.15	31	7.40
Aug. 5	9.60			15	10.18	June 7	8.69
				22	10.18	14	9.05
		Aug. 4	9.45	28	9.67	21	8.12
						28	9.01
				July 6	9.90	5	8.57
				13	9.87	12	9.40
		Sept. 2	10.10	20	9.50	19	9.74
				27	9.86	26	10.19
				Aug. 4	9.00	Aug. 2	10.28
				11	9.65	9	10.25
				17	9.80	16	10.26
		Oct. 6	10.00	24	9.90	23	9.00
				31	10.29	26	8.55
				Sept. 8	10.15	30	9.43
				15	9.50	Sept. 7	9.95
		Nov. 5	11.09	21	10.05	13	10.22
				28	10.42	20	10.46
				Oct. 5	10.08	27	10.56
				12	10.62	Oct. 4	8.70
		Dec. 1	11.32	19	10.86	11	9.92
				27	11.13	18	10.11
				Nov. 2	11.10	25	10.39
				10	11.35		
				17	11.43		
1952				30	10.82		
				Dec. 7	10.19		
Jan. 28	9.25						

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

Jasper 3--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1954		Sept. 6	9.59	July 24	9.87	June 10	7.56
		12	9.68	31	9.85	17	7.62
Nov. 1	10.61	19	9.70	Aug. 6	9.89	24	7.50
8	10.70	26	10.00	13	9.85	July 1	7.46
15	10.77	Oct. 3	9.86	20	9.79	8	7.37
22	10.82	10	9.94	27	9.86	15	7.19
29	10.79	17	9.87	Sept. 3	9.94	22	7.15
Dec. 6	10.29	24	9.93	10	10.00	29	7.41
13	10.32	31	9.99	17	10.17	Aug. 5	7.43
20	10.36	Nov. 7	9.97	24	10.18	12	7.51
27	10.24	14	10.07	Oct. 1	10.40	19	7.50
		20	10.11	8	10.49	26	7.61
1955		27	10.15	15	10.58	Sept. 2	7.70
		Dec. 4	10.12	22	10.61	9	8.40
Jan. 3	10.03	12	10.06	29	10.66	16	8.66
10	9.86	19	10.02	Nov. 5	10.75	23	8.71
17	9.98	27	9.94	12	10.82	30	8.89
24	10.01			19	10.80	Oct. 7	8.91
31	10.02	1956		26	10.83	14	8.93
Feb. 7	10.03	Jan. 3	9.79	Dec. 3	10.84	21	8.85
14	10.03	9	9.80	10	10.88	28	8.73
21	10.04	16	9.88	17	10.84	Nov. 4	8.67
28	9.26	23	9.88	24	10.81	11	8.80
Mar. 7	8.87	30	9.92	31	10.88	18	8.85
14	9.05	Feb. 6	9.67			25	8.99
21	9.01	13	9.12	1957		Dec. 2	8.93
28	9.06	20	8.78	Jan. 7	11.24	9	8.97
Apr. 4	9.15	27	8.36	14	11.17	16	9.07
11	9.17	Mar. 5	8.02	21	11.16	23	8.87
18	9.11	12	8.27	28	11.02	30	8.37
25	8.87	19	8.97	Feb. 4	10.52		
May 2	8.97	26	9.11	11	8.82	1958	
9	9.01	Apr. 2	9.24	18	8.62	Jan. 6	7.43
15	8.82	9	9.34	25	9.92	13	7.33
23	8.92	16	9.42	Mar. 4	9.72	20	7.30
30	8.88	23	9.51	11	9.52	27	7.10
June 6	8.93	30	9.35	18	10.02	Feb. 3	7.41
13	8.60	May 7	9.32	25	9.62	10	7.50
20	8.68	14	9.38	Apr. 1	9.32	17	7.85
27	8.76	21	9.42	8	9.12	24	8.09
July 5	8.94	28	9.45	15	9.52	Mar. 3	8.38
11	9.02	June 4	11.65	22	9.42	10	8.20
18	9.04	11	10.69	29	8.44	17	8.02
25	9.14	18	10.58	May 6	8.81	24	7.37
Aug. 1	9.28	25	10.26	13	8.70	31	6.72
8	9.03	July 3	10.18	20	8.17	Apr. 7	7.00
15	9.30	10	10.02	27	7.80	14	7.22
22	9.17	17	9.94	June 3	7.54	21	7.40
29	9.56						

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

Jasper 3--Cont.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1958		Sept. 15	7.62	Jan. 26	8.42	July 6	8.42
		22	7.70	Feb. 2	8.33	13	8.32
Apr. 28	7.31	29	7.75	9	8.31	20	8.47
May 5	7.72	Oct. 6	7.71	16	8.23	27	8.39
12	7.32	13	7.69	23	8.12	Aug. 3	8.49
19	7.52	20	7.83	Mar. 2	8.05	10	8.51
26	8.22	27	7.91	9	8.01	17	8.55
June 2	7.62	Nov. 3	8.33	16	7.85	24	8.69
9	6.82	10	8.29	23	7.89	31	8.75
16	7.02	17	8.31	30	7.71	Sept. 7	9.84
23	7.22	24	8.33	Apr. 6	8.23	14	9.89
30	7.42	Dec. 1	8.07	13	8.12	21	9.82
July 7	7.37	8	7.97	20	8.00	28	9.22
14	7.15	15	7.92	27	8.10	Oct. 5	9.02
21	7.45	22	8.02	May 4	8.22	12	8.92
28	7.31	29	8.22	11	7.72	19	9.33
Aug. 4	7.71			18	7.87	26	9.15
11	7.73	1959		25	7.71	Nov. 2	9.02
18	7.41			June 1	7.95	9	8.87
25	7.11	Jan. 5	8.28	8	8.00	16	9.12
Sept. 1	7.33	12	8.46	15	8.00	23	9.47
8	7.47	19	8.43	22	8.22	30	9.42
				29	8.45		

Jasper 4. (30/5W-17L1). Wm. Gehring Inc. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 30 N., R. 5 W. Drilled unused artesian well in limestone, diameter 16 inches, reported depth 300 feet. Recording gage installed July 5, 1956. Highest water level is 1.15 below lsd, Apr. 27-28, 1959; lowest 17.50 below lsd, July 8, 1959. Records available: 1956-60. Affected by barometric pressure and by occasional pumping.

