STATE OF INDIANA

INDIANA DEPARTMENT OF CONSERVATION

DIVISION OF WATER RESOURCES

BULLETIN NO. 15

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: St. Joseph County

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

1962

INDIANA DEPARTMENT OF CONSERVATION

Donald E. Foltz, Director

BULLETIN NO. 15

OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: St. Joseph County

BY

J. S. Rosenshein and J. D. Hunn

GEOLOGISTS, U. S. GEOLOGICAL SURVEY

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION ON WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

1962

CONTENTS

ILLUSTRATIONS

(All plates in pocket)

TABLES

GROUND-WATER RESOURCES OF NORTHWESTERN INDIANA

Preliminary Report: St. Joseph County

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

ABSTRACT

St. Joseph County, in northwestern Indiana, has an area of about 468 square miles. Glaciofluvial sand and gravel of Pleistocene age is the chief source of ground water for domestic and stock, industrial, and public supplies. Wells that tap this source generally are less than 200 feet deep and yield from 5 to more than 2,000 gpm. The underlying bedrock is not used as a source of ground water. However, the bedrock of Devonian and Devonian and Mississippian(?) age is a potential source of water, although quality and quantity available is uncertain. Field chemical analyses show that the hardness of water from the glaciofluvial sand and gravel is generally greater than 200 ppm and less than 500 ppm. In much of the county the concentration of iron exceeds maximum concentration recommended in the U. S. Public Health Service drinking-water standards for iron and manganese together. However, there are sizable areas where this standard is not exceeded.

This preliminary report contains tabulated records of about 1,850 wells and test holes giving information about well construction, water level, condition of occurrence, and characteristics of water-bearing material; selected logs for about 710 wells and test holes giving driller's description of material penetrated and authors' interpretation of their geologic age; results of 426 field chemical analyses giving hardness of water and the bicarbonate, carbonate, chloride, iron, and sulfate content; and water levels in 24 observation wells indicating the magnitude of short-term and long-term water-level fluctuations in the unconsolidated rock. These basic data include much of the material to be used in an interpretive report on the ground-water resources and geology of the area.

A base map of St. Joseph County shows the location of each well or test hole listed in this report. Additional maps show the avilability of ground water in the county and quality of water in the unconsolidated rocks of Pleistocene age with respect to the hardness and iron content of the ground water.

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 fourth 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 geology and ground-water conditions 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 general direction of A. N. Sayre and P. E. LaMoreaux, successive chiefs of the Ground Water Branch of the Geological Survey, and under the immediate supervision of C. M. Roberts, district geologist of the Ground Water Branch for Indiana.

Location and Areal Extent

St. Joseph County is in the northwestern part of Indiana (fig. 1). The county is rectangular and includes about 468 square miles. It is bounded on the north by the State of Michigan, on the south by Marshall and Starke Counties, on the west by La Porte County, and on the east by Elkhart County.

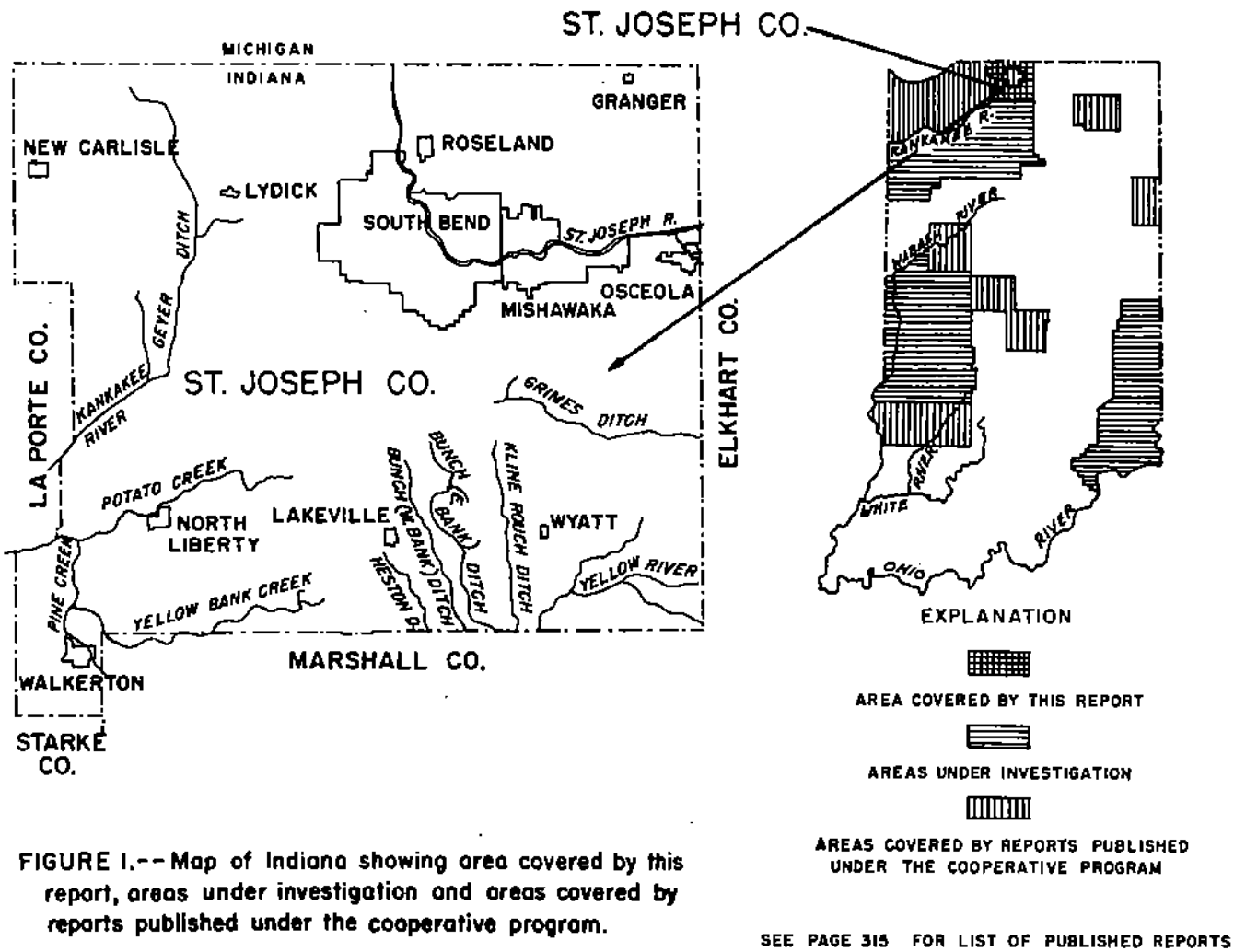

FIGURE 1.--Map of Indiana showing area covered by this report, areas under investigation and areas covered by reports published under the cooperative program.

SEE PAGE 315 FOR LIST OF PUBLISHED REPORTS

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 indicates its location according to the official rectangular public-land survey. As wells in this report are east and west of the second principle meridian, the letter "W" is included for ranges west of the meridian. No letter is included for ranges east of the second principle meridian. For example, in the number for Well 37/1W-24G1 the numbers preceeding the hyphen indicates that the well is in T. 37 N., R. 1 W. The first number after the hyphen indicates the section in which the well is located. Each quarter-quarter section (40-acre tract) within a section is assigned a letter symbol as shown on Figure 2. Within the quarter-quarter section the wells are numbered consecutively. Therefore, Well 24G1 is in the SW¼NE¼ sec. 24, T. 37 N., R. 1 W.

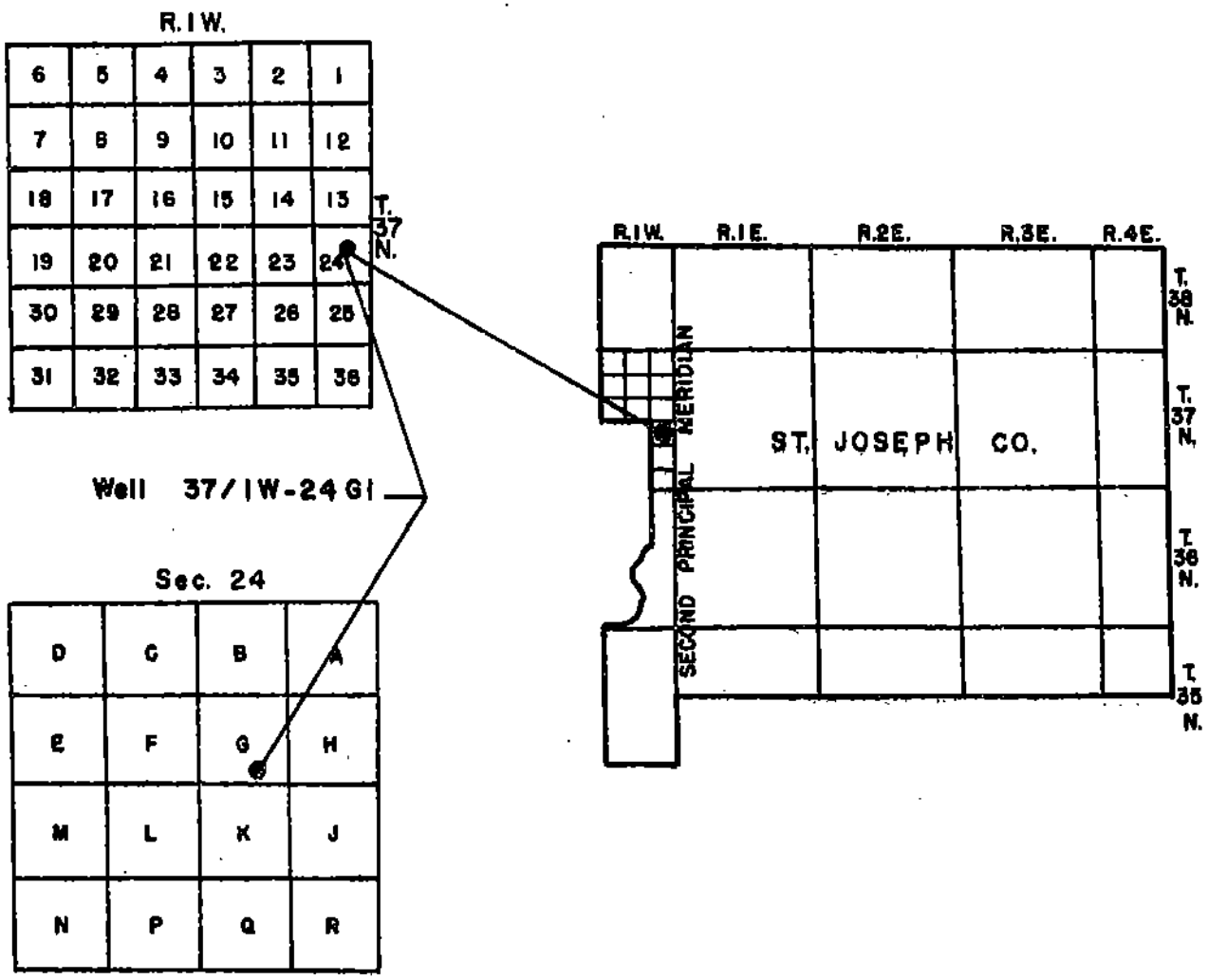

Figure 2.— Sketch showing well-numbering system.

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 W. J. Steen and

H. C. Kost of the Indiana Department of Conservation assisted in processing the data in the field. G. F. Westinghouse of the Topographic Division of the Geological Survey provided the elevations that were determined by the Topographic Division for unpublished topographic quadrangle maps of the county. Well drillers, whose names are listed in the table of well records, furnished much of the information summarized in tables 2 and 3.

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

DATA COLLECTION AND PROCESSING

The well data were collected from drillers, water-works superintendents, owners, and others. 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. Discrepancies between driller's location and the location of property shown in the plat books were corrected. The locations of wells were checked further in the field if major discrepancies existed between the driller's location and the property record in the plat books, if the location given by the driller could not be verified from county records, or if the verified location was not sufficiently accurate to be used.

Plate 1 shows the location of water wells and test holes, and test holes drilled for purposes other than water supply. Most of these locations are shown to the nearest 10 acres. The basic data for these wells and test holes are summarized in table 2. In addition, selected driller's logs of wells and test holes are given in table 3.

Samples of water were collected at the time well sites were visited. These water samples were analyzed in the field office for hardness, alkalinity (carbonate and bicarbonate), chloride, and sulfate content by standard titration methods. The alkalinity is expressed as carbonate and bicarbonate. The total 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 4) were used to select sites for collecting larger water samples for more comprehensive and accurate chemical analyses by the laboratory of the U. S. Geological Survey.

Observation wells were established prior to and during the investigation in order to determine the factors affecting the changes in storage in the ground-water resevoir. Table 5 contains the water-level data collected from these wells. The observation wells were chosen so as to obtain water-level information from artesian and water-table aquifers consisting of unconsolidated rocks. Whenever 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 St. Joseph County are of Ordovician age. These rocks consist of dolomite, dolomitic limestone, and shale and are overlain by dolomitic limestone, shale, and dolomite of Silurian age. The rocks of Ordovician and Silurian age are not used as a source of water supply in the county because of their depth and the highly mineralized water which they contain.

The rocks of Silurian age are overlain by dolomite and dolomitic limestone of Middle Devonian age. These rocks underlie blue-black bituminous shale of Devonian age (Logan, 1932) or Devonian and Mississippian age (Patton, 1956). This shale is listed as Devonian age in table 3. The rocks of Devonian and Mississippian(?) age grade upward into shale of Mississippian age which is overlain locally by thin limestone. Although these limestones and shales of Devonian and Mississippian age are not used as a source of water in St. Joseph County, they are a potential source of water, and the quality and quantity available are uncertain.

The bedrock is overlain by unconsolidated glacial drift of Pleistocene age. The drift forms several prominent topographic features in the county (Klaer and Stallman, 1948, pl 2; Leverett and Taylor, 1915, pl. 6; Wayne, 1958) such as the Valparaiso moraine in the extreme northwestern part, a two-prong extension of the Kalamazoo moraine in the north-central part; the Maxinkuckee moraine in the south-central part, and glaciofluvial plains and terraces in the northern and southwestern parts.

The unconsolidated rocks of Pleistocene age range in thickness from less than 50 feet to about 300 feet. The rocks consist chiefly of glaciofluvial sand and gravel, clayey till, and some glaciolacustrine clay and silt. The glaciofluvial sand and gravel is locally more than 200 feet thick and is the chief source of ground water for domestic and stock, industrial, and public supplies. Wells that tap this aquifer are generally less than 200 feet deep and yield from 5 to more than 2,000 gpm.

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

Plate 2 shows the availability of ground water in the unconsolidated rocks underlying the county. In addition, plates 3 and 4 show respectively the areal distribution of hardness and iron content of water from sand and gravel of Pleistocene age. The water is hard to very hard. The hardness is generally greater than 200 ppm and less than 500 ppm. However, in several small areas in the northern and southern parts of the county the hardness is less than 200 ppm. Although the iron content in much of the county exceeds maximum concentration

recommended in the U. S. Public Health Service drinking-water standards (p.252) for iron and manganese together, there are sizeable areas where this standard is not exceeded.

CONFINED AND UNCONFINED CONDITIONS

Ground water occurs in the consolidated and unconsolidated rocks of St. Joseph County under confined (artesian) conditions or under unconfined (water-table)conditions. Under confined conditions the saturated water-bearing material is overlain directly by relatively impervious material, and the water will rise above the level at which it is encountered in the water-bearing material. Under unconfined conditions the water-bearing material 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 St. Joseph County. Most water wells 3-inches or more in diameter are constructed by the cable-tool, or percussion, method, but a few wells have been drilled by the rotary and reverse-rotary methods. When 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 screens and the water-bearing material.

Water wells less than 3-inches in diameter are constructed in unconsolidated material by driving or jetting. The driven well consists of a small-diameter pipe having a drive point attached to the end, which is driven into shallow water-bearing material. The jetted well is constructed by forcing water under pressure out of a hollow-rod or small-diameter drill pipe that is fitted with a jetting bit. As the material is washed out of the hole ahead of the casing, the casing is driven down into the hole. After the water-bearing material is penetrated the well is generally finished with a well-point screen set in the water-bearing material below the bottom of the casing. Table 1 relates the grain-size in inches and millimeters to the slot and the gauze size of screens commonly used in water wells.

Oil or gas test holes in St. Joseph County generally were drilled by the cable-tool method. Structure test holes for foundations and bridges generally are drilled by the wash-boring method. In this method test hole samples usually are collected by driving a sampling tube into the material after specific intervals of boring.

Table 1.--Grain size and equivalent screen openings

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

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

SUMMARY

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

The quality of water from the rocks of Pleistocene age varies. The water is generally hard to very hard. In several small areas in the northern and southwestern parts the hardness of water is less than 200 ppm. Although the iron content exceeds the U. S. Public Health Service drinking-water standards for iron and manganese together in much of the county, there are sizeable areas in which the iron content does not exceed these standards.

RECORDS

The records of about 1,850 wells and test holes are given in table 2. The table contains information about well construction, water levels, yields and drawdowns, conditions of occurrence, thickness and characteristics of water-bearing materials, type of pump, and other data. The altitude of the land surface at all wells, except test borings was interpolated from topographic maps or extrapolated from aerial photographs using the vertical control of the Topographic Division of the Geological Survey. Altitudes of borings were leveled by the Federal or State agency for whom the borings were made.

Table 3 contains the selected logs of about 710 wells and test holes. This table gives the driller's description of the material encountered, pertinent remarks with regard to the material, and the authors' interpretation of the geologic age of the material.

The results of 450 partial chemical analyses of water are given in table 4. Of this number 426 were determined in the field office of the Geological Survey, and 24 were determined by commercial or other governmental laboratories. This table gives information about geologic source, temperature, concentration in parts per million (ppm) of iron, carbonate, 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 standards have been established for hardness of water. However, water with respect to hardness is generally classified as follows: 0-60 ppm soft; 61-120 ppm moderately hard; 121-200 ppm hard; more than 200 ppm very hard. Water having a hardness of more than 200 ppm requires softening for many purposes.

Table 5 contains the records of 24 observation wells of which two were established during the investigation and the rest prior to the investigation. The water levels in the observation wells were measured either by recording gages installed on the well or by manual measurements made with an engineer's steel tape graduated to a hundredth of a foot. The water levels are in feet below land-surface datum except where otherwise noted. Daily water levels are given for the observation wells equipped with recording gages for which the records have not been previously published. Previously published records are summarized, and only selected measurements are tabulated in the table. (See water-supply papers listed under U. S. Geological Survey in selected bibliography.) Periodic water levels are given for the observation wells measured manually. Factors affecting the water levels in the observation wells are also indicated. The location of the observation wells is shown on plate 1.

SELECTED BIBLIOGRAPHY

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

Harrell, Marshall, 1935, Ground Water in Indiana: Indiana Dept. Conserv., Div. Geology Pub. 113, 504 p.

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

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

Klaer, F. H., Jr., and Stallman, R. W., 1948, Ground-water resources of St. Joseph County, Indiana, part 1, South Bend area: Indiana Dept. Conserv., Div. Water Resources Bull. 3, 177 p.

Leverett, Frank, 1899, Wells of northern Indiana: U. S. Survey Water-Supply and Irrig. Paper 21, 64 p.

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

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

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

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

U. S. Geological Survey, issued annually, Water levels and artesian pressure in observation wells in the United States: U. S. Geol. Survey Water-Supply Papers 817, 840, 845, 886, 906, 936, 944, 986, 1016, 1023, 1071, 1096, 1126, 1156, 1165, 1191, 1221, 1265, 1321, and 1404.

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

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

Table 2.--Records of wells and test holes in St. Joseph County, Indiana

Well: See text for description of well-numbering system.
Altitude: Altitude of land-surface datum from topographic map, except as noted in text p. 7.
Type of well: B, bored; Dn, driven; Dr, drilled; Du, dug; J, jetted.
Finish: Gp, gravel pack; S, screen; dia, diameter in inches; g, gauze size; sl, slot size.
Character: D, drift; G, gravel; Sd, sand.
Geologic age: Pl, Pleistocene
Condition of occurrence: C, confined; U, unconfined; see text for definition of terms.

Water level: In feet below land-surface datum on date of completion of well, except where otherwise noted.
Use: Ac, air conditioning; D, domestic; Do, destroyed; I, industrial; Ir, irrigation; N, not used; O, observation; P, public supply; S, stock; T, test.
Type of pump and horsepower: C, centrifugal; J, jet; L, lift; P, pitcher; S, submersible; T, turbine; numeral indicates rated horsepower of electric motor.
Remarks: Ca, field chemical analysis in table 4; dd, drawdown; E, electric log available for inspection; G, gamma-ray log available for inspection; gpm, gallons per minute; KS, 1948, in Klear and Stallmann (1948); L, log of well in table 3.

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
35/1W- 1R1	H. Clingenpeel	E. Brooker	7-12-55	712	J	63	2	S; 3½ft, 60g, dia 1½	44	19	Sd,G	Pl	C	12	D,S	J	Fine sand and medium gravel overlain by 44 ft yellowish clay mixed with sand; Ca.
12B1	O. Schmoltz	----do----------	7-10-59	710	J	35	2½	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	----	---	D	------	L.
13G1	J. Capek	Woods and Kuol Well Drilling Co.	7-11-59	718	J	51	2	S; 3½ft, 60g, dia 1½	30	21	Sd,G	Pl	U	30	D	J1/2	Ca, L.
13H1	G. Matz	Srivor Drilling Co.	9-30-49	722	J	54	2	S; 3ft, 60g, dia 1½	42	12	Sd,G	Pl	C	28	D	J1/2	See log well 13G1; Ca.
13K1	J. Groves	E. Brooker	8- 6-55	725	J	159	2	S; 3½ft, 60g, dia 1½	145	14	Sd,G	Pl	C	26	D	J1/2	Ca.
23J1	Town of Walkerton	Layne-Northern Co., Inc.	9-32	715	Dr	92	12	S; 20ft	61	31	Sd,G	Pl	C	15	Do	------	See log well 23J2.
23J2	----do----------	Indiana-Michigan Water Development Co.	8- 2-42	715	Dr	163	12	S	---	---	Sd,G	Pl	----	---	P	------	Bedrock at 163 ft; L.
23J3	----do----------	----do----------	3- 9-45	715	Dr	100	6	----------	---	---	Sd	Pl	----	---	T	------	See log well 23J2.
23J4	----do----------	----do----------	4-11-45	715	Dr	98	12	S; 28ft, 10sl	60	39	Sd	Pl	C	2	P	T20	Dd 44 ft pumping 500 gpm; see log well 23J2.
23R1	----do----------	----do----------	8- 7-36	718	Dr	124	12	S; 12ft, 40sl, dia 11½	109	15	G,Sd	Pl	C	18	P	T20	Dd 80 ft pumping 120 gpm; L.
24M1	----do----------	----do----------	9- 4-42	710	Dr	142	12	S; 20ft, dia 10	122	20	G,Sd	Pl	C	16	P	T20	Dd 80 ft pumping 400 gpm; screen, upper 10 ft 20 g, lower 10 ft 60 g; L.
24M2	----do----------	----do----------	10-15-42	710	Dr	141	12	S; 12½ft, dia 10	122	19	G,Sd	Pl	C	14	P	T15	Dd 18 ft pumping 200 gpm; L.
24M3	J. Norris	E. Brooker	8-10-55	723	J	47	2	S; 3½ft, 60g, dia 1½	43	4	G,Sd	Pl	C	26	Ac	J1/3	
25C1	Town of Walkerton	Indiana-Michigan Water Development Co.	1-24-45	724	Dr	148	6	----------	---	---	Sd	Pl	----	51	T	------	L.
25D1	----do----------	----do----------	3- 2-45	728	Dr	136	6	----------	---	---	Sd,G	Pl	----	---	T	------	L.
25E1	J. Erbaugh	E. Brooker	6-23-56	730	J	54	2	S; 3½ft, 60g, dia 1½	40	14	Sd,G	Pl	C	24	D	------	L.
26A1	W. D. Gorsline	Srivor Drilling Co.	10-17-49	719	J	39	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	24	D	------	
35H1	E. Kerchart	E. Brooker	6-21-57	710	J	78	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	----	9	I	------	Ca.
35/1- 1A1	H. Kaser	Srivor Drilling Co.	11-10-52	800	J	80	2	S; 4ft, 60g, dia 1	---	---	Sd,G	Pl	----	---	---	J1/2	
1A2	----do----------	E. W. Schroeder	8- 6-59	800	J	108	2	S; 3ft, 12sl, dia 1½	36	72	Sd,G	Pl	C	25	D,S	J1/3	Yield 10 gpm; Ca. L.
1D1	----do----------	----do----------	7- 3-57	810	J	57	2	S; 3ft, 60g, dia 1½	48	9	G	Pl	C	32	---	L	Yield 8 gpm; L.
1J1	R. A. McEndarfer	Srivor Drilling Co.	11- 4-53	815	J	65	2	----do----------	45	20	Sd	Pl	C	22	D,S	J	Ca, L.
2E1	M. Kane	----------	--------	777	J	85	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	14	N	------	

35/1- 5R1	J. Six	E. Brooker	12- 3-55	735	J	46	2	S; 3½ft, 60g, dia 1¼	40	6	G,Sd	Pl	C	18	D	J1/3	Medium gravel with fine sand overlain by 40 ft yellow and blue clay.
9J1	R. C. Nye	Sriver Drilling Co.	5- 7-54	752	J	88	2½	S; 5ft, 60g, dia 1½	82	6	Sd	Pl	C	10	S	J	Ca, L.
10M1	C. Hivley	J. Hughes	10-56	756	J	82	2	S; 3ft, 60g, dia 1	60	22	G,Sd	Pl	C	---	D	P1/4	Flowed 5 gpm; gravel with gray sand overlain by 60 ft yellow and blue clay.
12J1	R. Collins	Sriver Drilling Co.	11-26-54	832	J	88	2	S; 3½ft, 60g, dia 1¼	80	8	Sd	Pl	C	49	---	J1/2	L.
14K1	J. Longaneckor	Mr. Kirkley	--------	768	J	84	2	----------	---	---	Sd,G	Pl	----	3	S	------	Flowed 1 gpm.
17J1	W. Parvey	E. Brooker	7- 5-59	737	J	58	2	S; 4ft, 60g, dia 1½	48	10	Sd,G	Pl	C	14	D,S	J1/2	Ca, L.
35/2- 1B1	M. Weiss	C. Rouch	3-55	830	J	125	2	S; 4ft, 60g	83	82	Sd,G	Pl	C	12	D,S	C3/4	Yield 20 gpm; sand and gravel overlain by 83 ft clay and silt.
1F1	E. Miller	----do----------	8- 2-57	835	J	40	3	----do----------	30	10	Sd,G	Pl	C	22	D,S	J3/4	Yield 30 gpm; Ca, L.
2F1	C. E. Cavendor	Sriver Drilling Co.	12-23-46	840	J	40	2	S; 3ft, 60g, dia 1½	24	16	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-40 ft; Ca.
2H1	F. W. Rupert	----do----------	8-50	845	J	44	2	----do----------	28	16	Sd,G	Pl	U	28	---	------	Sand and gravel from 0-44 ft.
2K1	J. Wozny	----do----------	8-23-53	840	J	49	2	----do----------	24	25	G,Sd	Pl	U	24	D	J	Ca, L.
2L1	W. Pugh	--------	--------	835	J	39	2	S; 3ft, 10sl, dia 1½	---	---	Sd,G	Pl	----	32	---	J3/4	
2P1	J. Peters	Sriver Drilling Co.	5-18-49	830	J	39	2	S; 3ft, 60g, dia 1½	28	11	Sd,G	Pl	C	18	D	------	L.
2R1	G. Fansler	----do----------	8-23-52	835	J	49	2	S; 3½ft, 60g, dia 1¼	10	30	Sd,G	Pl	U	10	D	------	Sand and gravel from 0-49 ft.
3L1	L. Platz	----do----------	8-14-48	860	J	58	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	48	---	------	Coarse sand and gravel overlain by clay mixed with gravel.
3N1	F. Kizor	--------	--------	860	J	65	2	S; 3½ft, 60g, dia 1¼	---	---	Sd,G	Pl	----	59	---	L1/2	Ca.
4D1	G. E. Stump	Sriver Drilling Co.	5- 8-47	875	J	144	2	S; 5ft, 60g, dia 1½	---	---	Sd	Pl	----	68	D,S	L	Ca.
4W1	F. W. Pilgor	----do----------	5-12-47	885	J	94	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	80	D,S	L	
4R1	S. Byror	----do----------	10-16-52	870	J	111	2	S; 3½ft, 60g, dia 1½	104	7	Sd	Pl	C	49	D	------	Ca, L.
5A1	S. Strykul	----do----------	8- 8-45	875	J	100	2	S; 5ft, 60g, dia 1½	---	---	Sd	Pl	----	64	---	------	
6A1	C. Starzynski	----do----------	--------	810	J	84	2½	S; 5ft, dia 1½	74	10	Sd	Pl	C	30	D,S	J1	Ca, L.
6A2	----do----------	----------	--------	810	J	75	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	C	27	D,S	J1	Ca.
6L1	R. Korsh	----------	--------	825	J	48	2	----do----------	---	---	Sd	Pl	----	30	---	------	
7J1	G. Gushwa	Sriver Drilling Co.	3-10-50	851	J	76	2	S; 3½ft, 60g, dia 1¼	---	---	Sd,G	Pl	----	59	D	------	
8B1	F. Markley	----do----------	8- 8-56	885	J	105	2	S; 3½ft, 8sl, dia 1¼	90	15	Sd	Pl	C	50	D,S	------	Ca, L.
8N1	E. Roush	----do----------	8-18-53	852	J	87	2	S; 3ft, 60g, dia 1½	66	21	G	Pl	U	66	---	------	L.
10D1	M. Richards	E. W. Schroeder	8-19-59	870	J	126	2	S; 3½ft, 12sl, dia 1½	100	26	Sd,G	Pl	C	80	D	------	Yield 10 gpm; L.
10J1	Mr. Houck	Sriver Drilling Co.	--------	847	J	35	2	S; 3ft, 60g, dia 1½	20	15	Sd,G	Pl	C	18	D	L	Sand and gravel overlain by 20 ft blue clay; Ca.
11D1	C. Everett	C. Rouch	10-57	835	J	70	2	S; 4ft, 60g	54	16	Sd	Pl	C	40	D,S	J1/2	Fine to coarse sand overlain by 54 ft clay and silt.
14H1	L. Geyer	----do----------	9-55	832	J	45	2	S; 3ft	36	9	Sd	Pl	C	18	D,S	J1/2	Yield 20 gpm; Ca, L.
15C1	E. Herr	Sriver Drilling Co.	5- 9-46	851	J	99	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	34	---	------	
16E1	C. N. Gillis	----do----------	10-27-45	897	J	124	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	100	---	------	
16N1	F. Bronner	Indiana-Michigan Water Development Co.	5-20-40	873	Dr	49	4	S; 10ft, 15sl, dia 3½	25	24	Sd,G	Pl	U	25	D,S	T2	Ca, L.
18E1	E. Kaser	E. W. Schroeder	9-13-57	816	J	40	2	S; 3ft, 60g, dia 1½	30	10	G	Pl	C	28	D	------	Yield 8 gpm; Ca, L.
18G1	D. T. Harbaugh	Sriver Drilling Co.	1052	842	J	60	2	S	---	---	Sd	Pl	----	---	---	J1/2	
18Q1	E. R. Hively	----do----------	2-23-40	842	J	69	2	S; 3ft, 60g, dia 1½	48	21	Sd,G	Pl	U	48	D	------	Sand and gravel overlain by 45 ft clay; Ca.
21C1	N. Bartlett	----------	--------	887	J	50	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	23	---	J3/4	Ca.
35/3-11D1	C. Dutol	Kennedy Well Service	10-17-56	820	Dr	98	4	S; 4½ft, 10sl, dia 2	92	6	Sd,G	Pl	C	18	D,S	J1	Yield 60 gpm; Ca, L.
13R1	J. Pittman	W. Burkholder	8-14-57	822	J	101	2	S; 60g	---	---	Sd,G	Pl	----	---	D	L	Ca.
16E1	O. S. Hochstetler	Sriver Drilling Co.	9-29-48	847	J	139	3	S; 5ft, 60g, dia 2	131	8	Sd,G	Pl	C	100	D,S	J1/2	Ca, L.
18E1	E. Rouch	C. Rouch	5-55	832	J	70	2	S; 4ft, 60g	60	10	Sd	Pl	C	15	S	L1/4	Ca, L.
35/4-17L1	A. Stevens	Sriver Drilling Co.	4- 4-46	831	J	112	2	S; 3ft, 60g, dia 1¼	102	10	Sd	Pl	C	18	D	------	Ca.
38/1W-13Q1	W. H. Snyder	Shell Oil Co.	1941	897	Dr	289	---	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 175 ft; 97 ft shale underlain by 17 ft dolomite; dolomite contained water with hydrogen sulfide gas.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
36/1W-25P1	W. Rose	Hunts Hoosier Hardware	1956	704	J	58	2	S; 4ft, 60g	20	38	Sd,G	Pl	U	20	S	J1	Yield 15 gpm; Ca, L.
26D1	M. Nelson	Shell Oil Co.	1941	688	Dr	300	---	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 152 ft; 136 ft shale underlain by 12 ft dolomite.
35B1	W. Ruff	Sriver Drilling Co.	10-30-50	705	J	40	2	S; 3½ft, 60g, dia 1½	25	15	Sd	Pl	C	13	D,S	J1/4	Ca, L.
36/1- 1F1	Camp Millhouse	Indiana-Michigan Water Development Co.	6-18-51	745	Dr	88	4	S; 8ft, 30sl, dia 3½	---	---	Sd,G	Pl	----	32	P	------	L.
1H1	V. Kring	Sriver Drilling Co.	--------	750	J	43	2	S; 3ft, 60g, dia 1½	22	21	G,Sd	Pl	U	22	D,S	J1/2	Sand overlain by 40 ft gravel; Ca.
1K1	R. Rogers	----do----------	2-15-57	745	J	37	2	----------	31	27	Sd,G	Pl	U	31	D,S	------	Originally drilled to 58 ft; Ca.
1N1	T. Jones	Woods and Keel Well Drilling Co.	11- 9-50	740	J	39	2	S; 3½ft, 60g, dia 1½	27	12	Sd	Pl	C	18	S	------	Yield 10 gpm; L.
1R1	G. Strantz	Sriver Drilling Co.	9-20-51	740	J	43	2	----do----------	---	---	Sd,G	Pl	----	---	D	------	Sand and gravel from 0-43 ft.
8N1	R. Miller	Shell Oil Co.	1941	695	Dr	332	---	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 112 ft; 210 ft shale underlain by 10 ft limestone and dolomite.
8Q1	H. Whitman	Sriver Drilling Co.	12-24-53	722	J	87	2	S; 3ft, 60g, dia 1½	75	12	Sd	Pl	C	38	D	------	L.
8R1	E. Lynn	----do----------	12-24-53	735	J	87	2	----do----------	70	17	Sd	Pl	C	40	D	J3/4	Ca, L.
9L1	R. Futa	----do----------	12-27-46	742	J	50	2	----do----------	---	---	Sd,G	Pl	----	44	D,S	------	
9L2	----do----------	----do----------	11-15-49	742	J	50	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	U	31	D,S	------	Sand and gravel from 0-50 ft.
10C1	H. Wolff	----do----------	7-28-55	750	J	47	2½	S; 3ft, 60g, dia 1½	31	16	Sd,G	Pl	U	31	D	------	Sand and gravel overlain by 18 ft clay.
10C2	H. P. Woods	Woods and Keel Well Drilling Co.	9-28-59	746	J	50	2	S; 3½ft, 60g, dia 1½	30	20	Sd	Pl	----	30	D	J3/4	Yield 13 gpm; Ca, L.
10D1	W. Kopanski	Sriver Drilling Co.	4-16-58	749	J	64	2	----do----------	31	33	Sd,G	Pl	U	31	D	------	Yellow sand and gravel from 0-64 ft.
11D1	E. R. Prytz	----do----------	9-19-50	748	J	40	2	S; 3ft, 60g, dia 1½	30	10	Sd,G	Pl	U	30	D	J3/4	Sand and gravel from 0-40 ft.
12B1	C. E. Patterson	----do----------	4-19-50	740	J	33	2	S; 3ft, 60g	---	---	Sd,G	Pl	----	16	---	------	
12C1	T. Jones	----do----------	7-18-51	740	Dn	32	2	S; 5ft, 60g, dia 2	---	---	Sd,G	Pl	----	17	D	------	Ca.
13H1	A. Sattler	----do----------	--------	790	J	120	2	S; 3½ft, 60g, dia 1½	106	14	Sd,G	Pl	C	75	D	J1/2	L.
13K1	H. Gerlack	----do----------	1- 8-57	780	J	100	3	S; 4ft, 60g, dia 1	90	10	Sd	Pl	C	64	D	------	Ca, L.
17B1	H. Whitmer	----do----------	--------	732	J	36	2	----do----------	---	---	Sd	Pl	----	---	---	------	
17B2	E. Whitmer	----do----------	12-10-52	732	J	90	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	17	D,S	J1/2	Ca.
17Q1	H. Chabora	Woods and Keel Well Drilling Co.	7-14-59	727	J	24	2	----do----------	13	11	Sd	Pl	U	13	D	------	Yield 12 gpm; sand from 0-24 ft.
19B1	E. Eldred	Sriver Drilling Co.	3-31-47	727	J	50	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	30	D	------	Ca.
19R1	V. W. Smith	Mr. Hughes	--------	727	Dn	21	2	----------	---	---	Sd	Pl	----	---	D	------	Ca.
21D1	E. Parmley	Sriver Drilling Co.	--------	728	J	38	2	S; 3½ft, 60g, dia 1½	29	9	Sd	Pl	C	8	D	------	Ca, L.
22C1	J. Holloway	----do----------	9-14-50	742	Dn	25	1½	S	---	---	Sd	Pl	----	15	D	------	
23A1	R. Minglin	----do----------	5-12-45	742	J	46	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	2	---	------	
23Q1	C. Whitmer	Woods and Keel Well Drilling Co.	8- 9-59	758	J	65	2	S; 3½ft, 60g, dia 1½	40	25	Sd	Pl	C	21	D	------	Yield 9 gpm; sand overlain by 40 ft clay with some sand.
24H1	C. Lightfoot	Sriver Drilling Co.	7- 4-50	790	J	53	2	----do----------	29	24	Sd,G	Pl	U	29	D,S	------	Sand and gravel overlain by 18 ft clay.
25J1	W. F. Hay	----------	--------	800	Dr	300	6-3	----------	---	---	Sd,G	Pl	----	---	---	------	Oil test; bedrock at 225 ft; L.
26P1	F. Kring	Sriver Drilling Co.	1-29-52	770	J	113	2	S	---	---	Sd	Pl	----	---	---	J3/4	
28C1	D. A. Pearse	Ohio Oil Co.	--------	733	Dr	1,514	7	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 202 ft; L.
28E1	L. D. Shoemaker	E. Brooker	6-12-57	722	J	63	2	S; 3½ft, 60g, dia 1½	40	23	Sd,G	Pl	C	12	D,I	J1/2	Ca. L.

