

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

BULLETIN NO. 14

GROUND-WATER RESOURCES OF
WEST-CENTRAL INDIANA

Preliminary Report: Sullivan County



Prepared by the
GEOLOGICAL SURVEY
UNITED STATES DEPARTMENT OF THE INTERIOR
In cooperation with the
DIVISION OF WATER RESOURCES
INDIANA DEPARTMENT OF CONSERVATION

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PRELIMINARY REPORT: SULLIVAN COUNTY

ERRATA

On Page 6, last paragraph, first sentence should read:
"and organically rich sand, silt, and clay."

On Page 296, first log, well number should be "9/9w-
34w1," not "34ll."

INDIANA DEPARTMENT OF CONSERVATION

Donald E. Foltz, Director

BULLETIN NO. 14

OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Sullivan County

BY

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

ENGINEERS, U. S. GEOLOGICAL SURVEY

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GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Sullivan County

By F. A. Watkins, Jr., and D. G. Jordan

ABSTRACT

Sullivan County, in west-central Indiana, has an area of about 457 square miles. Consolidated rocks of Pennsylvanian age and unconsolidated deposits of Pleistocene age are the sources of ground water for domestic, stock, industrial and municipal supplies. Wells in rocks of Pennsylvanian age average about 100 feet in depth and yields range from about 0.1 to more than 50 gpm although some dry holes are reported. Wells in sand and gravel of Pleistocene age average about 55 feet in depth and yields range from about 1 to more than 1,000 gpm. Field chemical analyses of water from these sources show that the chemical quality varies greatly. The average hardness of water is about 220 ppm, the average chloride content is about 90 ppm, and the average sulfate content is about 70 ppm. In most of the county the iron content and, locally, either the chloride or sulfate content of the ground water exceeds the U. S. Public Health Service (1946) drinking-water standards for those constituents.

This preliminary report contains tabulated records of about 1,270 wells and test holes giving information about well construction, water levels, conditions of occurrence, and characteristics of the water-bearing material; selected logs of about 617 wells and test holes giving the drillers' description of the material encountered and a tentative interpretation by the authors of the geologic age; records of 3 springs giving information about geologic source, yield, and temperature of the water; results of 253 field chemical analyses of water from wells, 3 field chemical analyses from springs, and 25 field chemical analyses from streams giving the hardness and the bicarbonate, chloride, iron, and sulfate content; and water levels in 4 observation wells indicating the magnitude of short and long-term water level fluctuations in the consolidated and unconsolidated rocks. These basic data include much of the material to be used in an interpretive report on the ground-water resources and geology of the area.

A map of Sullivan County shows the location of all water wells, springs, oil wells, test holes, drain holes, or holes drilled for purposes other than water supply, and stream sampling sites listed in this report. Additional maps show availability of ground water and generalized quality of water with respect to hardness, and areas of high chloride and sulfate content.

INTRODUCTION

Purpose and Scope

An investigation of the ground-water resources and geology of nine counties in west-central Indiana has been conducted intermittently since 1950. In 1956 the investigation was placed on a full-time basis and another county was added to the area of study. This investigation is being made by the U. S. Geological Survey in cooperation with the Division of Water Resources, Indiana Department of Conservation, as a part of a broad program of these agencies to inventory and evaluate the ground-water resources of Indiana.

This report is the second of a series of preliminary reports to be published on the ground-water resources and geology of west-central Indiana. The purpose of this report is to make the basic data collected during the investigation available to the public and to provide a preliminary evaluation of the ground-water conditions and geology as an aid to the development of the ground-water resources. A more detailed and comprehensive analysis will be published in an interpretive report on the ground-water resources and geology of the area.

The investigation was made under the general direction of A. N. Sayre and P. E. LaMoreaux, successive chiefs of the Ground Water Branch of the U. S. Geological Survey, and under the immediate supervision of F. H. Klaer and C. M. Roberts, successive district geologists of the Ground Water Branch for Indiana.

Location and Areal Extent

Sullivan County is in west-central Indiana (fig. 1). The county is roughly rectangular in shape and has an area of about 457 square miles. It is bounded on the north by Vigo County, on the east by Clay and Greene Counties, on the south by Knox County, and on the west by the State of Illinois.

EXPLANATION


AREA COVERED BY THIS REPORT


AREAS UNDER INVESTIGATION


**AREAS COVERED BY REPORTS PUBLISHED
 UNDER THE COOPERATIVE PROGRAM**

SEE PAGE 343 FOR LIST OF PUBLISHED REPORTS

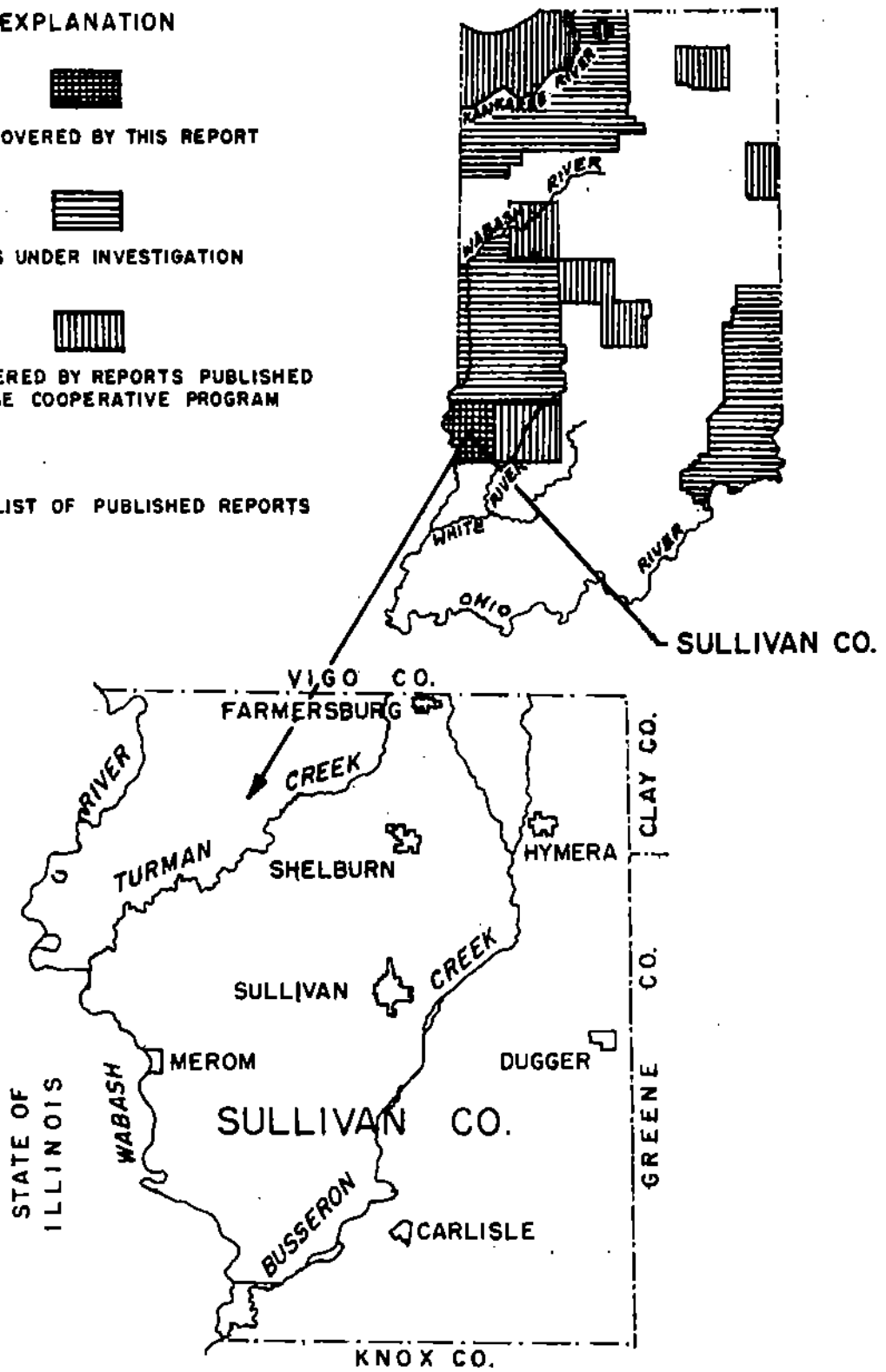


FIGURE 1.-- Map of Indiana showing area covered by this report, areas under investigation and areas covered by reports published under the cooperative program.

Well-Numbering System

A numbering system is used to locate and identify the wells, test holes, and springs in this report. The number assigned to the well, test hole, or spring indicates its location according to the official rectangular survey of public lands. For example, in the number for well 8/9W-33N1, the part preceding the hyphen indicates that the well is in T. 8 N., R. 9 W. The first number after the hyphen indicates the section in which the well is located. Each quarter-quarter section (40-acre tract) within a section is given a letter symbol as shown on figure 2. Within the quarter-quarter section, wells are numbered serially. Therefore, well 8/9W-33N1 is the first well listed in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T. 8 N., R. 9 W.

In the southern part of the county where there are land grants the rectangular survey of public lands was superimposed. Wells in land grants accordingly are numbered in the same manner as those in the rectangular survey area.

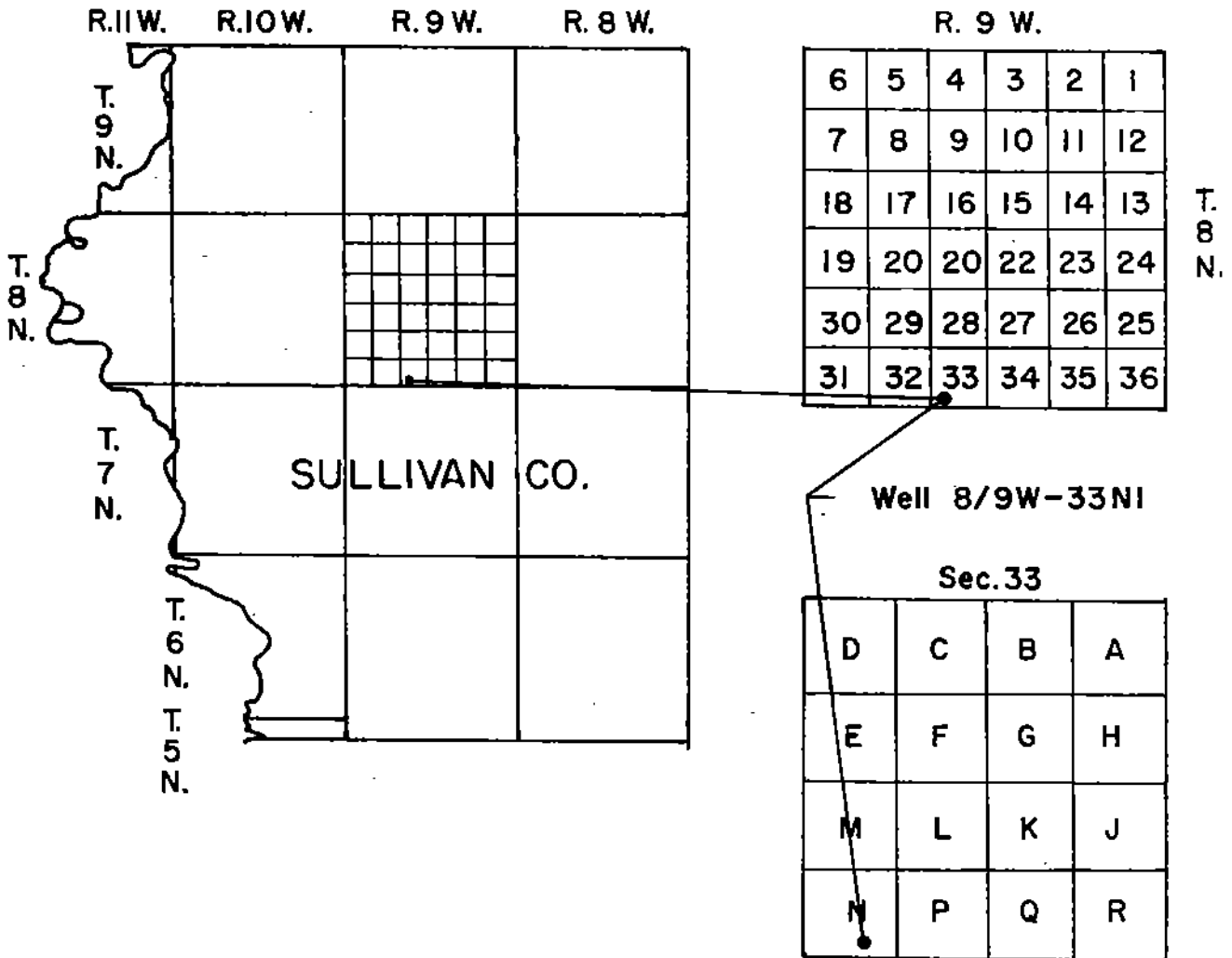


FIGURE 2.-- Sketch showing well-numbering system.

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. We especially thank the well drillers listed in the table of well records who furnished much of the information summarized in tables 1 and 2.

The authors also thank the following government agencies which provided information for the report: the Coal Section of the Geological Survey, the Division of Oil and Gas, and the Division of Water Resources, all of the Indiana Department of Conservation; and the Indiana State Highway Department.

DATA COLLECTION AND PROCESSING

The well data were collected from drillers, water works superintendents, and others. The well records obtained from drillers were of two types--written records and reports from memory. A tentative driller's location of the well record was obtained at the time of collection and this was checked against the property records in the county courthouse to verify the location, to locate the property, and to obtain the name of the current property owner. Discrepancies between the driller's location and the location of the property shown in the plat books were corrected. The well location was then checked in the field and its location plotted on the appropriate U. S. Geological Survey 7½-minute topographic quadrangle map. The locations given on the records of test holes, oil or gas exploration holes, and wells from other reports were accepted without further verification.

Plate 1 shows the location of water wells, springs, oil wells, test holes, drain holes, or holes drilled for purposes other than water supply, and stream sampling sites. All locations are accurate to the nearest quarter-quarter section and most locations are shown to the nearest 10 acres or quarter-quarter-quarter section. The basic data for these wells and holes drilled for purposes other than water supply are summarized in table 1. Selected drillers' logs of wells and other drill holes and tentative interpretations by the authors of the geologic age of the materials encountered are given in table 2. Basic data for the springs are summarized in table 4.

Samples of water were collected at the time the well and spring sites were visited and from the streams during a period of low flow. These water samples were analyzed in the field office for hardness, alkalinity (expressed as bicarbonate), and chloride content by standard titration methods. Sulfate was determined by a turbidimetric method using a colorimeter when concentrations were below 100 parts per million and by a standard titration method when concentrations exceeded 100 parts per million. The total iron content was determined at the well site immediately after collection by the bipyridine method in which unknown concentrations of iron are compared with standard color ampules having known iron concentrations. The results of the field chemical analyses (tables 3, 4, and 5) were used to select sites for collecting larger water samples for more comprehensive analyses by the U. S. Geological Survey.

During the investigation observation wells were established to measure the fluctuations of water-level. Table 6 contains water level measurements obtained from these wells. Data from these wells show seasonal and longer term

variations of the ground-water level. Two of the observation wells show the effect of pumping of nearby wells.

GENERAL GEOLOGY AND SOURCES OF GROUND WATER

The oldest consolidated rocks underlying Sullivan County that are important as ground-water sources are of Early, Middle, and Late Pennsylvanian age. The rocks of Pennsylvanian age consist chiefly of sandstone, sandy shale, and shale. Limestone and coal make up a minor part of the rock units in this sequence. The limestone is of little economic importance but the coal deposits are of major economic importance.

Consolidated rocks of Pennsylvanian age crop out throughout the county. Sandstone is the principal source of ground water from consolidated rocks and is tapped extensively by domestic, stock, and a few small industrial wells. Well depths range from about 40 to 500 feet; the average depth being about 100 feet. Yields from these wells range from 0.1 to more than 50 gpm although some dry holes are reported.

The unconsolidated glacial deposits of Pleistocene age overlie the consolidated rocks of Pennsylvanian age. In the upland areas the glacial deposits consist chiefly of clayey to sandy-clay till. Along the Wabash River and some of its tributaries are sizable deposits of glaciofluvial sand and gravel laid down during the time the Wabash valley was the major discharge channel for meltwater from glaciers farther to the north. These deposits are an important source of ground water for domestic, stock, industrial, and irrigation supplies and are the source used for public supplies by the towns and cities in the county, with the exception of the town of Dugger, which obtains its water from similar deposits along a tributary of White River in Greene County. Well depths range from about 45 to 75 feet; the average depth being about 55 feet. Yields from these wells range from 3 to better than 1,000 gpm depending upon well construction.

Lacustrine deposits and till of Pleistocene age with interbedded lenses and thin sheet-like deposits of sand and gravel are present in Sullivan County as shown on plate 2. Lake sediments consisting chiefly of silt and clay are found in the preglacial valley of the Wabash River and its tributaries. They overlie bedrock or are interbedded with or overlie glaciofluvial sand and gravel associated with the Wabash valley discharge channel. In the upper reaches of the preglacial tributaries of the Wabash River, sand and gravel deposits are interbedded with clayey or sandy-clay till. In some places the till interfingers with lacustrine deposits.

The sand and gravel lenses and thin sheet-like deposits associated with lake sediments and till are not used extensively as a source of ground water, but they may be a potential source for small domestic and stock supplies. Well depths range from about 40 to 120 feet and yields from these wells range from 0.5 to 30 gpm. At the present time, the majority of wells drilled in these areas pass through the sand and gravel deposits and tap the Pennsylvanian bedrock.

Deposits of Recent age in Sullivan County are thin and consist of alluvium, wind-blown sand, and organically rich sand, silty, and clay. These deposits are not important as sources of ground water.

Plate 2 shows availability of ground water in the consolidated and unconsolidated rocks underlying the county. In addition, plate 3 shows generalized quality of water conditions in the consolidated and unconsolidated rocks with respect to hardness. The hardness of water from wells and springs ranges from near 0 to about 2,500 ppm; the average being about 220 ppm. This map also shows areas where the chloride and sulfate contents exceed the limits for these constituents recommended by the U. S. Public Health Service (1946). The chloride content ranges from near 0 to about 4,500 ppm; the average being about 90 ppm and the sulfate content ranges from about 5 to about 3,300 ppm; the average being about 70 ppm. The averages were computed after discarding those analyses having extremely high hardness, or chloride or sulfate contents (over 1,000 ppm), which were a small percentage of the total analyses.

CONFINED AND UNCONFINED CONDITIONS

In Sullivan County ground water occurs in the consolidated and unconsolidated rocks chiefly under confined (artesian) conditions, but in some places it occurs under unconfined (water-table) conditions. Under confined conditions, the saturated water-bearing material (aquifer) is overlain directly by relatively impervious material, and the water in the well bore will rise above the bottom of the impervious material. Under unconfined conditions, the water-bearing material (aquifer) is overlain directly by permeable unsaturated material, and the water does not rise above the level at which it is encountered.

TYPES OF WELLS

Drilled wells are the principal type of water wells used in Sullivan County. However, a small number of driven and dug wells are still in use and occasionally a well is constructed by one of these methods. A few wells have been drilled by the rotary or reverse-rotary methods. Most water wells are 6-inches or more in diameter and are constructed by the cable-tool or percussion method of drilling. When the water-bearing material is consolidated rock, the well casing is generally driven a few inches to several feet into the rock, and the well is finished as an open hole in rock. If the water-bearing material is sand and gravel, the well casing is driven into the water-bearing zone and either left as an open-end casing, or the lower end of the casing is slotted or perforated, or a well screen is set opposite the water-bearing zone below the end of the casing. A modification of the above type, the gravel-packed well, has a gravel lining between the well screen and the water-bearing material.

