

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

BULLETIN NO. 16

GROUND-WATER RESOURCES OF
WEST-CENTRAL INDIANA

Preliminary Report: Clay County



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

1962

INDIANA DEPARTMENT OF CONSERVATION

Donald E. Foltz, Director

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OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Clay County

BY

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GROUND-WATER RESOURCES OF WEST-CENTRAL INDIANA

Preliminary Report: Clay County

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

ABSTRACT

Clay County, in west-central Indiana, has an area of about 364 square miles. Consolidated rocks of Pennsylvanian and Mississippian ages and unconsolidated rocks of Pleistocene age are the sources of ground water for domestic, stock, industrial and municipal supplies. Wells in rocks of Pennsylvanian age range from about 20 to 440 feet in depth; their yields range from less than 1 to about 70 gpm, with some dry holes reported. Wells in sand and gravel of Pleistocene age range from about 25 to 160 feet in depth; yields range from less than 1 to about 370 gpm. Field chemical analyses of water from these sources show that the chemical quality differs greatly. Waters from aquifers of Pennsylvanian age have an average hardness of 180 ppm, average chloride content of 30 ppm, and an average sulfate content of 55 ppm. Waters from aquifers of Pleistocene age have an average hardness of 290 ppm, average chloride content of 20 ppm, and an average sulfate content of 40 ppm. Locally, either the iron, sulfate, or chloride content exceeds the recommended standards of the U. S. Public Health Service (1946) for drinking water.

This preliminary report contains tabulated records of about 789 wells and other drilled holes giving information about well construction, water levels, conditions of occurrence, and characteristics of the water-bearing material; selected logs for about 644 wells and other drilled holes giving the drillers' description of the material encountered and a tentative interpretation by the authors of the geologic age; records of 4 springs giving information about geologic source, yield and temperature of the water; results for 393 field chemical analyses of water from wells, 4 field chemical analyses of water from springs, and 23 field chemical analyses of water 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 ground-water resources and on the geology of the area.

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

INTRODUCTION

Purpose and Scope

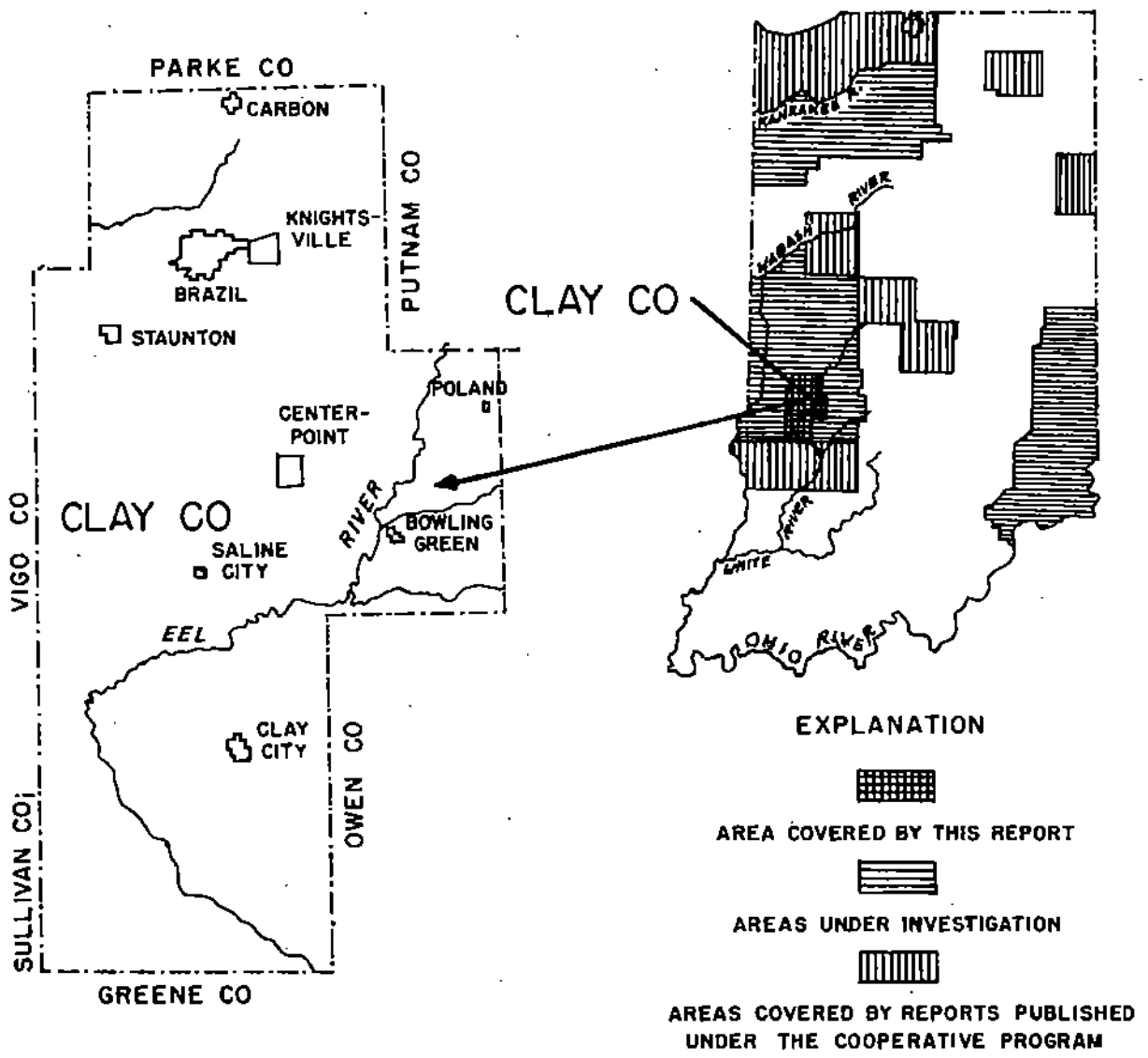
An investigation of the ground-water resources and geology of nine counties in west-central Indiana has been conducted intermittently since 1950. In 1956 the investigation was placed on a full-time basis and another county was added to the area of study. This investigation is being made by the U. S. 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 third 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 geology and ground-water conditions 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

Clay County is in the west-central portion of Indiana (fig. 1). The county is roughly rectangular in shape and has an area of about 364 square miles. It is bounded on the north by Parke County, on the east by Putnam and Owen Counties, on the south by Greene County, and on the west by Sullivan and Vigo Counties.



SEE PAGE 306 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, holes drilled for purposes other than water supply, and springs in this report. The number assigned indicates the location according to the official rectangular survey of public lands. For example, in the number for well 11/6W-32D1, the part preceding the hyphen indicates that the well is in T. 11 N., R. 6 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 11/6W-32D1 is the first well listed in NW $\frac{1}{4}$ NW $\frac{1}{4}$, sec. 32, T. 11 N., R. 6 W.

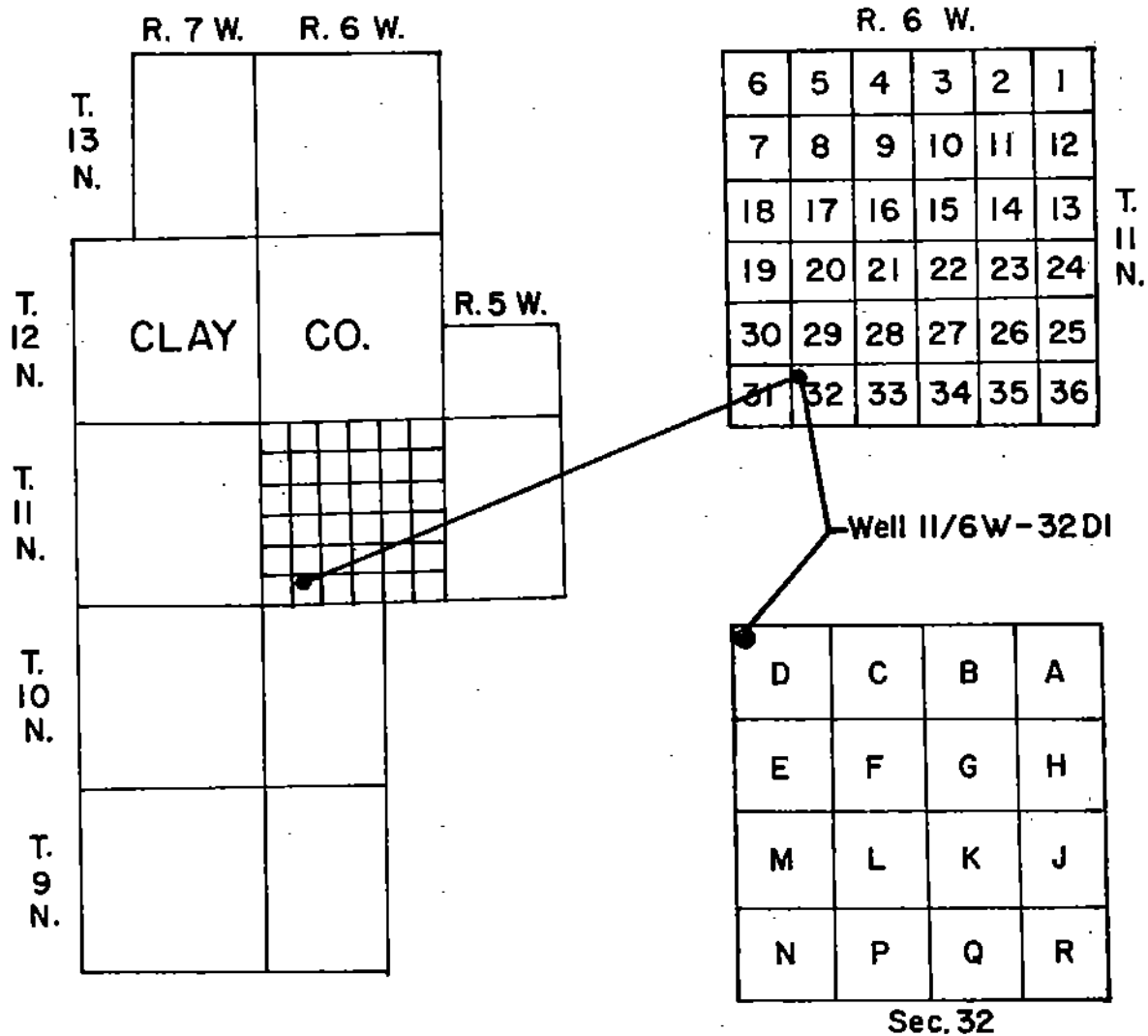


FIGURE 2.-- Sketch showing well-numbering system.

Acknowledgments

The authors thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. 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 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. Any discrepancy between the driller's location and the location shown in the plat book was 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, oil wells, test holes, drain holes, or holes drilled for purposes other than water supply, springs, 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 drilled holes with 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 ppm (parts per million) and by a standard titration method when concentrations exceeded 100 ppm. The total iron content was determined at the well site immediately after collection by the bipyridine method by comparison 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 and accurate analyses by the laboratory of 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. The data from these observation wells show the effect of seasonal and longer term variations of the ground-water level.

GENERAL GEOLOGY AND SOURCES OF GROUND WATER

The oldest consolidated rocks underlying Clay County that are important as ground-water sources are of Early and Middle 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. Sandstones are the principal source of ground water from consolidated rocks and are extensively used for domestic and stock supplies, a few small industrial supplies and one municipal supply. Well depths range from about 20 to 440 feet, the average depth being about 135 feet. Yields from these wells range generally from less than 1 to about 70 gpm, although some dry holes have been reported.

Consolidated rocks of Mississippian age are a minor source of ground water along the eastern edge of the county.

The unconsolidated glacial deposits of Pleistocene age overlie the consolidated rocks of Pennsylvanian and Mississippian ages. Along the Eel River and some of its tributaries there are large deposits of glaciofluvial sand and gravel laid down during the time the Eel valley was a major discharge channel for melt water from glaciers farther to the north. These deposits are an important source of ground water for domestic, stock, and industrial supplies and are the source used for public supplies by the towns and cities in the county, with the exception of Staunton, which obtains its water from rocks of Pennsylvanian age. A similar deposit of glaciofluvial sand and gravel, near Poland, is used for domestic and stock supplies. Well depths range from about 60 to 160 feet, the average depth being about 90 feet. Yields from these wells range from about 5 to 370 gpm; however, these deposits may have a much larger potential than indicated by the above yields.

Glaciofluvial sand and gravel are associated with clayey and sandy-clay till in the northern half of the county and to a lesser extent in the southern half of the county. The sand and gravel were deposited as lenses or thin stringers on bedrock and are overlain by till or interbedded with the till. There is a close relationship between the extent of pre-glacial bedrock channels and the sand and gravel deposits. In many areas these deposits are, or with proper development could be, additional sources of ground water for domestic, stock, and small industrial supplies, and locally for even larger supplies. In the upland areas the glacial deposits consist chiefly of a clayey to sandy-clay till and do not yield water freely.

Lake sediments are present in several small areas in southern Clay County. Along the Eel River and some of its tributaries these sediments were deposited on bedrock or on glaciofluvial sand and gravel. These lacustrine deposits, consisting chiefly of silt and clay, do not yield water freely, but in areas where interbedded sand and gravel lenses are present they may be potential sources for domestic and stock supplies.

Wells tapping the sand and gravel aquifers associated with the till and lacustrine deposits range in depth from about 25 to 110 feet and have yields ranging from less than 1 to about 175 gpm. At the present time many of the wells drilled in these areas pass through the sand and gravel deposits and are completed in the Pennsylvanian bedrock.

Deposits of Recent age in Clay County are thin and consist mostly of flood-plain [sediments] and wind-blown sand, which are not important as sources of ground water.

Plate 2 shows availability of ground water in the consolidated and unconsolidated rocks underlying the county. Plate 3 shows generalized quality of water conditions in the consolidated and unconsolidated rocks with respect to hardness. This map also shows areas where the chloride and sulfate content exceeds the limits for these constituents as established by the U. S. Public Health Service (1946).

The quality of water differs greatly in hardness and chemical content in the aquifers of Pennsylvanian age and to a lesser extent in aquifers of Pleistocene age. The range of hardness, and of chloride and sulfate content of water from aquifers of Pennsylvanian and Pleistocene age are shown below.

Pennsylvanian

	Hardness	Chloride	Sulfate
Maximum	1,620	2,540	1,250
Minimum	Near 0	1	5
Average <u>a/</u>	180	30	55

Pleistocene

Maximum	665	160	155
Minimum	130	Near 0	10
Average	290	20	40

CONFINED AND UNCONFINED CONDITIONS

In Clay 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, which is confined under pressure in the aquifer, 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 is in hydraulic continuity with the atmosphere, hence, the water does not rise above the level at which it is encountered. Thus, under confined conditions a fluctuation of water level represents a response to a pressure change in the aquifer, whereas under unconfined conditions a fluctuation of water level actually represents a change in the amount of water in storage.

a/Averages do not include those analyses having high hardness or chloride or sulfate content (over 1,000 ppm), which were a small percentage of the total analyses.

TYPES OF WELLS

Drilled wells are the principal type of water wells used in Clay County. However, a small number of driven and dug wells are still in use and wells are occasionally 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. A well drilled by the cable-tool method is constructed by a combination of drilling, bailing, and driving casing. When the water-bearing material is consolidated rock, the well casing generally is driven a few inches to several feet into the rock, and the well finished as an open hole in rock. When 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 Clay County municipal-supply wells drilled in sand and gravel are equipped with well screens. Most domestic and stock wells constructed in sand and gravel do not use a screen, but are finished with an open-end casing or either a slotted or perforated casing. Greater dependability and improved yields of wells in the coarser unconsolidated materials and development of wells in the finer unconsolidated materials are 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.

The oil or gas exploration holes, test holes, drain holes, and holes drilled for purposes other than water supply are drilled by either the cable-tool or rotary method in Clay 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 Eel River, ground water is available in adequate quantities for domestic and stock use and locally for industrial, irrigation, and public supplies. These sand and gravel deposits are the source of all large-yield wells in Clay County. Another source of domestic and stock supplies and possibly small industrial supplies are the sand and gravel deposits interbedded and overlain by till in the preglacial bed-rock channels. Interbedded sand and gravel in the lake sediments may contain ground water in adequate quantities for domestic and stock supplies.

The quality of the water from the rocks of Pennsylvanian and Pleistocene ages varies greatly. Locally water from these sources exceeds the U. S. Public Health Service (1946) drinking-water standards for either iron, chloride, or sulfate content.

RECORDS

The records of about 789 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 pertinent data. The altitude of the land surface at all wells, except oil or gas exploration holes, was determined from topographic maps. Altitudes of oil or gas exploration holes were on the records when received and were checked against the topographic maps.

Table 2 contains the selected logs of about 644 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. A glossary of drillers' terms is on page 2610

The results of 393 analyses of well waters are given in table 3. These chemical analyses were made in the field office of the U. S. Geological Survey. The table 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 state 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 4 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 23 field chemical analyses of water from streams in Clay County with other data.

Water levels in 4 observation wells in Clay County are given in table 6. The water levels in two of these wells were obtained by recording gages and in the other two wells 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 wells which were measured manually. The locations of these observation wells are shown on plate 1.

GLOSSARY OF DRILLERS' TERMS

- Blackjack.--Black carbonaceous shale or a clayey or shaly coal.
- Bone coal.--See Blackjack.
- Boots.--Any material, usually a shale, which when drilled adheres to the bit and stem of the drilling tools.
- Bottoms.--Underclay generally found beneath a coal; the bottom or floor of a mine entry.
- Chunky.--Breaks into small blocks or cube-shaped pieces.
- Clay rock.--Clay hardened by pressured and/or cementation by some mineral, usually a carbonate or silicate.
- Coal fault.--An irregularity in the coal, especially places where the coal is more or less displaced by fire clay, shale, or sandstone.
- Drift.--Any rock material, such as boulders, till, gravel, sand, or clay, transported by a glacier and deposited by or from the ice or by or in water derived from the melting of the ice.
- Hardpan.--A hard impervious layer composed chiefly of clay and cemented by relative insoluble materials; does not become plastic when mixed with water.
- Jack.--See Blackjack.
- Pan.--Clay of glacial origin; generally contains small pebbles and occasional boulders.
- Pasty.--Smooth, sticky, when used with a rock term.
- Redrock.--Red soft to hard sometimes sandy shale.
- Shell.--Thin and usually hard layer of rock.
- Shelly.--See shell; rock which splits in thin pieces parallel with the bedding surface; a fossiliferous rock.
- Slate.--Hard shale which splits into thin platy fragments, usually black in color.
- Smut.--Soft coal containing much earthy matter.
- Soapstone.--Hard smooth clay or shale, slippery to the touch.
- Softpan.--Hard impervious layer composed chiefly of clay, partially cemented by relative insoluble materials; becomes plastic when mixed with water.
- Steel band.--Reportedly a hard brown dolomitic fresh-water limestone. May also be used in place of the term iron band, which is generally applied to a black or brown, hard silicate or iron carbonate rock that occurs as a zone of concretions from pebble to boulder size or in thin beds.
- Sulfur.--Thin band or layer of pyrite in a coal seam.
- Wash.--Water laid glacial material consisting of sand, silt, and clay with a high percentage of twigs, leaves, and other organic material.
- White top.--White shale or fire clay.

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Table 1.--Record of wells, Clay County, Indiana

Well number: See text for description of well-numbering system.
 Altitude: Altitude of land-surface datum from topographic map.
 Type of well: Dr, drilled; Da, dug; J, jetted.
 Finish: Gp, gravel pack; Op, open end; Oh, open hole; P, perforated casing;
 S, screen.
 Material: C, coal; F, fireclay; G, gravel; L, limestone; S, sand; Sd-sh, sandy limestone; Sd-sb, sandy shale; Sh, shale; Ss, sandstone.
 Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian.
 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. F, flowing well.
 Use: D, domestic; De, destroyed; Dh, drain hole drilled into mine opening; I, industrial; Ir, irrigation; N, not used; O, observation; Ok, oil or gas; P, public supply; S, stock; T, test.
 Remarks: A, fluid chemical analysis in Table 3; E, electric log on file; L, log in Table 2; La, log on file; Lm, log from memory on file; Lr, log from memory in Table 2; S, sample study in Table 2; Ss, sample study on file; W, water-level measurements in Table 4; Dd, 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)	Pithead	Depth to top (feet)	Water-bearing zone				Yield (gpm)	Water level (feet)	Remarks
											Thickness (feet)	Material	Geologic age	Ground-water occurrence			
9/8W-4E1	J. Harl	M. O. Schrader	9-10-55	570	Dr	104	6	28	Oh	63	41	Sh	P	C	---	---	---
481	H. Jackson	Campbell Bros.	8-21-51	611	Dr	151	---	---	Oh	97	54	Sh	P	C	47	13	D, S L, A
501	C. O. Spindler	D. H. Lovelace	12-24-53	600	Dr	1,785	6	43	Oh	---	---	---	---	---	---	---	---
511	O. Lova	M. O. Schrader	12-24-53	580	Dr	69	6	70	Oh	112	1	C	P	C	46	3	D, S L, A
6E1	D. Myers	Ring & Son	9-30-49	579	Dr	1,352	6	80	Oh	233	23	Ss	P	C	60	1.5	Ok, E. Skiles 1, L, E
8M1	H. Schnoffer	Spainhower & Sons	10-3-57	590	Dr	286	6	10	Oh	42	20	Sd-sh	P	---	---	---	---
9J1	H. Collin	Campbell Bros.	1951(?)	606	Dr	62	---	---	Oh	70	---	---	---	---	---	---	---
1581	H. Horn	Ring & Son	1-1-40	647	Dr	480	6	70	Oh	---	---	---	---	---	---	---	---
1591	J. and Z. Nickman	Ring & Son	11-51	530	Dr	70	---	---	Oh	---	---	---	---	---	---	---	---
16H1	P. Faulk	Ring & Son	7-54	545	Dr	46	6	43	Oh	---	---	---	---	---	---	---	---
16P1	M. Brewer	Ring & Son	1-59	555	Dr	241	7	170	Oh	---	---	---	---	---	---	---	---
17H1	T. Drabow	R. C. Page	1958	555	Dr	271	---	---	Oh	41	14	Sd-sh	P	C	45	3.5	D, S L, A
18C1	I. Ewing	V. Hayden	---	555	Dr	135	6	80	Oh	120	15	Ss	P	C	27	3	D, S L, A
18G2	New Hope Baptist Church	Campbell Bros.	1-18-58	550	Dr	122	6	---	Oh	110	9	Sh	P	C	24	4	D, S L, A (partial)
18J1	P. Michael	Ring & Son	1958	540	Dr	137	6	36	Oh	128	37	Ss	P	C	60	1	D, S L, A
18L1	T. Corber	Campbell Bros.	3-1-44	550	Dr	145	6	50	Oh	108	47	Ss	P	C	42	3	D, S L, A
20C1	R. Garber	L. Adkins	12-58	555	Dr	230	7	172	Oh	172	42	S, G	P	C	22	---	---
20D1	G. Negeen	R. C. Page	1-4-48	535	Dr	90	6	46	Oh	76	3	C, Sh	P	C	35	7	D, S L, A
21K1	P. C. Loae	N. D. Knox	11-23-53	545	Dr	100	6	77	Oh	86	3	C, Sh	P	C	35	3.5	D, S L, A
21K2	C. Collins	Spainhower & Sons	1954	565	Dr	126	6	50	Oh	100	3	C, Sh	P	C	35	---	---
21R1	C. Collins	Spainhower & Sons	1954	540	Dr	100	6	50	Oh	---	---	---	---	---	---	---	---
22M1	M. Brothers	Campbell Bros.	7-43	560	Dr	1,724	---	---	Oh	---	---	---	---	---	---	---	---
27J1	P. Duncan	Campbell Bros.	7-29-54	575	Dr	94	6	12	Oh	51	11	G	P	C	22	---	---
28A1	H. Duncan	Spainhower & Sons	10-23-54	525	Dr	62	6	62	Oh	---	---	---	---	---	---	---	---
31D1	O. Ax	Spainhower & Sons	---	525	Dr	62	6	62	Oh	---	---	---	---	---	---	---	---
9/7W-1D1	D. Collins	Spainhower & Sons	10-23-54	550	Dr	82	6	22	Oh	43	20	Sd-sh	P	C	---	---	---
1E1	D. McCullough	V. Hayden	---	560	Dr	125	7	104	Oh	65	10	Ss	P	---	---	---	---
5A1	A. McCullough	Spainhower & Sons	---	560	Dr	260	6	260	Oh	108	10	Ss	P	---	---	---	---
6C1	M. Shields	Spainhower & Sons	6-26-59	600	Dr	65	8	28	Oh	210	22	Sh	P	---	---	---	---
6G1	C. Bodwell	Spainhower & Sons	---	630	Dr	190	8	30	Oh	14	5	Sh	P	---	---	---	---
6G2	R. Bodwell	Spainhower & Sons	6-30-59	630	Dr	110	7	30	Oh	28	35	Ss	P	C	70	1.5	D, S L, A; shale cased out
7C1	O. Scamhorn	Spainhower & Sons	2-14-60	595	Dr	132	6	15	Oh	70	40	Ss	P	---	---	---	---
8L1	Y-landy Grove Church	M. O. Schrader	---	595	Dr	132	6	15	Oh	60	7	C	P	C	32	---	---
9M1	E. and J. Davis	T. & H. Corp.	3-24-58	542	Dr	1,788	---	---	---	---	---	---	---	---	---	---	---
12A1	Z. Stark	Spainhower & Sons	3-23-40	605	Dr	168	7	106	Oh	---	---	---	---	---	---	---	---
14Q1	C. Horton	Layne-Northern Co., Inc.	11-15-54	570	Dr	58	28	43	Gp-5	40	18	S, G	P	C	11	---	---
	City of Jasonville		5-22-52	520	Dr	58	12	58	---	---	---	---	---	---	---	---	---

T. & H. Corp. 1, L.
 M. A. Stojman Oil Co. 1, L.
 L. Dd 25 ft after 8 hr pumping at 250 gpm; screen, 15 ft of 12 in dia, No. 5 shuttler

9/78-1402
10/87- 5M1

Well No.	Owner/Location	Completion Date	Drift	62	20	50	82	Op.S	30	26	S.G	P1	C	10	J57	P	Remarks
1403	do	12-29-51	J	91	24	---	---	---	---	---	S	P1	U	7	---	L	L, A; Dd 15 ft after 7 hr pumping at 357 gpm; screen, 10 ft of 12 in dia, No. 5 shutter
1404	do	1-52	J	75	24	---	---	---	---	---	S.G	P1	U	7	---	L	
1405	do	1-31-52	J	80	24	---	---	---	---	---	S	P1	U	7	---	L	
15K1	Campbell Bros.	3-9-49	Dr	317	6	37	Oh	---	---	---	S	P	U	6	---	L	
16C2	Sutherland Bros.	7-31-57	Dr	304	---	---	---	---	---	---	---	---	---	---	---	D,S	A. Stepmann Oil Co. 1, La
17K1	H. Knight	620	Dr	430	---	---	---	---	---	---	---	---	---	---	---	Og	M. W. Kuhn 1, L, E
17N1	H. R. Christ	580	Dr	370	---	---	---	---	---	---	---	---	---	---	---	Og	L. Logan (1926)
21M1	H. R. Knox	5-29-48	Dr	52	7	20	Oh	---	---	---	S	P	---	---	---	L	L. Logan (1926)
23G1	Layne-Northern Co., Inc.	12-30-51	J	80	21	---	---	---	---	---	S	P	---	---	---	L	
28H1	H. R. Knox	11-46	Dr	96	7	58	Oh	---	---	---	S	P1	C	18	---	L, A	
28K1	Spainhower & Sons	560	Dr	79	7	53	Oh	---	---	---	S	P	C	2	---	L	L. A. I. Lavooren & A. R. Thompson
30C1	C. J. Simpson	9-12-50	Dr	1,990	---	---	---	---	---	---	F	---	---	---	---	Og	L, A
30P1	I. Williams	6-48	Dr	83	7	20	Oh	---	---	---	S	P	---	---	---	D	L, A
31E1	Indiana Department of Conservation	6-26	Dr	160	6	---	---	---	---	---	---	---	---	---	---	O,N	Observation well Clay 1,
31M1	do	3-25-55	Dr	194	6	19	Oh	---	---	---	---	---	---	---	---	Dh	L, A
31R1	I. Cotton	570	Dr	100	6	---	---	---	---	---	S	P	C	40	5	D	L, A
33H1	Layne-Northern Co., Inc.	12-17-51	J	30	24	---	---	---	---	---	---	---	---	---	---	T	L
35E1	do	12-10-51	J	21	24	---	---	---	---	---	---	---	---	---	---	T	L
35F1	M. Stone	7-50	Dr	150	6	82	Oh	---	---	---	---	---	---	---	---	S	L, A
35M1	C. W. Gambell	570	Dr	132	6	104	Oh	---	---	---	S	P	---	---	---	L, A	
35N1	M. L. Bizard	550	Dr	251	6	104	Oh	---	---	---	S	P	---	---	---	L, A	
35O1	Protestant Church	550	Dr	241	6	146	Oh	---	---	---	S	P	---	---	---	L, A	
35P1	F. Ellis	550	Dr	196	6	129	Oh	---	---	---	S	P	---	---	---	L, A	
35Q1	W. Miller	550	Dr	1112	6	107	Oh	---	---	---	S	P	---	---	---	L, A	
35R1	M. Rhodes	8-23-54	Dr	565	6	107	Oh	---	---	---	S	P	---	---	---	L, A	
35T1	Ringo & Son	565	Dr	89	6	88	Oh	---	---	---	S	P	---	---	---	L, A	
3N1	E. Yeagerlehner	11-30-53	Dr	546	6	---	---	---	---	---	S	P	---	---	---	D,S	L; Dd 20 ft pumping at 372 gpm; screen 10 ft, 12 in dia, No. 8 shutter
5E1	Indiana State Highway Department	2-2-55	Dr	67	---	---	---	---	---	---	---	---	---	---	---	T	L
6C1	Ringo & Son	12-46	Dr	107	7	107	Oh	---	---	---	G	P	---	---	---	D,S	L, A
6M1	R. E. Rector	570	Dr	151	6	80	Oh	---	---	---	S	P	C	30	6	L, A	L. A. Lucht & J. Simpson 1, La
6N1	F. Rector	4-53	Dr	107	6	---	---	---	---	---	---	---	---	---	---	Og	L, A
10A1	E. Francis	4-28-53	Dr	1,500	8	35	Oh	---	---	---	---	---	---	---	---	Og	L, A
10B1	M. O. Schender	4-23-54	Dr	300	8	72	Oh	---	---	---	S	P	---	---	---	D,S	L, A
10E1	V. Magennis	12-27-54	Dr	195	6	62	Oh	---	---	---	S	P	---	---	---	L, A	
16F1	K. Yeagerlehner	560	Dr	122	7	62	Oh	---	---	---	S	P	---	---	---	D,S	L, A
16G1	E. Yeagerlehner	560	Dr	138	6	94	Oh	---	---	---	S	P	---	---	---	L, A	
16H1	G. Max	590	Dr	138	6	94	Oh	---	---	---	S	P	---	---	---	L, A	
16J1	M. L. Bizard	7-6-54	Dr	547	---	---	---	---	---	---	---	---	---	---	---	T	L
17D1	Indiana State Highway Department	5-5-54	Dr	35	---	---	---	---	---	---	---	---	---	---	---	T	L
17M1	do	3-9-49	Dr	65	6	---	---	---	---	---	S.G	P1	---	---	---	T	L
18A1	Town of Clay City	4-8-49	Dr	60	12	46	Op.S	---	---	---	S.G	P1	---	---	---	P	L; Dd 20 ft pumping at 372 gpm; screen 10 ft, 12 in dia, No. 8 shutter
18H1	do	550	Dr	82	---	---	---	---	---	---	---	---	---	---	---	P	L; Dd 20 ft pumping at 372 gpm; screen 10 ft, 12 in dia, No. 8 shutter
18E2	do	7-15-49	Dr	65	6	---	---	---	---	---	S.G	P1	---	---	---	T	L
18E3	do	9-14-49	Dr	20	6	---	---	---	---	---	S	P1	---	---	---	T	L
18E4	do	7-22-49	Dr	72	6	70	Oh	---	---	---	S.G	P1	---	---	---	T	L
19D1	J. W. Everwino	11-18-46	Dr	1,875	6	61	Oh	---	---	---	---	---	---	---	---	Og	G. H. Frodeman 1, La
19J1	H. and B. Luther	7-19-46	Dr	1,135	6	---	---	---	---	---	---	---	---	---	---	D	L
19P1	Indiana State Highway Department	5-5-54	Dr	3,200	---	---	---	---	---	---	---	---	---	---	---	Og	G. Rangan 1, L
19R1	do	11-5-54	Dr	145	6	---	---	---	---	---	---	---	---	---	---	B	L
20H1	H. McQuerry	610	Dr	171	8	21	Oh	---	---	---	---	---	---	---	---	D,S	L, A
20L1	Froo Methodist Church	800	Dr	352	8	28	Oh	---	---	---	S	P	C	44	5	N	L, A; well backfilled to 251 ft
20L2	do	600	Dr	252	8	---	---	---	---	---	---	---	---	---	---	N	L
20L3	do	590	Dr	252	6	85	Oh	---	---	---	S	P	---	---	---	N	L
20P1	A. Blair	195(?)	Dr	50	6	26	Oh	---	---	---	---	---	---	---	---	S	L, A
21F1	E. Neisnonger	580	Dr	160	7	110	Oh	---	---	---	---	---	---	---	---	N	L, A
21L1	do	580	Dr	160	7	92	Oh	---	---	---	S	P	---	---	---	D,S	L, A
22E1	St. Baumgartner	10-5-53	Dr	97	6	54	Oh	---	---	---	S	P	---	---	---	D,S	L, A
22H1	St. Peter's German Reform Church	9-16-53	Dr	250	8	51	P	---	---	---	S	P	C	20	15	L, A	L, A
22H2	M. L. Bizard	---	Dr	140	6	62	Oh	---	---	---	S	P	---	---	---	P	L, A
22L1	F. Jackson	9-28-54	Dr	62	7	---	---	---	---	---	---	---	---	---	---	D	L, A

Table 1.--Records of wells, Clay 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 No.				
10/6W-28A1	W. Garlot	X. L. Biehard	11-8-54	615	Dr	228	6	83	Oh	200	29	Ss	P	55	5	D, S	L, A
29C1	C. Garrard	Spainhower & Sons		590	Dr	124	6	61	Dh	114	10	Ss	P				L, A
29K1	E. Boyer	X. L. Biehard		570	Dr	52	8	44	Oh	227	27	Ss	P	35	5	S	L, A; drilled into old mine workings
29E2	Clay City High School	Ringo & Son		605	Dr	18	42	125	Oh				P(?)	2		X, K	Observation well Clay J
29M1	K. Owan			610	Dr	86	6	63	Oh	83.3	5	Ss	P	47	5	D	L, A
29N1	P. Klingor	M. L. Biehard		605	Dr	130	6	90	Oh	50	5	Ss	P	47	5	D	L, A
29R1	T. Ron			605	Dr	77	6	23	Oh				P			X, K	
29S1	R. Miller	Ringo & Son	4-47	600	Dr	77	6	22	Oh				P			X, K	
29P1	V. Hayden		1946	600	Dr	255	8	95	Oh	82	3	S, G	P1	50		N	L, well backfilled to 93 ft
30A1	G. Krauchi	X. L. Biehard		575	Dr	90	8	93	P	83	2	S, G	P1	35		P	L, observation well Clay 4,
30A2				575	Dr	85	8	65	Oh	83.5	2.5	S, G	P	15	20	O	L, observation well Clay 4,
30B1	Town of Clay City		1948	570	Dr	86	10	20	Oh				P			O	L, observation well Clay 4,
30B2				576	Dr		8	86					P			O	L, observation well Clay 4,
30B3	R. E. Peaty	Campbell Bros.	1951(?)	570	Dr	126			Oh				P			D, S	L, A
30D1	G. Pfister			575	Dr	82	6	39	Oh	72	10	Ss-sh	P			D, S	L, A
30D2	J. Fritz			560	Dr	240	6	80	Oh	123	23	Ss-sh	P1			D, S	L, (partial), A
30E1	John Gilman Lumber Co.	V. Hayden	1946	580	Dr	82	6	82	Oh	80	2	G	P1			N	L, A
30E2	O. Schlogel	Campbell Bros.		580	Dr	90			Oh				P			D	L, A
30H1	C. Weber	C. Ringo	1919	595	Dr	47			Oh				P			D	L, A
30J1	Marathon Service Sta.	H. R. Knox	12-9-47	580	Dr	108	8	35	Oh	81	3	C	P	35	16	N	L, A
30J2	Assembly of God Church		5-48	590	Dr	111	7	56	Oh	87	5	Ss-18	P			D	L, A
30J3	H. Walters	Campbell Bros.		605	Dr	80	6	50	Oh	107	4	C	P			N	L, A
31C1	H. Van Horn	H. Ellis	10-8-53	640	Dr	190	6		Oh	144	9	C, Sh	P	70	20	D, S	L, A
31F1	C. Gallespio	Campbell Bros.		610	Dr	251	6	40	Oh	175	3.5	C	P			N	L, A
31K1	H. Cromwell		1951(?)	670	Dr	100	6	38	Oh	60.5	10.5	Sh	P			D	L, A
31L1	G. Wilkes and others	M. O. Schrader	1-24-57	650	Dr	237	8	80	Oh	153	6	Sh	P	10	10	D	L, A
31P1	F. L. Biehard			635	Dr	162	6	80	Oh	171	14	Ss	P	70	6	D	L, A
32K1	J. Hyatt	Spainhower & Sons	9-19-50	610	Dr	200	6	98	Oh	171	14	Ss	P	44	1	D	L, A
33N1	L. Garlitz			590	Dr	86			Oh				P			T	L, Ashley (1958)
33P1	Buzzard			600	Dr	71			Oh	25	2	S, G	P1	4	15	N	L, Ashley (1958)
10/7W-1D1	A. D. Loderwood	Ringo & Son	11-51	530	Dr	29	1	29	S				P			N	L, observation well Clay 4,
1D2		Spainhower & Sons	12-16-57	550	Dr	142	6	116	Oh	131	8	Ss	P	8	20	D, S	L, A
1J1	A. Reina	Ringo & Son	6-14-47	560	Dr	74	7	70	P	68	6	G	P1	12	1.5	D, S	L, A
2K1	J. Dennis	L. Adkins	10-12-40	545	Dr	68		88	Oh	68		G	P1			D, S	L, A
2L1				554	Dr	1,559			Oh				P			Ox	L, Hill 1; Ls
3A1	F. Dietz	Ringo & Son	7-11-42	570	Dr	125	6	64	Oh	120	5	Sh	P	22	7	D	L, A
3G1	L. L. Medesitt		5-27-57	584	Dr	1,623			Oh				P			Ox	A. H. Kelsner 1; Ls
3E1	J. McCullough	Spainhower & Sons	8-26-59	580	Dr	1,522	8	32	Oh	31	28	Ss	P	16	2	N	L, A
3B1	R. Mendenhall	Ringo & Son	12-56	575	Dr	86	6	50	Oh	81		Ss	P	19	10	D, S	L, A
5J1	J. Collins	L. Adkins	4-16-25	553	Dr	81	0	50	Oh				P			Ox	G. F. Restor 1; Ls
6D1	J. Ross		10-9-53	553	Dr	1,080			Oh				P			Ox	G. F. Restor 1; Ls
6A1	E. Seymore	L. Adkins	4-28-47	580	Dr	1,100	6	32	Oh	33	60	Ss	P			D, S	L, A
9D1	F. Gard		4-28-25	565	Dr	100	6	32	Oh	57	43	Ss	P			D, S	L, A
9D2			6-7-58	571	Dr	2,807			Oh				P			Ox	Kelsner Oil Co. 1; Ls
11A1	H. Seymour	Ringo & Son	0-19	550	Dr	45	6	42	Oh	41	2	G	P1	17	8	D, S	L, A
12B1	J. Riddell		2-21-41	550	Dr	32	3	32	P	21	11	S, G	P1	15	15	D, S	L, A; Dd 5 ft pumping at 15 gpm
12B2			12-9-53	550	Dr	100	6	100	Oh	65	5	S, G	P1	17	15	D, S	L, A
17Q1	G. Jackson	L. Adkins	7-15-17	565	Dr	85	8	68	Oh	22	29	Ss	P	38	3.5	D	L, A
30S1	A. Cooperider	Spainhower & Sons	8-14-54	575	Dr	210	8	68	Oh	129	47	Ss-sh	P	38	3.5	D	L, A