(Daily highest water level from recorder graph, 1956)

July 5	9.67	Aug. 9	15.90	Oct. 24	14.95	Nov. 11	7.75
6	9.27	10	16.60	25	16.15	12	7.65
7	9.13	Sept. 18	7.05	26	15.20	13	7.35
8	8.96	19	6.85	29	11.30	14	7.10
9	8.60	20	7.00	30	10.70	15	7.00
10	8.44	21	7.75	31	10.10	16	7.45
11	8.53	22	7.60	Nov. 1	9.65	17	7.05
12	10.93	23	7.25	2	9.30	18	6.80
13	11.90	24	7.35	3	9.00	Dec. 25	4.55
14	11.87	Oct. 16	11.50	4	8.65	26	4.45
17	15.62	17	11.00	5	8.25	27	4.40
18	15.96	18	11.05	6	8.40	28	4.35
23	9.85	19	13.30	7	8.40	29	4.50
24	9.00	20	14.95	8	8.50	30	4.30
Aug. 7	12.15	21	14.15	9	8.40	31	4.40
8	14.65	23	13.70	10	8.05		

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

Jasper 4--Cont.

(Daily highest water level from recorder graph, 1957)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.65	4.05	3.55	3.30	----	----	2.95	----	5.95	----	----	2.10
2	4.65	4.05	3.50	3.40	----	----	2.75	----	5.95	----	----	2.25
3	4.40	3.95	3.60	3.35	----	----	2.70	----	6.05	----	----	2.10
4	4.50	4.10	3.60	3.20	----	----	2.75	----	6.05	----	----	----
5	4.60	4.20	3.55	3.00	----	----	2.70	----	6.50	----	----	----
6	4.40	4.15	3.55	3.10	----	----	2.60	----	6.70	----	----	----
7	4.35	4.15	3.55	3.15	----	----	2.50	6.35	6.75	----	----	----
8	4.35	3.85	3.50	3.05	----	----	2.45	6.45	6.15	5.55	----	----
9	4.35	3.80	3.50	3.00	----	----	2.80	6.20	6.25	5.25	----	----
10	4.60	3.95	3.45	2.85	----	----	----	5.70	6.55	5.05	----	----
11	4.35	4.05	3.30	2.80	----	----	----	5.30	6.80	4.95	----	----
12	4.45	3.80	3.40	2.85	----	----	----	5.20	----	4.80	----	----
13	4.50	3.75	3.45	2.80	----	----	----	5.65	----	4.65	----	----
14	----	3.85	3.35	2.85	----	----	----	6.10	----	4.55	----	----
15	4.45	3.80	3.45	2.65	----	----	----	5.95	----	----	----	----
16	4.50	3.80	3.55	2.65	----	----	----	6.20	----	----	2.50	----
17	4.35	3.85	3.50	2.60	----	----	----	6.45	----	----	2.55	----
18	4.50	3.75	3.35	2.55	----	----	----	6.30	----	----	2.15	----
19	4.55	3.85	3.35	2.40	----	----	----	6.10	----	----	2.20	----
20	4.50	3.90	3.50	2.40	----	----	5.65	6.15	----	----	2.40	----
21	4.30	3.85	3.40	2.40	----	----	5.25	6.70	----	----	2.45	----
22	4.25	3.85	3.40	2.30	----	----	5.15	7.10	----	----	2.50	----
23	4.40	3.90	3.45	----	----	----	4.95	7.10	----	----	----	----
24	4.35	3.65	3.50	----	----	----	5.05	6.70	----	----	----	----
25	4.30	3.60	3.40	----	----	----	5.25	6.20	----	----	----	----
26	4.40	3.50	3.35	----	----	----	5.30	----	----	----	----	----
27	4.30	3.60	3.50	----	----	----	----	----	----	----	2.15	----
28	4.05	3.50	3.50	----	----	----	----	5.95	----	----	2.15	----
29	4.05	----	3.45	----	----	3.30	----	5.75	----	----	2.15	----
30	4.20	----	3.50	----	----	3.10	----	5.95	----	----	2.15	----
31	4.05	----	3.40	----	----	----	----	6.35	----	----	----	----

(Daily highest water level from recorder graph, 1958)

1	----	----	----	2.05	----	----	----	----	3.25	3.50	3.20	3.00
2	----	----	----	----	----	----	----	----	3.40	3.40	3.20	2.80
3	----	----	----	----	----	7.20	----	----	3.40	3.30	3.25	2.65
4	----	----	----	----	----	6.65	2.20	----	----	3.20	3.15	2.65
5	----	----	----	----	----	6.50	2.10	2.15	----	3.40	3.05	2.80
6	----	----	----	----	----	6.65	2.10	2.00	3.00	3.30	3.30	3.05
7	----	----	----	----	----	7.55	2.25	2.00	3.00	3.20	3.25	3.05
8	----	----	----	----	----	----	2.20	----	3.00	3.15	3.05	2.90
9	----	----	----	2.00	----	----	2.15	----	2.85	3.10	3.05	3.00
10	----	----	----	1.95	----	----	2.05	----	2.90	3.20	3.25	3.05

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

Jasper 4--Cont.

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	----	----	----	1.90	----	----	1.95	----	3.35	3.30	3.35	2.85
12	----	----	2.15	1.95	----	----	1.95	----	3.95	3.30	3.35	2.80
13	----	----	2.05	2.00	----	----	----	2.50	3.75	3.25	3.25	3.05
14	----	----	2.10	1.95	----	----	----	2.40	3.50	3.25	3.25	3.00
15	----	----	2.10	1.95	----	----	1.65	2.30	3.45	3.20	3.10	2.95
16	----	----	2.10	----	----	----	1.70	2.25	3.45	3.10	3.20	2.75
17	----	----	2.15	----	----	3.10	1.65	----	3.25	3.20	3.05	2.75
18	----	----	2.20	----	----	2.95	1.50	----	3.35	3.25	3.05	2.75
19	----	----	2.15	----	----	2.75	1.55	2.25	3.25	3.15	3.20	2.70
20	----	----	----	----	----	2.70	1.55	2.25	3.15	3.15	3.20	3.00
21	----	----	----	----	----	2.60	----	2.35	3.15	3.15	3.15	3.00
22	----	----	----	----	----	2.40	----	2.35	3.25	3.15	3.15	2.80
23	----	----	----	1.80	----	2.35	1.70	2.50	3.20	3.10	3.05	2.75
24	----	----	----	1.80	----	----	1.65	2.50	3.20	3.15	3.10	2.90
25	----	----	2.15	2.20	----	2.20	----	2.50	3.20	3.20	2.90	3.05
26	----	----	2.10	2.15	----	----	----	----	3.35	3.25	3.05	2.95
27	----	----	2.10	2.05	8.20	----	----	----	3.35	3.25	3.10	2.85
28	----	----	2.10	2.00	8.75	----	----	2.70	3.40	3.30	3.00	2.95
29	----	----	2.10	2.05	9.45	----	----	3.00	3.25	3.35	3.00	3.00
30	----	----	2.05	----	9.50	----	----	3.25	3.20	3.35	3.05	3.15
31	----	----	2.05	----	9.25	----	----	3.35	----	3.25	----	2.80