36/1-28N1	Town of North Liberty	----------	Before 1930	732	Dr	67	8	S; 10ft, dia 6	---	---	Sd,G	Pl	----	17	P	T15	Yield 260 gpm.
28N2	----do----------	Layne-Northern Co., Inc.	3-13-40	728	Dr	100	8	S; 16ft	---	---	G,Sd	Pl	----	18	P	T	Yield 400 gpm; L.
32G1	W. E. Boone	E. Brooker	6-14-57	732	J	44	2	S; 3½ft, 60g, dia 1½	35	11	Sd,G	Pl	C	14	D	L	Fine to coarse sand and fine gravel overlain by 35 ft yellow clayey gravel; Ca.
32G2	J. Hiatt	Sriver Drilling Co.	--------	727	J	49	2	S; 3ft, 80g, dia 1½	35	14	G	Pl	C	10	D	------	Ca, L.
32G3	J. Holmes	----do----------	--------	730	J	49	2	S; 3ft, 80g, dia 1½	25	24	G,Sd	Pl	C	14	D	------	See log well 32G2.
32K1	F. J. Larson	----do----------	11-21-46	732	J	40	2	----do----------	---	---	Sd,G	Pl	----	22	---	J1/2	Ca.
33B1	H. Louks	----do----------	12- 5-58	730	J	67	2	S; 3½ft, 60g, dia 1½	42	25	Sd	Pl	C	16	D	------	L.
33D1	Wells Specialty Co., Inc.	Indiana-Michigan Water Development Co.	4-13-54	735	Dr	73	8	S; 10ft, 14sl, dia 5½	18	55	Sd,G	Pl	U	18	I	TJ	Ca, L.
33N1	T. Pearse	Sriver Drilling Co.	4- 8-52	737	J	46	2	S; 3½ft, 10sl, dia 1½	---	---	Sd	Pl	----	20	D,S	------	
34A1	C. E. Stull	----do----------	7-50	760	J	58	2	S; 3ft, 60g, dia 1½	49	9	Sd	Pl	C	12	D	J	Sand overlain by 49 ft clay; Ca.
34J1	C. Kaser	----do----------	11- 1-45	767	J	73	2	S; 5ft, 60g, dia 1½	---	---	Sd	Pl	----	8	D,S	------	Ca.
35M1	G. Stull	----do----------	--------	753	J	43	2	S; 3½ft, 80g. dia 1½	38	5	Sd	Pl	C	---	D,S	------	Flowed; sand overlain by 38 ft blue clay.
35M2	----do----------	C. Rouch	9-57	753	J	78	2	S; 3ft	58	18	Sd,G	Pl	C	+4	D,S	J	Flowed 17 gpm; L.
36J1	R. Reamschnyder	Sriver Drilling Co.	--------	800	J	108	2	S; 5½ft, 60g, dia 1½	---	---	Sd	Pl	----	20	D	J1/2	
36N1	Z. W. Miller	----do----------	10-25-46	810	J	58	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	---	D	J1/2	Ca.
36N2	H. Markley	----do----------	1-14-46	800	J	52	2	----do----------	---	---	G	Pl	----	7	D	------	
36/2- 1A1	E. Heminger	----do----------	5-11-45	840	J	90	2	S; 3ft, 80g, dia 1½	---	---	G,Sd	Pl	----	54	D	------	
1B1	A. C. Spellman	----do----------	8- 7-57	840	J	97	2	S; 3½ft. 60g, dia 1½	72	25	Sd	Pl	U	72	D	J3/4	Sand overlain by 21 ft yellow clay; Ca.
1C1	W. A. Mitchell	----do----------	8-19-53	805	J	51	2	S; 3ft, 60g. dia 1½	34	17	G,Sd	Pl	U	34	D	J1/2	L.
1C2	R. L. Rodgers	----do----------	10-15-53	805	J	51	2	----do----------	30	21	Sd,G	Pl	U	30	D	------	Sand and gravel from 0-51 ft.
1C3	E. A. Peterson	----do----------	12-24-53	805	J	52	2	----do----------	36	18	G,Sd	Pl	U	38	D	J1/2	Ca, L.
1C4	G. Richards, Jr.	----do----------	10-14-53	805	J	55	2	----do----------	32	23	Sd,G	Pl	U	32	D	J1/2	Sand and gravel from 0-55 ft.
1C5	G. E. Hostetler	Sriver Drilling Co.	8-14-48	805	J	58	2	----do----------	36	22	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-58 ft.
1C6	C. W. Brown	----------	--------	805	J	62	2	S; 3ft, 10sl, dia 1½	---	---	Sd,G	Pl	U	43	D	J3/4	
1D1	E. L. Cripe	Sriver Drilling Co.	--------	805	J	57	2	S; 3ft, 80g, dia 1½	37	20	Sd,G	Pl	U	37	D	------	Sand and gravel from 0-57 ft.
1D2	R. Udvardi	----do----------	9- 8-52	800	J	47	2	S; 3½ft, 60g, dia 1½	28	18	Sd,G	Pl	U	28	D	J1/2	Sand and gravel from 0-47 ft.
1D3	H. F. Trapp	----------	--------	800	J	51	2	S; 4ft, 80g, dia 1	---	---	Sd,G	Pl	U	31	D	------	
1D4	Whitcomb and Keller	Sriver Drilling Co.	9-29-53	800	J	49	2	S; 3ft. 80g, dia 1½	24	25	Sd,G	Pl	U	24	D	J1/2	Sand and gravel from 0-49 ft.
1D5	----do----------	----do----------	9-30-53	800	J	50	2	----do----------	26	24	Sd,G	Pl	U	26	D	J1/2	Sand and gravel from 0-50 ft.
1H1	V. Danner, Jr.	----do----------	9-19-50	850	J	87	2	----do----------	68	19	Sd,G	Pl	U	68	---	------	Sand and gravel from 0-87 ft; Ca.
2A1	D. Boylor	----do----------	8- 9-48	825	J	59	2	----do----------	38	21	Sd,G	Pl	U	38	D	------	Ca, L.
2A2	R. Foley	----do----------	--------	810	J	46	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	U	24	D	------	
2A3	R. Fletcher	----do----------	7-23-49	810	J	42	2	S; 3ft, 60g, dia 1½	24	18	Sd,G	Pl	U	24	D	J3/4	Sand and gravel overlain by 8 ft clay.
2A4	G. Blevens	----------	12-27-45	800	J	40	2	S	---	---	Sd,G	Pl	U	21	---	J1/2	
2D1	R. Loshor	Sriver Drilling Co.	9-15-49	825	J	64	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	46	D	------	
2D2	D. Perkins	----do----------	10-20-45	825	J	52	2	S; 3ft, 60g, dia 1½	---	---	G	Pl	----	47	D	L	
2P1	L. Kelly	----do----------	--------	860	J	87	2½	S; 5ft, 60g, dia 1½	60	27	Sd,G	Pl	U	60	D	L	Sand and gravel overlain by 14 ft yellow clay.
2Q1	A. H. Fetherling	----do----------	5-14-40	890	J	110	2	S; 3ft, 80g, dia 1½	100	10	G	Pl	U	100	D	J1	Gravel overlain by 50 ft clay and gravel.
2Q2	L. Michael	----do----------	10-15-50	870	J	94	2	----do----------	70	24	Sd,G	Pl	U	70	D	J1	Sand and gravel from 0-94 ft.
2Q3	Mr. Abee	----do----------	8-18-47	883	J	114	3	S; 4ft, 80g, dia 2	91	23	Sd,G	Pl	U	91	D	------	Sand and gravel overlain by 60 ft clay.
2Q4	E. P. Eby	----do----------	8-24-53	875	J	113	2½	S; 3½ft, 60g, dia 1½	85	28	G,Sd	Pl	U	85	D	------	L.
2R1	W. K. Watkins	----do----------	5-19-51	880	J	118	2	S; 3½ft, 60g. dia 1½	87	31	Sd,G	Pl	U	87	D	------	L.
2R2	M. Moore	----do----------	8-12-54	880	Dr	121	4	S; 10ft, 10sl	87	34	Sd,G	Pl	U	---	D	J	L.
2R3	F. Duczolich	----do----------	10-20-56	870	J	115	3	S; 5ft, 80g. dia 2	---	---	Sd,G	Pl	U	---	D	J2	Sand and gravel overlain by 20 ft yellow clay; Ca.
2R4	M. Schafer	----------	--------	880	J	98	2	S; 3½ft. 80g. dia 1½	---	---	Sd,G	Pl	----	85	D	J1	
2R5	W. Gidley	Sriver Drilling Co.	7-30-47	885	J	116	2	S; 3ft. 60g. dia 1½	92	24	G,Sd	Pl	U	92	D	------	L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
38/2- 2R6	J. Odusch	Sriver Drilling Co.	1- 3-51	885	J	115	3	S; 4ft, 60g, dia 2	90	25	Sd,G	Pl	U	90	D	J1	Yellow sand and gravel overlain by 25 ft yellow clay.
2R7	C. M. Ailor	----do----------	--------	880	J	112	2½	S; 5ft. 60g, dia 1½	86	26	Sd,G	Pl	U	86	D	J1/3	Sand and gravel overlain by 35 ft yellow clay.
3A1	S. Herezeg	----do----------	1-18-49	825	J	63	2	S; 3ft, 60g, dia 1¼	48	15	Sd,G	Pl	U	48	D	------	L.
3B1	C. Steck	----do----------	7-24-48	815	J	62	2	----do----------	50	12	Sd,G	Pl	C	40	N	------	L.
3D1	E. Lawson	----do----------	8- 5-48	815	J	44	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	14	D	------	
3D2	E. Prontkowski	----do----------	8- 6-46	815	J	44	2	----do----------	---	---	Sd	Pl	-----	14	D	------	
3D3	W. Bowers	----do----------	4-15-47	820	J	40	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	26	D	L	
3D4	E. Guhse	----do----------	5- 7-51	820	J	58	2	S; 3ft, 60g, dia 1	---	---	Sd	Pl	-----	32	D	------	
3G1	Mr. Barbar	----do----------	5-22-57	830	J	97	3	S; 7ft, 60g, dia 2	60	37	Sd,G	Pl	C	59	D	------	L.
3N1	F. Smith	----do----------	--------	840	J	94	2	S; 3½ft, 60g, dia 1½	88	7	G	Pl	C	64	---	------	L.
3P1	R. Daly	----do----------	--------	840	J	83	2	S; 5ft, 10sl, dia 1½	65	18	Sd,G	Pl	C	47	---	------	L.
3P2	W. M. Bogner	----do----------	--------	840	J	42	2	S; 3ft, 60g, dia 1¼	20	22	Sd,G	Pl	U	20	D	------	Yellow sand and gravel overlain by 18 ft yellow clay.
3R1	F. D. Wilson	----------	--------	840	J	83	2	S; 3½ft, 10sl, dia 1½	---	---	Sd	Pl	-----	40	---	L	
3R2	Gentner Packing Co.	Indiana-Michigan Water Development Co.	9-10-37	845	Dr	176	8	S; 10ft. 40sl, dia 7½	158	18	G	Pl	C	51	N	T10	Dd 20 ft pumping 160 gpm; L.
3R3	----do----------	----do----------	8-19-45	845	Dr	161	12	S; 15½ft, 70g, dia 10	149	31	Sd	Pl	C	50	P,I	T15	Dd 52 ft pumping 90 gpm; Ca, L.
3R4	----do----------	----do----------	11- 9-54	845	Dr	154	10	S; 10½ft, 10sl, dia 10	143	11	Sd	Pl	C	50	I	T10	Dd 102 ft pumping 75 gpm; Ca, L.
3R5	F. D. Wilson	Sriver Drilling Co.	6-22-56	840	J	177	2½	S; 5ft, 60g, dia 1½	146	31	Sd	Pl	C	50	D	J1	Ca, L.
4W1	W. E. Kessler	----do----------	4-28-50	805	J	114	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	C	49	D	------	L.
4W2	L. Kelly	----do----------	3- 6-52	820	J	154	2½	S; 5ft, 60g, dia 1½	148	8	Sd	Pl	C	60	D	------	Red sand overlain by 148 ft blue clay.
4W3	A. Parker	----do----------	12-27-57	825	J	162	2½	S; 3½ft, 60g, dia 1½	148	14	Sd,G	Pl	C	67	D	------	Ca, L.
4W4	F. Rice, Sr.	----do----------	9- 2-56	---	J	148	2	S; 3½ft, 10sl, dia 1½	140	8	Sd	Pl	C	119	D	J1	Sand overlain by 140 ft blue clay; Ca.
4N1	R. Campbell	----------	--------	830	J	160	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	-----	79	D,S	J3/4	
5D1	R. Umbaugh	Sriver Drilling Co.	--------	770	J	66	2	S; 3ft, 80g. dia 1½	53	13	Sd	Pl	C	40	D	------	L.
5D2	V. Nemeth	----do----------	12-11-51	770	J	59	2	S; 4½ft, 80g, dia 1	52	7	Sd	Pl	C	38	D	------	See log well 5D1.
5F1	E. J. Frushour	----do----------	--------	780	J	97	2	S; 3½ft. 60g, dia 1	54	43	Sd,G	Pl	U	54	---	J1/2	Yellow sand and gravel overlain by 20 ft yellow clay.
5G1	C. J. Huffmaster	----do----------	--------	780	J	94	2	----do----------	---	---	Sd	Pl	-----	52	D	J1/2	
5K1	T. Farris	----do----------	8-15-50	790	J	88	2	S; 3ft, 60g, dia 1¼	80	8	Sd	Pl	C	53	D	------	Sand overlain by 80 ft clay.
5K2	P. H. A. Cooper	----do----------	5-25-49	790	J	78	2	----do----------	65	11	G	Pl	C	56	---	------	Hard gravel overlain by 65 ft clay and gravel.
5L1	E. Pinter	----do----------	8-23-52	790	J	86	2	S; 3½ft. 60g, dia 1½	---	---	Sd	Pl	-----	61	D	------	
5L2	J. Poczik	----do----------	4- 3-47	795	J	94	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	-----	70	D	------	
5L3	R. Moore	----do----------	5- 3-48	790	J	94	2	----do----------	75	19	G	Pl	C	60	D	J3/4	L.
5M1	L. James	----do----------	8- 7-47	765	J	89	2	----do----------	---	---	Sd,G	Pl	-----	34	D	L	
5M2	J. J. Pinter	----do----------	1-20-49	765	J	77	2	----do----------	69	8	Sd,G	Pl	C	38	D	------	L.
5M3	R. E. Pacay	----do----------	5-30-50	765	J	66	2	S; 3½ft, 60g, dia 1½	41	25	Sd,G	Pl	U	41	D	------	Sand and gravel from 0-66 ft.
5N1	G. R. Youngs	----do----------	7-23-52	765	J	68	2½	S; 5ft, 60g. dia 1½	58	10	Sd	Pl	C	34	D	------	Ca, L.

36/2- 5N2	R. E. Youngs	Sriver Drilling Co.	1950	765	J	65	2	S; 3½ft, 10sl, dia 1½	56	9	Sd	Pl	C	28	---	------	See log well 5N1; Ca.
5P1	A. F. Verhostra	----do----------	4-13-48	790	J	94	2	S; 3ft, 60g, dia 1½	---	---	G	Pl	----	82	D	L	
5Q1	D. [illegible]orst	----do----------	--------	825	J	134	2	S; 3½ft, 10sl, dia 1½	124	10	Sd	Pl	C	97	D	------	L.
5Q2	[illegible]tephens	----do----------	5-28-49	785	J	94	2	S; 3½ft, 60g, dia 1½	84	10	Sd	Pl	C	69	D	------	Ca, L.
5Q3	[illegible]rs	----do----------	1-24-53	825	J	120	2	S; 3½ft, 10sl, dia 1½	103	17	G,Sd	Pl	U	103	D	------	L.
8A1	Mr. [illegible]ery	----do----------	3- 2-54	765	J	88	2	S; 3ft, 10sl, dia 1½	76	10	Sd,G	Pl	C	40	D	------	L.
8D1	P[illegible]	----do----------	--------	755	J	64	2	S; 3½ft, 10sl, dia 1½	37	27	Sd	Pl	U	37	D,S	J1/2	Yellow sand overlain by 38 ft yellow coarse gravel.
8F1	[illegible]n	----do----------	--------	760	J	60	2	S; 3ft, 60g, dia 1½	50	10	Sd,G	Pl	C	34	D	L	Ca, L.
8F2		----do----------	2-24-54	760	J	57	2	----do----------	---	---	Sd,G	Pl	----	40	D	J1/2	L.
7J1	[illegible]	----------	--------	---	J	78	2	S; 5½ft, 60g. dia 1½	---	---	Sd	Pl	----	---	---	J1	
8C1	H. [illegible]r	Sriver Drilling Co.	9-13-50	805	J	52	2	S; 3ft, 60g, dia 1½	35	17	Sd	Pl	U	35	---	------	Sand from 0-52 ft.
8D1	W. [illegible]	----do----------	8-50	775	J	64	2	----do----------	40	24	Sd,G	Pl	U	40	D	------	Sand and gravel from 0-64 ft.
8D2	H. [illegible]	----do----------	8-15-49	775	J	72	2	----do----------	66	8	Sd	Pl	C	40	D	------	L.
8D3	J. [illegible]	----do----------	7-22-49	775	J	61	2	----do----------	46	15	Sd,G	Pl	U	46	D	------	Sand and gravel from 0-61 ft.
8J1	J. [illegible]n	----do----------	9- 7-56	---	J	160	2	S; 3½ft, 60g, dia 1½	145	15	Sd	Pl	C	75	D,S	J1	Ca, L.
8M1	Mr. Gostola	----do----------	7-20-49	---	J	72	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	42	D	------	
8M2	W. Anderson	----------	--------	---	J	58	2	----do----------	---	---	Sd	Pl	----	24	D	J3/4	
9B1	A. C. Whickcar	----------	--------	845	J	126	2	----do----------	---	---	Sd	Pl	----	46	D	J1	
9R1	O. S. Pope	----------	--------	915	J	166	2	S	---	---	Sd	Pl	----	---	D,S	L	
10C1	S. A. Edholm	Sriver Drilling Co.	--------	875	Dr	------	6	S	---	---	Sd	Pl	----	---	I	J1-1/2	
10D1	----do----------	----------	--------	840	J	101	2	S; 3½ft, 100g, dia 1	---	---	Sd	Pl	----	26	D,S	------	Ca.
10K1	J. Lanczowski	Sriver Drilling Co.	12-17-51	---	Dn	27	1¼	S	---	---	Sd,G	Pl	----	20	D,S	J1/4	Ca.
11A1	E. Dudack	----do----------	12-11-48	870	J	112	2	S; 3ft, 60g, dia 1½	80	22	Sd,G	Pl	U	90	D	------	Sand and gravel overlain by 18 ft clay.
11B1	J. H. Christiana	----do----------	8-22-53	870	J	94	2	----do----------	68	26	G	Pl	U	66	D	L	Gravel from 0-94 ft.
11B2	J. DuBower	----do----------	7-20-51	870	J	92	2	S; 3½ft, 60g, dia 1½	65	27	Sd,G	Pl	U	65	D	L	Yellow sand and gravel from 0-92 ft.
11B3	G. Paymer	----do----------	2-12-49	870	J	88	2	S; 3ft, 60g, dia 1½	68	18	G,Sd	Pl	U	68	D	------	L.
11C1	R. Stapp	R. Raddish	7-30-57	860	J	68	2	S; 3½ft, dia 1½	50	18	Sd,G	Pl	U	50	---	J1/2	Yield 10 gpm; sand and gravel from 0-68 ft.
11G1	G. C. Flesher	Sriver Drilling Co.	7-23-51	870	J	78	2	S; 3½ft. 60g, dia 1½	61	15	Sd,G	Pl	U	61	D	------	Sand and gravel overlain by 12 ft yellow clay.
11G2	C. R. Castle	Mr. Smith	--------	---	J	90	2	----------	---	---	Sd	Pl	U	---	O	------	Observation well St. Joseph 2; water level measured 53.20 below lsd, 10-7-35.
11K1	S. Gumkowski	Sriver Drilling Co.	12-22-48	870	J	80	2	S; 3ft, 60g, dia 1½	58	24	Sd,G	Pl	U	58	N	------	Sand and gravel overlain by 36 ft yellow clay.
11N1	Hartman Buildors	----do----------	10-23-59	850	J	76	2	S; 3½ft, 60g, dia 1½	55	21	G,Sd	Pl	C	45	D	------	Yield 11 gpm; L.
11P1	W. Alexander	----do----------	9-13-48	855	J	88	2	S; 3ft, 60g, dia 1½	62	24	Sd,G	Pl	U	62	D	------	Sand and gravel overlain by 38 ft clay and gravel.
11P2	A. Alexander	----do----------	4- 2-52	855	J	89	2	S; 3½ft, 60g, dia 1	53	36	Sd,G	Pl	U	53	D	L	Red sand and gravel overlain by 35 ft yellow clay.
11P3	R. L. Seals	----do----------	--------	860	J	89	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	U	---	D	L	Sand and gravel overlain by 40 ft blue clay.
11P4	V. K. Hazzard	----do----------	--------	860	J	86	2	----do----------	52	35	G	Pl	U	52	D	------	Gravel overlain by 40 ft yellow clay.
11P5	F. Dare	----do----------	--------	860	J	79	2	S; 3½ft, 10sl, dia 1½	64	15	Sd,G	Pl	U	64	D	------	Sand and gravel overlain by 33 ft blue clay.
11P6	R. Bauer	----do----------	10-11-56	850	J	78	2	S; 3½ft, 60g, dia 1½	57	19	Sd,G	Pl	U	57	D	------	L.
11Q1	V. Wells	----do----------	8-17-51	860	J	74	2	----do----------	58	16	Sd,G	Pl	U	58	D	L	Yellow sand and gravel overlain by 35 ft blue clay.
12Q1	R. Whitmor	----do----------	8-10-56	875	J	94	2	----do----------	77	17	Sd	Pl	U	77	D,S	------	L.
13P1	R. L. Smith	----do----------	7-29-54	860	J	93	2	S; 3ft, 60g, dia 1½	60	33	Sd,G	Pl	U	60	D	J	Sand and gravel overlain by 35 ft blue clay; Ca.
13Q1	E. Metz	----------	--------	850	J	58	2	S; 4ft, 60g, dia 1	---	---	Sd	Pl	----	42	D	J1/2	
14B1	A. L. Williams	Indiana-Michigan Water Development Co.	6-30-35	855	Dr	94	4	S; 10ft, 15sl	55	39	Sd	Pl	----	55	N	------	Yield 40 gpm; L.
	J. Birch	Sriver Drilling Co.	7- 2-53	860	J	97	2	S; 3ft, 60g, dia 1½	48	48	G,Sd	Pl	U	48	D	J1	L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
36/2-14B2	R. Lyons	Sriver Drilling Co.	4-25-57	865	J	77	2	S; 4½ft, 60g, dia 1½	59	18	Sd	Pl	U	59	D	------	Sand overlain by 30 ft yellow clay.
14F1	F. Goethals	----do----------	8- 5-54	860	J	75	2	S; 3ft, 60g, dia 1½	47	28	Sd,G	Pl	U	47	D	------	L.
14G1	T. E. McDaniel	----do----------	3- 2-46	865	J	76	2	----do----------	---	---	Sd	Pl	-----	60	D	------	
14M1	C. Simmons	----do----------	1-18-51	865	J	76	2	----do----------	---	---	Sd	Pl	-----	57	D	------	
14M2	F. Kulczar	----do----------	7-27-56	865	J	76	2	S; 3½ft, 60g, dia 1½	57	19	Sd	Pl	U	57	D	J3/4	L.
14L1	L. Moon	----do----------	6-50	860	J	76	2	S; 3ft, 60g, dia 1½	50	28	Sd,G	Pl	U	50	D	------	Sand and gravel overlain by 30 ft clay.
14P1	R. Overmyer	----do----------	8-16-52	860	J	70	3	S; 4ft, 60g, dia 2	---	---	Sd	Pl	-----	44	D	J1	Ca.
14R1	C. L. Van Sky Hawk	----do----------	--------	850	Dr	98	4	S; 16ft, 12sl	35	61	G,Sd	Pl	C	33	D	J5	L.
16Q1	Mr. Paterson	----do----------	6-14-46	860	J	94	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	50	D	L	
17R1	A. Szabo	----do----------	6- 2-48	875	J	76	2	----do----------	---	---	Sd,G	Pl	-----	58	---	------	
18C1	M. Summers	----do----------	10-14-57	---	Dr	130	4	S; 10ft, 10sl	---	---	Sd,G	Pl	-----	48	S	------	Ca, L.
18Q1	A. Gorbics	----do----------	--------	840	J	64	2	S; 3½ft, 10sl, dia 1½	---	---	Sd,G	Pl	-----	36	D	------	
19F1	L. Lewis	----------	--------	850	J	58	2	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	-----	48	---	J1/3	Yield 5 gpm.
20A1	W. D. Roeser	Sriver Drilling Co.	7-26-48	870	J	79	2	----do----------	62	17	Sd,G	Pl	U	62	D,S	J	Sand and gravel overlain by 40 ft clay; Ca.
20B1	J. Andert	----do----------	8- 4-55	870	J	79	3	S	64	15	Sd	Pl	U	64	D,S	J1	Ca, L.
20R1	J. Varga	----do----------	11-14-56	860	J	76	2	S; 3½ft, 60g, dia	---	---	Sd	Pl	-----	50	---	------	Ca.
21C1	D. Donathon	----do----------	6-50	870	J	110	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	52	D,S	J1/2	Ca.
21D1	H. Geyer	----do----------	1952	865	J	52	2	S; 3ft, 10sl, dia 1½	---	---	Sd,G	Pl	-----	39	D,S	J	
21N1	E. L. Watkins	----------	--------	850	J	58	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	33	---	J1/2	
21P1	R. Stephens	Sriver Drilling Co.	--------	850	J	30	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	14	---	------	
22F1	H. L. Carr	----do----------	8- 1-53	865	J	100	2	----do----------	67	33	Sd,G	Pl	U	67	D	J1/2	Ca, L.
23D1	G. Strickler	----do----------	5-15-47	855	J	80	2	----do----------	---	---	Sd,G	Pl	-----	56	Ir	------	
24B1	C. Good	----do----------	9- 3-52	855	J	71	2	S; 3½ft, 60g, dia 1½	47	24	Sd,G	Pl	U	47	D,S	------	Gray sand and gravel overlain by 42 ft blue clay; Ca.
24M1	S. Nucci	----------	--------	850	J	85	---	S	---	---	Sd	Pl	-----	50	D,S	------	
24N2	L. E. Pittman	----------	--------	845	J	68	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	42	D	J3/4	
24N1	C. Casper	W. Rodgers	4-25-56	845	J	60	2	S; 3ft, 10sl, dia 1½	55	5	Sd,G	Pl	C	40	D	L	Sand and gravel overlain by 55 ft yellow clay.
25C1	H. Wright	C. Rouch	10-57	850	J	120	2	S; 4ft, 60g	---	---	Sd,G	Pl	-----	45	D,S	J1/2	
25E1	D. Whaley	----------	--------	845	J	60	2	S	---	---	Sd	Pl	-----	---	D	J1/2	
25P1	C. Good	Sriver Drilling Co.	8- 4-51	840	J	79	2½	S; 5ft, 60g, dia 1½	68	11	Sd	Pl	C	24	D,S	------	Ca, L.
26B1	M. A. Natino	----------	--------	850	J	58	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	39	---	J3/4	
26C1	Mr. King	Sriver Drilling Co.	--------	855	J	81	2	----do----------	54	27	Sd,G	Pl	U	54	D	------	Yellow sand and gravel overlain by 15 ft yellow clay.
26D1	Mr. Kipp	----do----------	--------	855	J	57	2	----do----------	41	16	Sd,G	Pl	U	41	D	------	Yellow sand and gravel overlain by 30 ft blue clay.
26D2	J. Auer	----do----------	9-17-46	855	J	77	2	----do----------	---	---	Sd	Pl	-----	52	D	------	
26D3	D. H. Thomas	----------	--------	855	J	75	2	----do----------	---	---	Sd	Pl	-----	47	D	L1/2	Ca.
26K1	M. M. Vincent	C. Rouch	9- 6-57	855	J	80	2	S; 4ft, 60g	---	---	Sd	Pl	-----	50	D,S	------	Yield 15 gpm; sand and hardpan from 0-80 ft.
26H1	H. Annis	Sriver Drilling Co.	9- 8-49	840	J	44	2	S; 3ft, 60g, dia 1½	28	16	Sd,G	Pl	U	28	D	------	Sand and gravel overlain by 17 ft clay.
26J1	----do----------	----do----------	6-50	840	J	58	2	----do----------	40	16	Sd,G	Pl	-----	26	D	------	Sand and gravel overlain by 40 ft clay.
26J2	Annis Bros.	----do----------	11-21-50	840	J	53	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	31	D	------	

36/2-26J3	H. Annis	Sriver Drilling Co.	3-24-52	840	J	81	2	S; 3½ft, 10sl, dia 1½	42	19	Sd	Pl	C	28	D	------	Dark sand overlain by 42 ft blue clay.
26M1	J. Kalafat	----do----------	8- 8-52	855	J	87	2	----do----------	38	28	G,Sd	Pl	U	38	D	------	L.
27A1	M. Lisher	----do----------	3-20-52	855	J	76	2	----do----------	48	27	Sd,G	Pl	C	49	---	------	L.
27A2	F. Walters	----------	--------	855	J	54	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	C	47	---	J1/2	
27E1	R. Schafer	Sriver Drilling Co.	8-28-52	860	J	60	3	S; 4½ft, 60g, dia 2	---	---	Sd	Pl	----	40	---	J1	
29M1	F. Daka	----------	--------	845	J	36	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	21	D	J	
29P1	G. E. Burton	Sriver Drilling Co.	7-19-51	800	J	41	2	----do----------	21	20	G,Sd	Pl	U	21	D	------	Gravel and sand overlain by 8 ft yellow clay.
30C1	H. Roxstrow	----do----------	9- 1-51	810	J	108	2	S; 3½ft, 60g, dia 1	102	7	Sd	Pl	C	40	D,S	J1/2	Ca, L.
30N1	C. Nemeth	----do----------	8- 7-53	770	J	75	2	S; 3ft, 60g, dia 1½	60	15	Sd	Pl	C	9	D	J1/2	Sand overlain by 60 ft blue clay.
31C1	H. Moon	----do----------	8-23-45	780	J	73	2	S; 5ft, 60g, dia 1½	---	---	Sd,G	Pl	----	36	D,S	------	
32B1	J. Banyk	----do----------	9- 9-54	855	J	91	3	S; 5ft, 60g, dia 2	65	28	G,Sd	Pl	C	54	D,S	J2	Ca, L.
32J1	V. Six	----do----------	3-18-46	870	J	123	2	S; 5ft, 60g, dia 1½	---	---	Sd	Pl	----	36	---	------	
32M1	Wabash Railroad Co.	Indiana-Michigan Water Development Co.	6-17-41	824	Dr	92	12	S; 20ft, 15sl, dia 11½	43	30	Sd	Pl	U	43	O	------	Observation well St. Joseph 24; water level measured 40.11 ft below lsd 1-13-57; L.
32R1	W. H. Goucher	Sriver Drilling Co.	--------	885	J	103	2	S; 5½ft. 80g, dia 1	---	---	Sd	Pl	----	80	N	------	
32R2	----do----------	----do----------	11-21-53	885	J	184	3	S; 60g, dia 2	---	---	Sd,G	Pl	----	70	D,S	J1-1/2	Ca, L.
33Q1	J. Metz	----do----------	--------	865	J	140	2	S; 5½ft, 80g, dia 1	140	9	Sd	Pl	C	52	D	L	Dark sand overlain by 140 ft blue clay.
33Q2	A. C. Milewski	----do----------	9- 3-52	860	J	183	2	S; 3ft, 10sl, dia 1½	177	6	Sd	Pl	C	47	D	------	Ca, L.
33R1	N. Grzesiak	C. Rouch	6-57	850	J	48	2	S; 3ft, 60g	---	---	Sd	Pl	----	38	S	L1/2	Yield 10 gpm; Ca, L.
34J1	Town of Lakeville	Layne-Northern Co., Inc.	2-23-38	845	Dr	84	8	S; 20ft, dia 7½	31	55	Sd,G	Pl	U	31	P	T20	Dd 31.75 ft pumping 410 gpm; L.
34R1	Fertile Acres Dairy	Indiana-Michigan Water Development Co.	7-29-47	845	Dr	81	6	S; 12ft, 35sl, dia 5½	---	---	Sd,G	Pl	----	28	I	T5	Dd 1.5 ft pumping 50 gpm; Ca, L.
35L1	G. Diehl	Sriver Drilling Co.	3-24-56	840	J	58	2	S; 3½ft, 60g, dia 1½	46	12	Sd	Pl	C	11	D	J1/2	Ca, L.
35M1	M. Clark	----do----------	2-27-53	840	J	39	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	10	D	------	Yellow sand and gravel overlain by 29 ft yellow clay and coarse gravel; Ca.
36C1	R. Wright	C. Rouch	9- 3-57	840	J	58	2	S; 4ft, 60g	54	4	Sd	Pl	C	26	D	------	Yield 15 gpm; L.
36J- 1M1	L. Holmes	Sriver Drilling Co.	9- 1-53	855	J	98	2	S; 3ft, 60g, dia 1½	73	25	Sd,G	Pl	U	73	D	------	L.
1M2	D. Tharp	----do----------	10-11-55	835	J	99	2	S; 3½ft, 10sl, dia 1½	80	19	Sd	Pl	C	66	D	J1	L.
1N1	C. Ward	----do----------	--------	855	J	108	2	S; 3ft, 60g, dia 1½	80	28	Sd,G	Pl	C	74	D	------	L.
1P1	G. C. Avery	----do----------	5-24-50	850	J	116	2	S; 3½ft, 60g, dia	108	8	G	Pl	C	59	---	------	Ca, L.
2D1	R. Sloss	----do----------	8-10-50	850	J	90	2	----do----------	73	23	Sd,G	Pl	U	73	D	------	Sand and gravel overlain by 60 ft clay and gravel.
2E1	E. Walters	----do----------	1-27-47	850	J	112	2	S; 5ft, 80g, dia 1½	---	---	Sd,G	Pl	----	76	D	------	
2E2	J. De Witte	----do----------	4-15-49	855	J	93	2	S; 3ft, 60g, dia 1½	79	14	Sd,G	Pl	U	79	D	------	L.
2F1	G. Hahn	----do----------	3-10-51	850	J	115	2	S; 5ft, 60g, dia 2	84	31	Sd,G	Pl	U	84	D,S	J1	Sand and gravel overlain by 75 ft clay and gravel; Ca.
2M1	R. Parcell	----do----------	4-23-57	850	J	131	2½	S; 8ft	90	41	Sd	Pl	C	84	D	J1	Ca, L.
2Q1	R. Jaqua	----------	--------	860	J	98	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	81	D	J1	
2R1	D. Byrd	Sriver Drilling Co.	2-25-58	855	J	113	3	S; 4½ft, 80g, dia 2	94	19	Sd	Pl	C	80	D,S	J1-1/2	Ca, L.
3E1	C. Geyer	Kennedy Well Service	9-16-55	800	J	92	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	65	D	------	Yield 15 gpm.
3E2	Contact Lumber Co.	----do----------	9-14-55	860	J	93	2	----do----------	---	---	Sd	Pl	----	65	D	------	Do.
3E3	A. Moody	Sriver Drilling Co.	9- 8-52	870	J	117	2	S; 3½ft, 10sl, dia 1½	78	39	Sd	Pl	U	78	D	J3/4	Yellow sand overlain by 42 ft blue clay.
3E4	S. Crothers	----do----------	8-20-54	870	J	99	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	80	D	J1	
3E5	F. H. Innis	----do----------	10-14-57	870	J	94	2	S; 3½ft, 60g, dia 1½	60	34	Sd	Pl	U	60	D	J3/4	Sand overlain by 20 ft clay.
3F1	R. O. Johnson	----do----------	8-16-54	870	J	101	3	S; 5ft, 60g, dia 2	76	25	Sd,G	Pl	U	76	D	J1-1/2	Ca, L.
3G1	H. G. Merrick	----------	--------	860	J	90	2	S	---	---	Sd,G	Pl	----	67	D	L1/2	
4J1	K. Crofoot	Sriver Drilling Co.	2-12-54	870	J	102	2½	S; 5ft, 60g, dia 1½	80	22	Sd,G	Pl	C	72	D,S	------	L.
5F1	W. Reihl	----------	--------	855	J	82	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	84	D,S	J3/4	Ca.
5N1	L. M. Harris	Sriver Drilling Co.	7-15-36	860	J	93	3	S; 5ft, 60g, dia 2	62	31	Sd,G	Pl	U	82	D	J1-1/2	Sand and gravel from 0-93 ft; Ca.
7A1	H. Leach	----do----------	1037	855	J	79	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	18	D	J1	Ca.
7B1	F. Koglovich	----do----------	1-28-58	855	J	82	3	S; 5ft, 60g, dia 2	62	20	Sd,G	Pl	U	62	---	------	Sand and gravel overlain by 30 ft yellow clay.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
36/3- 7C1	C. Shafer	Sriver Drilling Co.	10-10-53	850	J	210	2	S; 5½ft, 60g, dia 1¼	---	---	Sd	Pl	C	38	D,S	JJ/4	Ca, L.
7E1	M. Kerckhove	----do----------	9- 3-45	850	J	82	3	S; 5½ft, 80g, dia 2	---	---	Sd	Pl	----	40	D,S	------	Ca.
7M1	W. Shoremoyer	----do----------	5-16-57	850	J	68	2½	S; 4½ft, 60g, dia 1¼	---	---	G,Sd	Pl	----	---	D	------	
7N1	M. Fall	----------	--------	850	J	64	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	53	---	J1	
8B1	P. Ruff	C. Rouch	--------	855	J	100	2	S; 4ft, 80g	93	7	Sd,G	Pl	C	70	D	L	Yield 14 gpm; Ca, L.
8E1	R. C. Samuels	----------	--------	850	J	73	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	58	D	J1/2	
8F1	G. LaFree	----------	--------	870	J	105	2	S; 3½ft, 60g, dia 1¼	---	---	Sd,G	Pl	----	85	---	L	Sand and gravel overlain by 85 ft yellow clay.
9E1	D. Anthony	W. Rodgers	7-19-54	850	J	81	2	S; 3½ft, 10sl, dia 1¼	---	---	Sd,G	Pl	----	65	D	J1	
9E2	F. Anthony	----------	--------	850	J	78	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	----	67	D,S	J1/2	
10E1	R. C. Samuels	Sriver Drilling Co.	6-11-53	845	J	95	2	S; 4½ft, 80g, dia 1¼	---	---	Sd	Pl	----	58	D,S	------	L.
10N1	K. M. Felton	----do----------	12-13-52	845	J	88	2	S; 3½ft, 80g, dia 1¼	60	28	Sd,G	Pl	C	53	D	------	Yellow sand and gravel overlain by 60 ft blue and gray clay and gravel.
10N2	H. J. Beehler	----do----------	7- 3-47	845	J	94	2	S; 3ft, 60g, dia 1¼	60	34	Sd,G	Pl	C	54	D	L	Sand and gravel overlain by 60 ft tough gravelly clay.
11A1	R. Bokhart	----do----------	11- 6-57	850	J	98	2	S; 3½ft, 10sl, dia 1¼	81	17	Sd,G	Pl	U	81	D	J1	Sand and gravel overlain by 45 ft clay; Ca.
15C1	C. Trippel	----------	--------	845	J	75	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	40	D,S	J1	Ca.
15E1	R. Frick	Sriver Drilling Co.	4-19-50	845	J	94	2	----do----------	85	9	Sd,G	Pl	C	54	D	------	Sand and gravel overlain by 85 ft clay mixed with gravel.
15N1	St. Joseph County	----do----------	1-30-50	845	J	94	2	----do----------	78	16	Sd	Pl	C	52	---	------	Sand overlain by 78 ft clay.
15N2	Mr. Newcomer	----do----------	11-50	840	J	92	2	S; 3ft, 60g, dia 1¼	76	16	Sd	Pl	C	32	D	------	L.
15N3	L. Marker	----do----------	1952	845	J	93	2	S; 3½ft, 10sl, dia 1¼	78	15	Sd,G	Pl	C	68	D	JJ/4	Blue sand and gravel overlain by 76 ft blue gravel and clay; Ca.
16A1	C. Stuber	----do----------	--------	850	J	80	2	S; 3ft, 60g, dia 1¼	72	8	Sd	Pl	C	80	---	------	Sand overlain by 72 ft clay.
16B1	F. Kline	----do----------	2-19-51	850	J	94	2	S; 3½ft, 80g, dia 1¼	72	22	Sd	Pl	C	61	---	------	Do.
16H1	N. D. Craighead	----do----------	9-14-50	845	J	94	2	S; 3ft, 60g, dia 1¼	80	14	Sd,G	Pl	C	60	D	------	Sand and gravel overlain by 80 ft clay and gravel.
16J1	K. Weil	----do----------	7-18-47	845	J	94	2	----do----------	80	14	Sd	Pl	C	60	D	------	Sand overlain by 80 ft clay mixed with gravel.
16R1	P. Kobold	----do----------	8-50	845	J	94	2	----do----------	85	9	Sd	Pl	C	54	D	------	Ca, L.
17A1	C. Harein	----do----------	11-19-52	845	J	69	3	S; 5ft, 60g, dia 2	62	7	Sd,G	Pl	U	62	---	J1	Rod sand and gravel overlain by 48 ft blue clay and gravel
17B1	----do----------	----do----------	3-28-46	845	J	76	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	----	42	---	------	
17B2	H. Dunning	----do----------	4-18-50	845	J	80	2	S; 3½ft, 60g, dia 1¼	57	23	Sd,G	Pl	U	57	D	------	L.
17C1	E. Myers	----do----------	7- 2-46	850	J	76	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	48	D,S	J1/2	Ca.
17P1	F. Fasenacht	----do----------	1949	840	J	62	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	----	40	D,S	J	Ca.
17Q1	W. Kohlhardt	----do----------	3-53	840	J	57	2	S; 3ft, 60g, dia 1¼	40	17	Sd,G	Pl	C	38	D	------	Ca, L.
17R1	S. Horvath	----do----------	1-13-54	840	J	76	2	----do----------	---	---	Sd	Pl	----	51	D,S	L	
18A1	G. LaFree	----do----------	9-13-52	845	J	69	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	39	D,S	J1	
18B1	G. Schutz	----------	--------	845	J	55	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	43	S	L	
18C1	G. LaFree	Sriver Drilling Co.	1-16-47	845	J	76	2	----do----------	---	---	Sd	Pl	----	46	D,S	LJ/4	Ca.
18D1	----do----------	----do----------	9-24-49	860	J	75	2	----do----------	58	17	Sd,G	Pl	U	58	N	------	Sand and gravel overlain by 20 ft blue clay.