In Sullivan County most municipal supply wells, some irrigation wells, and one large industrial well are equipped with well screens. The majority of the irrigation wells have slotted or perforated casing. Most domestic and stock wells tapping sand and gravel do not use a screen but are finished with an open-end casing or slotted or perforated casing. Greater dependability and improved yield of wells in the coarser unconsolidated materials and development of wells in the finer unconsolidated materials is possible with the construction and use of properly screened wells.

In areas where the water level in the unconsolidated material is close to the surface, some water wells are constructed by driving or digging. The driven well consists of a small diameter pipe with a drive point on the end, which is driven into shallow water-bearing material. The dug well is constructed by digging a hole, usually about three feet in diameter, into the upper part of the water-bearing material and using concrete pipe, tile, brick, or stone as a casing.

Oil or gas explorations, test holes, drain holes and holes drilled for purposes other than water supply are drilled by either the cable-tool or rotary method in Sullivan County.

SUMMARY

Preliminary evaluation of the basic data shows that adequate quantities of ground water are generally available for domestic and stock use, and in some places for small industrial and small public supplies from the rocks of Pennsylvanian age. In the sand and gravel of Pleistocene age, along the Wabash River and some of its major tributaries, ground water is available in adequate quantities for domestic, stock and locally for industrial, irrigation, and public supplies. These sand and gravel deposits are the source of the large yield wells in Sullivan County. Interbedded sand and gravel in lake sediments and till contain ground water in adequate quantities for domestic, stock, and possibly for industrial supplies.

The quality of the water from the rocks of Pennsylvanian and Pleistocene ages varies greatly. In most of the county the iron content and, locally, either the chloride or sulfate contents exceed the U. S. Public Health Service (1946) drinking-water standards.

RECORDS

The records of about 1,270 water wells and holes drilled for purposes other than water supply are given in table 1. The table gives information about well construction, water levels, yields and drawdowns, thickness and characteristics of the water-bearing material, conditions of occurrence, use, and other data. The altitude of the land surface at all wells, except oil or gas tests, was interpolated from topographic maps. Altitudes of oil or gas test holes were on the records when received and were checked against the topographic maps.

Table 2 contains the selected logs of about 617 wells and other drilled holes. This table gives the drillers' description of the material encountered, pertinent remarks with regard to the material, and tentative interpretation by the authors of the geologic age of the material. The logs contain local terms used by drillers in describing the material penetrated. The most used term "slate", refers to a hard, usually black, fissile shale. The term "bottoms" is applied to the underclay found beneath coals. "Gumbo" is a smooth, sticky clay. The "red rock" is a red to maroon shale which is a prominent marker-bed in the rocks of Late Pennsylvanian age. "Soapstone" is a smooth, slippery shale. Iron pyrite in nodules or thin seams associated with coal is known as

"sulfur". "Shells" or "shelly" is used to designate marine fossils in a rock. A dark-gray, sandy-shale associated with one of the Pennsylvanian coals is known as the "dirty band".

The results of 253 field chemical analyses of well waters are given in table 3. These analyses were made in the field office of the U. S. Geological Survey. Table 3 gives information about geologic source, temperature, concentration in ppm (parts per million) of iron, alkalinity (expressed as bicarbonate), sulfate, chloride, and hardness of water. The U. S. Public Health Service (1946) drinking-water standards states that the chemical constituents should not exceed the following concentrations: iron and manganese (together), 0.3 ppm; sulfate, 250 ppm; chloride, 250 ppm. No standards have been established for hardness of water; however, the following classification is generally used: 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.

The records of 3 springs are given in table 4. This table gives information about geologic sources, yield, use, temperature of the water, and the results of field chemical analyses.

Table 5 gives the results of 25 field chemical analyses of water from streams in Sullivan County with other data.

Water levels in 4 observation wells in Sullivan County are given in table 6. The water levels in three of these wells were obtained by recording gages and in the other well by measurements made with an engineer's steel tape. Daily high water levels are given for observation wells equipped with recording gages and periodic water levels are given for the observation well which was measured manually. The locations of these observation wells are shown on plate 1.

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Table 1.--Records of wells, Sullivan County, Indiana

Well number: See text for description of well-numbering system.
 Altitude: Altitude of land-surface datum from topographic map.
 Type of well: Dn, driven; Dr, drilled; Du, dug; J, jetted.
 Finish: Gp, gravel pack; Oo, open end; Oh, open hole; Ls, limestone; S, sand; Sd-La, sandy limestone; C, coal; F, fireclay; G, gravel; La, limestone; Sh, shale; Sh-Ss, shaly sandstone; Ss, sandstone; T, till.
 Material: C, cement; L, log; Lm, log on file; La, log on file; Lam, log on file; G, gamma-ray log on file; Im, log from memory in Table 2; S, sample study in from memory on file; Lm, log from memory in Table 2; S, sample study in Table 2; Sa, sample study on file; W, water-level measurements in Table 6; Cd, drawdown; Gpm, gallons per minute.
 Geologic age: Pl, Pleistocene; P, Pennsylvanian.
 Ground-water occurrence: C, confined (artesian); U, unconfined (water table).
 Water level: In feet below land-surface datum on date of completion of well, except as noted in remarks. P, flowing well.
 Use: D, domestic; Do, destroyed; Dh, drain hole drilled into mine opening, except as noted in remarks; I, industrial; Ir, irrigation; N, not used; O, observation; Og, oil or gas; P, public supply; S, stock; T, test.
 Remarks: A, field chemical analysis in Table 3; E, electric log on file; G, gamma-ray log on file; L, log in Table 2; La, log on file; Lam, log from memory on file; Im, log from memory in Table 2; S, sample study in Table 2; Sa, sample study on file; W, water-level measurements in Table 6; Cd, drawdown; Gpm, gallons per minute.

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone				Water level (feet)	Yield (gpm)	Date	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age				
5/10W-3K1	Mitchell-Green		5-19-49	425	Dr	807											
6/SW-1R1	Carter Oil Co.	Carter Oil Co.	3-31-37	488	Dr	30											Illinois Mid-Continent Co.
2R1			3-31-37	497	Dr	50											La
JAI			3-31-37	540	Dr	50											La
4A1			3-31-37	539	Dr	40											La
4R1			3-31-37	625	Dr	50											La
5A1			4-1-37	515	Dr	40											La
5D1	R. Kinderman	H. R. Knox	3-4-48	495	Dr	85	7	25	Oh					3			D, S, L, A
5N1	Carter Oil Co.	Carter Oil Co.	3-30-37	492	Dr	30											La
6N1			3-29-37	540	Dr	40											La
5D1			3-30-37	575	Dr	40											La
5N1			3-29-37	523	Dr	30											La
9R1	S. Langacker	V. Hayden	3-29-37	600	Dr	140		24	Oh								N, L; dry hole
9R1	Carter Oil Co.	Carter Oil Co.	3-29-37	614	Dr	47											La
10R1	J. C. Gerkin	V. Hayden	3-31-37	545	Dr	55											La
11D1	Carter Oil Co.	Carter Oil Co.	3-29-37	570	Dr	50											La
11R1			6-8-59	550	Dr	140	7	43	Oh								La
12Q1	L. Bodwell	Mamma Bros	3-12-37	510	Dr	50											La
13R1	K. O'Flaver	Carter Oil Co.	3-20-37	580	Dr	40											La
14A1			3-12-37	565	Dr	40											La
14R1			3-12-37	575	Dr	50											La
16R1			3-12-37	525	Dr	40											La
17Q1	J. D. Lohano	H. R. Knox	3-4-48	505	Dr	182	7	22	Oh								D, S, L, A
17R1	Carter Oil Co.	Carter Oil Co.	3-16-37	490	Dr	80											La
18C1	M. Granholm		8-10-54	530	Dr	98											L, A
18C2	J. Hergib	H. R. Knox	11-20-42	545	Dr	78	8	20	Oh					0.3			D, S
18C3			11-14-42	550	Dr	80	6	5	Oh					20			L, A
18P1	P. Roschup	H. R. Knox	8-6-43	528	Dr	152											L, A
18P1			4-24-50	515	Dr	191	7	40	Oh								L, A
18R1	Carter Oil Co.	Carter Oil Co.	3-17-37	490	Dr	50											L, A
19C1	M. Granholm		8-6-54	522	Dr	62											L, A
19D1			8-14-54	508	Dr	47											L, A
19E1			8-24-54	543	Dr	80											L, A
19J1			8-12-54	496	Dr	122											L, A
19L1			8-6-54	535	Dr	46											L, A
19L2	Carter Oil Co.	Carter Oil Co.	3-9-37	525	Dr	40											L, A
19M1	M. Granholm		7-25-54	529	Dr	66											L, A
19Q1	H. Koonig			531	Dn	23											L, A

well plugged back to bottom of dug well; too much gas in well

Observation well Sullivan L, W

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone					Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence			
8/8W-2081	R. Ballaved	H. R. Knox	9-47	520	Dr	193	7	27	Oh	46	7	Ls	P			D.S.	L.A
2081	Carter Oil Co.	Carter Oil Co.	3-9-37	490	Dr	40				58	10	Sh	P				La
2101	Bedwell and Lucas	O. A. Thayer	10-11-31	515	Dr	759				180							La
2102	Carter Oil Co.	Carter Oil Co.	3-9-37	495	Dr	40											La
2103			3-8-37	550	Dr	80											L
2201			3-8-37	560	Dr	80											L
2202			3-8-37	565	Dr	40											L
2481			3-10-37	530	Dr	40											L
2581			3-10-37	500	Dr	40											L
2681			3-10-37	540	Dr	40											L
2682			3-8-37	515	Dr	40											L
2683			3-12-37	485	Dr	40											L
2881			3-9-37	520	Dr	40											La
2901	R. B. Gilbert	Made Connelly & Co.	4-25-31	475	Dr	921											La
2902		and O. A. Thayer															La
2903			8-12-54	478	Dr	77											E
2904	H. Granholm	Carter Oil Co.	3-9-37	470	Dr	40											La
3001	Carter Oil Co.	Carter Oil Co.	8-7-54	500	Dr	34											E
3002	H. Granholm		8-18-54	462	Dr	32											E
3003			8-7-54	491	Dr	21											E
3004			8-12-54	488	Dr	46											E
3101			9-20-54	466	Dr	120											E
3102			9-20-54	506	Dr	62											E
3103	Carter Oil Co.	Carter Oil Co.	3-11-37	489	Dr	40											La
3201			3-11-37	460	Dr	40											La
3202	H. Granholm		9-21-54	471	Dr	75											E
3203			9-21-54	473	Dr	91											E
3301	Carter Oil Co.	Carter Oil Co.	3-11-37	520	Dr	40											La
3401			3-9-37	525	Dr	40											La
3402			3-11-37	550	Dr	40											La
3403			3-11-37	550	Dr	40											La
3404			3-11-37	550	Dr	40											La
3405			3-12-37	475	Dr	40											L
3501			3-12-37	470	Dr	40											L
3502			1-16-33	470	Dr	831											L
3503	Mr. Koyser	Carter Oil Co.	3-30-37	490	Dr	40											Oh
3504	Mr. Koyser	Carter Oil Co.	3-30-37	500	Dr	99	7	25	Oh	28	36	Sh	P				L
3505	F. Bowen	L. E. Jordan	9-21-48	500	Dr	99				98	1	C					L
201	L. Carrico	H. R. Knox	8-1-52	460	Dr	95	10	20	Oh	35	17	Ss	P				L, A
202	A. Wilson		7-27-42	460	Dr	154	6	21	Oh	74	21	Ss	P				L
203			7-20-40	435	Dr	105	5		Oh	30	5	Ss	P				La
301	Indiana State Highway Department		2-4-57	441	Dr	64											L
302			2-4-57	428	Dr	38											La
401	H. Granholm		3-5-54	471	Dr	242											E
402			3-7-54	460	Dr	262											E
403			1954	442	Dr	167											E
501			2-18-54	476	Dr	272											E
502			8-17-54	480	Dr	197											E
503			3-7-54	464	Dr	257											E
504			6-28-54	485	Dr	272											E
505			3-2-54	491	Dr	212											E
506			3-9-54	475	Dr	272											E
507			3-7-54	479	Dr	272											E
508			1954	488	Dr	227											E
509			4-54	480	Dr	272											E
510			10-47	470	Dr	302	0			9	6	Sh	P				L
502	Town of Carlisle	Sutherland Bros.	2-23-54	489	Dr	302											E
503	H. Granholm		1954	472	Dr	257											E

8/9W-	6A1	6B1	6C1	6D1	6E1	6F1	6G1	6H1	6I1	6J1	6K1	6L1	6M1	6N1	6O1	6P1	6Q1	6R1	6S1	6T1	6U1	6V1	6W1	6X1	6Y1	6Z1
M. Granholm	3-9-54	471	Dr	257	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	1-24	477	Dr	277	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-29-54	479	Dr	272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-1-54	484	Dr	107	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-27-54	459	Dr	257	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-24-54	487	Dr	212	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-17-47	455	Dr	53	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sutherland Bros.	1954	455	Dr	133	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	10-17	460	Dr	45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	10-17	440	Dr	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	10-17	484	Dr	46	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-25-54	489	Dr	272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-15-54	484	Dr	187	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-16-54	476	Dr	237	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-21-54	476	Dr	237	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L. E. Jordan	1-30-48	460	Dr	188	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H. R. Knox	1-30-48	520	Dr	200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	1-30-48	520	Dr	200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L. E. Jordan	10-3-43	505	Dr	220	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-21-42	505	Dr	188	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H. R. Knox	7-20-37	475	Dr	60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carter Oil Co.	8-30-37	485	Dr	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	8-10-54	488	Dr	82	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
M. Granholm	8-10-54	524	Dr	62	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	8-10-54	495	Dr	137	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-21-54	495	Dr	57	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	8-18-54	494	Dr	122	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-28-54	488	Dr	122	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-20-37	540	Dr	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carter Oil Co.	7-23-54	543	Dr	174	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
M. Granholm	11-4-42	540	Dr	278	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H. R. Knox	11-24-42	525	Dr	82	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-44	525	Dr	104	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	10-24-42	520	Dr	109	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-44	520	Dr	111	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-23-54	512	Dr	107	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carter Oil Co.	7-30-37	509	Dr	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
M. Granholm	6-17-54	502	Dr	05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-13-54	502	Dr	77	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H. R. Knox	3-16	500	Dr	92	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	4-12-45	570	Dr	100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L. E. Jordan	9-27-47	515	Dr	193	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	7-17-54	405	Dr	122	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-21-54	505	Dr	272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-29-54	526	Dr	243	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-24-54	547	Dr	242	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	2-18-52	440	Dr	270	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	4-16-55	485	Dr	219	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-24-54	497	Dr	272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	12-3-45	490	Dr	1,354	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
O. A. Thayer	1954	467	Dr	187	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-25-54	464	Dr	60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	5-8-53	510	Dr	200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
V. Eaton	5-16-59	500	Dr	153	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
R. Ridgeway	4-20-55	460	Dr	192	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H. R. Knox	1-26-45	515	Dr	192	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L. E. Jordan	4-2-54	504	Dr	272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	3-13-37	480	Dr	240	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carter Oil Co.	3-28-54	533	Dr	192	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
M. Granholm	7-8-54	495	Dr	242	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-29-54	510	Dr	182	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L. E. Jordan	6-29-54	506	Dr	182	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
do	6-29-54	506	Dr	182	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
V. Hayden	6-29-54	500	Dr	460	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LOG: clay, black 0 to 15 ft
L; Dd 15 ft after bailing
at 10 GPM

L; liners set at 50, 100,
and 120 ft, perforated
at 220 ft

L; well dry 3-24-60

Highlands Oil Co. and
O. A. Thayer 1; La

E; converted to water well

Table 1. --Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone				Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic era				
6/9W-2231	F. Shoffler	H. R. Knox	2-1-54	485	Dr	150	8	31	P		2	C	Sh	P		N	
2232	M. Granbols		7-18-54	466	Dr	107	7	100			25	Sd	Sh	P		T	
2233	Carter Oil Co.		3-10-37	480	Dr	40										T	
2234	M. Granbols		7-6-54	487	Dr	118										T	
2235			7-17-54	487	Dr	84										T	
2236			1954	486	Dr	197										T	
2237	J. Harris		10-8-42	485	Dr	188			Oh		15	Ss		P		N	
2238	Mr. Collins		10-14-42	475	Dr	175	7	59	P		3	La		P		D, S	L, A
2239	C. Hoke		12-12-50	475	Dr	83	7	83	P		8	S, G		P		D, S	L, A
2240							5	69	Oh		7	S, G		P		D	L, A
2241	J. Van Meter		11-14-53	465	Dr	71										T	F, A
2242	A. Granbols		7-18-54	400	Dr	77										T	F, A
2243	Carter Oil Co.		3-10-37	485	Dr	40										T	E
2244	M. Granbols		7-25-54	498	Dr	61										T	E
2245			9-10-54	479	Dr	122										T	E
2246			8-17-54	475	Dr	107										T	E
2247			8-18-54	480	Dr	137										T	E
2248			9-11-54	512	Dr	137										T	E
2249			8-13-54	545	Dr	167										T	E
2250			3-17-36	530	Dr	50										T	E
2251	Carter Oil Co.		8-12-51	529	Dr	77										T	E
2252	M. Granbols		9-17-54	504	Dr	132										T	E
2253			9-11-54	494	Dr	107										T	E
2254			9-12-54	493	Dr	107										T	E
2255			7-15-54	495	Dr	197										T	E
2256	A. Henny		11-21-53	520	Dr	174	7	22	Oh		80	11	Ss	P		O	L; observation well L; Sullivan 2; W
2257											100	32	Ss	P		T	
2258																T	
2259	M. Granbols		9-15-54	521	Dr	150										T	
2260			9-14-54	527	Dr	68										T	
2261			9-13-54	528	Dr	151										T	
2262			8-12-54	525	Dr	60										T	
2263	Carter Oil Co.		3-10-37	520	Dr	40										T	
2264	M. Granbols		8-12-54	518	Dr	49										T	
2265			8-14-54	498	Dr	137										T	
2266			7-15-54	526	Dr	77										T	
2267	L. E. Jordan		5-20	520	Dr	180	6	20	Oh							T	
2268			7-15-54	522	Dr	107										T	
2269	M. Granbols		7-14-54	532	Dr	122										T	
2270			7-21-54	492	Dr	92										T	
2271			7-21-54	465	Dr	91										T	
2272			7-22-54	513	Dr	110										T	
2273			7-11-54	495	Dr	122										T	
2274			7-22-54	502	Dr	137										T, D	
2275	Hoko (M. Granbols)		12-43	480	Dr	70	10	40	Oh		65	5	Sh	P		D	L, A
2276							8	70								T	
2277			7-8-54	483	Dr	152										T	
2278	M. Granbols		11-2-43	493	Dr	94	8	61	P		80	5	S	PI		T	L, A
2279	R. Ridgway			480	Dr	125	7	94	Oh		85	9	G	PI		L	
2280			10-15-52	480	Dr	125	8	87	Oh		89	2	C	P		N	
2281	G. Holo										105	5	La	P		L	
2282			7-6-54	465	Dr	107										T	
2283	E. M. Goodman		10-2-49	473	Dr	60										Oh	
2284	Carter Oil Co.		3-18-37	485	Dr	1,700										T	F. B. Cilino 1; La, E
2285	M. Granbols		7-6-54	505	Dr	137										T	
2286	Carter Oil Co.		3-18-37	490	Dr	50										T	
2287			7-6-54	489	Dr	227										T	
2288	M. Granbols		7-8-54	489	Dr	137										T	
2289			7-6-54	461	Dr	342										T	
2290			7-7-54	462	Dr	212										T	