Table 1.--Records of wells, Clay 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)	Fluid	Water-bearing zone				Water level (feet)	Yield (gpm)	Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Geologic age				
11/6W-11D1	M. Crafton	Ringo & Son	6-12-50	635	Dr	83	6	44	Oh	85	4	Ss	P	15	D	L	
1101	C. Moon	do	7-29	625	Dr	93	6	42	Oh	87	6	Ss	P	52	I	L	Dd 5 ft pumping at 20 gpm
11N1	C. Brown	L. Adkins	3-17-51	610	Dr	90	6	77	Oh	78	8	Ss	P	---	L	A	
1361	J. Rubshly	do	4-2-51	585	Dr	173	6	39	Oh	100	10	Ss	M(?)	---	D	A	
14G1	C. Emsart	M. O. Schrader	10-21-57	620	Dr	245	6	31	Oh	---	---	---	---	---	D,S	L, A	
14Q1	H. Thomas	L. Adkins	2-7-56	390	Dr	100	6	65	P, Oh	28	8	Ss	P	---	D,S	L, A	
15D1	A. Hart	Spainhower & Sons	10-9-54	600	Dr	186	6	48	Oh	180	28	Ss	P	25	D,S	L, A	
16E1	G. Moss	do	600	600	Dr	70	6	---	---	---	---	---	---	---	T	L	Ashley (1898)
16N1	F. Rockhill	Campbell Bros.	1931(?)	680	Dr	42	6	11	Oh	49-3	1.5	Ss	P	---	D	L	
16N2	C. Futch	do	680	680	Dr	42	6	---	Oh	---	---	---	---	---	Do	L	
17C1	R. Miller	Ringo & Son	10-15-50	610	Dr	100	7	55	Oh	150	10	Ss	P	44	D	L, A	
17C2	L. Miller	Spainhower & Sons	4-56	600	Dr	100	7	82	Oh	80	14	Ss	P	5	D	L, A	
17C3	M. Backfish	Campbell Bros.	10-11-57	600	Dr	170	6	60	Oh	153	17	Ss	P	42	D	L, A	
17E1	R. W. Moss	C. Ringo	3-1-09	645	Dr	400	6	264	P	90	10	Ss	P	---	D,S	L, A	well backfilled to 264 ft
17F1	E. Houk	Ringo & Son	10-9-50	650	Dr	120	6	63	Oh	87	11	Ss	P	46	D	L	
17N1	W. O. Tilley	C. Ringo	1911	610	Dr	58	---	32	Oh	89	2	Ss	P	2.5	D	L	
18A1	H. Mann	L. Adkins	7-1-42	580	Dr	85	6	85	P	53	2	Ss	P	---	D	L	
18A2	Rockhill Gas Station	Ringo & Son	10-40	580	Dr	100	6	44	Oh	96	36	Ss	P	22	P	L, A	
18B1	C. W. Rapper	Campbell Bros.	9-8-59	585	Dr	103	6	53	Oh	92	36	Ss	P	20	D	L, A	
18N1	H. Mann	C. Ringo	1919	585	Dr	80	6	60	Oh	90	10	Ss	P	---	M	L, A	
18N1	F. Forstinger	M. O. Schrader	2-10-59	580	Dr	80	6	34	Oh	---	---	---	---	---	K	L	
20N1	L. A. Dowd	C. Ringo	1911	595	Dr	94	---	47	Oh	30.5	13.5	Ss	P	---	K	L	
20P1	R. Nicason	do	8-11	590	Dr	88	---	26	Oh	87	1	S	Pl	34	D,S	L, A	water level 36.7 ft, 4-2-58
21D1	T. Rockhill	Ringo & Son	5-27-40	680	Dr	134	6	72	Oh	223	14	Ss	M(?)	48	D	L	
21E1	F. Dietz	do	6-49	600	Dr	239	6	61	P	30	2	S, G	Pl	55	Do	L	
21P1	do	do	7-23-42	575	Dr	61	6	62	S	53	7	S, G	Pl	12	S	L	
21P2	do	do	7-53	575	Dr	62	6	62	S	53	7	S, G	Pl	12	S	L	Dd 30 ft pumping at 25 gpm; screen, 6 ft of 8 in dia
21P3	do	do	3-57	575	Dr	70	6	70	S	60	4	S, G	Pl	---	S	L, A	
22H1	G. Moon	do	6-49	645	Dr	71	6	18	Oh	84	1	Ss	P	11	D,S	L, A	
22H1	G. McKinney	Spainhower & Sons	7-5	600	Dr	105	6	63	Oh	94	11	Sd-sh	P	42	D	L	
23N1	J. Fisher	Edison & Gwaltney	4-6-53	624	Dr	1,496	---	---	---	---	---	---	---	---	Oh	L, A	P. Lucht 1; L
23P1	do	Campbell Bros.	---	600	Dr	71	---	---	---	---	---	---	---	---	D,S	L, A	
24H1	J. Rumbly	Ringo & Son	7-54	610	Dr	105	6	44	Oh	97	6	Ss	M(?)	28	S	L, A	
26E1	Clay County Home	do	7-14	650	Dr	148	8	10	Oh	127.5	18	Ss	M(?)	---	X	L, A	water level 40.0 ft, 4-2-58
26E2	do	do	7-10	650	Dr	108	---	---	---	---	---	---	---	---	X	L, A	
26N3	do	do	7-14	580	Dr	99	6	22	Oh	35	1	C	P	7	D	L	
27D1	P. Waldbaurer	Ringo & Son	10-3-54	580	Dr	140	6	46	Oh	65	35	Ss	P	---	X	L, A	wall dry, 4-2-58
27G1	K. Fatch	M. O. Schrader	10-10-56	585	Dr	105	5	105	P	---	---	---	---	---	D	L	
28D1	F. Dietz	L. Adkins	3-28-41	575	Dr	105	5	105	P	---	---	---	---	---	X	L, A	wall dry, 4-2-58
29A1	do	Ringo & Son	5-22-54	570	Dr	237	6	65	Oh	139	10	Ss	P	15	S	L	
29J1	do	do	---	570	Dr	163	6	55	Oh	77	5	Ss	P	12	S	L	
29M1	T. Collins	Spainhower & Sons	---	570	Dr	135	6	108	Oh	88	7	Ss	P	---	D	L, A	
31C1	N. Campbell	Campbell Bros.	---	600	Dr	133	6	18	Oh	115	20	Ss	P	---	S	L, A	
31P1	S. Quackenbush	Ringo & Son	9-52	600	Dr	85	6	85	S	76	10	S, G	Pl	31	D,S	L, A	Dd 4 ft pumping at 10 gpm; screen, 7 ft of 5 in dia
32B1	J. Fischer	do	12-54	560	Dr	121	6	100	Oh	107	4	S, G	Pl	13	D,S	L, A	Dd 47 ft pumping at 10 gpm
32D1	R. Proderman	L. Adkins	3-8-42	575	Dr	110	6	116	Oh	90	26	S	Pl	---	D	L	
32D2	do	Spainhower & Sons	6-55	575	Dr	125	6	106	Oh	111	14	Ss	P	---	D	L	
32E1	W. Brown	C. Ringo	6-17-07	583	Dr	436	7	128	Oh	---	---	---	---	---	D	L	

Table 1.--Records of wells, Clay 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						Remarks	
										Depth to top (feet)	Thickness (feet)	Material	Geologic age	Ground-water occurrence	Water level (feet)		Yield (gpm)
11/7W-2562	G. Perringer	Ringo & Son	8-56	580	Dr	92	6	68	Oh	86	3	C	C	16	0	D	La; Dd 34 ft pumping at 9 gpm
25H1	United Brethren Church	do	6-50	580	Dr	80	6	57	Oh	83	3	C	C	14	10	P	L; Dd 62 ft pumping at 20 gpm
25J1	Salline City Fair Grounds	do	5-27-37	575	Dr	88	6	73	Oh	82	2	C	C	8	20	P	L
26A1	C. B. Nicolson	Spainhower & Sons	4-56	505	Dr	110	7	107	Oh					20	10	N	L
26D1	C. Hart	L. Adkins	7-21-53	613	Dr	1,547	6	87	Oh	143	2	C	P			Ok	C. Hart 2; L
26S1	C. Dieks	L. Adkins	7-11-54	590	Dr	145	6	6	Oh	51	3	C	P	12		D,S	L, A
26P1	A. Jeffers	Ringo & Son	7-54	570	Dr	54	6	54	Oh	47	7	C	P	12		D	L, A
26P2	do	L. Adkins	8-8-43	570	Dr	54	6	54	Oh					12		D	L, A
26R1	C. B. Nicolson	do	8-25-41	560	Dr	65	4	48	P					30	5	S	L
27A1	E. A. Doud	C. Ringo	1-22	630	Dr	114	6	35	Oh					30	5	I	L
27A2	C. Hart	L. Adkins	7-10-42	630	Dr	225	6	64	Oh	72	5	C, Sh	P	7	10	D, S	L, A
27C1	J. W. Hastings	Ringo & Son	5-19	625	Dr	80	6	29	Oh	77	5	S, G	P	54	10	D, S	L, A
27D1	H. Palmer	do	7-9-54	620	Dr	82	6	82	Oh	45	25	S4	P	25	2	D, S	L, A
28Q1	E. Shaver	Spainhower & Sons	12-58	620	Dr	70	7	39	Oh	45	25	S4	P	25	2	D, S	L, A
28D1	C. L. Robertson	Ringo & Son	9-1-54	610	Dr	201	6	89	Oh	95	17	S4	P	40	1	D	L, A
29H1	M. Warkon	Spainhower & Sons	9-2-59	620	Dr	113	6	93	Oh							Ok	Logan (1928); L
20K1	J. Rocco	do	2-18-54	570	Dr	2,855	6	61	Oh	61	34	S4	P	28	7.5	D, S	L, A
22A1	D. Morgan	H. Willis	7-25-40	600	Dr	105	6	51	Oh	96	8	S4	P			D, S	L, A
22H1	E. McCullough	L. Adkins	12-21-58	583	Dr	48	8	41	Oh							Ok	K. Kuhn and D. Jones 1; S
23D1	R. W. Mosemitt	T. & H. Corp.	9-18-57	592	Dr	1,670			Oh							Ok	T. & H. Corp. 1; L
23M1	E. and F. McCullough	do	12-22-56	613	Dr	1,630			Oh							Ok	G. Rector 1; L
24K1	K. Spahn	L. Adkins	1943	610	Dr	235	0	90	Oh	32	2	S, G	P			D, S	L, A
25Q1	Zion Church	do	8-3-44	550	Dr	32	6	32	P	62	5	S, G	P			D, S	L, A
25R1	E. McCullough	do	7-28-43	550	Dr	97	6	50	P	105	16	S4	P			D, S	L, A
25S1	W. McCullough	do	8-27-41	590	Dr	120	6	30	Oh	108	7	S4	P			D, S	L, A
25M1	R. Mosemitt	do	2-18-44	570	Dr	119	6	30	Oh	63	1	C	P			Ok	W. A. Sago and others 1; L
25R2	E. Mosemitt	do	6-5-47	555	Dr	67	7	30	Oh							Ok	W. A. Sago and others 1; L
26B1	C. Shary	Ringo & Son	9-15-58	634	Dr	1,488			Oh	37	4	L4	M			D, S	L, A
12/5W-19C1	C. and Z. Donahio	do	3-5-55	560	Dr	41	6	51	Oh							D, S	L, A
20H1	W. Rodows	Ringo & Son	4-19-22	670	Dr	107	6	51	Oh							D, S	L, A
20N1	L. Kidd	C. Ringo	8-22-58	640	Dr	85	6	102	P	82	7	S, G	P	43	10	D, S	L, A; Dd 17 ft pumping 10 gpm
21L1	Kaitan	do	1945	635	Dr	102	6	70	Oh	70	15	S4	P	11	40	D	L, A
28L1	R. Sonnenfeld	do	1945	635	Dr	70	6	40	Oh	40	15	S4	P	8	5	D	L, A
28P1	F. Ballardick	K. Stall	9-54	580	Dr	55	6	21	Oh	22	27	S4	P	8	5	D	L, A
30J1	D. Stigler	do	9-54	670	Dr	80	6	21	Oh	103	31	S4	P	52	20	D, S	L, A; Dd 10 ft after 4 hr pumping at 20 gpm
31F1	L. Plunkett	Ringo & Son	9-10-59	620	Dr	135	6	104	Oh							D, S	L, A
32J1	A. Meyer	A. D. Schrader	4-40	670	Dr	75	6	37	Oh							P	L, A
33R1	Girl Scout Camp	Ringo & Son	8-65	665	Dr	162	6	162	Oh	162	6	G	P	21	17	P	L, A
34B1	J. Kaitman	W. Stull	8-40	680	Dr	115	6	115	Oh	95	20	S, G	P	20	6	D	L, A
34E2	F. Steiner	Ringo & Son	8-40	680	Dr	107	6	107	Oh	107	20	S, G	P	25	10	D	L, A; Dd 20 ft pumping at 10 gpm
34D3	L. Beary	W. Stull	6-45	640	Dr	85	6	85	Oh							D	L, A
34C1	D. Mustard	do	6-45	640	Dr	85	6	85	Oh							D	L, A
34F1	F. Spallbrink	do	7-10	690	Dr	70	6	70	Oh	177	23	S4	P	114	3.5	P	L, A
34P1	Zion Church of Christ	A. O. Schrader	7-11-59	700	Dr	200	6	18	Oh	30	1	S, G	P	30	3.5	D	L, A
12/6W-1Q1	W. E. Bornhoebr	Ringo & Son	4-20-48	610	Dr	50	6	38	Oh	43	5	S4	P	24	3	D	L, A
2N1	G. Rabb	do	12-1-46	645	Dr	166	6	60	Oh	125	22	S4	P	21	8	D	L, A
2M1	G. Rabb	do	12-1-50	645	Dr	138	6	41	Oh	43	5	S4	P	24	3	D	L, A
3R1	F. A. Price	Ringo & Son	8-31-53	670	Dr	149	6	100	Oh	127	20	S4	P	21	8	D	L, A
5D1	L. Duregger	do	11-20-54	650	Dr	34	8	30	Oh	122	10	S4	P	20	2	S	L, A
5Q1	G. K. Ball	do	12-15-58	655	Dr	150	6	81	Oh	85	31	S4	P	20	2	S	L, A
5R1	C. E. Rollings	do	2-12-48	670	Dr	133	6	88	Oh	170	95	S4	P	66	2.5	D	L, A
6A1	L. Duregger	Ringo & Son	3-10-55	660	Dr	205	6	108	Oh	142	28	S4	P	111	10	D, S	L, A; Dd 24 ft pumping at 10 gpm
7D1	J. B. Timberman	A. O. Schrader	2-57	600	Dr	152	6	95	Oh							L, A	
7F1	S. Kivchnor	do	5-26-50	655	Dr	170	6	75	Oh							D, S	L, A

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Well No.	Owner	Depth	Drill	Flow	Capacity	Notes
111	G. Green	2-53	880	Dr	635	9-17-53
112	R. O'Hara	8-7-49	465	Dr	665	1-15-54
113	T. Darr	9-4-56	680	Dr	650	12-13-54
114	W. Trout	10-9-57	640	Dr	640	7-20-59
115	O. Parrot	10-1-53	680	Dr	670	8-24-59
116	H. O. Mix	4-25-52	680	Dr	660	
117	H. O. Mennitt	3-12-55	680	Dr	680	
118	A. Nagle	3-11-54	680	Dr	680	
119	F. Skilton	10-6-00	640	Dr	640	
120	R. Trout	0-15-50	650	Dr	640	
121	K. Hyatt	0-11-54	670	Dr	670	
122	L. Girton	19-46	645	Dr	645	
123	R. Fritz	7-26-54	630	Dr	630	
124	A. F. Stough	4-6-57	655	Dr	655	
125	Union E.U.B. Church	7-26-54	640	Dr	640	
126	H. Bell	13-4-57	635	Dr	635	
127	R. McDonald	7-3-57	600	Dr	600	
128	Frankfort Rendering Co.	10-24-59	640	Dr	640	
129	W. A. Torbert	0-21-54	635	Dr	635	
130	E. Marren	2-24-54	635	Dr	635	
131	W. Hatcliff	8-26-45	645	Dr	645	
132	L. E. Frost	10-53	675	Dr	675	
133	Jackson Township School	4-17-58	680	Dr	680	
134	A. Bledsoe	6-56	650	Dr	650	
135	W. J. Woolf	8-47	670	Dr	670	
136	C. Kellen	2-10-54	630	Dr	630	
137	A. Clark		630	Dr	630	
138	J. Hoffman		620	Dr	620	
139	L. Stigler		620	Dr	620	
140	J. Stearley		620	Dr	620	
141	A. Connatt		620	Dr	620	
142	R. Ewart		620	Dr	620	
143	W. Slack		620	Dr	620	
144	F. Drako		620	Dr	620	
145	M. Lowe		620	Dr	620	
146	T. Talbot		620	Dr	620	
147	D. Walker		620	Dr	620	
148	Loughmiller		620	Dr	620	
149	A. Myerh		620	Dr	620	
150	M. K. Knust		620	Dr	620	
151	R. C. Ewart		620	Dr	620	
152	R. Boyce		620	Dr	620	
153	L. Sulbort		620	Dr	620	
154	H. Bucklew		620	Dr	620	
155	J. Stearley		655	Dr	655	
156	R. Stearley		645	Dr	645	
157	C. Koehler		660	Dr	660	
158	Campbell Bros.		660	Dr	660	
159	Ringo & Son		680	Dr	680	
160	P. Atkinson		640	Dr	640	
161	J. Ringo		680	Dr	680	
162	H. Ringo		675	Dr	675	
163	R. Cuthall		685	Dr	685	
164	W. Lautenschlager		640	Dr	640	
165	W. F. Stopman		650	Dr	650	
166	Clay Products Co., Inc.		630	Dr	630	
167	D. Aeling		665	Dr	665	

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

Table with 22 columns: 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, Depth to top (feet), Thickness (feet), Material, Geologic age, Ground-water occurrence, Water level (feet), Yield (gpm), Use, Remarks.

Table 1.--Records of wells, Clay 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	Depth to top (feet)	Thickness (feet)	Water-bearing zone			Water level (feet)	Yield (gpm)	Remarks
												Material	Geologic age	Ground-water occurrence			
12/7w-1211	G. Koerber	Ringo & Son	6-55	610	Dr	140	6	46	Oh	125	15	Ss	P	C	89	6	L; D; Dd 26 ft pumping @ 8 gpm
1212	do	do	6-55	610	Dr	160	6	74	Oh	132	28	Ss	P	C	89	6	L; A
1213	L. Clifton	Campbell Bros.	6-55	615	Dr	215	6	82	Oh	105	39	Ss	P	C	---	---	L; A
1214	R. Williams	do	---	630	Dr	218	6	70	Oh	105	113	Ss	P	C	---	---	L; A
1212	J. Williams	do	---	630	Dr	75	6	55	Oh	58	7	Ss-sh	P	C	---	---	L; A
1311	E. Holly	C. Ringo	8-8-13	640	Dr	166	6	86	Oh	158	8	Ss	P	C	---	---	L; A (partial); A; well deepened 3-52
1312	R. Hudson	Campbell Bros.	---	645	Dr	198	6	---	Oh	---	---	---	P	C	---	---	L; A
13C1	A. Battersman	Ringo & Son	10-46	650	Dr	163	6	58	Oh	102	55	Ss-sh	P	C	---	---	L; A
13C2	T. Shanks	Campbell Bros.	6-30-51	640	Dr	218	5	102	Oh	188	30	Ss	P	C	106	4-8	L; A
13H1	F. J. Panz	Ringo & Son	5-2-41	635	Dr	160	6	62	Oh	150	8	Ss	P	C	32	1.5	L; A; Dd 80 ft pumping at 5 gpm
14D1	L. Knappf	do	8-28-59	660	Dr	146	6	115	Oh	115	2	F	P	C	41	6	L; Dd 10 ft pumping at 5 gpm
14R1	F. M. Allen	H. O. Schrader	11-12-53	650	Dr	85	6	35	Oh	---	---	---	P	C	---	---	L; Ashley (1898)
15A1	S. Knappf	Campbell Bros.	1-15-52	660	Dr	165	6	111	Oh	123.5	4.5	Ss-sh	P	C	28	5	L; Dd 10 ft pumping at 5 gpm
15N1	Keiler	do	---	660	Dr	50	---	---	Oh	80	8	S; G	P1	C	30	5	L; Ashley (1898)
16B1	K. Barns	Ringo & Son	11-46	650	Dr	88	---	---	Oh	337	21	Ss	P	C	---	---	L; A
16B2	Staubton High School	C. Ringo	---	645	Dr	98	---	---	Oh	266	5	Ss	P	C	80	10	L; A
16E1	do	do	---	645	Dr	324	6	230	Oh	278	43	Ss	P	C	---	---	L; A
16B4	Town of Staunton	do	---	645	Dr	245	6	85	Oh	220	25	Ss	P	C	---	---	L; A
16C1	L. Gillette	L. Atkins	7-47	635	Dr	70	6	108	Oh	---	---	---	P1	C	---	---	L; A "dry hole"
16C2	do	do	2-40	635	Dr	211	6	75	Oh	80	1	C	P	C	---	---	L; A
16P1	B. Layton	M. O. Schrader	9-27-54	620	Dr	94	6	64	Oh	87	6	C	P	C	45	10	L; A
16Q1	R. C. Ardell	do	7-28-54	650	Dr	105	6	84	Oh	217	85	Ss	P	C	133	70	L; Dd 94 ft pumping at 70 gpm
16Q2	Town of Staunton	Layne-Northorn Co., Inc	1-8-56	660	Dr	380	6	219	Oh	503	16	Ss, Sh	P	C	---	---	L; A
16H1	P. Pearson	Ringo & Son	1954	655	Dr	123	6	90	P, Oh	314	57	Ss, Sh	P	C	---	---	L; A
16K1	D. Jaganyi	do	11-30-46	650	Dr	246	6	51	Oh	74	1	S; G	P1	C	---	---	L; A
16K2	E. Rouschlein	do	11-14-46	630	Dr	78	6	48	Oh	226	20	Ss	P	C	---	---	L; A
16Q1	H. Nelson	do	---	660	Dr	85	6	---	Oh	66	1	C	P	C	29	5	L; A
17A1	Mauve Collieries Co.	do	---	660	Dr	439	6	---	Oh	88	2	C	P	C	---	---	L; A
18L1	M. Profit	do	6-51	600	Dr	50	---	---	Oh	---	---	---	P	C	---	---	L; A
18C1	L. Fagg	do	12-27-56	610	Dr	132	6	79	Oh	---	---	---	P	C	11	7.5	L; A; Dd 16 ft pumping at 7 gpm; screen, 5 ft of G in dia
19R1	H. Harrison	Ringo & Son	12-51	635	Dr	37	6	37	S	29	8	S; G	P1	C	---	---	L; A; Dd 16 ft pumping at 7 gpm; screen, 5 ft of G in dia
21C1	Ayrshire Collieries Corp.	T. K. H. Drilling Co.	9-26-50	686	Dr	1,572	---	---	---	---	---	---	---	---	---	---	Ayrshire Collieries Corp. 1;
2211	do	Ringo & Son	4-12-11	630	Dr	50	6	42	Oh	84	2	C	P	C	---	---	L; A
2212	do	do	3-23-11	650	Dr	125	8	56	P, Oh	32	2	S; G	P1	C	---	---	L; A
24J1	Quality Coal Corp.	do	9-10-40	630	Dr	184	6	74	Oh	86	1	C	P	C	---	---	L; A
25L1	D. Moore	C. Ringo	1907	660	Dr	84	6	5	Oh	63	1	S; G	P1	C	---	---	L; A
27J1	H. Brown	Ringo & Son	6-6-54	660	Dr	146	6	60	Oh	---	---	---	P	C	31	0	L; A
27R1	R. Brown	do	6-6-54	650	Dr	262	6	155	Oh	233	34	Ss	P	C	120	10	L; A; Dd 94 ft pumping at 10 gpm
28R1	Ayrshire Collieries Corp.	C. Ringo	9-5-58	635	Dr	85	6	46	Oh	70	5	Ss	P	C	53	1.5	L; A
28R1	do	do	1908	650	Dr	107	4	28	Oh	---	---	---	P	C	28	4	L; A
29C1	C. Gard	Ringo & Son	1-55	660	Dr	64	6	48	P, Oh	45	2	C	P	C	---	---	L; A
29E1	C. Zuknoff	do	11-55	650	Dr	85	6	72	Oh	72	10	Ss	P	C	22	5	L; A
30D1	E. W. Bidman	K. O. Schrader	7-28-55	600	Dr	50	6	50	P	48	2	S; G	P1	C	---	---	L; A
30W1	D. L. Fagg	do	8-25-59	600	Dr	58	6	58	P	53	4	S; G	P1	C	22	10	L; A; Dd 10 ft after 4 hr drilling at 10 gpm

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Well ID	Owner/Company	Date	Dr	123	J	Ls	P	C	14	7	D	A	Notes
301	M. Brown	10-47	830	130							D	L, A	
311A	M. O. Schrader	10-14-53	530	125						12	D	L, A	
311B	North Union E.U.B. Church	10-25-55	530	162						3.5	P	L, A	
3192	F. Nufean	7-54	535	39	1	S, G	P	C	16	8	D	L, A	
321	F. D'arcy	4-30-45	550	120							D	L, A	
331A	H. Reeshelein	1954	590	84						4	D, S	L, A	
331B	L. Adkins	1-14-47	575	88							D, S	L, A	
341	V. Dierdorf	7-53	550	181						2.5	D, S	L, A	
342	F. Reeshelein	1955	580	88	5	C	P	C	24	12	D	L, A	
343	H. Butt	12-19-29	550	3							D	L, A	Logan (1931); L
344	C. Butt	6-14	580	123							Og	L, A	
350	G. Kitchner	3-14	530	110						2	N	L	L; Dd 56 ft pumping at 16 gpm
351	C. Brown	10-26-50	910	90	2	S, G	P	C	14	16	D	L, A	Observation well Clay 5, W
13/8W-281	D. Chavis		766	52							O	L	L; water level 27.35 ft,
	L. Adkins	12-5-45	753	60	1	G	PI	C	13		S	L	7-23-57
281	M. O. Schrader	9-12-53	741	197						1.5	Og	L, A	A; well deepened
311	L. Adkins	11-17-45	750	148							D	L, A	L; water level 27.35 ft,
331	Jacob Pell	11-29-52	740	110	30	Se	P			3	D	L, A	
411	Joseph Pell	9-11-54	715	111	6	Ss	P			6	D, S	L, A	
481	R. Mercer	9-48	705	80	17	Sd-sh	P	C	25	1	D	L, A	
501	Quality Coal Corp.	10-52	890	173	22	Se	P	C	87	4	N	L	
511	L. Phipps	11-29-57	890	180	6	Sh	P	C		6	D	L, A	
511	R. Bradshaw	10-6-54	890	188	18	Se	P			4	D	L, A	
511	A. Dowson	12-4-54	890	167	6	Sa	P			9	D	L, A	
511	C. Ringo	10-22	890	27	27	S, G	PI				D	L, A	
511	M. O. Schrader	10-18-57	885	125	35	Se	P	C	46	7	D	L, A	
511	C. Ringo	5-3-57	890	175	6	Se	P	C		8	D	L, A	
511	C. Ringo	12-2-57	885	155	6	Se	P	C		10	D	L, A	
511	C. Ringo	8-30	885	155	6	Se	P	C		17	D	L, A	
511	C. Ringo	3-31	890	57	34	Ss	P	C		10	D	L, A	
511	C. Ringo	10-29-56	875	152	8	Se	P			2	D	L, A	
511	R. Taylor	9-17-56	870	80	6	Se	P			2	D	L, A	
511	C. Z. Mullenik	5-24-55	880	105	6	Se	P			8	D	L, A	
511	M. F. Lovell	12-5-59	880	162	8	Se	PI	C	36	8	D	L, A	
511	M. J. Schrader	8-28-59	885	70	11	S, G	PI	C	38	8	D	L, A	L; water level 53.6 ft, 7-23-57
511	M. O. Schrader	9-4-52	880	40	20	S, G	P			17	D	L, A	
511	L. Adkins	1-16-46	750	84	10	Se	P				D	L, A	
1371	Dr. Cheek	10-2-46	880	118	9	Ss	P				D	L, A	
1411	N. Metcalf	1-27-46	700	160	24	S	PI				D	L, A	
1511	S. Emsart	7-23-59	880	65			M(?)				D	L, A	
1581	V. Akers	5-36	890	113	1	S, G	P	C	27	4	D	L, A	
1681	C. Kuspf	6-12-57	710	65	10	Se	P			4	D	L, A	
1781	At. Lebanon Church	2-24-56	715	59	5	Se	P	C	42	1.5	D	L, A	
1881	Car-Na-var Club House	6-49	630	213	13	Se	P(?)	C	94	1.5	F	L, A	
1881	E. L. Hannon	12-6-56	955	163	40	Ss	P	C	149	17	S	L, A	
1981	C. L. Walla	11-22-58	705	274	79	Se	P	C	99	10	D	L, A	
2081	K. Gregory	8-10-59	705	202	12	Se	P	C	146	10	D	L, A	
2081	G. Morgan	3-30	710	102	1	C	P	C	57	10	S	L, A	
2081	Mr. Timberman	1955	705	102	6	C	P	C	42	10	S	L, A	
2081	J. O. Coltharp	8-4-55	700	225	6	Se	P				N	L, A	Well deepened
2082		9-2-58	705	33	4	Ls	P			8	D, S	L, A	
2083	A. McKenzie	12-19-50	680	162	15	Se	P	C	20	20	D	L, A	
2281	C. Shoar	12-40	670	93	6	Se	P	C	1.5	6	D	L, A	
2381	R. D. Harrison	8-30-51	575	52	88	Se	P			2	D	L, A	
2381	C. W. Furry	10-1-51	570	85	6	Sh-sh	P			10	D	L, A	
2481	A. C. Thomas	5-51	570	137	6	Sh-sh	P			26	D	L, A	L; water level 53.6 ft, 7-23-57
2481	N. Hunt	10-13-50	700	108	6	Se	P			4	D	L, A	
2581	C. Smith	1948	695	151	6	Se	P			2	D	L, A	
2681	E. Torry	6-11-49	705	36	6	Se	P	C	21	2	D	L, A	
2682	C. Stark	12-20-48	700	40	6	Se	P	C	10	1.5	D	L, A	
2683	C. Winkler	1951	690	34	6	Se	P	C	6	10	D	L, A	
2781	M. French		690	28	3	C	P	C	6	10	D	L, A	

Table 1.--Records of wells, Clay 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	Ground-water occurrence					
3574	City of Brazil	Ringo & Son	10-14	620	Dr	102	8	---	P	26	14	S.G	Pl	--	---	N	L		
3584	---do---	C. Ringo	---	620	Dr	100	4	---	P	10	12	S.G	Pl	--	---	N	L		
3585	---do---	Ringo & Son	5-18	620	Dr	100	8	100	P	20	13	S.G	Pl	U(?)	---	N	L		
3586	---do---	---	---	620	Dr	126	---	---	---	---	---	---	---	---	---	O.H	L		
3587	Brazil Ice Co.	Smith	3-19	620	Dr	102	8	102	S	40	10	G	Pl	C	175	I	A; DM 2 ft after 10 days pump- ing at 175 gpm		
3588	---do---	C. Ringo	---	625	Dr	120	---	---	P	37	17	G	Pl	C	---	N	L		
3589	---do---	---	1913	630	Dr	120	10	30	P	18	22	S.G	Pl	---	---	N	L		
3590	City of Brazil	Ringo & Son	---	620	Dr	50	---	---	P	45	3	C	Pl	---	---	N	L		
3591	---do---	---	---	630	Dr	133	8	133	P	21	30	S.G	Pl	U	---	N	L		
3592	---do---	---	6-16-18	630	Dr	135	---	80	S	29	25	S.G	Pl	---	---	N	L		
3593	---do---	---	7-52	630	Dr	135	6	52	P, Oh	18	14	S.G	Pl	---	---	N	L		
3594	Brazil Ice Co.	C. Ringo	4-13-10	620	Dr	90	---	---	---	---	---	---	---	---	---	N	L		

Table 2.--Selected well logs, Clay County, Indiana

Remarks: T.D., total depth in feet, complete log
or sample log not given; W.B., water bearing

Well 9/6W- 4E1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Open well-----	27	27	
Pennsylvanian system:			
Lower series:			
Sandstone-----	11	38	
Shale, dark-gray-----	16	54	
Sandstone-----	4	58	
Shale, sandy, gray-----	5	63	
Sandstone-----	41	104	W.B

Well 9/6W- 4R1

Type of record: Driller's log. Altitude: About 595 feet

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	23	23	
Pennsylvanian system:			
Lower series:			
Shale, sandy, dark to gray-	37	60	
Coal and jack-----	.5	60.5	
Clay and gray shale-----	2	62.5	
Shale, sandy, gray-----	13.5	76	
Shale, sandy, dark-gray---	2	78	
Sandstone-----	3	81	
Shale, sandy, dark-gray---	6	87	
Shale, sandy, gray-----	4	91	
Shale, sandy, dark-gray---	3	94	
Sandstone-----	1.5	95.5	
Shale, sandy, dark-gray---	1.5	97	
Sandstone-----	54	151	W.B

Well 9/6W- 5J1

Type of record: Driller's log. Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	18	18	
Shale, soft, yellow-----	25	43	Clay (?)
Pennsylvanian system:			
Lower series:			
Shale, gray-----	4	47	
Coal-----	2	49	
Clay-----	1	50	
Shale, sandy, gray-----	14	64	
Sandstone-----	1	65	
Shale, sandy, gray-----	4	69	

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

Well 9/6W- 6F1

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan, gray-----	28	48	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	16	64	
Fire clay, soft-----	8	72	
Shale, sandy, light-----	5	77	
Shale, sandy, gray-----	23	100	
Shale, dark-blue-----	12	112	
Coal-----	1	113	W.B.
Fire clay, hard-----	2	115	
Shale, light-blue-----	15	130	
Shale, sandy, gray-----	10	140	
Shale, dark-gray-----	7	147	
Shale, sandy, gray-----	5	152	

Well 9/6W- 8M1

Type of record: Driller's log. Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	20	20	
Clay, sandy-----	15	35	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	25	60	
Shale-----	10	70	
Shale, sandy-----	5	75	
Sandstone and limestone---	35	110	
Coal-----	3	113	
Sandstone and limestone---	17	130	
Sandstone-----	10	140	
Shale, sandy-----	20	160	
Sandstone-----	75	235	
Mississippian? system:			
Chester? series:			
Shale-----	20	255	
Sandstone and limestone---	25	280	
Limestone-----	20	300	
Shale, red and green-----	20	320	
Sandstone-----	13	333	
Shale-----	27	360	
Sandstone-----	30	390	
Limestone, shaly-----	10	400	T.D. 1,730 ft

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

Well 9/6W- 9J1

Type of record: Driller's log.

Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	13	13	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	9	22	
Shale, gray-----	21	43	
Coal-----	2	45	
Fire clay-----	2	47	
Shale, gray-----	14	61	
Coal-----	1	62	
Shale, gray-----	22	84	
Shale, sandy, gray-----	6	90	
Shale, gray-----	37	127	
Sandstone, gray-----	13	140	
Shale, sandy, gray-----	57	197	
Shale, gray-----	6	203	
Shale, sandy, gray-----	30	233	
Sandstone, white-----	23	256	W.B.

Well 9/6W-15N1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	7	7	
Pennsylvanian system:			
Lower series:			
Sandstone-----	11	18	
Shale, sandy, dark-gray---	7	25	
Sandstone-----	3	28	W.B.
Shale, dark-gray-----	14	42	
Shale, sandy, gray-----	20	62	W.B.

Well 9/6W-15R1

Type of record: Driller's log.

Altitude: About 647 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay, soft, yellow	10	10	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, white---	12	22	
Coal, soft, blue-----	1	23	
Shale, soft, blue-----	8	31	
Coal-----	2	33	
Shale, soft, gray-----	37	70	
Coal-----	3	73	
Shale, sandy, soft, blue-	100	173	

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

Well 9/6W-15R1--Continued

Material	Thick- ness (feet)	Depth. (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, soft, blue-----	37	210	
Sandstone, hard, brown---	10	220	
Mississippian system:			
Chester? series:			
Shale, soft, white-----	18	238	
Limestone, hard, white---	22	260	
Shale, dark-----	12	272	
Red rock-----	7	279	
Slate, dark-----	5	284	
Limestone, caved, light--	12	296	Porous
Limestone, broken, dark--	6	302	
Sandstone, broken, dark-gray	6	308	
Red rock, soft-----	5	313	
Red rock, sandy, firm---	4	317	
Slate, sandy, soft, dark-	8	325	
Limestone, hard, dark----	3	328	
Limestone, soft, dark----	4	332	
Red rock, soft-----	4	336	T.D. 480 ft

Well 9/6W-16N1

Type of record: Driller's log.

Altitude: About 530 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand, dirty, and clay----	5	25	
Softpan, gray, with streaks of sand and gravel-----	7	32	
Hardpan, gray-----	7	39	
Softpan, dark-----	31	70	
Sand and gravel-----	--	70	W.B.

Well 9/6W-16P1

Type of record: Driller's log.

Altitude: About 545 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Clay, yellow-----	18	30	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	4	34	
Coal, trace-----	--	34	
Fire clay (?)-----	4	38	
Shale (?), light-----	6	44	
Shale, sandy, light-----	9	53	
Coal-----	1	54	

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

Well 9/6W-16P1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay (?)-----	3	57	
Shale, sandy, blue-----	15	72	
Shale, sandy, light-----	3	75	
Sandstone, white-----	4	79	
Slate, dark-blue-----	7	86	

Well 9/6W-17N1

Type of record: Driller's log

Altitude: About 555 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Sand-----	4	17	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	5	22	
Shale, blue-----	3	25	
Shale, sandy, brown-----	24	49	
Shale, gray-----	12	61	
Shale, blue-----	9	70	
Shale, dark-gray-----	6	76	
Shale, light-gray-----	10	86	
Shale, dark-gray-----	9	95	
Shale, dark-----	2	97	
Shale, gray-----	2	99	
Shale, sandy, gray-----	7	106	
Sandstone, gray-----	4.5	110.5	
Shale, dark-----	17.5	128	
Limestone and slate-----	2	130	
Sandstone, gray-----	6	136	
Shale, dark-----	2.5	138.5	
Coal-----	.5	139	
Shale, gray-----	7	146	
Sandstone, dark-----	3	149	
Shale, dark-----	4	153	
Sandstone, dark-----	4	157	
Shale, sandy, gray-----	12	169	
Sandstone, gray-----	23	192	
Sandstone, dark-----	10	202	
Shale, gray-----	16	218	
Sandstone, gray-----	4	222	
Shale, gray-----	6	228	
Sandstone, gray-----	9	237	
Shale, sandy-----	4	241	

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

Well 9/6W-18G1

Type of record: Driller's log.

Altitude: About 555 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel-----	8	8	
Hardpan, dark-----	3	11	
Hardpan, gray-----	4	15	
Pennsylvanian system:			
Lower series:			
Fire clay-----	1	16	
Shale, sandy, dark-----	19	35	
Shale, dark-----	6	41	
Shale, sandy, broken-----	14	55	W.B
Shale, dark-----	5	60	
Coal-----	2	62	
Fire clay-----	1	63	
Sandstone-----	23	86	
Slate, dark-----	15	101	
Sandstone, gray-----	26	127	
Sandstone, hard, black----	3	130	
Sandstone, dark-----	22	152	
Sandstone, brown-----	15	167	
Sandstone, gray-----	5	172	
Sandstone, dark-----	43	215	
Shale, dark-----	15	230	
Limestone, sandy, brown---	12	242	
Sandstone, hard, dark----	2	244	
Sandstone-----	21	265	
Limestone-----	6	271	

Well 9/6W-18G2

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and sand-----	20	20	
Pan, blue-----	44	64	
Pennsylvanian system:			
Lower series:			
Sandstone, brown to gray--	11	75	
Conglomerate-----	1	76	"Bad water"
Shale, sandy, medium-hard, gray-----	26	102	
Shale, sandy, gray-----	6	108	
Sandstone-----	18	120	
Sandstone, dark-gray-----	15	135	W.B.

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

Well 9/6W-18L1

Type of record: Driller's log.

Altitude: About 540 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and pan-----	40	40	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	10	50	
Coal-----	2	52	
Clay, grading to gray shale-	17	69	
Shale, medium-hard, gray---	2	71	
Shale, sandy, gray-----	30	101	
Sandstone-----	20	121	
Shale, medium-hard, dark-			
gray-----	7	128	
Sandstone-----	9	137	W.B.

Well 9/6W-20C1

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Open well-----	27	27	
Pennsylvanian system:			
Lower Series:			
Shale, sandy-----	4	31	
Shale, blue-----	19	50	
Rock, black-----	2	52	Limestone (?)
Shale, sandy-----	8	60	
Shale, blue-----	40	100	
Coal-----	2	102	
Shale-----	6	108	
Sandstone-----	37	145	W.B.
Shale, blue-----	--	145	

Well 9/6W-20D1

Type of record: Driller's log.

Altitude: About 555 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Sand-----	8	27	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	2	29	
Shale, gray-----	3	32	
Shale, dark-----	2	34	
Coal-----	1	35	
Shale, gray-----	3	38	
Shale, blue-----	5	43	
Shale, gray-----	19.5	62.5	
Coal-----	1	63.5	
Fire clay-----	4	67.5	
Shale, gray-----	12.5	80	

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

Well 9/6W-20D1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, light-gray-----	13	93	
Sandstone, gray-----	1.5	94.5	
Shale, gray-----	2	96.5	
Shale, blue-----	2	98.5	
Coal-----	.5	99	
Shale, gray-----	11	110	
Shale, dark-----	15.5	125.5	
Sandstone, gray-----	9.5	135	
Shale, blue-----	4.5	139.5	
Shale, gray-----	3.5	143	
Sandstone, gray-----	6	149	
Shale, dark-----	6	155	
Shale, gray-----	17	172	
Sandstone, gray-----	24	196	W.B.
Sandstone, dark-----	18	214	W.B.
Shale, gray-----	6	220	

Well 9/6W-21K1

Type of record: Driller's log.

Altitude: About 535 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	16	16	
Hardpan-----	3	19	
Mud, dark, and gravel-----	57	76	
Sand-----	2	78	W.B.
Gravel-----	2	80	W.B.

Well 9/6W-21K2

Type of record: Driller's log.

Altitude: About 545 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pan-----	30	40	
Pennsylvanian system:			
Lower series:			
Sandstone-----	12	52	
Shale, sandy, gray-----	36	88	
Coal-----	3	91	W.B.
Clay-----	3	94	
Shale, sandy, gray-----	6	100	

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

Well 9/6W-21R1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Old well-----	25	25	
Pennsylvanian system:			
Lower series:			
Shale, dark-----	75	100	
Coal and shale, mixed----	3	103	W.B.
Shale, sandy-----	23	126	

Well 9/6W-22M1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12.5	12.5	
Hardpan-----	10	22.5	
Pan, smooth-----	7.5	30	
Sand and gravel-----	3	33	
Softpan-----	13	46	
Sand and gravel-----	1	47	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	1	48	
Sandstone-----	14	62	
Shale, sandy, gray-----	12.5	74.5	
Coal-----	3.5	78	
Clay-----	1	79	
Shale, sandy, gray-----	8	87	
Sandstone-----	3	90	
Shale, sandy, gray-----	10	100	

Well 9/6W-27J1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Slate-----	36	48	Fissile clay (?)
Sand and gravel-----	10	58	
Pennsylvanian system:			
Lower series:			
Slate-----	29	87	
Sandstone-----	73	160	
Slate-----	37	197	
Sandstone-----	5	202	
Shale-----	35	237	
Mississippian system:			
Chester series:			
Limestone, brown-----	13	250	
Red rock and green shale--	20	270	
Shale-----	48	318	

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

Well 9/6W-27J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system:			
Chester series:			
Sandstone-----	41	359	W.B.
Limestone-----	3	362	
Slate-----	17	379	T.D. 1,670 ft

Well 9/6W-28A1

Type of record: Driller's log		Altitude: About 575 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Softpan-----	3	11	
Hardpan-----	12	23	
Pan, sandy, smooth-----	7.5	30.5	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	44.5	75	
Shale, sandy, dark-gray-----	7	82	
Sandstone-----	4	86	
Shale, sandy, dark-gray-----	8	94	

Well 9/6W-31D1

Type of record: Driller's log.		Altitude: About 525 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	12	12	
Quicksand-----	38	50	
Muck, blue-----	1	51	
Gravel-----	11	62	W.B.