36/3-18E1	L. J. Alford	----------	--------	860	J	80	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	57	D,S	J1/2	Ca.
18M1	L. Kurz	Sriver Drilling Co.	12- 1-45	865	J	97	3	S; 7ft, 60g, dia 2	---	---	Sd	Pl	----	64	D,S	J1-1/2	Ca.
19C1	H. C. Brown	----do----------	--------	870	J	124	2	S; 3½ft, 10sl, dia 1¼	100	24	Sd,G	Pl	C	70	D	------	Yellow sand and gravel overlain by 100 ft blue clay.
19C2	P. Schafer	----do----------	7-22-46	875	J	112	2	S; 3½ft, 60g, dia 1¼	---	---	Sd,G	Pl	C	82	D	------	
19C3	C. Schafer	----------	--------	870	J	113	2	S; 4ft, 60g, dia 1	---	---	Sd,G	Pl	C	78	D	J1	
19C4	Mr. Henderson	Sriver Drilling Co.	5-24-52	870	J	123	2	S; 3½ft, 60g, dia 1¼	90	33	Sd,G	Pl	C	73	D	------	L.
19C5	R. Schoskor	----------	--------	883	J	148	2	S; 3½ft, 60g, dia 1	---	---	Sd,G	Pl	C	98	D	J1	
19C6	Mr. Braniff	Sriver Drilling Co.	5-12-52	870	J	123	2	S; 3½ft. 10sl. dia 1¼	90	33	Sd,G	Pl	C	74	D	------	See log well 19C4.
19C7	B. B. Henderson	H. J. Lewis and Sons	10-14-59	870	J	137	4	S; 6ft, 80g, dia 3½	104	33	Sd	Pl	C	72	D	------	L.
19N1	P. C. Stradley	Sriver Drilling Co.	7-27-51	880	J	115	3	S; 6½ft, 60g, dia 2	---	---	Sd,G	Pl	----	---	---	------	Sand and gravel overlain by 102 ft blue clay mixed with sand and gravel.
19P1	D. Schaffer	C. Rouch	5-57	873	J	112	3	S; 6ft, 60g	60	52	Sd,G	Pl	U	60	D,S	J1	Yield 60 gpm; L.
19R1	W. Zelgor	----do----------	11-53	885	J	140	3	----do----------	---	---	G	Pl	----	75	D,S	J1-1/2	Do.
21A1	W. J. Blue	Sriver Drilling Co.	4-28-51	850	J	116	3	S; 5ft, 60g, dia 2	102	14	Sd,G	Pl	C	65	---	J1-1/2	Sand and gravel overlain by 102 ft blue clay and cobbles.
21C1	E. Hanley	----do----------	10- 3-47	845	J	94	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	54	D	------	
21D1	L. Frick	----do----------	6-22-57	840	J	74	2	S; 3½ft, 60g, dia 1¼	60	14	Sd	Pl	C	54	---	------	Ca, L.
21E1	R. Frick	----------	--------	840	J	125	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	----	48	---	------	Ca.
21R1	F. Traub	C. Rouch	8-28-57	835	J	103	2	S; 4ft, 80g	97	6	G	Pl	C	27	D	------	Yield 15 gpm; Ca, L.
22E1	R. Kline	Sriver Drilling Co.	4-10-48	840	J	105	2	S; 3½ft, 60g, dia 1¼	---	---	G	Pl	----	38	---	------	Ca.
23C1	C. L. Amick	H. J. Moore and Son	6- 4-59	850	Dr	100	4	S; 10ft, 27sl. dia 3	86	14	Sd,G	Pl	----	---	---	------	Brown gravelly coarse sand overlain by 86 ft blue clayey, sandy, gravelly hardpan; Ca.
24D1	W. Searer	Sriver Drilling Co.	6-24-46	850	J	130	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	46	D	------	
27A1	W. Geyer	----do----------	11- 1-48	845	J	177	2	----------	---	---	-----	--	----	---	N	------	No water reported; bedrock at 177 ft; L.
30A1	H. R. McCauslan	----------	--------	885	J	125	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	70	D	L	Ca.
30B1	E. Rausch	----------	--------	880	J	120	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	25	D,S	L	
30D1	D. Stonger	Sriver Drilling Co.	2-27-53	845	J	80	2	----do----------	50	30	Sd,G	Pl	C	18	---	------	Ca, L.
30H1	F. Wernor	----do----------	12-27-52	875	J	114	2	----do----------	105	9	Sd,G	Pl	C	64	D	J1	Red sand and gravel overlain by 105 ft blue clay; Ca.
32C1	H. C. Wurster	C. Rouch	8-14-59	850	J	120	4	S; 6ft, 10sl, dia 3	100	20	G,Sd	Pl	C	30	D,S	------	Yield 60 gpm; Ca, L.
33Q1	J. Hensler	----------	--------	---	Du	13	----	----------	---	---	D	Pl	----	---	O	------	Observation well St. Joseph 3; water level measured 6.48 ft below lsd, 10-29-38.
34L1	L. Chalk	Sriver Drilling Co.	12- 1-51	830	J	95	2	S; 3½ft, 10sl, dia 1¼	87	8	Sd	Pl	C	21	D	J1	Dark sand overlain by 87 ft blue clay.
35B1	C. Kline	----do----------	8-50	840	J	108	2	S; 3½ft, 60g, dia 1¼	101	7	G	Pl	C	38	---	------	Gravel overlain by 101 ft clay.
35B2	----do----------	----do----------	12-14-49	840	J	105	2	----do----------	100	5	G	Pl	C	35	---	------	Ca, L.
36/4- 5M1	F. Wald	----do----------	3- 1-51	830	J	116	2	----do----------	110	6	Sd	Pl	C	38	D	J	Sand overlain by 110 ft clay; Ca.
6D1	A. P. Van Durmen	----do----------	11-24-44	850	J	112	2	S; 3ft, 80g, dia 1¼	---	---	Sd	Pl	----	82	---	------	
6M1	R. Borden	----do----------	11-11-59	840	J	76	2	S; 3½ft, 60g, dia 1¼	52	24	Sd,G	Pl	----	52	D	------	Yield 11 gpm; L.
16E1	L. W. Strycher	H. J. Moore and Son	8- 2-50	820	J	133	2	S; 20ft, 88g	---	---	Sd,G	Pl	----	---	N	------	Bedrock at 133 ft; L.
17Q1	K. Berkey	W. Rodgers	7-17-53	830	J	123	2	S; 4ft, 80g, dia 1	118	5	Sd	Pl	C	20	D,S	J	Yield 10 gpm; hard sand overlain by 118 ft blue clay mixed with gravel; Ca.
18W1	C. and A. Cannoot	H. J. Moore and Son	8-20-51	---	J	117	2	S	115	2	G	Pl	C	40	D	------	L.
29A1	Overholt Sisters	----------	--------	835	J	45	2	S; 3½ft, 80g, dia 1¼	---	---	Sd,G	Pl	U	20	---	------	
29A2	----do----------	Sriver Drilling Co.	9- 3-59	835	J	44	2	----do----------	20	24	Sd,G	Pl	U	20	D,S	T	Yield 10 gpm; sand and gravel from 0-44 ft; Ca.
30D1	M. Yoder	----------	--------	835	J	145	2	S; 3ft, 60g, dia 1	---	---	Sd	Pl	----	45	---	J1/2	Ca.
32R1	K. C. Munsbergor	Sriver Drilling Co.	11-18-52	830	J	48	2	S; 3½ft, 60g, dia 1¼	12	34	Sd,G	Pl	----	12	D,S	J	Dark sand and gravel overlain by 12 ft blue clay; Ca.
33R1	M. H. Lantz	----do----------	5- 2-49	835	J	90	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	10	D	------	Ca.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/1W- 2B1	Mr. Grimes	Hunts Hoosier Hardware	9- 6-56	781	J	47	2	S; 3½ft, 60g, dia 1	34	13	Sd	Pl	U	34	D	J1/2	Yield 13 gpm; coarse brown sand overlain by 40 ft brown sand and dirt; Ca.
11D1	A. Kitchen	----do----------	11- 1-57	850	Dr, J	160	3	S; 4ft, 10sl	126	34	Sd	Pl	U	126	D	------	Ca, L.
14N1	Studebaker Corp.	Indiana-Michigan Water Development Co.	5- 9-43	735	Dr	60	6	S; 20ft, 50g, dia 4	8	52	Sd	Pl	U	8	I	T3	Dd 8 ft pumping 90 gpm; well Sj 24-10 (KS, 1948); Ca, L.
15F1	I. F. and M. J. Haag	----------	10-12-46	850	Dr	1,017	10-6½	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 287 ft.
24D1	Tri-County Farms	Layne-Northern Co., Inc.	8-26-46	717	Dr	119	6	----------	---	---	Sd,G	Pl	----	---	T	------	L.
24J1	H. Surma	Sriver Drilling Co.	1-29-49	710	J	48	2	S; 3ft, 60g, dia 1¼	4	44	Sd,G	Pl	U	4	Do	------	Sand and gravel from 0-48 ft; Ca.
37/1- 1B1	W. Biggs	----do----------	8- 9-52	750	J	51	3	S	30	21	Sd,G	Pl	U	30	---	J1-1/2	Sand and gravel from 0-51 ft.
1L1	M. R. Denison	----do----------	7-11-53	742	Dr	66	4	S; 8ft, 10sl	33	33	Sd,G	Pl	U	33	D	------	Ca, L.
1M1	South Bend Country Club	Indiana-Michigan Water Development Co.	10-31	735	Dr	62	10	S; 15 ft, 30sl, dia 9½	8	54	Sd,G	Pl	U	8	Ir, P	T15	Dd 3 ft pumping 200 gpm; L.
1M2	----do----------	----do----------	4-30-34	720	Dr	76	10	----do----------	2	74	Sd,G	Pl	U	2	Ir	T10	Dd 7 ft pumping 1,000 gpm; Ca, L.
2G1	Warren Township Trustees	Michiana Drilling Co.	8-22-56	748	Dr	100	6	S	40	60	G,Sd	Pl	U	40	P	S	Dd 10 ft after 4.5 hr pumping 80 gpm; Ca, L.
7C1	Mr. King	Sriver Drilling Co.	7-31-48	732	J	40	2	S; 3ft, 60g, dia 1¼	7	33	Sd,G	Pl	U	7	D	------	Sand and gravel from 0-40 ft.
7F1	O. Gardner	Hunts Hoosier Hardware	6-20-57	728	J	89	2	S; 4ft, 60g, dia 1	69	20	G,Sd	Pl	U	69	D	------	Yield 13 gpm; L.
8C1	J. Kush	----------	9-27-39	727	Dr	1,016	----	----------	---	---	-----	--	----	---	---	------	Oil test; bedrock at 163 ft.
9F1	E. Cintor	Sriver Drilling Co.	5-15-52	717	J	58	2	S; 3½ft, 60g, dia 1¼	7	51	Sd,G	Pl	U	7	D	------	Dark sand and gravel from 0-58 ft; Ca.
9L1	T. Klodzynski	----do----------	5-24-52	717	J	44	2	----do----------	12	32	Sd,G	Pl	U	12	D	------	Sand and gravel from 0-44 ft.
10H1	Mr. Stone	Indiana-Michigan Water Development Co.	7-15-47	717	Dr	41	6	S; 10ft, 65sl, dia 5½	7	34	Sd,G	Pl	U	7	---	------	Dd 1 ft pumping 35 gpm; water level measured 8.8 ft below lsd, 8-14-58; L.
11A1	J. Oglesby	Sriver Drilling Co.	--------	748	J	46	2	S; 3ft, 60g, dia 1¼	11	35	G,Sd	Pl	U	11	D	------	Sand overlain by 40 ft gravel; Ca.
11B1	J. Riffle	----do----------	3-24-50	742	J	55	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	28	D	------	
11B2	E. VandeZande	----do----------	7-16-53	740	J	46	2	S; 3½ft, 10sl, dia 1½	30	16	Sd,G	Pl	U	30	D	------	Yellow gravel overlain by 40 ft yellow sand.
11B3	G. Davis	R. Reddish	7- 3-57	746	J	40	2	S; 3½ft, 60g, dia 1½	25	15	Sd	Pl	U	25	D	------	Yield 10 gpm; sand from 0-40 ft.
11E1	E. Smith	Sriver Drilling Co.	8- 2-57	728	J	40	2	----do----------	19	21	Sd	Pl	U	19	D	J1/2	Sand from 0-40 ft; Ca.
11H1	P. Love	----do----------	6-23-52	726	Dn	25	2	S; 4ft, 60g, dia 2	---	---	Sd	Pl	----	3	D	------	
12J1	O. Sharp	----------	--------	752	J	51	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	40	D	J3/4	
12Q1	R. Ryll	----------	--------	734	J	38	2	----------	---	---	Sd	Pl	----	---	D	J1/2	
13C1	R. Johnson	Sriver Drilling Co.	2- 4-54	740	J	40	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	24	D	------	
13E1	Mr. Connoly	W. Rodgers	--------	733	J	39	2	S; 3½ft, 10sl, dia 1½	26	13	Sd	Pl	U	26	D	J1/3	Coarse sand from 0-39 ft.
13L1	Mr. Przybyllski	Sriver Drilling Co.	12-12-53	722	J	45	2	S; 3ft, 60g, dia 1¼	15	30	Sd,G	Pl	U	15	D	------	Yellow sand and gravel from 0-45 ft; Ca.
13Q1	C. Sargent	----------	--------	745	Dn	27	1½	----------	---	---	Sd	Pl	U	---	O	------	Observation well St. Joseph 18; water level measured 24.54 ft below lsd, 6-22-45.
14A1	F. Moody	Sriver Drilling Co.	1953	730	J	44	2	S; 3ft, 60g, dia 1¼	19	25	Sd,G	Pl	U	19	D	J1/2	Ca, L.
23Q1	N. Peterson	----do----------	12- 2-47	712	J	31	2	S; 4ft, 80g, dia 1	27	4	Sd	Pl	C	10	---	J1/2	Yield 4 gpm; difficult area to obtain water; Ca, L.
24D1	J. Barilick	----do----------	--------	734	J	40	2	S; 3ft, 60g, dia 1¼	26	14	Sd,G	Pl	U	26	D	J	Sand and gravel from 0-40 ft; Ca.

37/1-24E1	T. Wiersma	----------	11-19-57	720	J	39	3	S; 5ft, 60g, dia 2	10	29	Sd,G	Pl	U	10	D	J1	Sand and gravel from 0-39 ft; clay at 39 ft; Ca.
31E1	S. Toth	Woods and Kool Well Drilling Co.	11-17-59	702	Dn	17	1½	S; 3ft, 60g, dia 1½	10	7	Sd	Pl	U	10	D	------	Yield 8 gpm; L.
32H1	S. Kulwici	Hunts Hoosier Hardware	9-12-59	702	J	22	3	S; 4ft, 60g, dia 1½	10	12	G,Sd	Pl	U	10	D	------	L.
33F1	R. Galvas	Srivor Drilling Co.	11-26-49	700	J	37	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	10	D	J	
36E1	Kankakee Valley Foods	Layne-Northern Co., Inc.	3-16-42	715	Dr	138	10	S; 10ft, 130sl, dia 6½	---	---	Sd,G	Pl	----	11	N	------	Dd 99 ft pumping 350 gpm; bedrock at 135 ft; L.
36L1	Targott Nurseries	Srivor Drilling Co.	---------	735	J	47	2	S; 3½ft, 10sl, dia 1½	22	25	Sd,G	Pl	U	22	D	------	Yellow sand and gravel from 0-47 ft.
36P1	Mrs. O. E. Fisher	----do----------	--------	735	J	46	2	S; 3½ft, 60g, dia 1½	19	27	Sd,G	Pl	U	10	---	------	Yellow sand and gravel from 0-46 ft.
37/2- 1F1	City of South Bend	Layne-Northern Co., Inc.	7-25-58	672	Dr	108	8	----------	---	---	Sd,G	Pl	----	1	T	------	L.
1F2	----do----------	----do----------	2- 4-57	672	Dr	104	38	Gp; S; 30ft, 80sl, dia 26	65	39	Sd,G	Pl	C	---	P	T50	Yield 2,100 gpm; flowed; L.
1L1	Nolan Construction Co.	----do----------	7- 1-50	710	Dr	55	8	----------	25	15	Sd	Pl	U	25	T	------	L.
1L2	----do----------	----do----------	7- 8-30	695	Dr	50	----	----------	18	11	Sd	Pl	U	18	T	------	L.
1L3	City of South Bend	----do----------	7-15-39	680	Dr	100	6	----------	58	44	Sd,G	Pl	C	5	T	------	See log well 1L5; well Sj 1-T1 (KS, 1948).
1L4	----do----------	----do----------	9-21-30	680	Dr	103	50	Gp; S; 20ft, 205sl, dia 38	76	27	Sd,G	Pl	C	3	P	T	Dd 24.8 ft after 10 hr pumping 2,220 gpm; well Sj 1-53 (KS, 1948); L.
1L5	----do----------	----do----------	12-14-39	680	Dr	110	6	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 1-T2 (KS, 1948); L.
1L6	----do----------	----do----------	1-13-40	679	Dr	110	8	----------	68	42	G	Pl	C	9	T	------	Bedrock at 110 ft; well Sj 1-T4 (KS, 1948); L.
1L7	----do----------	----do----------	2-14-40	679	Dr	110	50-38	Gp; S; 20ft, 205sl, dia 38	54	50	Sd,G	Pl	C	2	P	T	Dd 24.25 ft after 10 hr pumping 2,200 gpm; bedrock at 110 ft; see log well 1L5; well Sj 1-54 (KS, 1948).
1L8	----do----------	----do----------	8-17-49	679	Dr	105	38	Gp; S; 30ft, 105sl, dia 26	75	30	G,Sd	Pl	C	17	P	T40	Dd 21 ft after 9 hr pumping 1,500 gpm; see log well 1L6.
1M1	----do----------	----do----------	12-30-39	675	Dr	114	6	----------	54	58	G,Sd	Pl	C	---	T	------	Yield estimated at 125 g/ft dd; bedrock at 112 ft; well Sj 1-T3 (KS, 1948); L.
1M2	----do----------	----do----------	4-24-40	679	Dr	112	50-38	Gp; S; 20ft, 105sl, dia 38	67	45	G,Sd	Pl	C	0	N	------	Dd 34.8 ft after 10 hr pumping 2,200 gpm; see log well 1M1; well Sj 1-55 (KS, 1948).
1M3	----do----------	----do----------	11- 8-46	695	Dr	125	60	Gp; S; 20ft, 205sl	62	59	G,Sd	Pl	C	13	P	------	Bedrock at 121 ft; L.
1M4	----do----------	----do----------	1- 3-47	695	Dr	113	50-38	Gp; S; 20ft, 180sl, dia 38	60	50	G,Sd	Pl	C	12	P	T50	Dd 32 ft pumping 2,100 gpm; see log well 1M3.
1M5	----do----------	----do----------	6-12-51	675	Dr	110	38	Gp; S; 30ft, 105sl, dia 26	80	30	Sd,G	Pl	C	+2	P	T50	Dd 38 ft after 8 hr pumping 1,520 gpm; see log well 1M3.
1M6	International Business Machines Corp.	----do----------	12-16-58	685	Dr	111	----	S	78	35	G,Sd	Pl	C	16	Ac	T7-1/2	L.
1P1	Artificial Ice Co.	----------	--------	691	Dr	120	10	----------	---	---	Sd,G	Pl	----	---	I	T25	Yield 500 gpm; well Sj 30-2 (KS, 1948).
1P2	----do----------	A. L. Cox Co., Inc.	1945	691	Dr	120	10	----------	---	---	Sd,G	Pl	----	---	I	C25	Yield 500 gpm; well Sj 30-1 (KS, 1948); Ca.
1P3	H. D. Lee Co. Inc.	Indiana-Michigan Water Development Co.	--------	680	Dr	98	8	S	---	---	Sd,G	Pl	----	---	N	------	Water 19 ft below lsd, 8-21-41 well Sj 58 (KS, 1948).
1P4	----do----------	----do----------	8-27-47	680	Dr	102	12½	S; 18ft, 35sl, dia 12	75	27	Sd,G	Pl	C	18	I	T10	Ca, L.
2A1	City of South Bend	----------	Before 1911	685	Dr	125	----	----------	31	87	Sd,G	Pl	C	+4	T	------	Bedrock at 124 ft; well Sj 8-4 (KS, 1948); L.
2B1	----do----------	----------	Before 1911	685	Dr	148	----	----------	47	101	Sd,G	Pl	C	+4	T	------	Bedrock at 148 ft; well Sj 8-6 (KS, 1948); L.
2C1	----do----------	Austin Drilling Co.	About 1927	705	Dr	146	----	----------	44	100	G,Sd	Pl	C	---	T	------	Flowed; bedrock at 144 ft; well Sj 8-9B (KS, 1948); L.
2C2	----do----------	----------	Before 1911	685	Dr	144	2½	----------	46	98	G,Sd	Pl	C	+6	T	------	See log well 2C1; well Sj 8-3 (KS, 1948).
2C3	----do----------	----------	Before 1911	705	Dr	152	----	----------	77	75	G,Sd	Pl	C	19	T	------	Bedrock at 152 ft; well Sj 8-5 (KS, 1948); L.
2D1	Drewrys Ltd., U. S. A., Inc.	Layne-Northern Co., Inc.	7-13-33	702	Dr	128	6	----------	62	66	Sd,G	Pl	C	23	T	------	Well Sj 12-T1 (KS, 1948); L.
2D2	----do----------	----do----------	3-30-40	702	Dr	142	12	S; 20ft, 105sl	117	25	Sd	Pl	C	22	I	------	Dd 17 ft pumping 610 gpm; well Sj 12-2 (KS, 1948); L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
J7/2- 2D3	Drewrys Ltd., U. S. A., Inc.	Layne-Northern Co. Inc.	9-14-43	702	Dr	163	6	----------	72	91	Sd,G	Pl	C	20	T	------	Bedrock at 163 ft; see log well 2D7; well Sj 12-T3 (KS, 1948).
2D4	----do----------	----do----------	10-16-46	702	Dr	156	26	Gp; S; 20ft, 105sl, dia 18	75	81	Sd,G	Pl	C	25	Do	------	Dd 20 ft after 7 hr pumping 1,000 gpm; see log well 2D7.
2D5	----do----------	----do----------	2- 8-49	702	Dr	157	10-6	----------	72	85	Sd,G	Pl	C	26	T	------	L.
2D6	----do----------	----do----------	4- 1-49	702	Dr	159	30	Gp; S; 30ft, 80sl, dia 18	72	87	Sd,G	Pl	C	28	I	T100	Dd 20.5 ft after 3 hr pumping 1,500 gpm; see log well 2D5; Ca.
2D7	----do----------	----do----------	11-10-49	702	Dr	161	10-6	----------	77	82	Sd,G	Pl	C	26	T	------	Bedrock at 159 ft; L.
2D8	----do----------	----do----------	4- 7-50	702	Dr	154	38	Gp; S; 40ft, 105sl, dia 26	77	75	Sd,G	Pl	C	23	I	T150	Dd 20 ft after 4 hr pumping 2,000 gpm; see log well 2D7.
2D9	----do----------	----do----------	7-17-54	702	Dr	144	34	Gp; S; 40ft, 105sl, dia 18	85	59	Sd,G	Pl	C	28	I	T100	Dd 10.5 ft after 2.5 hr pumping 1,530 gpm; L.
2H1	A. Bjorans	Sriver Drilling Co.	10-20-49	705	J	45	2	S; 3ft, 60g, dia 1¼	28	19	Sd,G	Pl	U	26	D	--------	Sand and gravel from 0-45 ft.
2N1	City of South Bend	----------	Before 1921	709	Dr	215	---	----------	80	135	Sd	Pl	C	25	T	--------	Bedrock at 215 ft; well Sj 6-23A (KS, 1948); L.
3D1	South Bend Sand and Gravel Co.	Indiana-Michigan Water Development Co.	11-28-29	700	Dr	145	16	S; 18ft, dia 15½	93	52	G,Sd	Pl	C	---	I	T50	Dd 5 ft pumping 220 gpm; screen, upper 8 ft 20 sl, lower 9 ft 30 sl; water level 32 ft below lsd, 3-11-49; see log well 2D2; well Sj 69 (KS, 1948).
3D2	----do----------	----do----------	3-28-40	700	Dr	150	12	S; 20ft, dia 11½	95	61	Sd,G	Pl	C	26	I	T40	Screen, upper 5 ft 40 sl, lower 15 ft 50 sl; well Sj 58 (KS, 1948); L.
3D3	----do----------	----do----------	8-5-49	700	Dr	157	12	----do----------	---	-------	Sd,G	Pl	C	---	I	T40	Dd 30 ft after 8 hr pumping 620 gpm; screen, upper 12 ft 50 sl, lower 8 ft 30 sl; see log well 3D4; Ca.
3D4	----do----------	----do----------	3-5-54	700	Dr	147	10	S; 16ft, dia 15½	119	32	Sd,G	Pl	C	35	I	T50	Dd 50 ft pumping 750 gpm; screen, upper 10 ft 20 sl, lower 6 ft 30 sl; L.
3E1	R. Schmanski	Sriver Drilling Co.	--------	717	J	87	3	S; 5ft, 10sl, dia 2	62	25	Sd,G	Pl	U	62	D	J1-1/2	Sand and gravel from 0-87 ft.
3J1	Snabedissen-Wittner Diary, Inc.	Indiana-Michigan Water Development Co.	4-11-31	712	Dr	129	8	S; 25ft, dia 7½	110	19	G,Sd	Pl	C	28	I	T10	Screen, upper 10 ft 25 sl, lower 15 ft 15 sl; see log well 3J5; well Sj 74 (KS, 1948); Ca.
3J2	South Bend Brewing Co.	----------	About 1920	712	Dr	135	12	----------	---	---	Sd,G	Pl	----	---	N	C20	Well Sj 45-2 (KS, 1948).
3J3	----do----------	Indiana-Michigan Water Development Co.	5-24-34	712	Dr	133	12	S; 20ft, dia 11½	90	43	G,Sd	Pl	C	14	N	------	Dd 4 ft pumping 200 gpm; screen upper 5 ft 20 sl, lower 15 ft 35 sl; well Sj 45-1 (KS, 1948); Ca, L.
3J4	----do----------	----do----------	8-15-46	712	Dr	147	12	S; 21ft, 100sl, dia 11½	96	51	G,Sd	Pl	C	34	N	------	Dd 14 ft after 5 hr pumping 950 gpm; see log well 3J5.
3J5	----do----------	----do----------	2- 5-48	712	Dr	151	6	S	96	55	G,Sd	Pl	C	28	T	------	L.
3J6	City of South Bend	----------	Before 1921	711	Dr	187	----	----------	85	102	G,Sd	Pl	C	22	T	------	See log well 3J5; well Sj 6-22A (KS, 1948).
3L1	----do----------	----------	Before 1921	710	Dr	186	----	----------	84	102	Sd,G	Pl	C	18	T	------	Well Sj 6-20A (KS, 1948); L.
3N1	Bendix Aviation Corp.	Indiana-Michigan Water Development Co.	10-24-34	710	Dr	200	6	S; 15ft, 30sl	25	173	Sd,G	Pl	U	25	N	T15	Dd 15 ft pumping 100 gpm; well Sj 23-4 (KS, 1948); L.
3N2	----do----------	----do----------	11-15-34	712	Dr	198	12	S; 30ft, dia 11½	22	176	G,Sd	Pl	U	22	O	------	Screen, upper 10 ft 5 sl, lower 20 ft 35 sl; observation well St. Joseph 8; water level measured 44.5 ft below lsd, 6-14-44; see log well 3N1; well Sj 23-3 (KS, 1948).

37/2- 3N3	Bendix Aviation Corp.	A. L. Cox Co., Inc.	9-41	713	Dr	208	20	S; 38ft	105	103	Sd,G	Pl	C	40	I	T25	Dd 40 ft pumping 1,600 gpm; water level 21 ft below lsd, 4-56; bedrock at 208 ft; see log well 3N4; well SJ 23-2 (KS,1948).
3N4	----do----------	----do----------	9-41	713	Dr	210	----	----------	105	104	Sd,G	Pl	C	45	T	-------	Dd 30 ft pumping 1,100 gpm; bedrock at 209 ft; L.
3N5	----do----------	----do----------	9-41	713	Dr	205	----	----------	---	---	Sd,G	Pl	----	---	T	------	Bedrock at 202 ft; L.
3N6	----do----------	Michiana Drilling Co.	10-14-53	716	Dr	165	12	S; 30ft, dia 11½	---	---	Sd,G	Pl	----	---	I	T40	Screen, 15 ft 35 sl, 5 ft 20 sl, 10 ft 50 sl; Ca.
3N7	City of South Bend	----------	Before 1921	711	Dr	196	----	----------	86	109	Sd,G	Pl	C	14	T	-------	Bedrock at 195 ft; well SJ 6-18A (KS, 1948); L.
4E1	F. Alward	Sriver Drilling Co.	--------	742	J	51	2	S; 3ft, 60g, dia 1½	37	14	Sd,G	Pl	U	37	D	------	Ca, L.
4N1	M. C. Frick	----do----------	6-19-54	736	J	47	2	----do----------	39	8	Sd,G	Pl	U	39	D	------	Sand and gravel from 0-47 ft.
4J1	Bendix Aviation Corp.	A. L. Cox and Co., Inc.	9-41	712	Dr	182	----	----------	---	---	Sd,G	Pl	----	---	T	------	Bedrock at 180 ft; L.
4J2	----do----------	----do----------	9-41	712	Dr	205	----	----------	160	40	Sd,G	Pl	C	---	T	------	Bedrock at 204 ft; L.
4J3	Capital Elevator Company	Indiana-Michigan Water Development Co.	4- 3-42	712	Dr	60	18	----------	38	22	Sd,G	Pl	C	19	---	------	For elevator shaft; well SJ 59 (KS, 1948); L.
4N1	F. McAfee	Sriver Drilling Co.	--------	721	J	44	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	C	14	---	------	Ca, L.
4Q1	Bendix Aviation Corp.	Layne-Northern Co., Inc.	--------	711	Dr	90	12	S	---	---	Sd,G	Pl	----	30	---	------	
4R1	----do----------	A. L. Cox Co., Inc.	9-41	712	Dr	142	----	----------	---	---	Sd,G	Pl	----	---	T	------	L.
4R2	City of South Bend	----------	Before 1921	711	Dr	170	----	----------	80	90	Sd,G	Pl	C	2	T	------	Well SJ 6-17A (KS, 1948); L.
4R3	----do----------	----------	Before 1921	710	Dr	200	----	----------	15	185	Sd,G	Pl	----	0	T	------	Bedrock at 200 ft; well SJ 6-14A (KS, 1948); L.
5A1	L. W. Clipponger	Sriver Drilling Co.	8-10-46	754	J	59	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	43	D	------	
5A2	M. Wilson	----------	--------	748	J	44	2	----do----------	---	---	Sd	Pl	----	37	D	------	
5A3	L. H. Miller	Sriver Drilling Co.	--------	744	J	51	2	----do----------	25	26	Sd,G	Pl	U	25	D	------	Yellow sand and gravel from 0-51 ft.
5D1	Indiana Savings and Loan Co.	R. Reddish	1- 8-57	754	J	56	2	----do----------	45	11	Sd	Pl	C	35	D	J1/2	Yield 8 gpm; L.
5C1	Church of God	----do----------	4-26-57	752	J	58	2	----do----------	50	8	Sd	Pl	C	35	P	------	Yield 10 gpm; see log well 5B1.
5G1	D. Root	Sriver Drilling Co.	3- 2-56	739	J	98	2	----------	---	---	Sd	Pl	----	---	D	------	
5H1	L. Dillon	----------	--------	740	J	35	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	28	D	------	
5H2	L. D. Irvin	Sriver Drilling Co.	8- 1-49	740	J	80	2	S; 3ft, 60g, dia 1½	75	5	Sd,G	Pl	C	32	D	------	L.
5H3	A. J. Jones	----do----------	--------	742	J	53	2	----do----------	35	18	Sd,G	Pl	C	14	D	------	L.
5H4	R. Dell	R. Reddish	3- 8-57	743	J	63	2	S; 3½ft, 60g, dia 1½	50	13	Sd	Pl	C	35	D	J3/4	Yield 10 gpm; see log well 5B1.
5J1	E. Sellars	Sriver Drilling Co.	1-16-48	736	J	45	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	16	D	------	
5J2	L. Nowak	----do----------	4- 3-58	730	J	40	2	S; 3½ft, 60g, dia 1½	25	15	Sd,G	Pl	U	25	D	------	Sand and gravel overlain by 20 ft yellow sand.
5J3	J. A. Armour	----do----------	--------	735	J	47	2	----do----------	27	20	Sd,G	Pl	U	27	D	------	Sand and gravel from 0-47 ft.
5K1	A. E. Kosinski	----do----------	7-18-54	733	J	46	2	S; 3½ft, 10sl, dia 1½	24	22	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-46 ft; Ca.
5L1	Glish Lumber Co.	----do----------	--------	735	J	46	2	S; 3½ft, 60g, dia 1½	12	34	Sd,G	Pl	U	12	P	J2	Sand and gravel from 0-46 ft; Ca.
5P1	J. W. Buda	----do----------	--------	735	J	45	2	S; 3ft, 60g, dia 1½	16	29	Sd,G	Pl	U	16	D	J1/2	Sand and gravel from 0-45 ft.
5Q1	S. W. Paskiet	----do----------	12- 5-53	731	J	36	2	----do----------	---	---	Sd	Pl	----	17	D	------	
6B1	Indiana State Highway Department	----------	7-30-56	752	B	50	----	----------	---	---	Sd	Pl	----	---	T	------	Very fine brown sand from 0-50 ft.
6B2	----do----------	----------	7-30-56	754	B	50	----	----------	---	---	Sd	Pl	----	---	T	------	Do.
6B3	----do----------	----------	7-30-56	752	B	50	----	----------	---	---	Sd	Pl	----	---	T	------	Brown sand from 0-50 ft.
6D1	T. Rangenrud	Sriver Drilling Co.	--------	754	J	44	2	S; 3ft, 60g, dia 1½	34	10	Sd,G	Pl	U	34	D	------	Sand and gravel from 0-44 ft.
6F1	D. Baughman	----do----------	--------	747	J	42	2	S; 3½ft, dia 1½	25	17	Sd,G	Pl	U	25	D	------	Yellow sand and coarse gravel from 0-42 ft; Ca.
6G1	J. Mueller	----do----------	--------	740	J	56	2	S; 3ft, 60g, dia 1½	30	26	G	Pl	U	30	D	------	Gravel from 0-56 ft.
6G2	L. Lolmaugh	R. Reddish	2-27-57	748	J	45	2	S; 3½ft, 60g, dia 1½	30	15	G	Pl	U	30	D	J1/2	Gravel overlain by 20 ft sand.
6G3	Indiana State Highway Department	----------	12- 6-56	745	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	L.
6G4	----do----------	----------	12- 6-56	744	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 6G3.
6G5	----do----------	----------	12- 6-56	745	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Do.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
37/2- 6G6	Indiana State Highway Department	----------	12- 6-56	748	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and pea-sized gravel overlain by 35 ft brown sand.
6G7	----do----------	----------	12- 6-56	740	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and pea-sized gravel overlain by 38 ft brown sand.
6G8	----do----------	----------	12- 6-56	744	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and pea-sized gravel overlain by 44 ft brown sand.
6Q1	----do----------	----------	7-30-56	736	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 6G3.
6Q2	----do----------	----------	7-30-56	735	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Do.
7D1	G. Van Tornout	R. Roddish	4-24-57	745	J	44	2	S; 3½ft, 60g, dia 1½	20	24	Sd,G	Pl	U	20	D	J	Yield 8 gpm; sand and gravel overlain by 20 ft sand.
7D2	Indiana State Highway Department	----------	7-30-56	735	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and gravel overlain by 20 ft brown sand.
7B3	----do----------	----------	7-30-56	735	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and gravel overlain by 22 ft brown sand.
7B4	----do----------	----------	7-30-56	735	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and gravel overlain by 21 ft brown sand.
7B5	----do----------	----------	7-30-56	735	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Sand and gravel overlain by 18 ft brown sand.
7G1	----do----------	----------	7-30-56	740	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Brown sand from 0-50 ft.
7G2	----do----------	----------	7-30-56	738	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Brown sand overlain by 11 ft sand and pea-sized gravel.
7G3	----do----------	----------	7-30-56	736	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Brown sand overlain by 13 ft brown sand and pea-sized gravel.
7H1	E. Meszaros	Sriver Drilling Co.	5-11-51	742	J	67	2	S; 3½ft, 60g, dia 1½	29	38	Sd,G	Pl	U	29	D	J3/4	Ca, L.
7J1	J. H. Moyer	----do----------	10- 4-51	745	J	36	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	U	26	D	------	
7J2	D. De Vreese	----do----------	1-12-54	745	J	52	2	----do----------	38	14	Sd,G	Pl	U	38	D	J	Sand and gravel from 0-52 ft; blue clay at 52 ft.
7K1	Indiana State Highway Department	----------	7-30-56	738	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Brown sand and pea-sized gravel from 0-50 ft.
7K2	----do----------	----------	7-30-56	740	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	Do.
7M1	St. Joseph Cemetery Association	R. Kearney	--------	752	Dr	73	10	S; 10ft, 30sl, dia 8½	---	---	Sd,G	Pl	----	---	Ir	T25	Dd 9 ft pumping 440 gpm; water level 33 ft below lsd, 3-9-50; Ca.
7M2	----do----------	Indiana-Michigan Water Development Co.	10-23-52	740	Dr	84	12	S; 18ft, 20sl, dia 11½	---	---	Sd,G	Pl	----	18	Ir	T25	Dd 34 ft pumping 500 gpm; L.
7P1	G. Kazmierzak	Sriver Drilling Co.	9- 8-49	743	J	41	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	27	---	------	Ca.
7Q1	Indiana State Highway Department	----------	8-27-56	742	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	L.
7Q2	----do----------	----------	8-27-56	740	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	See log well 7Q1.
7R1	J. Kujawa	Sriver Drilling Co.	2-14-58	733	J	40	2	S; 3½ft, 10sl, dia 1½	25	15	Sd	Pl	U	25	D	J1/2	Yellow sand overlain by 20 ft yellow clay.
8A1	Indiana-Michigan Electric Co.	Layne-Northern Co., Inc.	5- 2-56	722	Dr	182	----	----------	---	---	Sd,G	Pl	----	14	T	------	L.
8D1	C. Contat	Sriver Drilling Co.	7-10-51	724	Dn	22	1¼	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	7	D	------	
8D2	R. M. Walt	----do----------	10-15-50	724	J	40	2	S; 5ft, 60g, dia 1½	10	30	Sd,G	Pl	U	10	D	------	Sand and gravel from 0-40 ft.
8E1	E. Doan	----do----------	8-23-54	737	J	80	2	S; 3½ft, 10sl, dia 1½	---	---	Sd,G	Pl	----	26	D	J1/2	L.