(Daily highest water level from recorder graph, 1959)

1	2.65	----	2.05	1.45	1.45	1.85	----	----	6.65	5.10	3.80	2.65
2	2.75	----	1.90	1.25	1.45	2.00	----	----	6.60	4.95	3.85	2.70
3	2.85	2.43	1.95	1.30	1.45	2.05	----	----	6.45	4.95	3.75	2.60
4	2.90	----	2.15	1.50	1.45	2.50	----	7.45	6.30	4.95	3.55	2.60
5	3.05	----	1.65	1.50	1.45	3.60	----	7.55	6.15	4.85	3.70	2.65
6	2.85	----	1.65	1.55	1.45	----	----	7.65	6.15	4.75	3.95	2.55
7	2.85	----	2.10	1.50	1.60	----	----	7.90	6.20	4.75	3.80	2.55
8	2.95	----	2.00	1.55	1.60	7.50	8.50	6.10	4.60	3.70	2.60	
9	3.00	----	2.00	1.60	1.40	----	----	8.35	6.10	4.70	3.55	2.75
10	3.00	----	2.05	1.65	1.35	----	----	8.50	6.05	4.55	3.40	2.65
11	2.95	----	2.00	1.65	1.40	6.30	----	10.65	6.00	4.55	3.45	2.40
12	2.90	----	1.95	1.60	1.55	5.70	----	11.25	5.85	4.60	3.45	2.35
13	2.90	----	1.90	1.50	1.50	5.70	----	12.20	5.70	4.50	3.30	2.60
14	2.70	----	1.65	1.55	1.60	7.85	----	14.05	5.60	4.40	3.35	2.65
15	2.75	----	1.60	1.50	1.60	----	----	11.95	5.70	4.35	3.30	2.50
16	2.75	----	1.95	1.50	1.65	----	----	11.35	5.75	4.35	3.15	2.55
17	2.80	----	1.95	1.50	1.60	----	----	11.75	5.75	4.35	3.35	2.55
18	2.80	----	2.00	1.50	1.55	----	----	10.60	5.65	4.30	3.05	2.55
19	2.65	----	1.85	1.45	1.55	----	----	10.00	5.55	4.20	3.10	2.65
20	2.75	----	1.85	1.45	1.65	----	----	9.30	5.45	4.25	2.90	2.55

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

Jasper 4--Cont.

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	2.45	-----	1.85	1.55	1.65	-----	-----	9.10	5.45	4.25	2.90	2.55
22	2.80	-----	1.85	1.50	1.75	-----	-----	8.60	5.45	4.10	2.85	2.55
23	3.00	-----	1.80	1.50	1.70	-----	-----	8.45	5.45	3.85	2.70	2.50
24	2.75	-----	1.80	1.45	1.85	-----	-----	8.20	5.30	3.75	2.60	2.45
25	2.75	2.05	1.85	1.45	1.75	-----	-----	8.10	-----	3.85	2.75	2.40
26	2.80	2.00	1.60	1.45	1.75	-----	-----	7.70	-----	3.90	2.80	2.30
27	2.85	2.00	1.65	1.15	1.80	-----	-----	7.65	-----	4.00	2.85	2.10
28	2.80	2.05	1.80	1.15	1.80	-----	-----	7.25	-----	4.15	2.80	2.00
29	2.60	-----	1.75	1.35	1.80	-----	-----	7.00	5.20	4.10	2.80	2.10
30	2.65	-----	1.60	1.40	1.90	-----	-----	6.90	5.10	4.05	2.70	2.25
31	-----	-----	1.60	-----	1.85	-----	-----	6.85	-----	3.95	-----	2.40

(Daily highest water level from recorder graph, 1960)