Well 9/7W- 1D1

Type of record: Driller's log.		Altitude: About 550 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	22	22	
Pennsylvanian system:			
Lower series:			
Sandstone-----	6	28	
Shale, gray-----	17	45	
Shale, sandy-----	20	65	W.B.
Sandstone-----	10	75	W.B.
Coal-----	3	78	
Fire clay-----	4	82	
Shale, gray-----	--	82	

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

Well 9/7W- 1E1

Type of record: Driller's log

Altitude: About 560 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	15	15	
Hardpan, yellow-----	28	43	
Pennsylvanian system:			
Lower series:			
Sandstone-----	16	59	
Slate, black-----	3	62	
Shale, dark-----	13	75	
Limestone-----	1	76	
Shale, dark-----	32	108	
Sandstone-----	10	118	W.B.
Shale, dark-----	7	125	

Well 9/7W- 5A1

Type of record: Driller's log.

Altitude: About 560 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Pennsylvanian system:			
Middle series:			
Shale, brown-----	12	30	
Shale, dark-----	28	58	
Limestone, hard-----	5	63	W.B.
Shale, light-----	5	68	
Limestone, sandy-----	20	88	
Shale, gray-----	12	100	
Lower(?) series:			
Shale, sandy-----	18	118	
Shale, gray-----	32	150	Trace of coal at 145 ft
Shale, sandy, dark-----	15	165	
Shale, dark-----	18	183	
Sandstone-----	7	190	
Shale, dark-----	20	210	
Shale, gray-----	22	232	W.B.
Limestone, hard-----	1	233	
Shale, dark-----	27	260	

Well 9/7W- 6C1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	14	14	
Pennsylvanian system:			
Middle series:			
Slate, black-----	5	19	W.B.
Coal, trace-----	--	19	

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

Well 9/7W- 6C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	9	28	
Sandstone-----	35	63	W.B. 60 to 63 ft
Shale, dark-----	2	65	

Well 9/7W- 6G1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale-----	15	25	
Sandstone-----	13	38	
Shale, gray-----	17	55	
Shale, dark, and trace of coal	5	60	
Limestone-----	1	61	
Shale-----	14	75	
Sandstone-----	35	110	W.B.
Shale, dark-----	15	125	
Slate, black-----	8	133	
Shale, gray-----	7	140	
Sandstone-----	3	143	
Shale, light-----	11	154	
Shale, sandy, broken-----	10	164	
Sandstone-----	21	185	
Shale, gray-----	5	190	
Shale, sandy-----	9	199	
Slate-----	--	199	

Well 9/7W- 7C1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	9	9	
Pennsylvanian system:			
Middle series:			
Sandstone-----	21	30	
Mud, gray-----	8	38	
Sandstone, green-----	8	46	
Sandstone, brown-----	7	53	
Shale, sandy-----	7	60	
Sandstone-----	7	67	W.B.
Shale, sandy-----	3	70	

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

Well 9/7W- 8L1			
Type of record: Driller's log.		Altitude: About 595 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Middle series:			
Sandstone, soft-----	4	14	W.B.
Coal-----	.5	14.5	W.B.
Clay-----	.5	15	
Shale, sandy, gray-----	10	25	
Shale, gray-----	14	39	
Coal-----	4	43	W.B.
Clay-----	4	47	
Shale, gray-----	3	50	
Sandstone-----	30	80	
Slate, black-----	2	82	
Coal-----	3	85	W.B.
Clay-----	1	86	
Shale, gray-----	9	95	
Sandstone-----	8	103	
Shale, gray-----	2	105	
Sandstone-----	13	118	
Shale, gray-----	5	123	
Slate, black-----	2	125	
Coal-----	1	126	W.B.
Clay-----	1	127	
Shale, gray-----	1	128	
Sandstone-----	4	132	

Well 9/7W- 9M1			
Type of record: Driller's log.		Altitude: About 542 feet.	
Record missing-----	35	35	
Pennsylvanian system:			
Middle series:			
Coal-----	2	37	
Record missing-----	8	45	
Shale, gray and light-gray, with sandy laminations--	39	84	
Coal-----	3	87	
Shale, gray and light-gray, with sandy laminations--	23	110	
Sandstone, fine-grained, tight, hard, shaly-----	9	119	
Lower(?) series:			
Shale, gray, with sandy laminations-----	11	130	
Shale, bituminous, micace- ous, gray to dark-gray--	10	140	

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

Well 9/7W- 9M1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower(?) series:			
Sandstone, dirty, shaly, gray--	10	150	
Shale, sandy, gray-----	20	170	
Shale, gray-----	9	179	
Underclay-----	2	181	
Shale, gray-----	4	185	
Shale, dark-gray, with sandstone laminations-----	15	200	
Underclay-----	1	201	
Shale, gray-----	14	215	
Underclay-----	1	216	
Shale, gray-----	3	219	
Underclay-----	1	220	
Shale, gray-----	20	240	
Shale, slaty, dark-gray to black	5	245	
Underclay-----	1	246	
Shale, slaty, dark-gray to black	16	262	
Underclay-----	1	263	
Shale, slaty, dark-gray to black	5	268	
Sandstone, coarse-grained, clear, angular grains, moderate to well-cemented, fair porosity, gray-----	20	288	"Free oil"
Limestone-----	2	290	
Sandstone, coarse-grained, clear, angular grains, moderate to well-cemented, fair porosity, gray-----	10	300	
Sandstone, coarse-grained, angu- lar, incoherent, partly cal- careous, siderite stained and cemented, pyritic, gray-----	70	370	
Sandstone, coarse-grained, angu- lar, calcareous and shaly, gray, with dark-gray to black, silty and bituminous, shale; large, clear to milky quartz grains-----	30	400	T.D. 1,788 ft

Well 9/7W- 9R1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	14	14	
Pennsylvania system:			
Middle series:			
Sandstone-----	8	22	

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

Well 9/7W-9R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, dark-----	8	30	
Coal-----	2	32	
Sandstone-----	5	37	
Shale, gray-----	12	49	
Rock and sandstone, gray---	11	60	Limestone (?) and sandstone
Shale, dark-----	5	65	
Coal-----	2	67	
Fire clay-----	3	70	
Shale, sandy-----	7	77	
Shale, gray-----	15	92	
Limestone-----	3	95	
Shale, light-gray-----	30	125	
Sandstone-----	15	140	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	12	152	
Coal-----	1	153	
Fire clay-----	4	157	
Shale, gray-----	5	162	
Sandstone, gray-----	22	184	
Shale, sandy, dark-----	10	194	
Shale, dark-----	4	198	
Limestone-----	2	200	
Shale, dark-----	34	234	
Sandstone-----	6	240	
Sandstone, broken-----	13	253	
Sandstone-----	19	272	
Sandstone, broken-----	7	279	
Shale, dark-----	13	292	
Shale, gray-----	8	300	
Shale, dark-----	20	320	

Well 9/7W-12A1

Type of record: Driller's log.

Altitude: About 570 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Shale, sandy-----	8	23	Clay (?)
Sand and gravel-----	9	32	
Shale, sandy-----	34	66	Clay (?)
Sand and gravel-----	1	67	
Shale, sandy-----	18	85	Clay (?)

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

Well 9/7W-12A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, blue-----	9	94	
Coal-----	3	97	
Fire clay-----	2	99	
Sandstone-----	3	102	
Shale, gray-----	14	116	
Coal-----	.5	116.5	
Fire clay-----	3.5	120	
Shale, gray-----	23	143	
Shale, black-----	12	155	
Coal-----	3	158	
Fire clay-----	1	159	
Shale, sandy, gray-----	9	168	

Well 9/7W-14Q1

Type of record: Driller's log.

Altitude: About 520 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Clay, sandy-----	10	12	
Sand, medium-----	9	21	W.B.
Clay, gray-----	13	34	
Sand, fine-----	6	40	W.B.
Sand, medium, and gravel-----	18	58	W.B.
Clay, hard-----	--	58	

Well 9/7W-14Q2

Type of record: Driller's log.

Altitude: About 520 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Clay, yellow-----	10	12	
Sand, coarse-----	10	22	W.B.
Clay, gray-----	14	36	
Sand, medium-----	14	50	W.B.
Sand, medium, and gravel-----	12	62	W.B.
Clay, hard, gray-----	--	62	

Well 9/7W-14Q3

Type of record: Driller's log.

Altitude: About 520 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	6	6	
Sand, fine-----	30	36	W.B.
Clay-----	12	48	

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

Well 9/7W-14Q3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse, and gravel----	8	56	W.B.
Clay-----	16	72	
Sand, fine-----	13	85	W.B.
Clay-----	6	91	
Pennsylvanian system:			
Lower series:			
Rock-----	--	91	

Well 9/7W-15K1

Type of record: Driller's log.

Altitude: About 530 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	4	22	
Shale, sandy, gray-----	7	29	
Coal and jack-----	3	32	
Clay-----	1.5	33.5	
Shale, gray-----	4.5	38	
Shale, dark-gray-----	6	44	
Coal-----	1	45	
Clay-----	1	46	
Shale, gray-----	5	51	
Shale, sandy, gray-----	4	55	
Shale, sandy, dark-gray----	2	57	
Sandstone-----	1	58	
Lower(?) series:			
Shale, sandy, dark-gray----	4	62	
Sandstone-----	9	71	
Shale, sandy, gray-----	13	84	
Coal-----	1.5	85.5	
Clay-----	1	86.5	
Shale, dark-gray-----	3.5	90	
Sandstone-----	4	94	
Shale, sandy, gray-----	7	101	
Coal-----	1.5	102.5	
Clay-----	1	103.5	
Shale, gray-----	1.5	105	

Well 9/7W-16C1

Type of record: Driller's log.

Altitude: About 617 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	

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

Well 9/7W-16C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Sandstone-----	18	36	
Shale, dark-----	3	39	
Coal-----	3	42	
Limestone-----	1	43	
Fire clay-----	4	47	
Shale, gray-----	3	50	
Sandstone, gray-----	5	55	
Shale, sandy-----	5	60	
Shale, gray-----	12	72	
Sandstone, gray-----	8	80	
Shale, dark-----	4	84	
Coal-----	1	85	
Shale, light-gray-----	84	169	
Lower(?) series:			
Coal-----	1	170	
Fire clay-----	4	174	
Shale, gray-----	9	183	
Shale, dark-----	4	187	
Sandstone-----	2	189	
Shale, dark-----	5	194	
Shale, gray-----	8	202	
Shale, sandy, dark-----	22	224	
Shale, sandy, gray-----	9	233	
Sandstone-----	10	243	
Shale, sandy, broken-----	49	292	
Sandstone, brown-----	19	311	
Shale-----	--	311	

Well 9/7W-16C2

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and soil-----	12	12	
Pennsylvanian system:			
Middle series:			
Sandstone-----	10	22	
Shale and slate, black-----	13	35	
Limestone-----	2	37	
Sandstone-----	15	52	
Sandstone, shaly-----	6	58	
Shale, dark-gray-----	6	64	
Coal-----	1	65	
Sandstone, shaly-----	49	114	
Coal-----	1	115	
Shale, light-gray-----	26	141	

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

Well 9/7W-16C2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	13	154	
Coal-----	1	155	
Shale-----	9	164	
Coal-----	1	165	
Shale, sandy-----	32	197	
Shale, sandy, gray-----	15	212	
Coal-----	1	213	
Fire clay-----	1	214	
Sandstone-----	1	215	Oil
Sandstone, shaly-----	4	219	
Shale, and some sandstone-	2.5	221.5	
Sandstone, and some shale-	4.5	226	
Sandstone, brown-----	3	229	Oil
Sandstone-----	1	230	Oil
Sandstone, brown-----	2	232	Oil
Sandstone-----	18	250	
Sandstone, shaly-----	20	270	
Shale, sandy, broken-----	34	304	

Well 9/7W-17K1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	11	11	
Pennsylvanian system:			
Middle series:			
Sandstone, brown-----	20	31	
Limestone and black shale-	5	36	
Shale, shelly-----	8	44	
Coal-----	3	47	
Fire clay and shale-----	11	58	
Shale, blue-----	27	85	
Shale, gray-----	5	90	
Shale, sandy-----	18	108	
Shale, black-----	6	114	
Coal-----	2	116	
Fire clay-----	4	120	
Shale, sandy-----	35	155	
Shale, gray-----	10	165	
Coal-----	1	166	
Fire clay-----	2	168	
Shale, sandy-----	8	176	
Sandstone-----	19	195	W.B.
Lower series:			
Shale, sandy-----	8	203	
Shale, blue-----	17	220	
Shale, black-----	2	222	

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

Well 9/7W-17K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	1	223	
Fire clay, shaly-----	8	231	
Shale, sandy-----	28	259	
Coal and fire clay-----	1	260	
Shale, gray-----	41	301	
Shale, sandy-----	31	332	
Coal and black shale-----	4	336	
Fire clay-----	4	340	
Shale, brown-----	6	346	
Shale, gray-----	15	361	
Coal, trace-----	--	361	
Fire clay-----	2	363	
Coal and fire clay-----	7	370	
Shale, black-----	3	373	
Shale, gray-----	8	381	
Limestone, shell-----	3	384	
Sandstone, brown-----	3	387	
Shale, dark-----	38	425	
Sandstone-----	5	430	W.B.

Well 9/7W-17N1

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Drift-----	8	8	
Pennsylvanian system:			
Middle series:			
Sandstone-----	2	10	
Shale-----	20	30	
Coal-----	1	31	
Shale-----	4	35	
Limestone-----	2	37	
Sandstone-----	43	80	W.B.
Coal-----	1	81	
Shale-----	3	84	
Coal-----	4	88	
Fire clay-----	4	92	
Sandstone, brown-----	1	93	
Fire clay-----	2	95	
Shale, sandy-----	2	97	
Sandstone-----	12	109	W.B.
Fire clay-----	4	113	
Sandstone-----	6	119	
Shale, black-----	8	127	
Coal-----	1	128	
Shale, white-----	4	132	

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

Well 9/7W-17N1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Sandstone-----	3	135	
Shale, white-----	2	137	
Limestone-----	2	139	
Sandstone-----	4	143	
Coal-----	2	145	
Shale-----	2	147	
Limestone-----	8	155	
Shale-----	8	163	
Coal-----	2	165	
Sandstone-----	5	170	
Lower(?) series:			
Shale-----	6	176	
Coal-----	1	177	
Shale-----	5	182	
Limestone-----	6	188	
Coal-----	12	200	
Shale-----	32	232	
Limestone, brown-----	5	237	
Shale-----	40	277	
Coal-----	1	278	
Shale-----	24	302	
Coal-----	5	307	
Shale-----	30	337	
Limestone-----	2	339	
Shale, brown-----	10	349	
Shale-----	16	365	
Sandstone-----	5	370	W.B.

Well 9/7W-21N1

Type of record: Driller's log.

Altitude: About 585 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Pennsylvanian system:			
Middle series:			
Sandstone-----	31	46	W.B.
Coal-----	4	50	
Fire clay-----	2	52	

Well 9/7W-23G1

Type of record: Driller's log.

Altitude: About 520 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soils-----	10	10	
Sand, fine-----	14	24	W.B.

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

Well 9/7W-23G1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	40	64	
Sand, medium-----	3	67	W.B.
Clay-----	13	80	
Pennsylvanian system:			
Lower series:			
Rock-----	--	80	

Well 9/7W-28H1

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

Quaternary system:			
Recent and Pleistocene series:			
Mud, blue-----	60	60	
Quicksand-----	7	67	
Pennsylvanian system:			
Middle series:			
Sandstone, white-----	29	96	W.B.

Well 9/7W-28K1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Shale, sand and gravel-----	40	52	Clay(?), sand and gravel
Pennsylvanian system:			
Middle series:			
Shale, blue-----	18	70	
Fire clay-----	9	79	W.B.

Well 9/7W-30F1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	22	22	
Pennsylvanian system:			
Middle series:			
Limestone, hard-----	4	26	
Slate, black-----	3	29	
Coal-----	4	33	
Shale, dark-----	7	40	
Sandstone-----	15	55	W.B.
Shale, dark-----	8	63	

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

Well 9/7W-31M1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	21	21	
Pennsylvanian system:			
Middle series:			
Sandstone-----	7	28	
Shale, sandy-----	17	45	
Sandstone-----	10	55	
Slate, gray-----	13	68	
Sandstone-----	7	75	
Shale, gray-----	10	85	
Limestone-----	5	90	
Coal-----	3	93	
Sandstone-----	32	125	
Shale, gray-----	27	152	
Shale, dark-----	18	170	
Coal-----	3	173	
Shale, dark-----	5	178	
Sandstone, gray-----	16	194	
Mine opening-----	--	194	

Well 9/7W-31R1

Type of record: Driller's log Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	16	16	
Pennsylvanian system:			
Middle series:			
Sandstone-----	6	22	
Shale, gray-----	29	51	
Shale, sandy-----	10	61	
Sandstone-----	12	73	W.B.
Shale, gray-----	27	100	W.B.

Well 9/7W-35E1

Type of record: Driller's log Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	11	11	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	13	24	Trace of coal at 21 ft
Shale, sandy, gray-----	6	30	
Shale, soft, dark-gray---	7	37	
Slate and coal-----	2	39	
Shale, soft, light-gray---	14	53	
Coal-----	1.5	54.5	

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

Well 9/7W-35E1--Continued

Material	Thick-- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Boulder and sandstone-----	3	57.5	Concretion(?) and sandstone
Coal and fire clay-----	1.5	59	
Shale, gray-----	3	62	
Shale, sandy, light-gray-----	10.5	72.5	
Sandstone, light-gray-----	8.5	81	
Shale, moderately-hard, gray----	2.5	83.5	
Coal-----	.5	84	
Sandstone, gray-----	8	92	
Sandstone and medium-gray, sandy shale-----	13	105	
Shale, sandy, gray-----	12	117	
Shale, hard, gray-----	4.5	121.5	Gas
Lower series:			
Slate, black-----	1	122.5	
Coal-----	1.5	124	
Slate, black-----	3	127	
Coal and sulfur-----	1.5	128.5	
Fire clay-----	2.5	131	
Shale, sandy, gray-----	4	135	
Sandstone, gray-----	2	137	
Shale, sandy, gray-----	4	141	
Coal-----	3	144	Gas
Fire clay-----	2.5	146.5	
Shale, sandy, gray-----	3.5	150	

Well 9/7W-35K1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Middle series:			
Sandstone, soft-----	10	24	
Shale, black-----	14	38	
Shale, gray, and soft sandstone-	31	69	
Coal-----	2	71	
Fire clay-----	7	78	
Coal-----	2.5	80.5	
Fire clay-----	10	90.5	
Coal-----	3	93.5	
Shale-----	1.5	95	
Sandstone, gray-----	32	127	W.B.
Steel band-----	3	130	
Shale, black-----	2	132	
Sandstone, hard-----	--	132	

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

Well 9/7W-36E1		Altitude: About 550 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Pennsylvanian system:			
Middle(?) series:			
Sandstone-----	32	45	
Lower series:			
Shale, dark-----	24	69	
Slate, black-----	6	75	
Coal-----	1	76	
Fire clay-----	2	78	
Shale, gray-----	14	92	
Slate-----	2	94	
Coal-----	1	95	
Fire clay-----	2	97	
Shale, sandy, dark-----	6.5	103.5	
Sandstone-----	13.5	117	
Shale, gray-----	8	125	
Shale, sandy-----	10	135	
Sandstone-----	25	160	
Sandstone, dark-----	18	178	
Sandstone-----	8	186	
Coal-----	1	187	
Fire clay-----	2	189	
Sandstone-----	11	200	
Coal-----	3	203	
Fire clay-----	2	205	
Shale, sandy-----	16	221	
Sandstone-----	17.5	238.5	
Coal-----	.5	239	
Fire clay-----	1	240	
Sandstone-----	11	251	
Shale, gray-----	10	261	

Well 9/7W-36L1		Altitude: About 550 feet.	
Type of record: Driller's log.			
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Pennsylvanian system:			
Middle(?) series:			
Sandstone, yellow-----	8	21	
Lower series:			
Shale, gray-----	17	38	
Slate, black-----	2	40	
Coal-----	2	42	
Fire clay-----	9	51	

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

Well 9/7W-36L1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian series:			
Lower series:			
Sandstone-----	2	53	
Shale, white-----	5	58	
Shale, gray-----	13	71	
Shale, soft, dark-----	2.5	73.5	
Coal-----	1.5	75	
Fire clay-----	3	78	
Sandstone-----	2	80	
Shale, gray-----	11	91	
Sandstone-----	2	93	
Coal-----	1	94	
Bottoms-----	2	96	
Shale, gray-----	25	121	
Sandstone, hard-----	2	123	
Sandstone, pink-----	3	126	
Shale, gray-----	11	137	
Sandstone, gray-----	1	138	
Sandstone, dark-----	12	150	
Shale, dark-----	10	160	
Sandstone-----	12	172	
Shale, sandy-----	2	174	
Slate, black-----	1	175	
Fire clay-----	4	179	
Shale, dark-----	36	215	
Sandstone, white-----	11	226	W.B.
Shale-----	2	228	
Sandstone-----	2	230	
Shale, dark-----	6	236	
Sandstone, dark-----	5	241	

Well 9/7W-36M1

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:		
Recent and Pleistocene series:		
Surface-----	12	12
Pennsylvanian system:		
Middle(?) series:		
Sandstone-----	28	40
Lower series:		
Shale, gray-----	30	70
Slate, black-----	6	76
Coal-----	1	77
Fire clay-----	2	79
Shale, sandy, dark-----	14	93
Coal-----	2.5	95.5
Fire clay-----	2	97.5
Shale, sandy, dark-----	6.5	104

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

Well 9/7W-36M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	1	105	
Fire clay-----	2	107	
Shale, gray-----	22	129	
Sandstone-----	20	149	
Shale, sandy-----	21	170	
Slate, black-----	4	174	
Coal-----	.5	174.5	
Fire clay-----	2.5	177	
Sandstone and sandy shale-	19	196	
Slate, black-----	--	196	

Well 10/6W- 3M1

Type of record: Driller's log.

Altitude: About 565 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface sand-----	13	13	
Clay, yellow-----	7	20	
Sand and gravel, dirty----	17	37	
Hardpan, gray-----	10	47	
Softpan, gray-----	23	70	
Sand and gravel, dirty----	10	80	
Wash, gray-----	20	100	
Wash, dark-----	7	107	
Sand and gravel-----	2	109	W.B.
Pennsylvanian system:			
Lower series:			
Shale, sandy, light-----	3	112	

Well 10/6W- 3N1

Type of record: Driller's log.

Altitude: About 565 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, sandy-----	25	25	
Sand, dirty, yellow-----	18	43	
Softpan, gray-----	15	58	
Softpan, dark-----	8	66	
Wash, yellow-----	9	75	
Sand and gravel, dirty, yellow-----	10	85	W.B.
Sand and gravel, coarse, blue-----	4	89	W.B.

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

Well 10/6W- 5E1

Type of record: Driller's log.

Altitude: About 546 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine to coarse, some silt, loose, brown-----	4	4	
Sand, fine to coarse, some silt, medium-dense, brown----	2	6	
Sand, fine, trace of silt, medium-dense, brown-----	3	9	
Sand, fine to coarse, medium- dense, brown-----	4.5	13.5	
Sand, fine to coarse, trace of gravel, medium-dense, brown-	5	18.5	
Sand, fine to coarse, trace of gravel, medium-dense, gray---	6.5	25	
Sand, fine to medium, trace of silt, dense, gray-----	18.5	43.5	3-inches of gravel at 27 ft
Sand, fine, dense, gray-----	5	48.5	
Sand, fine, some silt, trace of wood, very dense, gray-----	5	53.5	
Sand, fine to medium, trace of gravel, very dense, brown and gray-----	4	57.5	
Sand, fine, trace of silt, very dense, gray-----	9.6	67.1	

Well 10/6W- 6C1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, dark-----	52	66	
Sand, dirty, gray-----	12	78	
Sand and gravel-----	11	89	
Wash (sandy muck)-----	17	106	
Gravel-----	1	107	W.B.
Pennsylvanian system:			
Lower series:			
Shale, blue-----	--	107	

Well 10/6W- 6N1

Type of record: Driller's log.

Altitude: About 550 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Drift-----	37	54	
Sand-----	16	70	
Pan-----	9	79	

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

Well 10/6W- 6N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	14	93	
Shale, gray-----	7	100	
Shale, sandy, gray-----	22	122	
Sandstone-----	2	124	
Shale, sandy, gray-----	16	140	
Sandstone-----	11	151	W.B.

Well 10/6W-10E1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Coal-----	3.5	20.5	
Clay-----	6.5	27	
Shale, dark-gray-----	10.5	37.5	
Coal-----	4.5	42	
Sandstone-----	13	55	W.B.
Shale, sandy, gray-----	17	72	
Sandstone-----	49	121	
Shale, sandy, gray-----	7	128	
Sandstone-----	32	160	
Shale, sandy, gray-----	7	167	
Mississippian system:			
Chester series:			
Limestone-----	6	173	
Shale, sandy, gray-----	56	229	
Limestone-----	5	234	
Shale, gray-----	23	257	
Limestone-----	10	267	
Shale, sandy, gray-----	25	292	
Limestone-----	6	298	
Shale, limy-----	2	300	

Well 10/6W-16F1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Quicksand-----	7	27	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	41	68	
Sandstone-----	7	75	

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

Well 10/6W-16F1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	20	95	W.B.
Sandstone-----	15	110	
Shale, sandy, gray-----	14	124	
Shale, gray-----	68	192	
Coal-----	.5	192.5	
Sandstone-----	2.5	195	

Well 10/6W-16G1

Type of record: Driller's log.

Altitude: About 560 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	27	27	W.B.	
Pennsylvanian system:				
Lower series:				
Shale, dark-----	25	52		
Sandstone, gray-----	58	110		
Shale, gray-----	12	122		

Well 10/6W-16J1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	19	19	W.B.	
Pennsylvanian system:				
Lower series:				
Coal-----	1	20		
Shale, gray-----	20.5	40.5		
Coal-----	.5	41		
Fire clay-----	2	43		
Sandstone-----	2	45		
Shale, dark-----	45.5	90.5		
Limestone-----	4	94.5		
Sandstone-----	21.5	116		
Shale, sandy, dark-----	5	121		
Sandstone-----	17	138		
Shale, dark-----	--	138		

Well 10/6W-17D1

Type of record: Driller's log.

Altitude: About 547 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill; sand, gravel and silt----	2	2	
Clay and silt, trace of sand, stiff, brown and gray-----	2	4	

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

Well 10/6W-17D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and silt, trace of sand, stiff, brown, and gray-----	9.5	13.5	
Silt, some clay, loose, blue and green-----	2.5	16	
Sand, fine to medium, some silt, medium-dense, gray-	7.5	23.5	
Sand, fine to medium, trace of silt and gravel, dense, gray-----	5	28.5	
Sand, fine to medium, some silt, trace of gravel, dense-----	10	38.5	
Sand, fine to coarse, some silt, trace of gravel, very dense, gray-----	3.5	42	

Well 10/6W-17M1

Type of record: Driller's log. Altitude: About 556 feet.

Asphalt-----	2	2	
Quaternary system:			
Recent and Pleistocene series:			
Silt and fine sand, medium-dense, brown-----	2	4	
Sand, fine to coarse, some silt and fine gravel, loose, brown-----	2	6	
Silt, some fine sand, loose, brown and gray, and sand, seams-----	7.5	13.5	
Silt, organic, some fine sand, medium-dense, gray-	5	18.5	
Silt, organic, trace of sand, loose, brown and gray-----	5	23.5	
Silt, organic, trace of sand, loose, gray-----	7.5	31	
Silt, organic, some sand, loose, gray-----	2	33	
Pennsylvanian(?) system:			
Lower(?) series:			
Shale(?), hard-----	2	35	

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

Well 10/6W-18A1

Type of record: Driller's log.

Altitude: About 555 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt and muck soil-----	10	10	
Sand, fine-----	1	11	
Clay, sandy-----	5	16	
Sand, muddy-----	6	22	
Sand, medium, clean-----	6	28	W.B.
Gravel, coarse-----	6	34	W.B.
Sand, coarse, and gravel-----	23	57	W.B.
Gravel, coarse-----	3	60	W.B.
Clay and muddy gravel-----	5	65	

Well 10/6W-18H1

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, tough-----	18	18	
Clay, sandy, fine-----	10	28	
Sand, fine, muddy-----	11	39	
Sand, fine, and medium gravel, muddy-----	10	49	W.B.
Sand, medium, and gravel, clean-----	10	59	W.B.
Sand, muddy-----	1	60	

Well 10/6W-18H3

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	12	12	
Sand-----	.5	12.5	W.B.
Pennsylvanian system:			
Lower series:			
Shale, blue-----	1.5	14	
Sandstone-----	6	20	

Well 10/6W-19J1

Type of record: Driller's log.

Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	29	29	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	21	50	
Coal-----	1.5	51.5	
Fire clay-----	7.5	59	
Shale, sandy, blue-----	65	124	

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

Well 10/6W-19J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, black-----	3	127	
Coal-----	1	128	
Fire clay-----	3	131	
Sandstone-----	4	135	
Shale, dark-----	--	135	

Well 10/6W-19P1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	12	12	
Sand and gravel-----	48	60	
Pennsylvanian system:			
Middle series:			
Sandstone, hard-----	5	65	
Lower series:			
Shale, dark-----	40	105	
Coal-----	5	110	W.B.
Shale, dark-----	11	121	
Coal-----	4	125	
Clay-----	10	135	
Shale, dark-----	10	145	
Sandstone-----	9	154	
Limestone-----	3	157	
Sandstone-----	58	215	
Mississippian system:			
Chester(?) series:			
Shale, dark-----	20	235	
Limestone-----	8	243	
Sandstone-----	25	268	
Limestone-----	42	310	
Shale, dark-----	15	325	
Limestone and red and green shale-----	20	345	
Limestone-----	3	348	
Shale, green-----	12	360	T.D. 3,200 ft

Well 10/6W-19R1

Type of record: Driller's log.

Altitude: About 561 feet.

Quaternary system:			
Recent and Pleistocene series:			
Silt, some sand, medium- dense, brown-----	4	4	
Sand, medium, silt, medium, dense, brown----	3	7	
Clay and silt, trace of sand, stiff, green-----	2	9	

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

Well 10/6W-19R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt, some clay, trace of sand, medium-stiff, green-	4.5	13.5	
Silt, organic, trace of sand, loose, green and brown-----	5	18.5	
Silt, organic, trace of sand, medium-dense, green and brown-----	2.5	21	
Sand, fine, some organic silt, medium-dense, green and brown-----	2.5	23.5	
Pennsylvanian(?) system:			
Lower (?) series:			
Shale, sandy, hard, brown and blue-----	3.2	26.7	
Silt, hard, shale, and trace of sand, blue-----	1.1	27.8	

Well 10/6W-20H1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	17	17	
Pennsylvanian system:			
Middle series:			
Sandstone-----	7	24	
Shale, gray-----	1	25	
Sandstone-----	3	28	
Lower(?) series:			
Shale, gray-----	6	34	
Fire clay-----	7	41	
Shale, gray-----	27	68	
Sandstone-----	6	74	
Shale, gray-----	22	96	
Coal, trace-----	---	96	
Fire clay-----	3	99	
Shale, gray-----	6	105	
Coal-----	1	106	
Fire clay-----	3	109	
Shale, gray-----	16	125	
Coal-----	2	127	
Fire clay-----	3	130	
Shale-----	15	145	

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

Well 10/6W-20L1			
Type of record: Driller's log.		Altitude: About 610 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Middle(?) series:			
Sandstone-----	13.5	27.5	
Lower(?) series:			
Shale, gray-----	10.5	38	
Shale, sandy, dark-----	8	46	
Sandstone-----	12	58	
Shale, sandy, dark-----	12	70	
Shale, dark-----	28	98	
Coal-----	2	100	
Fire clay-----	3	103	
Shale, dark-----	14	117	
Coal-----	4	121	
Fire clay-----	1	122	
Sandstone-----	10	132	
Shale, sandy, gray-----	3	135	
Slate, black-----	1.5	136.5	
Coal-----	.5	137	
Sandstone-----	10	147	
Shale, gray-----	2	149	
Sandstone-----	21	170	W.B.
Shale, sandy, dark-----	1	171	

Well 10/6W-20L2			
Type of record: Driller's log.		Altitude: About 600 feet.	
Old well-----	191.5	191.5	
Pennsylvanian system:			
Lower series:			
Slate and dark shale-----	18.5	210	
Sandstone-----	15	225	
Slate-----	6	231	
Shale, gray-----	6	237	
Mississippian system:			
Chester series:			
Sandstone-----	30	267	
Limestone-----	23	290	
Shale, sandy, gray-----	10	300	
Shale, red-----	14	314	
Shale, sandy, gray-----	11	325	
Sandstone-----	6	331	
Shale, sandy, red-----	3	334	
Shale, sandy, gray-----	6	340	
Sandstone, white-----	12	352	"Salt water"

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

Well 10/6W-20L3		Altitude: About 600 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	27	43	
Coal-----	1.5	44.5	
Fire clay-----	2	46.5	
Shale, sandy, dark-----	15	61.5	
Shale, dark-----	23	84.5	
Sandstone, white-----	20	104.5	W.B.
Shale, sandy, gray-----	17	121.5	
Coal-----	4	125.5	
Fire clay and shale-----	5	130.5	
Sandstone-----	10	140.5	
Sandstone, gray-----	4	144.5	
Sandstone-----	30	174.5	
Shale, sandy, dark-----	38	212.5	
Sandstone-----	12	224.5	
Shale, gray-----	.5	225	

Well 10/6W-20P1		Altitude: About 590 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Softpan-----	12	25	
Pennsylvanian system:			
Lower series:			
Shale, brown-----	6	31	
Coal-----	1.5	32.5	
Shale, dark-gray-----	17.5	50	

Well 10/6W-21F1		Altitude: About 590 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Shale-----	7	20	Clay (?)
Shale, sandy, and gravelly-----	3	23	Clay (?), sandy and gravelly
Pennsylvanian system:			
Lower series:			
Shale-----	5	28	
Rock, hard-----	1	29	Limestone (?), hard
Shale-----	36	65	

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

Well 10/6W-21F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	3	68	
Fire clay-----	3.5	71.5	
Sandstone-----	5.5	77	
Shale, soft, dark-----	8	85	
Sandstone, white-----	12	97	
Shale, sandy, dark-----	3	100	
Slate, black, and coal----	2	102	
Fire clay-----	2	104	
Sandstone-----	1.5	105.5	
Coal-----	2	107.5	
Bottoms, hard-----	2.5	110	
Sandstone, white-----	11	121	
Shale, dark-----	66	187	
Rock, hard-----	2	189	Limestone (?), hard
Shale-----	9	198	
Slate-----	1.5	199.5	
Sandstone, white-----	8	207.5	
Shale, dark-----	75.5	283	
Sandstone, white-----	8	291	
Sandstone-----	26	317	
Mississippian(?) system:			
Chester(?) series:			
Shale, red-----	7	324	
Sandstone, white-----	4	328	"Salt water"

Well 10/6W-21L1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	25	41	
Shale-----	29.5	70.5	
Slate, black-----	1.5	72	
Coal-----	1	73	
Fire clay-----	9	82	
Sandstone-----	1	83	
Shale, dark-----	2.5	85.5	
Coal-----	3.5	89	
Fire clay-----	2.5	91.5	
Sandstone-----	9.5	101	
Coal-----	.5	101.5	
Fire clay-----	3.5	105	
Sandstone, white-----	2.5	107.5	W.B.
Shale, dark-----	2.5	110	

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

Well 10/6W-21L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, dark-----	14	124	W.B.
Slate, black-----	1	125	
Coal-----	3	128	
Bottoms, hard-----	1	129	
Sandstone, white-----	8.5	137.5	W.B.
Shale, white-----	4	141.5	
Shale, blue-----	18.5	160	

Well 10/6W-22E1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	5	26	
Slate, black-----	2	28	
Coal-----	1	29	
Fire clay-----	3	32	
Shale, gray-----	14	46	
Shale, sandy-----	2	48	
Coal-----	.5	48.5	
Fire clay-----	4.5	53	
Sandstone-----	16	69	
Coal-----	2	71	W.B.
Fire clay-----	8	79	
Shale, gray-----	3	82	
Slate, black-----	2	84	
Shale, gray-----	4	86	
Sandstone-----	11	97	

Well 10/6W-22H1

Type of record: Driller's log.

Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Shale, gravelly-----	20	41	Clay (?), gravelly
Shale, gray-----	7	48	Clay (?), gray
Sand-----	1.5	49.5	W.B.
Pennsylvanian system:			
Lower series:			
Shale, gray-----	2.5	52	
Slate, black-----	3	55	
Shale, gray-----	46	101	
Coal-----	1	102	

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

Well 10/6W-22H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvania system:			
Lower series:			
Fire clay-----	3	105	
Sandstone-----	14	119	
Shale, gray-----	14	133	
Sandstone-----	2	135	
Shale, gray-----	13	148	
Coal-----	.5	148.5	
Fire clay-----	3.5	152	
Sandstone-----	24	176	
Limestone-----	24	200	
Sandstone-----	2	202	
Shale, gray-----	6	208	
Shale, red-----	4	212	
Shale, gray-----	10	222	
Sandstone-----	12	234	
Shale, gray-----	5	239	
Sandstone-----	2	241	
Shale, gray-----	4	245	
Sandstone-----	5	250	

Well 10/6W-22H2

Type of record: Driller's log.

Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Shale, dark-----	35	55	
Sandstone-----	10	65	
Shale, sandy, dark-----	5	70	
Sandstone-----	35	105	
Shale, sandy, dark-----	10	115	
Sandstone-----	10	125	W.B.
Shale, sandy, dark-----	5	130	
Sandstone-----	10	140	W.B.
Shale, dark-----	--	140	

Well 10/6W-28A1

Type of record: Driller's log.

Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	12	29	
Limestone-----	5	34	

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

Well 10/6W-28A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, dark-----	3	37	
Coal-----	2	39	
Fire clay-----	2	41	
Shale, gray-----	34	75	
Coal-----	3	78	
Fire clay-----	4.5	82.5	
Sandstone-----	3	85.5	
Shale, sandy-----	6.5	92	
Sandstone-----	20	112	
Slate, black-----	5	117	
Coal-----	2	119	
Fire clay-----	1	120	
Shale, sandy, gray-----	15	135	
Shale, dark-----	60	195	
Shale, gray-----	5	200	
Sandstone-----	29	229	W.B.

Well 10/6W-29C1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	17	17	
Quicksand-----	5	22	
Pennsylvanian system:			
Middle(?) series:			
Shale, gray-----	38	60	
Shale, sandy-----	8	68	
Lower(?) series:			
Shale, gray-----	18	86	
Coal-----	3	89	
Fire clay-----	5	94	
Sandstone-----	10	104	W.B.
Shale, black-----	3	107	
Coal-----	3	110	
Shale, sandy-----	4	114	
Sandstone-----	10	124	W.B.

Well 10/6W-29E2

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Middle(?) series:			
Sandstone, yellow-----	22	40	

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

Well 10/6W-29E2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower (?) series:			
Slate-----	5	45	
Coal-----	1	46	
Fire clay-----	3	49	
Slate, gray-----	29	78	
Shale, gray-----	22	100	
Coal-----	1	101	
Clay-----	2	103	
Shale, clayey, light-----	25	128	
Limestone, sandy-----	15	143	
Shale, hard, dark-----	24	167	
Shale, light-----	40	207	
Shale, black-----	20	227	
Sandstone, white-----	27	254	W.B.
Limestone, sandy-----	11	265	

Well 10/6W-29N1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6.5	26.5	
Shale, sandy, gray-----	10.5	37	
Sandstone-----	15	52	
Shale, sandy, gray-----	4	56	
Coal-----	2	58	
Fire clay-----	6.5	64.5	
Shale, sandy, gray-----	21	85.5	
Coal-----	.5	86	W.B.

Well 10/6W-29N2

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	33	53	
Coal-----	2	55	
Fire clay-----	3	58	
Shale, sandy-----	12	70	
Shale, dark-----	20	90	
Sandstone-----	5	95	W.B.
Shale, sandy, gray-----	13	108	

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

Well 10/6W-29N2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, dark-----	10	118	
Coal-----	1	119	
Fire clay-----	3	122	
Sandstone-----	5	127	
Shale, sandy, gray-----	3	130	

Well 10/6W-29N3

Type of record: Driller's log.

Altitude: About 600 ft.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	4	18	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	2	20	
Slate, light-blue-----	2	22	
Shale, very sandy, hard, light---	14	36	
Sandstone, gray-----	10	46	
Coal-----	.5	46.5	
Fire clay, white-----	3.5	50	
Shale, gray-----	4	54	
Shale, blue-----	11	65	
Shale, sandy, light-----	10	75	
Slate-----	2	77	

Well 10/6W-30A1

Type of record: Driller's log.

Altitude: About 575 ft.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Shale, sandy, gray-----	65	85	Sandy clay (?)
Pennsylvanian system:			
Lower series:			
Shale, sandy, white-----	4	89	
Coal-----	.5	89.5	
Fire clay-----	4.5	94	
Sandstone-----	13	107	
Shale, blue-----	88	195	
Sandstone-----	9	204	
Coal-----	1	205	
Fire clay-----	2	207	
Sandstone-----	9	216	
Shale, gray-----	4	220	
Mississippian(?) system:			
Chester(?) series:			
Limestone-----	12	232	

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

Well 10/6W-30A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian(?) system: Chester(?) series: Sandstone-----	23	255	

Well 10/6W-30A2

Type of record: Driller's log.

Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Shale, sandy-----	4	24	Sandy clay (?)
Shale, soft, gray-----	58	82	Soft clay (?)
Sand and gravel-----	3	85	W.B.
Pennsylvanian system:			
Lower series:			
Shale, blue-----	8.5	93.5	
Coal-----	.5	94	
Fire clay-----	5	99	
Sandstone-----	--	99	

Well 10/6W-30B2

Type of record: Driller's log.