37/2- 8F1	J. M. Wieczorek	Sriver Drilling Co.	7-26-50	740	J	40	2	S; 3ft, 60g, dia 1¼	24	16	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-40 ft.
8F2	F. Kab	R. Reddish	9- 4-57	740	J	73	2	S; 3½ft, 80g,dia 1¼	66	7	Sd	Pl	C	40	D	J1/2	Yield 7 gpm; Ca.
8F3	Holy Family Parish School	Indiana-Michigan Water Development Co.	12- 5-53	732	Dr	71	8	S; 8ft, 30sl	48	25	Sd,G	Pl	C	26	P	J4	Ca, L.
8H1	South Bend Auto Theater	Sriver Drilling Co.	--------	717	J	58	3	S; 6ft, 60g, dia 2	48	10	G	Pl	C	13	P	------	L.
8L1	H. Miller	----do----------	--------	726	J	44	2	S; 3ft, 60g, dia 1¼	35	9	Sd	Pl	C	18	D	------	L.
8L2	T. Bocchelli	----do----------	7- 7-48	732	J	50	2	----do----------	---	---	Sd	Pl	----	---	D	------	See log well 8L1.
8L3	E. Plechocki	----do----------	5-20-53	725	J	45	2	----do----------	39	6	Sd	Pl	C	14	D	------	See log well 8L1; Ca.
8L4	J. Petty	----do----------	10-26-53	730	J	53	2	----do----------	49	4	Sd	Pl	C	24	I	------	L.
8N1	L. Dombrowski	----do----------	4-18-36	730	J	46	2	S; 3½ft, 60g, dia 1¼	16	30	Sd	Pl	U	16	D	------	Sand from 0-46 ft; Ca.
9A1	City of South Bend	----------	Before 1921	709	Dr	186	----	----------	0	186	Sd	Pl	U	0	T	------	Well Sj 6-13A (KS, 1948); L.
9J1	----do----------	----------	Before 1921	714	Dr	193	----	----------	5	188	Sd,G	Pl	U	5	T	------	Bedrock at 193 ft; well Sj 6-18A (KS, 1948); L.
9J2	----do----------	----------	Before 1921	714	Dr	200	----	----------	80	120	Sd,G	Pl	C	4	T	------	Well Sj 6-18A (KS, 1948); L.
9R1	----do----------	----------	Before 1921	714	Dr	200	----	----------	90	110	Sd,G	Pl	C	4	T	------	Bedrock at 200 ft; well Sj 6-21A (KS, 1948); L.
10D1	O'Brien Corp.	Indiana-Michigan Water Development Co.	11-18-44	717	Dr	130	10	S; 20ft, dia 9½	92	38	Sd	Pl	C	30	I	T20	Dd 18 ft pumping 350 gpm; screen, upper 12 ft 20 sl, lower 8 ft 30 sl; L.
10D1	Bendix Aviation Corp.	A. L. Cox Co., Inc.	9-41	713	Dr	201	20	S	---	---	Sd	Pl	----	40	I	------	Dd 40 ft pumping 1,600 gpm; see log well 10D2; well Sj 23-1 (KS, 1948); Ca.
10D2	----do----------	----do----------	9-41	712	Dr	201	20	S	---	---	Sd	Pl	----	45	I	------	Dd 30 ft pumping 1,100 gpm; L.
10E1	City of South Bend	----------	Before 1921	713	Dr	211	----	----------	50	140	Sd,G	Pl	C	6	T	------	Bedrock at 211 ft; well Sj 6-11A (KS, 1948); L.
10E2	----do----------	----------	Before 1921	713	Dr	210	----	----------	45	162	Sd,G	Pl	C	7	T	------	Bedrock at 207 ft; well Sj 6-12A (KS, 1948); L.
10G1	Singer Manufacturing Co.	----------	--------	716	Dr	118	6	----------	---	---	Sd,G	Pl	U ?	---	O	------	Observation well St. Joseph 4; water level measured 29.86 ft below lsd. 6-28-44; well Sj 16-2 (KS, 1948).
10G2	----do----------	----------	Before 1906	716	Du	40	480	----------	---	---	Sd	Pl	U ?	14	O	------	Observation well St. Joseph 5; water level measured 19.28 ft below lsd. 6-28-44; well Sj 16-F (KS, 1948).
10G3	----do----------	Layne-Northern Co., Inc.	7-18-34	714	Dr	138	8	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 16-T1 (KS, 1948); L.
10G4	----do----------	----do----------	8- 6-34	714	Dr	118	30-18	Gp; S; 25ft, 105sl, dia 18	90	28	Sd	Pl	C	28	N	------	Dd 18.5 ft pumping 500 gpm; see log well 10G3; well Sj 16-1 (KS, 1948).
10H1	Hurwich Iron Co.	----do----------	1-16-53	717	Dr	119	10	S; 20ft, dia 9½	91	28	Sd,G	Pl	C	30	I	T40	Dd 33 ft pumping 680 gpm; Ca, L.
10N1	City of South Bend	----------	Before 1921	715	Dr	194	----	----------	5	183	Sd,G	Pl	----	5	T	------	Bedrock at 188 ft; well Sj 6-8A (KS, 1948); L.
10N2	----do----------	----------	Before 1921	715	Dr	182	----	----------	---	---	Sd,G	Pl	----	5	T	------	Bedrock at 180 ft; see log well 10N1; well Sj 6-9A (KS, 1948).
10N3	----do----------	----------	Before 1921	715	Dr	198	----	----------	5	192	Sd,G	Pl	U	5	T	------	Bedrock at 197 ft; see log well 10N1; well Sj 6-10A (KS, 1948).
10P1	----do----------	----------	Before 1921	714	Dr	184	----	----------	8	168	Sd,G	Pl	U	8	T	------	Bedrock at 176 ft; well Sj 6-7A (KS, 1948); L.
11N1	American Telephone and Telegraph Co.	Layne-Northern Co., Inc.	6- 9-48	720	Dr	75	8	S; 10ft	48	27	G,Sd	Pl	C	36	I	T5	Dd 2 ft pumping 85 gpm; Ca, L.
11J1	Claeys Candy Co.	Indiana-Michigan Water Development Co.	3-21-29	720	Dr	84	10	S; 20ft, 30sl, dia 9½	35	29	Sd	Pl	C	30	Do	------	Dd 12 ft pumping 180 gpm; well Sj 67 (KS, 1948); L.
11K1	Oliver Corp.	----------	Before 1906	718	Du	28	144	----------	---	---	Sd,G	Pl	----	10	N	------	Water level 30 ft, 1944; well Sj 25-1 (KS, 1948).
11K2	----do----------	Layne-Northern Co., Inc.	10-27-44	718	Dr	125	6	----------	25	82	Sd,G	Pl	U	25	T	------	Well Sj 25-T1 (KS, 1948); L.
11K3	----do----------	----do----------	3-24-45	718	Dr	96	50	S; 30ft, 130sl, dia 18	---	---	Sd,G	Pl	----	30	I	------	Dd 37 ft after 8 hr pumping 1,000 gpm; see log well 11K2; well Sj 25-2 (KS, 1948); Ca.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/2-11K4	Oliver Corp.	----------	1944	718	Dn	44	2	----------	---	---	Sd,G	Pl	U	---	O	------	Observation well St. Joseph 7; water level measured 28.28 ft below lsd, 9-28-44.
11R1	Studebaker Corp.	Smith-Monroe Co.	--------	724	Dr	72	12	S; 15ft, dia 11½	32	40	Sd,G	Pl	U	32	I	T25	Dd 16 ft pumping 400 gpm; bedrock at 94 ft; well Sj 24-5 (KS, 1948); L.
11R2	----do----------	R. Kersey	1910	724	Dr	58	12	S; 20ft, 25sl, dia 10	37	21	Sd,G	Pl	U	37	I	T20	Dd 21 ft pumping 450 gpm; sand and gravel overlain by 35 ft sand; well Sj 24-1 (KS, 1948); Ca.
11R3	----do----------	Indiana-Michigan Water Development Co.	8-38	725	Dr	81	12	S; 14ft	---	---	Sd,G	Pl	-----	32	Da	------	Dd 36 ft pumping 250 gpm; originally drilled to 44 ft; deepened to 81 ft, 10-29-48; L.
11R4	----do----------	----------	--------	725	Dr	97	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R10; well Sj 24-T1 (KS, 1948).
11R5	----do----------	----------	--------	724	Dr	100	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 24-T2 (KS, 1948); L.
11R6	----do----------	----------	--------	725	Dr	98	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R5; well Sj 24-T3 (KS, 1948).
11R7	----do----------	----------	--------	725	Dr	100	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R10; well Sj 24-T4 (KS, 1948).
11R8	----do----------	----------	--------	724	Dr	90	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R5; well Sj 24-T5 (KS, 1948).
11R9	----do----------	----------	--------	725	Dr	103	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R10; well Sj 24-T6 (KS, 1948).
11R10	----do----------	----------	--------	725	Dr	103	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 24-T8 (KS, 1948); L.
11R11	----do----------	----------	--------	724	Dr	90	----	----------	---	---	G,Sd	Pl	----	---	T	------	See log well 11R5; well Sj 24-T26 (KS, 1948).
11R12	----do----------	----------	--------	724	Dr	63	----	----------	---	---	G	Pl	----	---	T	------	See log well 11R5; well Sj 24-T27 (KS, 1948).
11R13	----do----------	A. L. Cox Co., Inc.	3- 3-41	725	Dr	94	12	S; 16ft, dia 11½	---	---	Sd,G	Pl	----	36	I	T25	Yield 250 gpm; screen, upper 3 ft 10 sl, middle 5 ft 20 sl, lower 8 ft 30 sl; well Sj 24-12 (KS, 1948).
11R14	----do----------	----------	--------	725	Dr	63	----	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 11R5; well Sj 24-T29 (KS, 1948).
11R15	----do----------	----------	--------	724	Dr	63	----	----------	---	---	G,Sd	Pl	----	---	T	------	See log well 11R5; well Sj 24-T28 (KS, 1948).
12C1	Granada Theatre	A. L. Cox Co., Inc	3-27	674	Dr	124	12	S; 18ft, dia 11½	---	---	Sd	Pl	----	---	Ac	C25	Yield 450 gpm; water level 24 ft, 5-30-42; well Sj 37 (KS, 1948).
12C2	Arrow Towel Co.	R. Kersey	1930	686	Dr	116	8	S; 20ft	55	61	G	Pl	C	---	I	C10	Well Sj 46-1 (KS, 1948); Ca, L.
12C3	Taube Printing Co.	Indiana-Michigan Water Development Co.	5-31	685	Dr	110	12	S; 15ft, dia 11½	80	30	G,Sd	Pl	C	14	N	T25	Screen, upper 7 ft 20 sl, lower 8 ft 30 sl; see log well 12C9; well Sj 50 (KS, 1948).
12C4	Holloway House Cafeteria	----do----------	3-21-39	705	Dr	124	8	S; 12ft, 35sl, dia 7½	---	---	G,Sd	Pl	C	23	N	------	Dd 8 ft pumping 150 gpm; see log well 12C5; well Sj 81 (KS, 1948).
12C5	----do----------	----do----------	10-15-48	705	Dr	119	8	S; 12ft, 35sl, dia 7½	85	34	G,Sd	Pl	C	20	P,Ac	T7-1/2	Dd 13 ft pumping 90 gpm; Ca, L.
12C6	City of South Bend	Layne-Northern Co., Inc.	12-20-41	684	Dr	110	----	----------	82	27	Sd,G	Pl	C	4	T	------	Bedrock at 109 ft; well Sj 2-T1 (KS, 1948); L.

37/2-12C7	City of South Bend	Layne-Northern Co., Inc.	4-25-42	684	Dr	108	50-38	Gp; S; 20ft, 180sl, dia 38	84	24	G	Pl	C	4	N	------	Dd 42.75 ft after 8 hr pumping 2,100 gpm; see log well 12C9; well Sj 2-36 (KS, 1948).
12C8	----do----------	----do----------	8- 1-56	675	Dr	116	6	----------	55	61	Sd,G	Pl	C	2	T	------	See log well 12C9.
12C9	----do----------	----do----------	11-27-56	675	Dr	116	38	Gp; S; 25ft, 80sl, dia 26	86	30	Sd,G	Pl	C	7	P	T150	Dd 34.8 ft pumping 2,100 gpm; L.
12C10	----do----------	R. Korsey	1906	675	Dr	99	4	----------	62	37	G,Sd	Pl	C	---	P	------	Well Sj 2-34 (KS, 1948); L.
12D1	Indiana and Michigan Electric Co.	Indiana-Michigan Water Development Co.	8-26-36	708	Dr	138	12	S; 20ft, 40sl, dia 11½	111	24	G,Sd	Pl	C	32	N	T25	Dd 1 ft pumping 120 gpm; see log well 12D9; well Sj 70-2 (KS, 1948).
12D2	Oliver Hotel	A. L. Cox Co., Inc.	5-20-40	708	Dr	135	12	S; 20ft	---	---	G	Pl	-----	35	P,Ac	T25	Well Sj 15-1 (KS, 1948).
12D3	Colfax Theater	Mr. Happ	1938	708	Dr	160	----	----------	---	---	Sd,G	Pl	-----	---	---	C20	Yield 125 gpm; well Sj 33 (KS, 1948).
12D4	Palace Theater	R. Korsey	1923	708	Dr	97	12	S; 20ft, 35sl, dia 10	95	47	Sd,G	Pl	C	28	---	------	Dd 75 ft pumping 500 gpm; observation well St. Joseph 6, water level measured 37.29 ft below lsd, 6-8-44; well Sj 22-1 (KS, 1948); L.
12D5	Palais Royale	R. Korsey	1923	708	Dr	139	12	----------	---	---	Sd,G	Pl	-----	30	N	------	Yield 400 gpm; well Sj 22-2 (KS, 1948).
12D6	J. M. S. Building	J. P. Korsey	1909	708	Dr	142	6	S	120	22	G,Sd	Pl	C	---	N	------	Water level 26 ft below lsd, 8-39; see log well 12D4; well Sj 35 (KS, 1948).
12D7	Palace Theater	H. E. Cowell	8-39	708	Dr	149	12	S; 20ft	---	---	Sd,G	Pl	-----	40	Ac	T20	Screen, upper 4 ft 80 g, middle 12 ft 80 g, lower 4 ft 80 g; well Sj 22-3 (KS, 1948).
12D8	South Bend Tribune	Indiana-Michigan Water Development Co.	5-21-41	708	Dr	135	12	S; 20ft, 40sl, dia 11½	110	25	G	Pl	C	41	Ac	C60	Dd 11 ft after 2 hr pumping 600 gpm; see log well 12D9; well Sj 42 (KS, 1948).
12D9	Michiana Hotel	----------	--------	708	Dr	138	12	S; 20ft, 30sl, dia 10	111	27	G,Sd	Pl	C	---	P,Ac	C25	Water level 32 ft below lsd, 8-27-36; well Sj 44 (KS, 1948); L.
12E1	South Bend Tribune	Layne-Northern Co., Inc.	8-13-54	709	Dr	73	10	S; 20ft, 30sl, dia 9½	22	53	Sd,G	Pl	U	22	---	------	For heat pump system; Ca, L.
12E2	----do----------	----do----------	8-20-54	709	Dr	55	8	S; 20ft, 30sl, dia 7½	28	27	G,Sd	Pl	U	28	---	------	Return well for heat pump system; see log well 12E1.
12E3	Young Men's Christian Association	Indiana-Michigan Water Development Co.	9-23-39	709	Dr	99	8	S; 15ft, 20g, dia 7½	30	69	G,Sd	Pl	U	30	P	T7-1/2	Dd 22 ft pumping 150 gpm; see log well 12E4; well Sj 79 (KS, 1948).
12E4	Indiana Bell Telephone Co.	----do----------	12-30-53	712	Dr	64	8	S; 13ft, 12sl, dia 7½	33	31	Sd,G	Pl	U	33	I	------	Dd 17 ft after 7 hr pumping 120 gpm; bedrock at 96 ft; L.
12E5	Davies Laundry and Cleaning Co.	----do----------	9-25-37	708	Dr	140	10	S; 21ft, 20sl, dia 9½	83	57	Sd,G	Pl	C	38	N	------	Dd 14 ft pumping 150 gpm; well Sj 32 (KS, 1948); L.
12E6	Lerner's Shop	----do----------	8-19-37	710	Dr	129	8	S; 10ft, 25sl, dia 7½	77	52	Sd,G	Pl	C	38	Ac	T7-1/2	Dd 30 ft pumping 200 gpm; L.
12E7	J. C. Penny Co.	H. Cowles	6-29-37	708	Dr	160	----	----------	---	---	-----	--	----	---	T	------	Shale overlain by 110 ft clay; no water reported; well Sj 48 (KS, 1948).
12F1	Slicks Laundry and Dry Cleaning	Indiana-Michigan Water Development Co.	2-26-38	706	Dr	128	12	S; 14ft	96	32	Sd,G	Pl	C	25	I	C20	Dd 5 ft pumping 180 gpm; water level 38 ft below lsd, 11-18-44; screen, upper 6 ft 15 sl, lower 8 ft 40 sl; well Sj 31 (KS, 1948); Ca, L.
12H1	Jefferson Medical Arts Building	D. J. Lewis and Sons	5- 7-59	704	Dr	110	8	S; 10ft	75	41	Sd,G	Pl	C	28	P	------	Dd 12 ft after 4 hr pumping 200 gpm; Ca, L.
12H2	Ullery Ice and Supply Co.	Indiana-Michigan Water Development Co.	4-27-34	703	Dr	92	6	S; 15ft, 20sl, dia 5½	72	20	Sd	Pl	C	19	N	T7-1/2	Dd 10 ft pumping 300 gpm; water level 20 ft below lsd, 11-30-38; see log well 12H1; well Sj 66-1 (KS, 1948).
12H3	----do----------	----do----------	2- 6-45	703	Dr	94	6	S; 15ft, 15sl, dia 5½	77	17	Sd,G	Pl	C	25	I	T7-1/2	See log well 12H1; well Sj 66-; (KS, 1948); Ca.
12K1	Haughton Elevator Co.	----do----------	6-18-37	706	Dr	27	10	----------	---	---	-----	--	----	---	---	------	For elevator shaft; clay overlain by 24 ft sand and gravel; well Sj 76 (KS, 1948).
12L1	Grand Trunk Railroad	----do----------	8-17-20	711	Dr	121	6	S; 12ft, 20sl, dia 5½	105	16	Sd	Pl	C	30	---	------	Yield 50 gpm; well Sj 84 (KS, 1948); L.
12N1	Furnas Division, Borden Co.	Layne-Northern Co., Inc.	1932	720	Dr	80	8	S	---	---	Sd,G	Pl	----	36	N	C	Well Sj 41-1 (KS, 1948).

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/2-12N2	Furnas Division, Borden Co.	Indiana-Michigan Water Development Co.	2-24-38	728	Dr	73	8	S; 15ft, 20sl. dia 6	---	---	Sd	Pl	-----	37	N	T10	Dd 14 ft after 5 hr pumping 160 gpm; well Sj 41-2 (KS, 1948); L.
12N3	----do----------	----do----------	6-15-45	728	Dr	74	10	S; 8ft, dia 9½	39	35	Sd,G	Pl	-----	39	Da	-------	Dd 12 ft pumping 80 gpm; screen, upper 4 ft 40 sl, lower 4 ft 70 sl; see log well 12N2.
12N4	City of South Bend	Austin Drilling Co.	3-27	722	Dr	100	----	----------	46	13	Sd,G	Pl	U	46	T	-------	Bedrock at 98 ft; well Sj 8-24B (KS, 1948); L.
12N5	Studebaker Corp.	Layne-Northern Co., Inc.	8-31-53	725	Dr	95	8	----------	83	12	Sd,G	Pl	C	42	---	T20	Bedrock at 85 ft; L.
12P1	White Swan Laundry	----------	-----	726	Dr	81	12	S; 17ft, 20sl, dia 11½	---	---	Sd,G	Pl	C	40	O	-------	Dd 35 ft pumping 140 gpm; observation well St. Joseph 10; water level measured 41.28 ft below lsd, 2-15-45; well Sj 34-1 (KS, 1948).
12P2	----do----------	Indiana-Michigan Water Development Co.	12-11-41	728	Dr	97	8	----------	64	33	G,Sd	Pl	C	38	T	-------	Well Sj 34-T1 (KS, 1948); L.
12P3	----do----------	----do----------	12-31-41	726	Dr	95	12	S; 15ft, 35sl, dia 11½	65	30	G,Sd	Pl	C	42	Do	-------	Dd 9 ft pumping 180 gpm; see log well 12P2; well Sj 34-2 (KS, 1948).
12P4	----do----------	----do----------	4-24-47	726	Dr	97	12	S; 15ft, 15sl, dia 11½	---	---	G,Sd	Pl	C	42	I	T15	
12R1	City of South Bend	Austin Drilling Co.	8-15-26	692	Dr	333	----	----------	40	40	Sd	Pl	C	15	T	-------	Bedrock at 285 ft; well Sj 7-12 (KS, 1948); L.
12R2	Fattore Co.	Layne-Northern Co., Inc.	7-15-50	690	Dr	63	12	----------	20	43	Sd,G	Pl	C	14	T	-------	See log well 13A5.
12R3	City of South Bend	----------	1-11	685	Dr	150	----	----------	---	---	Sd,G	Pl	-----	---	T	-------	Bedrock at 150 ft; well Sj 8-8 (KS, 1948); L.
13A1	South Bend Toy Manufacturing Co.	R. Kersey	--------	723	Dr	94	8	S; 18ft, dia 6	---	---	Sd,G	Pl	-----	---	N	-------	Well Sj 80-1 (KS, 1948).
13A2	----do----------	Indiana-Michigan Water Development Co.	5-31-44	723	Dr	88	10	S; 15ft, 15sl, dia 9½	39	49	Sd	Pl	U	39	I	T7-1/2	Dd 10 ft pumping 100 gpm; see log well 13A5; well Sj 80-2 (KS, 1948).
13A3	South Bend Bait Co.	Layne-Northern Co., Inc.	1- 6-36	719	Dr	75	8	S; 15ft, dia 7	36	42	Sd,G	Pl	U	36	Ac	T7	Dd 9 ft pumping 200 gpm; well Sj 17-1 (KS, 1948); L.
13A4	Northern Indiana Public Service Co.	----do----------	7-13-47	712	Dr	73	6	----------	32	41	Sd,G	Pl	U	32	T	-------	See log well 13A5.
13A5	----do----------	----do----------	9-12-47	712	Dr	75	34	Gp; S; 20ft, 105sl, dia 18	34	41	Sd,G	Pl	U	34	I	T30	Dd 14 ft after 6.5 hr pumping 1,070 gpm; L.
13A6	City of South Bend	Austin Drilling Co.	6-16-27	704	Dr	91	----	----------	20	39	Sd,G	Pl	U	20	T	-------	Bedrock at 87 ft; well Sj 7-31 (KS, 1948); L.
13D1	----do----------	----do----------	1925	726	Dr	102	----	----------	---	---	Sd,G	Pl	-----	30	T	-------	Bedrock at 87 ft; well Sj 8-1B (KS, 1948); L.
13E1	Borden Co.	Layne-Northern Co., Inc.	1-23-35	732	Dr	58	8	----------	---	---	Sd,G	Pl	U	36	O	-------	Yield 60 gpm; observation well St. Joseph 21; water level measured 36.86 ft below lsd, 2-1-46; see log well 13D1; well Sj 10-1 (KS, 1948).
13E2	----do----------	Indiana-Michigan Water Development Co.	7- 1-37	732	Dr	45	12	S; 7ft, 40sl, dia 11½	---	---	Sd,G	Pl	U	33	O	-------	Dd 20 ft pumping 90 gpm; observation well St. Joseph 22; water level measured 38.41 ft below lsd, 1-28-46; well Sj 10-2 (KS, 1948); L.

37/2-13E3	F. G. Hay	Indiana-Michigan Water Development Co.	4-25-41	733	Dr	137	6	S; 10ft, 20sl, dia 5½	---	---	Sd,G	Pl	U	---	Ac	J2	L.
13E4	----do----------	Silver Drilling Co.	1-20-55	733	Dr	94	4	S; 7ft, 80g, dia 3	91	3	Sd	Pl	C	49	N	------	L.
13N1	Pepsi-Cola Bottling Co.	Indiana-Michigan Water Development Co.	1-27-56	718	Dr	98	10	----------	---	---	Sd,G	Pl	----	31	I	T15	Dd 44 ft pumping 200 gpm; Ca.
13N2	Reliable Dairy, Inc.	----------	--------	713	Dr	80	8	S; 15ft, 20sl, dia 6	---	---	Sd,G	Pl	C	---	N	------	Dd 10 ft pumping 100 gpm; water level 27 ft below lsd, 1-23-33; well Sj 65-1 (KS, 1948).
13N3	----do----------	Indiana-Michigan Water Development Co.	8- 8-46	713	Dr	96	10	S; 13ft, 40sl, dia 9½	58	38	G,Sd	Pl	C	32	I	------	Dd 20 ft pumping 75 gpm; well Sj 65-2 (KS, 1948); Ca, L.
13N4	Northern Indiana Public Service	Layne-Northern Co., Inc.	8-13-47	714	Dr	121	8-6	----------	47	74	Sd,G	Pl	C	23	T	------	See log well 13N8.
13N5	----do----------	----do----------	9-27-37	713	Dr	70	12	S; 20ft, dia 10	37	51	Sd,G	Pl	C	17	I	T10	Dd 14 ft after 8 hr pumping 240 gpm; well Sj 14-2 (KS, 1948); Ca, L.
13N6	----do----------	----do----------	8-20-47	714	Dr	84	8-6	----------	---	---	Sd,G	Pl	----	18	T	------	L.
13N7	----do----------	----do----------	8- 8-47	713	Dr	53	30	Gp; S; 20ft, 105sl, dia 18	---	---	Sd,G	Pl	----	22	N	------	Dd 18 ft pumping 350 gpm; see log well 13N8.
13N8	----do----------	----do----------	9- 3-47	713	Dr	72	8	----------	21	16	Sd,G	Pl	U	21	T	------	L.
13N9	City of South Bend	Austin Drilling Co.	8- 4-27	713	Dr	115	----	----------	---	---	Sd,G	Pl	----	20	T	------	Well Sj 7-30 (KS, 1948); L.
13M1	Bob Rans Wholesale Co.	----------	--------	742	Dr	58	10	S; 8ft, dia 8	---	---	Sd,G	Pl	----	---	N	------	Water level 43 ft below lsd, 2-25-37; well Sj 75 (KS, 1948).
13M2	----do----------	Indiana-Michigan Water Development Co.	3-38	742	Dr	76	8	S; 20ft	46	30	Sd,G	Pl	C	40	N	------	Dd 28.5 ft pumping 93 gpm; water level measured 41 ft below lsd, 4-11-58; L.
13M3	Pennsylvania Railroad Co.	Layne-Northern Co., Inc.	2-27	750	Dr	77	8	----------	62	15	Sd,G	Pl	C	32	N	------	See log well 13N3; well Sj 47 (KS, 1948).
13M4	----do----------	Indiana-Michigan Water Development Co.	10-30-48	750	Dr	80	10	S; 8ft, 80sl, dia 9½	73	7	G	Pl	C	40	N	------	Dd 24 ft pumping 100 gpm; L.
13N1	South Bend Tool & Die Co.	----do----------	8-30-39	744	Dr	103	8	S; 15ft, 30sl, dia 7½	---	---	G,Sd	Pl	----	28	Ac	T5	Dd 50 ft pumping 60 gpm; well Sj 55-1 (KS, 1948); L.
14A1	Studebaker Corp.	----------	1927	727	Dr	85	16	S; dia 12	---	---	Sd,G	Pl	----	29	I	T40	Yield 550 gpm; well Sj 24-7 (KS, 1948).
14A2	----do----------	Indiana-Michigan Water Development Co.	3-19-37	727	Dr	85	12	S; 15ft, 30sl, dia 11½	29	36	Sd,G	Pl	U	29	I	T40	Dd 27 ft pumping 550 gpm; see log well 14A3; well Sj 24-6 (KS, 1948); Ca.
14A3	----do----------	----------	--------	727	Dr	103	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 24-T7 (KS, 1948); L.
14A4	----do----------	----------	--------	727	Dr	105	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 24-T9 (KS, 1948); L.
14A5	----do----------	----------	--------	727	Dr	87	----	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 24-T10 (KS, 1948); L.
14A6	----do----------	----------	--------	727	Dr	90	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A5; well Sj 24-T11 (KS, 1948).
14A7	----do----------	----------	--------	727	Dr	103	----	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 24-T12 (KS, 1948); L.
14A8	----do----------	----------	--------	727	Dr	83	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A3; well Sj 24-T13 (KS, 1948).
14A9	----do----------	----------	--------	727	Dr	72	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A3; well Sj 24-T14 (KS, 1948).
14A10	----do----------	----------	--------	727	Dr	93	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A3; well Sj 24-T15 (KS, 1948).
14A11	----do----------	----------	--------	727	Dr	70	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A3; well Sj 24-T16 (KS, 1948).
14A12	----do----------	----------	--------	727	Dr	65	----	----------	---	---	Sd	Pl	U	---	T	------	Well Sj 24-T17 (KS, 1948); L.
14A13	----do----------	----------	--------	728	Dr	70	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A4; well Sj 24-T20 (KS, 1948).
14A14	----do----------	----------	--------	728	Dr	65	----	----------	---	---	G,Sd	Pl	U	---	T	------	See log well 14A4; well Sj 24-T24 (KS, 1948).
14A15	----do----------	----------	--------	727	Dr	115	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 24-T25 (KS, 1948); L.
14A16	----do----------	----------	--------	727	Dr	83	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A12; well Sj 24-T30 (KS, 1948).
14A17	----do----------	----------	--------	727	Dr	63	----	----------	---	---	G	Pl	U	---	T	------	See log well 14A7; well Sj 24-T31 (KS, 1948).
14A18	----do----------	----------	--------	727	Dr	70	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14A12; well Sj 24-T18 (KS, 1948).
14B1	Wilson Brothers	H. Halo	1900	720	Dr	79	12	S	---	---	Sd,G	Pl	----	28	N	------	Well Sj 29-1 (KS, 1948).
14B2	----do----------	Indiana-Michigan Water Development Co.	6-29-44	722	Dr	70	12	S; 18ft, 50sl, dia 11½	26	44	Sd,G	Pl	U	28	I	T15	Dd 15 ft after 1.5 hr pumping 580 gpm; well Sj 29-2 (KS, 1948); Ca, L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/2-14B3	City of South Bend	----------	--------	718	Dr	100	----	----------	---	---	Sd,G	Pl	U	19	T	------	Bedrock at 100 ft; well Sj 6-6B (KS, 1948); L.
14C1	N. P. Bowsher Co.	Indiana-Michigan Water Development Co.	1937	719	Dr	77	6	----------	---	---	Sd	Pl	----	25	I	J1	Well Sj 36 (KS, 1948).
14D1	Sanders Lumber Co.	----------	1924	719	Dr	100	8	----------	---	---	Sd	Pl	----	24	I	------	Well Sj 38 (KS, 1948).
14E1	Oliver Corp.	----------	1910	720	Dr	72	12	----------	---	---	Sd	Pl	U	18	O	------	Bedrock at 146 ft; observation well St. Joseph 20; water level measured 18.32 ft below lsd, 3-8-45; well Sj 28-1 (KS, 1948).
14H1	Studebaker Corp.	----------	5-26	729	Dr	58	38	S; 20ft, dia 32	---	---	Sd	Pl	----	31	I	T40	Dd 13.7 ft pumping 400 gpm; well Sj 24-9 (KS, 1948); Ca.
14H2	----do----------	R. Kersey	6-26	729	Dr	58	32	S; 20ft	---	---	Sd	Pl	----	34	I	T75	Dd 16 ft pumping 770 gpm.
14H3	----do----------	----------	--------	726	Dr	82	----	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 24-T32 (KS, 1948); L.
14H4	----do----------	----------	--------	730	Dr	120	----	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 24-T19 (KS, 1948); L.
14H5	----do----------	----------	--------	730	Dr	78	----	----------	---	---	G,Sd	Pl	U	---	T	------	See log well 14H4; well Sj 24-T20 (KS, 1948).
14H6	----do----------	----------	--------	728	Dr	65	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14H4; well Sj 24-T21 (KS, 1948).
14H7	----do----------	----------	--------	730	Dr	60	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 14H4; well Sj 24-T22 (KS, 1948).
14L1	South Bend Tool and Die Co.	Indiana-Michigan Water Development Co.	5- 2-44	730	Dr	80	8	S; 10ft, 40sl, dia 7½	26	54	G,Sd	Pl	U	26	P	T3	Yield 100 gpm; well Sj 55-2 (KS, 1948); L.
14M1	City of South Bend	----------	Before 1921	723	Dr	132	----	----------	56	76	Sd,G	Pl	C	12	T	------	Well Sj 6-1A (KS, 1948); L.
14Q1	----do----------	----------	Before 1911	765	Dr	182	----	----------	53	94	G,Sd	Pl	C	29	T	------	Bedrock at 147 ft; well Sj 8-10 (KS, 1948); L.
14R1	Reliable Dairy, Inc.	A. L. Cox Co., Inc.	1-23-35	767	Dr	93	8	S; 20ft	---	---	G,Sd	Pl	C	---	N	------	Yield 150 gpm; well Sj 49 (KS, 1948).
14R2	----do----------	Indiana-Michigan Water Development Co.	12-31-51	767	Dr	94	8	S; 15ft, 80g, dia 7½	70	24	G,Sd	Pl	C	55	I	------	Dd 7 ft pumping 125 gpm; see log well 14Q1.
14R3	City of South Bend	Austin Drilling Co.	9-17-26	768	Dr	155	----	----------	70	81	Sd,G	Pl	C	30	T	------	Well Sj 7-16 (KS, 1948); L.
15B1	----do----------	----------	Before 1921	719	Dr	170	----	----------	90	80	Sd,G	Pl	C	12	T	------	See log well 15D2; well Sj 6-24A (KS, 1948).
15D2	----do----------	----------	Before 1921	717	Dr	159	12	S; 21ft, dia 11½	50	109	Sd,G	Pl	C	10	T	------	Dd 22 ft after 3 hr pumping 300 gpm; well Sj 6-25A (KS, 1948); L.
15C1	----do----------	Layne-Northern Co., Inc.	9- 6-46	717	Dr	193	6	----------	---	---	Sd,G	Pl	C	18	T	------	Bedrock at 191 ft; well Sj 4-T3 (KS, 1948); L.
15C2	----do----------	----do----------	4- 7-47	717	Dr	171	38-20	Gp; S; 40ft, 155sl, dia 28	---	---	Sd,G	Pl	C	19	P	T50	Dd 22.3 ft after 23 hr pumping 2,300 gpm; bedrock at 191 ft; see log well 15C1; well Sj 4-28 (KS, 1948).
15C3	----do----------	----do----------	2-15-40	717	Dr	186	38	Gp; S; 40ft, 105sl, dia 26	18	148	Sd,G	Pl	U	18	P	T150	Dd 29.5 ft after 10 hr pumping 2,250 gpm; L.
15C4	----do----------	----do----------	11-19-53	716	Dr	171	----	----------	18	153	Sd,G	Pl	U	18	T	------	Bedrock at 171 ft; L.
15C5	----do----------	----do----------	12-10-53	718	Dr	168	38	Gp; S; 40ft, 105sl, dia 26	19	149	Sd,G	Pl	U	19	P	T150	Dd 25.4 ft after 8 hr pumping 2,280 gpm; see log well 14C4; Ca.
15C6	----do----------	----do----------	10-19-44	716	Dr	152	3-1½	S; 6ft	118	47	Sd,G	Pl	C	18	O	------	Bedrock at 165 ft; observation well St. Joseph 11; water level measured 19.32 ft below lsd, 2-16-45; well Sj 4-T1 (KS, 1948); L.

37/2-15C7	City of South Bend	Layne-Northern Co., Inc.	4-11-58	717	Dr	172	8	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 15C3.
15F1	Stanley Body Equipment Co.	Indiana-Michigan Water Development Co.	9-23-50	717	Dr	71	6	S; 15ft, dia 5½	16	57	Sd,G	Pl	U	16	P,I	T7	Dd 10 ft pumping 40 gpm; screen, upper 5 ft 30 sl, lower 10 ft 20 sl; Ca.
15G1	City of South Bend	----------	Before 1921	716	Dr	178	----	----------	80	88	Sd,G	Pl	C	12	T	------	Bedrock at 178 ft; well Sj 6-5A (KS, 1948); L.
15G2	----do----------	----------	--------	719	Dr	180	----	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj 6-6A (KS, 1948); L.
15H1	Oliver Corp.	----------	10-22-41	717	Dr	88	12	S; 18ft, 20sl, dia 10	---	---	Sd	Pl	----	17	I	C40	Dd 18 ft after 1 hr pumping 320 gpm; well Sj 28-2 (KS, 1948); Ca.
15J1	City of South Bend	----------	--------	722	Dr	135	----	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 6-2A (KS, 1948); L.
15J2	----do----------	----------	--------	720	Dr	80	----	----------	9	71	Sd,G	Pl	U	9	T	------	See log well 15J1; well Sj 6-3A (KS, 1948).
15K1	----do----------	----------	Before 1921	718	Dr	173	----	----------	63	110	Sd,G	Pl	C	13	T	------	Well Sj 6-4A (KS, 1948); L.
15L1	New Jersey, Indiana, and Illinois Railroad	----------	1931	715	Dr	80	8	----------	---	---	Sd,G	Pl	C	---	O	------	Observation well St. Joseph 8; water level measured 14.32 ft below lsd. 1-20-45; well Sj 85 (KS, 1948); S, G.
16B1	Torrington Co., Inc.	Indiana-Michigan Water Development Co.	10-30-36	712	Dr	102	8	S; 14ft, dia 7½	85	17	Sd,G	Pl	C	16	N	------	Dd 40 ft pumping 150 gpm; screen, upper 7 ft 20 sl, lower 7 ft 30 sl; see log well 16B4; well Sj 40 (KS, 1948).
16B2	----do----------	----do----------	5-23-45	712	Dr	102	8	S; 15ft, 50sl, dia 7½	78	36	Sd	Pl	C	10	I	T10	Dd 5 ft pumping 100 gpm; see log well 16B5.
16B3	----do----------	----do----------	4-17-51	712	Dr	100	12	S; 18ft, 30sl	75	25	Sd,G	Pl	C	14	I	T20	Ca, L.
16B4	Roach-Appleton Manufacturing Co.	----do----------	3- 2-39	712	Dr	108	8	S; 15ft, dia 7½	90	20	Sd,G	Pl	C	9	I	T10	Dd 12 ft pumping 150 gpm; well Sj 78 (KS, 1948); L.
16B5	----do----------	----do----------	5- 7-48	712	Dr	115	10	S; 18ft, 18sl, dia 8½	77	39	Sd	Pl	C	12	I	T20	Dd 29 ft pumping 680 gpm; Ca, L.
16G1	Grand Trunk Railroad	Layne-Northern Co., Inc.	11- 6-37	713	Dr	170	----	----------	81	79	Sd,G	Pl	C	8	T	------	See log well 16G1; well Sj 11-T1 (KS, 1948).
16G2	----do----------	----do----------	1-11-46	713	Dr	174	34	Gp; S; 20ft, 105sl, dia 18	108	68	Sd,G	Pl	C	11	N	------	Dd 13 ft after 8 hr pumping 830 gpm; well Sj 11-1 (KS, 1948); L.
16G3	New York Central System	Indiana-Michigan Water Development Co.	8-31	710	Dr	152	12	S	---	---	Sd,G	Pl	----	---	N	------	Well Sj 63-1 (KS, 1948); L.
16N1	M. Ulad	Layne-Northern Co., Inc.	1-27-49	710	Dr	117	6	----------	76	41	Sd,G	Pl	C	3	T	------	See log well 16N2.
16N2	----do----------	----do----------	3-10-49	711	Dr	142	12	S; 20ft, 80sl, dia 10	78	66	Sd,G	Pl	C	1	Ir	------	Dd 25 ft after 4 hr pumping 1,000 gpm; L.
17A1	City of South Bend	----do----------	11- 4-44	710	Dr	152	3	S; 5ft, dia 1½	128	38	Sd,G	Pl	C	9	O	------	Observation well St. Joseph 12; water level measured 8.56 below lsd, 2-16-45; well Sj 4-T2 (KS, 1948); L.
17B1	B. Nalipinski	Sriver Drilling Co.	7-24-52	718	J	44	2	S; 3½ft, 10sl, dia 1½	38	6	Sd	Pl	C	7	D	------	Ca, L.
17D1	H. Kelver	----do----------	1-18-54	737	J	52	2	S; 3ft, 60g, dia 1½	30	22	Sd,G	Pl	U	30	D	------	Sand and gravel from 0-52 ft.
17K1	Indiana State Highway Department	----------	12-11-56	717	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	L.
17K2	----do----------	----------	12-11-56	715	B	50	----	----------	---	---	G.Sd	Pl	U	---	T	------	See log well 17K1.
17L1	----do----------	----------	12-11-56	716	B	50	----	----------	---	---	G.Sd	Pl	U	---	T	------	L.
17L2	----do----------	----------	12-11-56	717	B	50	----	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 17K1.
17R1	----do----------	----------	2-15-57	710	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Gray sand overlain by 7 ft muck.
17R2	----do----------	----------	2-15-57	712	B	50	----	----------	---	---	Sd	Pl	----	---	T	------	Gray sand overlain by 7 ft muck and fill.
17R3	----do----------	----------	2-15-57	714	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Gray sand overlain by 6 ft muck.
17R4	----do----------	----------	2-15-57	709	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	Do.
18D1	----do----------	----------	8-27-56	742	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	See log well 18B2.
18B2	----do----------	----------	8-27-56	740	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	L.
18B3	----do----------	----------	8-27-56	740	B	50	----	----------	---	---	Sd	Pl	U	---	T	------	See log well 18B2.
18D1	R. Martin	Sriver Drilling Co.	12-15-53	743	J	47	2	S; 3ft, 60g, dia 1½	30	17	Sd,G	Pl	U	30	D	------	Yellow sand and gravel from 0-47 ft.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
37/2-20P1	M. Blad	Layne-Northern Co., Inc.	1- 7-49	714	Dr	53	8	S; 8ft, dia 7	---	---	Sd,G	Pl	----	6	I	-------	Dd 16 ft after 1.25 hr pumping 140 gpm; see log well 20P2.
20P2	----do----------	----do----------	0-13-57	716	Dr	68	12	S; 20ft, 10Sal	6	62	Sd,G	Pl	U	6	I	-------	Dd 21.2 ft after 2 hr pumping 550 gpm; Ca, L.
20P3	----do----------	----do----------	5-30-46	716	Dr	65	12	S; 20ft, 80sl, dia 10	5	60	Sd,G	Pl	U	5	I	T25	Dd 20 ft after 3 hr pumping 560 gpm; see log well 20P2.
21D1	Indiana State Highway Department	----------	5-20-57	714	D	50	----	----------	---	---	Sd	Pl	U	---	T	-------	Gray sand overlain by 4 ft muck.
21D2	----do----------	----------	5-20-57	714	D	50	----	----------	---	---	Sd	Pl	----	---	T	-------	L.
21D3	----do----------	----------	5-20-57	717	B	50	----	----------	---	---	Sd	Pl	----	---	T	-------	See log well 21D2.
21E1	----do----------	----------	5-20-57	714	B	50	----	----------	---	---	Sd	Pl	----	---	T	-------	Do.
21F1	M. Blad	Layne-Northern Co., Inc.	9- 2-47	721	Dr	86	8-6	----------	---	---	Sd	Pl	----	4	T	-------	L.
21F2	----do----------	----do----------	1-28-48	721	Dr	51	30	Gp; S; 20ft, 105sl, dia 12	---	---	Sd	Pl	----	5	Ir	T	Dd 30.5 ft after 6 hr pumping 830 gpm; L.
21K1	Indiana State Highway Department	----------	11-10-56	777	D	50	----	----------	---	---	-----	--	----	---	T	-------	L.
21K2	----do----------	----------	11-10-56	771	B	50	----	----------	---	---	-----	--	----	---	T	-------	See log well 21K1.
21K3	----do----------	----------	11-19-56	777	B	50	----	----------	---	---	-----	--	----	---	T	-------	Do.
21K4	----do----------	----------	11-19-56	772	B	50	----	----------	---	---	-----	--	----	---	T	-------	Do.
21K5	----do----------	----------	11-19-56	771	D	50	----	----------	---	---	-----	--	----	---	T	-------	Do.
21P1	E. Lonzo	Sriver Drilling Co.	--------	778	J	71	2½	S; 5ft, 60g, dia 1½	52	19	Sd,G	Pl	U	52	D	-------	Yellow sand and gravel overlain by 15 ft gray sand; Ca.
21R1	M. Juhas	----do----------	8-27-48	775	J	76	2	S; 2½ft, 80g, dia 1¼	---	---	Sd	Pl	----	57	D	-------	
21R2	J. Wozniak	----do----------	4-17-48	780	J	78	2	S; 3ft, 80g, dia 1¼	57	19	G,Sd	Pl	U	57	D	-------	Gravel and sand overlain by 40 ft clay.
21R3	L. Wozniak	----do----------	12- 2-53	781	J	101	2½	S; 5ft, 60g, dia 1½	90	11	Sd	Pl	C	84	D	-------	Ca, L.
22C1	B. and B. Wileznk	----do----------	4- 3-43	760	J	56	2	S; 3ft, 80g, dia 1¼	42	14	Sd,G	Pl	U	42	D	-------	Sand and gravel from 0-56 ft.
22C2	E. S. Earl	----do----------	11- 9-48	760	J	65	2	----do----------	44	21	Sd,G	Pl	U	44	D	-------	L.
22C3	J. Jovanich	----do----------	7-20-56	750	J	57	2	S; 3½ft, 80g, dia 1½	40	17	Sd	Pl	C	26	D	J1/2	L.
22E1	F. H. Bouchard	----do----------	8-12-54	755	J	39	2	S; 3ft, 80g, dia 1¼	26	13	Sd,G	Pl	U	26	D	J1/3	Sand and gravel overlain by 16 ft gray clay.
22G1	City of South Bend	Indiana-Michigan Water Development Co.	8-10-36	784	Dr	102	4	S; 5ft, 16sl	95	7	G	Pl	C	55	P	J1	Dd 40 ft pumping 100 gpm; Ca, L.
22G2	C. Dunlap	Sriver Drilling Co.	3-10-48	770	J	50	2	S; 3ft, 80g, dia 1¼	---	---	Sd,G	Pl	----	32	D	-------	
22G3	----do----------	----do----------	5-27-48	770	J	50	2	----do----------	---	---	Sd,G	Pl	----	34	D	-------	
22G4	----do----------	----do----------	8-19-48	770	J	82	2	----do----------	---	---	Sd,G	Pl	----	32	D	-------	
22K1	F. Powell	----do----------	7-50	790	J	100	2	S; 3½ft, 80g, dia 1½	92	8	Sd,G	Pl	C	51	D	-------	See log well 22G1.
22P1	W. Sannor	----do----------	--------	820	J	122	2	S; 3½ft, 10sl, dia 1½	115	7	Sd	Pl	C	65	D	J1	L.
22P2	H. King	----do----------	9- 3-54	821	J	137	2	S; 3½ft, 80g, dia 1½	133	4	Sd	Pl	C	68	D	J1	Ca, L.
22P3	C. Dunlap	----do----------	2-18-52	817	J	111	3	S; 5ft, 10sl, dia 2	101	10	Sd	Pl	C	70	D	-------	Red sand overlain by 101 ft clay and blue gravel.
22Q1	J. Kochanowski	----------	--------	810	J	112	2	S; 3ft, 80g, dia 1	---	---	Sd	Pl	----	73	---	-------	
23D1	City of South Bend	Layne-Northern Co., Inc.	2-25-55	803	Dr	192	6	----------	102	48	Sd,G	Pl	C	---	T	-------	Bedrock at 180 ft; L.