Well No.	Owner	Date	Dr	122	7	42	77	102	63	Ss	P	C	Yield	Notes
6/8W-2881	H. Granholm	1934	484	122	7	42	77	102	63	Ss	P	C	3	E. Zink 1; L
2941	do	4-3-34	501	277										
2942	Carter Oil Co.	3-11-37	490	50										
2943	do	3-13-37	500	70										
2944	J. Tielow	9-1-47	475	165	5									
2945	do	3-10-56	474	1,450										
2946	A. Wolfe	4-5-54	463	272										
2947	H. Granholm	8-5-54	449	242										
2948	do	8-4-54	447	272										
2949	do	7-28-54	451	270										
2950	do	8-6-54	451	277										
2951	do	4-54	462	272										
2952	do	8-2-54	450	272										
2953	do	7-3-54	458	272										
2954	do	6-30-54	448	272										
2955	do	7-8-54	458	227										
2956	do	7-9-54	498	237										
2957	do	7-10-54	456	197										
2958	H. R. Knox	4-27-55	500	135	7	63	Oh	115	12	Ss	P			
2959	do	7-12-54	513	122										
2960	S. Ridgway	7-13-54	501	242										
2961	H. Granholm	3-18-37	475	90										
2962	Carter Oil Co.	3-17-37	515	122										
2963	do	3-17-37	497	137										
2964	H. Granholm	7-14-54	532	137	6	33	P	50	11	S	Pl	C	20 0.5	
2965	do	12-15-41	525	61	5	60	Oh	50	11	Sh	P			
2966	C. L. Whalen	7-12-54	509	122										
2967	H. Granholm	3-9-37	520	40										
2968	Carter Oil Co.	3-17-37	540	85										
2969	do	3-17-37	495	50										
2970	do	3-18-37	480	60										
2971	do	8-17-54	400	106										
2972	H. Granholm	4-54	457	132	6	54	Oh	50	11	S	Pl		Log: sand and gravel 0 to 60 ft	
2973	do	11-5-40	460	60										
2974	J. Phogley	4-18-54	452	227										
2975	do	1-54	462	77										
2976	do	5-22-57	430	45	12	45	P	6	39	S,G	Pl	U	7	
2977	V. Eaton	5-21-57	430	47	12	47	P	6	41	S,G	Pl	U	8 950	
2978	do	12-9-57	430	45	10	41	P	10	35	S,G	Pl	U	5 700	
2979	W. Limburg	3-8-56	430	35	10	35	P	10	25	S,G	Pl	U	12 700	
2980	do	7-9-59	430	40	10	40	P	10	20	S,G	Pl	U	10	
2981	do	3-54	430	60	10	60	S	40	20	G	Pl	U	9 450	
2982	Luther Phogley	3-12-50	430	50	12	50	P	8	44	S,G	Pl	U	8	
2983	do	4-1-54	452	272										
2984	do	3-54	432	70	8	70	S	3	67	S,G	Pl	U	11 202	
2985	City of Carlisle	1948	428	70										
2986	do	1948	428		6		Oh							
2987	do	5-27-40	455	1,408										
2988	Shepherd Hoirs	3-22-57	430	30	12	50	P	14	36	S,G	Pl		25 ft screen set 41 to 66 ft; Dg 34 ft after pumping 24.5 hr at 202 gpm	
2989	Leland Phogley	11-10-18	434	1,282										Observation well Sullivan J. W
2990	R. Green	8-7-58	430	49	12	49	P	14	35	S,G	Pl	U	8 900	
2991	R. Phogley	4-15-57	430	54	12	34	P	15	30	S,G	Pl	U	15	
2992	do	6-6-56	430	45	12	45	P							
2993	do	3-15-36	435	200										
2994	J. B. Lynch	10-14-52	422	1,372										O. A. Thayer 1; L. R. H. Holders and J. B. Lynch; La. S Illinois Mid-Continent Co. B-1; L
2995	do	4-28-44	600	143	8	45	P	35	5	C,F	P			
2996	Mauzee Collieries	8-29-52	605	98	7	27	Oh	7	20					
2997	O. Brock	10-1-52	610	98	7	16	Oh	7	18					
2998	C. Abrah	9-12-50	600	92	6	18	Oh	6	16					
2999	R. McGeeho	8-19-52	605	94	6	18	Oh	6	18					
3000	Mr. Dukes	8-22-52	595	94	6	21	Oh	6	21					
3001	M. Blakeman	11-4-53	590	74	7	21	Oh	7	21					
3002	E. King	3-20-53	580	77	7	22	Oh	7	22					
3003	L. R. Knox	3-19-55	570	87	7	22	Oh	7	22					
3004	Lippert Bros.	3-19-55	560	82	7	23	Oh	7	23					
3005	W. Seward													
3006	Mr. Evans													
3007	Mrs. Schofield													

6/8W-2881 to 3007
 6/10W-1K1 to 1L1
 1P1 to 12M1
 12M2
 13M1 to 15K1
 15K2 to 26Q1
 26Q1
 34B1
 7/8W-1J1 to 1L1
 1M1 to 1N2
 1N3 to 1N5
 1N6 to 1P1
 1P2 to 1P3

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone					Yield (gpm)	Water level (feet)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
7/8*-1P4	Dr. Dukes	K. R. Knox	4-11-52	590	Dr	65	7	21	Oh	---	---	---	---	---	---	Dh	L, A	
2C1	X. Hughes	-----do-----	5-14-54	580	Dr	106	7	20	Oh	---	---	---	---	---	---	D, S	L, A	
2C2	D. Husbam	-----do-----	5-12-54	580	Dr	112	7	21	Oh	---	---	---	---	---	---	D	L, A	
2D1	H. Gambill	-----do-----	7-9-53	540	Dr	67	7	21	Oh	---	---	---	---	---	---	D	L, A	
2E1	H. N. Gambill	-----do-----	12-3-53	530	Dr	65	7	26	Oh	---	---	---	---	---	---	D	L, A	
2/1	I. Pirk	-----do-----	9-9-54	550	Dr	88	7	10	Oh	---	---	---	---	---	---	D, S	L, A	
2/2	A. Cross	-----do-----	9-4-54	570	Dr	90	0	23	Oh	---	---	---	---	---	---	N	L, A	
2J1	R. Skonney	-----do-----	5-16-52	500	Dr	97	8	11	Oh	---	---	---	---	---	---	Dh	L, A	
2J2	N. Holland	-----do-----	8-25-52	585	Dr	106	6	18	Oh	---	---	---	---	---	---	Dh	L, A	
2J3	D. McGehee	-----do-----	8-19-52	605	Dr	108	6	20	Oh	---	---	---	---	---	---	Dh	L, A	
2K1	L. Harrison	-----do-----	4-16-51	563	Dr	64	6	16	Oh	---	---	---	---	---	---	N	L, A	
2K2	D. A. Alton	-----do-----	10-24-50	575	Dr	105	6	22	Oh	---	---	---	---	---	---	Dh	L, A	
2R1	D. Griffith	-----do-----	7-14-50	580	Dr	64	6	16	Oh	---	---	---	---	---	---	Dh	L, A	
2R2	Mr. Taylor	-----do-----	10-18-50	580	Dr	90	7	---	Oh	---	---	---	---	---	---	Do	L, A	
3A1	L. Hale	-----do-----	0-10-54	540	Dr	80	7	21	Oh	---	---	---	---	---	---	N	L	
3A2	F. Lang	-----do-----	5-13-52	530	Dr	62	7	12	Oh	---	---	---	---	---	---	D	L, A	
3A3	H. Gambill	-----do-----	7-6-53	530	Dr	67	7	31	Oh	---	---	---	---	---	---	D	L, A	
5A1	E. Boone	Spainhower & Sons	12-55	530	Dr	120	6	52	Oh	---	---	---	---	---	---	Dh	L, A	
5H1	G. Eash	-----do-----	8-17-35	525	Dr	105	---	---	Oh	---	---	---	---	---	---	OK	L, A	
5L1	J. Dukes	V. Dalton	9-10-58	505	Dr	102	0	34	P, Oh	---	---	---	---	---	---	OK	L, A	
8E1	M. A. Dunder	K. R. Knox	4-8-44	490	Dr	131	0	63	Oh	---	---	---	---	---	---	D	L, A	
9A1	X. Boone	Spainhower & Sons	1-1-56	520	Dr	75	6	22	Oh	---	---	---	---	---	---	D	L, A	
9D1	D. Hildonbrand	F. Hayden	---	460	Dr	65	8	46	Oh	---	---	---	---	---	---	D	L, A	
10C1	Naumo Collieries	M. L. Biecard	---	525	Dr	66	8	77	Oh	---	---	---	---	---	---	N	L, A	
10N1	-----do-----	-----do-----	---	563	Dr	122	7	77	Oh	---	---	---	---	---	---	N	L, A	
10P1	G. Sheffler	H. Ellis	8-57	560	Dr	125	6	23	Oh	---	---	---	---	---	---	Dh	L, A	
12C1	Mrs. Lishor	K. R. Knox	9-25-51	590	Dr	64	6	40	Oh	---	---	---	---	---	---	Dh	L, A	
12D1	Kroger Co.	-----do-----	7-8-53	585	Dr	77	7	21	Oh	---	---	---	---	---	---	Dh	L, A	
12D2	Dugger Mine	-----do-----	---	600	Dr	---	---	---	Oh	---	---	---	---	---	---	T	L, A	
14J1	K. Smith	M. L. Biecard	---	560	Dr	148	8	59	Oh	---	---	---	---	---	---	N	L	
14K1	V. Daltor	-----do-----	---	605	Dr	272	---	---	Oh	---	---	---	---	---	---	De	L	
15C1	Naumo Collieries	-----do-----	---	580	Dr	105	0	67	Oh	---	---	---	---	---	---	P	L	
15G1	D. F. Willis	H. Ellis	11-8-50	550	Dr	283	7	---	Oh	---	---	---	---	---	---	De	L	
15G2	-----do-----	-----do-----	1-3-51	550	Dr	111	10	74	Oh	---	---	---	---	---	---	N	L	
15Q1	Mr. Strum	M. L. Biecard	---	585	Dr	122	8	81	Oh	---	---	---	---	---	---	De	L	
18H1	C. Bedwell	-----do-----	9-13-49	520	Dr	2, 460	---	---	Oh	---	---	---	---	---	---	OK	L, A	
18P1	O. Hays	V. Hayden	7-3-59	525	Dr	50	8	25	Oh	---	---	---	---	---	---	OK	L, A	
18K1	L. Bohms	Spainhower & Sons	10-55	560	Dr	38	8	10	Oh	---	---	---	---	---	---	D	L, A	
18P1	Carter Oil Co.	Spainhower & Sons	4-5-37	520	Dr	50	---	---	Oh	---	---	---	---	---	---	T	L, A	
18H1	F. Morin	L. V. Jordan	4-7-37	565	Dr	158	7	29	Oh	---	---	---	---	---	---	T	L, A	
20M1	Carter Oil Co.	Carter Oil Co.	4-7-37	560	Dr	50	---	---	Oh	---	---	---	---	---	---	T	L, A	
20N1	-----do-----	-----do-----	5-6-49	560	Dr	50	---	---	Oh	---	---	---	---	---	---	T	L, A	
25P1	D. Pahrator	K. R. Knox	4-1-37	585	Dr	40	---	---	Oh	---	---	---	---	---	---	Dh	L, A	
25R1	Carter Oil Co.	Carter Oil Co.	4-1-37	585	Dr	40	---	---	Oh	---	---	---	---	---	---	T	L, A	
27A1	-----do-----	-----do-----	9-4-36	540	Dr	826	---	---	Oh	---	---	---	---	---	---	OK	L, A	
29J1	S. E. Watays	Nelson Bros.	12-2-35	550	Dr	824	---	---	Oh	---	---	---	---	---	---	OK	L, A	
28P1	D. Holden	-----do-----	1-17-36	550	Dr	1, 057	---	---	Oh	---	---	---	---	---	---	OK	L, A	
28L1	G. S. Blakeman	-----do-----	4-1-37	500	Dr	40	---	---	Oh	---	---	---	---	---	---	OK	L, A	
28R1	Carter Oil Co.	Carter Oil Co.	---	500	Dr	---	---	---	Oh	---	---	---	---	---	---	T	L, A	

7/8M-30E1	7/9M-1C1	7/9M-1E1	7/9M-1K1	7/9M-1M1	7/9M-1N1	7/9M-1O1	7/9M-1P1	7/9M-1Q1	7/9M-1R1	7/9M-1S1	7/9M-1T1	7/9M-1U1	7/9M-1V1	7/9M-1W1	7/9M-1X1	7/9M-1Y1	7/9M-1Z1
30X1	30Y1	30Z1	31A1	31B1	31C1	31D1	31E1	31F1	31G1	31H1	31I1	31J1	31K1	31L1	31M1	31N1	31O1
32E2	32F2	32G2	32H2	32I2	32J2	32K2	32L2	32M2	32N2	32O2	32P2	32Q2	32R2	32S2	32T2	32U2	32V2
32W2	32X2	32Y2	32Z2	33A2	33B2	33C2	33D2	33E2	33F2	33G2	33H2	33I2	33J2	33K2	33L2	33M2	33N2
33O2	33P2	33Q2	33R2	33S2	33T2	33U2	33V2	33W2	33X2	33Y2	33Z2	34A2	34B2	34C2	34D2	34E2	34F2
34G2	34H2	34I2	34J2	34K2	34L2	34M2	34N2	34O2	34P2	34Q2	34R2	34S2	34T2	34U2	34V2	34W2	34X2
34Y2	34Z2	35A2	35B2	35C2	35D2	35E2	35F2	35G2	35H2	35I2	35J2	35K2	35L2	35M2	35N2	35O2	35P2
35Q2	35R2	35S2	35T2	35U2	35V2	35W2	35X2	35Y2	35Z2	36A2	36B2	36C2	36D2	36E2	36F2	36G2	36H2
36I2	36J2	36K2	36L2	36M2	36N2	36O2	36P2	36Q2	36R2	36S2	36T2	36U2	36V2	36W2	36X2	36Y2	36Z2
37A2	37B2	37C2	37D2	37E2	37F2	37G2	37H2	37I2	37J2	37K2	37L2	37M2	37N2	37O2	37P2	37Q2	37R2
37S2	37T2	37U2	37V2	37W2	37X2	37Y2	37Z2	38A2	38B2	38C2	38D2	38E2	38F2	38G2	38H2	38I2	38J2
38K2	38L2	38M2	38N2	38O2	38P2	38Q2	38R2	38S2	38T2	38U2	38V2	38W2	38X2	38Y2	38Z2	39A2	39B2
39C2	39D2	39E2	39F2	39G2	39H2	39I2	39J2	39K2	39L2	39M2	39N2	39O2	39P2	39Q2	39R2	39S2	39T2
39U2	39V2	39W2	39X2	39Y2	39Z2	40A2	40B2	40C2	40D2	40E2	40F2	40G2	40H2	40I2	40J2	40K2	40L2
40M2	40N2	40O2	40P2	40Q2	40R2	40S2	40T2	40U2	40V2	40W2	40X2	40Y2	40Z2	41A2	41B2	41C2	41D2
41E2	41F2	41G2	41H2	41I2	41J2	41K2	41L2	41M2	41N2	41O2	41P2	41Q2	41R2	41S2	41T2	41U2	41V2
41W2	41X2	41Y2	41Z2	42A2	42B2	42C2	42D2	42E2	42F2	42G2	42H2	42I2	42J2	42K2	42L2	42M2	42N2
42O2	42P2	42Q2	42R2	42S2	42T2	42U2	42V2	42W2	42X2	42Y2	42Z2	43A2	43B2	43C2	43D2	43E2	43F2
43G2	43H2	43I2	43J2	43K2	43L2	43M2	43N2	43O2	43P2	43Q2	43R2	43S2	43T2	43U2	43V2	43W2	43X2
43Y2	43Z2	44A2	44B2	44C2	44D2	44E2	44F2	44G2	44H2	44I2	44J2	44K2	44L2	44M2	44N2	44O2	44P2
44Q2	44R2	44S2	44T2	44U2	44V2	44W2	44X2	44Y2	44Z2	45A2	45B2	45C2	45D2	45E2	45F2	45G2	45H2
45I2	45J2	45K2	45L2	45M2	45N2	45O2	45P2	45Q2	45R2	45S2	45T2	45U2	45V2	45W2	45X2	45Y2	45Z2
46A2	46B2	46C2	46D2	46E2	46F2	46G2	46H2	46I2	46J2	46K2	46L2	46M2	46N2	46O2	46P2	46Q2	46R2
46S2	46T2	46U2	46V2	46W2	46X2	46Y2	46Z2	47A2	47B2	47C2	47D2	47E2	47F2	47G2	47H2	47I2	47J2
47K2	47L2	47M2	47N2	47O2	47P2	47Q2	47R2	47S2	47T2	47U2	47V2	47W2	47X2	47Y2	47Z2	48A2	48B2
48C2	48D2	48E2	48F2	48G2	48H2	48I2	48J2	48K2	48L2	48M2	48N2	48O2	48P2	48Q2	48R2	48S2	48T2
48U2	48V2	48W2	48X2	48Y2	48Z2	49A2	49B2	49C2	49D2	49E2	49F2	49G2	49H2	49I2	49J2	49K2	49L2
49M2	49N2	49O2	49P2	49Q2	49R2	49S2	49T2	49U2	49V2	49W2	49X2	49Y2	49Z2	50A2	50B2	50C2	50D2
50E2	50F2	50G2	50H2	50I2	50J2	50K2	50L2	50M2	50N2	50O2	50P2	50Q2	50R2	50S2	50T2	50U2	50V2
50W2	50X2	50Y2	50Z2	51A2	51B2	51C2	51D2	51E2	51F2	51G2	51H2	51I2	51J2	51K2	51L2	51M2	51N2
51O2	51P2	51Q2	51R2	51S2	51T2	51U2	51V2	51W2	51X2	51Y2	51Z2	52A2	52B2	52C2	52D2	52E2	52F2
52G2	52H2	52I2	52J2	52K2	52L2	52M2	52N2	52O2	52P2	52Q2	52R2	52S2	52T2	52U2	52V2	52W2	52X2
52Y2	52Z2	53A2	53B2	53C2	53D2	53E2	53F2	53G2	53H2	53I2	53J2	53K2	53L2	53M2	53N2	53O2	53P2
53Q2	53R2	53S2	53T2	53U2	53V2	53W2	53X2	53Y2	53Z2	54A2	54B2	54C2	54D2	54E2	54F2	54G2	54H2
54I2	54J2	54K2	54L2	54M2	54N2	54O2	54P2	54Q2	54R2	54S2	54T2	54U2	54V2	54W2	54X2	54Y2	54Z2
55A2	55B2	55C2	55D2	55E2	55F2	55G2	55H2	55I2	55J2	55K2	55L2	55M2	55N2	55O2	55P2	55Q2	55R2
55S2	55T2	55U2	55V2	55W2	55X2	55Y2	55Z2	56A2	56B2	56C2	56D2	56E2	56F2	56G2	56H2	56I2	56J2
56K2	56L2	56M2	56N2	56O2	56P2	56Q2	56R2	56S2	56T2	56U2	56V2	56W2	56X2	56Y2	56Z2	57A2	57B2
57C2	57D2	57E2	57F2	57G2	57H2	57I2	57J2	57K2	57L2	57M2	57N2	57O2	57P2	57Q2	57R2	57S2	57T2
57U2	57V2	57W2	57X2	57Y2	57Z2	58A2	58B2	58C2	58D2	58E2	58F2	58G2	58H2	58I2	58J2	58K2	58L2
58M2	58N2	58O2	58P2	58Q2	58R2	58S2	58T2	58U2	58V2	58W2	58X2	58Y2	58Z2	59A2	59B2	59C2	59D2
59E2	59F2	59G2	59H2	59I2	59J2	59K2	59L2	59M2	59N2	59O2	59P2	59Q2	59R2	59S2	59T2	59U2	59V2
59W2	59X2	59Y2	59Z2	60A2	60B2	60C2	60D2	60E2	60F2	60G2	60H2	60I2	60J2	60K2	60L2	60M2	60N2
60O2	60P2	60Q2	60R2	60S2	60T2	60U2	60V2	60W2	60X2	60Y2	60Z2	61A2	61B2	61C2	61D2	61E2	61F2
61G2	61H2	61I2	61J2	61K2	61L2	61M2	61N2	61O2	61P2	61Q2	61R2	61S2	61T2	61U2	61V2	61W2	61X2
61Y2	61Z2	62A2	62B2	62C2	62D2	62E2	62F2	62G2	62H2	62I2	62J2	62K2	62L2	62M2	62N2	62O2	62P2
62Q2	62R2	62S2	62T2	62U2	62V2	62W2	62X2	62Y2	62Z2	63A2	63B2	63C2	63D2	63E2	63F2	63G2	63H2
63I2	63J2	63K2	63L2	63M2	63N2	63O2	63P2	63Q2	63R2	63S2	63T2	63U2	63V2	63W2	63X2	63Y2	63Z2
64A2	64B2	64C2	64D2	64E2	64F2	64G2	64H2	64I2	64J2	64K2	64L2	64M2	64N2	64O2	64P2	64Q2	64R2
64S2	64T2	64U2	64V2	64W2	64X2	64Y2	64Z2	65A2	65B2	65C2	65D2	65E2	65F2	65G2	65H2	65I2	65J2
65K2	65L2	65M2	65N2	65O2	65P2	65Q2	65R2	65S2	65T2	65U2	65V2	65W2	65X2	65Y2	65Z2	66A2	66B2
66C2	66D2	66E2	66F2	66G2	66H2	66I2	66J2	66K2	66L2	66M2	66N2	66O2	66P2	66Q2	66R2	66S2	66T2
66U2	66V2	66W2	66X2	66Y2	66Z2	67A2	67B2	67C2	67D2	67E2	67F2	67G2	67H2	67I2	67J2	67K2	67L2
67M2	67N2	67O2	67P2	67Q2	67R2	67S2	67T2	67U2	67V2	67W2	67X2	67Y2	67Z2	68A2	68B2	68C2	68D2
68E2	68F2	68G2	68H2	68I2	68J2	68K2	68L2	68M2	68N2	68O2	68P2	68Q2	68R2	68S2	68T2	68U2	68V2
68W2	68X2	68Y2	68Z2	69A2	69B2	69C2	69D2	69E2	69F2	69G2	69H2	69I2	69J2	69K2	69L2	69M2	69N2
69O2	69P2	69Q2	69R2	69S2	69T2	69U2	69V2	69W2	69X2	69Y2	69Z2	70A2	70B2	70C2	70D2	70E2	70F2
70G2	70H2	70I2	70J2	70K2	70L2	70M2	70N2	70O2	70P2	70Q2	70R2	70S2	70T2	70U2	70V2	70W2	70X2
70Y2	70Z2	71A2	71B2	71C2	71D2	71E2	71F2	71G2	71H2	71I2	71J2	71K2	71L2	71M2	71N2	71O2	71P2
71Q2	71R2	71S2	71T2	71U2	71V2	71W2	71X2	71Y2	71Z2	72A2	72B2	72C2	72D2	72E2	72F2	72G2	72H2
72I2	72J2	72K2	72L2	72M2	72N2	72O2	72P2	72Q2	72R2	72S2	72T2	72U2	72V2	72W2	72X2	72Y2	72Z2
73A2	73B2	73C2	73D2	73E2	73F2	73G2	73H2	73I2	73J2	73K2	73L2	73M2	73N2	73O2	73P2	73Q2	73R2
73S2	73T2	73U2	73V2	73W2	73X2	73Y2	73Z2	74A2	74B2	74C2	74D2	74E2	74F2	74G2	74H2	74I2	74J2
74K2	74L2	74M2	74N2	74O2	74P2	74Q2	74R2	74S2	74T2	74U2	74V2	74W2	74X2	74Y2	74Z2	75A2	75B2
75C2	75D2	75E2	75F2	75G2	75H2	75I2	75J2	75K2	75L2	75M2	75N2	75O2	75P2	75Q2	75R2	75S2	75T2
75U2	75V2	75W2	75X2	75Y2	75Z2	76A2	76B2	76C2	76D2	76E2</							