Altitude: About 576 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Shale, sandy-----	42	61	Sandy clay (?)
Shale, soft, gray-----	21.5	82.5	Soft clay (?)
Coal-----	1	83.5	
Sand and gravel-----	2.5	86	W.B.

Well 10/6W-30B3

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	11.5	11.5	
Hardpan-----	8.5	20	
Sand and gravel-----	1	21	
Hardpan-----	.8	29	
Sand and gravel-----	2	31	
Hardpan, sandy streaks----	14	45	
Pan, soft, smooth-----	32	77	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	80	
Clay-----	1.5	81.5	
Shale, sandy, gray-----	10.5	92	
Coal-----	2.5	94.5	

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

Well 10/6W-30B3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	1.5	96	
Shale, gray-----	4	100	
Sandstone-----	2	102	
Shale, dark-gray-----	.5	102.5	
Coal-----	3	105.5	
Clay-----	4.5	110	
Shale, gray-----	7	117	
Shale, sandy, gray-----	3	120	
Sandstone-----	1	121	
Shale, sandy, gray-----	2	123	
Slate, black-----	3	126	

Well 10/6W-30D1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	8	24	
Softpan-----	13.5	37.5	
Pennsylvanian system:			
Lower series:			
Sandstone-----	3.5	41	
Shale, sandy, gray-----	26	67	
Shale, sandy, dark-gray-----	5	72	
Shale, sandy, gray-----	10	82	W.B.

Well 10/6W-30D2

Type of record: Driller's log.

Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Hardpan-----	13	26	
Softpan-----	43	69	
Sand and gravel-----	16	85	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6	91	
Shale, sandy, gray-----	17	108	
Sandstone-----	15	123	
Shale, sandy, gray-----	23	146	W.B.
Sandstone-----	2	148	
Shale, sandy, gray-----	14	162	
Record missing-----	78	240	

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

Well 10/6W-30G1

Type of record: Driller's log. Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Hardpan-----	64	76	
Shale-----	4	80	Clay (?)
Gravel-----	2	82	W.B.

Well 10/6W-30G2

Type of record: Driller's log. Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	28	42	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	9	51	
Shale, dark-gray-----	1	52	
Shale, sandy, gray-----	12	64	
Coal-----	2	66	
Clay-----	2	68	
Shale, sandy, gray-----	20	88	
Coal-----	2	90	

Well 10/6W-30H1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	7	7	
Drift-----	14	21	
Hardpan, gray-----	20	41	
Pennsylvanian system:			
Lower(?) series:			
Slate, black-----	1	42	
Fire clay-----	5	47	
Shale, sandy-----	--	47	

Well 10/6W-30J2

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	17	17	
Hardpan-----	4	21	
Mud, blue, and sand-----	21	42	

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

Well 10/6W-30J2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle(?) series:			
Shale, soft-----	13	55	
Shale, sandy-----	32	87	W.B.
Lower series:			
Slate, blue-----	4	91	
Coal-----	1	92	W.B.
Shale, dark-----	10	102	
Coal-----	2	104	
Fire clay-----	3	107	
Limestone, broken-----	4	111	W.B.

Well 10/6W-31C1			
Type of record: Driller's log.			Altitude: About 640 feet.
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	25	25	
Pennsylvanian system:			
Lower series:			
Limestone-----	7	32	
Shale, gray-----	16	48	
Slate, black-----	4.5	52.5	
Coal-----	1.5	54	
Fire clay-----	5	59	
Shale, gray-----	30	89	
Sandstone-----	32	121	
Coal, trace-----	--	121	
Sandstone and shale-----	23	144	
Coal, trace-----	--	144	W.B.
Sandstone-----	9	153	W.B.
Shale, light-gray-----	3	156	
Sandstone and shale-----	19	175	
Coal-----	3.5	178.5	W.B.
Fire clay-----	4.5	183	
Shale, gray-----	7	190	

Well 10/6W-31K1			
Type of record: Driller's log.			Altitude: About 670 feet.
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	15	15	
Pennsylvanian system:			
Middle series:			
Sandstone-----	15.5	30.5	
Coal-----	7	37.5	
Clay-----	7.5	45	
Limestone-----	5.5	50.5	

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

Well 10/6W-31K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy, gray-----	10	60.5	W.B.
Shale, dark-gray-----	10.5	71	
Sandstone-----	2	73	
Lower? series:			
Coal-----	2	75	
Shale, dark-gray-----	5	80	
Shale, sandy, dark-gray-----	20	100	

Well 10/6W-31L1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	7	25	
Pennsylvanian system:			
Middle series:			
Coal, soft-----	5	30	
Coal, clay, and shale-----	10	40	
Sandstone-----	4.5	44.5	
Shale, light-gray-----	19.5	64	
Lower? series:			
Slate, black-----	7	71	
Shale, sandy, gray-----	82	153	
Sandstone-----	4	157	
Shale, sandy, gray-----	3	160	
Shale, gray-----	13	173	
Coal-----	1	174	
Clay-----	3	177	
Shale, light-----	5	182	
Shale, dark-gray-----	3	185	
Shale, light-----	8	193	
Shale, sandy, gray-----	2	195	
Sandstone-----	9	204	
Shale, dark-gray-----	8	212	
Limestone-----	4.5	216.5	
Shale, limy-----	.5	217	
Sandstone-----	20	237	

Well 10/6W-31P1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	

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

Well 10/6W-31P1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle? series:			
Shale, gray-----	25	53	
Lower? series:			
Slate-----	4	57	
Coal-----	1.5	58.5	
Fire clay-----	5	63.5	
Shale, gray-----	16.5	80	
Sandstone-----	4	84	
Sandstone and shale-----	66	150	
Coal-----	1	151	
Fire clay-----	2	153	
Sandstone-----	6	159	W.B.
Shale, blue-----	3	162	
Shale, sandy, blue-----	--	162	

Well 10/6W-32K1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	18	36	
Shale, boots, gray-----	28	64	
Slate, black-----	2	66	
Coal-----	3	69	
Fire clay-----	2	71	
Shale, boots, gray-----	24	95	
Shale, sandy, boots, gray--	2	97	
Sandstone, gray-----	3	100	
Slate, black-----	8	108	
Shale, dark-gray-----	19	127	
Shale, sandy, dark-gray----	7	134	
Shale, sandy, light-gray---	10	144	
Shale, sandy, dark-gray----	10	154	
Coal-----	1	155	
Sandstone, gray-----	12	167	
Shale, sandy, gray-----	4	171	
Sandstone, gray-----	14	185	W.B.
Shale, dark-gray-----	15	200	
Limestone, dark-gray-----	--	200	

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

Well 10/6W-33N1

Type of record: Driller's log.

Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	15.5	15.5	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	15.7	31.2	
Shale, blue-----	2.2	33.4	
Coal-----	2.1	35.5	
Fire clay-----	3.1	38.6	
Sandstone and gray shale-----	11.5	50.1	
Shale, blue-----	3.5	53.6	
Coal-----	3.1	56.7	
Fire clay and shaly sandstone-----	11.4	68.1	
Shale, blue-----	14.1	82.2	
Fire clay, sandstone, and shale-----	3.8	86	

Well 10/6W-33P1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	24	24	
Gravel-----	3	27	
Boulder clay-----	5.9	32.9	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	8.1	41	
Fire clay-----	11.5	52.5	
Shale, gray-----	8.5	61	
Shale, blue, with plates of sandstone-----	6.8	67.8	
Coal-----	2.4	70.2	
Fire clay-----	.6	70.8	

Well 10/7W-1D1

Type of record: Driller's log.

Altitude: About 550 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand, yellow-----	4	20	
Softpan-----	5	25	
Sand and gravel-----	2	27	
Hardpan-----	2	29	

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

Well 10/7W-1D2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Shale, rotten-----	9	21	Clay (?)
Quicksand-----	6	27	
Pea gravel, fine-----	2	29	W.B.
Shale, rotten-----	36	65	Clay (?)
Sand-----	30	95	
Pennsylvanian system:			
Lower series:			
Coal-----	1	96	
Fire clay-----	1	97	
Shale, gray-----	15	112	
Slate, black-----	4	116	
Coal-----	2	118	
Fire clay-----	3	121	
Shale, gray-----	12	133	
Sandstone-----	6	139	W.B.
Shale, gray-----	3	142	

Well 10/7W-1J1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Muck, soft, light-----	15	25	
Softpan, yellow-----	10	35	
Hardpan, gray with blue gravel streaks-----	30	65	
Softpan, dark-yellow-----	4	69	
Pennsylvanian system:			
Lower series:			
Slate, soft, blue-----	1	70	
Sandstone, white-----	4	74	

Well 10/7W-2K1

Type of record: Driller's log. Altitude: About 545 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	

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

Well 10/7W-2K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	50	68	
Gravel-----	--	68	W.B.

Well 10/7W-3A1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	18	38	
Sand and gravel-----	2	40	
Hardpan-----	12	52	
Sand, dirty-----	6	58	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	62	120	
Sandstone, gray-----	5	125	W.B.

Well 10/7W-4E1

Type of record: Driller's log.

Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Hardpan-----	17	29	
Sand, yellow-----	2	31	
Pennsylvanian system:			
Middle (?) series:			
Sandstone, brown-----	26	57	W.B.
Coal-----	--	57	

Well 10/7W-5B1

Type of record: Driller's log.

Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	15	30	
Pennsylvanian system:			
Middle series:			
Sandstone, clayey, yellow-----	38	68	
Sandstone, gray-----	5	73	
Sandstone, white-----	5	78	
Sandstone, yellow-----	8	86	

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

Well 10/7W-11A1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	15	15	
Softpan-----	25	40	
Sand, yellow-----	1	41	W.B.
Gravel-----	2	43	W.B.
Hardpan, gray-----	2	45	

Well 10/7W-12B2

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand and gravel, dirty, yellow-	15	35	
Wash, gray-----	25	60	
Sand, dirty-----	3	63	
Sand and gravel-----	4	67	
Sand, coarse-----	4	71	
Sand, gray-----	9	80	
Wash, gray-----	10	90	
Sand, dirty, gray-----	5	95	
Sand and gravel-----	5	100	W.B.

Well 10/7W-17Q1

Type of record: Driller's log. Altitude: About 555 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Middle? series: /			
Shale-----	7	22	
Sandstone-----	29	51	
Shale and coal-----	34	85	

Well 10/7W-20M1

Type of record: Driller's log. Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Pennsylvanian system:			
Middle series:			
Sandstone, brown-----	10	18	
Shale, gray-----	21	39	

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

Well 10/7W-20M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Coal-----	1	40	
Fire clay-----	4	44	
Shale, gray-----	19	63	
Lower? series:			
Limestone-----	3	66	
Shale, gray-----	3	69	
Coal-----	1	70	
Shale, gray-----	30	100	Trace of coal at 94 feet
Shale, sandy, gray-----	18	118	
Coal-----	1	119	
Shale, gray-----	10	129	
Shale, sandy, gray-----	31	160	W.B.
Sandstone, white-----	5	165	
Shale, sandy, gray-----	6	171	
Sandstone, white-----	5	176	
Shale, gray-----	8	184	
Shale, blue-----	26	210	Trace of coal at 196 feet.

Well 10/7W-20M2

Type of record: Driller's log.	Altitude: About 560 feet.		
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Middle series:			
Shale, light-----	8	28	
Shale, blue-----	10	38	
Shale, light-----	17	55	
Sandstone-----	3	58	
Shale, brown-----	2	60	
Sandstone-----	8	68	W.B.

Well 10/7W-20N1

Type of record: Driller's log.	Altitude: About 600 feet.		
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Sand, red-----	18	30	
Pennsylvanian system:			
Middle series:			
Shale, soft, blue-----	10	40	

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

Well 10/7W-20N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Slate, black-----	10	50	
Shale, light-----	5	55	
Sandstone-----	57	112	
Lower? series:			
Coal-----	1	113	
Sandstone-----	5	118	
Shale, light-----	7	125	
Sandstone-----	5	130	
Shale, light-----	5	135	
Sandstone-----	15	150	
Shale, dark-----	7	157	
Coal-----	1	158	
Shale, light-----	12	170	

Well 10/7W-24H1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	15	15	
Sand, gray-----	13	28	
Mud-----	6	34	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	17	51	
Shale, sandy, gray-----	7	58	
Shale, gray-----	18	76	
Slate, gray-----	5	81	
Coal-----	3	84	
Fire clay-----	2	86	
Shale, gray-----	3	89	
Shale, sandy, gray-----	9	98	
Lower? series:			
Shale, gray-----	3	101	
Shale, sandy, gray-----	31	132	
Shale, gray-----	15	147	
Slate, gray-----	3	150	
Coal-----	2	152	W.B.
Fire clay-----	--	152	

Well 10/7W-24K1

Type of record: Driller's log.

Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	20	20	

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

Well 10/7W-24K1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	10	30	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	30	60	
Lower series:			
Limestone-----	5	65	
Shale, sandy-----	4	69	
Coal-----	1	70	
Fire clay-----	2	72	
Shale, blue-----	28	100	
Coal-----	1	101	
Fire clay-----	1	102	

Well 10/7W-24R1			
Type of record: Driller's log.		Altitude: About 560 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	10	10	
Sand-----	51	61	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	7	68	
Shale, sandy, dark-gray-----	2	70	W.B.
Shale, sandy, gray-----	25	95	
Coal-----	1	96	

Well 10/7W-25H1			
Type of record: Driller's log.		Altitude: About 555 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Hardpan-----	11	24	
Softpan-----	43	67	
Sand and gravel-----	3	70	
Drift, sandy-----	3	73	
Pan, sandy, soft-----	11	84	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6	90	
Coal-----	2	92	
Clay-----	3	95	
Shale, sandy, gray-----	15	110	

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

Well 11/7W-25K1

Type of record: Driller's log.

Altitude: About 555 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	22	22	
Hardpan-----	12	34	
Softpan-----	13	47	
Pennsylvanian system:			
Lower series:			
Sandstone-----	38	85	
Shale, sandy, gray-----	6	91	
Coal-----	2	93	
Clay-----	2	95	
Shale, sandy, gray-----	15	110	

Well 10/7W-25M1

Type of record: Driller's log.

Altitude: About 540 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Drift-----	20	30	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	27	57	
Limestone-----	3	60	
Coal and sandstone-----	2	62	
Fire clay-----	5	67	
Shale, light-----	10	77	

Well 10/7W-25R1

Type of record: Driller's log.

Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Muck, gray-----	8	26	
Softpan, brown-----	20	46	
Softpan, yellow-----	6	52	
Pennsylvanian system:			
Middle series:			
Slate, gray-----	3	55	
Slate, sandy, gray-----	15	70	
Slate, dark-blue-----	3	73	
Slate, blue-----	6	79	
Shale, sandy, gray-----	9	88	

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

Well 10/7W-25R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Shale, gray-----	18	106	
Coal-----	2	108	
Fire clay-----	6	114	
Shale, gray-----	6	120	

Well 10/7W-27E1

Type of record: Driller's log.

Altitude: About 535 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and softpan-----	23	23	
Drift, sandy-----	28	51	
Sand and gravel-----	13	64	W.B.

Well 10/7W-32G1

Type of record: Driller's log.

Altitude: About 565 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Drift-----	21	37	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	2	39	
Shale, blue-----	23	62	
Coal-----	2	64	
Fire clay-----	3	67	
Shale, light-----	5	72	
Sandstone-----	29	101	
Shale, blue-----	2	103	

Well 10/7W-32G2

Type of record: Driller's log.

Altitude: About 555 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	12	12	
Clay-----	7	19	
Drift-----	10	29	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	4	33	

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

Well 10/7W-36P1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal fault-----	2	65	W.B.
Shale, gray-----	5	70	
Sandstone-----	1	71	

Well 11/5W- 3G1

Type of record: Driller's log.

Altitude: About 720 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	3	20	
Mud-----	5	25	
Sandstone, gray-----	2	27	
Shale, sandy, gray-----	3	30	
Shale, gray-----	21	51	
Shale, sandy, gray-----	4	55	
Shale, sandy, black-----	6	61	Gas
Sandstone, gray-----	3	64	
Shale, sandy, gray-----	8	72	
Sandstone, white-----	26	98	W.B.
Shale, gray-----	--	98	

Well 11/5W- 4R1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	5	21	
Shale, very soft, gray-----	17	38	
Shale, sandy, gray-----	2	40	
Sandstone, brown-----	4	44	
Shale, gray-----	4	48	
Shale with layers of sand- stone-----	12	60	
Sandstone, brown-----	8	68	W.B.
Sandstone, gray-----	8	76	W.B.
Shale, gray-----	5	81	
Shale, sandy, gray-----	--	81	

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

Well 11/5W- 6G1

Type of record: Driller's log.

Altitude: About 665 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	6	6	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	17.5	23.5	
Shale, gray-----	1.5	25	
Sandstone-----	6	31	
Shale, gray-----	2	33	
Shale, sandy, gray-----	22	55	
Shale, gray-----	7	62	
Sandstone-----	38	100	
Shale, gray-----	43	143	
Sandstone-----	27	170	W.B.

Well 11/5W- 6G1

Type of record: Driller's log.

Altitude: 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	9	9	
Pennsylvanian system:			
Lower series:			
Sandstone-----	5	14	
Slate, black-----	3	17	
Sandstone-----	6	23	
Slate, blue-----	12	35	
Fire clay-----	3	38	
Slate, blue-----	16	54	
Coal-----	2	56	
Fire clay-----	1	57	
Shale, blue-----	40	97	
Slate, brown-----	13	110	
Coal-----	3	113	
Fire clay-----	2	115	
Shale, chunky, dark-----	14	129	

Well 11/5W- 9A1

Type of record: Driller's log.

Altitude: About 715 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Pennsylvanian system:			
Lower series:			
Sandstone-----	4	12	
Mud, soft, blue-----	23	35	
Steel band-----	--	35	
Sandstone and layers of mud	9	44	

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

Well 11/5W- 9A1--Continued

Material	Thick-- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, red-----	35	79	
Sandstone, brown-----	2	81	
Sandstone, red-----	23	104	
Sandstone, brown-----	3	107	
Sandstone, white-----	7	114	

Well 11/5W-17R1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Softpan-----	14	31	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	25	56	
Shale, black-----	5	61	
Coal-----	.5	61.5	
Shale, sandy, light-----	2.5	64	
Sandstone, light-----	4	68	
Shale, sandy, dark-----	26	94	

Well 11/5W-18R1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	15	30	
Hardpan, dark-----	15	45	
Softpan-----	12	57	
Pennsylvanian system:			
Lower series:			
Sandstone, hard-----	11	68	
Shale, sandy, blue-----	6	74	
Coal, trace-----	--	74	
Fire clay, hard-----	3	77	
Shale, blue-----	4	81	
Shale, gray-----	4	85	
Shale, sandy, blue-----	13	98	
Limestone, hard, blue-----	2	100	
Shale, dark-----	5	105	
Shale, dark-blue-----	10	115	
Shale, dark-----	21	136	
Shale, hard, dark-blue-----	5	141	
Shale, black-----	12	153	
Shale, sandy, light-----	5	158	

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

Well 11/5W-18R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, hard, gray-----	3	161	
Sandstone, pasty, light-----	5	166	

Well 11/5W-19D1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	4	18	
Sandstone, pasty, light-gray-	22	40	
Shale, sandy, blue-----	5	45	
Fire clay, hard-----	3	48	
Shale, light-blue-----	42	90	
Shale, sandy, dark, and			
pyrite-----	1	91	
Sandstone-----	3	94	
Sandstone, white-----	16	110	W.B.
Shale, sandy, light-----	1	111	

Well 11/5W-19D2

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Pennsylvanian system:			
Lower series:			
Sandstone, white-----	20	44	
Shale, sandy, blue-----	25	69	
Sandstone, blue-----	5	74	
Shale, sandy, blue-----	26	100	
Sandstone-----	3	103	
Shale, sandy, blue-----	37	140	
Sandstone, white-----	30	170	W.B.

Well 11/5W-19D4

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pan yellow-----	4	18	

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

Well 11/5W-19D4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	1	19	
Sandstone-----	45	64	
Shale, gray-----	18.5	82.5	
Sandstone-----	2.5	85	
Shale, sandy, gray-----	5	90	
Sandstone-----	8	98	
Limestone-----	6	104	
Shale, light-----	2	106	
Shale, gray-----	4	110	
Sandstone-----	80	190	
Mississippian(?) system:			
Chester(?) series:			
Limestone-----	4	194	

Well 11/5W-19E1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Softpan-----	14	22	
Pennsylvanian system:			
Lower series:			
Shale, brown-----	4	26	
Sandstone-----	3	29	
Coal-----	1.5	30.5	
Clay-----	4	34.5	
Shale, gray-----	4	38.5	
Slate, black-----	12	50.5	
Shale, sandy, gray-----	9.5	60	
Shale, dark-gray-----	10	70	
Shale, gray to brown-----	12	82	
Shale, dark-gray-----	4	86	
Shale, sandy, gray-----	22	108	
Shale, dark-gray-----	15	123	

Well 11/5W-19F1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Sandstone-----	10	27	
Slate, very soft-----	3	30	
Slate, sandy, blue-----	30	60	

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

Well 11/5W-19F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay-----	2	62	
Shale, sandy, blue-----	20	82	
Sandstone-----	12	94	
Shale, dark-----	51	145	
Mississippian system:			
Chester? series:			
Sandstone, light-----	21	166	
Limestone-----	20	186	
Shale, limy, green-----	12	198	
Limestone-----	10	208	
Meramec? series:			
Shale, limy-----	15	223	
Limestone-----	52	275	
Shale, limy, light-----	5	280	
Limestone-----	15	295	

Well 11/5W-19F2

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system			
Recent and Pleistocene series:			
Surface-----	14.5	14.5	
Pennsylvanian system:			
Lower series:			
Sandstone-----	14.5	29	
Shale, soft, light-----	3	32	
Shale, sandy, gray-----	10	42	
Sandstone-----	4	46	
Shale, sandy, gray-----	8	54	
Sandstone, hard-----	2	56	
Shale, sandy, gray-----	15	71	

Well 11/5W-19H1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Lower series:			
Sandstone-----	28	43	
Coal-----	5	48	
Shale, sandy, light-blue--	7	55	
Shale, blue-----	21	76	
Sandstone-----	28	104	W.B.
Shale-----	13	117	

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

Well 11/5W-19L1

Type of record: Drillers log.

Altitude: About 650 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Pennsylvanian system			
Lower series:			
Sandstone, yellow-----	18	26	
Shale, sandy, gray-----	3	29	
Sandstone-----	3	32	
Shale, sandy, light-gray-----	2	34	
Sandstone-----	28	62	
Coal-----	.5	62.5	
Clay-----	.5	63	
Sandstone-----	25	88	W.B.
Shale, gray-----	18	106	

Well 11/5W-20M1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	16	16	
Sand-----	22	38	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	8	46	
Shale, sandy-----	19	65	
Sandstone-----	14	79	W.B.
Shale, gray-----	16	95	

Well 11/5W-27R1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	11	11	
Softpan, yellow-----	9	20	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	32	52	
Sandstone, light-gray-----	4	56	
Sandstone, white-----	10	66	
Sandstone, blue-----	24	90	

Well 11/5W-28C1

Type of record: Driller's log.

Altitude: About 715 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	

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

Well 11/5W-28C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system			
Lower series:			
Sandstone-----	48	63	
Shale, sandy-----	9	72	
Sandstone-----	28	100	W.B.

Well 11/5W-30A1

Type of record: Driller's log.

Altitude: About 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Lower series:			
Slate, soft, blue-----	18	36	
Clay rock, yellow-----	14	50	
Sandstone, clayey, red----	12	62	
Sandstone, brown-----	5	67	
Sandstone, yellow-----	32	99	W.B.
Shale, sandy, blue-----	3	102	

Well 11/5W-30B1

Type of record: Driller's log.

Altitude: About 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Clay, light-----	12	30	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	10	40	
Coal-----	1	41	
Sandstone, yellow-----	10	51	
Sandstone, red-----	19	70	
Sandstone, yellow-----	10	80	
Sandstone, white-----	20	100	W.B.

Well 11/5W-30M1

Type of record: Driller's log.

Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Sand-----	20	42	
Hardpan-----	23	65	
Wash-----	8	73	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	2	75	

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

Well 11/5W-30M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvania system:			
Lower series:			
Sandstone-----	4	79	W.B.
Shale, sandy, gray-----	2	81	

Well 11/5W-31N1

Type of record: Driller's log.		Altitude: About 640 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone-----	20	34	
Shale, sandy, gray-----	10	44	
Sandstone-----	6	50	
Shale, sandy, and sandstone-----	30	80	
Shale, dark-gray-----	8	88	

Well 11/6W- 1D1

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	W.B.
Hardpan-----	20	42	
Wash, gray-----	38	80	
Sand-----	1	81	
Wash, brown-----	7	88	
Pennsylvanian system:			
Lower series:			
Shale, sandy, blue-----	24	112	
Sandstone, hard, gray-----	2	114	
Shale, sandy, blue-----	12	126	
Sandstone, hard, blue-----	26	152	
Sandstone, hard, white-----	20	172	

Well 11/6W- 2B1

Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	6	20	
Softpan-----	63	83	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	21	104	W.B.
Sandstone-----	3	107	
Shale, gray-----	9	116	
Sandstone-----	46	162	

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

Well 11/6W- 2P1

Type of record: Driller's log.

Altitude: About 670 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	15	30	
Slate, hard, dark-blue----	12	42	
Coal, trace-----	--	42	
Fire clay, hard-----	3	45	
Shale, sandy, light-----	5	55	
Shale, sandy, blue-----	5	60	
Shale, sandy, light-----	4	64	
Shale, sandy, blue-----	5	69	
Sandstone, white-----	10	79	W.B.
Shale, sandy, blue-----	16	95	
Shale, light-gray-----	12	107	
Shale, sandy, blue-----	10	117	
Shale, dark-gray-----	21	138	
Shale, sandy, gray-----	12	150	
Shale, sandy, light-----	10	160	
Shale, sandy, gray-----	10	170	
Shale, sandy, hard, gray--	1	171	
Shale, sandy, gray-----	7	178	
Shale, gray-----	14	192	
Shale, sandy, gray-----	15	207	
Sandstone, gray-----	27	234	W.B.

Well 11/6W- 3N1

Type of record: Driller's log.

Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	31	41	
Coal-----	3	44	
Fire clay-----	2	46	
Clay rock-----	8	54	
Slate, blue-----	6	60	
Coal-----	1	61	
Clay-----	1	62	
Shale, sandy, blue-----	38	100	
Sandstone-----	15	115	
Shale, sandy, blue-----	25	140	

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

Well 11/6W- 3N2

Type of record: Driller's log. Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Slate, soft, blue-----	4	20	
Fire clay-----	4	24	
Slate, sandy, blue-----	15	39	
Coal-----	1	40	
Fire clay-----	2	42	
Slate, gray-----	18	60	
Fire clay-----	3	63	Trace of coal
Shale, dark-----	27	90	
Shale, sandy, light-----	28	118	
Shale, dark-----	2	120	
Shale, light-----	5	125	
Sandstone-----	2	127	
Shale, sandy, blue-----	3	130	

Well 11/6W- 4Q1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	22	22	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	29	51	
Coal-----	2	53	
Clay-----	2	55	
Shale, sandy, blue-----	8.5	63.5	
Coal-----	4.5	68	
Sandstone, dark-gray-----	10	78	
Shale, sandy, dark-gray-----	2	80	
Sandstone-----	4	84	
Shale, gray-----	14	98	
Sandstone-----	2	100	
Shale, sandy, gray-----	2	102	
Sandstone-----	10	112	
Shale, sandy, gray-----	10	122	
Sandstone-----	22	144	
Shale, sandy, dark-gray-----	4	148	
Sandstone-----	27	175	
Record missing-----	150	325	

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

Well 11/6W- 4R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	16	32	
Coal-----	2	34	
Fire clay-----	3	37	
Slate, blue-----	6	43	
Coal, trace-----	--	43	
Fire clay-----	6	49	
Clay rock, hard-----	3	52	
Slate, dark-blue-----	5	57	
Coal, trace-----	--	57	
Fire clay, hard-----	1	58	
Shale, sandy, light-----	2	60	
Shale, sandy, gray-----	15	75	
Shale, gray-----	15	90	
Slate, black-----	10	100	

Well 11/6W- 4R2

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	12	12	
Pennsylvanian system:			
Lower series:			
Shale, soft-----	35	47	
Coal-----	1	48	
Shale, sandy-----	3	51	
Shale, blue-----	43	94	
Sandstone-----	30	124	
Sandstone, white-----	6	130	
Shale, blue-----	16	146	
Sandstone-----	24	170	W. B.

Well 11/6W- 5E1

Type of record: Driller's log. Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Lower series:			
Coal-----	2	20	
Fire clay-----	5	25	
Shale, sandy, light-----	10	35	
Sandstone, white-----	35	70	W. B.

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

Well 11/6W- 6H1

Type of record: Driller's log.

Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan, yellow-----	6	16	
Hardpan, gray-----	39	55	
Pennsylvanian system:			
Lower series:			
Sandstone-----	20	75	
Shale, sandy, light-----	20	95	
Sandstone, white-----	25	120	W.B.

Well 11/6W- 7B1

Type of record: Driller's log.

Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Sand-----	1	22	
Hardpan, gray-----	20	42	
Softpan, gray-----	9	51	
Sand, dirty, and gravel-----	6	57	
Softpan, dark-----	28	85	
Wash, soft, dark-----	8	93	
Pennsylvanian system:			
Lower series:			
Slate, soft, blue-----	3	96	
Shale, sandy, white-----	6	102	
Sandstone-----	6	108	W.B.
Shale, sandy, light-----	2	110	

Well 11/6W- 7K1

Type of record: Driller's log.

Altitude: About 585 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	14	14	
Pan, sandy-----	55	69	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	1	70	
Coal-----	1	71	
Clay-----	6	77	
Sandstone-----	3	80	
Shale, sandy, gray-----	16	96	
Shale, dark-gray-----	69	165	
Shale, sandy, gray-----	62	227	
Sandstone-----	13	240	
Coal-----	.5	240.5	

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

Well 11/6W- 7K1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system: Lower series: Clay-----	2.5	243	
Mississippian? system: Chester? series: Shale, sandy, gray-----	30	273	
Sandstone-----	19	292	W.B.

Well 11/6W- 7L1			
Type of record: Driller's log.		Altitude: About 580 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	25	35	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	15	50	
Coal-----	2	52	
Fire clay and light shale-	5	57	
Shale, blue-----	17	74	
Coal-----	3	77	
Sandstone-----	9	86	
Shale, light-----	6	92	
Sandstone-----	51	143	W.B.

Well 11/6W- 8P1			
Type of record: Driller's log.		Altitude: About 590 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	21	36	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	4	40	
Coal-----	1	41	
Clay-----	3	44	
Shale, light-----	16	60	
Coal-----	1	61	
Clay-----	1	62	
Shale, sandy, light-----	20	82	
Sandstone-----	2	84	
Shale, sandy, blue-----	6	90	

Well 11/6W- 9B1			
Type of record: Driller's log.		Altitude: About 665 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	

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

Well 11/6W- 9B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy-----	9	23	
Pennsylvanian system:			
Lower series:			
Shale, boots, gray-----	20	43	
Coal-----	1	44	
Shale, boots, light-gray-----	9	53	
Coal-----	1	54	
Fire clay-----	5	59	
Shale, boots, gray-----	2	61	
Slate, black-----	9	70	
Shale, boots, gray-----	3	73	
Shale, sandy, gray-----	10	83	
Shale, sandy, boots, gray-----	8	91	
Shale, sandy, gray-----	13	104	
Shale, sandy, boots, gray-----	5	109	
Sandstone, dark-gray-----	31	140	
Sandstone, light-gray-----	12	152	
Shale, sandy, gray-----	7	159	
Sandstone, gray-----	1	160	
Shale, sandy, gray-----	24	184	
Sandstone, light-gray-----	3	187	
Shale, sandy, gray-----	4	191	
Sandstone, dark-gray-----	9	200	
Shale, sandy, gray-----	3	203	
Sandstone, gray-----	11	214	
Mississippian? system:			
Chester? series:			
Limestone, gray-----	10	224	
Sandstone, white-----	13	237	
Sandstone, dark-gray-----	21	258	
Shale, sandy, gray-----	8	266	
Shale, solid, dark-gray-----	7	273	
Shale, sandy, gray-----	6	279	
Sandstone, gray-----	3	282	
Sandstone, white-----	12	294	W.B.
Shale, sandy, gray-----	2	296	

Well 11/6W- 9C1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:		
Recent and Pleistocene series:		
Surface-----	12	12
Hardpan-----	5	17
Pennsylvanian system:		
Lower series:		
Sandstone, brown-----	5	22
Shale, gray-----	27	49

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

Well 11/6W- 9C1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	7	56	
Shale, gray-----	13	69	
Coal-----	3	72	
Fire clay-----	3	75	
Shale, sandy, gray-----	7	82	
Shale, gray-----	4	86	
Coal-----	5	91	
Fire clay-----	7	98	
Shale, sandy, gray-----	5	103	
Shale, gray-----	3	106	
Shale, sandy, gray-----	20	126	
Shale, gray-----	8	134	
Sandstone, gray-----	21	155	
Shale, black-----	26	181	
Shale, gray-----	24	205	
Mississippian? system:			
Chester? series:			
Shale, sandy, gray-----	35	240	
Sandstone, gray-----	30	270	
Sandstone, white-----	8	278	W.B.
Shale, sandy, gray-----	12	290	

Well 11/6W-10E1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	10	25	
Softpan, dark-----	11	36	
Pennsylvanian system:			
Lower series:			
Sandstone, pasty-----	3	39	
Clay-----	6	45	
Sandstone, brown-----	10	55	
Slate, blue-----	25	80	

Well 11/6W-11B1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Lower series:			
Sandstone-----	5	23	
Slate-----	10	33	trace of coal at 25 ft.
Fire clay-----	6	39	
Shale, dark-----	10	49	

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

Well 11/6W-11B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy, blue-----	12	61	
Sandstone, blue-----	18	79	
Sandstone, white-----	12	91	W.B.
Shale, sandy, blue-----	2	93	

Well 11/6W-11D1

Type of record: Driller's log.

Altitude: About 645 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	10	34	
Slate, black-----	6	40	
Coal, trace-----	--	40	
Clay-----	3	43	
Sandstone, hard, brown-----	4	47	
Shale, sandy, light-----	6	53	
Shale, blue-----	4	57	
Shale, sandy, light-----	3	60	
Shale, sandy, blue-----	5	65	
Shale, sandy, light-----	6	71	
Shale, sandy, blue-----	14	85	
Sandstone-----	4	89	W.B.
Shale, blue-----	4	93	

Well 11/6W-11G1

Type of record: Driller's log.

Altitude: About 665 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Clay-----	10	28	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	14	42	
Shale, sandy, dark-----	12	54	
Shale, sandy, blue-----	33	87	
Sandstone, gray-----	3	90	W.B.
Sandstone, white-----	3	93	W.B.

Well 11/6W-11N1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	25	25	

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

Well 11/6W-11N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system: Recent and Pleistocene series: Hardpan-----	38	63	
Pennsylvanian system: Lower series: Rock, black-----	2	65	Limestone (?)
Shale, blue-----	11	76	
Sandstone-----	8	84	W.B.
Shale, blue-----	6	90	

Well 11/6W-13G1

Type of record: Driller's log.

Altitude: About 585 feet.

Quaternary system: Recent and Pleistocene series: Surface-----	18	18	
Sand-----	6	24	
Pennsylvanian system: Lower series: Shale, blue-----	7	31	
Shale, black-----	44	75	
Shale, blue-----	10	85	
Slate-----	5	90	
Shale, light-----	10	100	
Sandstone-----	10	110	W.B.
Shale, light-----	3	113	

Well 11/6W-14G1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system: Recent and Pleistocene series: Surface-----	14.5	14.5	
Pennsylvanian system: Lower series: Shale, gray-----	13.5	28	
Coal-----	1	29	
Clay-----	2	31	
Shale, gray-----	8	39	
Sandstone-----	7.5	46.5	
Coal-----	.5	47	
Shale, sandy, gray-----	8	55	
Sandstone-----	20	75	
Shale, sandy, gray-----	15	90	
Sandstone-----	15	105	
Shale, sandy, dark-gray----	25	130	
Sandstone-----	20	150	
Shale, sandy, gray-----	25	175	

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

Well 11/6W-14G1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	21	196	
Mississippian system:			
Chester? series:			
Shale, limy-----	1	197	
Limestone-----	11	208	
Shale, gray-----	20	228	
Limestone-----	2	230	
Shale, limy-----	2	232	
Limestone-----	13	245	

Well 11/6W-14Q1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	19	19	
Hardpan-----	9	28	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	8	36	W.B.
Shale, light-----	7	43	
Shale, blue-----	47	90	
Sandstone-----	10	100	W.B.

Well 11/6W-15D1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	14	14	
Quicksand-----	6	20	
Muck, blue-----	13	33	
Pennsylvanian system:			
Lower series:			
Shale, black-----	10.5	43.5	
Coal-----	.5	44	
Fire clay-----	1.5	45.5	
Sandstone-----	3.5	49	
Shale, sandy-----	6	55	
Shale, gray-----	23	78	
Shale, black-----	19	97	
Sandstone-----	24	121	
Shale, gray-----	39	160	W.B.
Sandstone-----	15	175	W.B.
Sandstone, white-----	11	186	
Shale, gray-----	--	186	

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

Well 11/6W-16E1

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface soil-----	6	6	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	10	16	
Coal-----	3	19	
Clay, shaly, and sandstone	9	28	
Shale-----	15.5	43.5	
Shale, dark-----	12	55.5	
Coal-----	3.5	59	
Clay, shaly-----	1	60	

Well 11/6W-16N1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	11	11	
Pennsylvanian system:			
Lower series:			
Sandstone-----	8	19	
Shale, brown-----	7	26	
Sandstone-----	2	28	
Shale, sandy, gray-----	5	33	
Coal-----	1	34	
Shale, dark-gray-----	8	42	
Sandstone-----	2	44	
Shale, sandy, dark-gray---	5.5	49.5	
Sandstone-----	1.5	51	W.B.
Shale, dark-gray-----	24	75	

Well 11/6W-17C1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	10	25	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	24	49	
Coal-----	1	50	
Clay-----	3	53	
Shale, sandy, light-----	19	72	
Coal-----	1	73	
Clay, hard-----	1	74	
Sandstone-----	3	77	

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

Well 11/6W-17C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, light-----	5	82	
Shale, sandy, blue-----	18	100	

Well 11/6W-17C3

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Pan, sandy-----	6	25	
Hardpan-----	2	27	
Softpan, soft, sandy-----	22	49	
Pennsylvanian system:			
Lower series:			
Shale, soft, gray-----	11	60	
Sandstone-----	14	74	W.B.
Shale, sandy, light-----	8	82	
Shale, hard, dark-----	71	153	
Sandstone, dark-----	17	170	W.B.

Well 11/6W-17E1

Type of record: Driller's log. Altitude: About 645 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4	4	
Clay-----	13	17	
Hardpan-----	10	27	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	25	52	
Slate, dark-blue-----	4	56	
Coal-----	2	58	
Fire clay-----	1	59	
Slate, gray-----	11	70	
Fire clay-----	20	90	
Sandstone, white-----	10	100	W.B.
Shale, black-----	96	196	
Shale, gray-----	52	248	
Mississippian system:			
Chester series:			
Sandstone, white-----	6	254	
Shale, limy, soft, gray-----	46	300	
Limestone-----	8	308	
Shale, sandy, dark-----	6	314	
Shale, sandy, gray-----	5	319	
Limestone-----	10	329	

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

Well 11/6W-17E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system:			
Chester series:			
Shale, limy-----	19	348	
Meramec? series:			
Limestone-----	52	400	"Salt water"

Well 11/6W-17F1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	8	22	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	32	54	
Coal-----	2.5	56.5	
Clay-----	2.5	59	
Shale, sandy, light-----	10	69	
Shale, sandy, blue-----	16	85	
Coal-----	1	86	
Clay, hard-----	3	89	
Shale, sandy, light-----	6	95	
Shale, dark-blue-----	25	120	

Well 11/6W-17H1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Clay, tough, light-----	10	18	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	12	30	
Slate, black-----	9	39	
Coal-----	2.5	41.5	
Fire clay-----	2	43.5	
Sandstone-----	5	48.5	
Shale, sandy-----	10	58.5	
Slate, blue-----	15	73.5	
Coal-----	2.5	76	
Fire clay-----	1	77	
Shale, sandy, light-----	10	87	
Sandstone, white-----	11	98	W.B.

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

Well 11/6W-19A2

Type of record: Driller's log. Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	33	43	
Pennsylvanian system:			
Lower series:			
Slate, sandy, gray-----	17	60	
Coal-----	2.5	62.5	
Clay, hard-----	3.5	66	
Shale, sandy, blue-----	26	92	
Sandstone-----	8	100	W.B.

Well 11/6W-19B1

Type of record: Driller's log. Altitude: About 585 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; caly, soft, yellow	12	12	
Hardpan, gray-----	18	30	
Softpan, gray-----	14	44	
Pennsylvanian system:			
Lower series:			
Shale, soft, light-----	12	56	
Shale, hard, dark-----	13	69	
Coal, hard-----	1	70	
Shale, dark, and hard sandstone-----	3	73	
Shale, soft, light-----	4	77	
Shale, hard, dark-----	19	96	
Sandstone, hard, dark-----	24	120	W.B.
Sandstone, moderately-hard, light-----	12	132	W.B.

Well 11/6W-19H1

Type of record: Driller's log. Altitude: About 595 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Sand-----	10	20	
Hardpan-----	20	40	
Softpan-----	17	57	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	3	60	
Shale, sandy-----	30	90	
Sandstone-----	10	100	W.B.
Shale, black-----	3	103	

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

Well 11/6W-19J1

Type of record: Driller's log. Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	17	73	
Pan-----	3	20	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	10	30	
Shale, sandy, gray-----	30	60	
Shale, dark-gray-----	3	63	
Coal-----	2	65	
Clay-----	4	69	
Shale, sandy, gray-----	6	75	
Coal-----	2	77	
Clay-----	3	80	

Well 11/6W-20N1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	8	18	
Pennsylvanian system:			
Lower series:			
Clay rock-----	10	28	
Slate-----	12	40	
Coal-----	2.5	42.5	
Fire clay-----	4.5	47	
Sandstone-----	3	50	
Shale, blue-----	10	60	
Slate, blue-----	10	70	
Coal-----	2.5	72.5	
Fire clay-----	2	74.5	
Shale, sandy-----	6	80.5	
Sandstone, dark-----	3	83.5	W.B.
Sandstone, gray-----	10.5	94	W.B.