37/2-23D2	City of South Bend	Layne-Northern Co., Inc.	7-5-55	805	Dr	138	34	Gp; S; 40ft, 80sl, dia 16	98	40	Sd,G	Pl	C	82	P	T100	Dd 16.2 ft after 8 hr pumping 1,040 gpm; see log well 23D1; Ca.
23H1	----do----------	Austin Drilling Co.	5-27-27	751	Dr	86	----	----------	9	73	Sd,G	Pl	U	9	T	------	Well Sj 7-29 (KS, 1948); L.
23Q1	----do----------	----do----------	4-21-27	781	Dr	160	----	----------	22	94	Sd,G	Pl	U	22	T	------	Well Sj 7-26 (KS, 1948); L.
23R1	----do----------	Layne-Northern Co., Inc.	8-27-41	790	Dr	116	----	----------	50	84	Sd,G	Pl	U	50	T	------	Well Sj 3-T1 (KS, 1948); L.
23R2	----do----------	----do----------	4-16-42	790	Dr	109	38-18	Gp; S; 25ft, 130sl, dia 18	77	32	Sd	Pl	C	46	P	T75	Dd 14 ft after 11 hr pumping 1,110 gpm; water level measured 51.5 ft below lsd, 3-5-45; well Sj 3-4 (KS, 1948); L.
23R3	----do----------	----do----------	4- 5-49	778	Dr	110	8-4	----------	37	84	Sd,G	Pl	U	37	T	------	See log well 23R4.
23R4	----do----------	----do----------	4-11-49	775	Dr	105	8-6	----------	36	68	Sd,G	Pl	U	36	T	------	L.
23R5	----do----------	----do----------	8-30-49	775	Dr	100	34	Gp; S; 25ft, 80sl, dia 18	---	---	Sd,G	Pl	----	40	P	T60	Dd 19.5 ft after 8.5 hr pumping 1,050 gpm; see log well 23R4.
23R6	----do----------	Austin Drilling Co.	1929	772	Dr	-----	24-18	----------	---	---	Sd,G	Pl	----	38	N	T	Dd 24.3 ft pumping 950 gpm; water level 38.20 ft below lsd, 8-11-41; well Sj 3-3 (KS, 1948).
23R7	----do----------	----do----------	1929	768	Dr	90	24-18	----------	40	50	Sd,G	Pl	U	40	P	T	Dd 19.3 ft pumping 1,420 gpm; water level measured 37.14 ft below lsd, 3-5-45; see log well 23R4; well Sj 3-2 (KS, 1948).
23R8	----do----------	----do----------	1929	772	Dr	-----	24-18	----------	---	---	Sd,G	Pl	----	40	P	T	Dd 12 ft pumping 950 gpm; water level 39.95 ft below lsd, 8-11-41; well Sj 3-1 (KS, 1948).
24C1	Victoria Motors	Sriver Drilling Co.	4- 2-54	747	J	45	2	S; 3ft, 10sl, dia 1¼	35	10	Sd,G	Pl	C	20	---	J	For fishing bait; Ca, L.
24D1	City of South Bend	Austin Drilling Co.	8-24-26	759	Dr	205	----	----------	27	58	Sd,G	Pl	U	27	T	------	Bedrock at 195 ft; well Sj 7-15 (KS, 1948); L.
24D2	----do----------	----do----------	10- 8-26	759	Dr	205	----	S; 20ft	---	---	Sd,G	Pl	----	---	T	------	See log well 24D1; well Sj 7-17 (KS, 1948).
24D3	----do----------	----do----------	3-18-27	748	Dr	129	----	----------	11	59	G,Sd	Pl	U	11	T	------	Bedrock at 128 ft; well Sj 7-24 (KS, 1948); L.
24E1	----do----------	----------	Before 1911	750	Dr	122	10	----------	110	12	G	Pl	C	4	T	------	Bedrock at 122 ft; well Sj 8-9 (KS, 1948); L.
24E2	----do----------	Austin Drilling Co.	5-24-27	749	Dr	83	----	----------	11	81	Sd,G	Pl	----	11	T	------	See log well 24D1; well Sj 7-28 (KS, 1948).
24F1	----do----------	Gray Drilling Co.	12-20-26	788	Dr	185	----	----------	---	---	Sd,G	Pl	----	---	T	------	Bedrock at 180 ft; well Sj 7-20 (KS, 1948); L.
24K1	P. H. Copeland	Sriver Drilling Co.	9- 9-53	813	J	93	2	S; 3ft, 60g, dia 1¼	68	25	G,Sd	Pl	C	68	D	J3/4	Sand overlain by 90 ft gravel; Ca.
24L1	City of South Bend	Gray Drilling Co.	1-17-27	802	Dr	200	----	----------	---	---	Sd	Pl	----	---	T	------	Bedrock at 195 ft; well Sj 7-21 (KS, 1948); L.
24N1	Super Auto Salvage	Sriver Drilling Co.	5- 7-51	805	J	58	2	S; 3½ft, 60g, dia 1¼	38	20	Sd,G	Pl	U	38	---	------	Sand and gravel from 0-58 ft.
25A1	City of South Bend	R. Korsey	8- 1-28	706	Dr	185	----	----------	92	33	Sd	Pl	U	92	T	------	Bedrock at 180 ft; well Sj 6-3K (KS, 1948); L.
25D1	H. Van Slette	----------	--------	813	J	82	2	S; 4½ft, 60g, dia 1¼	---	---	Sd	Pl	----	68	D	J1	
25E1	J. Jones	Sriver Drilling Co.	8-30-47	836	J	131	2	S; 3ft, 60g, dia 1¼	92	39	Sd,G	Pl	U	92	D	------	Sand and gravel from 0-131 ft.
25E2	E. Lukas	----do----------	9-10-52	830	J	109	2	S; 3½ft, 60g, dia 1¼	89	20	Sd,G	Pl	U	89	D	------	Sand and gravel from 0-109 ft.
25E3	W. Rock	----do----------	1- 6-51	825	J	133	3	S; 6ft, 60g, dia 2	---	---	Sd,G	Pl	----	96	---	------	
25E4	Standard Oil Co.	----do----------	7-20-53	832	J	131	3	S; 5ft, 60g, dia 2	72	59	Sd,G	Pl	U	72	P	J1-1/2	Yellow sand and gravel overlain by 10 ft blue clay.
25E5	W. Rock	----------	--------	832	J	77	2	S; 4ft, 80g, dia 1	---	---	Sd	Pl	----	84	P	J1	
25E6	J. Weis	Sriver Drilling Co.	9-13-57	840	J	119	2	S; 3½ft, 60g, dia 1¼	94	25	Sd	Pl	U	94	D	J1	Ca, L.
25F1	R. W. Maurice	----do----------	11- 5-49	824	J	94	2	----do----------	77	17	Sd,G	Pl	U	77	D	------	Sand and gravel from 0-94 ft.
25N1	City of South Bend	Layne-Northern Co., Inc.	8-17-54	843	Dr	185	4	----------	---	---	G,Sd	Pl	----	86	T	------	L.
25N2	----do----------	----do----------	12-21-54	843	Dr	175	34	S; 40ft, 80sl, dia 16	87	88	G,Sd	Pl	U ?	87	P	T60	Dd 14 ft after 3 hr pumping 850 gpm; see log well 25N1; Ca.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/2-25K1	G. Palmer	Sriver Drilling Co.	12- 8-54	837	J	125	3	S; 5ft, 60g, dia 2	84	41	Sd,G	Pl	U	84	D	J	Sand and gravel from 0-125 ft; Ca.
25K2	L. F. Sumrall	Layne-Northern Co., Inc.	10-25-44	848	Dr	144	6	S; 8ft, dia 5	92	52	Sd,G	Pl	U	92	D	------	Yield 30 gpm; well SJ 43 (KS, 1948); L.
25K3	E. N. Robinson	Sriver Drilling Co.	8- 3-55	833	J	114	2½	S; 5ft, 60g, dia 1½	80	31	Sd,G	Pl	U	80	D	------	Sand and gravel from 0-114 ft.
25L1	R. Albert	----do----------	5-26-48	851	J	110	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	-----	96	D	------	
25L2	J. Barlakovich	----do----------	8-22-52	847	J	112	3	S; 5ft, 60g, dia 2	92	20	Sd,G	Pl	U	92	D	J1-1/2	Sand and gravel from 0-112 ft.
25L3	D. A. Rowe	----do----------	6-23-52	851	J	148	2	S	---	---	Sd	Pl	-----	---	D	J1	
25L4	Michiana Realty Co.	Layne-Northern Co., Inc.	7- 9-54	853	Dr	121	6	S; 10ft, dia 4	72	49	Sd,G	Pl	U	72	D	------	Dd 18 ft pumping 40 gpm; L.
25N1	P. Nash	--------------------	--------	835	J	92	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	-----	77	D	------	
25N2	----do----------	Sriver Drilling Co.	7-23-52	835	J	98	2	----do----------	80	18	G	Pl	U	80	D	------	Gravel from 0-98 ft.
25N3	C. Hasler	----do----------	6- 5-52	820	J	86	2	S; 3½ft, 60g, dia 1¼	66	20	Sd,G	Pl	U	66	D	------	L.
25N2	Mr. Kramer	----do----------	6-24-48	820	J	70	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	-----	62	D	------	
25N3	Mr. Fabyan	----do----------	10-21-46	820	J	82	2½	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	65	D	------	
25N4	F. Fazekas	----do----------	11-17-52	820	J	94	2½	----do----------	60	31	Sd,G	Pl	U	60	D	------	Yellow sand and gravel from 0-94 ft; trace of clay at 50 ft.
25N5	P. Woodcox	----do----------	6-18-54	825	J	87	2	S; 3ft, 60g, dia 1¼	72	15	Sd,G	Pl	U	72	D	------	Yellow sand and gravel overlain by 15 ft yellow clay.
25N6	L. Stokes	----do----------	--------	822	J	97	3	S; 5ft, 60g, dia 2	68	29	Sd,G	Pl	U	68	D	------	Sand and gravel overlain by 15 ft top soil and yellow clay.
25N7	D. Fuqua	----do----------	7-22-54	820	J	75	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	-----	58	D	------	L.
25N8	Indiana State Highway Department	----------	4-15-57	819	B	29	----	----------	---	---	-----	--	-----	---	T	------	L.
25N9	----do----------	----------	4-15-57	823	B	28	----	----------	---	---	-----	--	-----	---	T	------	See log well 25N8.
25N10	----do----------	----------	4-15-57	824	B	29	----	----------	---	---	-----	--	-----	---	T	------	Do.
25N11	----do----------	----------	4-15-57	821	B	26	----	----------	---	---	-----	--	-----	---	T	------	Do.
25P1	E. V. D. Korps	Sriver Drilling Co.	3- 1-49	835	J	98	2	S; 3ft, 60g, dia 1¼	84	14	Sd,G	Pl	U	84	D	------	Sand and gravel from 0-98 ft.
25P2	R. W. Britton	----do----------	10- 2-54	835	J	94	2½	S; 5ft, 60g, dia 1½	80	14	Sd,G	Pl	U	80	D	------	Sand and gravel from 0-94 ft.
25P3	R. Falan	----do----------	6-27-51	830	J	103	2	S; 3½ft, 60g, dia 1¼	84	19	Sd,G	Pl	U	84	D	J	Yellow sand and gravel overlain by 6 ft yellow clay; Ca.
25P4	J. W. Majewski	----do----------	2-11-54	845	J	111	2½	S; 6ft, 60g, dia 1½	90	21	Sd,G	Pl	U	90	D	------	L.
26A1	Royal Rubber Co.	Indiana-Michigan Water Co.	1-21-53	780	Dr	113	6	S; 10ft, 60sl, dia 5½	30	83	Sd,G	Pl	U	30	I	T5	Dd less than 30 ft after 3 hr pumping 100 gpm; L.
26B1	H. L. Sibly	Sriver Drilling Co.	--------	795	J	86	2	S; 3ft, 60g, dia 1¼	56	30	Sd,G	Pl	U	56	D	J3/4	Yellow sand overlain by 75 ft coarse gravel; Ca.
26C1	City of South Bend	Austin Drilling Co.	5- 6-27	802	Dr	165	----	----------	---	---	Sd,G	Pl	-----	28	T	------	Bedrock at 163 ft; well SJ 7-27 (KS, 1948); L.
26E1	F. M. Plain	Sriver Drilling Co.	9-12-51	815	J	92	2	S; 4½ft, 10sl, dia 1¼	80	12	Sd	Pl	C	78	D	L	See log well 26E2.
26E2	F. Barker	----do----------	6-11-57	835	J	118	2½	S; 5ft, 60g, dia 1½	100	18	Sd	Pl	U	100	D	J1	Ca, L.
26F1	A. C. Fults	----do----------	4-29-48	812	J	77	2	S; 3ft, 60g, dia 1¼	62	15	Sd,G	Pl	U	62	D	------	See log well 26J1; Ca.
26H1	J. Edwards	----do----------	6-30-48	838	J	109	2	----do----------	---	---	Sd,G	Pl	-----	84	D	------	
26J1	Scaltest Corp.	Layne-Northern Co., Inc.	12-17-59	808	Dr	106	6	S; 10ft, 20sl, dia 4	43	60	Sd,G	Pl	U	43	I	------	Dd 3 ft after 3 hr pumping 15 gpm; L.
26K1	G. F. Burnett Co.	Indiana-Michigan Water Development Co.	4- 5-49	780	Dr	93	6	S; 10ft, 20sl, dia 6½	28	65	Sd,G	Pl	U	28	I	------	Yield 85 gpm; L.

37/2-26L1	Sinclair Refining Co.	Indiana-Michigan Water Development Co.	6-27-46	800	Dr	118	8	S; 15ft, 15sl, dia 7½	60	58	Sd,G	Pl	C	43	P	T7-1/2	Dd 10 ft pumping 60 gpm; Ca, L.
26L2	Indiana State Highway Department	----------	5- 6-57	797	D	50	----	----------	---	---	------	--	-----	---	T	------	L.
26L3	----do----------	----------	5- 6-57	803	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 26P1.
26M1	----do----------	----------	11-28-56	805	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
26M2	----do----------	----------	11-28-56	805	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 28M1.
26M3	----do----------	----------	11-28-56	805	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
26M4	----do----------	----------	11-28-56	808	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 28M3.
26P1	----do----------	----------	5- 6-57	813	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
26P2	----do----------	----------	5- 6-57	797	D	50	----	----------	---	---	------	--	-----	---	T	------	See log well 26P1.
26P3	----do----------	----------	5- 6-57	785	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 26L2.
27H1	T. Beaty	Sriver Drilling Co.	8- 2-46	803	J	102	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	82	D	------	
27F1	Indiana State Highway Department	----------	11-28-56	799	B	50	----	----------	---	---	------	--	-----	---	T	------	Gray clay overlain by 30 ft brown sand.
27F2	----do----------	----------	11-28-56	798	D	50	----	----------	---	---	------	--	-----	---	T	------	Gray clay overlain by 27 ft brown sand.
27G1	R. Berkheimer	Sriver Drilling Co.	7-16-52	815	J	110	2	S; 3½ft,60g, dia 1	---	---	Sd	Pl	-----	82	D	------	
27G2	Indiana State Highway Department	----------	11-28-56	802	B	50	----	----------	---	---	------	--	-----	---	T	------	Gray clay overlain by 30 ft brown sand.
27G3	----do----------	----------	11-28-56	799	B	50	----	----------	---	---	------	--	-----	---	T	------	Gray clay overlain by 18 ft brown sand.
27G4	----do----------	----------	11-28-56	797	D	50	----	----------	---	---	------	--	-----	---	T	------	Gray clay overlain by 17 ft brown sand.
27J1	----do----------	----------	11-28-56	808	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 26M3.
27J2	----do----------	----------	11-28-56	807	B	50	----	----------	---	---	------	--	-----	---	T	------	Do.
27J3	----do----------	----------	11-28-56	809	B	50	----	----------	---	---	------	--	-----	---	T	------	Do.
27J4	----do----------	----------	11-28-56	805	B	50	----	----------	---	---	------	--	-----	---	T	------	Do.
27J5	----do----------	----------	11-28-56	805	D	50	----	----------	---	---	------	--	-----	---	T	------	See log well 28M1.
27J6	----do----------	----------	11-28-56	806	B	50	----	----------	---	---	------	--	-----	---	T	------	Do.
27J7	----do----------	----------	10-12-56	798	B	50	----	----------	---	---	------	--	-----	---	T	------	See log well 26P1.
27J8	----do----------	----------	10-12-56	797	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
27J9	----do----------	----------	10-12-56	801	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
27J10	----do----------	----------	10-12-56	800	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
27K1	A. Batcho	Sriver Drilling Co.	4-20-51	798	J	92	3	S; 5ft, 60g, dia 2	---	---	Sd,G	Pl	-----	56	D	J1	
27K2	R. Halida	----do----------	8-10-56	803	J	94	2	S; 4ft, 60g, dia 1	70	24	Sd	Pl	C	66	D	L	L.
27K3	S. Nemes	----do----------	1950	810	J	103	3	S; 6ft, 60g, dia 2	85	18	Sd,G	Pl	C	68	D	------	L.
27K4	Indiana State Highway Department	----------	10-12-56	798	B	50	----	----------	---	---	------	--	-----	---	T	------	L.
27L1	J. Merisch	Sriver Drilling Co.	--------	798	J	93	2	S; 3½ft, 10sl, dia 1½	70	23	Sd,G	Pl	C	53	D	J3/4	Ca, L.
27M1	E. Kobor	----do----------	7-23-47	840	J	130	2	S; 4ft, 60g, dia 1	---	---	Sd,G	Pl	-----	90	D	------	
27M2	W. Smith	----do----------	--------	840	J	140	2	S; 3½ft, 60g, dia 1½	120	28	Sd,G	Pl	C	114	D	J1	Ca, L
27N1	C. Bennett	----do----------	7-27-57	---	Dr	101	4	S; 7½ft, 60g, dia 3	---	---	Sd	Pl	-----	67	---	------	L.
27P1	C. W. Anderson	----do----------	12- 8-40	---	J	114	3	S; 5ft, 60g, dia 2	70	44	Sd,G	Pl	C	80	D	------	L.
28A1	J. Miko	----do----------	9- 2-46	775	J	94	2	S; 2½ft, 60g, dia 1½	---	---	Sd	Pl	-----	50	D	L	
28C1	A. Molnar	----do----------	10-28-48	777	J	78	3	S; 5ft, 60g, dia 2	---	---	Sd,G	Pl	-----	54	D	------	
28E1	H. Morris	----do----------	6-19-53	805	J	158	2	S; 3½ft, 10sl, dia 1½	95	63	Sd,G	Pl	C	91	D	J3/4	Ca, L.
28F1	H. J. Kindt	----do----------	3- 7-48	782	J	70	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	58	D	------	
28F2	M. D. Johnson	----do----------	8-10-55	792	J	110	3	S; 6ft, 60g, dia 2	---	---	Sd	Pl	-----	72	D	------	
28F3	E. L. Nungesser	----do----------	8-12-48	785	J	82	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	62	D	------	
28G1	W. Ruszkowski	----do----------	--------	775	J	81	2	----do----------	71	10	G	Pl	C	56	D,S	L	L.
28G2	S. Sabo	----------	--------	800	J	90	2	S; 3½ft, 10sl, dia 1½	---	---	Sd,G	Pl	-----	56	D	J	
28G3	C. E. Trowbridge	----------	--------	800	J	130	2	S; 3½ft, 60g, dia 1	---	---	Sd,G	Pl	-----	87	D	------	
28G4	D. Golichowski	Sriver Drilling Co.	7-12-50	810	J	128	3	S; 5½ft, 60g, dia 1½	---	---	Sd	Pl	-----	101	D	J1-1/2	Yellow sand overlain by 115 ft sand and blue clay.
28J1	C. Perkins	----do----------	7- 8-55	830	J	120	3	S; 5ft, 60g, dia 2	80	40	Sd,G	Pl	U	80	D	------	L.
28J2	F. Savolo	----do----------	--------	830	J	101	2	S; 60g	80	21	Sd	Pl	C	78	D	J1	L.
28K1	E. Hartz	----do----------	3-20-48	815	J	112	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	86	D	------	

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/2-28K2	S. H. Smith	Sriver Drilling Co.	10-16-53	800	J	88	2	S; 3ft, 60g, dia 1¼	80	8	Sd,G	Pl	C	30	---	J	L.
29B1	V. Chlebek	R. Reddish	8-12-57	717	J	45	2	S; 3½ft, 60g, dia 1¼	12	33	Sd,G	Pl	U	12	D	------	Yield 10 gpm; gravel overlain by 30 ft sand.
29B2	C. Gear	Sriver Drilling Co.	9-21-53	735	J	67	2	S; 3ft, 60g, dia 1¼	24	43	Sd,G	Pl	U	24	D	------	Yellow sand and gravel from 0-67 ft.
29B3	C. Bailey	----do----------	8-20-56	727	J	112	2	S; 3½ft, 10sl, dia 1¼	13	89	Sd,G	Pl	U	13	D	------	Yellow sand and gravel from 0-112 ft.
29B4	M. Fox	----do----------	--------	727	J	67	2	S; 3ft, 60g, dia 1¼	24	43	Sd,G	Pl	U	24	D	J1/2	Yellow sand and gravel from 0-67 ft.
29C1	M. Mattheys	----do----------	9- 4-52	728	J	48	2	S; 3½ft, 60g, dia 1¼	12	36	Sd,G	Pl	U	12	---	------	Sand and gravel from 0-48 ft; Ca.
29C2	M. L. Strong	----do----------	8-26-52	730	J	63	2	S; 4ft, 80g, dia 1	---	---	Sd	Pl	----	10	D		
29D1	M. Blad	Layne-Northern Co., Inc.	10-29-53	710	Dr	171	6	----------	121	39	G	Pl	C	15	T	------	L.
29F1	N. Landman	Sriver Drilling Co.	6-25-52	740	J	72	2	S; 3½ft, 10sl, dia 1¼	54	18	Sd	Pl	C	26	D	------	L.
29F2	M. Naragon	----do----------	9- 3-53	741	J	68	3	S; 5ft, 60g, dia 2	49	19	Sd	Pl	C	26	D	------	See log well 29F1; Ca.
29F3	R. D. Strycker	----do----------	7-10-50	732	Dn	23	1¼	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	----	8	D	------	Ca.
29G1	L. H. Harris	----do----------	--------	742	J	54	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	22	D	J3/4	
29J1	Indiana Farm Bureau Co-Operative Association, Inc.	----do----------	6-10-54	740	J	107	2	S; 3ft, 60g, dia 1¼	100	7	Sd,G	Pl	C	20	N	------	Ca, L.
29J2	----do----------	----do----------	11-15-54	738	J	150	2	----do----------	146	4	Sd,G	Pl	C	20	P	J3/4	Ca, L.
29K1	O. D. Kessler	----do----------	5-22-46	752	J	55	2	S; 3½ft, 80g, dia 1¼	---	---	Sd,G	Pl	----	38	D	------	
29K2	----do----------	----do----------	12- 6-47	752	J	59	2	S; 3½ft, 60g, dia 1¼	43	16	Sd,G	Pl	U	43	D	------	Sand and gravel from 0-59 ft.
29L1	A. Dudeck	----------	--------	748	J	50	2	S; 3½ft, 60g, dia 1	---	---	Sd	Pl	----	38	D	------	
29L2	R. Livengood	----------	--------	748	J	39	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	30	D	------	
29L3	R. Yoder	----------	--------	752	J	58	2	S; 4½ft, 80g, dia 1¼	---	---	Sd	Pl	----	38	D	J	
29L4	D. Worthington	----------	--------	752	J	88	2	----do----------	---	---	Sd	Pl	----	38	---	------	
29L5	C. A. Newman	Sriver Drilling Co.	6-24-52	752	J	54	2	S	---	---	Sd,G	Pl	----	---	D	J3/4	
29P1	R. H. Drover	----do----------	--------	765	J	60	2	S; 2½ft, 10sl	44	16	Sd,G	Pl	U	44	---	------	Sand and gravel from 0-60 ft.
30Q1	Haas Concrete Products Co.	Roseland Well Co.	--------	720	J	50	3	S	---	---	Sd,G	Pl	U	10	P,I	C5	
30R1	L. Kelly	----------	--------	745	J	53	2	S; 3½ft, 80g, dia 1¼	---	---	Sd	Pl	----	39	D	------	
31A1	Western Indiana Sand and Gravel Co.	Woods and Keal Well Drilling Co.	8-11-59	750	J	77	2	----do----------	---	---	Sd	Pl	----	36	P	------	Yield 10 gpm; Ca, L.
31B1	----do----------	Sriver Drilling Co.	10-19-46	750	Dr	70	4	S; 6ft, 60g, dia 2½	---	---	Sd,G	Pl	----	32	D	------	
31L1	G. J. Snyder	----------	--------	750	J	48	2	S; 3½ft, 80g, dia 1¼	8	40	Sd,G	Pl	U	8	D,S	J3	Sand and gravel from 0-48 ft.
31N1	J. Lichtenbargor	Sriver Drilling Co.	8-28-48	755	J	67	2	S; 3ft, 60g, dia 1¼	42	25	Sd,G	Pl	U	42	D	J1/2	Sand and gravel from 0-67 ft.
32B1	C. Beyers	----do----------	6-50	775	J	61	2	----do----------	34	27	Sd,G	Pl	U	34	D	------	Sand and gravel from 0-61 ft.
32F1	E. Luke	----------	--------	765	J	54	2	----do----------	---	---	Sd,G	Pl	----	23	D	------	
32G1	M. Ott	Sriver Drilling Co.	12- 3-53	780	J	67	2	S; 3½ft, 60g, dia 1¼	46	21	Sd,G	Pl	U	46	D	J1/2	Sand and gravel from 0-67 ft; Ca.

37/2-32G2	L. Kline	Sriver Drilling Co.	1-18-56	780	J	62	2½	S; 5ft, 60g, dia 1½	---	---	Sd,G	Pl	U	---	D	------	Sand and gravel from 0-62 ft.
32G3	L. Walborn	----do----------	10-19-53	780	J	60	2	S; 3ft, 60g, dia 1½	44	16	Sd	Pl	U	44	D	------	Sand from 0-60 ft.
32L1	M. C. Lake	----do----------	9-23-50	770	J	71	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	26	D,I	J1/2	Ca, L.
32N1	Sumption Prairie Cemetery	----do----------	--------	750	J	60	2	S; 3½ft, 60g, dia 1	---	---	Sd	Pl	-----	9	---	P	Ca.
32P1	G. A. Pohling	----------	--------	775	J	75	2	S; 4½ft, 60g, dia 1	---	---	Sd	Pl	-----	43	---	J1/2	
32P2	C. Walgamuth	Sriver Drilling Co.	8-30-53	780	J	82	2	S; 4½ft, 60g, dia 1½	48	34	Sd	Pl	C	48	D	-----	L.
33D1	L. R. Milleken	----do----------	--------	825	J	142	2	S; 3½ft, 60g, dia 1½	130	12	Sd	Pl	C	64	D	L	L.
33B2	O. Treash	----do----------	5-31-45	825	J	148	2	S; 3ft, 80g, dia 1½	---	---	G	Pl	C	86	D	------	
33C1	W. E. Johnson	----do----------	6-15-55	810	J	138	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	C	75	D	J1	Ca, L.
33C2	R. Fletcher	----do----------	12- 6-45	830	J	147	2	S; 4ft, 80g, dia 1½	---	---	Sd,G	Pl	C	82	D	L1/2	
33C3	E. L. Redman	----do----------	9-29-51	830	J	150	2	S; 4ft, 60g, dia 1	145	5	Sd	Pl	C	94	D	J1	Fine sand overlain by 145 ft blue clay
33E1	F. Kohn	----do----------	--------	810	J	65	2	S; 4½ft, 60g, dia 1½	31	34	Sd,G	Pl	U	31	D	J	L.
33F1	E. J. Kish	----do----------	0-17-45	820	J	119	2	S; 3ft, 80g, dia 1½	80	39	Sd,G	Pl	U	80	---	L3/4	L.
33G1	D. F. Huddleston	----------	--------	820	J	160	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	-----	60	D	J1	Ca.
33H1	T. Morgan	Sriver Drilling Co.	11-18-46	820	J	128	2	S; 3ft, 60g, dia 1½	---	---	G,Sd	Pl	-----	81	D	J1	
33M1	P. Rotruck	----do----------	9-17-53	820	J	153	3	S; 5ft, 80g, dia 2	120	33	Sd	Pl	C	62	D,S	J3/4	Ca, L.
33P1	A. Horvath	----do----------	8-23-46	810	J	110	2	S; 2½ft, 60g, dia 1½	---	---	Sd	Pl	-----	56	D	------	
33P2	M. Kovatch	----do----------	5-14-53	815	J	81	3	S; 5ft, 60g, dia 2	68	13	Sd,G	Pl	C	64	D	------	L.
33P3	F. Berkowski	----------	--------	805	J	79	2	S; 3ft, 80g, dia 1½	---	---	Sd	Pl	-----	50	D	J3/4	
33P4	H. C. Studebaker	----------	--------	850	J	140	2	S; 4½ft, 80g, dia 1	---	---	Sd	Pl	-----	90	D	------	
33R1	J. Goroncea	Sriver Drilling Co.	8- 8-46	815	J	76	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	51	D	------	
33R2	W. C. Sherman	----do----------	4-19-47	830	J	94	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	-----	64	D	L	
34C1	C. Campbell	----do----------	1- 2-53	---	J	111	2	----do----------	104	7	Sd	Pl	C	86	---	J3/4	L.
35A1	F. and M. Bennighoff	----------	--------	805	J	60	2	S; dia 1	---	---	Sd	Pl	U	35	D	------	
35A2	J. Quinlen	Sriver Drilling Co.	8- 1-50	800	J	48	2	S; 3½ft, 60g, dia 1½	29	17	Sd,G	Pl	U	29	D	------	Sand and gravel from 0-48 ft.
35A3	J. C. L'Hommedieu	----do----------	3-15-51	800	J	48	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	U	26	D	------	
35A4	W. E. Comegys	----do----------	--------	805	J	51	2	S; 3½ft, 60g, dia 1½	33	18	Sd,G	Pl	U	33	D	J3/4	Yellow sand and gravel from 0-51 ft.
35A5	R. T. Strong	----do----------	5-31-46	800	J	40	2	S; 3ft, 80g, dia 1½	28	12	G,Sd	Pl	U	28	D	------	Gravel and sand from 0-40 ft.
35D1	K. Ulrich	----do----------	12- 5-53	800	J	45	2	----do----------	36	9	Sd,G	Pl	C	25	D	------	Ca, L.
35G1	D. Holdrod	----do----------	5-17-46	800	J	45	2	----do----------	---	---	Sd,G	Pl	C	24	D	------	Ca.
35G2	A. M. Rafer	----do----------	Summer 1951	815	J	107	2	S; 3½ft, 80g, dia 1½	35	72	Sd,G	Pl	C	30	D	J3/4	Ca, L
35H1	J. Hoy	----do----------	10-13-32	795	J	61	2	----do----------	43	18	Sd	Pl	C	38	D	------	L.
35H2	H. Dille, Jr.	----do----------	10- 2-57	795	J	51	2	----do----------	---	---	Sd,G	Pl	-----	31	D	J3/4	Originally drilled to 32 ft; sand and gravel from 32-51 ft.
35H3	J. Reed	Mr. Smith	--------	785	J	78	2	S; 3½ft, 10sl, dia 1½	---	---	Sd	Pl	-----	21	D	J1/2	
35J1	R. W. Berkheiser	Sriver Drilling Co.	7- 3-50	800	J	48	2	S; 3½ft, 60g, dia 1½	27	19	Sd,G	Pl	U	27	D	------	Sand and gravel overlain by 18 ft clay.
35J2	R. Dietl	----do----------	9-22-50	800	J	44	2	S; 3ft, 60g, dia 1½	22	22	Sd,G	Pl	C	19	D	------	Sand and gravel overlain by 22 ft clay.
35J3	M. Goddard	----do----------	10-50	805	J	58	2	----do----------	24	34	Sd,G	Pl	U	24	D	------	Sand and gravel overlain by 18 ft clay.
35J4	R. Sims	----do----------	8-21-54	805	J	80	2	S; 3ft, 80g, dia 1½	---	---	Sd,G	Pl	-----	24	D	J	Ca, L.
35R1	S. A. Rittenhouse	----do----------	9-24-46	805	J	41	3	S; 4ft, 60g, dia 2	---	---	Sd,G	Pl	-----	16	D	------	
35R2	----do----------	----do----------	5-31-45	805	J	39	2	S; 2½ft, 60g, dia 1½	---	---	Sd	Pl	-----	15	D	------	
35R3	C. Bowron	----do----------	5-17-52	800	Dr	47	4	S; 8ft, 12sl	11	36	Sd,G	Pl	U	11	P	J1	Red sand and gravel from 0-47 ft.
36C1	R. Lister	----do----------	3-10-54	---	J	113	2	S; 3½ft, 60g, dia 1½	90	17	Sd,G	Pl	U	93	D	J1	Ca, L.
36C2	F. Vas	----do----------	5-19-54	---	J	118	3	S; 8ft, 80g, dia 2	93	23	Sd,G	Pl	U	93	D	------	Sand and gravel from 0-118 ft.
36C3	M. Couts	----do----------	----------	---	J	102	2	S; 3ft, 60g, dia 1½	88	14	Sd,G	Pl	U	88	D	------	Yellow sand and gravel overlain by 18 ft yellow clay.
36D1	R. Tomlison	----do----------	4-26-46	810	J	76	2	----do----------	---	---	Sd,G	Pl	-----	60	D	J3/4	
36D2	S. Clayson	----do----------	3-12-46	800	J	74	2	----do----------	---	---	Sd,G	Pl	-----	48	D	------	

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
J7/2-36D1	G. Toth	----------	-------	800	J	76	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	-----	50	D	J2	
36D1	C. A. Waltors	Sriver Drilling Co.	7-23-54	800	J	76	2	----do----------	---	---	Sd,G	Pl	-----	62	D	J	Ca.
36E1	R. E. Waldo	----do----------	12-30-55	---	J	93	3	S; 5ft, 60g, dia 2	72	21	Sd,G	Pl	U	72	D	J1	Sand and gravel from 0-93 ft. Ca.
36E2	E. Skoog	----------	-------	---	J	58	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	-----	35	D	L	
36F1	Trustees, Center Township	Layne-Northern Co., Inc.	11-20-53	---	Dr	124	8	S; 20ft	64	60	Sd,G	Pl	U	64	P	T7-1/2	Dd 24.5 ft pumping 180 gpm; L.
36F2	T. Van Goey	Sriver Drilling Co.	6-50	---	J	98	2	S; 3½ft, 60g, dia 1¼	68	30	Sd,G	Pl	U	68	D	------	See log well 36F1.
36F3	J. Roark	----do----------	11- 5-51	---	J	100	2	S; 3½ft, 10sl, dia 1¼	79	21	Sd	Pl	U	79	D	J3/4	Ca, L.
36L1	H. J. Bryant, Jr.	----do----------	9-16-54	---	J	93	2	S; 3ft, 60g, dia 1¼	70	23	Sd,G	Pl	U	70	D	------	Sand overlain by 89 ft sand and gravel.
36L2	J. H. Sailor	----------	-------	---	J	83	2	S; 3½ft, 10sl, dia 1¼	---	---	Sd,G	Pl	-----	58	D	J1	Ca.
36L3	Mr. Barker	Sriver Drilling Co.	-------	---	J	93	2	S; 3ft, 60g, dia 1¼	77	16	Sd,G	Pl	U	77	D	------	L.
36L4	M. L. Long	----do----------	6-11-45	---	J	94	2	S; 2½ft, 60g, dia 1¼	---	---	Sd,G	Pl	U	68	D	------	
36L5	W. Phipps	----do----------	10- 7-47	845	J	83	2	S; 3ft, 60g, dia 1¼	---	---	Sd,G	Pl	U	60	D	------	
36L6	W. O. Wininger	----do----------	6-19-47	845	J	94	2	----do----------	68	26	G	Pl	U	68	D	------	Course gravel overlain by 30 ft clay with many rocks.
36L7	E. Jewell	----do----------	6-26-47	855	J	94	2	----do----------	---	---	Sd,G	Pl	U	78	D	------	
36L8	H. Kirkley	----do----------	12-21-50	---	J	93	2	----do----------	64	29	Sd,G	Pl	U	64	D	------	Sand and gravel from 0-93 ft.
36L9	J. Jackson	----do----------	10-20-52	845	J	92	2	S; 3½ft, 60g, dia 1¼	67	25	Sd,G	Pl	U	67	D	J3/4	
36L10	D. C. Sutherland	----do----------	10-22-53	845	J	75	2	S; 3ft, 60g, dia 1¼	56	19	Sd,G	Pl	U	56	D	J3/4	Sand and gravel from 0-75 ft.
36L11	C. Pulley	----do----------	1- 2-53	---	J	91	2	----do----------	61	30	Sd,G	Pl	U	61	D	------	Sand and gravel from 0-91 ft; Ca.
36M1	J. Rea	----do----------	7- 2-48	---	J	53	2	----do----------	30	23	Sd,G	Pl	U	30	D	J3/4	Sand and gravel overlain by 20 ft clay.
36M2	J. M. Smiley	----do----------	11-26-46	---	J	46	2	----do----------	---	---	Sd	Pl	-----	30	D	------	
36M3	Evangelical United Brethren Church	----------	-------	---	J	50	2	S; 3½ft, 10sl, dia 1¼	---	---	Sd	Pl	-----	23	P	J3/4	
36M4	W. E. Warner	Sriver Drilling Co.	6- 8-49	---	J	47	2	S; 3ft, 60g, dia 1¼	32	15	Sd,G	Pl	U	32	D	------	Sand and gravel overlain by 21 ft gravel.
36M5	H. Hall	----do----------	-------	---	J	58	2	----do----------	38	20	Sd,G	Pl	U	38	D	------	L.
36M6	Mr. Daniels	----do----------	9- 4-46	---	J	78	2	S; 2½ft, 60g, dia 1¼	---	---	Sd,G	Pl	U	52	D	------	
36M7	R. F. Dix	----do----------	6-50	---	J	60	2	S; 3ft, 60g, dia 1¼	36	24	Sd,G	Pl	U	36	D	------	Sand and gravel from 0-60 ft.
36M8	A. E. Holt	----do----------	7-23-54	---	J	57	2	----do----------	35	22	Sd,G	Pl	U	35	D	J1/2	Gravel and sand overlain by 50 ft sand.
36N1	E. Gawthorp	----do----------	3-19-51	800	J	46	3	S; 4ft, 60g, dia 2	21	25	Sd,G	Pl	U	21	P	J1-1/2	Sand and gravel overlain by 18 ft top soil and clay.
36N2	Cities Service Oil Co.	----do----------	-------	795	J	47	2	S; 4½ft, 50g, dia 1¼	12	35	G,Sd	Pl	U	12	P	J1/2	Sand overlain by 40 ft gravel; Ca.
36N3	J. R. Combs	----do----------	-------	805	J	58	2	----do----------	32	26	Sd,G	Pl	U	32	D	------	L.
36N4	L. O. Faulkner	----do----------	6-13-52	800	J	49	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	-----	24	D	J3/4	
36N5	N. G. Heidrich	----------	-------	800	J	53	2	S; 4½ft, 80g, dia 1¼	---	---	Sd	Pl	-----	29	D	J3/4	
36P1	E. C. Hummel	Sriver Drilling Co.	4-26-51	820	J	63	2	S; 3½ft, 60g, dia 1¼	35	28	Sd,G	Pl	U	35	D	------	Yellow course sand and gravel overlain by 10 ft yellow surface soil.