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Factor-bearing zone					Yield (gpm)	Remarks		
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
7/8W-171A	M. Granholm		2-13-54	474	Dr	131												
18A1	do		2-13-54	501	Dr	150												
18D1	H. R. Knox		8-13	520	Dr	262	8	20	Oh									
18P1	J. Hoover		3-17-54	505	Dr	945												
18Q1	M. Granholm		1-30-54	487	Dr	148												
20A1	do		2-1-54	472	Dr	107												
20B1	do		2-1-54	474	Dr	124												
20F1	do		2-7-54	461	Dr	122												
20J1	H. Dodds		do	460	Dr	94	11	85	Oh									
								54										
20R1	M. Granholm		1-25-54	453	Dr	122												
21E1	do		2-8-54	465	Dr	107												
21F1	L. L. Jordan		do	450	Dr	308	7	69	Oh									
21K1	W. Shrus		2-1-54	452	Dr	85												
21M1	M. Granholm		10-16	450	Dr	90	8	90	Oh									
21P2	W. Wilson		1-25-54	445	Dr	107												
21R2	M. Granholm		9-16	445	Dr	97	7	19	Oh									
22Q1	D. Rockenfild		do	465	Dr	82	9	82	Oh									
22Q2	R. Rockenfild		8-12	465	Dr	43	6	22	Oh									
23E1	A. Nash		8-19-54	455	Dr	315			Oh									
23K1	Piggs Community		3-16-58	472	Dr	1,207												
23L1	D. J. Nash		12-21-51	465	Dr	1,216												
24G1	C. Banther		8-3-56	504	Dr	660												
25E1	H. Ashcraft		5-17	540	Dr	78	7	18	Oh									
26E1	C. Hancock		1-11-55	510	Dr	78	7	17	Oh									
26E2	M. McKinley		9-3-54	515	Dr	72	7	20	Oh									
26G1	L. Blatt		9-1-54	510	Dr	101	7	21	P									
26N1	do		do	495	Dr	131	6	131	Oh									
27D1	F. L. Lang		10-46	450	Dr	51	7	19	Oh									
27H1	C. Rodger		8-14	485	Dr	62	7	21	Oh									
27L1	E. C. Pope		1-46	480	Dr	78	7	22	Oh									
	A. Nash		do	do	Dr	do	do	do	do									
27R1	A. Snyder		1-11-55	500	Dr	152	7	22	Oh									
	do		1-46	do	Dr	80	do	do	do									
28N1	E. Banther		1-15-55	450	Dr	108	6	77	Oh									
28Q1	M. Granholm		1954	450	Dr	137												
29F1	do		1-54	455	Dr	88												
29K1	do		1954	455	Dr	212												
29Q1	do		2-15-54	455	Dr	272												
30A1	do		1-26-54	483	Dr	112												
30C1	do		1-27-54	486	Dr	170												
30F1	do		1-18-54	484	Dr	152												
30G1	do		2-11-52	480	Dr	150	7	71	Oh									
30G2	H. Hart		do	do	Dr	do	do	do	do									
30J1	M. Granholm		1-18-54	469	Dr	95												
30Q1	do		1-20-54	478	Dr	147												
31D1	do		2-14-54	482	Dr	272												
31K1	do		1954	482	Dr	154												
31R1	do		8-17-54	488	Dr	227												
32D1	do		1-19-54	480	Dr	212												

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Filling	Water-bearing zone					Yield (gpm)	Remarks	
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence			
7 109-10C1 10D1	P. Elliott J. Eaton	C. Ottlinger H. R. Knox	8-27-32 4-15	487 486	Dr Dr	837 189	8	45	Oh	60 93 117	2 18 68	Ls Ss Ss	P P P	C	OK S	Ottlinger and Burgin 1; L	
10E1	M. Granhola		11-3-33	476	Dr	192											
10F1	-----do-----		12-3-33	512	Dr	107											
10N1	-----do-----		11-4-33	486	Dr	198											
10N2	R. Coon	Superior Drilling Corp.	7-13-33	480	Dr	87											
10P1	M. Granhola		11-18-33	511	Dr	257											
11A1	T. Davidson	O. A. Thayer	8-6-48	510	Dr	567											
11B1	L. W. Eaton	C. Ottlinger	6-18-59	520	Dr	1,322											
11M1	W. B. Springer	O. A. Thayer	9-10-48	505	Dr	836											
11M2	J. K. Coatsion		12-13-51	513	Dr	882											
12Q1	J. B. Schloot	Texas Gas Transmission Corp.	5-25-48	535	Dr	655											
13N1	M. Pirtle	H. R. Knox	4-4-46	510	Dr	98	7	32	Oh	68 78 112	8 13 38	Ss Ss Ss	P P P	C	S	Ottlinger and Burgin 1; L	
13Q1	-----do-----		8-4-32	508	Dr	160	0	44	Oh								
13R1	M. Granhola		1-30-53	508	Dr	107											
14N1	H. Lambeth		1-19-56	476	Dr	1,042											
14R1	M. Granhola		2-12-54	512	Dr	143											
15C1	R. Coon	Superior Drilling Corp.	2-8-53	480	Dr	835											
15D1	L. Crood	C. Ottlinger	9-23-58	485	Dr	869	7	53	Oh	160	24	Ss	P				
15G1	-----do-----		7-22-48	495	Dr	287											
15L1	M. Granhola	H. R. Knox	11-17-53	488	Dr	139											
15M1	F. Pierdon		7-1-36	485	Dr	855											
16D1	H. E. Shorter	V. Hayden		465	Dr	78											
16D2	J. McKinley	H. R. Knox	10-15-41	460	Dr	105											
16E1	A. Gettinger		7-29-52	460	Dr	119	7	82	Oh	95	24	Ss	P				
16L1	M. Granhola		1-7-54	470	Dr	187											
16R1	B. Bogard	C. Ottlinger	5-15-52	471	Dr	878											
17A1	M. Granhola		11-19-53	479	Dr	212											
17D1	-----do-----		11-13-53	510	Dr	212											
17G1	P. Cooper	V. Hayden		480	Dr	93	8	30	P	48	12	Ss-Sl	P				
17K1	M. Granhola		12-10-53	470	Dr	150											
17N1	G. Jackson	H. R. Knox	2-4-55	495	Dr	88	7	42	Oh	64	19	Ss	P				
17R1	M. Granhola		11-13-53	475	Dr	224											
18C1	Merem School	H. R. Knox	6-44	550	Dr	119	10	41	Oh	44	4	Ls	P				
18C2	W. Coyner		6-47	530	Dr	60	8	46	Oh	52	2	Ss	P				
18C3	Mr. Renaker		5-4-55	550	Dr	75	8	39	Oh	70	5	Ss	P				
18C4	L. Turpalo		3-4-55	530	Dr	70	6	45	Oh	45	15	Ss	P				
18C5	V. Nichols		10-6-43	530	Dr	118	6	40	Oh	100	18	Ss, Ls	P				
18C6	A. Pirtle			545	Dr	53	6	42	Oh	40	7	Ss, C	P				
18C7	Merem School		1943	530	Dr	214	10	44	Oh	90	27	Ls, C	P				
18D1	D. Lench		9-43	560	Dr	87	8	38	Oh	38	33	Ss	P				
18D2	Indiana Department of Conservation, Geological Survey	Geological Survey	3-4-54	438	Dr	440											
18E1	Town of Merem	Sutherland Bros.	1948	435	Dr	52	10	52	S	30	22	S, G	P1	C	9	50	Loess, clay, silty; 0-30 ft. sand and gravel 30-52 ft.; 20 ft. no. 60 silt screen
19K1	M. Granhola		1-3-54	535	Dr	187											
20A1	J. M. Hopper		6-1-50	487	Dr	2,821											
20B1	M. Granhola		11-18-55	485	Dr	212											
20F1	-----do-----		11-15-53	404	Dr	77											
21A1	W. D. and V. Scott	Clemens & Lewis	2-25-52	474	Dr	024											
21B1	M. Granhola		1-4-54	447	Dr	180											
21D1	L. Creed	C. Ottlinger	3-25-52	465	Dr	924											
21K1	M. Granhola		1-4-54	483	Dr	212											

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone				Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age				
8/98-411	Ponbody Coal Co.		7-1-11	510	Dr	319											L
4M	-do-		7-11	509	Dr	324											L
501	A. Gill, Jr.	V. Hayden	8-10-52	500	Dr	80	8	21	Oh								L, A
501	R. Myran		8-10-52	500	Dr	874											L, A
501	Hyden and Payne	C. Ottlinger	8-23-53	522	Dr	783											L, A
501	J. Shields	-do-	10-20-52	524	Dr	734											L, A
5E2	-do-		7-31	505	Dr	1,057											L, A
5G1	E. McCracken	V. Hayden	4-15-52	504	Dr	2,388	8	33	Oh								L, A
5H1	E. Gorman	-do-		500	Dr	31	8	30	P								L, A
6C1	R. Navin	-do-		500	Dr	40	6	40	Oh								L, A
6C2	-do-	Sapphire American Petroleum, Inc.	4-7-53	507	Dr	1,101											L
6F1	-do-		10-7-53	510	Dr	681											L
6H1	Knowels and Riggs		12-10-39	510	Dr	2,429											L
7H1	J. Baster	V. Hayden	1052	510	Dr	90	9	34	P								L, A
7K1	Conner, Mann, and Pinkston		6-9-54	522	Dr	832											L, A
8N1	O. Pinkston	V. Hayden	1947	520	Dr	82	6	22	Oh								L, A
8R1	M. Campbell	H. R. Knox	6-45	530	Dr	275	8	48	Oh								L, A
9C1	B. Walters	R. R. Knox	11-12-47	514	Dr	2,384											L
10D1	Town of Shelburn		6-47	500	Dr	110	8	62	Oh								L
10D2	-do-		8-47	500	Dr	110	8	57	Oh								L
10D3	-do-		6-47	500	Dr	110	8	57	Oh								L
10D4	-do-	Layne-Northern Co., Inc.	8-18-57	495	Dr	59	8										L
10D5	Indiana State Highway Department		3-20-52	496	Dr	14											L
10E1	H. Dodd	H. R. Knox	11-46	495	Dr	55	8	55	Oh								L
10E2	Town of Shelburn	Layne-Northern Co., Inc.	8-21-47	490	Dr	61	8										L
10E3	-do-		8-26-47	490	Dr	60	6										L
10E4	V. Dodd	H. R. Knox	11-20-41	495	Dr	51	6	44	Oh								L
10W1	-do-		1-25-54	540	Dr	80	6	22	P								L, A
14G1	Mrs. Sattlen	-do-		515	Dr	190	7	34	Oh								L
16A1	C. Merrill	-do-	7-44	505	Dr	141	6	37	Oh								L, A
16A2	-do-			505	Dr	211	6	70	Oh								L
16H1	-do-		11-11-41	505	Dr	75	6	20	Oh								L, A
18B1	C. Woodard	O. A. Thayer	12-15-45	540	Dr	800											L, A
20G1	H. Crowder	H. R. Knox	0-44	540	Dr	244	8										L, A
20G2	-do-		1939	540	Dr	102											L
20J1	M. and J. Frakes	-do-	6-30-39	534	Dr	2,515											L
20K1	J. Gottlinger	V. Hayden		540	Dr	204	8	39	Oh								L
20Q1	H. Crowder	-do-		530	Dr	108	8	44	P, Oh								L
21I1	J. Frakes	O. A. Thayer	7-21-32	535	Dr	785											L
21K1	M. Frakes		7-42	515	Dr	795											L

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone					Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence			
8/10K-301	C. K. Walters	The Ohio Oil Co.	5-22-47	487	Dr	1,443											
401	S. Granholm		1953	506	Dr	137											
401	do		1953	475	Dr	167											
401	B. Brown	V. Hayden	1954	470	Dr	105	8	48	Oh								
491	V. and N. Hardy	The Ohio Oil Co.	3-10-47	482	Dr	1,511											
501	V. Martin	H. R. Knox	10-21-52	510	Dr	1,28	8	112	Oh								
511	R. Bragdon	Clemens Drilling Co.	1-16-52	510	Dr	1,346											
541	Bragdon heirs		9-20-47	404	Dr	1,585											
541	M. Granholm		1953	506	Dr	182											
601	O. Hayden	V. Hayden	9-18-47	510	Dr	2,747											
601	G. Easter	J. J. Easter	9-6-55	508	Dr	852											
691	J. Easter	H. R. Knox	4-3-51	495	Dr	113	8	104	Oh								
701	X. Granholm	H. R. Knox	7-3-53	469	Dr	215											
702	X. Granholm	V. Hayden	7-19-45	470	Dr	75	8	73	Co								
781	B. Foutz		12-2-59	470	Dr	70	8	67	Co								
781	do			400	Dr	820											
781	C. Pirtz			470	Dr	81	8	16	Oh								
801	Eno Bros.	H. R. Knox	8-19	470	Dr	1,695											
801	J. Kraus		8-4-52	458	Dr	1,200											
801	X. Granholm		1953	470	Dr	1,184											
801	C. Masner		8-30-43	454	Dr	1,110											
811	C. Murdeck	H. R. Knox	11-46	470	Dr	2,600											
811	J. Hysue		9-11	460	Dr	54	7	54	P								
901	H. Straub	V. Hayden	2-16-56	457	Dr	34											
902	Indiana State Highway Department			511	Dr	1,520											
1001	R. McClure		5-10-47	481	Dr	2,030											
1001	R. Hayden	V. Hayden	8-7-40	510	Dr	125											
1001	V. Hayden			510	Dr	125											
1002	do		1950	510	Dr	321											
1000	Denson-Taylor		8-10-57	478	Dr	724											
1001	R. McClure	V. Hayden	1947	540	Dr	351											
1001	do		1-52	610	Dr	450											
1002	M. Granholm		1953	605	Dr	137											
1101	H. Sinclair		2-28	500	Dr	2,661											
1101	D. Sinclair and V. Trueblood		6-3-51	524	Dr	1,104											
1101	Mr. Crewe		6-12-52	576	Dr	895											
1101	W. G. Riggs		6-28-49	554	Dr	512											
1102	do		12-25-41	552	Dr	1,100											
1101	L. and L. D. Pierce		10-29-58	520	Dr	501											
1101	A. Poe		9-27-58	526	Dr	805											
1201	C. L. Wible	C. Ottlinger	1-2-53	512	Dr	724											
1301	Mr. Gittinger		10-24-41	528	Dr	820											
1301	C. Ferrue	V. Hayden	8-14-62	532	Dr	854											
1301	do	Houglund Drilling Co., Inc.	5-18-58	515	Dr	68	8										
1401	S. and J. Moser		4-7-52	567	Dr	877											
1401	do		4-26-52	490	Dr	805											
1401	Gettlinger Farms, Inc.		10-5-58	538	Dr	835											
1401	C. L. Davis		12-18-47	543	Dr	1,659											
1401	Gettlinger Farms, Inc.		5-31	540	Dr	825											
1401	H. Fiesner		0-26-56	525	Dr	840											
1401	S. Granholm		7-10-58	525	Dr	822											
1401	do		1953	541	Dr	137											