Well 11/6W-20P1

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan, gray-----	65	75	
Sand-----	8	83	
Hardpan, gray-----	4	87	
Sand, coarse-----	1	88	W.B.

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

Well 11/6W-21D1			
Type of record: Driller's log.			Altitude: About 680 feet.
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan, yellow-----	18	38	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	10	48	
Coal-----	2.5	50.5	
Clay-----	2.5	53	
Slate, gray-----	10	63	
Coal-----	2	65	
Clay-----	3	68	
Shale, sandy, blue-----	48	116	
Sandstone, white-----	4	120	
Shale, sandy, blue-----	6	126	
Shale, dark-----	8	134	

Well 11/6W-21L1			
Type of record: Driller's log.			Altitude: About 600 feet.
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	32	32	
Hardpan-----	15	47	
Pennsylvanian system:			
Lower series:			
Coal-----	2	49	
Clay-----	2	51	
Slate, soft, gray-----	13	64	
Coal-----	1	65	
Clay, soft-----	5	70	
Shale, sandy, hard, light-----	35	105	
Slate, black-----	26	131	
Slate, sandy, gray-----	10	141	
Sandstone, gray-----	12	153	
Shale, sandy, blue-----	64	217	
Sandstone, gray-----	6	223	
Mississippian? system:			
Chester? series:			
Sandstone, white-----	14	237	W.B.
Shale, limy-----	2	239	

Well 11/6W-21P1			
Type of record: Driller's log.			Altitude: About 575 feet.
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	33	33	
Hardpan-----	23	56	

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

Well 11/6W-21P1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	2	58	W.B.
Clay, tough, hard-----	3	61	
Well 11/6W-21P2			
Type of record: Driller's log.		Altitude: About 575 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	W.B.
Hardpan, gray-----	7	22	
Softpan, dark-----	22	44	
Wash, yellow-----	9	53	
Softpan-----	2	55	
Sand and gravel-----	7	62	
Well 11/6W-21P3			
Type of record: Driller's log.		Altitude: About 575 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	W.B.
Sand, dirty-----	3	18	
Hardpan, gray-----	9	27	
Hardpan, soft-----	17	44	
Wash, yellow-----	5	49	
Gravel, yellow-----	1	50	
Softpan-----	7	57	
Sand and gravel, dirty----	3	60	
Softpan-----	2	62	
Sand and wash, dirty-----	4	66	
Sand and gravel-----	4	70	
Well 11/6W-22H1			
Type of record: Driller's log.		Altitude: About 645 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	3	18	
Pennsylvanian system:			
Lower series:			
Sandstone, hard-----	3	21	
Shale, sandy, hard-----	15	36	
Slate, blue-----	3	39	
Coal, trace-----	--	39	
Shale, sandy, hard-----	6	45	
Shale, sandy, blue-----	19	64	

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

Well 11/6W-22H1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	1	65	W.B.
Shale, sandy, blue-----	6	71	
Well 11/6W-23A1			
Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Shale, sandy-----	13	23	
Quicksand-----	1	24	
Pennsylvanian system:			
Lower series:			
Coal-----	2	26	
Fire clay-----	3	29	
Shale, gray-----	22	51	
Sandstone-----	9	60	
Shale, sandy-----	5	65	
Shale, gray-----	29	94	
Shale, sandy-----	11	105	W.B.
Well 11/6W-23N1			
Type of record: Driller's log.		Altitude: About 624 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	16	16	
Pennsylvanian system:			
Lower series:			
Shale, soft-----	37	53	
Sandstone, hard-----	3	56	
Shale and sandstone-----	80	136	
Sandstone-----	14	150	
Sandstone, hard-----	25	175	
Mississippian system:			
Chester? series:			
Limestone and shale-----	20	195	
Sandstone, hard-----	20	215	
Shale and sandstone-----	17	232	
Limestone, hard-----	29	261	
Shale, blue, and limy sandstone-----	9	270	
Meramec? series:			
Limestone and dolomite-----	29	299	
Limestone and chert-----	29	328	
Limestone-----	6	334	
Sandstone, hard-----	10	344	T.D. 1,497 ft.

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

Well 11/6W-23P1			
Type of record: Driller's log.		Altitude: About 620 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Dug well-----	25	25	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	6	31	
Sandstone-----	4	35	
Shale, sandy, gray-----	12	47	
Coal-----	1	48	
Clay-----	4	52	
Shale, dark-gray-----	19	71	
Well 11/6W-24H1			
Type of record: Driller's log.		Altitude: About 610 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand-----	4	19	
Hardpan-----	23	42	
Pennsylvanian system:			
Lower series:			
Coal and fire clay-----	2	44	
Shale, sandy, gray-----	12	56	
Slate, blue-----	32	88	
Shale, sandy, light-----	5	93	
Shale, light-----	4	97	
Sandstone-----	6	103	W.B.
Shale, sandy, light-----	2	105	
Well 11/6W-26B1			
Type of record: Driller's log.		Altitude: About 650 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	9.5	9.5	
Pennsylvanian system:			
Lower series:			
Sandstone-----	13	22.5	
Slate, blue-----	30	52.5	
Coal and fire clay-----	1	53.5	
Shale, light-----	10	63.5	
Shale, dark-----	46	109.5	
Shale, sandy, light-----	18	127.5	
Mississippian? system:			
Chester? series:			
Sandstone, white-----	18	145.5	W.B.
Shale, limy-----	2.5	148	

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

Well 11/6W-26B2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	11	11	
Pennsylvanian system:			
Lower series:			
Sandstone-----	12	23	
Slate, blue-----	15	38	
Shale, clayey-----	3	41	
Slate, blue-----	12	53	
Coal-----	2	55	
Fire clay-----	2	57	
Shale, sandy, gray-----	66	123	
Mississippian? system:			
Chester? series:			
Sandstone, light-----	8	131	
Shale, limy-----	20	151	
Shale, chunky, dark-----	9	160	
Limestone-----	38	198	

Well 11/6W-27D1

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	11	26	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	9	35	
Coal-----	1	36	
Slate, blue-----	7	43	
Coal-----	1	44	
Clay-----	3	47	
Clay, sandy, white-----	8	55	
Shale, sandy, gray-----	6	61	
Coal, trace-----	--	61	
Slate, blue-----	3	64	
Slate, sandy, dark-----	25	89	

Well 11/6W-27G1

Type of record: Driller's log. Altitude: About 585 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	20	20	
Pan, sandy-----	12	32	
Pennsylvanian system:			
Lower series:			
Shale, soft, yellow-----	9	41	

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

Well 11/6W-27G1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	1	42	
Shale, dark-gray-----	11	53	
Coal, trace-----	--	53	
Clay-----	2	55	
Shale, gray-----	17	72	
Sandstone-----	16	88	
Shale, gray-----	12	100	
Sandstone-----	30	130	
Shale, sandy, dark-gray----	10	140	

Well 11/6W-28D1

Type of record: Driller's log.

Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan-----	13	30	
Gravel and hardpan-----	22	52	
Hardpan-----	13	65	
Pennsylvanian system:			
Lower series:			
Sandstone-----	35	100	W.B.
Coal-----	3	103	
Shale, blue-----	2	105	

Well 11/6W-29A1

Type of record: Driller's log.

Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	35	55	
Wash, yellow-----	6	61	
Pennsylvanian system:			
Lower series:			
Slate, sandy, gray-----	4	65	
Slate, blue-----	2	67	
Shale, sandy, blue-----	15	82	
Sandstone, hard-----	16	98	
Slate, dark-----	4	102	
Shale, sandy, blue-----	20	122	
Shale, sandy, gray-----	17	139	
Sandstone, gray-----	10	149	W.B.
Shale, sandy, blue-----	4	153	
Shale, blue-----	16	169	
Shale, sandy, dark-blue----	11	180	
Shale, sandy, blue-----	4	184	

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

Well 11/6W-29A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, dark-----	14	198	
Shale, light-gray-----	3	201	
Shale, sandy, light-----	6	207	
Shale, blue-----	6	213	
Shale, sandy, blue-----	7	220	
Mississippian? system:			
Chester? series:			
Sandstone, gray-----	7	227	
Shale, limy-----	10	237	

Well 11/6W-29J1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Softpan, dark-----	21	39	
Sand, dirty-----	2	41	
Softpan, yellow-----	8	49	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	3	52	
Slate, sandy, gray-----	12	64	
Shale, sandy, blue-----	8	72	
Shale, sandy, light-----	5	77	
Sandstone, white-----	5	82	W.B.
Shale, sandy, gray-----	4	86	
Limestone, dark-----	2	88	
Sandstone, white-----	7	95	W.B.
Shale, sandy, blue-----	7	102	
Sandstone, hard, blue-----	8	110	
Shale, sandy, gray-----	3	113	
Sandstone, light-blue-----	18	131	
Shale, sandy, gray-----	17	148	
Sandstone, pasty, gray-----	5	153	
Shale, sandy, blue-----	10	163	

Well 11/6W-29M1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Mud-----	74	90	
Sand, green-----	15	105	"Log near bottom"
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	108	

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

Well 11/6W-29M1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	7	115	
Sandstone, white-----	20	135	W.B.

Well 11/6W-31C1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Middle? series:			
Shale, gray-----	8	24	
Shale, sandy, gray-----	7.5	31.5	
Sandstone-----	2.5	34	
Lower? series:			
Shale, sandy, dark-gray-----	2	36	
Sandstone-----	1	37	
Shale, sandy, gray-----	10	47	
Shale, sandy, dark-gray-----	34	81	
Coal-----	3	84	
Clay-----	6	90	
Shale, sandy, gray-----	2	92	
Shale, sandy, dark-gray-----	3	95	
Coal-----	1	96	
Clay-----	1	97	
Shale, sandy, dark-gray-----	3	100	
Sandstone-----	3	103	
Shale, sandy, gray-----	2	105	
Sandstone-----	2	107	
Shale, sandy, gray-----	5	112	
Shale, sandy, dark-gray-----	4	116	
Sandstone-----	2	118	
Shale, sandy, gray-----	4	122	
Shale, sandy, dark-gray-----	11	133	

Well 11/6W-31P1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	10	25	
Softpan, gray-----	39	64	
Sand, gray-----	12	76	
Sand and gravel-----	10	86	W.B.

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

Well 11/6W-32B1		Altitude: About 560 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, dark-----	10	25	
Hardpan, gray-----	10	35	
Softpan, dark-----	10	45	
Softpan, yellow-----	16	61	
Sand, dirty, and some gravel--	2	63	
Wash, gray-----	37	100	
Gravel-----	--	100	W.B.
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	4	104	
Sandstone, gray-----	3	107	
Sandstone, white-----	4	111	W.B.
Shale, dark-blue-----	10	121	

Well 11/6W-32D2		Altitude: About 575 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	14	14	
Sandstone-----	6	20	Cemented sand (?)
Shale, gray-----	6	26	Clay (?)
Silt-----	39	65	
Coal-----	2	67	
Fire clay-----	3	70	Clay (?)
Silt-----	15	85	
Quicksand-----	20	105	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6	111	
Sandstone-----	14	125	W.B.

Well 11/6W-32E1		Altitude: About 585 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	15	25	
Wash-----	4	29	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	6	35	
Slate, gray-----	30	65	
Coal-----	1.5	66.5	
Clay-----	1	67.5	

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

Well 11/6W-32E1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, dark-blue-----	60	127.5	
Sandstone-----	17	144.5	
Shale, dark-blue-----	60	204.5	
Shale, gray-----	25	229.5	
Shale, dark-blue-----	15	244.5	
Sandstone-----	15	259.5	
Coal and shale-----	1	260.5	
Mississippian system:			
Chester series:			
Limestone-----	16	276.5	
Shale, gray-----	16	292.5	
Limestone-----	8	300.5	
Shale, light-gray-----	35	335.5	
Limestone-----	20	355.5	
Sandstone-----	4	359.5	
Limestone-----	8	367.5	
Sandstone, dark-----	12	379.5	
Limestone-----	4	383.5	
Sandstone-----	21	404.5	
Limestone-----	12	416.5	
Sandstone, light-----	11	427.5	
Meramec (?) series:			
Limestone-----	3.5	431	
Sandstone, dark-----	7	438	

Well 11/6W-35F1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	28	28	
Pan-----	16	44	
Pennsylvanian system:			
Lower series:			
Sandstone-----	18.5	62.5	
Shale, sandy, gray-----	.5	63	
Sandstone-----	27	90	W.B.

Well 11/6W-35J1

Type of record: Driller's log.

Altitude: About 560 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	18	30	

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

Well 11/7W- 3A1

Type of record: Driller's log. Altitude: About 620 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan and sand-----	62	77	
Pennsylvanian system:			
Lower series:			
Sandstone-----	16	93	
Shale, gray-----	7	100	
Shale, dark-----	10	110	
Coal-----	3	113	
Shale, dark-----	7	120	
Shale, sandy-----	11	131	
Sandstone-----	20	151	W.B.
Shale, dark-----	19	170	

Well 11/7W- 3D1

Type of record: Driller's log. Altitude: About 660 feet.

Open well-----	28	28	
Pennsylvanian system:			
Middle series:			
Slate, black-----	10	38	
Shale, light-----	8	46	
Shale, dark-----	15	61	
Shale, light-----	59	120	
Sandstone-----	50	170	
Lower? series:			
Shale, blue-----	2	172	
Sandstone-----	3	175	
Shale, blue-----	1	176	
Shale, sandy-----	55	231	
Shale, gray-----	19	250	
Sandstone-----	30	280	W.B.

Well 11/7W- 4M1

Type of record: Driller's log. Altitude: 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan, gray-----	30	46	
Softpan-----	2	48	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	16	64	
Shale, gray-----	39	103	

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

Well 11/7W- 5M1

Type of record: Driller's log.

Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	9	25	
Hardpan and gravel-----	30	55	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	22	77	
Coal-----	2	79	
Shale, blue-----	21	100	
Sandstone-----	10	110	W.B.

Well 11/7W- 5Q1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Softpan, yellow-----	10	27	
Softpan, dark-----	12	39	
Softpan, yellow-----	8	47	
Wash, dark-----	3	50	
Pennsylvanian system:			
Middle series:			
Shale, sandy, gray-----	45	95	
Coal, trace-----	--	95	
Fire clay-----	3	98	
Shale, sandy, light-----	5	103	
Shale, sandy, gray-----	10	113	
Slate, black-----	3	116	
Coal-----	2	118	
Fire clay, hard-----	3	121	
Slate, black-----	5	126	
Coal-----	1	127	
Slate, sandy, gray-----	8	135	

Well 11/7W- 7H1

Type of record: Driller's log.

Altitude: About 610 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, gray-----	22	36	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	10	46	
Slate, sandy, blue-----	30	76	
Sandstone, blue-----	5	81	

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

Well 11/7W- 7H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Coal-----	3.5	84.5	
Fire clay, dark-----	1.5	86	
Shale, sandy, blue-----	25	111	
Shale, white-----	5	116	
Sandstone, blue-----	3	119	
Shale, sandy, blue-----	5	124	
Sandstone, blue-----	8	132	

Well 11/7W- 7L1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Middle series:			
Sandstone-----	7	27	W.B.
Shale-----	28	55	

Well 11/7W- 7N1

Type of record: Driller's log. Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Pennsylvanian system:			
Middle series:			
Sandstone, white-----	21	42	
Sandstone, soft, yellow-----	8	50	
Slate, sandy, gray-----	3	53	
Slate, brown-----	8	61	
Slate, sandy, gray-----	84	145	
Sandstone-----	25	170	W.B.

Well 11/7W- 7Q1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Gravel, small-----	4	17	W.B.
Sand, coarse-----	10	27	W.B.
Pennsylvanian system:			
Middle series:			
Soapstone-----	2	29	
Slate-----	1	30	

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

Well 11/7W- 8B1

Type of record: Driller's log. Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent Pleistocene series:			
Surface-----	15	15	
Hardpan-----	46	61	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	2	63	
Slate, black-----	5	68	
Shale, light-----	7	75	
Shale, gray-----	6	81	
Sandstone-----	3	84	
Shale, gray-----	2	86	
Coal-----	5	91	
Shale, light-----	4	95	
Rock, black-----	5	100	Limestone (?)
Shale, light-----	11	111	
Shale, blue-----	3	114	

Well 11/7W- 8B2

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4	4	
Hardpan-----	14	18	
Gravel-----	2	20	W.B.
Hardpan-----	12	32	

Well 11/7W- 9J1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	56	72	
Sand and hardpan-----	33	105	
Pennsylvanian system:			
Middle series:			
Shale, dark-----	8	113	

Well 11/7W-10C1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	22	40	

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

Well 11/7W-12C1

Type of record: Driller's log. Altitude: About 590 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	76	90	
Wash, gray-----	12	102	
Wash, brown-----	5	107	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	23	130	W.B.

Well 11/7W-12J1

Type of record: Driller's log. Altitude: About 585 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	40	58	
Sand-----	10	68	W.B.
Pennsylvanian system:			
Lower series:			
Coal-----	1	69	
Fire clay-----	1	70	

Well 11/7W-12N1

Type of record: Driller's log. Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	1	17	
Hardpan-----	28	45	
Gravel, small-----	1	46	
Softpan-----	8	54	
Pennsylvanian system:			
Lower series:			
Slate, sandy, gray-----	30	84	
Coal-----	1	85	
Clay-----	2	87	
Shale, sandy, light-----	7	94	

Well 11/7W-15P1

Type of record: Driller's log. Altitude: About 625 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Quicksand-----	14	30	
Mud, sand, and gravel-----	35	65	
Quicksand-----	54	119	

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

Well 11/7W-16K1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	60	80	
Sand, fine-----	9	89	
Hardpan-----	4	93	
Sand-----	14	107	
Pennsylvanian system:			
Lower? series:			
Sandstone-----	133	240	
Shale, gray-----	3	243	

Well 11/7W-17H1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Softpan, yellow-----	11	25	
Softpan, dark-----	6	31	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	14	45	
Slate, black-----	7	52	
Coal-----	1	53	
Fire clay-----	4	57	
Shale, sandy, light-blue-----	5	62	
Sandstone, pasty, blue-----	11	73	
Coal-----	1	74	
Fire clay, blue-----	3	77	
Shale, sandy, gray-----	11	88	
Shale, sandy, light-blue-----	6	94	
Shale, sandy, gray-----	6	100	
Coal, trace-----	--	100	
Fire clay-----	2	102	W.B.
Shale, sandy, gray-----	10	112	
Shale, hard, white-----	4	116	
Shale, sandy, light-----	6	122	
Lower? series:			
Shale, gray-----	9	131	
Fire clay-----	3	134	
Shale (?), soft, gray-----	5	139	
Shale (?), soft, light-gray-----	8	147	
Shale, sandy, blue-----	8	155	
Shale, light-gray-----	7	162	
Sandstone, pasty, gray-----	9	171	
Shale, dark-blue-----	7	178	
Shale, sandy, blue-----	10	188	

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

Well 11/7W-17H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Coal, trace-----	--	188	
Fire clay-----	3	191	
Shale, gray-----	5	196	
Shale, sandy, gray-----	5	201	
Sandstone, pasty, gray-----	9	210	
Shale, gray-----	10	220	
Shale, blue-----	20	240	
Sandstone, pasty, blue-----	10	250	
Shale, sandy, blue-----	10	260	

Well 11/7W-17P1

Type of record: Driller's log.		Altitude: About 625 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Sandstone-----	4	19	Cemented sand (?)
Silt-----	6	25	
Gravel-----	15	40	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	10	50	
Shale, black-----	15	65	
Shale, sandy-----	19	84	
Coal-----	1.5	85.5	
Shale, gray-----	14.5	100	
Sandstone-----	35	135	W.B.
Shale, gray-----	--	135	

Well 11/7W-17P2

Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	15	29	
Pennsylvanian system:			
Middle series:			
Shale, light-----	6	35	
Slate-----	7	42	
Shale, blue-----	26	68	
Sandstone-----	43	111	W.B.

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

Well 11/7W-17Q1

Type of record: Driller's log. Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Mud-----	2	18	
Sand and gravel-----	2	20	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	30	50	
Shale, black-----	21	71	
Shale, sandy, gray-----	7	82	
Sandstone, white-----	34	112	W.B.

Well 11/7W-17Q2

Type of record: Driller's log. Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	4	20	
Pennsylvanian system:			
Middle series:			
Shale, soft, gray-----	40	60	
Shale, sandy, gray-----	11	71	
Sandstone, gray-----	12	83	
Shale-----	7	90	
Sandstone, white-----	25	115	W.B.

Well 11/7W-17R1

Type of record: Driller's log. Altitude: About 625 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Muck and sand-----	1	19	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	19	38	
Coal, trace-----	--	38	
Fire clay-----	3	41	
Clay rock, light-----	13	54	
Shale, light-----	10	64	
Shale, sandy, blue-----	6	70	
Sandstone, gray-----	17	87	
Coal-----	1	88	
Fire clay-----	2	90	
Shale, limy, with lime- stone bands-----	8	98	
Shale, light-----	8	106	
Coal-----	2	108	

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

Well 11/7W-17R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Fire clay-----	2	110	
Shale, blue-----	18	128	
Lower? series:			
Shale, white-----	14	142	
Sandstone-----	28	170	
Shale with sandstone bands----	40	210	
Slate, blue-----	3	213	
Coal-----	2	215	
Fire clay, white-----	2	217	
Shale, sandy, white-----	10	227	
Sandstone-----	54	281	W.B.

Well 11/7W-18K1

Type of record: Driller's log.

Altitude: About 578 feet.

Quaternary system:			
Recent and Pleistocene series:			
Drift-----	35	35	
Pennsylvanian system:			
Middle series:			
Sandstone-----	9	44	
Shale, dark-----	32	76	
Coal-----	1	77	
Shale, sandy, gray-----	6	83	
Sandstone-----	24	107	
Shale, gray-----	14	121	
Sandstone, brown-----	30	151	
Lower series:			
Coal-----	3	154	
Shale, gray-----	21	175	
Shale, sandy-----	13	188	
Limestone, dark-----	7	195	
Shale, dark-----	13	208	
Sandstone, dark-----	30	238	
Shale, sandy-----	78	316	T.D. 772 ft.

Well 11/7W-18M1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Drift, shaly, dark-----	9	24	Trace of coal
Pennsylvanian system:			
Middle series:			
Shale, gray-----	14	38	
Shale, dark-----	34	72	

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

Well 11/7W-18M1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	2	74	
Sandstone, broken-----	17	91	W.B.
Shale, dark-----	7	98	
Slate-----	3	101	
Shale, gray-----	19	120	Trace of coal
Sandstone, broken-----	18	138	
Sandstone-----	37	175	
Lower series:			
Shale, gray-----	45	220	
Limestone, gray-----	1	221	
Shale, dark-----	15	236	
Limestone, gray-----	3	239	
Shale, dark-----	24	263	
Sandstone, broken-----	11	274	
Shale, gray-----	30	304	
Sandstone, broken-----	14	318	
Shale, dark-----	10	328	
Shale, sandy, gray-----	21	349	
Sandstone-----	39	388	W.B.; T.D. 1,674 ft.

Well 11/7W-18N1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	25	25	
Pennsylvanian system:			
Middle series:			
Slate, soft, black-----	5	30	
Coal, trace-----	--	30	
Fire clay, white-----	10	40	
Shale, sandy, white-----	4	44	
Shale (?), gray-----	16	60	
Coal, trace-----	--	60	
Fire clay, soft, blue-----	2	62	
Shale, gray-----	4	66	
Shale, sandy, blue-----	13	79	
Shale, gray-----	4	83	
Shale, sandy, gray-----	4	87	
Sandstone, pasty, gray-----	13	100	
Shale, black-----	13	113	
Coal, trace-----	--	113	
Fire clay-----	3	116	
Shale, sandy, gray-----	4	120	
Shale, gray-----	5	125	
Coal-----	2	127	W.B.
Fire clay, hard-----	3	130	

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

Well 11/7W-18N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy, gray-----	12	142	W.B.
Sandstone, gray-----	8	150	
Coal, trace-----	--	150	
Fire clay, hard-----	3	153	
Shale, sandy, light-blue-----	12	165	

Well 11/7W-18Q1

Type of record: Driller's log. Altitude: About 605 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	28	28	W.B.	
Hardpan-----	10	38		
Pennsylvanian system:				
Middle series:				
Sandstone-----	65	103		
Coal-----	2	105		
Fire clay-----	3	108		
Sandstone-----	30	138		

Well 11/7W-19D1

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary system:				
Recent and Pleistocene series:				
Clay-----	30	30	W.B.	
Hardpan-----	8	38		
Pennsylvanian system:				
Middle series:				
Sandstone-----	60	98		
Coal-----	3	101		
Fire clay-----	1	102		
Sandstone-----	24	126		

Well 11/7W-19D2

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	18	18	W.B.	
Hardpan-----	6	24		
Pennsylvanian system:				
Middle series:				
Shale, blue-----	28	52		

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

Well 11/7W-19D2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	10	62	
Sandstone-----	58	120	
Coal-----	4	124	
Shale-----	6	130	
Sandstone-----	30	160	W.B.

Well 11/7W-19R1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Softpan, gray-----	30	52	
Wash, gray-----	10	62	
Softpan, yellow-----	12	74	
Pennsylvanian system:			
Middle series:			
Slate, black-----	1	75	
Coal, trace-----	--	75	
Fire clay-----	5	80	
Shale, light-gray-----	7	87	
Sandstone, pasty, gray-----	7	94	W.B.
Shale, gray-----	10	104	

Well 11/7W-20E1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Softpan, gray-----	15	32	
Softpan, yellow-----	8	40	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	7	47	
Coal-----	1	48	
Fire clay, blue-----	3	51	
Slate, blue-----	6	57	
Shale, sandy, blue-----	20	77	
Slate, blue-----	5	82	
Slate, black-----	6	88	
Coal, trace-----	--	88	
Fire clay, hard-----	2	90	
Shale, sandy, light-----	13	103	
Coal-----	1	104	
Fire clay, hard-----	2	106	
Shale, sandy, gray-----	4	110	

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

Well 11/7W-20E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	8	118	W.B.
Sandstone, pasty, gray-----	18	136	
Shale, sandy, light-----	8	144	
Shale, white-----	4	148	
Shale, sandy, light-blue-----	6	154	
Shale, sandy, gray-----	12	166	

Well 11/7W-20G1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Sand-----	18	31	
Muck, gray-----	7	38	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	5	43	
Coal-----	1	44	
Shale, gray-----	14	58	
Slate, black-----	2	60	
Shale, gray-----	7	67	
Sandstone, gray-----	5	72	
Sandstone, light-gray-----	6	78	
Shale, boots, gray-----	6	84	
Shale, sandy, gray-----	14	98	
Shale, gray-----	21	119	
Shale, sandy, gray-----	12	131	
Sandstone, white-----	9	140	W.B.
Sandstone, gray-----	2	142	W.B.

Well 11/7W-20H1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand and gravel-----	6	26	
Pennsylvanian system:			
Middle series:			
Shale, very soft, gray-----	8	34	
Shale, sandy-----	7	41	
Shale, gray-----	4	45	
Slate, black-----	6	51	
Coal-----	1	52	
Fire clay-----	3	55	
Shale, gray-----	5	60	

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

Well 11/7W-20H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	6	66	
Coal-----	2	68	
Sandstone-----	22	90	W.B.

Well 11/7W-20H3

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	8	32	
Slate, black, and coal-----	4	36	
Fire clay-----	1	37	
Shale, gray-----	16	53	
Slate, black-----	7	60	
Fire clay-----	3	63	
Sandstone-----	4	67	
Shale, gray-----	5	72	
Coal, trace-----	--	72	
Sandstone-----	9	81	
Shale, gray-----	18	99	
Shale, sandy-----	8	107	
Sandstone-----	37	144	W.B.
Shale, gray-----	10	154	

Well 11/7W-20H5

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	17	17	
Sand-----	15	32	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	11	43	
Sandstone, gray-----	2	45	
Shale, gray-----	12	57	
Slate, black-----	6	63	
Coal-----	1	64	
Fire clay-----	2	66	
Shale, gray-----	8	74	
Slate, black-----	2	76	
Coal-----	2	78	
Fire clay-----	2	80	
Shale, sandy, gray-----	12	92	

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

Well 11/7W-20H5--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	26	118	
Sandstone-----	17	135	W.B.

Well 11/7W-20H7

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Sand-----	2	26	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	34	60	
Shale, sandy, gray-----	6	66	
Shale, gray-----	6	72	
Shale, sandy, gray-----	17	89	
Shale, gray-----	12	101	
Sandstone, white-----	24	125	W.B.

Well 11/7W-20J2

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Sand and mud-----	14	28	
Muck, gray-----	5	33	
Pennsylvanian system:			
Middle series:			
Coal-----	1	34	
Shale, sandy, gray-----	11	45	
Shale, boots, gray-----	14	59	
Slate, black-----	3	62	
Shale, dark-gray-----	5	67	
Shale, light-gray-----	4	71	
Sandstone, gray-----	3	74	
Shale, boots, gray-----	10	84	
Shale, sandy, gray-----	12	96	
Sandstone, light-gray-----	24	120	
Shale, sandy, gray-----	5	125	
Sandstone, white-----	11	136	W.B.
Shale, gray-----	2	138	

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

Well 11/7W-20K2

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	6	34	
Shale, gray-----	11	45	
Coal-----	1.5	46.5	W.B.
Sandstone-----	5.5	52	
Sandstone-----	4	56	W.B.
Shale, gray-----	12	68	
Slate, black-----	10	78	
Fire clay-----	3	81	
Shale, sandy-----	3	84	
Shale, gray-----	4	88	
Shale, sandy-----	16	104	
Sandstone-----	10	114	
Shale, sandy-----	4	118	
Sandstone-----	4	122	
Shale, gray-----	11	133	
Sandstone-----	9	142	
Lower series:			
Shale, dark-----	16	158	
Slate, black-----	4	162	
Coal-----	1	163	
Fire clay-----	1	164	
Shale, sandy-----	5	169	
Sandstone-----	5	174	
Fire clay-----	4	178	
Shale, sandy-----	17	195	
Sandstone-----	5	200	
Shale, gray-----	8	208	
Sandstone-----	2	210	
Shale, sandy-----	7	217	
Sandstone-----	26	243	
Shale, gray-----	3	246	
Sandstone-----	14	260	
Shale, gray-----	21	281	
Coal, trace-----	--	281	
Fire clay-----	2	283	
Sandstone-----	4	287	
Shale, gray-----	13	300	

Well 11/7W-21A1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	

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

Well 11/7W-21A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	50	60	
Pennsylvanian system:			
Middle series:			
Sandstone-----	15	75	
Shale-----	10	85	
Coal-----	--	85	

Well 11/7W-21B1

Type of record: Driller's log.

Altitude: About 625 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	15	15	
Hardpan-----	3	18	
Shale, sandy-----	41	59	Sandy clay?
Hardpan-----	7	66	
Coal-----	2	68	
Sand and gravel-----	--	68	
Pennsylvanian system:			
Middle series:			
Shale-----	6	74	
Sandstone-----	6	80	
Coal-----	1	81	
Fire clay-----	4	85	
Shale, blue-----	12	97	
Lower? series:			
Coal-----	1	98	
Fire clay-----	3	101	
Shale, light-----	44	145	
Sandstone-----	30	175	W.B.
Shale, blue-----	3	178	

Well 11/7W-21D1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Shale, sandy-----	15	25	Sandy clay?
Sand and gravel-----	5	30	
Pennsylvanian system:			
Middle series:			
Coal-----	2	32	
Fire clay, soft-----	11	43	
Clay, yellow-----	5	48	
Fire clay, soft-----	12	60	
Shale, gray-----	12	72	

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

Well 11/7W-23E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale-----	5	50	
Sandstone-----	32	82	
Lower series:			
Shale, light-----	46	128	
Limestone-----	6	134	
Shale, black-----	8	142	
Shale and limestone-----	8	150	
Sandstone, hard-----	15	165	
Shale, limy-----	20	185	
Limestone, brown-----	3	188	
Sandstone, broken-----	5	193	
Shale-----	23	216	
Sandstone-----	25	241	T.D. 1,510 ft.

Well 11/7W-23H1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan, gray-----	10	30	
Softpan, gray-----	40	70	
Sand, dirty, and some gravel---	1	71	
Softpan, gray-----	19	90	
Softpan, dark-yellow-----	7	97	
Pennsylvanian system:			
Lower series:			
Sandstone, light-gray-----	19	116	W.B.

Well 11/7W-23N1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Hardpan, yellow-----	15	27	
Hardpan, blue-----	20	47	
Sand and gravel, dirty-----	18	65	
Hardpan and wash-----	10	75	
Sand, fine-----	1	76	
Pennsylvanian system:			
Lower series:			
Shale, sandy, light-----	3	79	
Sandstone-----	4	83	
Slate, blue-----	10	93	
Sandstone-----	10	103	W.B.
Slate, dark-blue-----	5	108	

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

Well 11/7W-25G1

Type of record: Driller's log. Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Sand-----	2	16	
Softpan, yellow-----	8	24	
Sand, dirty-----	5	29	
Hardpan, gray-----	22	51	
Pennsylvanian system:			
Lower series:			
Coal, trace-----	--	51	
Fire clay-----	3	54	
Slate, blue-----	4	58	
Slate, sandy, gray-----	25	83	
Slate, blue-----	5	88	
Coal-----	3	91	W.B.
Fire clay, hard-----	1	92	

Well 11/7W-25H1

Type of record: Driller's log. Altitude: About 580 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	31	46	
Pennsylvanian system:			
Lower series:			
Coal, trace-----	--	46	
Slate, blue-----	10	56	
Slate, sandy, gray-----	7	63	
Shale, light-blue-----	5	68	
Slate, sandy, gray-----	15	83	
Coal-----	3	86	W.B.
Fire clay-----	2	88	
Shale, sandy, light-----	2	90	

Well 11/7W-25J1

Type of record: Driller's log. Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	48	63	
Softpan, yellow-----	5	68	
Pennsylvanian system:			
Lower series:			
Slate, sandy, blue-----	14	82	
Coal-----	2	84	W.B.
Fire clay-----	2	86	
Shale, sandy, light-----	2	88	

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

Well 11/7W-26A1

Type of record: Driller's log.

Altitude: About 565 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	14	14	
Quicksand-----	1	15	
Shale, very soft, gray-----	48	63	
Sand and gravel-----	32	95	
Muck and gravel-----	8	103	
Pennsylvanian system:			
Lower? series:			
Shale, gray-----	7	110	

Well 11/7W-26D1

Type of record: Driller's log.

Altitude: About 613 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	7	7	
Pennsylvanian system:			
Middle series:			
Sandstone-----	6	13	
Shale, and sandstone-----	54	67	
Limestone-----	8	75	W.B.
Shale-----	5	80	
Sandstone-----	40	120	W.B.
Lower? series:			
Coal-----	2	122	
Sandstone-----	6	128	
Shale-----	37	165	
Sandstone-----	110	275	T.D. 1,547 ft.

Well 11/7W-26N1

Type of record: Driller's log.

Altitude: 585 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Sandstone, red-----	2	20	Cemented sand (?)
Hardpan-----	60	80	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	63	143	
Coal-----	2	145	W.B.

Well 11/7W-26P1

Type of record: Driller's log.

Altitude: About 570 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	

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

Well 11/7W-26P1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	15	43	
Gravel-----	2	45	
Hardpan-----	2	47	
Sand-----	4	51	
Gravel-----	3	54	W.B.
Well 11/7W-26R1			
Type of record: Driller's log.		Altitude: About 560 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	28	28	
Hardpan-----	20	48	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	12	60	
Coal-----	2	62	
Shale, sandy-----	3	65	
Well 11/7W-27A1			
Type of record: Driller's log.		Altitude: About 650 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	22	32	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	35	67	
Slate, blue-----	3	70	
Coal-----	3.5	73.5	
Shale, sandy, light-----	40.5	114	
Well 11/7W-27A2			
Type of record: Driller's log.		Altitude: About 630 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Sand-----	5	24	
Hardpan-----	7	31	
Sand-----	8	39	
Hardpan-----	25	64	
Pennsylvanian system:			
Middle series:			
Shale, light-----	3	67	
Coal-----	2	69	

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

Well 11/7W-27A2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, light-----	11	80	
Shale, dark-----	9	89	
Shale, light-----	2	91	
Limestone, blue-----	2	93	
Shale, light-----	11	104	
Lower? series:			
Limestone-----	30	134	
Sandstone-----	46	180	
Shale, blue-----	2	182	
Sandstone-----	43	225	

Well 11/7W-27C1

Type of record: Driller's log. Altitude: About 625 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	7	22	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	42	64	
Shale, soft, gray-----	8	72	
Coal and blackjack-----	5	77	W.B.
Clay-----	3	80	

Well 11/7W-27D1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	5	20	
Hardpan, gray-----	57	77	
Sand and gravel-----	5	82	W.B.

Well 11/7W-28Q1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	9	9	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	13	22	
Shale-----	4	26	
Sandstone-----	4	30	
Shale-----	4	34	W.B.

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

Well 11/7W-28Q1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	11	45	
Sandstone-----	25	70	W.B.
Well 11/7W-29D1			
Type of record: Driller's log.		Altitude: About 610 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand, dirty, yellow-----	12	28	
Softpan, gray-----	22	50	
Softpan, dark-----	12	62	
Slate, soft-----	4	66	Fissile, clay
Coal-----	--	66	
Softpan, yellow-----	20	86	
Pennsylvanian system:			
Middle series:			
Shale, sandy, light-----	6	92	
Sandstone, gray-----	8	100	
Shale, sandy, light-----	10	110	
Shale, sandy, blue-----	5	115	
Sandstone, blue-----	14	129	
Lower? series:			
Shale, dark-----	3	132	
Shale?, light-blue-----	6	138	
Shale, sandy, blue-----	12	150	
Sandstone, pasty, blue-----	10	160	
Coal-----	2	162	
Fire clay-----	3	165	
Shale, sandy, hard, gray-----	1	166	
Shale, white-----	5	171	
Shale, gray-----	6	177	
Shale, sandy, blue-----	6	183	
Shale, light-gray-----	4	187	
Sandstone, pasty, gray-----	10	197	
Coal-----	1	198	
Clay-----	3	201	
Well 11/7W-29H1			
Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Hardpan, sandy-----	22	34	
Pennsylvanian system:			
Middle series:			
Coal-----	1	35	

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

Well 11/7W-29H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Fire clay-----	3	38	
Shale, gray-----	10	48	
Shale, sandy, gray-----	4	52	
Sandstone, gray-----	9	61	
Shale, soft, slick-----	2	63	
Sandstone, gray-----	32	95	
Sandstone, white-----	17	112	W.B.
Shale, gray-----	1	113	

Well 11/7W-30K1

Type of record: Driller's log.

Altitude: About 570 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	12	12	
Quicksand-----	60	72	
Sand, black-----	8	80	
Gravel-----	10	90	
Pennsylvanian system:			
Lower series:			
Sandstone, white-----	45	135	
Shale, blue-----	45	180	
Sandstone-----	15	195	
Shale, blue-----	20	215	
Sandstone-----	25	240	
Shale, blue-----	90	330	
Sandstone-----	5	335	
Shale-----	5	340	
Sandstone, broken-----	80	420	T.D. 2,855 ft.

Well 11/7W-32A1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	5	29	
Sandstone, yellow-----	32	61	
Sandstone-----	34	95	W.B.
Coal-----	.5	95.5	
Fire clay-----	.5	96	
Sandstone-----	8	104	W.B.
Shale, gray-----	1	105	

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

Well 11/7W-32H1

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Sand-----	2	24	
Pennsylvanian system:			
Middle series:			
Sandstone-----	3	27	
Shale, blue-----	14	41	
Sandstone-----	5	46	W.B.

Well 11/7W-33D1

Type of record: Sample study (by K. Kuhn). Altitude: About 583 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and surface-----	10	10	
Pennsylvanian system:			
Middle series:			
Sandstone, calcareous, light- gray-----	10	20	
Sandstone, calcareous, shaly, light-gray-----	10	30	
Sandstone, white; trace of pyrite-----	10	40	
Sandstone, loose, white-----	10	50	W.B.
Lower? series:			
Slate, black; trace of coal, fire clay, and pyrite-----	10	60	
Shale, light-gray, and black slate-----	20	80	
Shale, soft, gray, brown, and green-----	10	90	
Shale, soft, gray, brown and green; trace of coal-----	10	100	
Shale, soft, grading to carbon- aceous, sandy shale-----	10	110	
Sample missing-----	10	120	
Shale, sandy, hard, light-gray to dark-gray-----	20	140	
Sandstone, fine, chunky, gray---	10	150	
Sandstone and shale, gray to black, trace of chocolate slate-----	10	160	
Sandstone, shaly, calcareous, black-----	10	170	
Sandstone, fine, gray; trace of shale-----	10	180	
Shale, hard, gray to dark-gray--	10	190	

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

Well 11/7W-33D1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Shale, sandy, hard, light-gray-	10	200	
Shale and sandstone, carbon-			
aceous-----	10	210	
Shale, gray, and hard coal-----	10	220	
Mississippian system:			
Chester? series:			
Shale; pyrite; trace of brown			
hard limestone-----	10	230	
Limestone, hard, dark-gray;			
fossiliferous; much pyrite---	10	240	
Shale, gray-----	10	250	
Sandstone, well-cemented-----	10	260	
Shale, hard, dark-gray-----	10	270	
Shale, hard, dark-gray; trace			
of chocolate slate-----	10	280	
Shale, hard, dark-gray; much			
pyrite-----	10	290	
Sandstone, large-grained-----	10	300	
Sandstone, shaly, limy-----	20	320	
Sandstone, fine-grained, loose;			
pyrite-----	10	330	
Sandstone, fine-grained, loose-			
Sandstone, coarse, shaly, limy;	10	340	
pyrite-----	10	350	T.D. 1,630 ft.

Well 11/7W-33M1

Type of record: Driller's log.

Altitude: About 592 feet.