37/2-36P2	E. Tableman	Sriver Drilling Co.	12- 6-48	825	J	64	2	S; 3ft, 60g, dia 1½	42	22	Sd,G	Pl	U	42	D	------	Sand and gravel from 0-64 ft.
36P3	R. Scherzinger	----do----------	8- 4-54	835	J	75	2	----do----------	57	18	Sd,G	Pl	U	57	D	------	Sand and gravel from 0-75 ft.
36P4	P. Miller	----do----------	9- 4-53	825	J	62	2	----do----------	46	16	G,Sd	Pl	U	46	D	------	L.
36P5	F. J. Kirschner	----do----------	3-22-52	825	J	61	2	S; 3½ft, 10sl, dia 1½	41	20	Sd,G	Pl	U	41	D	J1/2	Yellow sand and gravel from 0-61 ft.
36P6	J. Hoffer	----do----------	5-20-54	835	J	95	2½	S; 5ft, 60g, dia 1½	62	33	Sd,G	Pl	U	62	D	J1	Sand and gravel from 0-95 ft.
36P7	E. W. Bixler	----do----------	--------	840	J	93	2	S; 3ft, 60g, dia 1½	65	28	Sd,G	Pl	U	65	D	------	Yellow sand and gravel overlain by 20 ft yellow clay.
36P8	E. Talcott	----do----------	11- 8-50	835	J	78	2	S; 3½ft, 60g, dia 1½	49	27	Sd,G	Pl	U	49	D	------	Sand and gravel from 0-78 ft.
36P9	L. Craft	----do----------	9-24-51	820	J	62	2	----do----------	44	18	Sd,G	Pl	U	44	D	------	Yellow sand and gravel from 0-62 ft.
36Q1	L. Moore	----do----------	7-30-48	845	J	92	2	S; 4½ft, 60g, dia 1½	66	26	Sd,G	Pl	U	66	D	------	Sand and gravel from 0-92 ft.
36Q2	O. C. Blesbrock	----do----------	--------	845	J	95	2	S; 3½ft, 60g, dia 1½	72	23	Sd,G	Pl	U	72	D	------	L.
36Q3	J. Lloyd	----do----------	--------	845	J	93	2	----do----------	67	26	Sd,G	Pl	U	67	D	J1	L.
36R1	D. Hominger	----do----------	--------	860	J	94	2	S; 3ft, 60g, dia 1½	66	28	G,Sd	Pl	U	88	D	------	Sand overlain by 90 ft gravel.
36R2	Mr. Schultz	----do----------	4-26-48	865	J	117	4	S; 8ft, 8sl, dia 3½	---	---	G,Sd	Pl	U	84	D	------	
36R3	R. H. Buysse	----do----------	8-28-50	860	J	94	2	S; 3½ft, 60g, dia 1½	68	26	Sd,G	Pl	U	68	D	------	Sand and gravel from 0-94 ft.
36R4	R. St. Germain	----do----------	--------	855	J	102	2½	S; 6ft, 60g, dia 1½	66	36	Sd,G	Pl	U	66	D	------	L.
36R5	G. Packard, Jr.	----do----------	10-28-46	855	J	94	2	S; 3ft, 60g, dia 1½	70	24	Sd,G	Pl	U	70	D	------	Sand and gravel from 0-94 ft.
36R6	R. W. Stanifer	----do----------	--------	845	J	92	2	----do----------	68	24	Sd,G	Pl	U	68	D	------	Yellow sand and gravel overlain by 18 ft yellow clay.
36R7	C. T. Yoder	----------	--------	855	J	93	2	----do----------	---	---	Sd,G	Pl	U	74	D	J1	
37/3- 1K1	U. S. Rubber Co.	Layne-Northern Co., Inc.	8-20-54	742	Dr	131	6	S; 10ft. dia 4	112	19	Sd,G	Pl	C	16	P	T10	Dd 27 ft pumping 210 gpm; L.
1R1	Sibley Machine and Foundry Corp.	----do----------	3-27-51	742	Dr	120	8	S; 14ft	94	26	Sd	Pl	C	19	N	------	Dd 27 ft pumping 250 gpm; L.
2E1	J. Bryce	Sriver Drilling Co.	11-28-53	748	J	57	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	C	11	D	------	Ca, L.
2L1	H. Lilly	----do----------	3-23-51	748	J	62	2	----do----------	18	44	Sd	Pl	C	7	D	J1/3	Ca, L.
2N1	J. Losink	----do----------	6-50	745	J	58	2	S; 3ft, 60g, dia 1½	16	42	Sd,G	Pl	U	16	D	------	Sand and gravel from 0-58 ft.
2N2	H. E. Fletcher	----do----------	10-10-52	745	Dr	53	4	S; 6ft, 10sl	23	30	Sd,G	Pl	U	23	D	J3/4	L.
3G1	C. Hunt	----do----------	12- 2-53	743	J	44	2	S; 3ft, 60g, dia 1½	25	19	Sd	Pl	C	10	D	L1/3	Ca, L.
3K1	J.E. Hamilton	----do----------	11-50	745	J	50	2	S; 3½ft, 60g, dia 1½	44	6	Sd,G	Pl	C	39	D	------	L.
3L1	C. L. Hunter	----do----------	--------	743	J	35	2	S; 3½ft, 80g, dia 1	---	---	Sd	Pl	----	4	D	J1/2	Ca.
3N1	Veterans Homes of Mishawaka, Inc.	Layne-Northern Co., Inc.	12-13-46	742	Dr	20	6	----------	---	---	Sd,G	Pl	U	7	T	------	See log well 2L1; Ca.
3N2	City of Mishawaka	----do----------	7-26-56	741	Dr	197	6½	----------	112	83	Sd,G	Pl	C	27	T	------	Bedrock at 195 ft; Ca, L.
3N3	W. E. Clark	Sriver Drilling Co.	2- 3-50	743	J	71	2	S; 3ft, 60g, dia 1½	63	8	Sd	Pl	C	16	D	------	Sand overlain by 63 ft clay; Ca.
3N4	City of Mishawaka	Layne-Northern Co., Inc.	4- 3-59	741	Dr	174	8	----------	107	60	Sd,G	Pl	C	---	T	------	L.
3N5	----do----------	----do----------	3-25-59	741	Dr	198	8	----------	125	38	Sd,G	Pl	C	---	T	------	Bedrock at 198 ft.
3Q1	D. Ringer	Sriver Drilling Co.	10- 3-46	746	J	49	2	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	C	28	D	------	
4E1	R. Stacy	----do----------	5-18-53	742	J	46	2	S; 3½ft, 60g, dia 1½	24	22	Sd	Pl	C	8	D	J1/3	See log well 3G1; Ca.
4J1	Veterans Homes of Mishawaka, Inc.	Layne-Northern Co., Inc.	12-10-46	741	Dr	20	6	----------	---	---	Sd,G	Pl	U	6	T	------	See log well 2L1.
4J2	----do----------	----do----------	12-16-46	741	Dr	20	6	----------	2	18	G,Sd	Pl	U	2	T	------	L.
4L1	City of Mishawaka	----do----------	7-24-56	738	Dr	193	7½	----------	132	58	Sd,G	Pl	C	28	T	------	Bedrock at 190 ft; L.
4R1	----do----------	----do----------	3- 9-53	743	Dr	137	---	----------	115	22	Sd,G	Pl	C	35	T	------	Bedrock at 137 ft; Ca, L.
5C1	City of South Bend	----do----------	8-18-48	747	Dr	205	10-6	----------	170	35	Sd,G	Pl	C	30	T	------	Bedrock at 205 ft; L.
5C2	----do----------	----do----------	12- 9-48	747	Dr	203	38	Gp; S; 35ft, 105sl, dia 26	148	57	G,Sd	Pl	C	29	P	T150	Dd 14.7 ft after 10 hr pumping 2,200 gpm; L.
5E1	----do----------	----do----------	12-30	747	Dr	205	60-26	Gp; S; 40ft, 105sl, dia 26	---	---	G,Sd	Pl	C	35	P	T	Dd 15.3 ft after 167 hr pumping 1,600 gpm; water level measured 38.35 ft below lsd. 1-27-45; see log well 5E2; well SJ 5-1 (KS, 1948).
5E2	----do----------	Harmon-Ness Co.	12-11-30	747	Dr	206	6	S; 20ft	133	73	G,Sd	Pl	C	30	T	------	Bedrock at 206 ft; well SJ 5-T4 (KS, 1948); L.
5F1	----do----------	Layne-Northern Co., Inc.	1-19-54	747	Dr	204	38	Gp; S; 40ft, 105sl, dia 26	140	64	Sd,G	Pl	C	39	P	T150	Dd 8.75 ft after 8 hr pumping 2,180 gpm; see log well 5E2.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/3- 5F2	City of South Bend	Layne-Northern Co.,	5-26-54	747	Dr	196	38	Gp; S; 40ft, 155sl, dia 26	136	60	G,Sd	Pl	C	38	P	T150	Dd 7.5 ft after 8 hr pumping 2,210 gpm; see log well 5E2.
5L1	Morris Park Country Club	Indiana-Michigan Water Development Co.	6-19-50	749	Dr	173	6	S; 20ft, 45sl	146	27	Sd,G	Pl	C	44	P	S10	Dd 10 ft pumping 90 gpm; L.
5P1	H. Emmons	----do----------	11-27-53	750	Dr	80	6	S; 15ft, 20sl, dia 5½	45	35	Sd,G	Pl	U	45	D	------	Dd 10 ft pumping 90 gpm; L.
5P2	Morris Park Country Club	----------	1923	745	Dr	86	12	----------	---	---	Sd,G	Pl	U	10	O	T50	Observation well St. Joseph 19; water level measured 10.75 ft below lsd, 4-8-45; well Sj 88 (KS, 1948); Ca.
5R1	O. Brown	Sriver Drilling Co.	12-14-50	751	J	-----	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	---	D	J3/4	
6A1	City of South Bend	Layne-Northern Co., Inc.	11-24-30	746	Dr	213	8	----------	---	---	Sd,G	Pl	----	30	T	------	Bedrock at 212 ft; L.
6A2	C. Caron	Sriver Drilling Co.	11-21-57	748	J	36	2	S; 3½ft, 10sl, dia 1½	---	---	G	Pl	----	23	D	------	
6G1	R. D. Cox	----do----------	12-14-48	752	J	62	2	S; 3ft, 60g, dia 1½	48	14	Sd,G	Pl	U	48	D	------	Sand and gravel from 0-62 ft.
6H1	R. Smith	Indiana-Michigan Water Development Co.	6-36	755	Dr	213	4-2½	S; 8ft, 90g, dia 2½	---	---	Sd,G	Pl	----	---	N	------	Bedrock at 212 ft; see log well 6A1.
6H2	City of South Bend	Harmon-Ness Co.	10-31-30	748	Dr	189	---	----------	---	---	Sd,G	Pl	----	30	T	------	Well Sj 5-T1 (KS, 1948); L.
6H3	----do----------	----do----------	11- 4-30	748	Dr	70	6	----------	---	---	-----	--	----	---	T	------	Well Sj 5-T2 (KS, 1948); L.
6N1	L. Quimby	Sriver Drilling Co.	3-23-50	745	J	152	2	S; 3½ft, 60g, dia 1½	140	12	Sd	Pl	C	57	D	J	Ca, L.
7A1	V. D. Morgan	----------	--------	745	Dr, Dn	138	2	----------	---	---	Sd,G	Pl	C(?)	47	O	------	Observation well St. Joseph 17; water level measured 46.29 ft below lsd, 3-30-45; well Sj 89 (KS, 1948).
7H1	Trustees, Diocese Northern Indiana Corp.	Sriver Drilling Co.	3-25-54	736	Dr	100	4	S; 8ft, 12sl	85	15	Sd,G	Pl	C	38	P	------	L.
7K1	L. Sellers	----do----------	3- 8-54	724	J	98	3	S; 5½ft, 10sl, dia 1½	90	8	Sd	Pl	C	21	D	J1-1/2	L.
7N1	Fattore Co.	Layne-Northern Co., Inc.	6-28-50	695	Dr	72	---	----------	28	39	Sd,G	Pl	C	15	T	------	L.
7N2	----do----------	----do----------	7-27-50	695	Dr	49	12	----------	22	27	G,Sd	Pl	C	15	T	------	See log well 7N1.
7P1	City of South Bend	Austin Drilling Co.	7-18-28	706	Dr	151	---	----------	26	14	Sd	Pl	C(?)	26	T	------	Bedrock at 120 ft; well Sj 7-13 (KS, 1948); L.
7R1	----do----------	----do----------	3-11-26	711	Dr	122	---	----------	---	---	Sd	Pl	----	---	T	------	Bedrock at 115 ft; well Sj 7-3 (KS, 1948); L.
7R2	----do----------	----do----------	2-22-27	712	Dr	134	---	----------	---	---	Sd,G	Pl	----	32	T	------	Bedrock at 127 ft; well Sj 7-22 (KS, 1948); L.
8G1	M. N. Light	Indiana-Michigan Water Development Co.	7- 7-43	742	Dr	122	4	S; 3ft, 60g	---	---	Sd	Pl	C	27	D,P	------	Dd 18 ft pumping 28 gpm; well Sj 81 (KS, 1948); Ca, L.
8N1	J. Mitschelen	Sriver Drilling Co.	6-50	716	J	62	2	S; 3ft, 60g, dia 1½	40	22	Sd,G	Pl	U	40	D	------	Sand and gravel from 0-62 ft.
10B1	Jontz Manufacturing Co.	Indiana-Michigan Water Development Co.	9- 4-52	748	Dr	75	6	S; 13ft, 8sl, dia 4½	57	18	Sd	Pl	C	30	I	T3	Dd 30 ft pumping 60 gpm; L.
10G1	R. Arnold	Sriver Drilling Co.	5-20-54	737	J	52	2	S; 3ft, 60g, dia 1½	48	4	Sd	Pl	C	14	D	J	Ca, L.
10G2	City of Mishawaka	Layne-Northern Co., Inc.	3-28-52	737	Dr	112	8	----------	---	---	Sd,G	Pl	----	18	T	------	Bedrock at 100 ft; L.

11E1	M. H. Rush	Sriver Drilling Co.	6-50	737	J	51	2	S; 3ft, 60g, dia 1¼	45	6	Sd	Pl	C	32	D	------	See log well 11E1.
11E2	Dependable Welding Shop	----do----------	10- 6-50	737	J	62	2	----do----------	45	17	Sd,G	Pl	C	18	---	------	L.
11F1	H. M. Plotner	----do----------	9-12-53	744	J	53	2	----do----------	30	23	Sd,G	Pl	U	30	D	J1/2	Ca, L.
11G1	R. E. Geisler	----do----------	4-18-54	744	J	48	2	----do----------	38	10	Sd	Pl	C	28	D	------	L.
11H1	F. Myers	----do----------	5-20-54	743	J	40	2	----do----------	28	14	Sd,G	Pl	U	28	D	------	Yellow sand and gravel from 0-40 ft.
11N1	City of Mishawaka	Kelly Well Co.	1929	701	Dr	81	24-18	S; 32ft, dia 10	33	58	Sd,G	Pl	C	9	P	T25	Dd 11.2 ft after 48 hr pumping 650 gpm; see log well 11N2; well Sj I11-1-4 (KS, 1948).
11N2	----do----------	Layne-Northern Co., Inc.	1- 8-51	701	Dr	339	6	----------	---	---	G,Sd	Pl	C	---	T	------	Flowed; L.
11N3	----do----------	----do----------	5-18-51	701	Dr	329	26	Gp; S; 35ft, dia 12	290	39	G,Sd	Pl	C	+2	P	------	Dd 33 ft after 8 hr pumping 1,200 gpm; Ca, L.
11P1	----do----------	Kelly Well Co.	1929	710	Dr	98	24-18	Gp; S; 43ft, dia 7	24	74	Sd,G	Pl	C	13	P	T25	Dd 6.5 ft after 41 hr pumping 650 gpm; well Sj I11-1-3 (KS, 1948); L.
11P2	----do----------	Layne-Northern Co., Inc.	2-20-37	702	Dr	100	38	Gp; S; 25ft, 105sl, dia 20	9	91	Sd,G	Pl	U	9	P	T25	Dd 32 ft after 48 hr pumping 820 gpm; see log well 11N2; well Sj I11-1-1 (KS, 1948).
11P3	----do----------	----do----------	9-24-41	697	Dr	130	--	----------	---	---	Sd,G	Pl	----	---	T	------	Well Sj I11-1-T5 (KS, 1948); L.
11P4	----do----------	----do----------	9-25-41	698	Dr	133	6	----------	82	51	Sd,G	Pl	C	7	T	------	Well Sj I11-1-T6 (KS, 1948); L.
11P5	----do----------	----do----------	9-27-41	702	Dr	130	6	----------	---	---	G	Pl	C	---	T	------	See log well 11P3; well Sj I11-1-T7 (KS, 1948).
11P6	----do----------	----do----------	12-11-41	696	Dr	121	6	----------	---	---	Sd,G	Pl	C	---	T	------	Bedrock at 120 ft; well Sj I11-1-T9 (KS, 1948); L.
11P7	----do----------	----do----------	11-25-46	698	Dr	120	6	----------	100	20	Sd,G	Pl	C	---	T	------	Flowed; L.
11P8	----do----------	----do----------	3-24-47	701	Dr	115	38-20	Gp; S; 35ft, 105sl, dia 20	100	15	Sd,G	Pl	C	+2	P	T25	Dd 49 ft after 2 hr pumping 880 gpm; see log well 11P7.
11P9	----do----------	----do----------	3-18-49	703	Dr	101	8-6	----------	15	66	Sd,G	Pl	U	15	T	------	See log well 11N2
11P10	----do----------	----do----------	4-22-49	706	Dr	91	38	Gp; S; 25ft, dia 20	12	61	Sd,G	Pl	U	12	P	T25	Dd 15.4 ft after 12 hr pumping 1,570 gpm; see log well 11N2.
11P11	----do----------	----do----------	1- 7-55	706	Dr	89	38	Gp; S; 20ft, 80sl, dia 18	14	75	Sd,G	Pl	U	14	P	T25	Dd 16 ft after 8 hr pumping 1,120 gpm; see log well 11N2.
11P12	----do----------	----do----------	2-15-56	704	Dr	85	38	Gp; S; 20ft, 105sl, dia 18	13	72	Sd,G	Pl	U	13	P	T25	Dd 12.8 ft after 8 hr pumping 1,000 gpm; see log well 11N2.
11P13	----do----------	----------	--------	702	Dm	40	1¼	S	8	32	Sd	Pl	U	8	O	------	Observation well St. Joseph 1; water level measured 9.85 ft below lsd, 10-16-35.
11Q1	----do----------	Layne-Northern Co., Inc.	9-13-41	702	Dr	119	6	----------	---	---	Sd,G	Pl	----	---	T	------	Bedrock at 119 ft; well Sj I11-1-T3 (KS, 1948); L.
11Q2	----do----------	----do----------	8-19-41	704	Dr	100	6	----------	---	---	G	Pl	----	---	T	------	See log well 11P3; well Sj I11-1-T4 (KS, 1948).
11R1	Sollitt Construction Co.	Indiana-Michigan Water Development Co.	10-18-49	705	Dr	43	6	S; 10ft, 40sl, dia 5½	10	35	Sd,G	Pl	U	10	I	------	Dd less than 10 ft pumping 60 gpm; see log well 11R4.
11R2	----do----------	----do----------	5-22-51	719	Dr	40	6	----------	---	---	Sd,G	Pl	U	---	T	------	See log well 11R4.
11R3	----do----------	----do----------	5-24-51	705	Dr	54	6	S	---	---	Sd,G	Pl	U	---	T	------	Do.
11R4	----do----------	----do----------	5-29-51	720	Dr	62	6	S	---	---	Sd,G	Pl	U	---	T	------	L.
12G1	Rockwell Spring and Axle Co.	Layne-Northern Co., Inc.	4- 3-57	745	Dr	131	4	S; 4ft, 12sl, dia 2	102	29	Sd,G	Pl	C	32	D	------	Yield 12 gpm; L.
12G2	J. J. Lamberp	Sriver Drilling Co.	8-15-57	742	J	40	2	S; 3½ft, 10sl, dia 1½	27	13	Sd,G	Pl	U	27	D	------	Sand and gravel from 0-40 ft.
12M1	Rockwell Spring and Axle Co.	Layne-Northern Co., Inc.	11-23-55	748	Dr	150	6	----------	94	56	Sd,G	Pl	C	31	T	------	L.
12N1	Indiana and Michigan Electric Co.	----------	1924	710	Dr	100	6	S; 21ft, dia 4½	---	---	Sd	Pl	C	+8	P	T20	Well Sj I12-1-1 (KS, 1948).
12N2	----do----------	Indiana-Michigan Water Development Co.	2-10-44	710	Dr	111	6	S; 15ft, 20sl, dia 5½	83	28	Sd	Pl	C	+11	P	T20	Flowed 120 gpm; well Sj I112-1-2 (KS, 1948); L.
12R1	G. Mead	Sriver Drilling Co.	--------	728	J	56	2	S; 3½ft, 60g, dia 1½	19	37	Sd,G	Pl	U	19	D	------	Sand and gravel from 0-56 ft.
12R2	P. Russell	----do----------	9-25-52	720	J	43	2	S; 3½ft, 10sl, dia 1½	12	31	Sd,G	Pl	U	12	D	J1/2	Sand and gravel from 0-43 ft.
13E1	M. Nems	Layne-Northern Co.,	12-30-43	728	Dr	39	---	----------	14	25	Sd,G	Pl	U	14	N	------	See log well 13E2; well Sj I13-1 (KS, 1948).
13E2	----do----------	----do----------	8-20-47	720	Dr	136	8-4	----------	14	108	Sd,G	Pl	U	14	---	------	Bedrock at 120 ft; L.
13G1	W. Ulmer	Sriver Drilling Co.	7-16-53	727	J	45	2	S; 3ft, 60g, dia 1½	10	35	Sd	Pl	C	8	D	------	Sand overlain by 10 ft clay.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
37/3-13K1	J. Blalock	Sriver Drilling Co.	3- 2-53	729	J	41	2	S; 3ft, 60g, dia 1¼	10	31	Sd,G	Pl	U	10	D	------	Yellow sand and gravel from 0-41ft; Ca.
14B1	City of Mishawaka	Layne-Northern Co., Inc.	5-19-41	702	Dr	106	42	Gp; S; 25ft, 180sl, dia 20	12	93	Sd,G	Pl	U	12	P	T25	Dd 10.7 ft after 24 hr pumping 1,200 gpm; well Sj I11-1-2 (KS, 1948); L.
14C1	----do----------	----do----------	12-17-47	705	Dr	97	38	Gp; S; 25ft, 105sl, dia 20	8	89	Sd,G	Pl	U	8	P	T20	Dd 12 ft after 8 hr pumping 1,500 gpm; see log well 14B1.
14J1	C. Martinczak	Sriver Drilling Co.	8-50	727	J	52	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	U	---	D	------	Sand from 0-52 ft.
14J2	W. Booker	----do----------	8-25-52	727	J	46	2	S; 3½ft, 10sl, dia 1½	8	38	Sd,G	Pl	U	8	D	------	Sand and gravel from 0-46 ft.
14J3	J. W. Peterson	----do----------	9- 8-54	728	J	43	2	S; 3ft, 60g, dia 1¼	5	38	Sd	Pl	U	5	D	------	Sand from 0-43 ft.
14K1	Bendix Aviation Corp.	Layne-Northern Co., Inc.	11-24-53	724	Dr	164	4	----------	---	---	Sd,G	Pl	-----	14	T	------	Bedrock at 146 ft; Ca, L.
14K2	----do----------	----do----------	6-29-54	726	Dr	145	10	S; 20ft. 20sl	---	---	Sd,G	Pl	-----	23	I	T30	Dd 68 ft after 4 hr pumping 500 gpm; bedrock at 146 ft; L.
14K3	----do----------	----do----------	7-13-54	724	Dr	142	10	S; 20ft	---	---	Sd,G	Pl	-----	18	I	T30	Dd 71 ft pumping 460 gpm; screen, upper 10 ft 40sl, lower 10 ft 20sl; Ca, L.
14M1	Wheelabrator Co.	A. L. Cox Co., Inc.	1938	723	Dr	165	10	S	---	---	Sd,G	Pl	-----	---	P,I, Ac	------	Yield 300 gpm; Ca.
14N1	City of Mishawaka	Layne-Northern Co., Inc.	9-25-53	729	Dr	148	8	----------	12	44	G,Sd	Pl	U	12	T	------	L.
15C1	South Bend Modern Moulding and Manufacturing Co.	Sriver Drilling Co.	10-31-53	710	Dr	75	4	S; 8ft, 12sl	35	40	Sd,G	Pl	C	17	I	------	Ca, L.
15H1	Clarks Laundry and Dry Cleaning Co.	Indiana-Michigan Water Development Co.	4-29	722	Dr	99	10	S; 14ft, 10sl, dia 9½	83	18	G,Sd	Pl	C	9	I	------	Dd 0 ft pumping 150 gpm; well originally drilled to 44 ft, deepened 7-15-37; water level 18 ft below lsd, 7-15-37; well Sj I15-1 (KS, 1948) Ca, L.
15H2	Varsity Cafe	Sriver Drilling Co.	3-16-54	722	J	45	2	S; 3ft, 60g, dia 1¼	20	25	Sd,G	Pl	U	20	Ac	J	Sand and gravel from 0-45 ft.
15M1	Dodge Manufacturing Co.	Layne-Northern Co., Inc.	6-20-49	723	Dr	52	18	Gp; S; 10ft, 105sl, dia 8	13	50	Sd,G	Pl	U	13	P,I	------	Dd 19.2 ft pumping 800 gpm; see log well 15M2; Ca.
15M2	----do----------	----do----------	7-15-59	724	Dr	66	18	Gp; S; 10ft, 50g, dia 10	14	52	Sd,G	Pl	U	14	P,I	T30	Dd 17 ft pumping 500 gpm; Ca, L.
15R1	City of Mishawaka	----do----------	2- 1-54	724	Dr	75	8	----------	---	---	Sd,G	Pl	-----	8	T	------	Ca, L.
15R2	----do----------	----do----------	4- 5-54	724	Dr	70	42	Gp; S; 15ft, 105sl, dia 18	5	65	Sd,G	Pl	U	5	P	T75	Dd 35.1 ft after 7.5 hr pumping 1,040 gpm; Ca.
16A1	C. Colo and Son	----do----------	1- 3-50	703	Dr	50	8	----------	12	7	G	Pl	U	12	T	------	Bedrock (?) at 43 ft; L.
16B1	U. S. Rubber Co.	----------	--------	695	Du	20	36	----------	---	---	Sd	Pl	-----	---	---	------	For dewatering.
16B2	----do----------	Layne-Northern Co., Inc.	7-25-59	692	Dr	35	8	S; 5ft	26	14	Sd,G	Pl	C	8	---	------	Dd 22 ft, after 2 hr pumping 15 gpm; L.
16C1	Kamm and Schollinger Co., Inc.	----do----------	3-20-42	695	Dr	52	8-6	----------	27	25	Sd,G	Pl	C	12	T	------	See log well 16C3.
16C2	----do----------	Indiana-Michigan Water Development Co.	9-18-42	695	Dr	116	6	S; 36ft, 60g	98	18	G	Pl	-----	98	D	------	Well Sj I16-4 (KS, 1948).
16C3	----do----------	----do----------	1-12-46	695	Dr	119	6	----------	---	---	Sd,G	Pl	-----	---	T	------	L.
16C4	----do----------	----do----------	5-16-46	695	Dr	125	6	S	---	---	Sd	Pl	-----	40	I	T15	Bedrock at 108 ft; well Sj I16-1-T4 (KS, 1948); Ca, L.

37/3-16C5	City of Mishawaka	Layne-Northern Co., Inc.	7-30-54	715	Dr	178	6-6	----------	---	---	Sd,G	Pl	----	34	T	------	Bedrock at 174 ft; L.
16D1	C. Cole and Son	----do----------	1- 5-50	715	Dr	63	6	----------	27	38	Sd,G	Pl	U	27	T	------	L.
16F1	Kamm and Shellinger Co., Inc.	Indiana-Michigan Water Development Co.	5- 1-33	703	Dr	127	6	S; 15ft	110	17	Sd,G	Pl	C	20	I	T15	Dd 70 ft pumping 120 gpm; screen, upper 5 ft 25sl, lower 10 ft 30sl; well Sj 116-1-T1 (KS, 1948); L.
16F2	----do----------	Layne-Northern Co., Inc.	6-23-34	703	Dr	135	---	----------	---	---	Sd,G	Pl	----	20	T	------	Well Sj 116-1-T3 (KS, 1948); L.
16F3	----do----------	----do----------	8-11-34	703	Dr	137	30-18	Gp; S; 25ft, 130sl, dia 18	---	---	Sd,G	Pl	----	28	I	T25	Dd 70.5 ft pumping 550 gpm; well Sj 116-1-2 (KS, 1948); Ca.
16F4	----do----------	Indiana-Michigan Water Development Co.	1-24-48	710	Dr	114	6	S	---	---	Sd,G	Pl	----	20	T	------	Bedrock at 112 ft; L.
16F5	----do----------	H. Korsey	Before 1906	712	Dr	723	6	----------	---	---	-----	---	----	---	---	------	Bedrock at 130 ft; well Sj 116-1-1 (KS, 1948).
16H1	Bonnie Doon Ice Cream Co.	Layne-Northern Co., Inc.	3-24-49	721	Dr	31	6	S; 10ft	18	17	Sd,G	Pl	U	16	N	------	Dd 3.75 ft pumping 80 gpm; L.
16J1	Swift & Co.	Indiana-Michigan Water Development Co.	9- 4-42	723	Dr	39	4	S; 8ft, 60g, dia 3	17	22	Sd,G	Pl	U	17	N	------	Gravel overlain by 28 ft sand.
16N1	Hygrade Food Products Corp.	----------	9-10-29	721	Dr	75	10	S; 14ft, 30sl, dia 8	---	---	Sd	Pl	----	---	N	------	Well Sj 116-3-1 (KS, 1948).
16N2	----do----------	Indiana-Michigan Water Development	11-30-42	721	Dr	69	12	S; 15ft, dia 11½	---	---	G, Sd	Pl	C	5	N	------	Dd 76 ft pumping 130 gpm; water level 2 ft above lsd, 4-17-58; screen, upper 6 ft 25 sl, lower 9 ft 60 sl; well Sj 116-3-2 (KS, 1948); Ca, L.
16N3	----do----------	Layne-Northern Co., Inc.	9-20-45	719	Dr	116	6	----------	---	---	Sd,G	Pl	---	12	T	------	L.
16N4	----do----------	----do----------	10- 9-45	719	Dr	133	6-4	----------	---	---	Sd,G	Pl	---	6	T	------	L.
16R1	Mishawaka Farmers Dairy Co.	Indiana-Michigan Water Development	2-21-34	723	Dr	30	10	S; 15ft, 30sl, dia 9½	12	18	G	Pl	U	12	I	C15	Dd 5 ft pumping 150 gpm; well Sj 116-3-2 (KS, 1948); Ca, L.
17M1	McMillan Bowling Alleys	Layne-Northern Co., Inc.	8- 5-46	713	Dr	60	8	S; 3ft, dia 7	22	38	Sd,G	Pl	U	22	Ac	------	Dd 23 ft pumping 200 gpm; L.
17R1	N. Dawson	Sriver Drilling Co.	7-17-51	718	J	40	2	S; 3½ft, 60g, dia 1½	11	20	Sd,G	Pl	U	11	N	------	See log well 17M1.
18A1	Coca-Cola Bottling Co.	Layne-Northern Co., Inc.	7-29-54	714	Dr	98	8	S; 22ft, 16sl	28	71	Sd,G	Pl	U	28	I	T7-1/2	Dd 66 ft after 9 hr pumping 90 gpm; sand overlain by 53 ft sand and gravel; clay at 99 ft; Ca.
18D1	National Milk Co.	Indiana-Michigan Water Development Co.	11- 2-37	700	Dr	67	12	S; 14ft, 30sl, dia 11½	24	43	Sd,G	Pl	C	13	N	T15	Dd 17 ft pumping 180 gpm; well Sj 13-2 (KS, 1948); L.
18D2	----do----------	----do----------	8-20-43	700	Dr	147	8	S	---	---	Sd,G	Pl	C	---	T	------	Test drilled through well 18D1; bedrock at 147 ft; well Sj 13-T1 (KS, 1948); L.
18D3	----do----------	----do----------	8-31-43	700	Dr	74	8	S; 15ft, 40g, dia 8	25	49	G,Sd	Pl	C	23	N	------	Dd 18 ft pumping 90 gpm; well Sj 13-3 (KS, 1948).
18D4	City of South Bend	Austin Drilling Co.	7-26-26	690	Dr	112	---	----------	---	---	Sd	Pl	----	24	T	------	Well Sj 7-14 (KS, 1948); L.
18F1	----do----------	----do----------	3-15-26	688	Dr	70	---	----------	---	---	Sd	Pl	----	---	T	------	See log well 18D4; well Sj 7-4 (KS, 1948).
18G1	----do----------	----do----------	2-15-26	693	Dr	70	---	----------	---	---	Sd	Pl	----	---	T	------	See log well 18D4; well Sj 7-1 (KS, 1948).
18G2	----do----------	----do----------	2-27-26	693	Dr	70	---	----------	---	---	Sd	Pl	----	---	T	------	See log well 18D4; well Sj 7-2 (KS, 1948).
18G3	----do----------	----do----------	5- 6-26	693	Dr	169	---	----------	---	---	Sd	Pl	----	---	T	------	See log well 18G5; well Sj 7-9 (KS, 1948).
18G4	----do----------	----do----------	10-15-26	712	Dr	100	---	----------	2	73	Sd	Pl	U	2	T	------	Bedrock at 85 ft; well Sj 7-18 (KS, 1948); L.
18G5	----do----------	----do----------	11- 4-26	688	Dr	220	---	----------	22	46	Sd,G	Pl	U	22	T	------	Bedrock at 219 ft; well Sj 7-10 (KS, 1948); L.
18G6	----do----------	----do----------	3- 0-27	692	Dr	85	---	----------	5	57	Sd,G	Pl	U	5	T	------	Well Sj 7-23 (KS, 1948).
18H1	----do----------	----do----------	6-18-26	688	Dr	105	---	----------	3	97	Sd	Pl	U	3	T	------	See log well 18Q1; well Sj 7-11 (KS, 1948).
18K1	----do----------	----do----------	4-29-26	710	Dr	103	---	----------	---	---	Sd,G	Pl	U	---	T	------	Well Sj 7-8 (KS, 1948); L.
18N1	W. Redmer	Sriver Drilling Co.	12- 5-49	741	J	67	2	S; 3ft, 10sl	44	23	Sd,G	Pl	U	44	Ir	L	Sand and gravel from 0-67 ft.
18P1	City of South Bend	Austin Drilling Co.	4-18-26	730	Dr	140	---	----------	27	103	Sd,G	Pl	U	27	T	------	Well Sj 7-7 (KS, 1948); L.
18Q1	----do----------	----do----------	4-12-26	732	Dr	130	---	----------	---	---	Sd	Pl	U	---	T	------	Well Sj 7-5 (KS, 1948); L.
19B1	----do----------	----do----------	6- 7-26	732	Dr	183	---	----------	27	86	Sd	Pl	U	27	T	------	Bedrock at 175 ft; well Sj 7-10 (KS, 1948); L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/3-19C1	City of South Bend	Austin Drilling Co.	4-19-26	737	Dr	116	---	----------	26	89	Sd	Pl	U	26	T	------	See log well 19B1; well SJ 7-6 (KS, 1948).
19E1	----do----------	----do----------	3-28-27	756	Dr	169	---	----------	---	---	Sd,G	Pl	-----	20	T	------	Bedrock at 162 ft; well SJ 7-25 (KS, 1948); L.
19R1	J. Filley	Sriver Drilling Co.	7-14-53	797	J	66	2	S; 3ft, 60g, dia 1½	52	14	Sd,G	Pl	U	52	D	J1/2	Ca, L.
20D1	D. Freeman	----------	--------	805	J	85	2	----do----------	---	---	Sd	Pl	----	80	D	L	
20D2	D. Nelson	Sriver Drilling Co.	2-19-54	809	Dr	117	4	S; 8ft, 14sl	90	27	Sd,G	Pl	U	90	D	------	Yellow sand and gravel from 0-117 ft.
20D3	Concrete Products Corp.	Indiana-Michigan Water Development Co.	7-14-43	760	Dr	91	4	S; 6ft, 60g, dia 3	48	43	Sd,G	Pl	U	48	I	------	Dd 12 ft pumping 28 gpm; see log well 20D4.
20D4	----do----------	----do----------	3- 7-51	762	Dr	128	10	S; 18ft, 100sl, dia 9½	---	---	G,Sd	Pl	----	47	I	T	Dd 57 ft after 3 hr pumping 430 gpm; L.
20D5	P. Behm, Sr.	----do----------	7-26-57	793	Dr	116	6	S; 5ft, 40sl	110	6	Sd,G	Pl	C	71	D	------	Dd 29 ft pumping 50 gpm; L.
20D6	C. C. Zimmer	Sriver Drilling Co.	11-19-51	792	J	102	2	S; 3½ft, 10sl, dia 1½	93	9	Sd	Pl	C	67	D	------	See log well 20D5.
20G1	C. F. Cunningham	Indiana-Michigan Water Development Co.	6-24-47	882	Dr	235	6	----------	---	---	-----	---	----	---	N	------	No water reported; bedrock at 231 ft; L.
20H1	St. Francis Convent	----------	--------	790	Dr	200	8	----------	---	---	Sd,G	Pl	----	---	Ac, P	T20	
20K1	C. F. Cunningham	Indiana-Michigan Water Development Co.	4-36	892	Dr	212	4	S; dia 1½	207	5	G,Sd	Pl	C	160	---	------	Yield 40 gpm; L.
20K2	----do----------	----do----------	10- 2-47	892	Dr	223	6	S; 13½ft, dia 4	213	10	G,Sd	Pl	C	165	D	------	Dd 27 ft pumping 40 gpm; L.
21B1	J. Braeckelaire	Sriver Drilling Co.	--------	728	J	46	2	S; 3½ft, 60g, dia 1½	36	10	Sd	Pl	C	5	D	------	L.
21G1	M. D. Yacko	----do----------	--------	750	J	57	2	S; 3ft, 60g, dia 1½	17	40	Sd,G	Pl	U	17	D	------	Sand and gravel from 0-57 ft.
21G2	H. Brown	----do----------	8-31-46	735	J	56	2	----do----------	42	14	Sd,G	Pl	U	42	D	L	Sand and gravel from 0-56 ft.
21G3	R. G. Bautors	----do----------	--------	736	J	45	2	----do----------	40	5	Sd	Pl	C	32	D	L	Ca, L.
21H1	A. E. Vannoni	----do----------	--------	743	J	54	2	S; 3½ft, 10sl, dia 1½	48	6	Sd	Pl	C	4	D	------	Yellow sand overlain by 48 ft blue and yellow clay.
21K2	M. Mounick	----do----------	9- 3-48	731	J	43	2	S; 3ft, 60g, dia 1½	38	5	Sd	Pl	C	6	D	------	See log well 21G3.
21N3	S. Casini	----do----------	5-19-50	738	J	40	2	----do----------	14	26	Sd,G	Pl	U	14	D	------	Sand and gravel from 0-40 ft.
21N4	L. Six	----do----------	11- 6-50	738	J	40	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	----	---	D	------	
21J1	S. Hearrell	----do----------	8-24-55	805	Dr	97	4	S; 8ft, 10sl	70	27	Sd,G	Pl	U	70	D	------	L.
21K1	L. C. Phenegar	----do----------	6-12-56	852	J	146	3	S; 6ft, 60g, dia 2	116	32	Sd,G	Pl	U	116	D	J1-1/2	Sand and gravel from 0-48 ft.
21Q1	M. Rutting	----do----------	6- 8-53	883	J	175	3	S; 5ft, 60g, dia 2	168	7	Sd	Pl	C	138	D	------	L.
21Q2	K. Rohleder	----do----------	11-13-54	872	J	148	2	S; 5½ft, 60g, dia 2	140	8	Sd	Pl	C	130	D	------	L.
21R1	C. T. Dunham	----do----------	10-28-55	880	J	194	3	S; 4½ft, 10sl, dia 2	184	10	Sd	Pl	C	131	D	------	L.
21R2	J. Kurth	----do----------	9-10-54	882	J	176	3	----do----------	150	26	Sd,G	Pl	C	149	D	J1-1/2	Ca, L.
22M1	F. Donath	----do----------	--------	752	J	51	2	S; 3½ft, 60g, dia 1½	30	21	Sd,G	Pl	C	29	D	------	L.
22N1	Dry Island Sand and Gravel Co.	Layne-Northern Co., Inc.	3-14-58	800	Dr	110	10	S; 15ft	77	33	Sd,G	Pl	C	59	I	------	Dd 33 ft after 3 hr pumping 500 gpm; screen, upper 10 ft 20sl, lower 5 ft 50sl; L.
22R1	P. Miller	Sriver Drilling Co.	10- 5-46	753	J	40	2	S; 3ft, 60g, dia 1½	24	16	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-40 ft.
22R2	V. Shreve	----do----------	8-13-47	762	J	40	2	S; 2½ft, 60g, dia 1½	27	13	Sd,G	Pl	U	27	D	------	Do.
22R3	D. Overholser	----do----------	9-13-50	753	J	40	2	S; 3ft, 60g, dia 1½	21	18	Sd,G	Pl	U	21	D	------	Sand and gravel from 0-40 ft; Ca.
22R4	J. DeClark	----do----------	7-18-52	772	J	69	2	S; 3½ft, 60g, dia 1½	62	7	Sd	Pl	C	37	D	J3/4	L.
23H1	N. Brown	W. Rodgers	2-10-55	743	J	42	2	S; 3ft, 60g, dia 1½	16	26	Sd,G	Pl	U	16	D	J1/3	Sand and gravel from 0-42 ft; Ca.