Table 1.--Records of wells, Sullivan County, Indiana.--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Plumb	Depth to top (feet)	Thickness (feet)	Water-bearing zone			Water level (feet)	Yield (gpm)	Use	Remarks
												Material	Geologic age	Ground-water occurrence				
8/108-2441	H. C. Hays	H. R. Knox	5-41	530	Dr	200	8	53	Oh	70	3	C	La, Ss	P	---	---	L	
2451	R. Houpt	-----	5-8-50	516	Dr	771	---	---	---	165	13	---	---	---	---	---	---	C. Johnson and others 1; L
2461	R. Wilkey	-----	5-30-50	520	Dr	853	---	---	Oh	111	74	---	Ss	P	---	---	L, A	
2481	-----	-----	5-10-50	524	Dr	853	---	---	---	---	---	---	---	---	---	---	---	C. Johnson and others 1; La
2541	Gettler Farms, Inc.	-----	8-21-50	528	Dr	888	---	---	---	---	---	---	---	---	---	---	Do	
2551	-----	-----	6-41	540	Dr	178	10	28	Oh	47	3	---	La	P	0.2	---	La, A	
2572	-----	-----	-----	535	Dr	200	---	---	Oh	---	5	---	Ss	P	---	---	L; well pumps dry	
2581	E. Huff	-----	1945	520	Dr	178	8	43	Oh	---	---	---	---	---	---	---	L, A	
2591	D. Dawns	-----	7-27-51	520	Dr	187	10	49	Oh	84	2	C	---	P	.2	---	L, A	
2591	-----	-----	-----	524	Dr	850	---	---	---	130	33	Ss	---	P	---	---	W. F. Sours 2; La	
2591	E. and C. Huff	-----	4-30-46	524	Dr	854	---	---	---	---	---	---	---	---	---	---	A. S. Reed and others 1; La	
2591	G. R. Huff	-----	8-26-45	524	Dr	803	---	---	---	---	---	---	---	---	---	---	O. A. Thayer 1; La	
2681	R. L. Dawns	-----	11-28-54	520	Dr	803	---	---	---	44	11	---	---	---	---	---	L, A	
2681	W. Whitman	-----	-----	500	Dr	45	7	55	P	---	---	---	---	---	---	---	L, A	
2691	X. Granholm	-----	1953	512	Dr	222	---	---	---	---	---	---	---	---	---	---	E	
2691	-----	-----	-----	503	Dr	212	---	---	---	---	---	---	---	---	---	---	E	
2691	-----	-----	1953	487	Dr	182	---	---	---	---	---	---	---	---	---	---	E	
2691	-----	-----	11-5-58	481	Dr	753	---	---	---	---	---	---	---	---	---	---	S. Meier 1; L	
2691	C. W. Ridgeway	-----	12-2-58	483	Dr	840	---	---	---	---	---	---	---	---	---	---	S. Meier 2; La	
2691	-----	-----	1947	512	Dr	188	6	22	P	---	---	---	---	---	---	---	L	
2691	-----	-----	-----	510	Dr	194	8	188	---	82	8	Ss, Sh	---	P	---	---	L, A	
2691	N. Wilkey	-----	3-21-46	512	Dr	814	---	---	Oh	---	---	---	---	---	---	---	A. S. Reed 1; L	
2701	Mr. Coppings	-----	3-17-59	501	Dr	865	---	---	---	---	---	---	---	---	---	---	W. F. and P. E. Meier 1; L	
2701	M. Granholm	-----	1-19-53	518	Dr	342	---	---	---	---	---	---	---	---	---	---	E	
2711	J. Dunivan	-----	8-24-59	480	Dr	642	---	---	---	---	---	---	---	---	---	---	W. F. and P. E. Meier 1; La	
2711	G. Watson	-----	1957	520	Dr	183	8	51	P	---	---	---	---	---	---	---	L	
2771	P. Verallison	-----	4-45	515	Dr	126	7	78	Oh	90	4	Ss	---	P	---	---	L, A	
2841	M. Granholm	-----	10-53	533	Dr	167	---	---	---	---	---	---	---	---	---	---	D, S	
2841	-----	-----	11-10-53	523	Dr	227	---	---	---	---	---	---	---	---	---	---	---	A. S. Reed 1; L
2841	-----	-----	3-0-50	521	Dr	851	---	---	---	---	---	---	---	---	---	---	W. F. and P. E. Meier 1; L	
2841	D. Ferrer	-----	-----	500	Dr	915	---	---	---	---	---	---	---	---	---	---	---	E
2841	F. and K. Hoko	-----	3-41	510	Dr	92	6	43	Oh	46	4	Sh, C	---	P	1.7	---	W. Miller 1; L	
2851	J. Brown	-----	11-8-53	512	Dr	240	---	---	---	---	---	---	---	---	---	---	---	L, A
2851	M. Granholm	-----	11-1-51	475	Dr	812	---	---	---	---	---	---	---	---	---	---	---	W. Miller 1; L
2851	C. Houpt	-----	7-25-40	510	Dr	837	---	---	---	---	---	---	---	---	---	---	---	and K. Hoko 3; L
2851	E. Evans	-----	11-9-53	547	Dr	192	---	---	---	---	---	---	---	---	---	---	---	L, A
2851	M. Granholm	-----	3-25-41	540	Dr	56	8	28	P	23	3	S, G	---	P1	---	---	R. Anderson 1-D; La	
3002	D. Pigg	-----	9-20-50	516	Dr	887	---	---	---	---	---	---	---	---	---	---	---	C. Hardin 1; La
3041	W. and R. Mible	-----	9-17-42	490	Dr	141	0	65	Oh	---	---	---	---	---	---	---	---	L, A
3081	R. Mable	-----	12-11-53	504	Dr	187	---	---	---	---	---	---	---	---	---	---	---	L, A
3101	M. Granholm	-----	12-14-53	538	Dr	197	---	---	---	---	---	---	---	---	---	---	---	L, A
3101	-----	-----	12-21-41	540	Dr	70	6	48	P	47	20	S, G, T	---	P1	5	---	L	
3101	M. O. Pirillo	-----	12-17-41	530	Dr	78	5	70	P	52	4	S	---	P1	5	---	L	
3101	-----	-----	-----	519	Dr	182	5	76	---	---	---	---	---	---	---	---	---	L
3101	M. Granholm	-----	12-12-53	490	Dr	151	7	61	Oh	85	12	S4-Sh	---	P	---	---	E	
3101	G. Street	-----	9-20-52	490	Dr	151	---	---	---	123	7	---	---	---	---	---	---	L, A
3112	E. Padgett	-----	12-12-53	500	Dr	152	---	---	---	---	---	---	---	---	---	---	---	La, A
3112	M. Granholm	-----	-----	491	Dr	152	---	---	---	---	---	---	---	---	---	---	---	E
3112	E. Padgett	-----	-----	510	Dr	80	8	27	Oh	77	3	Ss	---	P	---	---	L	

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone				Water level (feet)	Yield (gpm)	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age			
8/11W-11C1	M. Granholm		1053	518	Dr	167										
11F1	A. L. Patton		5-21-52	523	Dr	744										K. L. Fillingame and J. Van Dyck 2; La
11J1	G. T. Cox	V. Hayden		490	Dr	106	8	106	Oh		105	1	G			L, A
11J2	M. Granholm		1053	487	Dr	137										E
11L1	J. Donstlick	Clemens & Lewis	7-10-53	492	Dr	137										K
11L2	L. A. Donstlick	Clemens & Lewis	12-7-51	522	Dr	625										Pinkston and Fillingame 1;
11L3	X. Crow		5-12-54	515	Dr	624										La, E
11N1	M. Granholm		2-16-52	490	Dr	601										Union Chapel Oil Co. 1; La
11R1	M. Granholm		1953	489	Dr	212										J. L. Pinkston and O. F. Fillingame 3; La, E
12A1	O. Patton	V. Hayden	9-53	505	Dr	200										E
12B1	M. Granholm		9-53	502	Dr	137										E
12C1	M. Granholm		1947	500	Dr	92	8	90	Oh		90	2	S			I, A
12C2	M. Granholm		9-1-53	477	Dr	137										A
12C3	M. Granholm		1053	476	Dr	47										E
12D1	M. Granholm		9-53	503	Dr	107										E
12D2	M. Granholm		1953	503	Dr	182										E
12D3	M. Granholm		7-5-53	504	Dr	182										E
12E1	R. Lester	H. R. Knox	9-10-48	480	Dr	63	8	36	Oh		34	12	S, G			I, A
12E2	O. Lester		4-10-54	490	Dr	155	8	72	Oh		95	0	La			L, A
12E3	M. Granholm		7-4-53	470	Dr	152										A
12Q1	M. Granholm		1953	472	Dr	265										E
13E1	F. and C. Durton		12-13-53	470	Dr	164										E
14A1	M. Crow	Clemens & Lewis	8-3-49	489	Dr	690										C. W. Dittman and L. Ormiston 1; La
14C1	S. E. Lindley		2-8-52	493	Dr	626										Pinkston and Fillingame 1; La
14F1	H. Burton		3-45	450	Dr	63	6	23	Oh		23	10	G			L, A
14H1	L. Badger			480	Dr	90	7	78	P		42	3	G			L, A
14L1	R. Lester		7-44	450	Dr	100	8	100	Oh		100		S			L
23E1	R. Whitman		1945	460	Dr	45	6	45	P		35	5	S, G			L
23E2	J. Borders			445	Dr	54	7	29	Oh		50	4	Ss			L, A
23G1	D. Foutz		1947	440	Dr	40	7	50	Oh		0	40	S, G			Log; sand and gravel 0-40 ft;
23H1	R. and M. Whitman		1-4-51	442	Dr	2,783										L
23J1	J. Monroe		11-15-48	465	Dr	150	7	20	Oh		16	4	La			L
23K1	D. Foutz			445	Dr	55	5	24	Oh		43	12	Ss			L, A
24D1	E. Nowlin		3-46	530	Dr	82	8	22	Oh		20	24	Ss			L, A
24D2	D. Foutz		12-14-53	530	Dr	212										L, A
24D3	G. Borders		10-11-41	530	Dr	64	7	40	P		42	4	O			L, A
24L1	P. Mable		10-3-41	525	Dr	175	6	60	Oh		50	2	C			L, A
24M1	W. Barrick		4-20-51	500	Dr	102	8	41	Oh		58	12	Ss, La			L, A
24N1	M. Granholm			510	Dr	122	8	49	P		85	10	Ss			L, A
25D1	M. Granholm		12-12-53	480	Dr	60	6	81	P		110	10	Ss			L, A
25D2	M. Granholm			559	Dr	62	6	81	P		61	2	La			La
25D3	M. Granholm			480	Dr	60	6	81	P		71	2	La			L

8/11N-25H1

Well No.	Owner	Location	Depth	Drill Date	Drill Type	Drill	71	36	C	P	14	J	48	71	P	42	6	57	540	Dr	
25W2	L. Whitman			11-53	Dr																
25G1	M. Granholm			12-12-53	Dr																
36G1	Sullivan-Jutsonville			7-8-11	Dr																
36K1	Edwards-Wible Community			9-25-52	Dr																
36M1	D. L. Riggs			7-31-52	Dr																
36Q1	B. L. Riggs			1-3-52	Dr																
9/8W-1D1	C. Graham			5-25-52	Dr																
2M1	G. Boston			7-28-48	Dr																
2M2	J. Jones			8-11-52	Dr																
3M1	S. Moody			8-5-52	Dr																
3M2	H. R. Knox			6-5-52	Dr																
4M1	H. R. Knox			12-8-52	Dr																
4M2	H. R. Knox			12-11-52	Dr																
5N1	Ferr-Durton			9-28-53	Dr																
5N2	F. B. Mohan			2-10-54	Dr																
5N3	H. R. Knox			3-1-54	Dr																
5P1	G. Forbes			10-12-59	Dr																
6J1	V. Hayden			3-12-54	Dr																
8D1	H. R. Knox			9-11-52	Dr																
9C1	H. R. Knox			2-24-54	Dr																
9E1	G. Larr			12-46	Dr																
9L1	K. H. Brown			2-13-54	Dr																
9M1	Brown Estate and Grindol			11-5-58	Dr																
10C1	K. Quick			4-44	Dr																
11C1	O. Larr			8-53	Dr																
11D1	M. A. Curry			10-10-41	Dr																
13R1	E. S. Mohan			12-16	Dr																
13R2	K. Nelson			11-14-59	Dr																
16B1	C. Davis			-----	Dr																
16G1	V. Hollibaugh			11-12-54	Dr																
17C1	C. K. Jones			1957	Dr																
17K1	J. L. Ring and E. Halberstadt			3-16-49	Dr																
17P1	P. Harvey			2-21-49	Dr																
17R1	J. Pullman			2-10-49	Dr																
18B1	Mr. Bays			2-22-52	Dr																
20A1	R. Peterson			2-48	Dr																
20B1	D. R. Hilliard			10-19-49	Dr																
21A1	R. Plew			10-58	Dr																
21B1	N. Stark			12-14-54	Dr																
21R1	J. Wright			7-17-54	Dr																
22L1	C. Norman			12-7-59	Dr																
23R1	W. Gebel			4-2-41	Dr																
23G1	-----do-----			1-4-55	Dr																
24H1	U. S. Powder Co.			5-27-55	Dr																
27C1	J. Zink			-----	Dr																
27D1	G. Mathers			0-15	Dr																
28E1	Town of Hysora			2-14-52	Dr																
28F1	-----do-----			6-2-51	Dr																
28G1	L. Ingram			7-15	Dr																
28G2	-----do-----			7-28-54	Dr																
28G3	E. Bunyan			8-15	Dr																
28G4	R. Runyan			1957	Dr																
28G5	G. Everhart			10-29-11	Dr																
28K1	Town of Hysora			10-2-17	Dr																

9/9R- 9D1	W. Sparks	-----do-----	7-45	545	Dr	173	7	54	Oh	54	54	24	54-Sh	P	C	F	D	L, A
9G1	R. Jewell	V. Hayden	1947	520	Dr	280	7	66	P	66	120	2	C	P			H	L, A
9J1	Town of Farmoreburg	Layne-Northern Co., Inc.	5-23-51	510	Dr	29	6				219	50	Sd-Sh	P			T	L
10D1	M. Moore	R. Denson	1949	555	Dr	200	8	74	Oh	74	45	58	Sd-Sh	P	C	25	N	L
10E1	Z. Johnson	V. Hayden	7-31-59	540	Dr	71	7	33	Oh	33	26	39	Ss	P	C	27	D	L
11A1	J. L. Shephard	H. R. Knox	6-2-54	550	Dr	165	5	35	P	35	147	4	Ss	P	C		D	L, A
11N1	R. Spencer	-----do-----	6-47	560	Dr	124	7	27	Oh	27	78	2	Ls	P	C	1, 6	D	L, A
12D1	F. W. Walton	V. Hayden	2-2-48	563	Dr	950	8	17	Oh	17	52	11	Ss	P			Oh	M. C. Freeman 1; La
13G1	E. Nash	V. Hayden	1946	530	Dr	84	8				52	11	Ss	P			Oh	L, A
14E1	F. Staibacker	H. R. Knox	1947	560	Dr	270	7	23	P	23	51	2	C	P			Oh	L, A
14F1	M. Branshite	H. R. Knox	11-17-55	580	Dr	80	5	80	P	80	70	8	Ss	P			Oh	L, A
14J1	R. Scott	-----do-----	11-10-53	590	Dr	172	7	21	P	21	120	30	Ss	P			Oh	L, A
15E1	R. Woodard	The Ohio Oil Co.	1943	510	Dr	177	7										Oh	L
15P1	Shirley Realty Co.	The Ohio Oil Co.	0-1-43	531	Dr	2,407	7										Oh	The Ohio Oil Co. 2; La
15R1	M. Branshite	H. R. Knox	10-46	550	Dr	182	7	21	Oh	21	84	1	C	P			Oh	L
15R2	W. Baldridge	R. Denson	1950	545	Dr	150	7	31	P	31	94	12	Ls	P	C	20	D	L, A
16D1	C. Moore	V. Hayden	2-53	530	Dr	297	5	150	Oh	150	48	1	C	P			Oh	L, A
16J1	Meadow Lark Farms	H. R. Knox	5-45	515	Dr	90	6	28	Oh	28	58	3	Sd-Sh	P			Oh	L, A
17E1	R. E. Jennings	George & Wraether Oil Co.	12-22-48	535	Dr	2,286											Oh	George & Wraether Oil Co. 1; La
17Q1	R. Pittman	-----do-----	7-10-49	523	Dr	1,370											Oh	F. B. Cline 1; La
18L1	R. Sluder	-----do-----	11-4-54	535	Dr	2,377											Oh	T. Grog 1; La
18M1	-----do-----	Clemens Exploration Co.	3-7-52	524	Dr	1,000											Oh	F. D. Cline 1; L
18N1	E. Thompson	-----do-----	6-27	530	Dr	656											Oh	L
18R2	J. Bonham	W. H. Wood	12-7-32	525	Dr	338											Oh	W. H. Wood and others 1; L
19A1	J. Polje	V. Hayden	-----do-----	520	Dr	96	8	96	P	96	95	1	S	Pl			Oh	L, A
19A2	R. Harris	-----do-----	1-12-35	530	Dr	320											Oh	The Domo Gas Co. 1; L
19A3	W. Mad C. Jennings	-----do-----	12-15-34	520	Dr	267											Oh	The Domo Gas Co. 2; L
19A4	R. Harris	-----do-----	2-16-35	500	Dr	280											Oh	The Domo Gas Co. 2; La
19G1	A. R. Hauger	-----do-----	10-29-34	500	Dr	628											Oh	Wyman and Brown 1; L
19H1	T. Stuck	-----do-----	3-5-35	530	Dr	337											Oh	The Domo Gas Co. 1; La
19K1	S. Hauger	V. Hayden	1-8-46	520	Dr	352											Oh	The Domo Gas Co. 3; L
20D1	D. Sluder	-----do-----	1953	525	Dr	96											Oh	L; dry hole
20E1	R. Harris	-----do-----	1-31-32	505	Dr	258											Oh	D. Sluder 1; L
20E2	H. Harris	-----do-----	12-6-37	535	Dr	468											Oh	The Domo Gas Co. 5; La
20E3	H. Taylor	H. R. Knox	7-12-40	525	Dr	93	6										Oh	La (partial). A
20G1	O. Williams	M. & E. Drilling Co.	1-19-58	505	Dr	2,150											Oh	R. English 1; La
20H1	R. Harris	H. R. Knox	4-6-50	530	Dr	1,103	7	15	P, Oh	15	85	15	Ss	P			Oh	L
20N1	A. Fulford	Sutherland Bros.	1-26-52	486	Dr	650	8	35	P	35							Oh	Sutherland Bros. 1; La
21P1	D. Jennings	V. Hayden	-----do-----	500	Dr	92	8	92		92							Oh	L, A
22E1	W. Royer	H. R. Knox	11-15-39	525	Dr	190	6	65	Oh	65							Oh	L; salt water
22F1	Lori and Jewell	H. R. Knox	8-22-47	535	Dr	640	6										Oh	A. S. Reed 1; La
23C1	L. Baker	H. R. Knox	8-49	570	Dr	75											Oh	L, A
23H1	Ebenezer Church	-----do-----	J-53	560	Dr	183	7	42	Oh	42	60	5	Sd-Ls	P			P	L, A
23H2	H. Martin	C. E. Crick	4-6-50	566	Dr	1,380											Oh	F. B. Cline 1; La, E
23H3	H. Taylor	H. R. Knox	11-13-52	540	Dr	92	8	28	Oh	28	77	8	Sd-Sh	P			Oh	L, A
24D1	M. Taylor	-----do-----	10-13-47	540	Dr	97	7	20	Oh	20	70	2	C	P	C	12	N	L
26L1	P. Austin	V. Hayden	-----do-----	540	Dr	82	8	20	P	20	64	2	C	P			Oh	L, A
27D1	H. Crowder	H. R. Knox	11-43	540	Dr	87	7	82	Oh	82	70	10	Sd-Ls	P	C	16	Oh	L (partial), A
27H1	V. Ring	V. Hayden	10-47	545	Dr	205	6										Oh	L
27P1	Cook and Yusey	H. R. Knox	5-16-51	545	Dr	2,287											Oh	F. D. Cline 1; La
28D1	Mrs. Bailey	H. R. Knox	9-46	530	Dr	77	7	21	Oh	21	24	6	Ss	P			Oh	L
28H1	McKinney and Fairview	U. & E. Drilling Co.	10-22-51	531	Dr	1,417											Oh	Kuhn, Banks, Korns, and McKinney 1; La, E
29A1	A. Beckwith	-----do-----	4-27-53	525	Dr	700											Oh	Superior Drilling Corp. 1; La
29G1	C. E. Blackford	-----do-----	7-6-53	526	Dr	1,082											Oh	Do
29G2	J. L. Hartzler	H. R. Knox	11-30	530	Dr	110	6	40	Oh	40	40	5	Sh	P			Oh	Do
					Dr	88						22	Ss	P			Oh	L