Record missing-----	70	70	
Pennsylvanian system:			
Middle series:			
Sandstone, coarse-grained, sub-			
angular, loosely-cemented,			
gray-----	50	120	W.B.
Lower series:			
Shale, gray-----	60	180	
Sandstone, fine-grained, hard,			
tight, shaly, gray-----	40	220	
Shale, gray and buff-----	60	280	
Slate, black-----	30	310	
Shale, gray-----	13	323	
Limestone, crystalline, brown-			
ish-gray-----	4	327	
Shale, gray-----	8	335	
Sandstone, coarse-grained,			
subangular, loosely-cemented,			
micaceous, gray-----	25	360	

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

Well 11/7W-33M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, fine-grained, moder- ately-cemented, shaly, gray---	20	380	
Shale, sandy, gray-----	20	400	
Sandstone, fine to medium-grain- ed, rounded grains, loosely- cemented, gray-----	95	495	W.B.; T.D. 1,670 ft.

Well 11/7W-34K1

Type of record: Driller's log.

Altitude: About 613 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	10	
Pennsylvanian system:			
Middle series:			
Shale, sandy-----	55	65	
Shale, sandy, gray-----	5	70	
Lower series:			
Shale, gray-----	18	88	
Coal-----	3	91	
Shale, gray-----	33	124	
Shale, sandy, gray-----	10	134	
Sandstone, broken-----	12	146	
Shale-----	7	153	
Sandstone, broken-----	15	168	
Shale, sandy-----	56	224	
Shale, dark-----	3	227	
Sandstone, broken-----	18	245	
Sandstone-----	10	255	W.B.
Sandstone-----	55	310	T.D. 1,630 ft.

Well 11/7W-34Q1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	35	50	
Clay, yellow-----	5	55	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	20	75	
Shale, light-----	14	89	
Sandstone-----	4	93	
Lower? series:			
Shale, blue-----	12	105	
Sandstone, blue-----	20	125	
Sandstone-----	110	235	

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

Well 11/7W-35B1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Hardpan-----	20	32	
Sand and gravel-----	--	32	W.B.

Well 11/7W-35G1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	25	25	
Hardpan-----	10	35	
Sand-----	3	38	
Hardpan-----	6	44	
Sand-----	18	62	
Gravel-----	6	68	W.B.
Hardpan-----	29	97	

Well 11/7W-35M1

Type of record: Driller's log. Altitude: About 590 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	27	27	
Hardpan-----	43	70	
Pennsylvanian system:			
Lower series:			
Shale, light-----	5	75	
Shale, blue-----	10	85	
Shale, light-----	5	90	
Shale, blue-----	3	93	
Shale, light-----	6	99	
Limestone-----	4	103	
Shale, blue-----	2	105	
Sandstone-----	16	121	W.B.
Shale, blue-----	2	123	

Well 11/7W-35M2

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	27	27	
Hardpan-----	27	54	
Pennsylvanian system:			
Middle? series:			
Shale, light-----	11	65	

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

Well 11/7W-35M2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle? series:			
Sandstone-----	10	75	
Lower series:			
Shale, light-----	6	81	
Shale, blue-----	23	104	
Coal-----	2	106	
Shale, light-----	2	108	
Sandstone-----	7	115	W.B.
Slate, black-----	3	118	
Shale, light-----	1	119	

Well 11/7W-36B1

Type of record: Driller's log.

Altitude: About 555 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	4	24	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	6	30	
Slate, sandy, hard, blue-----	4	34	
Slate, dark-blue-----	4	38	
Slate, blue-----	25	63	
Coal-----	1	64	W.B.
Clay, light-----	3	67	

Well 12/5W-19C1

Type of record: Driller's log.

Altitude: About 634 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil-----	5	5	
Clay and hardpan-----	35	40	
Pennsylvanian? system:			
Lower series:			
Sandstone-----	5	45	W.B.
Mississippian system:			
Chester? series:			
Limestone, broken-----	30	75	
Sandstone-----	10	85	W.B.
Limestone, sandy-----	31	116	
Meramec? series:			
Limestone, light-----	9	125	
Slate, white-----	10	135	
Limestone, brown-----	20	155	
Slate, blue-----	30	185	
Limestone, brown-----	10	195	
Limestone, sharp, gray-----	10	205	T.D. 1,488 ft

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

Well 12/5W-20H1

Type of record: Driller's log. Altitude: About 580 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone, pasty-----	18	32	
Shale, blue-----	5	37	
Mississippian system:			
Meramec? series:			
Limestone-----	4	41	W.B.

Well 12/5W-20N1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, yellow-----	7	20	
Slate, soft, blue-----	5	25	
Coal and smut-----	1	26	
Shale, sandy, light-----	9	35	
Shale, sandy, blue-----	12	47	
Sandstone, dark-----	3	50	
Sandstone, white-----	10	60	
Shale, sandy, gray-----	40	100	
Sandstone-----	6	106	
Shale, gray-----	1	107	

Well 12/5W-21L1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Softpan, gray-----	23	45	
Wash, gray-----	15	60	
Pennsylvanian system:			
Lower series:			
Shale, sandy, blue-----	8	68	
Shale, blue-----	3	71	
Shale, light-----	10	81	
Mississippian system:			
Meramec? series:			
Limestone-----	2	83	

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

Well 12/5W-28L1

Type of record: Driller's log. Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand-----	30	50	
Softpan, yellow-----	32	82	
Gravel, fine-----	5	87	W.B.
Sand, fine-----	2	89	W.B.
Hardpan, gray-----	21	110	

Well 12/5W-31F1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Rock, yellow-----	5	19	
Slate, gray-----	3	22	
Sandstone-----	27	49	W.B.
Slate, blue-----	8	57	
Shale, black-----	23	80	

Well 12/5W-32J1

Type of record: Driller's log. Altitude: About 620 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4	4	
Sand-----	11	15	
Pan, sandy-----	28	43	
Softpan-----	9	52	
Pan-----	32	84	
Sand, hard-----	2	86	
Sand, soft-----	3	89	W.B.
Pan-----	15	104	
Pennsylvanian system:			
Lower series:			
Sandstone-----	31	135	W.B.

Well 12/5W-33R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	24	24	
Muck, soft; sand and gravel-----	2	26	

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

Well 12/5W-33R1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, gray-----	22	48	
Sandstone, white-----	2	50	
Shale, sandy, hard, dark-blue--	10	60	
Shale, sandy, hard, gray-----	15	75	
Well 12/5W-34B2			
Type of record: Driller's log.		Altitude: About 680 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand, dirty-----	40	60	
Wash, sandy-----	35	95	
Sand and gravel-----	20	115	W.B.
Well 12/5W-34C1			
Type of record: Driller's log.		Altitude: About 645 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	12	12	
Pennsylvanian system:			
Lower series:			
Soapstone-----	68	80	
Shale-----	1	81	W.B.
Soapstone-----	4	85	
Well 12/5W-34P1			
Type of record: Driller's log.		Altitude: About 700 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Sandstone-----	18	38	
Shale, sandy, light-gray-----	16	54	
Sandstone-----	23	77	
Shale, dark-gray-----	25	102	
Shale, sandy, light-gray-----	23	125	
Shale, light-gray-----	30	155	
Shale, dark-gray-----	22	177	
Sandstone-----	23	200	W.B.

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

Well 12/6W- 1Q1

Type of record: Driller's log. Altitude: 610 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, soft, yellow-----	5	20	
Gravel, yellow-----	1	21	
Hardpan, gray-----	9	30	
Sand and gravel, gray-----	1	31	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	19	50	

Well 12/6W- 2N1

Type of record: Driller's log. Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	12	27	
Softpan-----	10	37	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	4	41	
Slate, sandy, gray-----	14	55	
Slate, blue-----	4	59	
Sandstone, gray-----	3	62	
Shale, light-blue-----	8	70	
Slate, black-----	45	115	
Shale, sandy, blue-----	3	118	
Shale, sandy, white-----	9	127	
Sandstone, white-----	8	135	
Sandstone, gray-----	10	145	
Shale, blue-----	10	155	
Sandstone, gray-----	6	161	
Shale, blue-----	5	166	
Mississippian system:			
Meramec? series:			
Limestone-----	--	166	

Well 12/6W- 3N1

Type of record: Driller's log. Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pan-----	4	20	
Pennsylvanian system:			
Lower series:			
Shale, soft, light-----	12	32	
Shale, gray-----	8	40	

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

Well 12/6W- 3N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	2.5	42.5	
Coal-----	.5	43	
Sandstone-----	5	48	W.B.
Shale, sandy-----	14	62	

Well 12/6W- 5C1

Type of record: Driller's log.

Altitude: About 670 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	10	25	
Softpan, gray-----	30	55	
Sand, dirty-----	3	58	
Pennsylvanian system:			
Lower series:			
Slate, sandy, gray-----	40	98	
Coal-----	1	99	W.B.
Shale, sandy, blue-----	8	107	
Shale, sandy, gray-----	17	124	
Shale?, black-----	1	125	"Smut?"
Shale, sandy, black-----	5	130	
Sandstone, gray-----	5	135	
Shale, blue-----	3	138	

Well 12/6W- 5D1

Type of record: Driller's log.

Altitude: About 670 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, gray-----	7	22	
Softpan, yellow-----	10	32	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	4	36	
Slate, blue-----	19	55	
Coal-----	3	58	
Fire clay-----	3	61	
Slate, sandy, gray-----	27	88	
Slate, dark-----	6	94	
Coal-----	1	95	
Fire clay-----	3	98	
Clay rock, light-----	9	107	
Shale, sandy, blue-----	8	115	
Sandstone, pasty, gray-----	10	125	
Sandstone, white-----	22	147	W.B.
Shale-----	2	149	

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

Well 12/6W- 5Q1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pan-----	15	32	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	35	
Coal-----	.5	35.5	
Clay-----	4.5	40	
Shale, gray-----	18	58	

Well 12/6W- 5R1

Type of record: Driller's log. Altitude: About 655 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan-----	9	26	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6	32	
Coal-----	.5	32.5	
Clay-----	2.5	35	
Shale, gray-----	9	44	
Shale, dark-gray-----	10	54	
Coal-----	1	55	
Clay-----	3	58	
Shale, gray-----	12	70	
Shale, sandy, gray-----	13	83	
Sandstone-----	27.5	110.5	
Shale, dark-gray-----	8.5	119	
Sandstone-----	6	125	
Shale, gray-----	2	127	
Sandstone-----	20	147	W.B.
Shale, gray-----	3	150	

Well 12/6W- 6A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Softpan-----	2	18	
Sand and gravel, trace-----	--	18	"Bad water"
Hardpan, gray-----	9	27	
Sand and gravel, trace-----	--	27	"Bad water"

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

Well 12/6W- 6A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay-----	2	29	
Slate, blue-----	15	44	
Coal-----	1	45	
Fire clay, dark-----	2	47	
Slate, blue-----	5	52	
Fire clay-----	3	55	
Shale, dark-----	16	71	
Slate, gray-----	10	81	
Coal-----	1	82	
Fire clay, sandy-----	3	85	
Sandstone, gray-----	31	116	W.B.
Shale, blue-----	3	119	
Shale, sandy, blue-----	3	122	
Sandstone, white-----	10	132	W.B.
Shale, blue-----	1	133	

Well 12/6W- 7D1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	4	19	
Softpan-----	6	25	
Hardpan-----	15	40	
Softpan-----	5	45	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	22	67	
Coal-----	3	70	
Clay-----	3	73	
Shale, sandy, gray-----	14	87	
Coal-----	3	90	
Clay-----	2	92	
Shale, sandy, gray-----	78	170	
Sandstone-----	95	265	W.B.

Well 12/6W- 7D2

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	5	20	
Hardpan, gray-----	10	30	
Softpan, yellow-----	10	40	
Softpan, dark-----	7	47	

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

Well 12/6W- 7D2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	8	55	
Coal, trace-----	--	55	
Fire clay-----	3	58	
Slate, sandy, gray-----	17	75	
Coal, trace-----	--	75	
Fire clay-----	3	78	
Slate, blue-----	10	88	
Slate, sandy, dark-----	6	94	
Shale, sandy, light-----	6	100	
Shale, sandy, dark-----	6	106	
Shale, dark-----	10	116	
Shale, blue-----	3	119	
Coal, trace-----	--	119	
Fire clay, hard-----	3	122	
Slate, sandy, gray-----	5	127	
Shale, gray-----	18	145	
Shale, sandy, light-gray-----	7	152	

Well 12/6W- 7F1

Type of record: Driller's log.

Altitude: About 655 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	14	30	
Mine opening-----	2	32	
Slate, blue-----	12	44	
Mine opening-----	4	48	
Fire clay-----	2	50	
Slate, gray-----	30	80	
Shale, sandy, blue-----	10	90	
Shale, sandy, light-blue-----	52	142	
Sandstone, blue-----	10	152	W.B.
Sandstone, white-----	18	170	W.B.

Well 12/6W- 8A1

Type of record: Driller's log.

Altitude: About 665 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	22	32	
Pennsylvanian system:			
Lower series:			
Coal, trace-----	--	32	

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

Well 12/6W-8A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	6	38	
Shale, sandy, gray-----	3	41	
Shale, gray-----	9	50	
Sandstone-----	4	54	
Shale, gray-----	2	56	
Sandstone-----	37	93	
Shale, gray-----	1	94	
Sandstone-----	26	120	
Shale, gray-----	5	125	

Well 12/6W- 8N1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	7	25	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	9	34	
Coal-----	3.5	37.5	
Clay-----	6.5	44	
Shale, gray-----	7	51	
Shale, sandy, light-gray-	3	54	
Coal-----	1	55	
Clay-----	3	58	
Shale, sandy, gray-----	5	63	
Shale, dark-gray-----	1	64	
Coal-----	1	65	
Clay-----	.5	65.5	
Shale, gray-----	9	74.5	
Shale, sandy, gray-----	15.5	90	
Sandstone-----	64	154	W.B.

Well 12/6W- 8P1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Pan-----	13	21	
Clay-----	5	26	

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

Well 12/6W- 8P1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	12	38	
Coal-----	.5	38.5	
Clay-----	1.5	40	
Shale, sandy, gray-----	10	50	
Sandstone-----	10	60	
Shale, sandy, gray-----	62	122	
Sandstone-----	2	124	
Shale, gray-----	12	136	
Shale, sandy, dark-gray-----	36	172	
Sandstone-----	12	184	
Shale, gray-----	6	190	
Sandstone-----	1	191	

Well 12/6W- 8R1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	62	77	
Pennsylvanian system:			
Lower series:			
Sandstone-----	33	110	W.B.
Shale, gray-----	1	111	

Well 12/6W- 9D1

Type of record: Driller's log.

Altitude: About 670 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	1	17	
Hardpan-----	19	36	
Softpan-----	10	46	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	12	58	
Sandstone-----	28	86	
Shale, sandy, gray-----	7	93	
Sandstone-----	10	103	
Shale, gray-----	9	112	
Sandstone-----	11	123	
Shale, dark-gray-----	3	126	
Sandstone-----	8	134	
Shale, dark-gray-----	26	160	
Sandstone-----	75	235	W.B.

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

Well 12/6W- 9E1		Altitude: About 660 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Hardpan, gray-----	10	29	
Softpan, gray-----	28	57	
Pennsylvanian system:			
Lower series:			
Slate, dark-----	3	60	
Slate, dark-gray-----	3	63	
Coal, trace-----	--	63	
Fire clay-----	2	65	
Slate, gray-----	10	75	
Slate, blue-----	4	79	
Coal, trace-----	--	79	
Fire clay-----	2	81	
Shale, sandy, light-----	11	92	
Shale, sandy, gray-----	20	112	
Sandstone, pasty, gray-----	8	120	
Shale, dark-blue-----	5	125	
Shale, gray-----	25	150	
Sandstone, pasty, gray-----	40	190	
Shale, sandy, blue-----	8	198	
Sandstone, blue-----	8	206	W.B.
Sandstone, white-----	53	259	W.B.

Well 12/6W-11L1		Altitude: About 680 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	9	26	
Slate, blue-----	9	35	
Coal-----	5	40	Mine (?)
Fire clay-----	3	43	
Slate, blue-----	6	49	
Coal, trace-----	--	49	
Fire clay-----	3	52	
Shale, sandy, light-----	38	90	
Shale, sandy, blue-----	14	104	
Coal-----	1	105	
Shale, sandy, blue-----	12	117	
Shale, blue-----	8	125	
Shale, gray-----	4	129	
Slate, black-----	4	133	
Slate, blue-----	7	140	

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

Well 12/6W-11R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	30	50	
Pennsylvanian system:			
Lower series:			
Slate-----	3	53	
Shale, sandy, blue-----	39	92	
Mississippian system:			
Chester series:			
Limestone, dark-blue-----	5	97	
Sandstone-----	4	101	W.B.
Shale, limy-----	2	103	

Well 12/6W-12B1

Type of record: Driller's log. Altitude: About 660 feet.

Open well-----	20	20	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	37	57	
Shale, light-gray-----	14	71	
Mississippian? system:			
Chester? series:			
Sandstone-----	37	108	W.B.
Limestone-----	2	110	

Well 12/6W-12J1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan-----	30.5	47.5	
Sand and gravel-----	2	49.5	
Softpan-----	16.5	66	
Pennsylvanian system:			
Lower series:			
Shale, soft-----	17	83	
Shale, sandy, hard, light-----	5	88	
Sandstone, light-----	4	92	
Sandstone, shelly-----	17	109	
Shale, gray-----	6	115	
Sandstone, hard-----	6	121	
Shale, hard, gray-----	5.5	126.5	
Sandstone, hard, dark-----	10.5	137	
Shale, sandy, gray-----	23	160	
Sandstone, hard, dark-----	3	163	

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

Well 12/6W-13E1

Type of record: Driller's log.

Altitude: About 680 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	13	13	
Sand and gravel-----	1	14	
Hardpan-----	30	44	
Pennsylvanian system:			
Lower series:			
Shale, sandy, dark-gray-----	20	64	
Shale, black-----	15.5	79.5	
Sandstone-----	2	81.5	"Boulder"
Shale, black-----	6.5	88	
Shale, sandy, gray-----	3	91	
Sandstone-----	15	106	
Shale, sandy, gray-----	8	114	
Shale, sandy, dark-gray-----	30	144	
Sandstone-----	2	146	
Shale, sandy, gray-----	6	152	
Sandstone-----	1	153	
Shale, sandy, gray-----	5	158	
Sandstone-----	11	169	
Shale, sandy, gray-----	4	173	
Sandstone-----	34	207	W.B.

Well 12/6W-14D1

Type of record: Driller's log.

Altitude: About 690 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	5	29	
Shale, light-gray-----	13	42	
Shale, dark-gray-----	10	52	
Coal and clay-----	1	53	
Shale, dark-gray-----	11	64	
Coal-----	2	66	
Clay-----	2	68	
Shale, sandy, light-----	12	80	

Well 12/6W-15A1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	10	25	

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

Well 12/6W-15A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	20	45	
Shale, sandy, gray-----	23	68	
Coal-----	2	70	
Clay-----	4	74	
Shale, sandy, gray-----	10	84	

Well 12/6W-16D1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	15	15	
Hardpan, yellow-----	58	73	
Sand and gravel-----	9	82	W.B.
Pennsylvanian system:			
Lower series:			
Rock-----	--	82	

Well 12/6W-16J1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, yellow-----	12	26	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	7	33	
Coal-----	1	34	
Clay-----	6	40	
Slate, blue-----	8	48	
Clay-----	3	51	
Slate, blue-----	3	54	
Slate, sandy, gray-----	13	67	
Coal-----	3	70	
Clay, blue-----	6	76	
Clay, white-----	4	80	
Shale, light-----	5	85	
Shale, blue-----	36	121	
Shale, sandy, light-----	7	128	
Shale, blue-----	10	138	
Shale, sandy, light-----	4	142	
Shale, sandy, blue-----	9	151	
Shale, black-----	14	165	
Shale, blue-----	20	185	
Shale, sandy, light-----	11	196	
Shale, sandy, blue-----	9	205	

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

Well 12/6W-16J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, brown-----	4	209	
Shale, sandy, light-----	11	220	
Sandstone, white-----	20	240	W.B.

Well 12/6W-16P1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	18	18	
Hardpan-----	44	62	
Wash-----	5	67	
Sand, dirty-----	1	68	
Pennsylvanian system:			
Lower series:			
Shale, sandy, light-blue-----	39	107	
Sandstone, white-----	10	117	W.B.

Well 12/6W-17L1

Type of record: Driller's log.

Altitude: About 645 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, yellow-----	22	37	
Pennsylvanian system:			
Lower series:			
Sandstone, gray-----	27	64	
Slate, sandy, blue-----	12	76	
Slate, sandy, gray-----	5	81	
Slate, sandy, blue-----	17	98	
Fire clay-----	5	103	
Sandstone, white-----	8	111	W.B.
Shale, sandy, dark-blue-----	4	115	

Well 12/6W-17N1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone-----	16	30	
Coal-----	2	32	
Clay and shale-----	24	56	
Slate, sandy, gray-----	20	76	

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

Well 12/6W-17N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	1	77	
Clay-----	4	81	
Sandstone, gray-----	28	109	
Sandstone, white-----	15	124	W.B.
Shale, sandy, white-----	3	127	
Shale, sandy, blue-----	1	128	

Well 12/6W-17N2

Type of record: Driller's log.

Altitude: About 655 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Softpan-----	4	22	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	8	30	
Coal-----	4	34	
Clay-----	3	37	
Shale, gray-----	37	74	
Sandstone-----	48	122	W.B.

Well 12/6W-17Q1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	25	40	
Pennsylvanian system:			
Lower series:			
Sandstone-----	41	81	
Shale, dark-gray-----	14	95	
Shale, gray-----	12	107	
Sandstone-----	6	113	
Shale, sandy, gray-----	52	165	
Sandstone-----	5	170	
Shale, sandy-----	9	179	
Sandstone-----	11	190	
Shale, sandy-----	15	205	
Sandstone-----	9	214	
Shale, sandy-----	6	220	

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

Well 12/6W-18H1

Type of record: Driller's log.

Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface and Pan-----	15	15	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	15	30	
Coal-----	3.5	33.5	
Clay-----	.5	34	
Shale, sandy, gray-----	13	47	
Shale, dark-gray-----	2	49	
Shale, sandy, gray-----	10	59	
Sandstone-----	52	111	W.B.
Shale, sandy, hard, dark-gray---	6	117	

Well 12/6W-18J1

Type of record: Driller's log.

Altitude: About 650 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	30	30	
Clay-----	8	38	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	5	43	
Coal-----	1	44	
Clay-----	1	45	
Shale, gray-----	7	52	
Shale, sandy, gray-----	48	100	
Sandstone-----	38	138	W.B.

Well 12/6W-18P1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan, sandy-----	7	22	
Clay-----	1	23	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	16	39	
Coal-----	1	40	
Clay-----	2	42	
Sandstone-----	13	55	W.B.
Shale, gray-----	5	60	

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

Well 12/6W-18Q1

Type of record: Driller's log.

Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Sand-----	2	14	
Hardpan-----	27	41	
Clay, sandy, yellow-----	3	44	
Drift-----	8	52	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	2	54	
Shale, sandy, gray-----	7	61	
Coal-----	.5	61.5	
Fire clay-----	2.5	64	
Shale, sandy, gray-----	8	72	
Slate, black-----	4	76	
Shale, sandy, gray-----	13	89	
Shale, gray-----	2	91	
Shale, sandy, gray-----	14	105	W.B.

Well 12/6W-20B1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	23	33	
Softpan-----	23	56	
Pennsylvanian system:			
Lower series:			
Sandstone-----	12	68	
Shale, gray-----	1	69	
Coal-----	.5	69.5	
Clay-----	1.5	71	
Sandstone-----	7	78	
Coal-----	.5	78.5	
Clay-----	1.5	80	
Shale, sandy, gray-----	28	108	
Sandstone-----	22	130	W.B.
Shale, sandy, gray-----	32	162	

Well 12/6W-20D1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan, sandy-----	25	45	
Hardpan-----	7	52	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	11	63	

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

Well 12/6W-20D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	4	67	
Clay-----	5	72	
Mine opening-----	4	76	
Sandstone-----	16	92	
Clay-----	6	98	
Shale, gray-----	7	105	
Shale, sandy, gray-----	10	115	
Shale, dark-gray-----	15	130	
Shale, sandy, gray-----	11	241	W.B.

Well 12/6W-20G1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan-----	58	73	
Pennsylvanian system:			
Lower series:			
Sandstone-----	19	92	
Shale, dark-gray-----	23	115	
Shale, sandy, gray-----	8	123	
Sandstone-----	1.5	124.5	

Well 12/6W-21A1

Type of record: Driller's log.

Altitude: About 655 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	29	29	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	23	52	
Coal, trace-----	--	52	
Fire clay-----	3	55	
Slate, light-blue-----	10	65	
Slate, sandy, gray-----	9	74	
Coal, trace-----	--	74	
Fire clay-----	4	78	
Shale, sandy, light-----	3	81	
Shale, sandy, blue-----	69	150	
Slate, black-----	5	155	
Sandstone, hard, dark-----	4	159	
Shale, sandy, light-----	10	169	
Shale, black-----	9	178	
Shale, sandy, blue-----	27	205	
Sandstone, hard, blue-----	6	211	

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

Well 12/6W-21A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, light-----	8	219	
Sandstone, hard, blue-----	4	223	
Shale, sandy, blue-----	4	227	
Sandstone, hard, blue-----	4	231	
Shale, blue-----	6	237	
Sandstone-----	41	278	W.B.
Mississippian? system:			
Chester? series:			
Limestone-----	3	281	

Well 12/6W-21R1

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	26	26	
Softpan-----	8	34	
Sand-----	1	35	
Hardpan, gray-----	15	50	
Softpan-----	12	62	
Softpan and yellow wash-----	26	88	
Sand and gravel-----	12	100	W.B.

Well 12/6W-22B1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	18	18	
Pan-----	33	51	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	2	53	
Coal-----	4	57	W.B.
Clay-----	6	63	

Well 12/6W-22M1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Hardpan, gray-----	18	40	
Wash, yellow-----	5	45	
Pennsylvanian system:			
Lower series:			
Slate-----	6	51	

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

Well 12/6W-22M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal, trace-----	--	51	
Fire clay-----	3	54	
Slate, gray-----	14	68	
Coal-----	1	69	
Fire clay?-----	2	71	
Shale, gray?-----	10	81	
Coal-----	2	83	
Fire clay, blue-----	2	85	
Shale, blue-----	15	100	
Coal-----	3	103	W.B.
Shale, sandy, gray-----	13	116	
Shale, gray-----	12	128	
Shale, sandy, gray-----	12	140	
Sandstone, gray-----	4	144	
Shale, sandy, gray-----	18	162	
Sandstone, hard, gray-----	9	171	
Shale, blue-----	4	175	
Shale, gray-----	4	179	
Shale, sandy, light-gray-----	4	183	
Shale, sandy, gray-----	7	190	
Shale, sandy, blue-----	28	218	
Shale, soft, gray-----	17	235	
Rock, hard, gray-----	5	240	Limestone (?)
Shale, sandy, gray-----	30	270	

Well 12/6W-23P1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	
Softpan, yellow-----	6	34	
Softpan, dark-----	22	56	
Wash, yellow-----	3	59	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	8	67	
Slate, gray-----	10	77	
Slate, dark-gray-----	13	90	
Slate, sandy, gray-----	6	96	
Clay, soft, light-----	3	99	
Shale, soft, gray-----	3	102	
Shale, sandy, blue-----	13	115	
Shale, dark-blue-----	10	125	

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

Well 12/6W-28H1

Type of record: Driller's log. Altitude: About 620 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Pennsylvanian system:			
Lower series:			
Coal-----	1	9	
Fire clay-----	3	12	
Slate, blue-----	8	20	
Fire clay-----	4	24	
Slate, gray-----	24	48	
Fire clay-----	3	51	
Shale, sandy, blue-----	38	89	
Sandstone, pasty, hard-----	5	94	
Slate, black-----	1	95	
Clay, hard, blue-----	2	97	
Shale, brown-----	2	99	
Shale, sandy, gray-----	9	108	
Shale, sandy, light-----	6	114	
Shale, sandy, gray-----	14	128	
Shale, sandy, light-----	6	134	
Shale, sandy, blue?-----	8	142	
Shale, sandy, light-----	6	148	
Sandstone, white-----	6	154	
Shale, sandy, blue-----	41	195	
Sandstone, hard, blue-----	15	210	W.B.
Sandstone, white-----	8	218	W.B.
Sandstone, blue-----	17	235	W.B.

Well 12/6W-29B1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Sand-----	3	24	
Hardpan-----	45	69	
Wash-----	10	79	
Softpan and wash-----	24	103	
Sand, brown-----	2	105	
Sand, light-----	1	106	
Pennsylvanian system:			
Lower series:			
Sandstone-----	6	112	W.B.

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

Well 12/6W-30D1

Type of record: Driller's log.

Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay, soft, yellow-----	17	17	
Softpan, gray-----	14	31	
Hardpan, gray-----	9	40	
Pennsylvanian system:			
Lower? series:			
Shale, soft, brown-----	12	52	
Coal and clay, soft-----	2	54	
Shale, light, and medium-hard sandstone-----	16	70	
Sandstone, medium-hard, light---	20	90	
Sandstone, medium-hard, light---	52	142	W.B.

Well 12/6W-30E1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	15	30	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	8	38	
Shale, dark-gray-----	.5	38.5	
Clay-----	6.5	45	
Sandstone-----	86	131	W.B.

Well 12/6W-30M1

Type of record: Driller's log.

Altitude: About 620 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Lower series:			
Coal-----	1	11	
Clay-----	3	14	
Shale, sandy, gray-----	6	20	
Shale, dark-gray-----	4	24	
Coal-----	2	26	
Clay-----	1	27	
Shale, sandy, gray-----	15	42	
Sandstone-----	73	115	W.B.

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

Well 12/6W-30Q1

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	18	18	
Clay-----	4	22	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	19	41	
Coal-----	1	42	
Clay-----	3	45	
Shale, gray-----	2	47	
Coal-----	.5	47.5	
Clay-----	.5	48	
Shale, gray-----	15	63	
Sandstone-----	41	104	W.B.

Well 12/6W-31D1

Type of record: Driller's log. Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	23	38	
Wash, yellow-----	5	43	
Pennsylvanian system:			
Lower series:			
Sandstone, soft-----	1	44	
Slate, blue-----	7	51	
Coal-----	2	53	
Fire clay-----	4	57	
Shale, sandy-----	5	62	
Slate, blue-----	10	72	
Coal, trace-----	--	72	W.B.
Shale, sandy, dark-----	7	79	
Shale, light-gray-----	3	82	

Well 12/6W-31E1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface; clay, soft, yellow----	7	7	
Hardpan, gray-----	7	14	
Hardpan, blue-----	36	50	
Softpan, smooth, gray-----	25.5	75.5	
Pennsylvanian system:			
Lower series:			
Shale, hard, dark-gray-----	3	78.5	
Coal, hard-----	1.5	80	
Shale, sandy, hard, gray-----	20	100	
Sandstone, medium, light-----	54	154	W.B.

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

Well 12/6W-31M1

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	30	45	
Hardpan and sand-----	23	68	
Pennsylvanian system:			
Lower series:			
Sandstone-----	60	128	W.B.

Well 12/6W-31N1

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	3	18	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	7	25	
Sandstone, gray-----	18	43	
Mud-----	29	72	
Slate-----	1	73	
Coal-----	2	75	
Fire clay-----	3	78	
Shale, sandy-----	10	88	
Coal-----	4	92	
Fire clay-----	2	94	
Shale, sandy-----	9	103	
Sandstone-----	7	110	
Shale-----	6	116	
Shale, sandy-----	17	133	
Sandstone-----	17	150	W.B.

Well 12/6W-31Q1

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pan-----	42	54	
Sand-----	34	88	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	15	103	W.B.

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

Well 12/6W-32R1

Type of record: Driller's log.

Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	24	40	
Softpan and faulty material-----	30	70	
Pennsylvanian system:			
Lower series:			
Shale, hard, blue-----	12	82	
Coal-----	3	85	
Clay, hard-----	2	87	
Shale, sandy, light, and rock---	12	99	
Shale, blue-----	39	138	
Sandstone, gray-----	12	150	W.B.
Sandstone, white-----	10	160	
Shale, dark-----	4	164	

Well 12/6W-33B1

Type of record: Driller's log.

Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Lower series:			
Slate-----	30	45	
Slate, sandy, gray-----	5	50	
Shale, sandy, hard, gray-----	20	70	
Sandstone, dark-----	7	77	
Sandstone-----	10	87	
Shale, dark-----	3	90	
Coal, trace-----	--	90	
Fire clay-----	2	92	
Shale, sandy, light-----	4	96	
Shale, sandy, hard, blue-----	8	104	
Shale, blue-----	6	110	
Shale, black-----	4	114	
Shale, hard, gray-----	3	117	
Shale, sandy, light-----	6	123	
Shale, sandy, gray-----	15	138	
Shale, sandy, blue-----	8	146	
Shale?, gray-----	5	151	
Shale, sandy, gray-----	14	165	
Sandstone, gray-----	5	170	
Shale, sandy, gray-----	18	188	
Shale, sandy, blue-----	27	215	
Sandstone, hard, blue-----	20	235	
Sandstone, blue-----	18	253	W. B.
Sandstone, white-----	20	273	W. B.

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

Well 12/6W-33J1

Type of record: Driller's log.

Altitude: About 655 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pennsylvanian system:			
Lower series:			
Shale, brown-----	4	16	
Shale, sandy, gray-----	11	27	
Sandstone-----	5	32	
Shale, sandy, dark-gray-----	6	38	
Slate, dark-gray-----	4	42	
Coal-----	2.5	44.5	
Clay-----	2	46.5	
Shale, sandy, gray-----	8.5	55	
Coal-----	1.5	56.5	
Clay-----	1.5	58	
Shale, sandy, dark-gray-----	13	71	
Sandstone-----	6	77	
Shale, sandy, dark-gray-----	17	94	
Sandstone-----	89	183	W.B.

Well 12/6W-34B1

Type of record: Driller's log.

Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, gray-----	6	20	
Pennsylvanian system:			
Lower series:			
Slate, sandy, blue-----	10	30	
Coal, trace-----	--	30	
Fire clay, blue-----	3	33	
Slate, blue-----	7	40	
Slate, gray-----	25	65	
Coal, trace-----	--	65	
Fire clay, blue-----	3	68	
Shale, blue-----	7	75	
Shale, sandy, blue-----	4	79	
Shale, dark-blue-----	6	85	
Shale, sandy, gray-----	25	110	
Sandstone, pasty, gray-----	8	118	
Shale, sandy, gray-----	15	133	
Limestone, hard, gray-----	8	141	
Shale, gray-----	16	157	
Shale, sandy, gray-----	9	166	
Shale, gray-----	8	174	
Shale, sandy, blue-----	4	178	
Sandstone, gray-----	69	247	W.B.

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

Well 12/6W-34P1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	1	14	
Coal-----	3	17	
Fire clay-----	7	24	
Slate, gray-----	8	32	
Coal, smut-----	2	34	
Fire clay-----	3	37	
Shale, gray-----	25	62	
Slate, gray-----	12	74	
Fire clay-----	1	75	
Shale, clayey-----	5	80	
Slate, gray-----	10	90	
Shale, dark-blue-----	80	170	
Shale, sandy-----	15	185	
Sandstone, white-----	15	200	W.B.

Well 12/6W-34Q1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Lower series:			
Sandstone-----	3	13	
Shale, sandy, gray-----	4	17	
Shale, gray-----	2	19	
Sandstone-----	4	23	
Shale, sandy, gray-----	31	54	
Sandstone-----	2	56	
Shale, sandy, dark-gray-----	9	65	
Sandstone-----	28.5	93.5	
Shale, sandy, gray-----	.5	94	
Coal-----	1	95	
Shale, sandy, gray-----	45	140	
Sandstone-----	5	145	
Shale, sandy, gray-----	35	180	
Sandstone, hard-----	2	182	
Sandstone-----	20	202	W.B.

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

Well 12/6W-34R1

Type of record: Driller's log. Altitude: About 660 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, yellow-----	6	20	
Hardpan, gray-----	15	35	
Softpan, yellow-----	17	52	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	8	60	
Shale, sandy, blue-----	7	67	
Sandstone, pasty, gray-----	18	85	
Shale, sandy, blue-----	5	90	
Sandstone, pasty, blue-----	8	98	
Shale, dark-blue-----	32	130	
Shale, gray-----	4	134	
Shale, sandy, gray-----	5	139	
Sandstone, pasty, gray-----	6	145	
Shale, light-blue-----	6	151	
Shale, dark-blue-----	27	178	
Shale, sandy, light-blue-----	12	190	
Sandstone, blue-----	38	228	W.B.

Well 12/7W- 1D1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and Pan-----	28	28	
Pennsylvanian system:			
Middle series:			
Shale, sandy, dark-gray-----	5	33	W.B.
Coal, bright-----	.5	33.5	
Clay to gray shale-----	3.5	37	
Shale, sandy, gray-----	1	38	
Sandstone-----	3	41	
Lower series:			
Shale, sandy, dark-gray-----	31.5	72.5	
Coal and jack-----	.5	73	
Shale, sandy, gray-----	1	74	
Sandstone-----	11	85	W.B.
Shale, sandy, dark-gray-----	11	96	

Well 12/7W- 1J1

Type of record: Driller's log. Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	

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

Well 12/7W- 1J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate-----	6	21	
Limestone-----	1	22	
Slate, blue-----	2	24	
Limestone-----	2	26	
Slate, blue-----	22	48	
Coal, trace-----	--	48	
Slate, sandy, gray-----	36	84	W.B.

Well 12/7W- 1J3

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	5	21	
Limestone-----	1	22	
Slate, blue-----	25	47	
Coal, trace-----	--	47	
Fire clay-----	3	50	
Slate, sandy, gray-----	33	83	
Slate, blue-----	10	93	
Slate, black-----	11	104	
Coal-----	1	105	
Fire clay-----	8	113	
Shale, sandy, gray-----	26	139	
Shale, dark-----	5	144	
Shale?, soft, gray-----	5	149	
Shale, sandy, gray-----	24	173	
Shale, sandy, blue-----	8	181	
Shale?, dark-----	5	186	
Shale, sandy, blue-----	9	195	
Sandstone, white-----	8	203	
Sandstone, blue-----	51	254	W.B.
Sandstone, white-----	12	266	W.B.

Well 12/7W- 1Q1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	15	30	
Coal-----	1	31	

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

Well 12/7W- 1Q1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	2	33	
Shale, blue-----	22	55	
Coal-----	2	57	
Clay-----	2	59	
Slate, sandy, light-----	24	83	
Fire clay-----	3	86	
Clay rock-----	6	92	
Shale, dark-----	19	111	
Shale, light-----	8	119	
Shale, sandy, hard, light-----	10	129	
Sandstone, gray-----	50	179	
Slate, blue-----	15	194	
Shale, hard, dark-----	31	225	
Shale, sandy, gray-----	37	262	
Sandstone-----	7	269	
Mississippian (?) system:			
Meramec (?) series:			
Limestone-----	12	281	

Well 12/7W- 1R1

Type of record: Driller's log.

Altitude: About 665 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	9	29	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	30.5	59.5	
Coal, trace-----	--	59.5	
Clay-----	2.5	62	
Shale, gray-----	6	68	
Coal-----	.5	68.5	
Clay-----	3	71.5	
Shale, gray-----	9.5	81	
Shale, light-gray-----	3	84	
Shale, gray-----	7	91	
Shale, dark-gray-----	14	105	
Shale, sandy, light-gray-----	38	143	

Well 12/7W- 2E1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pan-----	6	18	

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

Well 12/7W- 2E1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	21	
Coal-----	.5	21.5	
Clay-----	3.5	25	
Shale, gray-----	11	36	
Coal-----	3	39	
Clay-----	3	42	
Sandstone-----	38	80	
Shale, sandy, gray-----	16	96	
Shale, gray-----	6	102	
Coal-----	1	103	
Clay-----	1	104	
Shale, sandy, gray-----	12	116	
Coal-----	1	117	
Clay-----	1	118	
Shale, sandy, gray-----	92	210	

Well 12/7W- 2E3

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	5	5	
Sand-----	27	32	
Pea gravel-----	3	35	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	9	44	
Shale, dark-gray-----	24	68	
Coal-----	3	71	
Clay-----	1	72	
Shale, sandy, gray-----	10	82	
Sandstone-----	10	92	W.B.

Well 12/7W- 2F1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Muck-----	2	16	
Softpan-----	22	38	
Pennsylvanian system:			
Lower series:			
Shale, light-blue-----	3	41	
Limestone, very-hard-----	5	46	
Shale, sandy, blue-----	2	48	
Shale, soft, white-----	4	52	

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

Well 12/7W- 3A2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Shale, smooth-----	46	76	
Clay-----	16	92	
Coal-----	3	95	
Clay-----	15	110	
Slate, sandy-----	94	204	W.B.
Sandstone-----	16	220	W.B.

Well 12/7W- 3A3

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan, sandy-----	20	40	
Pennsylvanian system:			
Middle? series:			
Shale, gray-----	10	50	
Shale, light-gray-----	8	58	
Shale, gray-----	12	70	
Lower series:			
Shale, sandy, light-gray-----	13	83	
Coal-----	.5	83.5	
Shale, sandy, light-gray-----	7.5	91	
Coal-----	1	92	
Clay-----	1	93	
Shale, sandy, light-gray-----	5	98	
Shale, sandy, gray-----	7	105	
Shale, sandy, dark-gray-----	5	110	
Coal-----	4	114	
Clay-----	1	115	
Shale, sandy, gray-----	55	170	
Sandstone-----	47	217	W.B.
Shale, sandy, gray-----	1	218	
Sandstone-----	14	232	W.B.