1	2.30	-----	1.85	1.80	1.55	2.70	2.40	8.95	8.55	6.00	5.05	4.64
2	2.10	-----	1.65	1.80	1.55	2.70	2.25	9.10	8.90	5.95	5.10	4.45
3	2.15	-----	1.60	1.80	1.55	3.00	2.25	8.75	8.75	5.95	5.30	4.40
4	2.35	-----	-----	1.75	1.55	3.25	2.35	8.25	8.10	5.75	5.25	4.35
5	2.35	-----	-----	1.75	1.50	3.45	2.40	7.95	8.00	5.50	5.15	4.30
6	2.20	-----	-----	1.55	1.35	3.35	2.45	7.40	8.50	5.55	5.00	4.40
7	2.10	-----	-----	1.70	1.35	3.50	2.45	6.95	10.70	5.80	5.10	4.40
8	2.20	-----	-----	1.70	1.50	3.65	2.40	6.65	12.05	6.00	5.00	4.45
9	2.30	-----	1.70	1.80	1.50	3.65	2.35	6.55	11.75	6.55	5.00	4.30
10	2.25	-----	1.80	1.85	1.45	3.75	2.35	6.50	10.50	7.40	5.10	4.30
11	2.40	-----	1.85	1.60	1.60	-----	2.35	6.60	9.55	7.90	4.95	4.15
12	2.05	-----	1.95	1.70	1.70	-----	2.40	6.65	9.30	8.30	4.90	4.30
13	2.15	-----	1.95	1.65	1.65	-----	2.40	7.00	8.90	8.40	4.85	4.15
14	2.05	-----	1.95	1.65	1.65	-----	2.55	6.95	8.35	8.10	4.75	4.05
15	1.95	-----	1.80	1.60	2.15	2.80	3.85	6.90	8.05	7.70	4.55	4.00
16	2.25	-----	1.60	1.45	3.20	2.70	5.80	6.95	7.60	7.20	4.50	4.15
17	2.05	1.50	1.70	1.40	3.15	2.65	6.90	7.05	7.35	6.95	4.70	4.20
18	1.90	1.50	1.85	1.60	3.05	2.75	7.20	7.25	6.90	6.70	4.55	4.25
19	2.05	1.60	1.85	1.55	3.00	2.70	8.35	7.35	6.75	6.50	4.70	4.30
20	-----	1.70	2.00	1.35	2.70	2.55	10.65	7.25	6.65	6.35	4.65	4.15
21	-----	1.40	1.85	1.30	2.50	2.45	12.10	6.90	6.45	6.15	4.55	4.15
22	-----	1.50	1.85	1.45	2.45	2.40	13.20	6.75	6.30	5.80	4.55	4.15
23	-----	1.70	2.00	1.40	2.40	2.25	11.60	6.80	6.40	5.80	4.70	4.20
24	-----	1.60	1.95	1.35	2.40	2.35	10.40	6.95	6.50	5.85	4.50	4.20
25	-----	1.35	2.05	1.30	2.40	2.50	9.90	7.50	6.55	5.65	4.45	4.05
26	-----	1.50	2.05	1.40	2.50	2.45	9.35	7.70	6.45	5.50	4.40	4.00
27	-----	1.75	2.00	1.60	2.50	2.35	9.30	7.80	6.45	5.50	4.35	4.30
28	-----	1.70	2.00	1.50	2.80	2.30	9.15	7.55	6.60	5.45	4.20	4.25
29	-----	1.75	1.75	1.40	3.30	2.35	9.15	7.55	6.45	5.35	4.35	4.05
30	-----	-----	1.65	1.30	3.15	2.35	9.10	7.55	6.40	5.15	4.50	4.05
31	-----	-----	1.85	-----	2.95	-----	8.95	7.80	-----	5.00	-----	4.00

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

Jasper 5. (29/7W-36J1). St. Joseph's College, Collegeville. NE $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 36, T. 29 N., R. 7 W. Drilled used water-table well in sand and gravel, diameter 16 to 10 inches, depth 47 feet. Highest water level is 10.35 below 1sd, May 11, 1956; lowest 12.60 below 1sd, Oct. 24, 1955. Records available: 1955-56.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1955		Oct. 24	12.60	Nov. 30	12.40	1956	
Sept. 20	11.10					Mar. 22	11.75
						May 11	10.35

Jasper 6. (27/7W-25A1). Crystal Dairy. Remington. NE $\frac{1}{2}$ NE $\frac{1}{2}$ Sec. 25, T. 27 N., R. 7 W. Drilled unused artesian well limestone?, diameter 10 inches, depth 132 feet. Recording gage installed Sept. 25, 1956. Highest water level is 28.00 below 1sd, Feb. 12-13, 1959; lowest 36.92 below 1sd, Oct. 8, 1956. Records available: 1956-59. Affected by barometric pressure and by occasional pumping.

(Daily highest water level from recorder graph, 1956)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 26	29.91	Oct. 4	29.90	Nov. 4	32.86	Nov. 12	32.14
27	30.07	5	30.02	5	32.61	13	31.65
28	30.09	6	29.87	6	32.48	14	31.20
29	29.98	7	e30.80	7	32.41	15	30.65
30	29.99	31	32.75	8	32.49	16	31.60
Oct. 1	29.86	Nov. 1	32.72	9	32.37	17	32.05
2	29.78	2	32.77	10	32.20	18	31.65
3	29.88	3	32.79	11	32.08		

(Daily highest water level from recorder graph, 1957)

Feb. 26	29.90	Apr. 30	30.90	June 8	30.90	Aug. 23	30.35
27	30.05	May 1	30.85	9	30.85	24	30.20
28	30.00	2	30.85	10	30.80	25	30.25
Mar. 1	30.00	3	30.90	11	30.70	26	30.40
2	30.00	14	30.75	12	30.70	27	30.50
3	30.10	15	31.00	13	30.60	28	30.40
4	30.10	16	30.90	14	30.65	29	30.45
11	30.20	17	30.95	15	30.70	30	30.50
12	30.40	18	30.85	July 2	30.45	Sept. 1	30.35
Apr. 23	31.05	19	30.85	3	30.40	2	30.30
24	31.00	20	30.75	4	30.20	3	30.35
25	31.00	21	30.75	5	30.25	9	30.45
26	31.00	June 4	31.05	6	30.25	10	30.45
27	30.95	5	30.90	7	30.25	11	30.35
28	31.00	6	30.80	8	30.20	12	30.40
29	30.95	7	30.80	Aug. 22	30.55	13	30.40

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

Jasper C--Cont.

(Daily highest water level from recorder graph, 1957)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 14	30.35	Oct. 2	30.70	Oct. 4	30.75	Oct. 6	30.70
15	30.35	3	30.75	5	30.75		