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Finish	Water-bearing zone				Water level (feet)	Yield (gpm)	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age			
9/9W-29K1	M. D. Jowell		11-15-31	520	Dr	561										
29M1	J. Hazelrigg		6-2-49	523	Dr	2,386										The Dece Gas Co. 1; L
31G1	J. V. Dix		8-37	500	Dr	710										W. Myman 1; L
31L1	C. R. Hayden	Sutherland Bros.	2-17-54	502	Dr	708										Niagara Oil Corp. 1; L
31R1	L. R. Hayes		11-21-52	522	Dr	730										R. Sutherland 2; L
32A1	F. Jewell	W. R. Brown	10-33	559	Dr	501										Olinger and Burgin 1; L
32C1	W. Rux		11-37	530	Dr	560										The Dece Gas Co. 1; L
32D1	R. Martz		9-27-47	524	Dr	783										The Dece Gas Co. 2; LA
32E1	R. and D. Whitlock		8-11-36	530	Dr	720										A. S. Reed 1; L
32N1	N. Stock		3-20-52	531	Dr	2,315										Niagara Oil Corp. 2; LA
33D1	J. Gill		11-26-30	545	Dr	683										Superior Oil Corp. 1; LA
33F1	E. Mills		5-45	545	Dr	105	8	20	Oh							J. C. Ellis 1; LA
33H1	W. Scott		7-29-40	540	Dr	509										L, A
33I1	B. Dolinger		5-1-40	545	Dr	2,390										Forest Oil Corp. 1; LA
34B1	F. Shipman			540	Dr	221										L
34F1	Town of Shoeburn		8-47	540	Dr	90	8	28	Oh							L
34J1			6-46	540	Dr	303	10		Oh							L
34K2	Thompson-Gumano		10-37	540	Dr	304										L
34J3	W. Gamace		19-47	540	Dr	510										L
34J5	Opera House		10-3-46	540	Dr	302										LA (partial)
34K1	C. Hall		11-47	540	Dr	185										L
34K2	J. Sebring		10-47	540	Dr	205										L
34K3	J. Martz			540	Dr	205										L
34K4	J. Stevenson		10-47	540	Dr	177	6	03	Oh							L
34M1	J. Scoring		5-35	535	Dr	711										J. R. Riggs 1; LA
34L2	F. Miller		11-47	530	Dr	185										L
34N1	L. Skelton		10-47	530	Dr	205	6	38	Oh							L
34N2	C. Leach		7-9-51	580	Dr	120	8	28	Oh							L
34N3	J. Syertor			550	Dr	107	7	120	P							L
34E1	T. Rambis			550	Dr	318										L
34C1	G. Carrithers			542	Dr	181										L
24L				508	Dr	2,225										King Tust Oil Co 1; LA
4N1	T. Mayfield		1928	500	Dr	2,220										R. Nyora 1; LA
5D1	E. Williams	W. R. Brown	7-48	475	Dr	2,239										R. N. Anderson 1; L
5E1	C. Mayfield		8-50	475	Dr	50										L
5L1	F. Stemons	H. R. Knox	11-8-39	530	Dr	2,174										Stoni Oil Corp. 1; L
6A1	J. Thomas		1927	445	Dr	2,230										Stoni Oil Corp. 4; LA
6A2	J. and L. Thomas		12-12-48	487	Dr	2,271										R. Myers 1; LA
6E1	J. Hunt		1934	470	Dr	2,193										Reager and others 1; LA
8H1	L. Hunt		1953	520	Dr	2,486										L
8K1	M. Grantholm		1934	500	Dr	125	6	38	Oh							Ready & Dresser Oil 2; LA
8N1	L. Norris		9-18-40	525	Dr	64	6	43	Oh							L; solution opening in limestone
11L1	W. Johnson		5-20-55	525	Dr	167										E
11L2			1953	542	Dr	02										E
12H1	M. Grantholm		1950	544	Dr	02										E
13F1			1953	512	Dr	152										R. Jordan 1; LA
14H1			1950	513	Dr	860										L
14N1	F. and G. Reynolds		9-12-58	535	Dr	182										L
15C1	M. Granholm		10-53	498	Dr	35										L
15J1	W. Johnson		4-45	525	Dr	75	7	37	Oh							L, A
15N1				525	Dr											L, A

Table 1.--Records of wells, Sullivan County, Indiana--Continued

Well No.	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter (inches)	Depth of casing (feet)	Stratigraphic	Water-bearing zone					Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence				
9/10W-31A1	C. Lester	V. Hayden		530	Dr	100	8	47	P	49	11	Sh	P			D	L, A	
							7	100		88	3	Sh, C, Ld	P					
31H1	M. Granholm		1953	523	Dr	187				96	1	La	P					
31P1	E. Riggs	H. R. Knox	10-15	510	Dr	122	8	82	Oh	95	5	Ss	P				E, L, A	
31Q1	O. Thompson		7-44	510	Dr	100	7	40	Oh	55	2	La	P				L, A	
32J1	F. R. Cameron		9-5-55	515	Dr	1,645				68	12	Sa	P				R. Wyman 1; La	
32K1	M. Granholm		1953	518	Dr	154												
32L1	A. Drake		1953	507	Dr	120												
32M1	C. Clemens		12-27-52	517	Dr	785											R. Redifer 1; La	
32N1	M. Granholm		7-33	516	Dr	137												
32O1	V. Granholm		6-30	500	Dr	82	7	77	Oh	80	21	S	Pl	C	25	1	L, A	
32P1	E. Hall		3-8-52	502	Dr	800											R. Redifer 1; La	
32Q1	A. Woodard	Clemens & Lewis		500	Dr	81	8	56	Oh								L, A	
32R1	M. Granholm	V. Hayden	7-53	511	Dr	107											L, A	
32S1	R. Woodard	V. Hayden	1943	505	Dr	200	8	97	Oh	97	8	La	P				L, A	
34C1	M. Granholm		4-24-53	496	Dr	272				142	33	Sa	P					
34D1			4-22-53	498	Dr	197												
34E1	E. Gruthers	K. R. Knox	9-29-41	490	Dr	64	6	64	Oh	61	3	S	Pl				L, A	
34F1	O. Woodard		8-6-42	480	Dr	2,417											J. H. Gilliam 1; La	
34G1	J. Engberg	K. R. Knox	12-43	470	Dr	120	6	72	Oh	72	8	9d-La	P				L, A	
34H1	Indiana & Michigan Electric Co.	Raymond Concrete Pile, Inc.	1956	470	Dr	150	6		Oh								L, A	
34I1				442	Dr	80				10	70	S, G	Pl				L, A	
34J1			1956	440	Dr	55				28.5	27.5	S, G	Pl				La	
34K1		Layne-Werthorn Co., Inc.	12-56	440	Dr	36	28	30	S	19	37	S, G	Pl				L; screen 20 ft of 16-inch diameter	
34L1				441	Dr	65				14	51	S, G	Pl				L	
34M1		Raymond Concrete Pile, Inc.		443	Dr	70				12.5	56.5	S, G	Pl				La	
34N1			1955	442	Dr	60				14.5	45.5	S, G	Pl				La	
34O1			1956	442	Dr	55			Oh	12.5	42.5	S, G	Pl				La	
34P1			1950	455	Dr	70	7	7	P	34	3	C	P				L, A	
34Q1	S. Brothers	A. Benson		455	Dr	70	5	70	Oh	30	2	C	P				L, A	
25C2	J. Wilson	K. R. Knox	5-49	455	Dr	100	6	9	Oh	74	14	Su	P				L, A	
36H1	M. Granholm		1953	530	Dr	137												

Table 2.--Selected well logs, Sullivan County, Indiana
 Remarks: T. D., total depth in feet, complete log
 or sample log not given; W. B., water bearing

Well 6/8W-2R1

Type of record: Driller's log. Altitude: About 497 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Sand-----	19	27	
Pennsylvanian system:			
Middle series:			
Sandstone-----	8	35	
Shale-----	15	50	

Well 6/8W-4A1

Type of record: Driller's log. Altitude: About 559 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Middle series:			
Sandstone-----	24	34	
Limestone-----	3	37	
Shale-----	3	40	

Well 6/8W-5A1

Type of record: Driller's log. Altitude: About 515 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	2	2	
Pennsylvanian system:			
Middle series:			
Shale-----	5	7	
Limestone-----	6	13	
Shale-----	13	26	
Shale, hard-----	6	32	
Shale-----	8	40	

Well 6/8W-5D1

Type of record: Driller's log. Altitude: About 485 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	12	32	
Slate, dark, and coal-----	8	40	W. B.
Fire clay-----	3	43	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-5D1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	2	45	W. B.
Sandstone-----	25	70	
Shale, dark-----	8	78	
Shale, sandy-----	7	85	

Well 6/8W-9N1

Type of record: Driller's log.		Altitude: About 533 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Pennsylvanian system:			
Middle series:			
Shale-----	8	27	
Limestone-----	3	30	

Well 6/8W-9Q1

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale, firm-----	25	35	
Shale, sandy, broken-----	12	47	
Shale, soft, gray-----	3	50	
Shale, light-----	15	65	
Limestone-----	3	68	
Shale, gray-----	3	71	
Limestone-----	4	75	
Shale, red and gray-----	8	83	
Limestone-----	10	93	
Shale, gray-----	10	103	
Shale, dark-----	17	120	
Shale, sandy-----	20	140	
Shale, dark-----	--	140	

Well 6/8W-10N1

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Pennsylvanian system:			
Middle series:			
Shale-----	15	30	
Sandstone, brown-----	8	38	
Shale, gray; trace of coal-----	9	47	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-12K1

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	26	26	
Pennsylvanian system:			
Middle series:			
Shale-----	10	36	
Coal-----	2	38	"Bad water"
Fire clay-----	9	47	
Shale-----	20	67	
Shale, dark-----	2	69	Gas
Coal-----	1	70	
Shale-----	15	85	
Limestone-----	9	94	W. B.
Shale-----	46	140	

Well 6/8W-12Q1

Type of record: Driller's log.

Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale-----	28	48	
Coal-----	2	50	"Bad water"
Shale-----	28	78	
Coal-----	2	80	"Bad water"
Fire clay-----	6	86	
Shale-----	26	112	
Slate-----	2	114	
Shale-----	11	125	
Limestone-----	3	128	W. B.
Shale-----	4	132	

Well 6/8W-13R1

Type of record: Driller's log.

Altitude: About 510 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale-----	16	26	
Coal-----	2	28	
Shale-----	12	40	
Coal-----	5	45	
Shale, blue-----	5	50	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-14R1

Type of record: Driller's log.

Altitude: About 575 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	8	8	
Pennsylvanian system:			
Middle series:			
Shale-----	6	14	
Limestone-----	5	19	
Shale-----	21	40	

Well 6/8W-17Q1

Type of record: Driller's log.

Altitude: About 505 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and hardpan-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale-----	22	42	
Limestone, hard-----	2	44	
Shale, light-----	6	50	
Sandstone-----	32	82	W. B.
Shale, gray-----	8	90	
Slate, gray-----	12	102	
Coal-----	2	104	W. B.
Fire clay-----	5	109	
Shale, sandy-----	11	120	
Slate, gray-----	15	135	
Slate, dark-----	6	141	
Coal-----	3	144	W. B.
Fire clay-----	5	149	
Shale, light-----	16	165	
Sandstone-----	13	178	W. B.
Shale, dark-----	4	182	

Well 6/8W-18C2

Type of record: Driller's log.

Altitude: About 545 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Dug well-----	24	24	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	20	44	
Sandstone-----	9	53	
Coal and fire clay-----	7	60	
Limestone, sandy-----	7	67	
Shale, light-----	6	73	
Limestone, hard-----	2	75	
Shale-----	2	77	
Limestone-----	1	78	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-18P1

Type of record: Driller's log.

Altitude: About 515 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	30	30	
Hardpan-----	10	40	
Pennsylvanian system:			
Middle (?) series:			
Fire clay-----	3	43	
Limestone, hard-----	7	50	
Red rock-----	5	55	
Sandstone-----	10	65	
Shale, sandy-----	10	75	
Shale, dark-----	15	90	
Limestone-----	5	95	
Shale, sandy-----	5	100	
Sandstone-----	5	105	
Shale, black-----	10	115	
Shale, sandy-----	32	147	
Coal-----	2	149	
Fire clay-----	8	157	
Shale, black-----	11	168	
Limestone-----	17	185	W. B.
Coal-----	5	190	Gas
Fire clay-----	1	191	

Well 6/8W-18R1

Type of record: Driller's log.

Altitude: About 490 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Pennsylvanian system:			
Middle series:			
Shale-----	11	23	
Limestone-----	6	29	
Shale-----	21	50	

Well 6/8W-19L2

Type of record: Driller's log.

Altitude: About 525 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	14	14	
Pennsylvanian system:			
Middle series:			
Shale-----	14	28	
Coal-----	1	29	
Shale, hard-----	11	40	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-20B1

Type of record: Driller's log.

Altitude: About 520 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface and clay-----	17	17	
Hardpan-----	6	23	
Pennsylvanian system:			
Middle (?) series:			
Shale, gray-----	5	28	
Limestone, hard-----	6	34	
Shale, gray-----	3	37	
Red rock-----	5	42	
Shale, gray-----	4	46	
Limestone-----	3	49	W. B.
Shale, sandy-----	9	58	
Sandstone-----	7	65	W. B.
Shale, dark-----	5	70	
Limestone, hard-----	6	76	
Sandstone, hard-----	12	88	
Sandstone, gray-----	17	105	
Shale, sandy, dark-----	20	125	
Coal-----	3	128	
Fire clay-----	4	132	
Shale, light-----	6	138	
Sandstone-----	18	156	
Slate, black-----	11	167	
Coal-----	5	172	
Fire clay-----	3	175	
Shale, sandy-----	5	180	
Sandstone, light-----	10	190	W. B.
Shale-----	3	193	

Well 6/8W-21Q1

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	4	4	
Pennsylvanian system:			
Middle series:			
Shale-----	20	24	
Limestone-----	2	26	
Shale-----	9	35	
Limestone-----	1	36	
Shale-----	4	40	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-22J1

Type of record: Driller's log. Altitude: About 560 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale-----	25	35	
Limestone-----	2	37	
Shale-----	43	80	

Well 6/8W-22M1

Type of record: Driller's log. Altitude: About 565 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	8	8	
Pennsylvanian system:			
Middle series:			
Shale-----	27	35	
Limestone-----	2	37	
Shale-----	3	40	

Well 6/8W-24R1

Type of record: Driller's log. Altitude: About 530 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale-----	13	23	
Sandstone-----	3	26	
Shale-----	14	40	

Well 6/8W-26A1

Type of record: Driller's log. Altitude: About 540 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	8	8	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	20	28	
Shale-----	3	31	
Sandstone-----	4	35	
Shale-----	5	40	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/8W-31N1

Type of record: Driller's log. Altitude: About 480 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	16	16	
Pennsylvanian system:			
Middle series:			
Shale-----	18	34	
Limestone-----	6	40	

Well 6/8W-34R1

Type of record: Driller's log. Altitude: About 530 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Pennsylvanian system:			
Middle series:			
Shale-----	25	37	
Limestone-----	3	40	

Well 6/8W-36R1

Type of record: Driller's log. Altitude: About 480 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	14	14	
Pennsylvanian system:			
Middle series:			
Shale-----	17	31	
Limestone-----	6	37	
Shale-----	3	40	

Well 6/9W-2A1

Type of record: Driller's log. Altitude: About 500 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	28	28	
Pennsylvanian system:			
Middle series:			
Sandstone-----	36	64	W. B.
Shale, soft, gray-----	6	70	
Shale, sandy-----	20	90	
Shale, dark-----	8	98	
Coal-----	1	99	W. B.
Clay-----	--	99	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-2C1

Type of record: Driller's log.

Altitude: About 460 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, red, and hardpan-----	21	21	
Pennsylvanian system:			
Middle (?) series:			
Sandstone, white-----	31	52	W. B.
Shale, gray-----	4	56	
Limestone, hard-----	4	60	
Shale, gray-----	2	62	
Red rock-----	5	67	
Shale, sandy, gray-----	7	74	
Sandstone-----	21	95	W. B.

Well 6/9W-2C2

Type of record: Driller's log.

Altitude: About 460 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	21	21	
Pennsylvanian system:			
Middle (?) series:			
Sandstone, yellow-----	8	29	
Sandstone, gray-----	23	52	W. B.
Shale, gray-----	4	56	
Limestone-----	3	59	
Shale, dark-----	3	62	
Red rock-----	5	67	
Shale and sandy shale-----	7	74	
Sandstone-----	46	120	
Shale, sandy-----	30	150	
Coal-----	3	153	
Fire clay-----	1	154	

Well 6/9W-3F1

Type of record: Driller's log.

Altitude: About 441 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	14	14	
Sand, silty, gray, and clay-----	6.5	20.5	
Sand, silty, gray, and clay, with sandstone in layers-----	4.5	25	
Clay, brown-----	4	29	
Sand, silty, gray, and clay-----	32.5	61.5	
Sand, silty, gray, and clay with sandstone in layers-----	2.5	64	
Pennsylvanian system:			
Middle series			
Sandstone, solid-----	--	64	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-5Q1

Type of record: Driller's log. Altitude: About 470 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil, sandy-----	4	4	
Sand, very fine, red-----	11	15	W. B.
Sand, very fine, some clay-----	15	30	W. B.
Clay, sandy, red, green, and gray	2	32	

Well 6/9W-7C1

Type of record: Driller's log. Altitude: About 455 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, red-----	10	10	
Sand, with occasional gravel-----	11	21	
Sand, medium-----	3	24	
Sand and clay-----	2	26	W. B.
Sand, fine-----	15	41	W. B.
Sand, very fine-----	12	53	W. B.

Well 6/9W-8A1

Type of record: Driller's log. Altitude: About 460 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, very fine, red-----	7	7	
Sand, fine, red with lumps of brown and blue clay-----	8	15	W. B.
Sand, very fine, red-----	5	20	W. B.
Sand, fine, with some small gravel-----	7	27	W. B.
Clay, blue-----	11	38	
Clay-----	2	40	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	5	45	

Well 6/9W-8C1

Type of record: Driller's log. Altitude: About 464 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, red-----	25	25	W. B. 16 to 46 ft.
Sand, medium, clean-----	9	34	
Shale, soft, gray and green-----	11	45	Clay(?)
Gravel and shale, mixed-----	1	46	Gravel and clay(?)

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-10K1

Type of record: Driller's log.

Altitude: About 480 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; red sand-----	25	25	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	40	65	
Sandstone-----	35	100	
Shale, gray-----	20	120	
Sandstone-----	17	137	
Pennsylvanian system:			
Middle series:			
Limestone, hard, dark-----	4	141	
Sandstone, broken-----	9	150	
Sandstone-----	37	187	
Shale, dark-----	2	189	

Well 6/9W-10Q1

Type of record: Driller's log.