Well 12/7W- 3F1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Fire clay-----	3	23	
Pennsylvanian system:			
Middle? series:			
Shale, sandy, gray-----	3	26	
Sandstone-----	3	29	
Shale, sandy, gray-----	8	37	

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

Well 12/7W- 3F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Shale, gray-----	7	44	
Shale, sandy, gray-----	28	72	
Sandstone-----	3	75	
Shale, sandy, gray-----	8	83	
Coal-----	3	86	
Fire clay-----	1	87	
Shale, sandy, gray-----	13	100	

Well 12/7W- 3L1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand-----	10	30	
Pennsylvanian system:			
Middle series:			
Sandstone, gray-----	10	40	
Slate, blue-----	5	45	
Shale, sandy, blue-----	10	55	
Shale, sandy, light-----	5	60	
Lower series:			
Shale, sandy, blue-----	16	76	
Coal, trace-----	--	76	
Fire clay, blue-----	1	77	
Shale, gray-----	6	83	
Shale, sandy, light-----	5	88	
Sandstone, white-----	10	98	
Slate, dark-----	2	100	
Coal-----	2	102	
Fire clay-----	3	105	
Shale, light-gray-----	6	111	
Shale, dark-blue-----	11	122	
Coal-----	2	124	
Fire clay-----	1	125	
Shale, dark-blue-----	5	130	
Shale, sandy, gray-----	5	135	
Shale (?), gray-----	5	140	
Shale, sandy, gray-----	10	150	
Shale, sandy, blue-----	40	190	
Sandstone, pasty, blue-----	15	205	
Shale, sandy, blue-----	32	237	
Sandstone, white-----	5	242	W.B.
Sandstone, blue-----	22	264	W.B.

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

Well 12/7W- 3L2		Altitude: About 615 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	23	23	
Pennsylvanian system:			
Middle series:			
Fire clay-----	3	26	
Sandstone, pasty-----	4	30	
Shale?, white-----	5	35	
Slate, blue-----	8	43	
Shale, sandy, blue-----	14	57	
Sandstone, shaly-----	5	62	
Lower series:			
Shale, sandy, blue-----	15	77	
Slate, dark-----	2	79	
Coal-----	2	81	
Clay, hard-----	2	83	
Shale, sandy, blue-----	17	100	
Coal, trace-----	--	100	
Fire clay-----	1	101	
Shale, sandy, blue-----	16	117	
Coal-----	1	118	
Fire clay, hard-----	2	120	
Shale, gray-----	5	125	
Slate, dark-----	4	129	
Coal, trace-----	--	129	
Fire clay, hard-----	2	131	
Shale, gray-----	5	136	
Shale, sandy, gray-----	8	144	
Shale, sandy, blue-----	36	180	
Sandstone, blue-----	10	190	
Shale, sandy, blue-----	3	193	

Well 12/7W- 3M1		Altitude: About 630 feet.	
Type of record: Driller's log.			
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	15	15	
Sand, dirty, yellow-----	20	35	
Softpan, sandy-----	5	40	
Sand, yellow-----	10	50	W.B.
Sand and gravel, gray-----	2	52	W.B.
Sand, gray-----	2	54	W.B.
Sand and gravel, gray-----	1	55	W.B.

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

Well 12/7W- 3M4		Altitude: About 620 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system			
Recent and Pleistocene series:			
Surface-----	20	20	W.B.
Sand, dirty-----	17	37	
Sand and gravel-----	10	47	
Pennsylvanian system:			
Lower series:			
Fire clay-----	3	50	

Well 12/7W- 3M5		Altitude: About 620 feet.		
Type of record: Driller's log.				
Material	Thick- ness (feet)	Depth (feet)	Remarks	
Quaternary system:				
Recent and Pleistocene series:				
Surface-----	19	19		
Sand, dirty, gray-----	4	23		
Hardpan, gray-----	11	34		
Pennsylvanian system:				
Middle series:				
Slate, blue-----	3	37	W.B.	
Sandstone, pasty, white-----	12	49		
Slate, blue-----	11	60		
Shale, sandy, blue-----	20	80		
Shale, sandy, light-----	3	83		
Lower series:				
Slate, dark-----	4	87		
Coal, trace-----	--	87		
Fire clay, dark-blue-----	2	89		
Shale, sandy, light-----	4	93		
Sandstone, pasty, white-----	3	96		
Slate, blue-----	6	102		
Coal-----	2	104		
Fire clay, hard-----	2	106		
Shale, sandy, gray-----	17	123		
Coal-----	1	124		
Fire clay-----	2	126		
Shale, sandy, gray-----	5	131		
Coal-----	1	132		
Fire clay, hard-----	2	134		
Shale, hard, gray-----	2	136		

Well 12/7W- 3M14		Altitude: About 620 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Sand, dirty-----	15	37	
Hardpan, gray-----	3	40	

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

Well 12/7W- 3M14--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, white-----	3	43	
Slate, blue-----	7	50	
Shale, sandy, gray-----	45	95	
Sandstone, pasty, gray-----	6	101	W.B.
Coal-----	1	102	
Fire clay, hard-----	3	105	
Shale, gray-----	5	110	
Shale, sandy, gray-----	14	124	
Coal-----	1	125	
Shale, gray-----	10	135	
Shale, light-gray-----	5	140	
Shale, sandy, gray-----	40	180	
Sandstone, gray-----	18	198	W.B.
Sandstone, pasty, gray-----	12	210	
Shale, sandy, gray-----	30	240	
Sandstone, gray-----	25	265	W.B.

Well 12/7W- 3N1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Sand, dirty, yellow-----	25	35	
Sand yellow-----	5	40	W.B.
Sand and gravel, gray-----	3	43	W.B.

Well 12/7W- 3N3

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Sand-----	22.5	30.5	
Gravel-----	.5	31	
Pan-----	3	34	
Clay-----	4	38	
Pennsylvanian system:			
Lower series:			
Slate, black-----	10	48	
Coal-----	.5	48.5	
Clay-----	2.5	51	
Shale, sandy, gray-----	43	94	
Coal-----	1.5	95.5	
Clay-----	.5	96	
Shale, sandy, gray-----	24	120	
Sandstone-----	5	125	

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

Well 12/7W- 3R1

Type of record: Drillers' log.

Altitude: About 690 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Middle series:			
Sandstone-----	13	23	
Shale, dark-----	11	34	
Slate, black-----	6	40	
Coal-----	2	42	
Clay-----	4	46	
Shale, sandy, gray-----	3	49	
Coal-----	7	56	
Clay-----	4	60	
Shale, sandy, light-----	3.5	63.5	
Limestone-----	2	65.5	
Slate, black-----	2	67.5	
Coal-----	1	68.5	
Clay-----	1.5	70	
Shale, light-----	28	98	
Shale, light-gray-----	11	109	
Coal-----	2	111	
Clay-----	4	115	
Shale, gray-----	13	128	
Lower? series:			
Shale-----	5	133	
Shale, gray-----	21	154	
Coal-----	1.5	155.5	

Well 12/7W- 4J4

Type of record: Driller's log.

Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, red-----	20	20	
Sand-----	20	40	W.B.
Gravel-----	4	44	W.B.
Sand-----	8	52	W.B.

Well 12/7W- 4J5

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, dirty-----	30	45	
Sand and gravel-----	6	51	W.B.

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

Well 12/7W- 4J6

Type of record: Driller's log. Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Sand, dirty-----	32	42	
Sand, yellow, and some gravel---	5	47	W.B.
Sand, gray, and some gravel-----	1	48	W.B.
Pennsylvanian system:			
Middle series:			
Shale, soft, light-blue-----	1	49	

Well 12/7W- 4K1

Type of record: Driller's log. Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, dirty-----	12	27	
Sand and gravel-----	2	29	W.B.
Hardpan, gray-----	8	37	

Well 12/7W- 4L1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, yellow-----	15	30	
Hardpan, gray-----	14	44	
Pennsylvanian system:			
Middle? series:			
Shale, sandy, gray-----	22	66	
Lower series:			
Slate, black-----	4	70	
Coal-----	1	71	W.B.
Clay, dark-blue-----	3	74	
Shale, gray-----	6	80	
Shale, sandy, gray-----	25	105	
Slate, black-----	5	110	
Coal, trace-----	--	110	W.B.
Shale, sandy, gray-----	18	128	

Well 12/7W- 4M1

Type of record: Driller's log. Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	26	41	

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

Well 12/7W- 4M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Wash, gray-----	30	71	
Hardpan-----	8	79	
Wash, dark-----	10	89	
Wash, yellow-----	6	95	
Wash, dark-----	3	98	
Pennsylvanian system:			
Lower series:			
Fire clay-----	3	101	
Shale, blue-----	3	104	
Slate, black-----	7	111	
Coal-----	2	113	
Fire clay-----	3	116	
Shale, sandy, gray-----	7	123	
Coal, trace-----	--	123	W.B.
Fire clay, hard-----	3	126	
Shale, sandy, blue-----	10	136	

Well 12/7W- 4Q1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	27	45	
Pennsylvanian system:			
Middle series:			
Shale, light-----	19	64	
Sandstone-----	17	81	
Lower series:			
Shale, dark-----	29	110	
Sandstone-----	13	123	
Shale, gray-----	26	149	
Sandstone-----	36	185	
Shale, dark-----	10	195	
Sandstone-----	15	210	
Shale, dark-----	3	213	
Sandstone-----	19	232	W.B.
Sandstone, white-----	18	250	W.B.

Well 12/7W- 4Q3

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand-----	5	20	
Hardpan-----	10	30	

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

Well 12/7W- 4Q3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Coal-----	2	32	
Fire clay-----	5	37	
Shale, light-----	3	40	

Well 12/7W- 4Q4

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Softpan, yellow-----	12	12	
Hardpan, gray-----	15	27	
Softpan, dark-----	27	54	
Pennsylvanian system:			
Middle series:			
Slate, dark-blue-----	20	74	
Coal-----	2	76	
Fire clay-----	3	79	
Shale, gray-----	6	85	
Lower series:			
Slate, black-----	8	93	
Coal-----	3	96	
Fire clay-----	2	98	
Shale, sandy, gray-----	14	112	
Shale, gray-----	4	116	
Slate, dark-----	5	121	
Coal, trace-----	--	121	
Fire clay-----	2	123	
Shale, sandy, gray-----	47	170	
Shale, sandy, blue-----	15	185	
Shale, sandy, gray-----	20	205	
Sandstone, gray-----	15	220	W.B.
Shale, sandy, gray-----	30	250	
Shale, sandy, blue-----	15	265	
Sandstone, pasty, blue-----	15	280	
Coal-----	1	281	
Shale, dark-blue-----	11	292	

Well 12/7W- 4R2

Type of record: Driller's log.

Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, dirty-----	17	32	
Sand, yellow-----	4	36	W.B.
Sand and gravel, gray-----	1	37	W.B.
Hardpan-----	6	43	
Clay-----	7	50	

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

Well 12/7W- 4R3

Type of record: Driller's log. Altitude: About 605 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan, gray-----	16	26	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	9	37	
Coal, trace-----	--	37	
Fire clay-----	3	40	
Shale, gray-----	8	48	
Slate, blue-----	5	53	
Shale, light-----	9	62	
Slate, blue-----	11	73	
Coal, trace-----	--	73	"Bad water"
Fire clay-----	3	76	
Slate, sandy, hard, blue-----	1	77	

Well 12/7W- 4R5

Type of record: Driller's log. Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, yellow-----	5	20	
Hardpan, gray-----	10	30	
Softpan, dark-----	30	60	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	3	63	
Coal, trace-----	--	63	
Fire clay-----	6	69	
Coal-----	1	70	W.B.
Fire clay-----	3	73	

Well 12/7W- 4R6

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	12	12	
Sand, brown-----	16	28	
Pennsylvanian system:			
Middle series:			
Shale, light-gray-----	25	53	
Shale, dark-gray-----	17	70	
Sandstone-----	14	84	W.B.
Lower series:			
Shale, sandy, gray-----	26	110	

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

Well 12/7W- 4R6--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	16	126	
Coal, trace-----	--	126	
Fire clay, hard-----	2	128	
Shale, light-gray-----	10	138	
Shale, sandy, blue-----	6	144	
Coal-----	3	147	W.B.
Clay, hard-----	2	149	
Shale, light-gray-----	9	158	
Shale, sandy, blue-----	5	163	
Shale, sandy, gray-----	22	185	

Well 12/7W- 5B1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	.15	
Hardpan, gray-----	35	50	
Sand-----	2	52	W.B.
Sand and gravel-----	2	54	W.B.

Well 12/7W- 5Q1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, yellow-----	33	48	
Sand and gravel-----	6	54	W.B.

Well 12/7W- 5R1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	36	36	
Softpan-----	9	45	
Sand and gravel-----	12	57	W.B.

Well 12/7W- 6D1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Sand, dirty, yellow-----	18	30	

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

Well 12/7W- 6D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel, yellow-----	3	33	W.B.
Sand and gravel, gray-----	2	35	W.B.

Well 12/7W- 6E1

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Muck, soft-----	14	28	
Hardpan, gray-----	40	68	
Softpan, dark-----	10	78	
Softpan, brown-----	12	90	
Sand and gravel-----	1.5	91.5	
Wash, dark-----	6.5	98	
Gravel-----	9	107	W.B.

Well 12/7W- 6E2

Type of record: Driller's log.

Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Sand, yellow, and muck-----	11	24	
Hardpan, gray-----	31	55	
Hardpan, dark-----	21	76	
Sand and gravel, dirty-----	2	78	
Softpan, dark-----	9	87	
Gravel-----	8	95	W.B.

Well 12/7W- 6F1

Type of record: Driller's log.

Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	20	20	
Sand, dirty-----	8	28	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	2	30	
Coal, trace-----	--	30	
Fire clay-----	7	37	
Slate, blue-----	8	45	
Coal-----	6	51	W.B.
Fire clay, soft-----	3	54	
Slate, blue-----	6	60	
Coal-----	1	61	
Shale-----	2	63	

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

Well 12/7W- 6G1

Type of record: Driller's log. Altitude: About 575 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	6	26	
Sand, dirty-----	5	31	
Pennsylvanian system:			
Middle series:			
Slate, sandy, blue-----	10	41	Trace of coal is W.B.

Well 12/7W- 6L1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Hardpan-----	54	75	
Sand-----	16	91	W.B.
Gravel-----	9	100	W.B.

Well 12/7W- 6P1

Type of record: Driller's log. Altitude: About 595 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	8	24	
Sand-----	2	26	
Hardpan, gray-----	13	39	
Sand and gravel, dirty-----	1	40	
Hardpan, gray-----	7	47	
Softpan, yellow-----	8	55	
Softpan, gray-----	25	80	
Sand and gravel-----	5	85	W.B.
Gravel, gray-----	4	89	W.B.

Well 12/7W- 6Q1

Type of record: Driller's log. Altitude: About 590 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	25	43	
Pennsylvanian system:			
Middle series:			
Coal-----	5	48	
Fire clay-----	2	50	
Shale, light-----	12	62	
Sandstone-----	8	70	

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

Well 12/7W- 6Q1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Slate, black-----	15	85	
Slate, light-----	5	90	
Sandstone-----	30	120	
Shale, dark-----	5	125	
Sandstone-----	5	130	
Lower series:			
Shale, dark-----	10	140	
Limestone-----	10	150	
Slate, black-----	3	153	
Fire clay-----	2	155	
Sandstone-----	5	160	
Limestone-----	8	168	
Shale, dark-----	5	173	
Coal-----	2	175	
Fire clay-----	5	180	
Limestone-----	10	190	
Shale, dark-----	30	220	
Limestone-----	25	245	
Sandstone-----	50	295	W.B.

Well 12/7W- 7C2

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Softpan-----	7	31	
Hardpan, gray-----	18	49	
Gravel, fine, and sand-----	1	50	W.B.
Hardpan, gray-----	6	56	
Softpan-----	20	76	
Wash, gray-----	15	91	
Softpan-----	5	96	
Wash, yellow-----	2	98	
Pennsylvanian system:			
Middle series:			
Shale, sandy, blue-----	3	101	
Sandstone, pasty-----	34	135	

Well 12/7W- 7E3

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	25	25	
Sand-----	2	27	
Hardpan, gray-----	53	80	

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

Well 12/7W- 7E3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, trace-----	--	80	W.B.
Hardpan, dark-----	10	90	
Wash, yellow-----	7	97	
Pennsylvanian system:			
Middle series:			
Clay and blue slate-----	2	99	
Slate, black-----	4	103	
Clay, soft, blue-----	4	107	
Shale, soft, light-----	12	119	
Shale, sandy, light-----	21	140	
Sandstone, pasty-----	15	155	
Shale, sandy, blue-----	6	161	
Shale, dark-----	6	167	

Well 12/7W- 7F1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Open well-----	25	25	
Pan, sandy-----	40	65	
Drift-----	5	70	
Pan, sandy-----	20	90	
Pan-----	10	100	
Pennsylvanian system:			
Middle series:			
Sandstone, very soft-----	7	107	W.B.
Coal-----	--	107	

Well 12/7W- 7F2

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand, dirty-----	10	30	
Hardpan, gray-----	35	65	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	12	77	W.B.
Coal-----	6	83	
Fire clay-----	3	86	
Slate, blue-----	3	89	

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

Well 12/7W- 7F5

Type of record: Driller's log. Altitude: About 605 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	
Hardpan-----	30	58	
Pennsylvanian system:			
Middle series:			
Slate, gray-----	3	61	
Slate, sandy, gray-----	6	67	
Clay, hard, blue-----	4	71	
Shale, sandy, blue-----	11	82	
Coal-----	7	89	W.B.
Fire clay, hard-----	3	92	
Shale, blue-----	--	92	

Well 12/7W- 7F7

Type of record: Driller's log. Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	30	30	
Hardpan, gray-----	20	50	
Softpan, dark-----	16	66	
Sand and gravel-----	2	68	W.B.

Well 12/7W- 7G1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	23	23	
Muck, soft, gray-----	7	30	
Hardpan, gray-----	59	89	
Gravel, and some sand-----	2	91	W.B.
Hardpan, dark-----	4	95	
Softpan, yellow-----	16	111	
Sand, fine, white-----	.5	111.5	"Like flour"
Hardpan-----	.5	112	
Pennsylvanian system:			
Middle series:			
Shale, sandy, blue-----	4	116	
Shale, sandy, light-----	4	120	
Sandstone, gray-----	12	132	W.B.
Lower series:			
Shale, sandy, blue-----	15	147	
Shale, dark-----	--	147	

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

Well 12/7W- 7K1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan, gray-----	25	45	
Softpan, dark-----	23	68	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	3	71	
Slate, black-----	3	74	
Coal-----	1	75	
Fire clay-----	5	80	
Shale, gray-----	5	85	
Limestone, shell-----	1	86	
Slate, black-----	4	90	
Coal-----	3	93	
Fire clay-----	3	96	
Shale, light-gray-----	12	108	
Shale, sandy, gray-----	3	111	
Shale, gray-----	5	116	
Shale, sandy, light-gray-----	6	122	
Lower series:			
Shale?, gray-----	3	125	
Coal, trace-----	--	125	
Fire clay-----	2	127	
Shale, light-gray-----	3	130	
Slate, blue-----	4	134	
Coal, trace-----	--	134	
Fire clay-----	3	137	
Shale, gray-----	3	140	
Rock, hard, blue-----	3	143	Limestone (?)
Shale, blue-----	3	146	
Coal, trace-----	--	146	
Fire clay, hard-----	2	148	
Shale, sandy, gray-----	28	176	
Shale, blue-----	6	182	
Coal-----	1	183	
Fire clay-----	3	186	
Shale, sandy, blue-----	10	196	
Shale, dark-blue-----	7	203	
Coal, trace-----	--	203	
Fire clay (?)-----	3	206	
Shale (?), gray-----	5	211	
Shale, dark-blue-----	5	216	
Coal, grace-----	--	216	
Fire clay-----	3	219	
Shale, sandy, gray-----	13	232	
Shale, sandy, light-gray-----	12	244	
Shale, sandy, blue-----	11	255	
Sandstone, white-----	8	263	W.B.
Sandstone, gray-----	43	306	W.B.

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

Well 12/7W- 7L1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	25	25	
Pan-----	10	35	
Pennsylvanian system:			
Middle series:			
Sandstone-----	21	56	
Mine opening-----	6	62	
Clay-----	3	65	
Shale, dark-gray-----	7	72	
Coal-----	1.5	73.5	
Clay-----	3.5	77	
Sandstone-----	5	82	
Coal-----	1	83	
Clay-----	2	85	
Shale, gray-----	2	87	
Slate, black-----	5	92	
Shale, gray-----	5	97	
White top-----	8	105	
Shale, sandy, hard-----	20	125	

Well 12/7W- 7Q1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan-----	15	35	
Pennsylvanian system:			
Middle series:			
Fire clay-----	8	43	
Slate, blue-----	7	50	
Slate, dark-----	10	60	
Slate, black-----	6	66	
Coal-----	1	67	
Fire clay, blue-----	3	70	
Shale, gray-----	10	80	
Slate, blue-----	6	86	
Coal-----	1	87	
Fire clay-----	5	92	

Well 12/7W- 8A1

Type of record: Driller's log.

Altitude: About 610 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	14	28	

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

Well 12/7W- 8A1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, light-----	12	40	
Coal-----	2	42	
Shale, dark-----	3	45	
Shale, light-----	6	51	
Sandstone-----	31	82	
Lower? series:			
Shale, dark-----	21	103	
Sandstone-----	22	125	
Shale, dark-----	10	135	
Shale, sandy-----	75	210	

Well 12/7W- 8A4

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	3	19	
Softpan, yellow-----	1	20	
Hardpan, gray-----	5	25	
Pennsylvanian system:			
Middle series:			
Slate, dark-blue-----	5	30	
Coal-----	3	33	
Fire clay-----	4	37	
Shale, white-----	6	43	
Shale, sandy, hard, white-----	5	48	
Limestone, very hard-----	6	54	
Shale, sandy, hard, light-----	9	63	
Sandstone, white-----	14	77	W.B.
Sandstone, light-blue-----	17	94	W.B.
Shale, light-----	--	94	

Well 12/7W- 8D1

Type of record: Driller's log.

Altitude: About 605 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	19	37	
Sand and gravel-----	1	38	W.B.
Hardpan-----	6	44	

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

Well 12/7W- 8D2

Type of record: Driller's log. Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Softpan, yellow-----	7	26	
Sand and gravel-----	2	28	W.B.
Hardpan, gray-----	32	60	
Sand, dirty-----	10	70	
Pennsylvanian system:			
Middle series:			
Sandstone, gray-----	10	80	
Shale, gray-----	3	83	
Sandstone, gray-----	7	90	W.B.
Shale, blue-----	12	102	

Well 12/7W- 8D4

Type of record: Driller's log. Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	5	20	
Softpan, gray-----	15	35	
Sand and gravel, dirty-----	9	44	W.B.
Pennsylvanian system:			
Middle series:			
Sandstone, pasty, light-----	39	83	W.B.
Sandstone, blue-----	4	87	W.B.
Shale, sandy, gray-----	5	92	

Well 12/7W- 8P1

Type of record: Driller's log. Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	35	50	
Softpan, dark-----	3	53	
Sand and gravel-----	1	54	W.B.

Well ~~12/7W~~- 9D1

Type of record: Driller's log. Altitude: About 610 feet.

Dug well-----			
	34	34	
Pennsylvanian system:			
Middle series:			
Shale, sandy, light-----	17	51	
Sandstone, white-----	9	60	W.B.
Sandstone, blue-----	3	63	W.B.
Shale?, light-----	3	66	
Shale, blue-----	4	70	

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

Well 12/7W-11A1

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and pan-----	12	12	
Pennsylvanian system:			
Middle series:			
Shale, brown to dark-gray----	7	19	
Coal-----	1.5	20.5	
Shale, gray, to gray, sandy shale-----	50.5	71	
Sandstone-----	3	74	
Shale, medium-hard, dark-gray-	33	107	
Shale, sandy-----	6	113	
Sandstone-----	6	119	
Lower series:			
Shale, sandy, gray-----	2	121	
Limestone-----	5	126	

Well 12/7W-11J1

Type of record: Driller's log.

Altitude: About 670 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	7	25	
Pennsylvanian system:			
Lower series:			
Shale, white-----	14	39	
Slate, blue-----	8	47	
Fire clay-----	2	49	
Shale, sandy, light-----	5	54	
Slate, blue-----	28	82	
Slate, sandy, gray-----	2	85	
Coal-----	1	86	
Clay-----	2	88	
Slate, blue-----	12	100	
Slate, sandy, gray-----	8	108	
Coal-----	3	111	
Clay-----	1	112	
Slate, sandy, light-----	15	127	
Coal-----	1	128	
Shale, sandy, light-----	55	183	
Sandstone, gray-----	37	220	
Sandstone, white and gray----	52	272	

Well 12/7W-12A2

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Softpan, yellow-----	10	26	
Pan, sandy, dark-----	14	40	

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

Well 12/7W-12A2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	3	43	
Coal-----	1	44	
Fire clay-----	4	48	
Cavey and broken-down material	15	63	
Mine opening-----	3	66	
Fire clay-----	3	69	
Shale, sandy, light-----	3	72	
Slate, sandy, gray-----	5	77	
Fire clay-----	13	90	"Cavey"
Shale, sandy, light-----	3	93	
Shale, sandy, dark-----	14	107	
Coal-----	1	108	
Shale, sandy, gray-----	7	115	W.B.
Shale, sandy, blue-----	5	120	
Shale, gray-----	10	130	
Shale, sandy, blue-----	20	150	
Sandstone, blue-----	5	155	
Shale, sandy, blue-----	10	165	

Well 12/7W-12C1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Pennsylvanian system:			
Lower series:			
Limestone-----	1	14	
Coal and clay-----	7.5	21.5	
Shale, sandy, blue-----	37.5	59	
Coal-----	1	60	
Clay-----	1	61	
Slate, sandy, gray-----	17	78	
Coal-----	2	80	
Clay-----	1	81	
Clay rock-----	9	90	
Slate, blue-----	12	102	

Well 12/7W-12H1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Middle (?) series:			
Sandstone-----	5	25	
Lower series:			
Slate, blue-----	25	50	
Fire clay-----	3	53	
Slate, gray-----	15	68	
Coal-----	1	69	
Fire clay-----	3	72	

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

Well 12/7W-12H1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	7	79	
Shale, sandy, blue-----	52	131	
Sandstone, white-----	21	152	W.B.
Well 12/7W-12H2			
Type of record: Driller's log.		Altitude: About 650 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	8	22	
Softpan-----	8	30	
Hardpan-----	10	40	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	17	57	
Coal-----	3	60	
Clay-----	3	63	
Shale, sandy, gray-----	8	71	
Coal-----	.5	71.5	
Clay-----	1.5	73	
Shale, sandy, gray-----	7	80	
Shale, sandy, dark-gray-----	16	96	W.B.
Sandstone-----	8	104	
Shale, sandy, gray-----	21	125	
Well 12/7W-12J2			
Type of record: Driller's log.		Altitude: About 640 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Softpan, yellow-----	35	53	
Pennsylvanian system:			
Lower series:			
Slate, hard, blue-----	9	62	
Clay?, light-----	3	65	
Shale, sandy, light-blue-----	2	67	
Slate, dark-blue-----	6	73	
Fire clay, hard, blue-----	3	76	
Shale, sandy, blue-----	56	132	
Sandstone, hard, blue-----	4	136	W.B.
Sandstone-----	24	160	W.B.
Well 12/7W-12J3			
Type of record: Driller's log.		Altitude: About 645 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	15	15	
Hardpan-----	15	30	
Softpan-----	25	55	
Sand and gravel-----	27	82	

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

Well 12/7W-12J3--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	15	97	
Sandstone-----	25	122	
Shale, sandy, gray-----	17	139	
Sandstone-----	3	142	
Shale, sandy, gray-----	13	155	
Sandstone-----	7	162	
Shale, sandy, gray-----	4	166	
Sandstone-----	49	215	W.B.

Well 12/7W-12R1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	2.5	2.5	
Hardpan-----	38.5	41	
Sand and gravel-----	28.5	69.5	
Pennsylvanian system:			
Lower series:			
Coal-----	1.5	71	
Clay to gray shale-----	1	72	
Sandstone-----	4	76	
Shale, sandy, gray-----	28.5	104.5	
Sandstone-----	113.5	218	W.B.

Well 12/7W-13A1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	55	65	
Sand-----	11	76	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	40	116	
Shale, sandy, light-----	20	136	
Shale, sandy, gray-----	22	158	
Sandstone, white-----	8	166	W.B.

Well 12/7W-13C1

Type of record: Driller's log.

Altitude: about 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	

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

Well 12/7W-13C1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	26	45	
Coal-----	3.5	48.5	
Fire clay, soft-----	.5	49	
Clay rock, hard, and sandstone-----	8	57	
Shale, sandy, blue-----	2	59	
Clay, white, and dark, soft shale-----	8	67	"Cavey"
Shale, sandy, blue-----	10	77	
Shale, dark-----	25	102	
Shale, sandy, blue-----	55	157	W.B.

Well 12/7W-13C2

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	24	24	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	33	57	
Mine opening-----	4	61	
Clay-----	1	62	
Shale, sandy, gray-----	34	96	
Sandstone-----	10	106	
Shale, sandy, dark-gray-----	34	140	
Sandstone-----	10	150	
Shale, sandy, dark-gray-----	10	160	
Slate, black-----	4	164	
Shale, sandy, gray-----	2	166	
Sandstone-----	3	169	
Shale, sandy, gray-----	13	182	
Shale, sandy, dark-gray-----	6	188	
Sandstone-----	30	218	W.B.

Well 12/7W-13H1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone, brown-----	15	29	
Sandstone, gray-----	10	39	
Shale, blue-----	3	42	
Coal-----	1	43	
Clay-----	2	45	

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

Well 12/7W-13H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	11	56	
Coal-----	2	58	
Clay-----	2	60	
Shale, sandy, light-----	20	80	
Slate, black-----	23	103	
Shale, sandy, light-----	25	128	
Sandstone, gray-----	10	138	
Shale, sandy, dark-----	12	150	
Sandstone, gray-----	8	158	W.B.
Shale, sandy, light-----	2	160	

Well 12/7W-14D1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan-----	16	36	
Sand and gravel-----	1	37	W.B.
Softpan, yellow-----	8	45	
Pennsylvanian system:			
Middle series:			
Slate, dark-----	2	47	
Coal-----	2	49	W.B.
Fire clay, blue-----	4	53	
Slate, blue-----	7	60	
Coal-----	1	61	W.B.
Shale, gray-----	7	68	
Lower? series:			
Coal-----	1	69	W.B.
Clay, white-----	11	80	
Limestone, gray-----	2	82	
Shale, gray-----	18	100	
Shale, dark-----	3	103	
Shale, gray-----	7	110	
Slate, dark-----	5	115	
Fire clay, blue-----	2	117	W.B.
Shale, sandy, gray-----	9	126	
Shale, dark-gray-----	12	138	
Shale, blue-----	8	146	

Well 12/7W-14R1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	

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

Well 12/7W-14R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pan-----	24.5	34.5	
Pennsylvanian system:			
Middle series:			
Coal-----	.5	35	
Shale, sandy, gray-----	37	72	
Lower? series:			
Coal-----	2	74	
Clay-----	2	76	
Shale, sandy, gray-----	9	85	

Well 12/7W-15A1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	15	15	
Sand-----	1	16	
Hardpan-----	28	44	
Softpan-----	36	80	
Quicksand-----	3	83	
Hardpan-----	12	95	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	12	107	
Shale, sandy, dark-gray-----	15	122	
Coal and jack-----	1.5	123.5	
Shale, dark-gray-----	4.5	128	W.B.
Shale, sandy, medium-hard gray-----	14	142	
Shale, sandy, hard, gray-----	23	165	W.B.

Well 12/7W-15N1

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and boulder clay-----	22	22	
Pennsylvanian system:			
Lower series:			
Fire clay-----	10	32	
Shale, gray-----	3	35	
Coal-----	6	41	
Fire clay-----	3	44	
Shale, sheety, black-----	4	48	
Coal-----	1.5	49.5	

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

Well 12/7W-16B1

Type of record: Driller's log.

Altitude: About 650 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	50	68	
Softpan, yellow-----	12	80	
Sand and gravel-----	8	88	W.B.

Well 12/7W-16B3

Type of record: Driller's log.

Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	10.5	26.5	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	19.5	46	
Slate, black-----	4	50	
Clay-----	24	74	
Lower? series:			
Slate, black-----	8	82	
Coal-----	1	83	
Fire clay-----	19	102	
Slate, gray-----	34.5	136.5	
Coal-----	2.5	139	
Fire clay-----	5	144	
Shale, sandy, dark-----	5	149	
Clay-----	10	159	
Shale, sandy, dark-----	8	167	
Shale, sandy, gray-----	8	175	
Shale, clayey, gray-----	30	205	
Shale, dark-----	8	213	
Coal-----	1	214	
Shale, clayey-----	7	221	
Shale, sandy, dark-----	16	237	
Sandstone, white-----	21	258	W.B.
Shale, sandy, dark-----	8	266	
Sandstone, white-----	5	271	W.B.
Shale, dark-----	7	278	
Sandstone, white-----	43	321	
Shale, blue-----	3	324	

Well 12/7W-16B4

Type of record: Driller's log.

Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4	4	

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

Well 12/7W-16B4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	10	14	
Hardpan-----	41	55	
Wash-----	16	71	
Sand-----	8.5	79.5	
Gravel-----	.5	80	
Pennsylvanian system:			
Lower series:			
Slate, black-----	3	83	
Fire clay-----	20	103	
Slate, sandy, gray-----	28	131	
Slate, black-----	1	132	
Coal-----	4	136	
Fire clay-----	6	142	
Slate, gray-----	38	180	
Limestone, dark-----	5	185	
Slate, sandy, gray-----	5	190	
Shale, sandy-----	10	200	
Sandstone, dark-----	10	210	
Slate, blue-----	10	220	
Sandstone, white-----	25	245	W.B.

Well 12/7W-16C2

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	39	54	
Gravel-----	4	58	
Hardpan-----	16	74	
Sand-----	11	85	
Pennsylvanian system:			
Lower series:			
Shale, dark-----	13	98	
Shale, light-----	12	110	
Sandstone-----	23	133	
Shale, dark-----	11	144	
Coal-----	4	148	
Shale, sandy-----	13	161	
Shale, dark-----	4	165	
Shale, light-----	5	170	
Shale, dark-----	15	185	
Shale, light-----	4	189	
Shale, gray-----	22	211	

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

Well 12/7W-16F1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	17	17	
Pan-----	33	50	
Clay-----	10	60	
Pennsylvanian system:			
Middle series:			
White top-----	10	70	
Coal-----	.5	70.5	
Clay-----	1.5	72	
Lower? series:			
Shale, gray-----	8	80	
Coal-----	3	83	W.B.
Clay-----	2	85	
Shale, gray-----	9	94	

Well 12/7W-16G2

Type of record: Driller's log.

Altitude: About 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	5	5	
Gravel, fine, with red sand-----	15	20	
Gravel-----	5	25	
Gravel, some hardpan-----	5	30	
Pennsylvanian system:			
Middle series:			
Clay, blue, and shale-----	80	110	
Lower series:			
Limestone-----	5	115	
Shale, blue-----	15	130	
Coal-----	3	133	
Shale, blue-----	12	145	
Shale, gray-----	5	150	
Sandstone, fine gray-----	10	160	
Shale, gray-----	50	210	
Shale, chalky, white, with streaks of sandstone-----	7	217	
Sandstone, gray-----	35	252	W.B.
Shale, dark-----	2	254	
Sandstone, black-----	28	282	W.B.
Shale, dark, with streaks of sandstone-----	11	293	
Sandstone, gray with streaks of shale-----	16	309	W.B.
Shale, blue-----	6	315	
Sandstone, gray, with streaks of shale-----	57	372	W.B.
Shale, dark-----	8	380	

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

Well 12/7W-16H1

Type of record: Driller's log. Altitude: About 655 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan-----	57	74	
Sand and gravel, dirty, yellow-	1	75	
Pennsylvanian system:			
Lower series:			
Shale, soft, blue-----	19	94	
Shale, hard, blue-----	27	121	
Coal-----	2	123	

Well 12/7W-16K1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan, gray-----	45	61	
Pennsylvanian system:			
Middle series:			
Shale, light-----	5	66	
Shale, sandy, blue-----	4	70	
Shale, soft, white-----	5	75	
Lower series:			
Slate, dark-blue-----	19	94	
Coal-----	1	95	
Fire clay-----	5	100	
Slate, sandy, gray-----	38	138	
Coal-----	4	142	
Clay, hard-----	3	145	
Shale, sandy, gray-----	20	165	
Shale, dark-----	10	175	
Shale, gray-----	30	205	
Shale, sandy, gray-----	21	226	
Sandstone-----	20	246	W.B.

Well 12/7W-16K2

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Hardpan-----	10	22	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	2	24	
Coal-----	2	26	
Fire clay, soft-----	20	46	

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

Well 12/7W-16K2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, dark-gray-----	18	64	
Slate, dark-----	2	66	
Coal-----	1	67	
Fire clay, hard-----	2	69	
Shale, light-----	7	76	

Well 12/7W-16Q1

Type of record: Driller's log.

Altitude: 660 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	6	21	
Coal-----	1	22	
Fire clay-----	3	25	
Slate, blue-----	5	30	
Fire clay-----	20	50	
Slate, sandy, gray, with traces of coal-----	5	55	
Fire clay-----	6	61	
Slate, blue-----	7	68	
Coal-----	2	70	W.B.
Fire clay-----	3	73	
Slate, blue-----	12	85	

Well 12/7W-17A1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	12	12	
Hardpan-----	7	19	
Pennsylvanian system:			
Middle series:			
Sandstone-----	10	29	
Shale, gray-----	96	125	
Lower series:			
Coal-----	1	126	
Clay-----	3	129	
Clay rock-----	10	139	
Shale, gray-----	27	166	
Coal-----	1	167	
Shale, light-----	48	215	
Sandstone, gray-----	15	230	
Shale, sandy, gray-----	50	280	

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

Well 12/7W-17A1-Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	65	345	
Shale, sandy, dark-----	10	355	
Sandstone, white-----	84	439	

Well 12/7W-18L1

Type of record: Driller's log.		Altitude: About 595 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Sand, dirty-----	1	19	
Hardpan-----	6	25	
Pennsylvanian system:			
Middle series:			
Sandstone, pasty-----	6	31	
Slate, blue-----	19	50	

Well 12/7W-19C1

Type of record: Driller's log.		Altitude: About 610 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	40	55	
Pennsylvanian system:			
Middle series:			
Slate, black-----	10	65	
Coal-----	1	66	
Clay-----	1	67	
Shale, gray-----	8	75	
Coal-----	6	81	
Shale, dark-gray-----	7	88	
Shale, sandy, light-----	15	103	
Slate, black-----	3	106	
Shale, dark-gray-----	10	116	
Shale, sandy, light-gray-----	12	128	
Coal-----	.5	128.5	
Clay-----	3.5	132	

Well 12/7W-19R1

Type of record: Driller's log.		Altitude: About 635 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	11	29	
Gravel and sand-----	8	37	W.B.

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

Well 12/7W-22L1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface sand-----	4	4	
Softpan, dark, and gravel-----	8	12	
Hardpan, gray-----	15	27	
Softpan and sand-----	8	35	
Pennsylvanian system:			
Middle series:			
Shale, light-----	5	40	
Shale, blue-----	4	44	
Coal-----	2	46	W.B.
Clay-----	1	47	
Shale, sandy-----	3	50	

Well 12/7W-22L2

Type of record: Driller's log.

Altitude: About 650 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	5	5	
Hardpan, gray-----	27	32	
Sand and gravel-----	1	33	W.B.
Softpan, yellow-----	4	37	
Pennsylvanian system:			
Middle series:			
Fire clay, light-----	2	39	
Shale, white-----	11	50	
Lower? series:			
Slate, blue-----	36	86	
Coal-----	2	88	W.B.
Fire clay-----	2	90	
Shale, sandy, gray-----	10	100	
Sandstone, gray-----	5	105	
Shale, sandy, blue-----	6	111	
Slate, black-----	1	112	
Coal-----	3	115	W.B.
Clay-----	2	117	
Shale, sandy, light-----	8	125	

Well 12/7W-24J1

Record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4	4	
Pennsylvanian system:			
Lower series:			
Slate-----	28	32	

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

Well 12/7W-24J1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	1	33	
Clay-----	15	48	
Shale, clayey-----	9	57	
Coal-----	2	59	
Clay rock-----	10	69	
Sandstone-----	36	105	
Slate, black-----	1	106	
Slate, sandy, gray-----	12	118	
Shale, blue-----	30	148	
Shale, gray-----	34	182	
Coal, smut-----	.5	182.5	
Slate, gray-----	1.5	184	

Well 12/7W-25L1

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan, yellow-----	47	63	
Wash-----	20	83	
Sand and gravel-----	1	84	W.B.
Pennsylvanian system:			
Lower series:			
Coal-----	--	84	

Well 12/7W-27R1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	10	30	
Sand and gravel-----	2	32	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	18	50	
Shale, sandy, light-----	12	62	
Shale, light-----	3	65	
Slate, blue-----	40	105	
Shale, sandy, dark-----	10	115	
Lower series:			
Slate, black-----	5	120	
Slate, dark-----	10	130	
Slate, black-----	2	132	
Coal-----	1	133	
Clay, hard, light-----	2	135	

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

Well 12/7W-27R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, cavey, light-----	20	155	
Shale, sandy, blue-----	8	163	
Shale, sandy, light-----	5	168	
Coal, trace-----	--	168	
Fire clay, blue-----	2	170	
Shale, sandy, light-blue-----	24	194	
Shale, gray-----	4	198	
Shale, dark-blue-----	17	215	
Shale, blue-----	4	219	
Shale, gray-----	4	223	
Sandstone, gray-----	4	227	W.B.
Sandstone, white-----	30	257	W.B.
Shale, sandy, blue-----	5	262	

Well 12/7W-28P1

Type of record: Driller's log.

Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	13	13	
Hardpan-----	27	40	
Pennsylvanian system:			
Middle series:			
Slate-----	30	70	
Sandstone-----	5	75	W.B.
Slate, gray-----	10	85	

Well 12/7W-28R1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Hardpan, yellow-----	11	19	
Pennsylvanian system:			
Middle series:			
Slate, black-----	15	34	
Fire clay, tough-----	3	37	
Shale, clayey-----	15	52	
Slate, sandy, gray-----	28	80	
Slate, brown-----	8	88	
Coal-----	6	94	
Fire clay-----	1	95	
Shale, gray-----	4	99	
Slate, black-----	8	107	

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

Well 12/7W-29C1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	10	25	
Hardpan, gray-----	11	36	
Pennsylvanian system:			
Middle series:			
Sandstone, yellow-----	6	42	
Slate, soft, gray-----	3	45	
Coal-----	2	47	
Slate, soft, gray-----	3	50	
Slate, sandy, gray-----	14	64	

Well 12/7W-29E1

Type of record: Driller's log.