J7/3-25E1	Trustees, Penn Township	Layne-Northern Co., Inc.	2-27-53	795	Dr	176	8	----------	105	8	Sd,G	Pl	C	36	T	------	Bedrock at 135 ft; L.
25E2	----do----------	----do----------	3-30-53	807	Dr	60	10	S; 10ft	39	20	Sd,G	Pl	U	39	P	J3	Dd 11 ft pumping 60 gpm; Ca, L.
25M1	C. Love, Sr.	Sriver Drilling Co.	7-23-57	846	J	149	3	S; 4½ft, 10sl, dia 2	140	9	Sd	Pl	C	87	D	J	Ca, L.
26A1	E. Angel	R. Roddish	4- 9-57	764	J	40	2	S; 3ft, 60g, dia 1¼	20	20	Sd,G	Pl	U	20	D	J1/2	Yield 8 gpm; sand and gravel from 0-40 ft; Ca.
26C1	T. Fry	Sriver Drilling Co.	11- 5-45	808	J	74	2	S; 4ft, 80g, dia 1¼	---	---	Sd,G	Pl	-----	82	D	J1/2	
26C2	J. Haines	----do----------	8- 4-54	837	J	167	2	S; 4ft, 80g, dia 1	100	67	Sd,G	Pl	C	98	D	J1-1/2	L.
26G1	F. J. Michalo	----do----------	--------	846	J	96	2	S; 3ft, 10sl	78	24	Sd,G	Pl	U	78	D	J3/4	Yellow sand and gravel overlain by 30 ft yellow clay.
26G2	H. C. Eckler	----do----------	6- 9-51	837	J	66	2	S; 3½ft, 60g, dia 1½	59	7	Sd	Pl	C	20	D	------	Sand overlain by 59 ft blue clay.
26G3	Mr. Hall	----do----------	5-23-53	770	J	61	2	----do----------	55	6	Sd	Pl	C	24	D	J1/2	Ca, L.
26H1	W. J. Mitchell	----------	--------	827	J	82	2	S; 3ft, 80g, dia 1¼	---	---	Sd,G	Pl	-----	58	D	J1/2	
26H2	J. Reynolds	Sriver Drilling Co.	12- 5-50	817	J	110	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	62	D	------	
26K1	H. Carmean	----do----------	7- 9-46	857	J	155	2	S; 5ft, 60g, dia 1¼	---	---	Sd,G	Pl	-----	90	D	------	
26K2	H. Nunnally	----do----------	5-31-51	850	J	91	2	S; 3½ft. 60g, dia 1½	78	13	Sd,G	Pl	U	78	D	------	Sand and gravel overlain by 20 ft yellow clay.
26L1	J. Tuggle	----do----------	11-19-55	792	J	39	2	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	-----	24	D	J1/4	Ca.
26N1	W. O. Price	----do----------	9-18-53	860	J	102	2½	S; 5ft, 60g, dia 1½	82	20	Sd,G	Pl	U	82	---	------	L.
26P1	P. Klein	----do----------	11-16-45	880	J	100	2	S; 5ft, 60g, dia 1¼	---	---	Sd,G	Pl	-----	76	D,S	L3/4	Ca.
27E1	E. D. Zoltwanger	----do----------	4-28-52	874	J	144	2½	S; 10sl	137	7	Sd,G	Pl	C	108	D	J1	L.
27E2	H. Shirk, Jr.	----do----------	8-31-53	880	J	174	3	S; 5ft, 60g, dia 2	165	9	Sd,G	Pl	C	108	D	J1-1/2	L.
27E3	E. Wallis	----do----------	4-24-54	878	J	180	3	S; 4½ft, 10sl, dia 2	124	56	Sd	Pl	U	124	D	J1-1/2	L.
27E4	W. Ballinger	----do----------	5- 5-54	885	J	190	3	S; 5½ft. 60g, dia 2	180	10	Sd	Pl	C	126	D	J1-1/2	
27N1	H. Powell	----do----------	5- 3-50	872	J	130	2	S; 3½ft, 60g, dia 1½	100	30	Sd,G	Pl	U	100	D	------	Sand and gravel overlain by 50 ft clay.
27N2	C. and B. Weiss	M. C. Platcher	7-19-45	658	Dr	560	8-3½	----------	---	---	-----	---	-----	---	---	------	Oil test; bedrock at 250 ft; well G-Sj 127-1 (KS, 1948).
27R1	H. D. Robinson	Sriver Drilling Co.	9-30-56	850	J	100	2	S; 3½ft, 60g, dia 1½	82	21	Sd,G	Pl	U	82	D	J1	Ca, L.
28A1	D. Hershbarger	----do----------	9-13-56	887	J	170	3	----------	165	5	Sd,G	Pl	C	123	D	------	L.
28B1	C. V. Biltz	----do----------	3- 6-58	887	J	215	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	180	D	L	
28D1	St. Francis Convent	----do----------	8-25-57	902	J	173	3	S; 5ft, 80g, dia 2	140	33	Sd,G	Pl	U	140	D,S	J	Ca, L.
28G1	F. A. DeNeve	----do----------	12- 5-49	896	J	163	2	S; 5½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	121	D	------	
28G2	H. Lentino	----do----------	11- 1-50	887	Dr	188	4	S; 6ft, 80g, dia 2½	---	---	Sd	Pl	-----	116	D	------	Sand and clay overlain by 145 ft gravel.
28H1	E. Beechler	----do----------	5- 5-48	882	--	108	--	S	---	---	Sd	Pl	-----	99	D	J1	
28H2	Mr. Allen	C. Rouch	7-11-59	879	J	152	3	S; 6ft, 60g, dia 2	140	12	Sd	Pl	C	115	D	------	L.
28J1	J. Brakevelt	Sriver Drilling Co.	8-47	876	J	153	3	S; 3½ft, 60g, dia 2	---	---	Sd,G	Pl	-----	108	D	------	
28J2	R. Leininger	----do----------	10-50	876	J	150	3	S; 5ft, 80g, dia 1½	140	10	Sd,G	Pl	C	114	D	J1-1/2	See log well 28H2.
28J3	T. Pynaert	----do----------	--------	881	J	110	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	104	D	J1	
28K1	W. J. Below	----do----------	7- 8-47	893	J	168	2	S; 4½ft, 80g, dia 1½	---	---	G	Pl	-----	122	D	------	
28K2	L. Marker	----do----------	7-30-45	869	J	168	2	S; 3ft, 80g, dia 1½	---	---	Sd,G	Pl	-----	108	D	L	
28K3	P. Dalo	W. Rodgers	4-15-54	885	J	147	2	S; 4½ft, 80g, dia 1	---	---	Sd,G	Pl	-----	115	D	J1-1/2	
28K4	A. Martens	Sriver Drilling Co.	10-15-56	860	J	158	2½	S; 5ft. 60g, dia 1½	140	18	Sd	Pl	C	120	D	------	See log well 28H2.
28M1	D. Koil	----do----------	3-17-58	902	J	174	3	S; 6ft, 10sl	---	---	Sd,G	Pl	-----	142	D	------	Ca.
28N1	F. Battles	----do----------	3-24-58	895	J	140	3	S; 4½ft, 60g, dia 2	---	---	Sd	Pl	-----	133	D,S	J1-1/2	Ca.
29F1	R. C. Stein	----do----------	6-12-49	842	J	133	3	S; 5ft, 60g, dia 2	108	25	Sd	Pl	C	88	D	------	L.
29F2	R. G. Brandt	----do----------	8- 2-56	840	J	133	2	S; 3½ft, 80g, dia 1½	---	---	Sd	Pl	C	98	D	J1	
29G1	J. E. Filley	----do----------	--------	843	J	139	3	S; 4ft, 60g, dia 2	94	45	Sd,G	Pl	U	94	D	------	Sand and gravel with few strips of clay from 0-139 ft.
29G2	M. R. Campeau	----do----------	6-52	878	J	153	3	S; 5ft, 10sl, dia 2	127	26	Sd,G	Pl	U	127	D	J1-1/2	Yellow sand and gravel overlain by 16 ft yellow clay.
29G3	R. Dufendach	----do----------	9-49	895	J	171	3	S; 5ft, 60g, dia 2	142	29	Sd,G	Pl	U	142	D	J2	Sand and gravel from 0-171 ft.
29H1	J. Battles	----do----------	3-28-58	868	J	144	3	S; 7ft, 60g, dia 2	116	28	Sd,G	Pl	U	116	---	------	L.
29K1	F. S. Orisich	----do----------	3- 2-51	843	J	131	2½	S; 5ft, 60g, dia 1½	90	41	Sd,G	Pl	U	90	D	------	Sand and gravel from 0-131 ft.
29K2	D. C. Alexander	----do----------	10-23-56	862	J	141	3	S; 5ft, 60g, dia 2	---	---	G	Pl	-----	114	D	------	L.
29K3	J. Pintor	----do----------	10-10-55	862	J	136	3	S; 4½ft, 10sl, dia 2	114	24	Sd	Pl	C	113	D	J	Ca, L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/3-29N1	R. Carmican	Sriver Drilling Co.	--------	875	J	133	3	S; 4½ft, 60g, dia 2	120	13	Sd,G	Pl	C	111	D	------	L.
29N2	C. Koncyk	----do----------	4-18-50	883	J	141	2½	S; 4ft, 60g, dia 1½	120	21	Sd,G	Pl	C	130	D	------	See log well 29N1.
29N3	E. Gross	----do----------	9-20-52	872	J	132	3	S; 4½ft, 60g, dia 2	110	22	Sd,G	Pl	U	110	D	J1	Sand and gravel from 0-132 ft.
29N4	R. P. Morriston	----do----------	1-24-53	877	J	127	2	S	---	---	Sd,G	Pl	-----	---	---	J1	
29N5	C. E. Buffs	----do----------	3- 8-37	880	J	138	2	S; 4½ft, 60g, dia 1½	112	26	Sd,G	Pl	U	112	D	------	L.
30A1	Mr. Correll	----do----------	10-24-56	803	J	80	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	-----	81	D	J3/4	
30A2	Mr. Watson	----do----------	11- 5-56	804	J	81	2	S; 3½ft, 10sl, dia 1½	61	20	Sd,G	Pl	U	81	D	------	Yellow sand and gravel overlain by 75 ft yellow sand.
30A3	Mr. Reitmeir	----do----------	1957	807	J	118	2	S; 3½ft, 60g, dia 1½	95	23	Sd,G	Pl	U	95	D	J3/4	Sand and gravel from 0-118 ft.
30A4	B. Shacho	----do----------	5-15-57	857	J	134	3	S; 7ft, 60g, dia 2	114	20	Sd,G	Pl	U	114	D	------	Yellow sand overlain by 120 ft yellow sand and gravel.
30A5	J. Goff	----do----------	10-56	858	J	138	3	S; 5ft, 60g, dia 2	118	18	Sd	Pl	U	118	D	------	Sand overlain by 20 ft clay; Ca.
30A6	Mr. Johnson	----do----------	10-23-56	858	J	135	3	----do----------	---	---	Sd	Pl	-----	114	D	J	
30G1	H. Huston	----do----------	5-21-48	880	J	132	2	S; 5ft, 60g, dia 1½	110	22	Sd,G	Pl	U	110	D	------	Sand and gravel from 0-132 ft.
30G2	Brethren Home Missions Council, Inc.	----do----------	9-10-57	877	J	168	3	S; 6ft, 10sl, dia 2	120	48	Sd,G	Pl	U	120	P	------	Sand and gravel from 0-168 ft.
30J1	Mr. Schermerhorn	----do----------	3-57	867	J	168	3	S; 7ft, 60g, dia 2	---	---	Sd	Pl	-----	110	D	------	
30K1	M. W. Brodbeck	----do----------	9-43	880	J	153	3	S	---	---	Sd	Pl	-----	---	---	------	
30M1	C. Allen	----------	--------	837	J	119	2	S	---	---	Sd	Pl	-----	70	N	------	
31A1	O. Demaego	----------	--------	875	J	129	2	S; 4ft, 60g, dia 1	---	---	Sd	Pl	-----	110	D	J1	
31A2	St. Joseph County	Layne-Northern Co., Inc.	8-24-59	865	Dr	173	6	S; 15ft, 15sl, dia 4	---	---	Sd,G	Pl	-----	100	---	------	Dd 8 ft after 8 hr pumping 150 gpm; L.
31C1	G. Zimmer	Sriver Drilling Co.	9-50	860	J	112	2	S; 3ft, 60g, dia 1½	88	32	Sd,G	Pl	U	88	D	J	Sand and gravel overlain by 80 ft cobbles and hardpan; Ca.
31D1	J. A. Gordon	----do----------	5-15-55	860	J	114	3	S; 2½ft, 60g, dia 1	90	24	Sd,G	Pl	U	90	D	------	Sand and gravel overlain by 50 ft cobblestones; Ca.
31D2	H. Nietah	----do----------	7-23-57	860	J	113	3	S; 6ft, 10sl, dia 2	88	27	G,Sd	Pl	U	86	D	------	Yellow gravel and sand overlain by 18 ft yellow gravel; Ca.
31D3	E. L. Zimmer	----------	--------	860	J	150	2	S; 3½ft, 10sl, dia 1½	---	---	Sd,G	Pl	-----	95	D,S	J1	
31H1	South Bend Tribune	Indiana-Michigan Water Development Co.	10- 8-47	870	Dr	164	6	S; 15ft, dia 5½	101	63	Sd,G	Pl	U	101	Ac,P	T7-1/2	Dd 5 ft pumping 50 gpm; screen, 2 ft 10 sl, 2 ft 16 sl, 2 ft 30 sl, 2 ft 60 sl, 7 ft 125 sl; L.
31H2	P. R. Mangos	Sriver Drilling Co.	--------	870	J	131	2	S	---	---	Sd,G	Pl	-----	---	D	J1	
31M1	A. M. Boulanger	----do----------	8-27-50	865	J	110	2	S; 3½ft, 60g, dia 1½	92	18	Sd,G	Pl	U	92	D	------	Sand and gravel from 0-110 ft.
31M2	M. Ballot, Jr.	----do----------	4-27-49	865	J	110	2	S; 3ft, 60g, dia 1½	92	18	Sd,G	Pl	U	92	D	------	Do.
31R1	G. Battles	----------	--------	855	J	84	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	66	D,S	L3/4	Ca.
33A1	E. Randolph	Sriver Drilling Co.	--------	875	J	113	2	----do----------	88	25	Sd,G	Pl	U	88	D	------	Yellow sand and gravel overlain by 28 ft yellow and blue clay.
33A2	J. Gommer	----do----------	--------	875	J	110	2	S; 3½ft, 60g, dia 1½	85	25	Sd,G	Pl	U	85	D	------	L.
33A3	M. Salting	----do----------	--------	880	J	125	2½	S; 5ft, 60g, dia 1½	120	5	Sd	Pl	C	106	D	J1	L.
33A4	D. B. Christian	----do----------	4-14-53	875	J	110	2	S; 3½ft, 60g, dia 1½	91	19	Sd,G	Pl	U	91	D	------	Ca, L.
33A5	J. Callahan	----do----------	4-17-55	875	J	129	2½	S; 5ft, 60g, dia 1½	88	41	Sd,G	Pl	U	88	D	------	Sand and gravel overlain by 32 ft clay and gravel.

37/3-33A6	A. Major	Sriver Drilling Co.	8-30-57	880	J	122	3	S; 4½ft, 10sl, dia 2	102	20	Sd,G	Pl	U	102	D	J1-1/2	L.
33B1	K. Blitz	W. Rodgers	--------	885	J	131	2	S; 3½ft, 60g, dia 1½	115	16	Sd,G	Pl	U	115	D	------	Sand and gravel overlain by 60 ft yellow clay mixed with gravel.
33B2	D. Soviak	Sriver Drilling Co.	5-18-55	885	J	125	2½	S; 5ft, 60g, dia 1½	100	25	Sd	Pl	U	100	D	------	See log well 33A6.
33B3	J. W. Wallick	----do----------	11- 4-57	885	J	180	3	S; 5ft, 60g, dia 2	---	---	Sd	Pl	----	---	D	J1-1/2	Ca, L.
33C1	A. Wendel	----do----------	5-16-47	880	--	122	---	S	---	---	Sd	Pl	----	91	D	------	
33E1	Truth Publishing Co.	Layne-Northern Co., Inc.	12- 9-57	874	Dr	132	8	S; 10½ft, 15sl, dia 4	97	41	Sd,G	Pl	U	97	P	S	Dd 5 ft pumping 10 gpm; Ca, L.
33J1	W. W. Franco	Sriver Drilling Co.	--------	885	J	132	3	S; 5ft, 60g, dia 1½	108	26	Sd,G	Pl	U	108	D	------	Sand and gravel overlain by 48 ft brown clay.
33J2	L. Schwartz	----do----------	8-19-55	875	J	118	3	S; 5ft, 60g, dia 2	98	20	Sd	Pl	U	98	D	------	L.
34A1	R. A. Frick	----do----------	2- 3-55	880	J	101	2	S; 3ft, 60g, dia 1½	82	19	Sd	Pl	U	82	D	------	L.
34B1	W. Weise	----do----------	4- 8-45	880	J	82	2	S; 5ft, 60g, dia 1½	---	---	Sd,G	Pl	U	84	D,S	J1/2	
34Q1	R. Kline	----do----------	11-15-51	860	J	113	2	S; 3½ft, 10sl, dia 1½	82	31	Sd,G	Pl	U	82	D,S	L	Rod sand and gravel overlain by 50 ft blue clay; Ca.
35D1	C. Rodgers	----do----------	9-18-51	860	J	95	2½	S; 5ft, 60g, dia 1½	76	19	G,Sd	Pl	U	76	D,S	J1	Gravel and sand overlain by 20 ft yellow clay; Ca.
35D2	E. Castello	----do----------	3- 7-53	860	J	100	3	S; 5ft, 60g, dia 2	82	18	G,Sd	Pl	U	82	D,S	J3/4	Ca, L.
35D3	Trustees Penn Township	----do----------	8-29-57	855	Dr	90	4	S; 10ft, 10sl	64	26	G	Pl	U	64	---	------	For fire protection; coarse gravel overlain by 30 ft blue clay.
35M1	M. Hurlbut	----do----------	--------	850	J	91	2	S; 3ft, 60g, dia 1½	70	21	Sd,G	Pl	C	64	D	------	L.
35M2	C. Van Cotoghem	----do----------	2-26-53	850	J	91	2	S; 3½ft, 10sl, dia 1½	73	18	G	Pl	U	73	D	------	Gravel overlain by 60 ft yellow and blue clay; Ca.
36Q1	L. E. Duchatelet	----do----------	8-50	840	J	108	2	S; 3½ft, 60g, dia 1½	71	35	G	Pl	U	71	D	------	Ca, L.
37/4- 4J1	Buck's Shell Station	----do----------	3-18-49	750	Dn	34	2	S	---	---	Sd	Pl	----	27	P	------	Ca.
4J2	Night Fall Motel	----do----------	1- 9-53	750	Dr	58	4	S; 8ft, 10sl	26	32	Sd,G	Pl	U	26	P	------	Yellow sand and gravel overlain by 18 ft yellow sand.
4P1	N. Gaugler	----do----------	--------	752	J	49	2	S; 3½ft, 60g, dia 1½	33	16	Sd,G	Pl	U	33	D	------	Sand and gravel from 0-49 ft.
4P2	F. Gaugler	----do----------	4-23-49	752	J	48	2	S; 3ft, 60g, dia 1½	32	13	Sd,G	Pl	U	32	D	------	Sand and gravel from 0-45 ft.
4R1	T. Miller	----do----------	10- 3-50	752	J	57	3	S; 5ft, 60g, dia 2	22	35	Sd,G	Pl	U	22	D	J	Sand and gravel from 0-57 ft.
5E1	C. Fisher	----do----------	7-20-56	748	J	40	2	S; 3½ft, 10sl, dia 1½	22	18	Sd,G	Pl	U	22	D	J	Sand and gravel from 0-40 ft.
5L1	W. Horn	----do----------	12-28-53	752	J	40	2	S; 3½ft, 60g, dia 1½	25	15	Sd,G	Pl	U	25	D	------	Do.
6B1	J. Balog	Barrett and Kamm	7-15-59	754	J	25	2	S; 4ft, 10sl, dia 1	---	---	Sd,G	Pl	C	7	D	------	Yield 10 gpm; Ca, L.
6J1	Vrielynck Nursery	Sriver Drilling Co.	3-10-55	748	J	91	2	----------	---	---	Sd,G	Pl	----	---	T	------	L.
6J2	----do----------	----do----------	3- 3-55	748	Dr	48	4	S; 10ft, 10sl	24	24	Sd,G	Pl	U	24	Jr	J5	Yield 50 gpm; sand and gravel from 0-48 ft; Ca.
7A1	M. Hooter	----do----------	--------	746	J	42	2	S; 3ft, 60g, dia 1½	34	8	Sd,G	Pl	C	27	D	------	L.
7A2	R. C. Riffel	----do----------	10-15-48	744	J	58	2	----do----------	42	16	Sd	Pl	C	28	D	------	Sand overlain by clay.
7A3	O. Dirk	----do----------	6- 7-54	747	J	67	2	----do----------	48	19	Sd,G	Pl	C	32	D	------	L.
7A4	W. J. Culp	----do----------	1954	747	J	64	2	S; 3½ft, 60g, dia 1½	20	44	Sd,G	Pl	U	20	D	J1/3	Sand and gravel from 0-64 ft; Ca.
7B1	Trustees, Penn Township	Layne-Northern Co., Inc.	2-24-56	747	Dr	152	8	----------	---	---	Sd,G	Pl	----	29	T	------	L.
7B2	----do----------	----do----------	11-30-57	746	Dr	152	26-12	Gp; S; 30ft, 80sl, dia 12	---	---	Sd,G	Pl	----	32	P	J	Dd 17 ft pumping 730 gpm; Ca, L.
7C1	F. A. Liggett	Sriver Drilling Co.	1-28-54	747	J	44	2	S; 3ft, 60g, dia 1½	28	16	Sd,G	Pl	U	28	D	J1/2	Yellow sand and gravel from 0-44 ft.
7D1	Rockwell Spring and Axle Co.	Layne-Northern Co., Inc.	11- 7-57	748	Dr	154	26	S; 25ft, 80sl, dia 12	---	---	Sd,G	Pl	C	40	I	T125	Dd 57 ft after 8 hr pumping 1,700 gpm; L.
7D2	----do----------	----do----------	10- 4-57	748	Dr	149	8	S; 10ft, dia 8	139	17	Sd,G	Pl	C	32	T	------	Bedrock at 156 ft; L.
7E1	W. L. Davis	Sriver Drilling Co.	11- 4-55	748	J	40	2	S; 4ft, 60g, dia 1½	---	---	Sd,G	Pl	----	28	D	------	
7E2	Rockwell Spring and Axle Co.	Layne-Northern Co. Inc.	2-24-56	749	Dr	153	26	Gp; S; 25ft, 105sl, dia 13½	99	54	Sd,G	Pl	C	32	I	------	Dd 13 ft after 3 hr pumping 630 gpm; bedrock at 153 ft; Ca, L.
7F1	C. Bernhardt	Sriver Drilling Co.	8-20-49	748	J	44	2	S; 3ft, 60g, dia 1½	40	4	Sd,G	Pl	U	40	D	------	Sand and gravel from 0-44 ft.
7G1	J. Hollister	----do----------	12- 4-56	742	J	82	2	S; 3½ft, 60g, dia 1½	53	7	Sd,G	Pl	C	35	D	------	L.
7H1	C. B. Addington	----do----------	11- 9-56	742	J	76	2	S; 3½ft, 10sl, dia 1½	---	---	G	Pl	----	---	D	J	Ca.
7N1	Wayne Heating Co.	----do----------	6-18-56	730	J	40	2	S; 3½ft, 60g, dia 1½	13	27	Sd,G	Pl	U	13	D	J	Sand and gravel from 0-40 ft; Ca.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
37/4- 8D1	R. Fisher	Sriver Drilling Co.	1-10-58	740	J	81	2	S; 3½ft, 60g, dia 1½	73	6	Sd	Pl	C	29	D	J1/2	L.
8E1	W. Rogers	----do----------	--------	722	J	40	2	S; 3ft, 60g, dia 1½	30	10	Sd	Pl	C	---	D	J	See log well 8E2; Ca.
8E2	P. Doardorff	----do----------	Fall 1935	722	J	44	2	----do----------	34	10	Sd	Pl	C	24	D	J1/2	Ca, L.
9A1	J. Wright	----do----------	10-12-48	750	J	74	3	S; 5ft, 60g, dia 2	60	14	Sd	Pl	C	48	D	J	Ca, L.
9C1	J. L. Beisel	----do----------	7-10-51	748	J	45	2	S; 3½ft, 60g, dia 1½	31	14	Sd,G	Pl	U	31	D	J1/2	Sand and gravel from 0-45 ft.
9C2	G. Hood, Jr.	----do----------	4-17-50	734	J	39	2	S; 3ft, 60g, dia 1½	16	23	Sd,G	Pl	U	16	D	------	Sand and gravel from 0-39 ft.
9D1	Chapel Hill Memorial Gardens	Indiana-Michigan Water Development Co.	5-26-50	750	Dr	100	10	S; 15ft, 40sl, dia 9½	30	70	Sd,G	Pl	U	30	P,Ir	T10	Dd 50 ft pumping 150 gpm; Ca, L.
9G1	F. Keely	Sriver Drilling Co.	6-16-51	731	J	27	2	S; 3½ft, 60g, dia 1½	16	16	Sd,G	Pl	U	16	D	------	Fine sand overlain by 27 ft sand and gravel; clay at 32 ft.
9G2	G. Clark	W. Rodgers	8-10-54	731	J	44	2	S; 3ft, 60g. dia 1½	40	4	Sd,G	Pl	C	18	D	J1	Yield 13 gpm; Ca, L.
9M1	D. Quier	Sriver Drilling Co.	5-18-50	732	J	40	2	----do----------	18	22	Sd,G	Pl	U	18	D	------	Sand and gravel from 0-40 ft.
9M2	J. Doan	----do----------	8-50	732	J	32	2	----do----------	---	---	Sd,G	Pl	U	---	D	------	Sand and gravel from 0-32 ft; clay at 32 ft.
9P1	A. Hartzog	----do----------	1-27-51	725	J	45	2	----do----------	40	5	Sd	Pl	C	8	D	------	Sand overlain by 40 ft clay.
9Q1	F. Dishop	W. Rodgers	12-15-54	727	J	65	2	S; 3ft, 10sl, dia 1½	58	7	Sd,G	Pl	C	8	D	J1/2	Yield 10 gpm; L.
9Q2	W. M. Nicholson	Sriver Drilling Co.	11- 7-50	736	J	40	2	S; 3ft, 60g, dia 1½	22	18	Sd,G	Pl	U	22	D	------	Sand and gravel from 0-40 ft.
16C1	G. Bassinger	----do----------	11-30-48	736	J	42	2	S; 5ft, 80g. dia 1½	---	---	Sd,G	Pl	----	16	D	------	
16C2	F. B. Wise	----do----------	8-50	736	J	52	2	S; 3ft, 60g, dia 1½	45	7	Sd,G	Pl	C	18	D	------	L.
16D1	R. Weisweaver	----do----------	10-17-51	737	J	74	2	S; 3½ft. 60g, dia 1	---	---	Sd,G	Pl	----	15	D	------	L.
16G1	F. Miller	----do----------	Fall 1952	741	J	37	2	S; 3½ft, 10sl. dia 1½	21	16	Sd,G	Pl	U	21	D	------	Sand and gravel from 0-37 ft.
16G2	H. Brown	----do----------	2- 5-54	741	J	68	2	S; 3ft, 80g, dia 1½	43	23	Sd,G	Pl	C	22	D	------	Ca, L.
16P1	G. Morgan	----do----------	7-28-51	747	Dn	30	2	S; 3ft, 60g, dia 2	13	17	Sd,G	Pl	U	13	D	J1/3	Sand and gravel from 0-30 ft.
17A1	Town of Osceola	Indiana-Michigan Water Development Co.	8- 3-50	737	Dr	114	8	S; 12ft, 25sl, dia 5½	72	42	Sd,G	Pl	C	14	P	T5	Dd 5 ft pumping 78 gpm; at the Moran School; Ca, L.
17A2	R. Ingraham	----do----------	7-54	736	Dr	81	8	S; 6ft, 30sl, dia 7½	---	---	Sd	Pl	----	21	D	J1/4	Dd less than 12 ft pumping 95 gpm; L.
17B1	C. LaCluyse	Sriver Drilling Co.	10- 8-55	734	J	57	2	S; 3½ft, 10sl, dia 1½	32	25	Sd	Pl	C	13	D	------	L.
17C1	Town of Osceola	Layne-Northern Co., Inc.	12-22-56	732	Dr	145	8½	----------	---	---	Sd,G	Pl	----	---	T	------	Bedrock at 143 ft; L.
17F1	C. Krahulec	Sriver Drilling Co.	9-20-51	733	J	50	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	----	---	D	------	L.
17H1	W. H. Dreves	----do----------	1952	737	J	57	3	S; 5ft, 60g, dia 2	---	---	Sd	Pl	----	15	P	J	Ca, L.
18D1	City of Mishawaka	Layne-Northern Co.,	3-18-55	729	Dr	143	---	----------	---	---	G,Sd	Pl	----	15	T	------	Ca, L.
19M1	C. Mahank	Sriver Drilling Co.	1-23-54	742	J	51	2	S; 3½ft, 10sl, dia 1½	---	---	Sd,G	Pl	----	11	D	J1/3	Ca, L.
21P1	Mr. Williamson	----do----------	1-56	752	J	64	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	----	14	D	------	Ca, L.
28L1	J. Monaugh	----do----------	1-24-56	766	J	65	2	----do----------	54	11	Sd	Pl	C	17	D	------	L.
29J1	L. Frick	Woods and Kool Well Drilling Co.	12- 4-59	772	J	44	2	----do----------	13	31	Sd	Pl	U	13	D	------	Yield 6 gpm; L.
30K1	V. Romley	Sriver Drilling Co.	6-50	788	J	39	2	----do----------	17	22	Sd,G	Pl	U	17	D,S	------	Sand and gravel from 0-39 ft; Ca.
31M1	H. Ort	----do----------	5- 5-49	835	J	83	2	S	---	---	Sd	Pl	----	73	D,S	L	Ca.

37/4-33R1	L. Eby	Sriver Drilling Co.	--------	805	J	70	2	S; 3ft, 60g, dia 1½	64	6	Sd,G	Pl	C	52	D	------	Ca, L.
38/1W-10J1	O. Proud	Hunts Hoosier Hardware	7- 8-59	755	J	100	2	S; 4ft, 60g, dia 1	92	8	Sd	Pl	C	50	D,S	------	Ca, L.
10R1	L. Doubois	----do----------	12-28-55	---	J	78	2	S; 4½ft, 60g, dia 1	---	---	Sd,G	Pl	-----	13	D	J1/2	Yield 13 gpm; L.
14H1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-24-54	790	B	25	---	----------	---	---	Sd,G	Pl	U	12	T	------	See log well 14H3.
14H2	----do----------	----do----------	4-24-54	791	B	25	---	----------	14	11	Sd,G	Pl	U	14	T	------	Do.
14H3	----do----------	----do----------	4-23-54	792	D	30	---	----------	16	14	Sd,G	Pl	C	12	T	------	L.
14H4	----do----------	----do----------	4-22-54	793	B	25	---	----------	16	9	Sd,G	Pl	C	14	T	------	See log well 14H3.
14H5	----do----------	----do----------	4-22-54	793	B	25	---	----------	14	11	Sd,G	Pl	C	13	T	------	Do.
14M1	----do----------	----do----------	4-14-54	805	B	35	---	----------	---	---	-----	---	-----	---	T	------	No water reported; see log well 14M2.
14M2	----do----------	----do----------	4-15-54	800	B	35	---	----------	---	---	-----	---	-----	---	T	------	L.
14M3	----do----------	----do----------	4-16-54	797	B	40	---	----------	---	---	Sd	Pl	-----	1	T	------	L.
14N1	----do----------	----do----------	4-18-54	797	B	60	---	----------	52	8	Sd,G	Pl	C	9	T	------	L.
15E1	H. Copehover	Harrett and Namm	7-14-59	800	J	65	2	S; 4ft, 10sl, dia 1	55	10	Sd	Pl	C	45	D	------	Yield 9 gpm; Ca, L.
15J1	O. Proud	Hunts Hoosier Hardware	7-53	805	J	86	2	S; 60g	70	16	Sd,G	Pl	C	55	D,S	JJ/4	Ca.
15J2	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-14-54	804	B	35	---	----------	---	---	-----	---	-----	---	T	------	No water reported; see log well 15J3.
15J3	----do----------	----do----------	4-14-54	802	B	35	---	----------	---	---	-----	---	-----	---	T	------	L.
15J4	----do----------	----do----------	4-15-54	800	B	35	---	----------	---	---	-----	---	-----	---	T	------	See log well 15J3.
15J5	----do----------	----do----------	4-15-54	798	B	30	---	----------	---	---	Sd,G	Pl	-----	1	T	------	See log well 15J3.
15K1	H. Coffman	Sriver Drilling Co.	2-18-54	805	J	105	3	S; 7ft, dia 2	68	37	Sd,G	Pl	U	68	D	------	Ca, L.
15M1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-13-54	811	B	45	---	----------	---	---	Sd,G	Pl	-----	0	T	------	L.
15M2	----do----------	----do----------	4-14-54	814	D	35	---	----------	30	5	Sd,G	Pl	U	30	T	------	L.
15N1	----do----------	----do----------	4-15-54	798	D	45	---	----------	38	7	Sd,G	Pl	C	0	T	------	L.
15N2	----do----------	----do----------	4-16-54	801	B	31	---	----------	21	10	Sd	Pl	U	21	T	------	See log well 15M2.
22R1	Indiana and Michigan Electric Co.	Indiana-Michigan Water Development Co.	3-19-37	765	Dr	110	6	S; 10ft, dia 5½	78	33	Sd,G	Pl	C	28	I	T3	Dd 40 ft pumping 75 gpm; screen, upper 5 ft 15 sl, lower 5 ft 25 sl; L.
22R2	----do----------	----do----------	7-24-39	765	Dr	106	6	S; 10ft, dia 5½	64	42	Sd	Pl	C	28	I	T3	Dd 6 ft pumping 100 gpm; screen, 15 sl and 25 sl; see log well 22R1; Ca.
24E1	Haven Hubbard Memorial	----------	--------	763	Dr	86	4	----------	---	---	Sd,G	Pl	-----	---	P	------	
24E2	----do----------	----------	--------	763	Dr	86	6	----------	---	---	Sd,G	Pl	-----	---	P,S	------	Ca.
34G1	Town of New Carlisle	Michiana Drilling Co.	4- 7-52	820	Dr	192	12	S	161	31	Sd,G	Pl	C	68	P	T25	Dd 5 ft after 8 hr pumping 460 gpm; L.
34M1	C. Ray	Hunts Hoosier Hardware	6- 1-57	815	J	66	2	S; 4ft, 60g, dia 1	50	16	Sd,G	Pl	U	30	---	------	Yield 13 gpm; Ca, L.
35D1	Town of New Carlisle	Indiana-Michigan Water Development Co.	10- 5-34	795	Dr	115	12	S; 20ft, 30sl, dia 1½	86	30	G,Sd	Pl	C	30	P	T25	Dd 10 ft pumping 360 gpm; L.
35D2	----do----------	----do----------	10-21-40	795	Dr	132	8	S; 10ft, 25sl, dia 7½	115	17	Sd	Pl	C	33	P	T15	Dd 10 ft pumping 200 gpm; L.
38D1	Indiana-Michigan Electric Co.	Layne-Northern Co., Inc.	11-26-57	752	Dr	65	6	S; 10ft, 15sl, dia 5½	48	17	Sd,G	Pl	C	20	P,I	T5	Dd 12 ft after 8 hr pumping 100 gpm; Ca. L.
38J1	C. Colo and Son	----do----------	11- 3-48	748	Dr	41	8	----------	18	25	Sd,G	Pl	U	16	D,S	T3	L.
38/1- 7R1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-28-54	737	B	48	---	----------	2	46	Sd,G	Pl	U	2	T	------	L.
7R2	----do----------	----do----------	4-28-54	737	B	42	---	----------	2	40	Sd,G	Pl	U	2	T	------	See log well 7R1.
8N1	----do----------	----do----------	4-29-54	737	B	40	---	----------	3	37	Sd,G	Pl	U	3	T	------	See log well 8N2.
8N2	----do----------	----do----------	4-29-54	738	B	40	---	----------	4	36	Sd,G	Pl	U	4	T	------	L.
8N3	----do----------	----do----------	4-30-54	738	B	40	---	----------	3	37	Sd,G	Pl	U	3	T	------	See log well 8N2.
13L1	C. Relsh	Layne-Northern Co., Inc.	5- 5-50	796	Dr	110	12	S; 20ft	76	34	Sd,G	Pl	C	50	Ir	T40	Dd 25 ft pumping 530 gpm; L.
13P1	---do----------	Sriver Drilling Co.	11-19-49	822	J	102	2	S; 3½ft, 60g, dia 1½	87	15	Sd	Pl	U	87	---	J1	Sand overlain by 85 ft gravel and stone; Ca.
13Q1	A. Lichtenberger	----do----------	10-28-49	822	J	102	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	-----	83	D	------	Ca.
13Q2	R. Lichtenberger	----do----------	10-28-49	805	J	72	2	S; 3½ft, 60g, dia 1½	53	19	Sd,G	Pl	C	53	S	------	L.
15E1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	5- 5-54	739	B	35	---	----------	7	28	Sd,G	Pl	U	7	T	------	L.
15E2	----do----------	----do----------	5- 6-54	739	B	30	---	----------	8	22	Sd,G	Pl	U	8	T	------	See log well 15E1.
15E3	----do----------	----------	--------	790	B	20	---	----------	---	---	-----	---	-----	---	T	------	No water reported; see log well 15E1.
15K1	----do----------	----------	--------	796	D	18	---	----------	---	---	-----	---	-----	---	T	------	No water reported; fine sand overlain by 2 ft silt and top soil.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Character	Water-bearing zone: Geologic age	Water-bearing zone: Conditions of occurrence	Water level (feet)	Use	Type of pump and horsepower	Remarks
38/1-15K2	Indiana Toll Road Commission	----------	---------	794	B	22	---	----------	---	---	-----	---	----	---	T	------	L.
15K3	----do----------	----------	---------	785	B	18	---	----------	---	---	-----	---	----	---	T	------	See log well 15K2.
15R1	----do----------	----------	---------	779	B	18	---	----------	---	---	-----	---	----	---	T	------	No water reported; fine to coarse sand overlain by 4 ft silt and top soil.
16A1	----do----------	Raymond Concrete Pile Co.	5- 5-54	737	D	35	---	----------	6	29	Sd	Pl	U	6	T	------	L.
16D1	----do----------	----do----------	4-26-54	734	B	30	---	----------	5	45	Sd,G	Pl	U	5	T	------	L.
16D2	----do----------	----do----------	4-27-54	734	B	40	---	----------	6	34	Sd,G	Pl	U	6	T	------	See log well 16D1.
16D3	----do----------	----do----------	4-27-54	735	B	25	---	----------	4	21	Sd,G	Pl	U	4	T	------	Do.
16H1	----do----------	----do----------	5- 4-54	736	B	40	---	----------	6	34	Sd	Pl	U	6	T	------	See log well 16A1.
17A1	----do----------	----do----------	4-26-54	735	B	30	---	----------	2	28	Sd,G	Pl	U	2	T	------	See log well 17A2.
17A2	----do----------	----do----------	4-27-54	735	D	32	---	----------	4	28	Sd,G	Pl	U	4	T	------	L.
23F1	J. Pickarski	Sriver Drilling Co.	5-29-51	773	J	110	2½	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	----	44	D,S	------	
23F2	Indiana Toll Road Commission	----------	---------	783	B	25	---	----------	---	---	-----	---	----	---	T	------	No water reported; dark-brown gravel overlain by 8 ft dark-brown clayey sand and top soil.
23G1	----do----------	Raymond Concrete Pile Co.	4-19-54	777	D	35	---	----------	30	5	Sd	Pl	U	30	T	------	L.
23G2	----do----------	----do----------	4-20-54	775	B	30	---	----------	---	---	-----	---	----	---	T	------	No water reported; see log well 23G1.
23G3	----do----------	----do----------	4-20-54	772	B	35	---	----------	32	3	Sd,G	Pl	U	32	T	------	See log well 23G4.
23G4	----do----------	----do----------	4-22-54	773	D	55	---	----------	---	---	-----	---	----	---	T	------	No water reported; L.
23G5	----do----------	----do----------	4-19-54	772	B	26	---	----------	---	---	-----	---	----	---	T	------	See log well 23G1.
23H1	E. Porter	Sriver Drilling Co.	12- 8-54	800	J	81	3	S; ft, 60g, dia 2	54	27	Sd,G	Pl	U	54	D	------	Sand and gravel overlain by 21 ft brown clay; Ca.
24E1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-23-54	794	B	95	---	----------	---	---	-----	---	----	---	T	------	No water reported; L.
24E2	----do----------	----do----------	4-23-54	794	B	40	---	----------	30	10	Sd,G	Pl	U	30	T	------	L.
24E3	----do----------	----do----------	4-21-54	793	B	40	---	----------	30	10	Sd,G	Pl	U	30	T	------	See log well 24E2.
24E4	----do----------	----do----------	4-22-54	792	D	40	---	----------	22	18	Sd,G	Pl	U	22	T	------	Do.
24E5	----do----------	----do----------	4-22-54	794	B	38	---	----------	---	---	-----	---	----	---	T	------	Do.
25L1	J. C. Smith	Sriver Drilling Co.	3- 7-47	762	J	86	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	---	42	D	------	
25L2	L. Pezzi	----do----------	8- 9-51	755	J	88	3	S; 5ft, 60g, dia 2	80	8	Sd,G	Pl	C	46	D	------	Sand and gravel overlain by 80 ft blue clay with few thin layers of sand; Ca.
26J1	G. W. Rough	----do----------	12-27-46	787	J	65	2	S; 3ft, 60g, dia 1½	50	15	Sd.G	Pl	U	50	D	------	Sand and gravel from 0-65 ft; Ca.
26J2	H. M. Shaw	----do----------	---------	787	J	59	2	S; 3½ft, 60g, dia 1½	44	15	Sd	Pl	U	44	D	------	Yellow sand overlain by 32 ft yellow stony gravel; Ca.
26K1	W. F. Gummel	----do----------	7-31-54	757	J	64	2	S; 2½ft, 60g, dia 1	35	29	Sd,G	Pl	U	35	D	------	Sand and gravel from 0-64 ft.
26K2	J. Podemski	----do----------	9-29-51	772	J	60	2	S; 3½ft, 60g, dia 1½	44	16	Sd,G	Pl	U	44	D	------	Yellow sand and gravel with stones from 0-60 ft.
26K3	W. Millekin	----do----------	7-10-54	787	J	76	2	S; 3ft, 60g, dia 1½	61	15	Sd,G	Pl	U	61	D	------	Ca,L.
26L1	J. Doremus	Hunts Hoosier Hardware	10- 1-59	785	J	68	2	S; 3½ft, 60g, dia 1	63	5	Sd	Pl	C	50	D	------	L.
26P1	G. D. Frye	Sriver Drilling Co.	5-22-47	771	J	82	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	42	D	L	
26P2	H. Hutts	----do----------	8- 9-47	765	J	66	2	----do----------	44	22	Sd,G	Pl	U	44	D	------	Sand and gravel from 0-66 ft.
26Q1	J. Singletary	----do----------	6-50	782	J	80	2	----do----------	---	---	Sd	Pl	----	60	D	------	