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	----	----	----	----	30.10	30.80	29.95	----	28.80	28.75	28.60	29.25
2	----	----	----	----	30.15	31.00	29.90	----	28.80	28.75	28.55	28.95
3	----	----	----	----	30.20	31.10	----	----	28.80	28.65	28.65	28.80
4	----	----	----	----	30.15	31.10	----	----	28.85	28.50	28.50	28.80
5	----	----	----	----	30.25	31.05	----	----	28.70	28.65	28.40	29.10
6	----	----	----	----	30.20	31.15	----	----	28.65	28.55	29.65	29.35
7	----	----	----	----	30.05	30.95	----	----	28.70	28.40	29.65	29.25
8	----	----	----	----	----	30.75	29.85	----	28.70	28.35	29.45	29.10
9	----	----	----	----	----	30.40	29.75	----	28.55	28.35	29.35	29.25
10	----	----	----	----	----	30.10	29.60	----	28.60	28.45	29.50	29.35
11	----	----	----	----	----	30.15	29.60	----	28.75	28.60	29.50	29.15
12	----	----	----	29.50	30.60	30.05	29.55	----	28.70	28.70	29.55	29.10
13	----	----	----	29.55	30.65	30.00	----	28.75	28.65	28.70	29.35	29.35
14	----	----	29.40	29.55	30.60	30.20	----	28.80	28.60	28.65	29.25	29.35
15	----	----	29.35	29.50	30.55	30.20	----	28.80	28.60	28.55	29.10	29.30
16	----	----	29.40	29.50	30.55	30.20	----	28.75	28.60	28.50	29.20	29.10
17	----	----	29.40	29.50	30.55	30.20	----	28.70	28.45	28.60	29.05	29.10
18	----	----	29.40	29.45	30.60	30.25	----	28.75	28.60	28.65	29.10	29.05
19	----	----	29.50	----	30.75	30.20	----	28.75	28.60	28.60	29.20	28.95
20	----	----	29.45	----	----	30.20	----	28.70	28.50	28.55	29.20	29.25
21	----	----	----	----	----	30.25	----	28.70	28.50	28.60	29.15	29.25
22	----	----	----	----	----	30.05	----	28.75	28.60	28.55	29.20	29.10
23	----	----	----	----	----	30.00	----	28.60	28.55	28.50	29.15	29.00
24	----	----	----	29.65	----	----	----	28.60	28.50	28.55	29.20	29.15
25	----	----	----	29.65	----	----	29.15	28.65	28.50	28.60	29.00	29.30
26	----	----	----	30.05	----	----	29.20	28.70	28.60	28.60	29.15	29.15
27	----	----	----	30.25	----	30.05	29.15	28.65	28.60	28.60	29.15	29.10
28	----	----	----	30.10	----	30.00	29.10	28.65	28.65	28.65	29.15	29.10
29	----	----	----	30.00	31.00	29.95	29.05	28.65	28.50	28.70	29.15	29.15
30	----	----	----	30.05	30.90	29.95	29.05	28.65	28.45	28.75	29.25	29.30
31	----	----	----	----	30.85	----	29.00	28.65	----	28.65	----	28.90

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

Jasper 6--Cont.

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.80	29.40	28.85	28.95	29.10e	29.50	----	31.50	31.75	----	----	----
2	29.80	28.80	28.65	28.75	29.60	----	----	31.40	31.75	----	----	----
3	28.90	28.65	28.70	28.80	29.60	----	----	31.35	31.90	----	----	----
4	29.00	28.60	28.90	29.15	29.55	----	----	31.40	----	----	----	----
5	29.25	28.90	28.35	29.15	29.55	----	----	31.40	----	----	----	----
6	29.10	29.05	28.35	29.30	29.45	----	----	31.45	----	----	----	----
7	29.05	28.95	28.80	29.15	29.60	----	e30.75	31.55	----	----	----	----
8	29.15	28.85	28.85	29.20	29.45	----	30.90	31.60	----	----	----	----
9	29.20	28.35	28.85	29.30	29.20	----	31.10	31.65	----	----	----	----
10	29.20	28.40	28.90	29.35	29.20e	29.45	31.20	31.65	----	----	----	----
11	29.15	28.15	28.95	29.40	29.35	29.40	31.30	31.65	----	----	----	----
12	29.05	28.00	29.05	29.35	29.40	29.40	31.45	31.70	----	----	----	----
13	29.00e	28.00	29.00	29.30	29.40	29.45	31.50	31.85	----	----	----	----
14	28.85	----	28.70	29.35	29.45	29.60	31.55	31.95	----	----	----	----
15	28.85	----	28.70	29.25	29.60	29.50	31.45	31.80	----	----	----	----
16	28.85	----	29.20	29.25	29.55	29.55	31.30	31.75	----	----	----	----
17	28.90	----	29.20	29.15	29.55	29.70	31.20	31.85	----	----	----	----
18	28.80	----	29.60	29.20	29.45	----	31.25	31.90	----	----	----	----
19	28.80	----	29.50	29.05	29.50	----	31.30	31.80	----	----	----	----
20	28.65	----	29.55	29.15	29.50	----	31.30	31.80	----	----	----	----
21	28.50	----	29.55	29.20	29.55	----	31.25	31.90	----	----	----	----
22	28.90	28.75	29.50	29.15	29.55	----	31.15	31.90	----	----	----	----
23	29.00	28.50	29.35	29.10	29.70	----	31.20	31.90	----	----	----	----
24	28.90	28.90	29.30	29.05	29.65	----	31.30	31.90	----	----	----	----
25	28.90	28.85	29.25	29.05	29.55	----	31.30e	31.90	----	----	----	----
26	28.95	28.80	29.00	28.95	29.55	----	31.25	31.85	----	----	----	----
27	29.00	28.80	29.10	28.60	29.65	----	31.25	31.90	----	----	----	----
28	28.95	28.85	29.35	28.60	29.50	----	31.25	31.85	----	----	----	----
29	28.75	----	29.30	28.75	29.50	----	31.35	31.80	----	----	----	----
30	29.00	----	29.10	28.85	29.55	----	31.45	31.80	----	----	----	----
31	29.30	----	29.10	----	29.50	----	31.50	31.80	----	----	----	----