Altitude: About 520 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface; sandy mud-----	25	25	
Pennsylvanian system:			
Middle series:			
Sandstone, blue-----	23	48	
Shale, muddy, dark-----	10	58	
Limestone-----	2	60	
Shale, muddy, blue-----	20	80	
Slate, muddy, black-----	30	110	
Sandstone, limy, broken-----	30	140	
Sandstone-----	64	204	
Limestone-----	1	205	
Sandstone-----	15	220	

Well 6/9W-10Q2

Type of record: Driller's log.

Altitude: About 505 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	25	25	
Pennsylvanian system:			
Middle series:			
Shale, muddy-----	15	40	
Limestone-----	3	43	
Shale, muddy, blue-----	32	75	
Shale, brown-----	10	85	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-14G4

Type of record: Driller's log.

Altitude: About 520 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, tough-----	9	29	
Shale, dark-----	6	35	
Slate, black-----	4	39	
Shale, light-----	11	50	
Shale, sandy-----	5	55	
Sandstone-----	30	85	W. B.
Shale, dark-----	7	92	
Coal-----	1	93	
Shale, sandy-----	5	98	
Shale, light-----	9	107	
Limestone-----	4	111	W. B.

Well 6/9W-15B1

Type of record: Driller's log.

Altitude: About 500 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and hardpan-----	25	25	
Hardpan, gray-----	15	40	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	20	60	
Shale, sandy-----	6	66	W. B.
Coal-----	2	68	
Fire clay-----	5	73	
Shale, sandy-----	10	83	W. B.
Shale, dark-----	9	92	

Well 6/9W-15G1

Type of record: Driller's log.

Altitude: About 570 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	25	25	
Clay, gravelly-----	4	29	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	38	67	
Sandstone-----	6	73	W. B.
Shale, muddy, soft-----	7	80	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-20A1

Type of record: Driller's log.

Altitude: About 500 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil; soft sand-----	15	15	
Sand, very fine-----	10	25	W. B.
Pennsylvanian system:			
Middle series:			
Shale-----	33	58	
Limestone, sandy-----	3	61	
Shale, sandy-----	17	78	
Coal-----	2	80	
Fire clay-----	5	85	
Shale, gray-----	25	110	
Slate, black-----	10	120	
Coal-----	2	122	
Fire clay-----	6	128	
Limestone, sandy-----	8	136	W. B.
Limestone, broken, with streaks of shale and limestone-----	54	190	
Shale-----	10	200	

Well 6/9W-20J1

Type of record: Driller's log.

Altitude: About 515 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Quicksand-----	39	39	
Loam, sandy-----	8	47	Clay, sandy (?)
Pennsylvanian system:			
Middle series:			
Shale, blue-----	23	70	
Limestone-----	2	72	W. B.
Shale, gray-----	13	85	
Sandstone-----	15	100	
Shale, black-----	3	103	
Shale, sandy-----	17	120	
Shale, dark-----	4	124	
Shale, gray-----	11	135	
Sandstone-----	57	192	W. B.
Shale-----	--	192	

Well 6/9W-21L1

Type of record: Driller's log.

Altitude: About 510 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	50	50	
Sand, blue-----	28	78	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-21-L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	7	85	
Sandstone, gray-----	25	110	
Sandstone, white-----	22	132	
Shale, red-----	6	138	
Sandstone, broken-----	22	160	
Limestone, brown-----	5	165	
Shale-----	5	170	
Limestone, brown-----	5	170	

Well 6/9W-22A1

Type of record: Driller's log. Altitude: About 500 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	17	17	
Pennsylvanian system:			
Middle series:			
Shale, soft-----	6	23	
Limestone-----	2	25	
Shale, gray-----	11	36	
Limestone-----	4	40	W. B.
Shale, dark-----	20	60	

Well 6/9W-22J1

Type of record: Driller's log. Altitude: About 485 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and clay-----	23	23	
Hardpan-----	8	31	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	5	36	
Slate, dark-----	3	39	
Limestone, hard-----	6	45	
Coal-----	2	47	W. B.
Fire clay, soft-----	4	51	
Shale, gray-----	12	63	
Shale, soft, dark-----	4	67	
Shale, sandy-----	25	92	W. B.
Shale, dark-----	15	107	
Shale, gray-----	9	116	
Shale, sandy-----	10	126	
Limestone, hard-----	6	132	
Red rock, cavey-----	6	138	
Limestone, hard-----	6	144	
Shale, sandy-----	6	150	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-23H2

Type of record: Driller's log.

Altitude: About 485 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	24	24	
Hardpan, gray-----	16	40	
Pennsylvanian system:			
Middle (?) series:			
Sandstone-----	4	44	
Shale, light-----	2	46	
Limestone-----	1	47	
Shale, light-----	3	50	
Limestone, very hard-----	3	53	
Red rock-----	9	62	
Limestone, sandy-----	16	78	
Shale, sandy-----	3	81	
Sandstone-----	5	86	
Shale, dark-----	1	87	
Limestone, hard-----	3	90	
Sandstone, dark-----	15	105	
Sandstone, light-----	7	112	
Shale, dark-----	23	135	
Coal-----	2	137	
Fire clay-----	8	145	
Sandstone, light-----	34	179	
Slate, dark-----	4	183	
Coal-----	5	188	
Fire clay-----	--	188	

Well 6/9W-23J1

Type of record: Driller's log.

Altitude: About 475 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	18	18	
Hardpan-----	2	20	
Sand-----	5	25	W. B.
Gumbo-----	18	43	Sticky clay (?)
Pennsylvanian system:			
Middle series:			
Limestone-----	1	44	
Shale, gummy-----	6	50	
Limestone, sandy-----	21	71	
Shale, dark-----	1	72	
Limestone-----	2	74	
Shale, sandy-----	6	80	
Limestone-----	5	85	
Sandstone-----	15	100	W. B.
Shale, dark-----	20	120	
Coal-----	2	122	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-27-E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene (?) series:			
Muck, blue-----	10	40	
Loam, sandy, little hard-----	28	68	Clay, sandy (?)
Shale, soft-----	12	80	Clay (?)
Sand and slate-----	5	85	W. B.
Gravel and limestone-----	9	94	W. B.
Pennsylvanian system:			
Middle series:			
Sandstone-----	--	94	

Well 6/9W-27L1

Type of record: Driller's log. Altitude: About 480 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	20	20	
Sand, gray-----	18	38	
Hardpan-----	49	87	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	2	89	
Coal-----	2	91	W. B.
Limestone, hard-----	3	94	
Shale, gray-----	11	105	
Limestone, broken-----	5	110	W. B.
Limestone, hard-----	6	116	
Red rock-----	4	120	
Limestone, hard-----	5	125	

Well 6/9W-29A3

Type of record: Driller's log. Altitude: About 500 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	47	47	
Pennsylvanian system:			
Middle series:			
Shale-----	20	67	
Limestone-----	3	70	

Well 6/9W-29E1

Type of record: Driller's log. Altitude: About 475 feet.

Record missing-----	22	22	
Quaternary system:			
Recent and Pleistocene series:			
Shale, muddy-----	41	63	Clay (?)
Pennsylvanian system:			
Middle series:			
Coal and slate-----	2	65	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-29E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Fire clay-----	10	75	
Shale, gray-----	25	100	
Sandstone-----	2	102	
Sandstone-----	63	165	W. B.

Well 6/9W-29J1

Type of record: Driller's log. Altitude: About 474 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Mud and sand-----	40	48	
Pennsylvanian system:			
Middle series:			
Limestone-----	8	56	
Shale-----	83	139	
Sandstone-----	77	216	W. B.
Shale-----	34	250	
Limestone-----	19	269	
Shale, dark-----	24	293	
Limestone-----	12	305	
Shale-----	38	343	
Sandstone-----	14	357	
Limestone-----	11	368	T. D. 1,450 ft.

Well 6/9W-34D1

Type of record: Driller's log. Altitude: About 500 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	42	42	
Sand, gray-----	8	50	
Pennsylvanian system:			
Middle series:			
Shale, soft-----	12	62	
Shale, sandy-----	18	80	
Shale, gray-----	22	102	
Shale, sandy-----	13	115	
Sandstone-----	12	127	W. B.
Shale, gray-----	3	130	
Limestone, hard-----	5	135	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-34N1

Type of record: Driller's log. Altitude: About 475 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	28	28	
Pennsylvanian system:			
Middle series:			
Shale-----	9	37	
Shale, black-----	8	45	
Shale, hard-----	15	60	
Coal-----	6	66	
Shale-----	24	90	

Well 6/9W-35K1

Type of record: Driller's log. Altitude: About 525 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	24	24	
Hardpan, yellow-----	2	26	
Sand-----	1	27	W. B.
Hardpan, gray-----	23	50	
Pennsylvanian system:			
Middle series:			
Shale-----	11	61	

Well 6/9W-36D1

Type of record: Driller's log. Altitude: About 540 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Pennsylvanian system:			
Middle series:			
Shale-----	9	24	
Limestone-----	5	29	
Shale, hard-----	61	90	

Well 6/9W-36R1

Type of record: Driller's log. Altitude: About 480 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	17	17	
Pennsylvanian system:			
Middle series:			
Shale-----	20	37	
Limestone-----	7	44	
Shale-----	8	52	
Rock ledges-----	4	56	Thin beds of limestone in shale (?)

Table 2.-- Selected well logs, Sullivan County, Indiana--Continued

Well 6/9W-36R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale-----	4	60	

Well 6/10W-2L1

Type of record: Driller's log. Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	6	6	
Sand and coarse gravel-----	4	10	W. B.
Gravel, coarse, and some sand----	20	30	W. B.
Sand, coarse, and some gravel----	3	33	W. B.
Gravel, coarse, and some sand with large pebbles-----	12	45	W. B.

Well 6/10W-4M1

Type of record: Driller's log. Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, clay, and sand-----	20	20	
Gravel, coarse, and little sand--	18	38	W. B.
Sand and little gravel-----	6	44	W. B.

Well 6/10W-5J1

Type of record: Driller's log. Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Subsoil and gravel-----	10	10	Dry
Gravel and some sand-----	15	25	W. B.
Gravel and 60% sand-----	6	31	W. B.
Gravel and 40% sand-----	4	35	W. B.

Well 6/10W-5J2

Type of record: Driller's log. Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and subsoil-----	10	10	
Sand and gravel-----	5	15	W. B.
Gravel and coarse sand, large pebbles-----	10	25	W. B.
Sand and small pea gravel-----	7	32	W. B.
Sand and small gravel, large pebbles-----	8	40	W. B.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/10W-11P2

Type of record: Driller's log.

Altitude: About 430 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, black, and gravel-----	6	6	
Mud and coarse sand, runny-----	14	20	W. B.
Gravel, coarse, and some sand----	12	32	W. B.
Sand, coarse, and pea gravel-----	8	40	W. B.
Sand, very coarse-----	10	50	W. B.

Well 6/10W-12M1

Type of record: Driller's log.

Altitude: About 425 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil, sandy-----	3	3	
Sand, gray, and small gravel-----	67	70	W. B.

Well 6/10W-13H1

Type of record: Driller's log.

Altitude: About 455 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Quicksand, brown-----	85	85	
Gravel, coarse-----	20	105	
Quicksand-----	30	135	
Pennsylvanian system:			
Middle series:			
Slate, white-----	5	140	
Sandstone, gray-----	9	149	W. B.
Slate, white-----	10	159	
Limestone, firm, gray-----	6	165	
Mud, light-----	5	170	
Limestone, soft, gray-----	10	180	
Limestone, sandy, soft-----	5	185	
Sandstone, firm, gray-----	5	190	
Slate, soft, light-----	20	210	
Slate, soft, dark-----	6	216	
Slate, light, dark-----	2	218	
Slate, light-----	5	223	
Limestone, firm, light-----	10	233	
Sandstone, firm, light-----	32	265	
Slate, soft, light-----	17	282	
Limestone, shell-----	2	284	
Shale, dark-----	16	300	
Shale, gritty, light-----	15	315	
Shale, soft, brown-----	17	332	
Limestone, gray-----	4	336	
Slate, soft, dark-----	13	349	
Limestone, hard, brown-----	5	354	
Shale, soft, dark-----	5	359	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/10W-13H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy, light-----	13	372	
Sandstone, light-----	38	410	T. D. 1, 406 ft.

Well 6/10W-14G1

Type of record: Driller's log.

Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	6	6	
Gravel and clay-----	8	14	
Gravel, coarse, some sand and large pebbles-----	4	18	W. B.
Gravel and sand, small-----	6	24	W. B.
Sand, coarse; very little gravel-	4	28	W. B.
Gravel and sand, small-----	4	32	W. B.
Sand, coarse-----	4	36	W. B.
Gravel, small, and little sand---	6	42	W. B.
Sand, coarse, and large gravel---	4	46	W. B.
Gravel, small-----	4	50	W. B.

Well 6/10W-15K1

Type of record: Driller's log.

Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, subsoil, and gravel-----	14	14	
Gravel, good, and little sand----	28	42	W. B.
Sand, coarse-----	7	49	W. B.

Well 6/10W-15K2

Type of record: Driller's log.

Altitude: About 430 feet.

Quaternary system:			
Recent, and Pleistocene series:			
Clay, sand, and gravel-----	18	18	
Sand, coarse, and pea gravel-----	2	20	W. B.
Sand, coarse, and little gravel--	4	24	W. B.
Sand, coarse, gray, and streaks of gravel-----	30	54	W. B.

Well 6/10W-15K3

Type of record: Driller's log.

Altitude: About 430 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	15	15	Dry
Sand-----	4	19	W. B.
Gravel, coarse-----	3	22	W. B.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/10W-15K3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, with little gravel-----	3	25	W. B.
Sand, coarse, and some gravel----	5	30	W. B.
Sand, coarse, and little gravel--	13	43	W. B.
Sand, and pea gravel-----	2	45	W. B.

Well 6/10W-26Q1

Type of record: Driller's log.	Altitude: About 435 feet.		
Record missing-----	89	89	
Pennsylvanian system:			
Middle (?) series:			
Shale, sandy-----	26	115	
Sandstone-----	15	130	
Shale, dark-----	17	147	
Limestone-----	3	150	
Shale, dark-gray-----	17	167	
Limestone-----	6	173	
Shale, sandy, light-----	37	210	
Sandstone-----	8	218	
Shale, gray-----	5	223	
Coal-----	2	225	
Shale, gray-----	10	235	
Sandstone-----	35	270	W. B.
Shale, gray-----	9	279	
Slate, black-----	4	283	
Shale, dark-----	7	290	
Sandstone-----	5	295	
Shale, gray-----	60	355	
Slate, black-----	5	360	
Shale, sandy, light-----	65	425	T. D. 812 ft.

Well 6/10W-27L1

Type of record: Sample study (examined by L. E. Workman)	Altitude: About 435 feet.		
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	Driller's log .0-87 ft.
Sand and gravel-----	77	87	
Pennsylvanian system:			
Middle series:			
Clay, sandy, calcareous, white (like fire clay), grading to white, compact, calcareous, very-fine sandstone-----	19	106	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 6/10W-27L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks.
Pennsylvanian system:			
Middle series:			
Shale, weak, blue and gray; sample contains considerable calcareous, fine gravel, thrown in or caved-----	3	109	
Shale, weak, gray; same gravel as above-----	5	114	
Shale, sandy, weak, micaceous, blue and brown, with brown and light-brown, very fine, semi-lithographic limestone---	14	128	
Limestone, semi-lithographic, brown; and brown, fine-grained, sandy, argillaceous, limestone; large bryozoa fragments; blue, weak shale associated with sandy limestone; some brown, weak shale-----	10	138	
Sandstone, very-fine, argil- laceous, friable, gray, and light-gray and blue, weak shale; some sandy and semi- lithographic limestone, and brown, weak shale-----	30	168	
Sandstone, very-fine, argil- laceous, carbonaceous, mica- ceous, compact, gray; a few chips of limestone as above, caved-----	9	177	
Siltstone, argillaceous, carbon- aceous, micaceous, fairly firm, gray-----	11	188	
Coal, conchoidal fracture prominent, bright-----	2	190	
Shale, slightly sandy, plastic, pink (fire clay)-----	3	193	
Shale, slightly sandy, plastic, pink; and gray, micaceous, weak, sandy shale; a few chips of coal and limestone, caved-----	7	200	

Well 6/10W-34B1

Type of record: Driller's log.

Altitude: About 422 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and gravel-----	93	93	
Pennsylvanian system:			
Middle (?) series:			
Shale-----	3	96	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-1L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, light-----	3	83	
Mine opening-----	--	83	

Well 7/8W-1N1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	14	14	
Hardpan-----	6	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	15	35	
Shale, dark-----	15	50	
Coal-----	6	56	
Fire clay-----	6	62	
Sandstone-----	18	80	
Shale, gray-----	9	89	
Slate, black-----	3	92	
Coal-----	4	96	Shot opening into mine.

Well 7/8W-1P2

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	12	12	
Hardpan-----	11	23	
Pennsylvanian system:			
Middle series:			
Sandstone-----	12	35	
Coal-----	4	39	
Fire clay-----	4	43	
Sandstone-----	25	68	
Shale, brown-----	8	76	
Coal-----	6	82	Opening into mine.

Well 7/8W-2C1

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	16	16	
Hardpan-----	4	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	25	45	W. B.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-2E1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, soft-----	5	26	
Shale, gray-----	19	45	
Coal-----	4	49	W. B.
Fire clay-----	4	53	
Limestone-----	4	57	
Shale, sandy-----	8	65	W. B.

Well 7/8W-2F1

Type of record: Driller's log. Altitude: About 550 feet.

Record missing-----	25	25	
Pennsylvanian system:			
Middle series:			
Sandstone-----	18	43	W. B.
Shale, gray-----	9	52	
Slate, dark-----	16	68	
Coal and fire clay-----	7	75	
Limestone, hard, and sandstone---	3	78	W. B.
Sandstone-----	10	88	W. B.

Well 7/8W-2F2

Type of record: Driller's log. Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and hardpan-----	20	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	18	38	W. B.
Slate, gray-----	24	62	
Coal-----	4	66	
Fire clay-----	3	69	
Shale, sandy-----	13	82	W. B.
Shale, dark-----	8	90	

Well 7/8W-2Q1

Type of record: Driller's log. Altitude: About 565 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	14	14	
Pennsylvanian system:			
Middle series:			
Sandstone-----	50	64	W. B.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-2Q2

Type of record: Driller's log.

Altitude: About 575 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	21	21	
Pennsylvanian system:			
Middle series:			
Sandstone-----	14	35	
Shale, gray-----	26	61	
Coal-----	4	65	
Fire clay-----	2	67	
Shale, gray-----	8	75	
Sandstone-----	8	83	W. B.
Shale, gray-----	10	93	
Slate, dark-----	7	100	
Coal-----	5	105	Mine opening.

Well 7/8W-2R1

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow, and hardpan-----	16	16	
Pennsylvanian system:			
Middle series:			
Sandstone-----	16	32	
Shale, light-----	8	40	
Coal-----	3	43	
Fire clay-----	7	50	
Shale, light-----	5	55	
Sandstone-----	9	64	
Mine opening-----	--	64	

Well 7/8W-3A1

Type of record: Driller's log.

Altitude: About 540 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and hardpan-----	20	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	18	38	W. B.
Slate, gray-----	23	61	
Coal-----	5	66	
Shale, dark-----	10	76	W. B.
Limestone, hard-----	4	80	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-3A3

Type of record: Driller's log.

Altitude: About 530 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface and clay-----	12	12	
Hardpan-----	6	18	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	32	50	
Coal-----	3	53	W. B.
Fire clay-----	3	56	
Limestone, sandy-----	5	61	W. B.
Shale, sandy-----	6	67	

Well 7/8W-5G1

Type of record: Driller's log.