38/1-31C1	J. Halossy	Hunts Hoosier Hardware	--------	747	J	31	2	S; 3½ft, 60g, dia 1	---	---	Sd,G	Pl	----	12	D	------	Yield 13 gpm; sand and gravel overlain by 18 ft sand and clay; Ca.
31M1	C. Colo and Son	Layne-Northern Co., Inc.	5- 3-50	743	Dr	66	16	S	4	62	Sd,G	Pl	U	4	Jr	T	Sand and gravel overlain by 2 ft top soil.
33R1	New York Central System	----do----------	12-15-41	722	Dr	46	12	S; 16ft, 16sl	5	41	Sd,G	Pl	U	5	N	------	Dd 1.8 ft pumping 400 gpm.
33R2	----do----------	----do----------	7-30-43	722	Dr	36	12	S; 16ft	5	51	Sd,G	Pl	U	5	O	------	Dd 7.5 ft pumping 420 gpm; Observation well St. Joseph 23; water level measured 5.19 ft below lsd, 8-21-56; see log well 33R1.
35F1	W. De Vine	Sriver Drilling Co.	6- 9-47	728	J	44	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	28	D	------	
35J1	F. Vando Zande	----do----------	2- 3-50	737	J	57	2	----do----------	35	22	G,Sd	Pl	C	28	D	------	L.
35J2	R. R. Frickor	----do----------	5-26-54	742	J	64	2	----do----------	42	22	Sd,G	Pl	C	20	D	------	L.
35K1	C. Micinski	----do----------	6-15-48	733	J	45	2	----do----------	---	---	Sd	Pl	----	---	D	------	Sand overlain by 38 ft quicksand and clay.
35K2	E. Mark	----do----------	4-11-45	742	J	54	2	S; 5ft, 60g, dia 1½	---	---	Sd	Pl	----	20	D	------	Ca.
35M1	J. Romano	----------	--------	757	J	54	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	38	D	J1	
36M1	City Rescue Mission	Indiana-Michigan Water Development Co.	8-24-40	762	Dr	72	6	S; 10ft, 30sl, dia 5½	60	12	Sd,G	Pl	C	35	P	T3/4	Dd 15 ft pumping 50 gpm; well Sj 57 (KS, 1948); Ca, L.
36M2	----do----------	----do----------	6-18-48	745	Dr	62	6	S; 10ft, 20sl, dia 5½	---	---	Sd,G	Pl	----	29	P	T1	Dd 16 ft pumping 40 gpm; L.
38/2- 7L1	C. L. Ehninger	Sriver Drilling Co.	4- 9-49	802	J	67	2	S; 3ft, 60g, dia 1½	50	17	Sd,G	Pl	U	50	---	------	Sand and gravel from 0-67 ft; Ca.
6N1	J. Sluss	----------	--------	800	J	60	2	S; 3½ft, 60g, dia 1½	---	---	Sd,G	Pl	----	54	D	J1	
8P1	E. Szwca	Sriver Drilling Co.	5-23-27	767	J	71	2	S; 3ft, 60g, dia 1½	48	23	Sd,G	Pl	U	48	D	------	Sand and gravel from 0-71 ft.
8P2	O. and V. Dunn	----do----------	3- 4-49	800	J	64	2	----do----------	52	12	Sd,G	Pl	U	52	D	------	Ca, L.
8K1	R. Volte	----do----------	--------	787	J	74	2	----do----------	55	19	Sd,G	Pl	U	55	---	J1/2	Ca, L.
11N1	A. Ladd	----do----------	3-16-51	696	J	48	2	S; 3½ft, 60g, dia 1½	33	15	Sd,G	Pl	U	33	D	J3/4	Sand and gravel from 0-48 ft; Ca.
12F1	E. Day	----do----------	--------	743	J	59	2	S; 3ft, 60g, dia 1½	40	19	Sd,G	Pl	U	40	D	------	Sand and gravel from 0-59 ft.
12K1	Wedgewood Park Water Co.	Indiana-Michigan Water Development Co.	7- 3-56	738	Dr	77	6	S; 15ft	---	---	Sd,G	Pl	U	---	P	------	Dd 15 ft pumping 150 gpm; screen, upper 3 ft 46 sl, lower 12 ft, 16 sl; see log well 12K2.
12K2	----do----------	----do----------	3- 4-58	738	Dr	85	10	S; 15ft, 20sl, dia 9½	22	85	Sd,G	Pl	U	22	P	------	Dd 27.5 ft after 24 hr pumping 350 gpm; L.
12N1	Mr. Stang	Sriver Drilling Co.	--------	723	J	42	2	S; 3ft, 60g, dia 1½	25	17	Sd,G	Pl	U	25	D	J1/3	Sand and gravel from 0-42 ft.
12N2	A. L. Kovacsis	----do----------	6-50	724	J	44	2	S; 3½ft, 60g, dia 1½	23	21	Sd,G	Pl	U	23	D	------	Sand and gravel from 0-44 ft.
12N3	C. Adams	----do----------	--------	720	J	45	2	S; 3ft, 60g, dia 1½	22	23	Sd,G	Pl	U	22	D	------	Yellow sand and gravel from 0-45 ft.
13F1	Trustees, Clay Township	----do----------	11- 1-51	732	Dr	142	4	S; 8ft, 60g, dia 2½	---	---	Sd,G	Pl	----	35	P	------	Ca, L.
13F2	H. Van Riesen	Indiana-Michigan Water Development Co.	5-22-46	732	Dr	60	6	S; 5½ft, 15sl, dia 5½	20	34	G,Sd	Pl	U	28	D	------	Dd 6 ft pumping 36 gpm; L.
13K1	J. V. Kacarab	Sriver Drilling Co.	6-50	727	J	51	2	S; 3½ft, 60g, dia 1½	9	42	Sd,G	Pl	U	9	D	------	Sand and gravel from 0-51 ft.
13L1	R. C. Huss	----do----------	3-18-48	734	J	58	2	S; 4½ft, 60g, dia 1½	32	26	Sd,G	Pl	U	32	D	J1/2	Sand and gravel from 0-58 ft.
13L2	J. Tusing	----do----------	8- 8-48	734	J	51	3	S; 4ft, 60g, dia 2	22	29	Sd,G	Pl	U	22	D	------	Sand and gravel from 0-51 ft.
13L3	A. Mass, Jr.	----do----------	6-50	734	J	54	2	S; 3½ft, 60g, dia 1½	30	24	Sd,G	Pl	U	30	D	------	Sand and gravel from 0-54 ft.
13L4	D. A. Scott	----------	--------	734	J	58	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	28	D	------	
13P1	F. Vaughn	----------	--------	723	J	37	2	----do----------	---	---	Sd	Pl	----	---	D	L	
13P2	F. Nojman	R. Reddish	5- 7-57	725	J	44	2	S; 3½ft, 60g, dia 1½	20	24	Sd	Pl	U	20	D	------	Sand from 0-44 ft.
13P3	M. Hileman	Sriver Drilling Co.	10-12-56	732	J	60	3	S; 5ft, 60g, dia 2	28	32	Sd,G	Pl	U	28	D	J1	Blue sand and gravel overlain by 50 ft yellow sand and gravel; Ca.
13Q1	L. Mitchell	----do----------	4- 7-52	726	J	46	2	S; 3½ft, 60g, dia 1½	15	31	Sd	Pl	U	15	D	------	Sand from 0-46 ft.
13Q2	D. Pedtke	----do----------	--------	726	J	40	2	S; 3ft, 60g, dia 1½	14	26	Sd,G	Pl	U	14	D	J	Sand and gravel from 0-40 ft.
14F1	J. W. Toyne	Indiana-Michigan Water Development Co.	0- 8-45	690	Dr	41	4	S; 6ft, 60g, dia 2½	21	20	G,Sd	Pl	C	19	D	------	Ca, L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
38/2-14N1	M. E. Winstead	Sriver Drilling Co.	6-30-48	701	J	112	2	S; 3ft, 80g, dia 1¼	---	---	Sd,G	Pl	----	30	D	------	L.
14N2	----do----------	----do----------	4-17-54	701	J	43	2	S; 4½ft, 7sl, dia 1¼	25	18	Sd,G	Pl	U	25	D	J1	Sand and gravel from 0-43 ft; Ca.
14R1	J. C. Bayman	----do----------	7-17-54	711	J	40	2	S; 4ft, 80g, dia 1¼	26	14	Sd,G	Pl	U	28	D	------	Sand and gravel from 0-40 ft.
15N1	A. Kolupa	----do----------	11- 8-48	716	Dr	60	4	S; 60g, dia 2½	---	---	Sd	Pl	----	50	D	------	
15N2	W. Heider	----do----------	10-27-57	723	J	62	2	S; 3½ft, 60g, dia 1¼	42	20	Sd	Pl	C	37	D	J1	Ca, L.
15M1	E. Stilson	----do----------	8-17-48	812	J	86	2	S; 3ft, 80g, dia 1¼	70	16	Sd,G	Pl	U	70	---	------	Ca, L.
15N1	F. C. Dawson	----do----------	--------	788	J	135	2	S; 3½ft, 60g, dia 1¼	---	---	Sd	Pl	----	68	D	J1	
16D1	E. Beirwagon	R. Reddish	8-11-57	791	J	67	2	----do----------	50	17	Sd	Pl	C	50	D	J1/2	See log well 16B2.
16B2	F. Schuell	Indiana-Michigan Water Development Co.	2-23-48	785	Dr	104	6	S; 10ft, dia 5½	65	39	Sd,G	Pl	C	45	D,Ir	------	Dd less than 15 ft pumping 40 gpm; screen, upper 7 ft 15 sl, lower 3 ft 30 sl; Ca, L.
16R1	W. Lawrence	Sriver Drilling Co.	7-11-55	787	J	89	2½	S; 5ft, 60g, dia 1½	67	22	Sd,G	Pl	U	67	D	------	Sand and gravel from 0-89 ft.
19F1	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-24-54	804	B	40	---	----------	10	30	Sd,G	Pl	----	9	T	------	L.
19F2	----do----------	----do----------	4-26-54	804	B	35	---	----------	8	27	Sd,G	Pl	----	8	T	------	See log well 19F1.
19F3	----do----------	----do----------	4-26-54	804	B	35	---	----------	20	8	Sd,G	Pl	U	20	T	------	See log well 19F1.
19F4	----do----------	----do----------	4-27-54	804	B	35	---	----------	---	---	-----	---	----	---	T	------	No water reported; see log 19F1.
19F5	----do----------	----do----------	4-27-54	804	B	35	---	----------	---	---	-----	---	----	---	T	------	See log well 19F1.
19P1	Trustees, German Township	Indiana-Michigan Water Development Co.	10-15-57	815	Dr	160	8	S; 10ft, 20sl, dia 7½	85	75	Sd,G	Pl	U	85	P	S5	Dd 5 ft after 8 hr pumping 130 gpm; Ca, L.
19Q1	P. Mattens	Sriver Drilling Co.	2- 8-55	792	J	94	2	S; 3ft, 10sl, dia 1¼	72	22	Sd,G	Pl	U	72	D,S	L	Sand and gravel from 0-94 ft; Ca.
20L1	Indiana Toll Road Commission	Layne-Northern Co., Inc.	5- 6-55	812	Dr	130	8	S; 10ft, dia 6	114	16	Sd	Pl	C	79	P	------	Dd 20 ft after 8 hr pumping 150 gpm; L.
22J1	E. D. Ray	Sriver Drilling Co.	8- 6-47	719	J	64	2	S; 3ft, 80g, dia 1¼	---	---	G	Pl	----	50	D	------	
22K1	C. W. Miller	----do----------	8-50	753	J	94	2	----do----------	88	6	Sd	Pl	C	62	D	J3/4	Ca, L.
22K2	W. Morehouse	Woods and Kool Well Drilling Co.	10-10-59	737	J	80	2	S; 3½ft, 60g, dia 1¼	60	20	Sd	Pl	C	50	D	------	Yield 11 gpm; Ca, L.
22M1	A. Topash	Sriver Drilling Co.	9- 6-55	778	J	100	2	S; 3½ft, 80g, dia 1¼	---	---	Sd	Pl	----	---	---	------	
22N1	Indiana Toll Road commission	Raymond Concrete Pile Co.	4-29-54	772	B	35	---	----------	---	---	-----	---	----	---	T	------	No water reported; see log well 22N2.
22N2	----do----------	----do----------	4-27-54	773	B	35	---	----------	---	---	-----	---	----	---	T	------	No water reported; L.
22P1	M. L. Nurwich	Indiana-Michigan Water Development Co.	3-23-48	766	Dr	68	6	S; 10ft, dia 5½	45	23	Sd,G	Pl	U	45	---	------	Dd less than 7 ft pumping 45 gpm; screen, 8 ft 10 sl, 2 ft 20 sl; L.
22P2	----do----------	Sriver Drilling Co.	8-31-54	760	J	224	3	----------	---	---	-----	---	----	---	---	------	L.
22P3	----do----------	----do----------	7-16-54	760	Dr	68	8	S; 10ft, 10sl	48	20	Sd,G	Pl	U	48	---	------	Sand and gravel from 0-68 ft.
22P4	----do----------	----do----------	9-23-54	760	Dr	57	4	S; 7ft, 60g, dia 2½	---	---	Sd,G	Pl	----	40	---	------	
22Q1	G. M. Murphy	----do----------	4-23-47	737	J	61	2	S; 3ft, 60g, dia 1¼	36	25	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-61 ft.
22Q2	J. Toth	----do----------	4- 7-47	738	J	56	2	----do----------	---	---	Sd,G	Pl	----	38	D	------	
22Q3	P. Rudebic	H. Crowle	5-47	728	Dr	138	4	S; 10ft	125	13	G,Sd	Pl	C	47	D	J3/4	Dd 7 ft pumping 15 gpm; L.
22R1	B. Perkins	Sriver Drilling Co.	9-14-46	717	J	67	2	S; 4½ft, 80g, dia 1¼	---	---	Sd	Pl	----	---	D	------	
22R2	C. Perkins	----do----------	3-10-48	715	J	56	2	S; 3ft, 80g, dia 1¼	---	---	Sd	Pl	----	38	D	------	
23B1	V. N. Fairchild	----do----------	5-16-50	713	J	58	2	S; 3½ft, 60g, dia 1¼	23	33	Sd,G	Pl	U	23	D	------	Sand and stone from 0-56 ft.

38/2-23B2	A. Wilson	Sriver Drilling Co.	11-23-54	698	J	41	2	S; 4½ft, 60g, dia 1½	21	20	Sd	Pl	U	21	D	------	Yellow sand from 0-41 ft.
23D1	Mr. Moore	----do----------	6- 8-54	702	J	62	2½	S; 5ft, 60g, dia 1½	44	18	Sd,G	Pl	U	44	D	------	Sand and gravel overlain by 20 ft clay; Ca.
23F1	Healthwin Hospital	Indiana-Michigan Water Development Co.	--------	698	Dr	68	8	S; 16ft, 20sl, dia 7½	---	---	Sd,G	Pl	----	27	P	------	See log well 23F3.
23F2	----do----------	----------	1922	698	Dr	65	---	S	---	---	Sd,G	Pl	----	---	P	T20	Yield 200 gpm.
23F3	----do----------	Indiana-Michigan Water Development Co.	7-19-38	698	Dr	67	8	S; 12ft, dia 7½	35	32	Sd,G	Pl	U	35	P	------	Dd 12 ft pumping 160 gpm; screen, 2 ft 20 sl, 5 ft 60 sl, 5 ft 30 sl; well Sj 23-1 (KS, 1948); L.
23F4	----do----------	Layne-Northern Co., Inc.	9-11-44	698	Dr	147	6	----------	37	110	Sd,G	Pl	C	23	T	------	Well Sj 27-T1 (KS, 1948); L.
23F5	----do----------	----do----------	11-21-44	698	Dr	142	16	Gp; S; 20ft, 105sl, dia 9½	37	105	Sd,G	Pl	C	23	P	T25	Dd 8 ft after 6 hr pumping 500 gpm; see log well 23F4; well Sj 27-2 (KS, 1948); Ca.
23G1	R. R. Alward	W. Rodgers	8-28-53	698	J	40	2	S; 3ft, 60g, dia 1½	---	---	Sd,G	Pl	----	23	D	------	Yield 10 gpm.
23G2	M. O. Moore	Indiana-Michigan Water Development Co.	10-20-48	700	Dr	53	4	S; 5ft, 60g, dia 2½	34	19	Sd	Pl	C	24	D	------	L.
23G3	E. Molnar	Sriver Drilling Co.	10-13-52	717	J	48	3	S; 5ft, 80g, dia 2	40	8	Sd,G	Pl	C	30	D	------	See log well 23G4.
23G4	P. Papandria	----do----------	--------	717	J	54	2	S; 3ft, 60g, dia 1½	40	14	Sd,G	Pl	C	35	D	------	L.
23H1	A. Papandria	----do----------	10- 8-47	716	J	50	2	S; 3½ft, 60g, dia 1½	30	20	Sd,G	Pl	U	30	D	------	Sand and gravel from 0-50 ft.
23K1	Isaac Walton League	----do----------	3-23-51	685	J	40	2	S; 3ft, 80g, dia 1½	---	---	Sd	Pl	----	4	D	------	
24B1	R. Gail	----do----------	11- 8-49	731	J	44	2	S; 3½ft, 60g, dia 1½	24	20	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-44 ft.
24B2	E. W. Toth	----do----------	11-22-53	732	J	47	2	S; 3ft, 60g, dia 1½	18	29	Sd,G	Pl	U	18	D	------	Yellow sand overlain by 40 ft yellow sand and gravel.
24B3	R. Rose	----do----------	--------	730	J	45	2	----do----------	30	15	Sd	Pl	C	16	D	------	See log well 24B9.
24B4	A. Sommerfield	----do----------	11- 9-46	731	J	47	2	S; 4ft, 60g, dia 1½	---	---	Sd	Pl	----	4	D	------	
24B5	N. Bower	----do----------	12-21-53	731	J	44	2	S; 3ft, 80g, dia 1½	35	9	Sd,G	Pl	C	26	D	------	L.
24B6	W. Wooley	----do----------	1-22-53	732	J	46	2	----do----------	40	6	Sd	Pl	C	24	D	------	See log well 24B9.
24B7	G. Snyder	----do----------	9-18-53	727	J	51	2	----do----------	37	14	Sd	Pl	C	28	D	------	L.
24B8	V. Bordner	----do----------	2-14-56	730	J	54	2	S; 3½ft, 80g, dia 1½	20	34	Sd,G	Pl	U	20	D	------	Sand and gravel from 0-54 ft.
24B9	W. Call	----do----------	10-25-56	726	J	44	2	S; 3½ft, 10sl, dia 1½	38	6	Sd,G	Pl	C	17	D	------	L.
24C1	R. Beard	----do----------	7-23-52	732	J	55	2	S; 3½ft, 60g, dia 1½	35	20	Sd,G	Pl	U	35	D	JJ/4	Sand and gravel from 0-55 ft.
24C2	E. Jefferson	----do----------	7-25-48	730	J	56	2	S; 3ft, 80g, dia 1½	38	18	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-56 ft.
24C3	B. M. Richey	----do----------	8-28-47	729	J	58	2	----do----------	38	20	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-58 ft.
24D1	D. Snowden	----do----------	3-22-54	714	J	42	2	----do----------	25	17	Sd,G	Pl	U	25	D	J	Yellow sand and gravel from 0-42 ft.
24E1	F. Nickerson	----do----------	5- 6-50	720	J	58	2	S; 3½ft, 60g, dia 1½	27	31	Sd,G	Pl	U	27	D	------	Sand and gravel from 0-58 ft.
24F1	J. Blankenbaker	----do----------	4- 4-52	727	J	53	2	S; 3½ft, 10sl, dia 1½	34	19	Sd,G	Pl	U	34	D	------	Yellow sand and gravel from 0-53 ft.
24F2	Peerless Supply Co.	----do----------	10-27-50	725	J	51	2	S; 3ft, 60g, dia 1½	32	19	Sd,G	Pl	U	32	D	------	Sand and gravel from 0-51 ft.
24F3	Roseland Lumber Co.	----do----------	1-23-56	727	J	46	2	----do----------	10	36	Sd,G	Pl	U	10	D	------	Sand and gravel from 0-46 ft.
24G1	Mr. Loughman	----do----------	9-24-47	727	J	51	2	----do----------	30	21	Sd,G	Pl	U	30	D	------	Sand and gravel from 0-51 ft.
24G2	W. Bavenor	----------	--------	724	J	84	2	S; 4ft	---	---	Sd,G	Pl	U	32	D	L	
24G3	H. Powers	Sriver Drilling Co.	8- 7-51	725	J	57	2	S; 3½ft, 60g, dia 1½	32	25	Sd,G	Pl	U	32	D	------	Yellow sand and gravel from 0-57 ft.
24J1	J. Young	----do----------	11- 4-51	725	Dr	83	4	S; 10ft, 10sl	49	20	Sd,G	Pl	C	8	---	------	L.
24K1	C. M. McHugh	----do----------	10-16-50	724	J	70	2	S; 3½ft, 60g, dia 1½	60	10	Sd	Pl	C	20	D	------	L.
24L1	C. B. Bates	----do----------	--------	727	J	53	2	S; 3ft, 60g, dia 1½	38	15	Sd,G	Pl	U	38	D	------	Yellow sand and gravel from 0-53 ft.
24L2	J. Osborne	----------	--------	727	J	49	2	S	---	---	Sd	Pl	----	35	D	J1/4	
24L3	E. L. Niles	Sriver Drilling Co.	12-27-49	725	J	50	2	S; 3½ft, 60g, dia 1½	40	10	Sd	Pl	C	34	D	------	L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued.

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
38/2-24L4	R. L. Gardner	Sriver Drilling Co.	6- 2-53	726	J	57	2	S; 3½ft, 10sl, dia 1½	32	25	G	Pl	U	32	D	------	Yellow gravel overlain by 16 ft yellow sand.
24L5	E. Hackley	----do----------	6-23-54	727	J	57	2½	S; 5ft, 60g, dia 1½	31	26	Sd,G	Pl	U	31	D	------	Sand and gravel from 0-57 ft; Ca.
24M1	Alou Tourist Hotel	----do----------	8- 1-57	722	J	60	3	S	50	10	Sd	Pl	C	40	P	------	L.
24M2	A. Hosinski	Layne-Northern Co., Inc.	7-19-49	718	Dr	71	6	S; 10ft, 30sl, dia 4	29	44	Sd,G	Pl	U	29	P	------	Yield 50 gpm; L.
24N1	Dr. Odell	----do----------	4-15-50	719	Dr	77	6	S; 10ft	54	23	Sd,G	Pl	C	25	D	------	Yield 280 gpm; Ca, L.
24P1	A. H. Richards	Sriver Drilling Co.	--------	726	J	50	2	S; 3ft, 60g, dia 1¼	34	16	Sd,G	Pl	U	34	D	------	Yellow sand and gravel from 0-50 ft.
24P2	H. Kondor	----do----------	1950	721	J	68	2	S; 3½ft, 60g, dia 1½	38	28	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-68 ft; Ca.
24Q1	M. D. Bowers	----do----------	1-24-57	730	J	46	2	----do----------	22	24	Sd,G	Pl	U	22	D	------	Yellow sand and gravel from 0-46 ft.
24Q2	Trustees, Clay Township	Layne-Northern Co., Inc.	4-23-51	731	Dr	70	8	S; 10ft	29	45	Sd,G	Pl	U	29	P	T7-1/2	Dd 10 ft pumping 280 gpm; Ca, L.
25A1	K. Buckles	Sriver Drilling Co.	--------	731	J	46	2	S; 3ft, 60g, dia 1¼	---	---	Sd	Pl	-----	---	D	------	L.
25A2	T. Braden	----do----------	9- 4-51	731	J	54	2	----do----------	40	14	Sd	Pl	C	12	D	------	See log well 25A1.
25A3	A. J. Herrmann	----do----------	5-17-52	732	J	46	2	S; 3½ft, 60g, dia 1½	21	25	Sd,G	Pl	U	21	D	------	Yellow sand and gravel 0-46 ft.
25A4	E. Molichar	----do----------	7-14-52	730	J	46	2	S; 3½ft, 10sl, dia 1½	21	25	G,Sd	Pl	U	21	D	------	L.
25A5	J. Haney	----do----------	3-10-55	732	J	47	2	S; 3ft, 60g, dia 1¼	17	30	Sd,G	Pl	U	17	D	------	Yellow sand and gravel from 0-47 ft.
25A6	J. White	----do----------	3-24-55	730	J	45	3	S; 5ft, 60g, dia 2	23	22	G	Pl	U	23	D	------	Gravel overlain by 10 ft yellow sand.
25A7	J. Nasko	----do----------	4-18-56	733	J	60	3	----do----------	24	36	Sd,G	Pl	U	24	D	------	Sand and gravel from 0-60 ft.
25A8	L. Grant	----do----------	10-16-56	726	J	49	2	S; 5ft, 60g, dia 1½	22	27	Sd,G	Pl	U	22	D	------	Yellow sand overlain by 35 ft yellow sand and gravel; Ca.
25C1	V. V. Engle	----do----------	5-20-51	715	J	40	2	S; 3½ft, 60g, dia 1½	20	20	Sd,G	Pl	U	20	P	------	Sand and gravel from 0-40 ft.
25C2	Indiana Toll Road Commission	Case Foundation Co.	5-10-54	707	B	44	---	----------	15	29	Sd,G	Pl	U	15	T	------	See log well 25C3.
25C3	----do----------	----do----------	5-12-54	719	B	56	---	----------	18	31	Sd,G	Pl	C	18	T	------	L.
25C4	----do----------	----do----------	6-10-54	722	B	40	---	----------	20	20	Sd	Pl	C	20	T	------	See log well 25C3.
25C5	----do----------	----do----------	5-12-54	719	B	31	---	----------	18	15	Sd	Pl	C	8	T	------	Do.
25D1	J. D. Lang	Indiana-Michigan Water Development Co.	3-18-30	710	Dr	46	6	S; 6ft, 24sl, dia 5½	20	26	Sd,G	Pl	U	20	D	TJ	Dd 24.5 ft pumping 50 gpm; used for lawn sprinkling; L.
25D2	Indiana Toll Road Commission	Case Foundation Co.	5- 5-54	705	B	20	---	----------	14	6	Sd,G	Pl	U	14	T	------	See log well 25D5.
25D3	----do----------	----do----------	5- 4-54	711	B	32	---	----------	20	12	Sd,G	Pl	U	20	T	------	Do.
25D4	----do----------	----do----------	5- 6-54	714	B	30	---	----------	27	3	Sd,G	Pl	U	27	T	------	Do.
25D5	----do----------	----do----------	5- 4-54	716	B	50	---	----------	25	25	Sd,G	Pl	U	25	T	------	L.
25D6	----do----------	----do----------	4-30-54	713	B	30	---	----------	22	8	Sd,G	Pl	U	22	T	------	See log well 25D5.
25D7	----do----------	----do----------	5- 7-54	708	B	35	---	----------	13	22	Sd,G	Pl	U	13	T	------	Do.
25D8	----do----------	----do----------	5- 8-54	706	B	30	---	----------	14	16	Sd,G	Pl	U	14	T	------	Do.
25D9	----do----------	----do----------	5- 7-54	721	B	30	---	----------	24	8	Sd	Pl	U	24	T	------	See log well 25D10.
25D10	----do----------	----do----------	5-11-54	721	B	54	---	----------	25	25	Sd	Pl	C	22	T	------	L.
25E1	W. Horrath	Sriver Drilling Co.	--------	725	J	48	2	S; 3ft, 60g, dia 1¼	35	13	Sd,G	Pl	U	35	D	------	White sand overlain by 42 ft yellow coarse gravel.
25E2	A. Fothergill	----do----------	5-28-50	724	J	56	2	S; 3½ft, 60g, dia 1½	21	35	Sd,G	Pl	U	21	D	------	Sand and gravel from 0-56 ft.

38/2-25E3	B. Stachurski	Sriver Drilling Co.	10-24-50	722	J	56	2	S; 3ft, 60g, dia 1¼	38	18	Sd,G	Pl	U	38	D	------	Sand and gravel from 0-56 ft.
25E4	Moore Engineering, Inc.	Indiana-Michigan Water Development Co.	8-19-48	730	Dr	154	8	S; 10ft, 15sl, dia 5½	80	74	Sd,G	Pl	C	41	N	T3	Dd 5 ft pumping 50 gpm; L.
25E5	Cole's Variety Store	W. Rodgers	8-20-53	727	J	45	2	S; 3ft, 60g, dia 1¼	35	10	Sd,G	Pl	U	35	P	------	Sand and gravel from 0-45 ft.
25F1	R. White	Sriver Drilling Co.	--------	720	J	46	2	S; 3½ft, 60g, dia 1½	23	23	G,Sd	Pl	U	23	D	------	Gravel and sand from 0-46 ft.
25F2	R. Lutz	----do----------	12-30-54	717	J	62	3	S; 5ft, 60g, dia 2	37	25	Sd	Pl	U	37	D	------	L.
25F3	L. Ringen	----do----------	7-31-47	727	J	44	2	S; 3ft, 60g, dia 1¼	29	15	Sd,G	Pl	U	29	D	------	Sand and gravel from 0-44 ft.
25F4	M. Call	----do----------	1- 5-56	727	J	52	2	S; 4ft, 60g, dia 1¼	28	24	Sd,G	Pl	U	28	D	------	Sand and gravel from 0-52 ft.
25F5	J. Stull	----do----------	4-21-54	724	J	40	2	S; 3ft, 60g, dia 1¼	25	15	Sd,G	Pl	U	25	D	------	Sand and gravel from 0-44 ft.
25F6	J. Medick	----do----------	--------	720	J	46	2	S; 3½ft, 60g, dia 1½	40	6	Sd	Pl	C	14	D	------	L.
25G1	L. Colip	----do----------	12-21-50	716	J	48	2½	S; 4ft, 60g, dia 1½	---	---	Sd,G	Pl	U	---	D	------	Sand and gravel from 0-49; underlain by 84 ft clay.
25G2	Indiana Toll Road Commission	Case Foundation Co.	5-13-54	712	B	22	---	----------	2	20	Sd	Pl	U	2	T	------	L.
25G3	----do----------	----do----------	5-13-54	716	B	20	---	----------	9	11	Sd	Pl	---	5	T	------	L.
25H1	H. F. Bushong	Sriver Drilling Co.	--------	725	J	56	2	S; 3½ft, 60g, dia 1½	---	---	Sd	Pl	---	12	D	------	L.
25H2	Indiana Toll Road Commission	Case Foundation Co.	5-17-54	722	B	37	---	----------	9	28	G,Sd	Pl	U	9	T	------	L.
25H3	----do----------	----do----------	5-19-54	722	B	30	---	----------	0	21	Sd,G	Pl	U	9	T	------	See log well 25H2.
25L1	M. Brunetteo	Sriver Drilling Co.	--------	724	Dn	36	1½	S; 3½ft, 60g, dia 1½	30	6	Sd	Pl	C	11	D	------	Sand overlain by 30 ft blue clay.
25L2	P. Fedrozzi	----do----------	5-22-57	724	J	45	2	----do----------	40	5	Sd	Pl	C	25	D	J1/2	See log well 25F3.
25R1	Notre Dame University	Indiana-Michigan Water Development Co.	11-21-47	729	Dr	147	6	S; 10ft, dia 5½	103	44	Sd,G	Pl	C	30	P	T	Dd 7 ft pumping 80 gpm; screen, upper 5 ft 12 sl, lower 5 ft 30 sl; L.
26A1	Indiana Toll Road Commission	Case Foundation Co.	5-25-54	718	B	57	---	----------	30	27	Sd,G	Pl	U	30	T	------	L.
26A2	----do----------	----do----------	5-25-54	717	B	30	---	----------	29	1	Sd	Pl	U	29	T	------	See log well 26A1.
26A3	----do----------	----do----------	5-24-54	716	B	30	---	----------	20	1	Sd	Pl	U	29	T	------	Do.
26A4	----do----------	----do----------	5-25-54	716	B	40	---	----------	30	10	Sd	Pl	U	30	T	------	Do.
26A5	----do----------	Layne-Northern Co., Inc.	3-31-55	710	Dr	68	6	S; 10ft, 30sl	29	39	Sd,G	Pl	U	29	P	------	Dd 2 ft after 8 hr pumping 55 gpm; Ca. L.
26C1	----do----------	Case Foundation Co.	6-10-54	662	B	30	---	----------	4	26	Sd,G	Pl	U	4	T	------	See log well 26C2.
26C2	----do----------	----do----------	6- 8-54	659	B	51	---	----------	0	51	Sd,G	Pl	U	0	T	------	L.
26C3	----do----------	----do----------	6-10-54	654	B	50	---	----------	---	---	Sd	Pl	U	---	T	------	See log well 26C4.
26C4	----do----------	----do----------	6-11-54	653	B	50	---	----------	---	---	Sd	Pl	----	---	T	------	L.
26C5	----do----------	----do----------	6-11-54	669	B	30	---	----------	5	25	Sd,G	Pl	U	5	T	------	See log well 26C2.
26C6	----do----------	----------	--------	667	B	24	---	----------	---	---	Sd,G	Pl	----	---	T	------	See log well 26C2.
26C7	----do----------	Raymond Concrete Pile Co.	5- 1-54	682	B	25	---	----------	4	21	Sd,G	Pl	C	+1	T	------	L.
26C8	----do----------	----do----------	4-30-54	682	B	29	---	----------	3	28	Sd,G	Pl	C	+1	T	------	See log well 26C7.
26D1	St. Joseph County	Layne-Northern Co., Inc.	4-18-41	678	Dr	80	8	S; 3ft, 20sl, dia 7½	---	---	Sd,G	Pl	----	23	P	T7-1/2	Dd 9 ft pumping 50 gpm; well Sj 19-1 (KS, 1848); L.
26D2	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-28-54	687	B	28	---	----------	22	4	Sd	Pl	U	22	T	------	See log well 26C4.
26D3	----do----------	----do----------	4-29-54	676	B	37	---	----------	7	30	Sd,G	Pl	U	7	T	------	L.
26D4	----do----------	----do----------	4-29-54	675	B	32	---	----------	---	---	-----	---	----	---	T	------	No water reported; see log well 26D3.
26D5	----do----------	----do----------	4-29-54	675	B	20	---	----------	16	16	Sd,G	Pl	U	10	T	------	See log well 26D3.
26D6	----do----------	----do----------	4-30-54	670	B	35	---	----------	2	33	Sd,G	Pl	U	2	T	------	Do.
26M1	City of South Bend	Sriver Drilling Co.	7- 3-52	672	J	48	2	S; 60g	20	28	G,Sd	Pl	C	8	P	P	L.
26M2	----do----------	Layne-Northern Co., Inc.	2- 2-59	676	Dr	144	8	----------	---	---	Sd,G	Pl	---	---	T	------	Bedrock at 141 ft; see log well 26M3.
26M3	----do----------	----do----------	2-12-59	678	Dr	144	8	----------	1	138	Sd,G	Pl	U	1	T	------	Bedrock at 140 ft; L.
26M4	----do----------	----do----------	3- 4-59	678	Dr	138	10	----------	---	---	Sd,G	Pl	---	0	T	------	L.
26R1	St. Mary's College	Indiana-Michigan Water Development Co.	8- 8-47	723	Dr	150	14	S; 20ft, 30sl, dia 12	118	33	G	Pl	C	42	P	T30	Dd 22 ft pumping 900 gpm; L.
27R2	-----do----------	Dunbar Drilling Co.	--------	724	Dr	158	14	S; 20ft, dia 12	---	---	G	Pl	---	48	P	T60	
27C1	----------	----------	--------	755	Du	10	42	----------	---	---	Sd	Pl	U	---	O	------	Observation well St. Joseph 15; water level measured 4.23 ft below lsd, 3-22-45.
27C2	Indiana Toll Road Commission	Raymond Concrete Pile	4-29-54	756	B	30	---	----------	---	---	-----	---	---	---	T	-----	See log well 26C4.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
38/2-27C3	Indiana Toll Road Commission	Raymond Concrete Pile Co.	4-30-54	756	B	25	---	----------	22	3	Sd	Pl	U	22	T	------	See log well 28C4.
27C4	----do----------	----do----------	4-28-54	759	B	35	---	----------	---	---	-----	---	----	---	T	------	L.
27C5	----do----------	----do----------	4-29-54	760	B	30	---	----------	---	---	-----	---	----	---	T	------	See log well 27C4.
27C6	----do----------	----do----------	4-28-54	760	B	35	---	----------	---	---	-----	---	----	---	T	------	Do.
27D1	----do----------	----do----------	4-28-54	776	B	40	---	----------	---	---	-----	---	----	---	T	------	No water reported; see log well 27D3.
27D2	----do----------	----do----------	4-28-54	775	B	35	---	----------	---	---	-----	---	----	---	T	------	See log well 27D3.
27D3	----do----------	----do----------	4-28-54	774	B	50	---	----------	---	---	-----	---	----	---	T	------	L.
27F1	City of South Bend	Layne-Northern Co., Inc.	6-14-50	748	Dr	81	4	S; 10ft, dia 2½	61	24	Sd,G	Pl	C	60	P	L	Yield 10 gpm; L.
27J1	----do----------	----do----------	2-26-59	678	Dr	138	6	----------	---	---	Sd,G	Pl	----	1	T	------	L.
29L1	C. Wiggins	Sriver Drilling Co.	12-22-49	797	J	100	2	S; 3½ft, 60g, dia 1½	76	24	G	Pl	C	76	D,S	J	Ca, L.
30N1	Methodist Church	----do----------	--------	795	J	87	2	S; 3ft, 60g, dia 1½	66	21	Sd,G	Pl	U	66	P	------	L.
30N2	L. O. Hawkins	----do----------	7- 9-53	791	J	95	3	S; 5ft, 60g, dia 2	74	21	Sd,G	Pl	U	74	D	J1-1/2	L.
31M1	A. Mihalak	----do----------	6- 1-53	803	J	87	2	S; 5½ft, 60g, dia 1½	75	12	G,Sd	Pl	U	75	D	------	Gravel and sand from 0-87 ft.
31M2	G. Lutteroll	----do----------	6- 3-53	805	J	105	2	S; 3½ft, 60g, dia 1	90	16	G	Pl	U	90	D	------	L.
31Q1	Indiana State Highway Department	----------	7-30-56	752	B	50	---	----------	---	---	-----	---	----	---	T	------	Brown very fine sand from 0-50 ft.
31Q2	----do----------	----------	7-30-56	752	B	50	---	----------	---	---	-----	---	----	---	T	------	Do.
31Q3	----do----------	----------	7-30-56	752	B	50	---	----------	---	---	-----	---	----	---	T	------	Brown sand from 0-50 ft.
32C1	R. Platz	Sriver Drilling Co.	--------	787	J	94	2	S; 3ft, 60g, dia 1	---	---	Sd	Pl	----	78	S	J3/4	Ca.
32E1	A. E. Waller	----------	--------	775	J	94	2	S; 3½ft, 60g, dia 1	---	---	Sd	Pl	----	49	D	------	
32J1	Anderson Trailer and Motor Sales	Layne-Northern Co., Inc.	8-17-48	757	Dr	80	6	S; 10ft, dia 4	42	38	G,Sd	Pl	U	42	P	TJ	Yield 50 gpm; Ca, L.
32L1	F. R. Ferro	----------	--------	776	J	76	2	S; 3ft, 60g, dia 1½	---	---	Sd	Pl	----	58	D	J1	
32L2	O. Williams	Sriver Drilling Co.	4-21-48	765	J	69	3	S; 5ft, 60g, dia 2	50	19	Sd,G	Pl	U	50	D	------	Sand and gravel from 0-69 ft.
32M1	V. Cavender	----do----------	5-25-53	772	J	64	2	S; 3ft, 60g, dia 1½	50	14	Sd,G	Pl	U	50	D	------	Sand and yellow gravel from 0-64 ft.
32M2	Mr. Dunnick	Indiana-Michigan Water Development Co.	2- 3-58	749	Dr	136	6	S; 10ft, 14sl, dia 5½	111	25	Sd	Pl	C	36	P	------	Dd 65 ft after 4 hr pumping 50 gpm; Ca, L.
32N1	P. Stroup	Sriver Drilling Co.	9-20-44	760	J	63	3	S; 2½ft, 60g, dia 1½	---	---	Sd,G	Pl	----	45	D	J1/3	
32P1	L. Call	----do----------	5- 8-45	760	J	57	3	----do----------	---	---	G	Pl	----	39	D	------	
32Q1	H. A. McCuen	----do----------	12-21-48	756	J	60	2	----do----------	---	---	Sd,G	Pl	----	41	D	------	
32Q2	H. L. Wiegand	----do----------	12- 5-46	757	J	58	2	----do----------	---	---	Sd,G	Pl	----	43	D	------	
32Q3	D. L. Ward	----do----------	12- 6-46	757	J	60	2	----do----------	44	16	Sd,G	Pl	U	44	D	------	Sand and gravel from 0-60 ft.
32Q4	R. J. Gallchowski	----do----------	12- 3-46	758	J	60	2	S; 3ft, 60g, dia 1¼	42	18	Sd,G	Pl	U	42	D	------	Do.
32Q5	T. F. Fitor	----do----------	12-11-46	756	J	59	2	S; 2½ft, 60g, dia 1½	42	18	Sd,G	Pl	U	42	D	------	Sand and gravel from 0-60 ft; clay at 60 ft.
32Q6	S. Simpson	R. Reddish	5- 1-57	754	J	58	2	S; 3½ft, 60g, dia 1½	40	18	Sd,G	Pl	U	40	D	J1/2	Yield 8 gpm; sand and gravel overlain by 25 ft sand.
32R1	L. W. Roms	Sriver Drilling Co.	10- 9-47	757	J	63	2	S; 3½ft, 60g, dia 1¼	48	15	Sd,G	Pl	U	48	D	------	Sand and gravel from 0-63 ft.
32R2	Foust Motel	----do----------	10-17-57	762	J	62	2	----do----------	36	25	Sd,G	Pl	U	36	D	------	Sand and gravel from 0-62 ft.
33L1	City of South Bend	Layne-Northern Co., Inc.	8-18-59	760	Dr	103	8-2	----------	53	48	Sd,G	Pl	U	53	T	------	See log well 33M1.
33M1	----do----------	----do----------	8-12-49	764	Dr	115	8-6	----------	55	55	Sd,G	Pl	U	53	T	------	L.
33M2	----do----------	----do----------	8- 9-50	764	Dr	105	38	Gp; S; 20ft, 105sl, dia 26	53	52	G,Sd	Pl	U	53	P	T100	Dd 9.5 ft after 8 hr pumping 1,750 gpm; see log well 33M1; Ca.