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

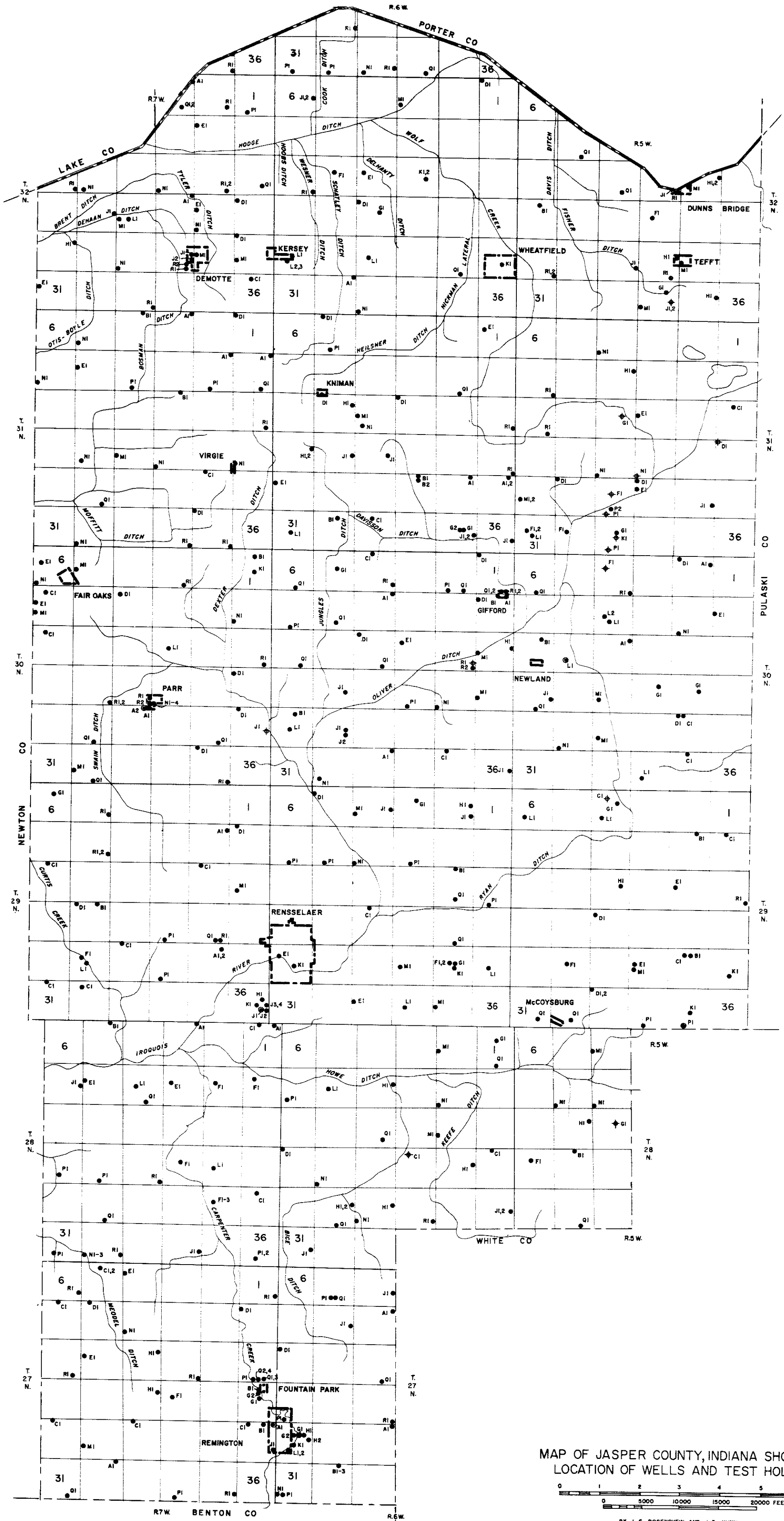
Publications of cooperative ground-water programs--Continued

Bulletins--Cont.

- 13 Ground-water resources of northwestern Indiana. Preliminary Report: La Porte County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.
- 14 Ground-water resources of west-central Indiana. Preliminary Report: Sullivan County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.
- 15 Ground-water resources of northwestern Indiana. Preliminary Report: St. Joseph County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.
- 16 Ground-water resources of west-central Indiana. Preliminary Report: Clay County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.
- 17 Ground-water resources of west-central Indiana. Preliminary Report: Vigo County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.
- 18 Ground-water resources of west-central Indiana. Preliminary Report: Owen County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.
- 19 Ground-water resources of northwestern Indiana. Preliminary Report: Marshall County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.
- 20 Ground-water resources of northwestern Indiana. Preliminary Report: Fulton County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.
- 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. 1964.
- 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. 1964.
- 23 Ground-water resources of west-central Indiana. Preliminary Report: Parke County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1964.
- 24 Ground-water resources of northwestern Indiana. Preliminary Report: Pulaski County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.
- 25 Ground-water resources of northwestern Indiana. Preliminary Report: Jasper County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.

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EXPLANATION

- Water well or test hole
- Observation well
- ◆ Oil or gas well or test hole

Base from modified General Highway and Transportation Map revised to July, 1953

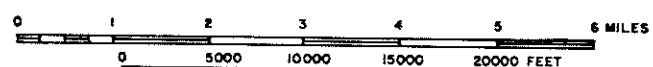
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M	L	K	J
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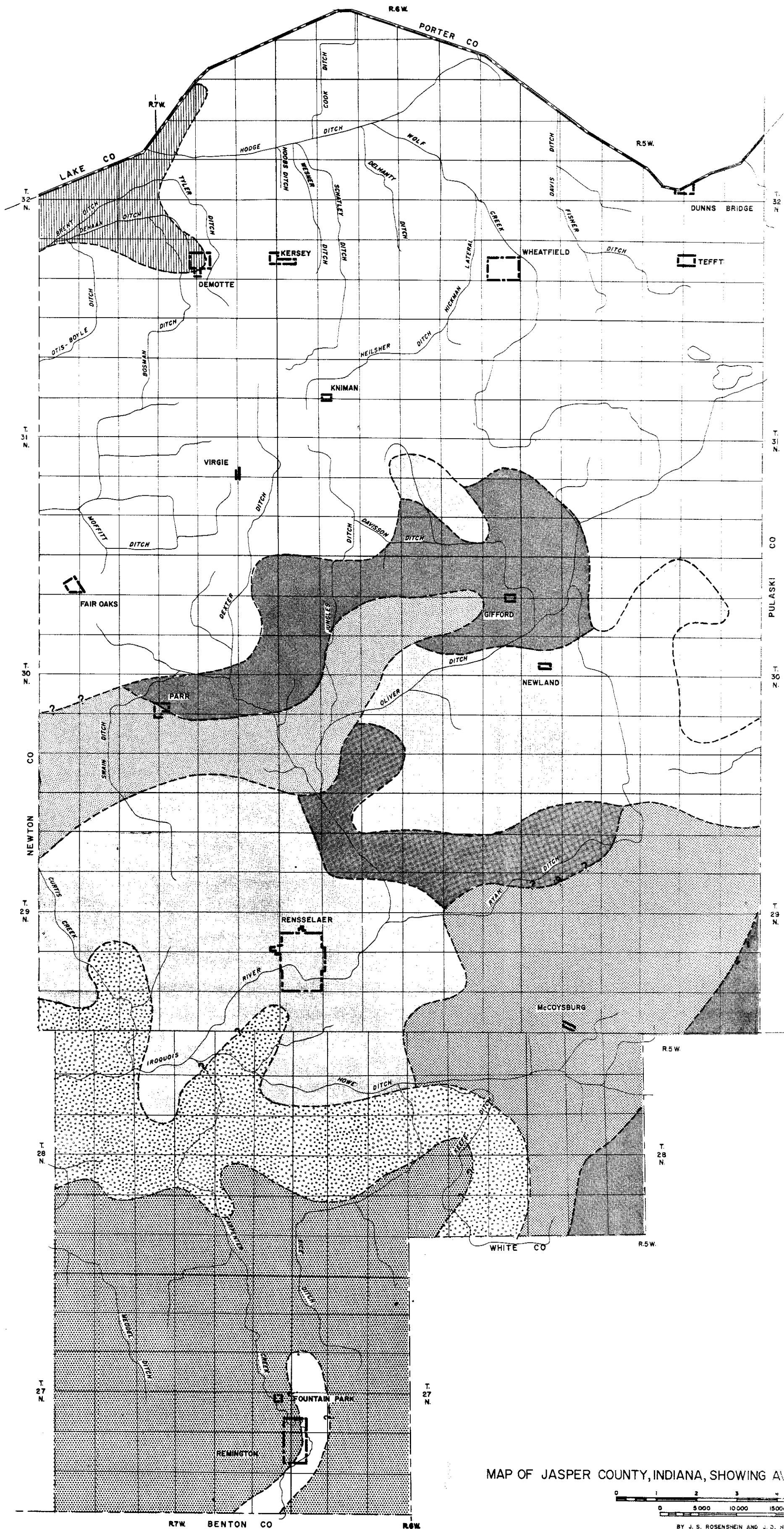
SECTION LETTER SYMBOLS IN WELL-NUMBERING SYSTEM