Altitude: About 530 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene (?) series:			
Top soil-----	12	12	
Shale, sandy, red-----	5	17	Sandy clay (?)
Fire clay and gravel-----	10	27	
Muck, blue-----	24	51	
Pennsylvanian system:			
Middle series:			
Shale-----	39	90	
Sandstone-----	20	110	
Coal, trace-----	--	110	
Fire clay-----	5	115	
Shale, gray-----	8	123	

Well 7/8W-6H1

Type of record: Driller's log.

Altitude: About 525 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Hardpan, brown-----	10	30	
Clay, yellow-----	20	50	
Clay, blue-----	6	56	
Hardpan-----	3	59	
Pennsylvanian system:			
Middle series:			
Coal-----	2.5	61.5	
Fire clay, white-----	2.5	64	
Sandstone, brown-----	1	65	
Limestone, sandy-----	14	79	
Slate, blue-----	13	92	
Coal-----	5	97	W. B., gas
Slate, black-----	5	102	
Fire clay-----	4	106	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-6H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, light-----	4	110	
Sandstone, light-----	7	117	
Slate, gray-----	6	123	
Coal-----	2	125	
Fire clay-----	5	130	
Limestone, shaly-----	10	140	
Slate, gray-----	14	154	
Sandstone, light-----	28	182	
Shale, sandy-----	7	189	
Sandstone, light-----	19	208	W. B., dead oil
Shale, sandy, blue-----	8	216	
Sandstone, light-----	23	239	
Shale, blue-----	27	266	
Slate, black-----	5	271	
Shale, sandy, light-----	18	293	
Sandstone, light-----	49	342	
Coal, soft-----	4	346	
Sandstone, hard, and limestone---	12	358	
Coal-----	7	365	Gas
Limestone, shell, gray-----	1	366	
Sandstone, soft, white-----	39	405	W. B.

Well 7/8W-6L1

Type of record: Driller's log.

Altitude: About 505 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	6	6	
Hardpan, yellow-----	11	17	
Hardpan, gray-----	4	21	
Sand, gray-----	5	26	Gas
Hardpan, solid, gray-----	11	37	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	7	44	
Shale, sandy, gray-----	14	58	
Shale, gray-----	10	68	
Coal-----	3	71	
Fire clay-----	8	79	
Limestone, sandy, hard-----	11	90	W. B.
Shale, gray-----	10	100	
Slate, dark-----	2	102	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-8E1

Type of record: Driller's log.

Altitude: About 490 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	14	14	
Sand-----	6	20	
Hardpan-----	35	55	
Pennsylvanian system:			
Middle series:			
Shale-----	5	60	
Slate, black-----	11	71	
Coal-----	2	73	W. B.
Fire clay, cavey-----	3	76	
Limestone-----	2	78	
Shale, sandy-----	12	90	
Sandstone-----	29	119	
Shale, dark-----	6	125	
Slate, black-----	6	131	

Well 7/8W-9A1

Type of record: Driller's log.

Altitude: About 520 feet.

Dug well-----	15	15	
Pennsylvanian system:			
Middle series:			
Slate-----	10	25	
Shale, gray-----	36	61	
Coal-----	4	65	
Fire clay-----	3	68	
Shale, gray-----	7	75	

Well 7/8W-9D1

Type of record: Driller's log.

Altitude: About 480 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Pennsylvanian system:			
Middle (?) series:			
Sandstone, red-----	7	25	
Sandstone, gray-----	20	45	
Shale, light-----	16	61	
Limestone-----	2	63	
Shale-----	2	65	
Limestone-----	--	65	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-10G1

Type of record: Driller's log. Altitude: About 525 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	3	19	
Pennsylvanian system:			
Middle series:			
Shale-----	8.5	27.5	
Limestone-----	2	29.5	
Shale, gray-----	15.5	45	
Shale, sandy-----	10	55	
Sandstone-----	6	61	
Shale, dark-----	4	65	
Coal-----	1	66	

Well 7/8W-10N1

Type of record: Driller's log. Altitude: About 565 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Pennsylvanian system:			
Middle series:			
Sandstone-----	16	35	
Shale, gray-----	20	55	
Coal-----	2.5	57.5	
Fire clay-----	8	65.5	
Shale-----	9.5	75	
Sandstone-----	47	122	
Shale, dark-----	--	122	

Well 7/8W-10P1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13.5	13.5	
Clay, sandy, yellow-----	5.5	19	
Pennsylvanian system:			
Middle series:			
Sandstone, gray-----	17	36	
Shale, sandy-----	29	65	
Coal-----	2.5	67.5	
Fire clay-----	6.5	74	
Shale, sandy, hard-----	13	87	
Sandstone-----	13	100	
Shale, white-----	4	104	
Shale, dark-----	9.5	113.5	
Coal-----	2	115.5	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-10P1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Dirty band-----	2	117.5	
Coal-----	1.5	119	Mine opening.
Fire clay and shale-----	6	125	

Well 7/8W-12C1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and clay-----	14	14	
Hardpan-----	6	20	
Pennsylvanian system:			
Middle series:			
Slate, gray-----	3	23	
Coal-----	3	26	
Fire clay-----	3	29	
Sandstone-----	24	53	
Slate, dark-----	6	59	
Mine opening-----	5	64	

Well 7/8W-12D2

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Earth-----	10.5	10.5	
Pennsylvanian system:			
Middle series:			
Sandstone-----	19.5	30	
Shale-----	5	35	
Shale, blue-----	10	45	
Coal-----	4	49	
Shale, clayey-----	7	56	
Sandstone-----	12	68	
Limestone-----	10	78	
Sandstone, hard-----	25	103	
Shale-----	3	106	
Coal-----	8.5	114.5	
Shale, black-----	2.5	117	
Sulphur-----	1	118	
Shale, clayey, very soft, very light-----	7	125	
Shale, very soft, black-----	10	135	
Shale, very soft, black, occa- sional concretion-----	8	143	
Sandstone, very hard-----	2.5	145.5	
Shale, dark-blue-----	4	149.5	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-12D2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	8.5	158	
Limestone, very hard-----	2	160	
Shale, black-----	6	166	
Coal-----	6	172	
Shale, black-----	2	174	

Well 7/8W-14J1

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Middle series:			
Shale, sandy, gray-----	10	27	
Shale, dark-gray-----	24	51	
Coal-----	3	54	
Fire clay-----	3	57	
Shale, sandy, gray-----	1.5	58.5	
Sandstone-----	33.5	92	
Shale, dark-----	11	103	
Coal-----	5	108	
Shale, dark-----	6	114	
Slate, black-----	5	119	
Shale, gray-----	3	122	
Sandstone-----	18	140	
Shale, dark-----	8	148	

Well 7/8W-14K1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Middle series:			
Sandstone-----	25	40	
Shale, gray-----	8	48	
Coal-----	3	51	
Fire clay-----	3	54	
Shale, sandy, gray-----	10	64	
Sandstone-----	29	93	
Shale, gray-----	10	103	
Coal-----	5	108	
Shale, hard, dark-----	4	112	
Shale, dark-----	7	119	
Shale, gray-----	9	128	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-15G1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Coal and dirty band-----	7	122.5	
Hard bottoms-----	4.5	127	
Fire clay-----	3	130	
Shale, blue-----	15	145	
Limestone-----	1.5	146.5	
Shale-----	14.5	161	
Sandstone-----	2	163	
Shale, sandy, dark-----	8	171	
Limestone-----	2.5	173.5	
Slate, black-----	1.5	175	
Coal-----	5.5	180.5	
Fire clay-----	4.5	185	
Sandstone, white-----	15	200	
Shale, sandy, white-----	7	207	
Shale, blue-----	6	213	
Sandstone-----	7	220	
Shale, sandy-----	21	241	
Sandstone-----	24	265	
Shale-----	21	286	
Slate, black-----	4	290	
Coal-----	1	291	
Fire clay-----	10	301	
Shale, sandy-----	8	309	
Coal-----	3	312	
Shale-----	13	325	
Sandstone-----	4	329	
Shale-----	14	343	
Slate, black-----	5	348	
Coal-----	2	350	
Fire clay-----	11	361	
Shale-----	12	373	Salt water.
Coal-----	7	380	
Sandstone-----	2.5	382.5	

Well 7/8W-15G2

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Middle series:			
Sandstone-----	19	34	
Shale-----	3	37	
Sandstone-----	3	40	
Shale, sandy-----	22.5	62.5	
Coal-----	5.5	68	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-15G2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Fire clay-----	6	74	
Shale, sandy, hard-----	23	97	
Sandstone, white-----	14	111	W. B.

Well 7/8W-15Q1

Type of record: Driller's log.

Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	7	22	
Sandstone-----	20	42	
Shale, sandy, gray-----	29	71	
Coal-----	4	75	
Fire clay-----	6	81	
Sandstone-----	6	87	W. B.
Shale, sandy-----	45	132	W. B.

Well 7/8W-18B1

Type of record: Driller's log.

Altitude: About 529 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil-----	5	5	
Clay, yellow-----	15	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	45	65	
Shale-----	42	107	
Coal-----	5	112	
Shale-----	8	120	
Limestone, sandy-----	10	130	
Limestone-----	10	140	
Shale-----	80	220	
Limestone-----	2	222	
Shale-----	23	245	
Sandstone-----	55	300	
Shale-----	20	320	
Limestone-----	5	325	
Coal-----	5	330	
Shale-----	120	450	T. D. 2,460 ft.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-18F1

Type of record: Driller's log. Altitude: About 565 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	9	9	
Hardpan-----	11	20	
Pennsylvanian system:			
Middle series:			
Sandstone, gray-----	30	50	

Well 7/8W-18K1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Pennsylvanian system:			
Middle series:			
Sandstone, brown-----	15	25	
Sandstone, gray-----	10	35	W. B.
Coal, trace-----	--	35	
Fire clay-----	3	38	

Well 7/8W-19H1

Type of record: Driller's log. Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	9	29	
Sandstone, yellow-----	19	48	
Coal and slate-----	2	50	
Fire clay-----	4	54	
Shale, soft, gray-----	18	72	
Limestone-----	3	75	
Slate and limestone-----	6	81	
Limestone, hard-----	3	84	
Limestone, sandy-----	16	100	
Sandstone, broken, dark-----	59	159	W. B.

Well 7/8W-25P1

Type of record: Driller's log. Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and hardpan-----	16	16	
Pennsylvanian system:			
Middle series:			
Sandstone-----	5	21	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-25P1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Slate, gray-----	11	32	
Coal-----	1	33	
Fire clay-----	2	35	
Shale, light-----	8	43	
Shale, sandy-----	12	55	
Shale, dark-----	13	68	
Mine opening-----	5	73	

Well 7/8W-27R1			
Type of record: Driller's log.		Altitude: About 585 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Pennsylvanian system:			
Middle series:			
Sandstone-----	8	20	
Shale-----	20	40	

Well 7/8W-29B1			
Type of record: Driller's log.		Altitude: About 540 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Pennsylvanian system:			
Middle series:			
Sandstone, light-----	22	37	
Slate, light-----	15	52	
Limestone, hard, light-----	4	56	
Slate, soft-----	4	60	
Sandstone, soft-----	12	72	
Slate, white-----	12	84	
Slate, dark-----	15	99	
Limestone, hard, gray-----	46	145	Sandstone (?)
Slate, soft, dark-----	2	147	
Coal-----	4	151	
Slate, soft, dark-----	12	163	
Coal-----	5	168	
Slate, soft, light-----	47	215	
Limestone, hard, brown-----	52	267	
Coal, soft-----	5	272	
Slate, soft, light-----	7	279	
Slate, sandy, light-----	41	320	
Slate, soft, dark-----	35	355	T. D. 826 ft.

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-29F1

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft, yellow-----	15	15	
Sand, soft, yellow-----	7	22	
Sand, firm, yellow-----	21	43	
Mud, soft, blue-----	2	45	
Pennsylvanian system:			
Middle series:			
Sandstone, firm, light-----	23	68	
Sandstone, hard, light-----	2	70	
Slate, soft, green-----	8	78	
Sandstone, firm, gray-----	14	92	
Slate, soft, dark-----	33	125	
Slate, shelly, firm, dark-----	43	168	
Coal, soft-----	6	174	
Slate, soft, dark-----	5	179	
Limestone, medium, light-----	1	180	
Slate, soft, light-----	3	183	
Sandstone, firm, broken, light---	17	200	
Slate, soft, dark-----	8	208	
Slate and coal, soft, dark-----	10	218	Little gas.
Slate, soft, light-----	23	241	
Sandstone, soft, light-----	3	244	W. B.
Slate, soft, dark-----	25	269	
Limestone, hard, brown-----	4	273	
Slate, soft, dark-----	4	277	
Coal, soft-----	3	280	
Slate, soft, dark-----	4	284	
Sandstone, firm, broken, light---	16	300	
Slate, soft, muddy, dark-----	94	394	
Limestone, medium, gray-----	1	395	
Slate and coal, soft, dark-----	5	400	T. D. 824 ft.

Well 7/8W-29L1

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, soft-----	21	21	
Pennsylvanian system:			
Middle series:			
Sandstone, light-----	20	41	
Limestone, hard-----	22	63	
Slate, dark-----	8	71	
Sandstone, light-----	9	80	
Slate, dark-----	83	163	
Coal, soft-----	3	166	W. B.
Slate-----	9	175	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-29L1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Sandstone, light-----	23	198	
Coal, soft-----	9	207	
Slate, soft-----	71	278	
Sandstone, light-----	8	286	
Slate, dark-----	98	384	
Limestone, dark-----	3	387	
Slate, dark-----	2	389	
Coal-----	3	392	
Slate, dark-----	38	430	T. D. 1,067 ft.
Well 7/8W-30R1			
Type of record: Driller's log.		Altitude: About 490 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Pennsylvanian system:			
Middle series:			
Shale-----	7	22	
Sandstone-----	10	32	
Shale-----	8	40	
Well 7/8W-31D1			
Type of record: Driller's log.		Altitude: About 490 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Pennsylvanian system:			
Middle series:			
Shale-----	4	22	
Limestone-----	3	25	
Shale-----	25	50	
Well 7/8W-32E1			
Type of record: Driller's log.		Altitude: About 480 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	18	18	
Mud and sand-----			
Quicksand-----	5	62	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	3	65	
Shale, sandy-----	7	72	W. B.
Shale, dark-----	6	78	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-32E2

Type of record: Driller's log.

Altitude: About 480 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Mud and sand-----	21	41	
Pennsylvanian system:			
Middle series:			
Limestone, sandy-----	4	45	W. B.
Shale, sandy-----	9	54	
Shale, dark-----	11	65	
Shale, sandy-----	7	72	
Sandstone-----	48	120	W. B.
Shale, dark-----	6	126	
Coal-----	4	130	
Fire clay-----	1	131	

Well 7/8W-35A1

Type of record: Driller's log.

Altitude: About 585 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, red-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	3	23	
Sandstone, gray-----	12	35	
Shale, sandy-----	9	44	
Limestone, brown-----	4	48	
Limestone, sandy-----	6	54	W. B.
Shale, gray-----	28	82	
Coal-----	5	87	
Shale, white-----	6	93	
Sandstone, light-----	7	100	W. B.
Limestone, brown-----	4	104	
Shale, dark-----	19	123	W. B.

Well 7/8W-35A2

Type of record: Driller's log.

Altitude: About 585 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and hardpan-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	4	24	
Sandstone, gray-----	12	36	
Shale, sandy, gray-----	9	45	
Sandstone, gray-----	7	52	W. B.
Shale, gray-----	1	53	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/8W-36R1

Type of record: Driller's log. Altitude: About 495 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Pennsylvanian system:			
Middle series:			
Shale-----	14	22	
Coal-----	2	24	
Shale-----	4	28	
Sandstone-----	22	50	

Well 7/9W-1C1

Type of record: Driller's log. Altitude: About 480 feet.

Record missing-----	22	22	
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	8	30	
Pennsylvanian system:			
Middle series:			
Sandstone-----	25	55	
Shale, sandy, and limestone-----	17	72	
Shale, dark-----	3	75	
Coal-----	3	78	W. B.

Well 7/9W-1F1

Type of record: Driller's log. Altitude: About 485 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Clay and gravel-----	7	22	
Pennsylvanian system:			
Middle series:			
Sandstone-----	32	54	
Shale, gray-----	18	72	
Coal-----	2	74	
Fire clay-----	6	80	
Shale, gray-----	5	85	
Limestone, shells-----	3	88	
Sandstone-----	7	95	
Shale, gray-----	9	104	
Slate, dark-----	9	113	
Coal-----	2	115	
Slate and fire clay-----	12	127	
Limestone and sandstone-----	13	140	
Slate, dark-----	5	145	
Coal-----	2	147	
Fire clay-----	3	150	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/9W-1F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Sandstone-----	50	200	
Slate-----	8	208	
Coal-----	2	210	
Limestone, sandy-----	17	227	
Sandstone-----	33	260	Gas
Coal-----	2	262	
Sandstone-----	31	293	
Coal-----	2	295	
Sandstone-----	30	325	
Slate, black-----	8	333	
Sandstone-----	37	370	Show of oil
Slate-----	8	378	Gas
Coal-----	2	380	
Fire clay-----	5	385	
Limestone, sandy-----	7	402	T. D. 1,050 ft.

Well 7/9W-1M1

Type of record: Driller's log.

Altitude: About 476 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and clay-----	14	14	
Sand and gravel-----	13	27	
Pennsylvanian system:			
Middle series:			
Sandstone, blue-gray-----	15	42	
Shale, dark-----	8	50	
Shale, sandy-----	8	58	
Shale, gray-----	20	78	
Coal-----	2	80	
Fire clay-----	4	84	
Limestone, dolomitic, sandy-----	7	91	
Limestone, hard-----	5	96	
Limestone, sandy-----	5	101	
Shale, gray-----	11	112	
Slate, dark-----	7	119	
Coal-----	5	124	
Slate, black-----	5	129	
Shale, light-----	8	137	
Limestone-----	2	139	
Sandstone-----	6	145	
Slate, gray-----	6	151	
Coal-----	2	153	
Limestone, broken-----	12	165	
Shale, sandy, gray-----	17	182	
Shale, dark-----	26	208	
Slate, black-----	22	230	

Table 2.--Selected well logs, Sullivan County, Indiana--Continued

Well 7/9W-1M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Coal-----	6	236	
Shale, sandy-----	24	260	
Sandstone, dark-----	6	266	
Limestone, sandy-----	6	272	
Coal-----	2	274	
Sandstone, gray-----	27	301	
Coal-----	2	303	
Shale, dark-----	19	322	
Sandstone and limestone broken---	3	325	
Shale, sandy, dark-----	15	340	
Slate, black-----	4	344	
Slate, dark-brown, limestone, and little sandstone-----	5	349	
Slate, shaly, black, and coal---	4	353	
Shale, gray-----	16	369	
Limestone, sandy-----	3	372	
Sandstone, gray-----	3	375	
Coal-----	1	376	
Sandstone-----	7	383	
Shale, light-----	5	388	
Limestone, broken-----	4	392	
Sandstone, gray-----	11	403	
Sandstone, broken-----	14	417	
Shale, sandy-----	4	421	
Coal-----	4	425	

Well 7/9W-3E1

Type of record: Driller's log.

Altitude: About 470 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	14	14	
Hardpan-----	11	25	
Hardpan, gray-----	33	58	
Clay, gray-----	22	80	
Sand-----	16	96	W. B.
Clay, soft-----	10	106	
Gravel and coal-----	4	110	W. B.
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	20	130	
Shale, gray-----	12	142	
Slate, black-----	7	149	
Coal-----	2	151	W. B.
Shale, light-----	6	157	
Shale, dark-----	9	166	
Limestone, sandy-----	4	170	W. B.
Shale, sandy-----	7	177	