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

DIAGRAM OF TOWNSHIP


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



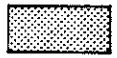


EXPLANATION


- Production from bedrock



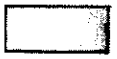
Well depths from 40 to 300 feet. Locally some production possible from sand and gravel. Water from some wells contains hydrogen sulfide gas. Yields inadequate to adequate for domestic use. Larger yields possible locally
- Production from bedrock and glaciofluvial sand




Well depths in bedrock generally less than 150 feet. Well depths in sand less than 50 feet. Yields from bedrock and sand generally adequate for domestic use. Larger yields possible from sand
- Production from bedrock and glaciofluvial sand and gravel



Well depths in bedrock generally from 50 to 160 feet. Well depths in sand and gravel generally from 50 to 160 feet. Yields from bedrock and sand and gravel adequate for domestic use
- Production from glaciofluvial sand and gravel and some wind-blown sand



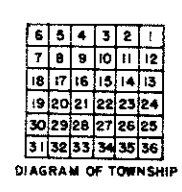
Well depths generally less than 50 feet. Where improperly located, very shallow wells may be subject to contamination by septic wastes. Yields adequate to more than adequate for domestic use. Larger yields possible
- Production from glaciofluvial sand and gravel



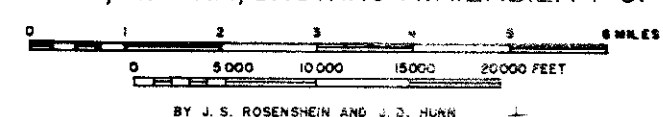
Well depths generally from 50 to 100 feet. Locally some wells shallower. Yields adequate to more than adequate for domestic use. Larger yields possible locally
- Boundary approximate
- ?-?-?-?

Boundary uncertain

Base from modified General Highway and Transportation Map revised to July, 1953



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



BY J. S. ROSENHEIM AND J. D. HURK
1961

T

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 25 PLATE 3

EXPLANATION

HARDNESS OF WATER, IN PARTS PER MILLION

100 - 200

200 - 300

300 - 400

more than 400

Data not sufficient to show hardness

Boundary approximate

Boundary uncertain

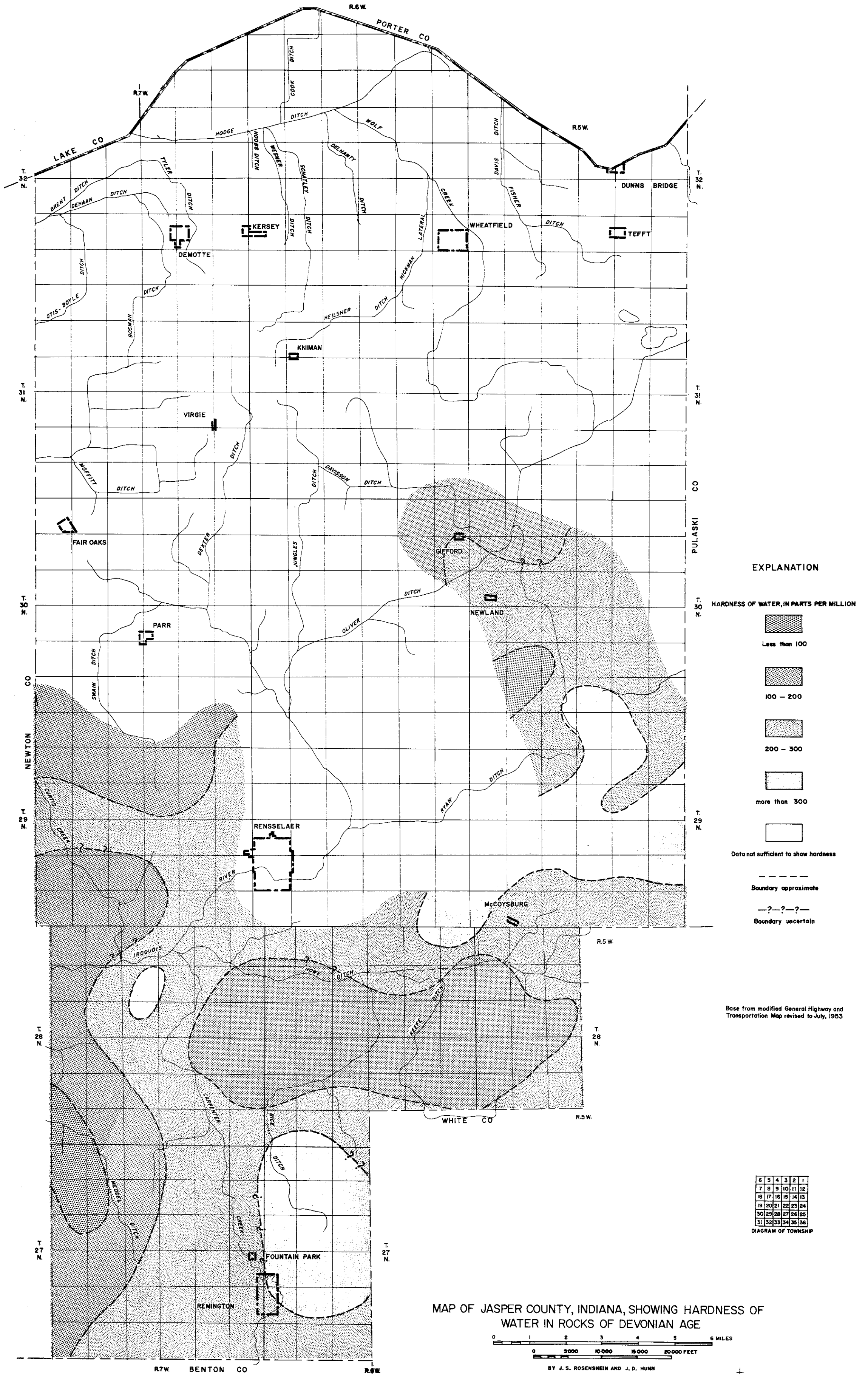
Base from modified General Highway and Transportation Map revised to July, 1953

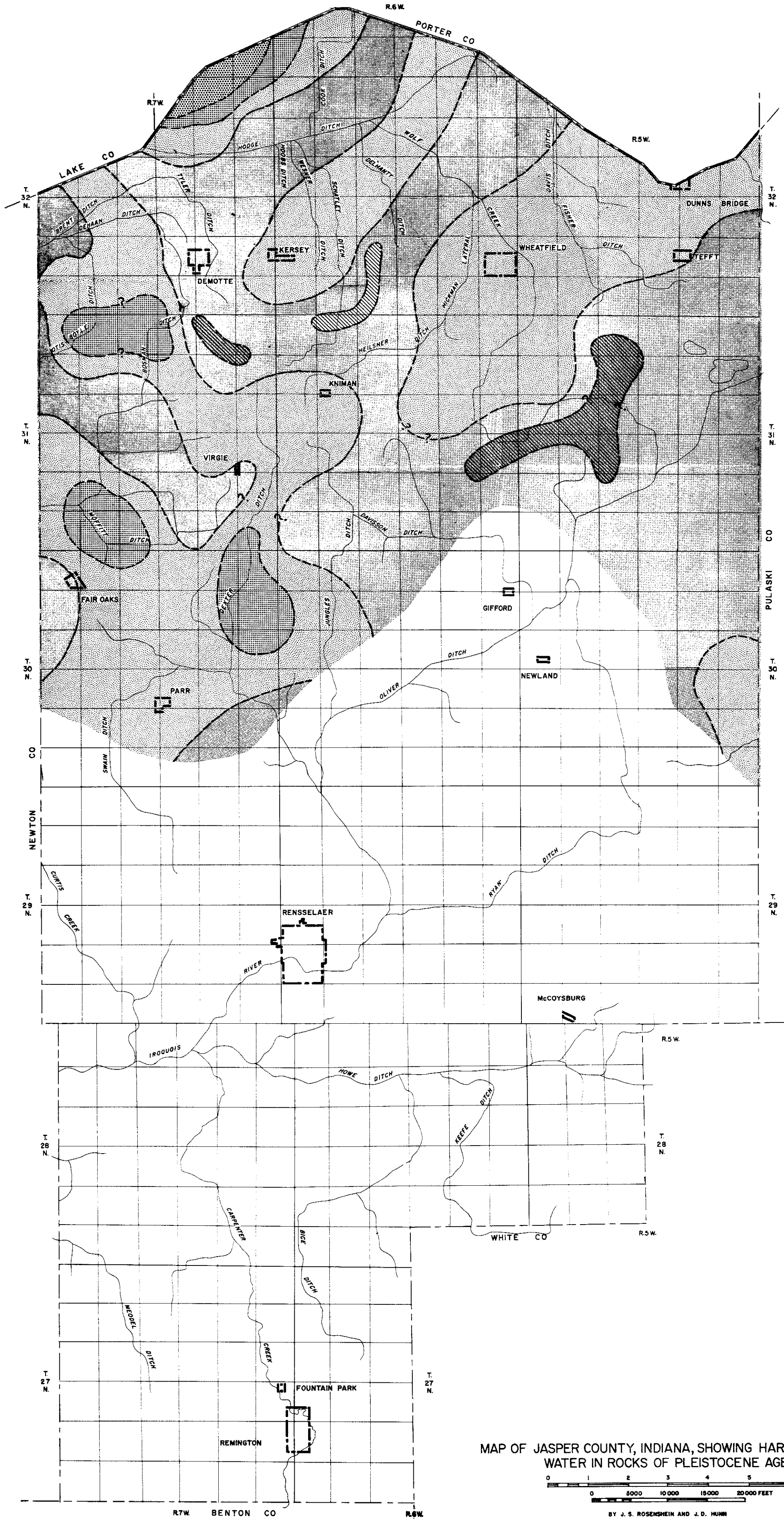
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7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

MAP OF JASPER COUNTY, INDIANA, SHOWING HARDNESS OF WATER IN ROCKS OF SILURIAN AGE

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





EXPLANATION

HARDNESS OF WATER IN PARTS PER MILLION



Less than 100



100 - 200



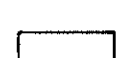
200 - 300



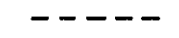
300 - 400



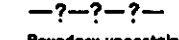
more than 400



Data not sufficient to show hardness

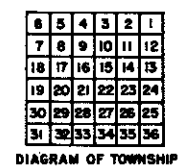


Boundary approximate

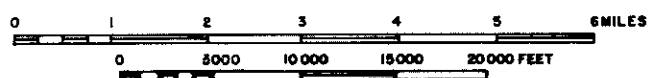


Boundary uncertain

Base from modified General Highway and Transportation Map revised to July, 1953



MAP OF JASPER COUNTY, INDIANA, SHOWING HARDNESS OF WATER IN ROCKS OF PLEISTOCENE AGE



BY J. S. ROSENHEIM AND J. D. MUNN
1961