Altitude: About 650 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	21	21	
Hardpan, gray-----	12	33	
Softpan, dark-----	27	60	
Softpan, yellow-----	6	66	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	6	72	
Slate, black-----	10	82	W.B.
Coal, trace-----	--	82	
Fire clay?-----	3	85	

Well 12/7W-30D1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	33	48	
Sand and gravel-----	2	50	W.B.

Well 12/7W-30M1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	36	54	
Sand and gravel-----	4	58	W.B.

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

Well 12/7W-30R1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan-----	52	66	
Pennsylvanian system:			
Middle series:			
Slate, hard, blue-----	3	69	
Slate, black-----	11	80	
Coal-----	1	81	
Fire clay-----	2	83	
Slate, gray-----	7	90	
Coal-----	7	97	
Fire clay-----	2	99	
Shale, sandy, blue-----	10	109	
Shale, sandy, gray-----	9	118	
Shale, sandy, blue-----	5	123	
Rock, dark-----	3	126	W.B.; limestone (?)
Shale, blue-----	2	128	
Shale, light-gray-----	5	133	

Well 12/7W-31A1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan, sandy-----	52	67	
Sand-----	12	79	
Pennsylvanian system:			
Middle series:			
Shale, dark-gray-----	3	82	
Coal-----	2	84	
Shale, dark-gray-----	8	92	
Rock-----	1.5	93.5	Limestone (?)
Shale, dark-gray-----	7.5	101	
Shale, sandy, light-gray-----	13	114	
Shale, light-gray-----	5	119	
Sandstone, dark-----	3.5	122.5	
Coal-----	2.5	125	

Well 12/7W-31B1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pan, sandy-----	76	92	

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

Well 12/7W-31B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, light-gray-----	19	111	
Coal-----	2	113	
Shale, light-gray-----	39	152	
Coal-----	1.5	153.5	
Clay-----	1.5	155	
Shale, gray-----	7	162	

Well 12/7W-31B2

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Softpan, yellow-----	16	34	
Sand and gravel-----	3	37	
Hardpan-----	1	38	
Sand and gravel-----	1	39	W.B.

Well 12/7W-32R1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Gravel-----	10	25	
Hardpan and gravel-----	33	58	
Pennsylvanian system:			
Middle series:			
Sandstone-----	14	72	
Limestone-----	3	75	
Slate, black-----	18	93	
Shale, light-----	1	94	
Coal-----	5	99	
Dirt-----	1	100	
Coal-----	2	102	
Fire clay-----	3	105	
Slate, black-----	12	117	
Shale, light-----	3	120	

Well 12/7W-33A1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	10	25	

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

Well 12/7W-33A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Slate, sandy-----	30	55	
Slate, gray-----	10	65	
Slate, black-----	4	69	
Coal-----	6	75	
Fire clay-----	7	82	
Shale, blue-----	2	84	

Well 12/7W-33R1

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	32	52	
Pennsylvanian system:			
Middle series:			
Shale, black-----	10	62	
Slate, black-----	6	68	

Well 12/7W-34B1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Hardpan, gray-----	11	35	
Softpan, dark-----	15	50	
Clay, sandy, soft-----	3	53	
Pennsylvanian system:			
Middle series:			
Shale, sandy, light-----	6	59	
Sandstone, pasty-----	4	63	
Sandstone-----	37	100	
Lower? series:			
Shale, sandy, blue-----	18	118	
Shale, sandy, light-----	12	130	
Shale, dark-----	15	145	
Slate, black-----	2	147	
Coal-----	2	149	
Clay, hard-----	1	150	
Shale, sandy, light-----	5	155	
Shale, dark-----	6	161	

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

Well 12/7W-34G1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Softpan, gray-----	22	46	
Sand and gravel, dirty, trace--	--	46	
Hardpan-----	4	50	
Pennsylvanian system:			
Middle series:			
Coal-----	2	52	
Slate, blue-----	7	59	
Slate, hard, blue-----	2	61	
Coal-----	5	66	W.B.
Fire clay-----	2	68	
Shale, sandy, light-----	.5	68.5	

Well 12/7W-34L1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocens series:			
Soil-----	3	3	
Clay-----	7	10	
Hardpan-----	10	20	
Gravel-----	24	44	
Sand and gravel-----	11	55	W.B.
Pennsylvanian system:			
Middle series:			
Shale-----	10	65	
Coal-----	2	67	
Shale-----	6	73	
Coal-----	2	75	
Shale-----	10	85	
Shale, sandy-----	13	98	
Shale-----	27	125	
Shale, sandy-----	10	135	
Lower series:			
Shale-----	15	150	
Limestone, sandy-----	10	160	
Shale-----	20	180	
Shale, sandy-----	10	190	
Shale-----	25	215	
Sandstone-----	10	225	
Shale-----	40	265	
Limestone-----	5	270	
Shale-----	45	315	
Limestone-----	15	330	T.D. 3,100 ft.

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

Well 12/7W-34P1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	40	56	
Pennsylvanian system:			
Middle series:			
Slate, blue-----	22	78	
Sandstone, white-----	10	88	W.B.
Shale, sandy-----	32	120	
Sandstone-----	3	123	W.B.

Well 12/7W-35B1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface clay-----	17	17	
Hardpan, gray-----	41	58	
Sand and gravel, dirty-----	3	61	
Hardpan, gray-----	4	65	
Wash-----	5	70	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	2	72	
Coal-----	1	73	
Fire clay, dark-blue-----	2	75	
Shale, sandy, gray-----	22	97	
Slate, blue-----	4	101	
Coal-----	1.5	102.5	
Fire clay-----	1.5	104	
Shale, sandy, white-----	2	106	
Sandstone-----	4	110	W.B.

Well 12/7W-35J1

Type of record: Driller's log.

Altitude: About 610 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	40	60	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	20	80	
Coal-----	2	82	W.B.
Clay-----	4	86	
Slate, sandy, gray, with sand- stone bands-----	4	90	

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

Well 13/6W- 2E1

Type of record: Driller's log.

Altitude: About 755 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Sand-----	6	30	
Hardpan-----	2	32	
Gravel-----	1	33	W.B.
Hardpan-----	15	48	
Softpan, yellow-----	12	60	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	12	72	
Sandstone-----	8	80	
Shale, gray-----	7	87	
Sandstone-----	3	90	
Shale, gray-----	11	101	
Sandstone, gray-----	20	121	
Sandstone-----	9	130	
Slate, black-----	9	139	
Coal-----	3	142	
Sandstone-----	6	148	
Shale, sandy, gray-----	7	155	
Shale, light-gray-----	3	158	
Shale, sandy, gray-----	2	160	
Sandstone-----	24	184	
Mississippian? system:			
Chester? series:			
Limestone-----	13	197	

Well 13/6W- 2H1

Type of record: Driller's log.

Altitude: About 741 feet.

Record missing-----	1	1	
Pennsylvanian system:			
Lower series:			
Sandstone-----	49	50	
Mud, blue-----	30	80	
Shale, gray-----	45	125	
Sandstone, white-----	20	145	
Shale, black, and slate-----	45	190	
Mississippian system:			
Meramec? series:			
Limestone, white-----	20	210	
Shale, gray-----	10	220	
Limestone, white-----	30	250	
Shale, brown-----	25	275	
Sandstone and shale-----	25	300	
Sandstone-----	15	315	W.B.
Limestone, white-----	90	405	

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

Well 13/6W- 2H1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system:			
Meramec? series:			
Sandstone, white-----	5	410	
Slate, black-----	5	415	
Limestone, white-----	5	420	

Well 13/6W- 3A1

Type of record: Driller's log.

Altitude: About 750 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	40	40	
Sand, fine, dirty, yellow-----	12	52	
Hardpan-----	18	70	
Pennsylvanian system:			
Lower series:			
Shale, blue-----	7	77	
Slate, black-----	5	82	
Shale, light-----	5	87	
Sandstone-----	7	94	
Slate, gray-----	16	110	
Shale, blue-----	10	120	
Shale, black-----	15	135	
Shale, light-----	5	140	
Sandstone-----	5	145	
Shale, light-----	3	148	

Well 13/6W- 3D1

Type of record: Driller's log.

Altitude: About 740 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	22	22	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	25	
Sandstone-----	13	38	
Shale, sandy, gray-----	7	45	
Sandstone-----	1	46	
Shale, dark-gray-----	9	55	
Shale, sandy, gray-----	25	80	
Sandstone-----	30	110	W.B.

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

Well 13/6W- 4J1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pan-----	10	20	
Clay-----	5	25	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	12	37	
Coal-----	.5	37.5	
Clay-----	1	38.5	
Shale, gray-----	11.5	50	
Sandstone-----	61	111	W.B.

Well 13/6W- 4R1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	3	21	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	4	25	
Fire clay-----	8	33	
Slate, sandy, gray-----	17	50	W.B.
Shale, blue-----	30	80	

Well 13/6W- 5D1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Softpan, yellow-----	6	24	
Hardpan, gray-----	12	36	
Pennsylvanian system:			
Lower series:			
Slate, gray-----	15	51	
Coal-----	3	54	
Fire clay-----	.6	60	
Cavey broken-down material-----	15	75	
Mine opening-----	5	80	
Clay rock, brown-----	3	83	
Shale, dark-gray-----	6	89	
Shale, sandy, gray-----	25	114	
Shale, sandy, blue-----	36	150	
Sandstone, white-----	22	172	W.B.
Shale, blue-----	1	173	

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

Well 13/6W- 5E1

Type of record: Driller's log.

Altitude: About 690 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan, sandy-----	12	32	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	5	37	
Coal-----	2	39	
Clay-----	8	47	
Shale, gray-----	5	52	
Sandstone-----	13	65	
Shale, gray-----	1	66	
Coal-----	3	69	
Clay-----	2	71	
Shale, gray-----	11	82	
Coal-----	1	83	
Clay-----	1	84	
Shale, sandy, gray-----	10	94	
Sandstone-----	21	115	
Shale, sandy, gray-----	15	130	
Sandstone-----	30	160	W.B.

Well 13/6W- 5L1

Type of record: Driller's log.

Altitude: About 690 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	24	39	
Softpan-----	27	66	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	18	84	
Coal-----	3.5	87.5	
Clay-----	1.5	89	
Shale, gray-----	16	105	
Shale, sandy, light-gray-----	27	132	
Shale, sandy, dark-gray-----	12	144	
Shale, sandy, gray-----	26	170	
Sandstone-----	18	188	W.B.

Well 13/6W- 5N1

Type of record: Driller's log.

Altitude: About 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	15	35	

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

Well 13/6W- 5N1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3.5	38.5	
Coal-----	3.5	42	
Clay-----	3	45	
Shale, soft, gray-----	25	70	
Shale, gray-----	14	84	
Coal-----	1.5	85.5	
Clay-----	9.5	95	
Shale, gray-----	25	120	
Shale, sandy, light-gray-----	23	143	
Sandstone-----	24	167	W.B.

Well 13/6W- 6A1

Type of record: Driller's log.

Altitude: About 690 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	12	27	
Sand and gravel-----	--	27	W.B.

Well 13/6W- 6E1

Type of record: Driller's log.

Altitude: About 685 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan-----	30	45	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3	48	
Sandstone-----	7	55	
Shale, gray-----	8	63	
Shale, sandy, gray-----	27	90	
Sandstone-----	35	125	W.B.

Well 13/6W 6H1

Type of record: Driller's log.

Altitude: About 690 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pan-----	13	30	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	8.5	38.5	
Sandstone-----	4.5	43	
Shale, sandy, gray-----	7	50	

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

Well 13/6W- 6H1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	3.5	53.5	
Coal-----	.5	54	
Clay-----	6	60	
Shale, gray-----	10	70	
Shale, sandy, dark-gray-----	21	91	
Coal-----	2	93	
Clay-----	2	95	
Sandstone-----	45	140	
Shale, sandy, gray-----	5	145	
Sandstone-----	30	175	W.B.

Well 13/6W- 6J1			
Type of record: Driller's log.		Altitude: About 685 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	10	25	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	15	40	
Coal-----	4	44	
Clay-----	9	53	
Shale, gray-----	7	60	
Shale, sandy, gray-----	12	72	
Coal-----	4	76	"Mine opening"
Clay-----	2	78	
Shale, gray-----	4	82	
Coal-----	.5	82.5	
Clay-----	1.5	84	
Shale, sandy, gray-----	4	88	
Sandstone-----	22	110	
Shale, sandy, gray-----	20	130	
Sandstone-----	25	155	W.B.

Well 13/6W- 6P1			
Type of record: Driller's log.		Altitude: About 690 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	16	36	
Softpan-----	10	46	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	6.5	52.5	
Coal-----	1.5	54	W.B.

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

Well 13/6W- 6P1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	2	56	
Shale, gray-----	1	57	

Well 13/6W- 6R1			
Type of record: Driller's log.		Altitude: About 675 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pan-----	7	21	
Pennsylvanian system:			
Lower series:			
Coal-----	3	24	
Clay-----	6	30	
Shale, gray-----	9	39	
Sandstone-----	3	42	
Shale, sandy, gray-----	14	56	
Coal-----	3	59	
Clay-----	4	63	
Shale, sandy, gray-----	55	118	
Sandstone-----	34	152	W.B.

Well 13/6W- 7C1			
Type of record: Driller's log.		Altitude: About 670 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan-----	1	16	
Pennsylvanian system:			
Lower series:			
Shale, yellow-----	4	20	
Shale, gray-----	20	40	
Coal-----	1	41	
Clay-----	3	44	
Shale, gray-----	3	47	
Sandstone-----	9	56	
Shale, sandy, gray-----	6	62	
Sandstone-----	5	67	
Shale, sandy, gray-----	13	80	

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

Well 13/6W- 7D1		Altitude: About 680 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Sand-----	2	19	
Pan-----	15.5	34.5	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	10.5	45	
Shale, sandy, yellow-----	10	55	
Shale, dark-gray-----	5	60	
Sandstone, yellow-----	25	85	
Sandstone, gray-----	20	105	W.B.

Well 13/6W- 7F1		Altitude: About 680 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	34	54	
Mud, sandy-----	11	65	
Pennsylvanian system:			
Lower series:			
Shale, sandy, soft, dark-gray---	25	90	
Sandstone-----	8	98	
Shale, soft, brown-----	9	107	
Sandstone-----	55	162	W.B.

Well 13/6W- 8D1		Altitude: About 685 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; yellow, soft clay-----	6	6	
Hardpan, gray-----	9	15	
Sand, fine, gray-----	9	24	
Hardpan, gray-----	35	59	
Sand and gravel, medium, gray---	11	70	W.B.

Well 13/6W-12H1		Altitude: About 750 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Sandstone-----	38	48	W.B.
Shale, blue-----	5	53	
Fire clay-----	3	56	
Shale, blue-----	9	65	

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

Well 13/6W-12H1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, light-----	10	75	W.B.
Sandstone-----	9	84	

Well 13/6W-13F1			
Type of record: Driller's log.		Altitude: 690 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	W.B.
Sand-----	24	48	
Hardpan-----	20	68	
Pennsylvanian system:			
Lower series:			
Sandstone-----	10	78	
Shale, dark-----	22	100	
Shale, sandy-----	5	105	
Shale, light-----	5	110	
Mississippian? system:			
Chester? series:			
Limestone-----	8	118	

Well 13/6W-13L1			
Type of record: Driller's log.		Altitude: About 680 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	7	27	
Pennsylvanian system:			
Lower series:			
Slate, gray-----	63	90	
Mississippian? system:			
Chester? series:			
Limestone-----	5	95	
Rock, loose, black-----	31	126	

Well 13/6W-14Q1			
Type of record: Driller's log.		Altitude: About 700 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Lower series:			
Sandstone, yellow-----	7	17	
Shale, sandy-----	100	117	
Shale, light-----	10	127	

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

Well 13/6W-14Q1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, blue-----	28	155	
Shale, sandy-----	5	160	

Well 13/6W-15J1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Wash, gray-----	10	30	
Softpan, gray-----	10	40	
Wash, gray-----	20	60	
Sand and gravel-----	1	61	W.B.
Hardpan-----	4	65	

Well 13/6W-16N1

Type of record: Driller's log. Altitude: About 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Slate, blue-----	9	27	
Coal, trace-----	--	27	
Fire clay-----	3	30	
Slate, hard, gray-----	7	37	
Slate, blue-----	3	40	
Coal, trace-----	--	40	
Fire clay-----	3	43	
Slate, light-gray-----	5	48	
Slate, black-----	5	53	
Coal, trace-----	--	53	
Fire clay-----	2	55	
Slate, dark-blue-----	5	60	
Coal-----	2	62	W.B.
Fire clay-----	3	65	
Shale, sandy, blue-----	5	70	
Shale, sandy, gray-----	5	75	
Shale, dark-blue-----	15	90	
Sandstone, pasty, gray-----	25	115	
Shale, black-----	3	118	
Shale, sandy, gray-----	19	137	
Sandstone, gray-----	5	142	W.B.
Shale, blue-----	3	145	

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

Well 13/6W-18R1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	2	72	W.B.
Shale, dark-gray-----	26	98	
Shale, sandy, gray-----	17	115	
Sandstone-----	40	155	
Shale, gray-----	8	163	

Well 13/6W-19H1

Type of record: Driller's log.

Altitude: About 700 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	20	20	W.B.	
Hardpan-----	35	55		
Pan-----	35	90		
Pennsylvanian system:				
Lower series:				
Coal-----	1	91		
Clay-----	3	94		
Shale, gray-----	51	145		
Shale, sandy, gray-----	15	160		
Sandstone-----	5	165		
Shale, sandy, gray-----	29	194		
Sandstone-----	79	273		
Mississippian? system:				
Meramec? series:				
Limestone-----	1.5	274.5		

Well 13/6W-20B1

Type of record: Driller's log.

Altitude: About 705 feet.

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	18	18		
Pennsylvanian system:				
Lower series:				
Slate, blue-----	12	30		
Mine opening-----	5	35		
Fire clay-----	5	40		
Slate, gray-----	6	46		
Slate, sandy, gray-----	5	51		
Coal-----	1	52		
Fire clay-----	8	60		
Shale, dark-----	12	72		
Shale, gray-----	6	78		
Shale, sandy, gray-----	14	92		
Shale, gray-----	3	95		
Sandstone, gray-----	4	99		

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

Well 13/6W-20B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale (?), soft, dark-blue-----	13	112	W. B.
Shale, gray-----	7	119	
Sandstone, pasty, gray-----	18	137	
Shale, gray-----	14	151	
Sandstone, gray-----	12	163	
Shale, gray-----	12	175	
Shale, sandy, light-blue-----	10	185	
Shale, gray-----	15	200	
Mississippian? system:			
Meramec? series:			
Limestone-----	--	200	

Well 13/6W-20D1

Type of record: Driller's log.

Altitude: About 705 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	17	35	W. B.
Sandstone-----	11.5	46.5	
Coal-----	3.5	50	
Clay-----	6	56	
Shale, dark-gray-----	23	79	
Coal-----	3	82	
Clay-----	5	87	
Shale, light-gray-----	5	92	
Shale, sandy, light-----	12	104	
Shale, dark-gray-----	45	149	
Sandstone-----	10	159	
Shale, dark-gray-----	5	164	
Sandstone-----	38	202	

Well 13/6W-20J1

Type of record: Driller's log.

Altitude: About 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	23	41	
Pennsylvanian system:			
Lower series:			
Coal-----	1	42	
Clay-----	1	43	
Slate, blue-----	7	50	
Coal-----	3	53	

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

Well 13/6W-20J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	1	54	W.B.
Slate, sandy, light-----	6	60	
Slate, blue-----	5	65	
Slate, sandy, light-gray-----	6	71	
Coal-----	3	74	
Fire clay-----	5	79	
Shale, dark-blue-----	23.5	102.5	

Well 13/6W-20P1

Type of record: Driller's log.

Altitude: About 705 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	W.B.; "mine water"
Hardpan, gray-----	6	22	
Clay-----	5	27	
Slate, sandy, gray-----	20	47	
Slate, blue-----	10	57	
Coal-----	3	60	
Fire clay-----	7	67	
Slate, sandy, gray-----	5	72	
Slate-----	4	76	
Coal-----	2.5	78.5	
Fire clay-----	3.5	82	
Shale, blue-----	38	120	
Shale, sandy, gray-----	4	124	
Shale, sandy, blue-----	12	136	
Shale, dark-blue-----	4	140	
Shale, sandy, dark-blue-----	10	150	
Shale, dark-gray-----	32	182	
Shale, sandy, gray-----	18	200	
Shale, sandy, blue-----	22	222	
Mississippian? system:			
Meramec? series:			
Limestone-----	3	225	

Well 13/6W-20P2

Type of record: Driller's log.

Altitude: About 700 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pan-----	2	14	
Pennsylvanian system:			
Lower series:			
Limestone-----	6	20	
Slate, blue-----	5.5	25.5	

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

Well 13/6W-20P2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	.5	26	
Clay-----	3.5	29.5	
Shale, sandy, gray-----	7.5	37	
Mine opening-----	2	39	
Shale-----	14	53	
Clay-----	4	57	
Shale, sandy, gray-----	14.5	71.5	
Shale, gray-----	40.5	112	
Coal-----	1.5	113.5	
Shale, sandy, gray-----	15.5	129	
Shale, dark-gray-----	15	144	
Shale, gray-----	6	150	
Shale, sandy, gray-----	73	223	

Well 13/6W-22J1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan-----	16	34	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	15	49	
Shale, white-----	3	52	
Shale, sandy, blue-----	11	63	
Sandstone, blue-----	12	75	
Shale, sandy, blue-----	14	89	
Shale, blue-----	3	92	
Shale, sandy, blue-----	14	106	
Shale, dark-----	3	109	
Shale, sandy, light-----	13	122	
Shale, sandy, blue-----	26	148	
Shale, sandy, light-----	8	156	
Shale, sandy, blue-----	5	161	
Limestone-----	1	162	

Well 13/6W-22R1

Type of record: Driller's log.

Altitude: About 670 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan-----	36	56	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	5	61	

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

Well 13/6W-24R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, light-----	8	92	
Shale, sandy, light-----	14	106	
Shale, dark-----	3	109	
Shale, light-----	3	112	
Shale, blue-----	12	124	
Shale, sandy, blue-----	11	135	
Sandstone, blue-----	2	137	

Well 13/6W-26A1

Type of record: Driller's log.

Altitude: About 695 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, yellow-----	5	22	
Sandstone, brown-----	15	37	
Sandstone, white-----	9	46	
Shale, blue-----	26	72	
Sandstone, gray, with shale bands-----	8	80	
Shale, sandy, blue-----	4	84	
Shale, dark-----	41	125	
Sandstone, hard, gray-----	20	145	
Mississippian system:			
Meramec? series:			
Limestone, shaly-----	5	150	
Limestone-----	1	151	

W.B.

Well 13/6W-26A2

Type of record: Driller's log.

Altitude: About 705 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, yellow-----	5	17	
Clay, soft, yellow-----	8	25	
Shale, sandy, dark-----	9	34	
Sandstone, brown-----	3	37	
Sandstone yellow-----	3	40	
Sandstone, dark-----	7	47	
Sandstone, white-----	8	55	
Shale, blue-----	3	58	

W.B.

W.B.

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

Well 13/6W-26A3

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system: Recent and Pleistocene series: Surface-----	18	18	
Pennsylvanian system: Lower series: Sandstone, yellow-----	6	24	
Sandstone, gray-----	10	34	
Sandstone, blue-----	6	40	W.B.

Well 13/6W-27M1

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

Quaternary system: Recent and Pleistocene series: Surface-----	15	15	
Pennsylvanian system: Lower series: Slate, blue-----	2	17	
Clay-----	2	19	
Sandstone, light-----	9	28	
Coal-----	3	31	W.B.
Clay-----	3	34	

Well 13/6W-27Mz

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

Quaternary system: Recent and Pleistocene series: Surface-----	11	11	
Hardpan-----	17	28	
Pennsylvanian system: Lower series: Limestone, hard-----	2	30	
Clay, soft, yellow-----	4	34	
Slate, blue-----	68	102	
Shale, sandy, dark-----	4	106	
Shale, sandy, blue-----	6	112	
Rock, hard, blue-----	2	114	Limestone (?)
Shale, sandy, black-----	10	124	
Shale, sandy, blue-----	10	134	
Shale, sandy with sandstone bands, gray-----	5	139	
Shale, gray-----	8	147	
Shale, dark-----	10	157	

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

Well 13/6W-27M4

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Clay-----	6	26	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	70	96	
Rock, hard, blue-----	3	99	Limestone(?)
Shale, dark-----	13	112	

Well 13/6W-27M5

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	11	27	
Pennsylvanian system:			
Lower series:			
Slate, soft-----	7	34	
Slate, hard, blue-----	60	94	
Shale, sandy, light-----	15	109	W.B.
Slate, dark-----	3	112	W.B.
Shale, sandy, blue-----	8	120	W.B.
Shale, dark-----	21	141	

Well 13/6W-28A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Gravel, trace-----	--	16	
Hardpan, gray-----	21	37	
Gravel, dirty-----	1	38	W.B.
Softpan, gray-----	8	46	
Softpan, yellow-----	3	49	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	6	55	
Coal-----	3	58	
Fire clay-----	1	59	
Sandstone, gray, with some slate-----	7	66	W.B.
Coal, trace-----	--	66	
Fire clay-----	4	70	
Shale, blue-----	30	100	

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

Well 13/6W-28D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Hardpan-----	10	23	
Softpan-----	30	53	
Sand, dirty, and some gravel----	8	61	
Wash-----	2	63	
Softpan, yellow-----	8	71	
Pennsylvanian system:			
Lower series:			
Slate, gray-----	6	77	
Slate, soft, gray-----	5	82	
Shale, blue-----	45	127	
Coal-----	1	128	
Shale, sandy, gray-----	7	135	
Shale, sandy, blue-----	42	177	
Shale, sandy, light-----	10	187	
Shale, sandy, gray-----	16	203	
Sandstone, pasty-----	7	210	
Shale, blue-----	5	215	
Shale, sandy, light-----	3	218	
Sandstone, hard-----	5	223	
Mississippian? system:			
Meramec? series:			
Limestone-----	1	224	

Well 13/6W-28H1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, gray-----	31	45	
Gravel-----	1	46	
Clay, yellow-----	6	52	
Pennsylvanian system:			
Lower series:			
Fire clay, white-----	1	53	

Well 13/6W-28J1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	40	55	

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

Well 13/6W-28J1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, blue-----	77	132	
Slate, black-----	14	146	
Shale, gray-----	11	157	
Shale, dark-----	43	200	
Shale, gray-----	3	203	
Mississippian? system:			
Meramec? series:			
Limestone-----	1	204	

Well 13/6W-28J2

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand-----	1	16	
Pan-----	42	58	
Pennsylvanian system:			
Lower series:			
Rock-----	2	60	Limestone (?)
Shale, sandy, gray-----	2	62	
Coal-----	2	64	W.B.
Clay-----	1	65	

Well 13/6W-28N1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	12	30	
Softpan, dark-----	16	46	
Boulder-----	1	47	
Softpan, dark-----	14	61	
Sand and gravel, dirty-----	2	63	
Wash, dark-----	6	69	
Sand and gravel-----	2	71	W.B.
Softpan-----	15	86	
Sand-----	1	87	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	3	90	
Shale, sandy, blue with sand- stone bands-----	23	113	W.B.
Shale, sandy, gray-----	2	115	
Shale, black-----	10	125	

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

Well 13/6W-28N2

Type of record: Driller's log.

Altitude: About 680 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Softpan, yellow-----	5	20	
Hardpan, gray-----	20	40	
Softpan, gray-----	27	67	
Wash and drift, gray, with sand streaks and some gravel-----	10	77	
Softpan-----	2	79	
Sand and gravel-----	11	90	W.B.

Well 13/6W-28N3

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Hardpan, gray-----	12	31	
Softpan, dark-----	36	67	
Sand and gravel-----	3	70	W.B.

Well 13/6W-28P1

Type of record: Driller's log.

Altitude: About 685 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pan-----	60	75	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	6	81	
Coal-----	4	85	
Clay-----	5	90	
Shale, sandy, gray-----	10	100	
Sandstone-----	10	110	
Shale, sandy, gray-----	75	185	
Sandstone-----	33	218	W.B.
Shale, sandy, gray-----	2	220	

Well 13/6W-28P2

Type of record: Driller's log.

Altitude: About 685 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	60	75	
Sand and gravel, trace-----	--	75	W.B.
Hardpan, gray-----	1	76	

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

Well 13/6W-28Q1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Hardpan-----	26	39	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	1	40	
Coal, trace-----	--	40	
Fire clay-----	3	43	
Slate, gray-----	23	66	
Coal-----	3.5	69.5	
Fire clay-----	2.5	72	
Shale, sandy, gray-----	6	78	
Shale, sandy, white-----	5	83	
Shale, light-brown-----	49	132	
Shale, black-----	4	136	
Shale, light-----	5	141	
Shale, sandy-----	6	147	
Shale, dark-----	3	150	
Shale, sandy, light-----	3	153	
Shale, dark-brown-----	2	155	

Well 13/6W-28Q2

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Hardpan, gray-----	43	57	
Wash, yellow-----	6	63	
Fire clay-----	4	67	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, brown-----	3	70	
Sandstone, light-----	37	107	
Sandstone, coarse, gray-----	10	117	W.B.
Shale, blue-----	1	118	

Well 13/6W-28R2

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pan-----	27	45	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	34	79	

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

Well 13/6W-28R2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	16	95	W.B.
Shale, gray-----	1	96	

Well 13/6W-29B1

Type of record: Driller's log.

Altitude: About 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Limestone-----	7	23	
Shale, sandy, gray-----	9	32	
Sandstone-----	5	37	
Shale, sandy, gray-----	16	53	
Coal-----	2	55	
Clay-----	1	56	
Shale, sandy, gray-----	8	64	
Coal-----	1	65	
Clay-----	9	74	
Shale, gray-----	3	77	
Shale, sandy, gray-----	3	80	
Sandstone-----	7	87	
Shale, sandy, gray-----	3	90	
Shale, gray-----	15	105	
Coal-----	2	107	
Clay-----	.5	107.5	
Shale, sandy, gray-----	1.5	109	
Sandstone-----	11	120	
Shale, sandy, gray-----	5	125	
Coal-----	.5	125.5	
Clay-----	1.5	127	
Shale, sandy, gray-----	3	130	
Shale, dark-gray-----	10	140	
Sandstone-----	4	144	
Shale, sandy, gray-----	21	165	

Well 13/6W-29E1

Type of record: Driller's log.

Altitude: About 685 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone-----	3	17	
Shale, gray-----	12	29	

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

Well 13/6W-29E1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone-----	5	34	
Shale, sandy, gray-----	13	47	
Mine opening-----	5	52	
Clay-----	5	57	
White top-----	6	63	
Shale, sandy, gray-----	4	67	
Sandstone-----	3	70	
Shale, gray-----	11	81	
Mine opening-----	4	85	W. B.
Clay-----	4	89	
Sandstone-----	6	95	
Shale, light-gray-----	9	104	
Shale, sandy, gray-----	25	129	
Sandstone-----	2	131	
Shale, gray-----	12	143	
Limestone-----	2	145	
Shale, sandy, gray-----	23	168	
Limestone-----	.5	168.5	
Shale, gray-----	16.5	185	
Shale, sandy, gray-----	11	196	
Shale, gray-----	5	201	
Shale, sandy, gray-----	47	248	

Well 13/6W-29E2

Type of record: Driller's log.

Altitude: About 695 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	6	21	
Pennsylvanian system:			
Lower series:			
Limestone-----	1.5	22.5	
Shale, gray-----	22.5	45	
Coal-----	.5	45.5	
Shale, dark-----	2.5	48	
Shale, sandy, light-----	4	52	

Well 13/6W-29J1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	8	23	
Softpan, yellow-----	9	32	

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

Well 13/6W-29J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	3	35	
Coal-----	2	37	W.B.
Fire clay, soft-----	3	40	
Slate, sandy, gray-----	13	53	
Slate, dark-----	3	56	
Coal, trace-----	--	56	W.B.
Fire clay, soft-----	3	59	
Slate, sandy, light-----	15	74	
Slate, gray-----	3	77	
Coal, trace-----	--	77	
Fire clay-----	2	79	
Shale, blue-----	6	85	

Well 13/6W-30H1

Type of record: Driller's log.

Altitude: About 690 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Softpan-----	5	15	
Pan, gravelly-----	5	20	
Hardpan-----	23	43	
Pennsylvanian system:			
Middle? series:			
Sandstone-----	5	48	
Lower series:			
Shale, dark-gray-----	5	53	
Coal-----	.5	53.5	
Clay-----	3.5	57	
Shale, gray-----	8	65	
Shale, light-gray-----	14	79	
Sandstone-----	3	82	
Shale, dark-gray-----	4	86	
Sandstone-----	59	145	W.B.

Well 13/6W-30H2

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface; clay, soft, yellow----	10	10	
Hardpan, gray-----	12	22	
Softpan, gray-----	10	32	
Pea gravel-----	1	33	
Softpan, sandy, gray-----	19	52	

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

Well 13/6W-30H2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, hard, dark-----	10	62	W.B.
Shale, soft, light-----	11	73	
Shale, hard, dark-----	3	76	
Sandstone, hard-----	7	83	
Shale, sandy, hard, light-----	7	90	
Shale, hard, gray-----	12	102	

Well 13/6W-30J1

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

Quaternary system:			
Recent and Pleistocene series:			
Softpan-----	25	25	W.B.
Hardpan, gray-----	7	32	
Softpan, dark-----	21	53	
Sand and gravel-----	2	55	

Well 13/6W-30M1

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

Quaternary system:				
Recent and Pleistocene series:				
Surface-----	20	20	W.B.	
Pennsylvanian system:				
Lower series:				
Shale, blue-----	3	23		
Shale, light-----	2	25		
Limestone-----	1	26		
Slate, blue-----	34	60		
Mine opening-----	8	68		
Clay, soft, white-----	14	82		
Slate, gray-----	20	102		
Coal-----	2	104		
Clay, sandy, hard-----	3	107		
Shale, light-----	15	122		
Sandstone-----	10	132		
Shale, sandy, white-----	6	138		
Shale, dark-blue-----	2	140		

Well 13/6W-31K1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan-----	3	18	

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

Well 13/6W-31K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	15	50	
Slate, gray-----	15	65	
Coal-----	1	66	
Fire clay-----	4	70	
Shale, blue-----	20	90	
Shale, dark-----	30	120	
Shale, gray-----	55	175	
Sandstone-----	76	251	W.B.

Well 13/6W-31K3

Type of record: Driller's log.

Altitude: About 665 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	8	8	
Softpan-----	2	10	
Sand, dirty-----	12	22	
Gravel, fine-----	4	26	
Gravel, yellow-----	8	34	
Gravel, gray-----	5.5	39.5	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	.5	40	

Well 13/6W-31P1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan, gray-----	9	19	
Sand-----	3	22	W.B.
Gravel, blue-----	8	30	W.B.

Well 13/6W-31P2

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	7	7	
Softpan, yellow-----	10	17	
Hardpan, gray-----	11	28	
Gravel, gray-----	1	29	
Hardpan, gray-----	2	31	
Gravel, gray-----	4	35	
Hardpan, gray-----	9	44	
Gravel, gray-----	10	54	W.B.

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

Well 13/6W-31R1

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Hardpan-----	10	30	
Softpan-----	19	49	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	13	62	
Coal-----	.5	62.5	
Shale, sandy, gray-----	40.5	103	
Sandstone, hard-----	4	107	
Sandstone-----	32	139	W.B.
Shale, sandy, gray-----	1	140	

Well 13/6W-32H1

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	2	16	
Coal-----	1	17	
Fire clay-----	2	19	
Slate, light-blue-----	12	31	
Coal-----	2	33	
Fire clay-----	1	34	
Slate, sandy, gray-----	9	43	
Coal-----	1	44	
Fire clay-----	1	45	
Clay rock, sandy-----	3	48	
Sandstone-----	5	53	
Shale, sandy, blue-----	13	66	
Sandstone, dark-gray and white-----	4	70	
Sandstone, white-----	15	85	W.B.

Well 13/6W-32H2

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Pennsylvanian system:			
Lower series:			
Sandstone-----	12	27	
Slate, blue-----	13	40	
Coal-----	3	43	

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

Well 13/6W-32H2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay-----	5	48	
Slate, gray-----	7	55	
Coal-----	1	56	
Fire clay-----	3	59	
Slate, gray-----	21	80	
Fire clay-----	2	82	
Shale, blue-----	48	130	
Shale, sandy, blue-----	36	166	
Shale, sandy, white-----	10	176	
Shale, blue-----	26	202	
Shale, sandy, light-----	14	216	
Sandstone, gray-----	34	250	
Mississippian system:			
Meramec? series:			
Limestone, dark-----	6	256	
Limestone, white-----	5	261	

Well 13/6W-32J1

Type of record: Driller's log.

Altitude: About 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	15	35	
Mine opening-----	--	35	
Slate, gray-----	15	50	
Shale, sandy, light-----	8	58	
Coal-----	1	59	
Fire clay-----	3	62	
Shale, sandy, light-----	5	67	
Coal, trace-----	--	67	
Shale, sandy, blue-----	13	80	
Shale, blue-----	30	110	
Sandstone-----	9	119	W.B.
Sandstone, hard, brown-----	2	121	

Well 13/6W-32J3

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pennsylvanian system:			
Lower series:			
Sandstone-----	24	44	

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

Well 13/6W-32J3--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, blue-----	8.5	52.5	
Coal-----	1.5	54	
Slate, gray-----	26	80	
Coal-----	2	82	
Fire clay-----	2	84	
Slate, blue-----	8	92	
Coal-----	3	95	
Fire clay-----	4	99	
Sandstone, white-----	33	132	W.B.

Well 13/6W-32J4

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Pennsylvanian system:			
Lower series:			
Sandstone, soft, gray-----	10	26	
Shale, light-----	4	30	
Slate, blue-----	8	38	
Coal-----	3.5	41.5	
Fire clay, light-----	3.5	45	
Slate, gray-----	13	58	
Coal-----	2	60	
Fire clay-----	2	62	
Slate, dark-----	7	69	
Coal-----	3	72	
Fire clay-----	4	76	
Shale, sandy, hard, light-----	31	107	
Sandstone, white-----	15	122	W.B.
Shale, sandy, blue-----	2	124	

Well 13/6W-32N1

Type of record: Driller's log.

Altitude: About 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Hardpan, gray-----	15	30	
Softpan, gray-----	38	68	
Sand and gravel, gray-----	1	69	W.B.

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

Well 13/6W-32R1

Type of record: Driller's log.

Altitude: About 680 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Softpan-----	15.5	25.5	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	12.5	38	
Shale, gray-----	7	45	

Well 13/6W-33D1

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	14	14	
Hardpan-----	44	58	
Sand and pea gravel-----	2	60	W.B.

Well 13/6W-33H1

Type of record: Driller's log.

Altitude: About 655 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	7	7	
Hardpan, gray-----	49	56	
Sand and gravel-----	1	57	W.B.

Well 13/6W-33H2

Type of record: Driller's log.

Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Sand, yellow-----	15	35	
Sand and gravel, gray-----	4	39	
Hardpan, gray-----	5	44	
Sand and gravel-----	4	48	W.B.

Well 13/6W-33N1

Type of record: Driller's log.

Altitude: About 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan-----	6	23	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	25	48	
Slate, gray-----	20	68	

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

Well 13/6W-33N1-Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	2	70	
Clay, blue-----	2	72	
Fire clay, white-----	8	80	
Shale, sandy, dark-----	12	92	
Shale, light-----	3	95	
Shale, sandy, light-----	4	99	
Shale, sandy, blue-----	4	103	
Sandstone, blue-----	14	117	W.B.
Shale, sandy, blue-----	3	120	
Shale, dark-brown-----	10	130	

Well 13/6W-33N3

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

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan, gray-----	7	24	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	6	30	
Slate, gray-----	20	50	
Slate, blue-----	21	71	
Coal-----	2	73	
Fire clay-----	5	78	
Shale, sandy, light-----	7	85	
Shale, dark-----	4	89	

Well 13/6W-33Q1

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

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	15	15	
Hardpan-----	9	24	
Pennsylvanian system:			
Lower series:			
Shale, dark-gray-----	5	29	
Coal and jack-----	.5	29.5	
Clay-----	1	30.5	
Shale, sandy, dark-gray-----	3.5	34	
Shale, sandy, gray-----	2	36	
Sandstone-----	31	67	W.B.

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

Well 13/6W-33R1

Type of record: Driller's log.

Altitude: About 562 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	25	25	
Sand and gravel-----	45	70	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	75	145	
Sandstone-----	15	160	
Mississippian system:			
Chester? series:			
Shale, dark-----	30	190	
Limestone, sandy-----	5	195	
Shale, dark-green-----	5	200	
Shale, pale-green-----	6	206	
Limestone, crystalline, sandy---	4	210	
Meramec? series:			
Limestone, oolitic-----	5	215	
Limestone, oolitic, white-----	5	220	
Limestone, dense, hard-----	5	225	
Dolomite, sucrose, pale-----	4	229	
Limestone, dense, tan-----	6	235	
Limestone, dense-----	10	245	
Limestone, dolomitic-----	17	262	
Limestone, permeable-----	10	272	
Limestone, hard, cherty-----	2	274	

Well 13/6W-34N1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface and pan-----	14	14	
Pennsylvanian system:			
Lower series:			
Sandstone-----	26	40	
Shale, sandy, dark-gray-----	52	92	
Sandstone-----	10	102	
Sandstone, hard-----	11	113	
Shale, sandy, gray-----	14	127	
Sandstone-----	13	140	W.B.

Well 13/6W-35Q1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan, sandy-----	55	75	

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

Well 13/6W-35Q1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, yellow-----	5	80	
Shale, sandy, soft, gray-----	38	118	
Coal-----	1	119	
Clay-----	1	120	
Shale, sandy, gray-----	60	180	W.B.

Well 13/6W-35Q2			
Type of record: Driller's log.		Altitude: About 640 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand, dirty-----	43	58	
Sand and gravel-----	6	64	W.B.

Well 13/7W- 1J1			
Type of record: Driller's log.		Altitude: About 685 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan, sandy-----	14	34	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	2	36	
Sandstone-----	22	58	
Shale, sandy, dark-gray-----	12	70	
Sandstone-----	25	95	
Shale, sandy, gray-----	10	105	
Sandstone-----	5	110	W.B.

Well 13/7W- 2N1			
Type of record: Driller's log.		Altitude: About 625 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pan-----	25	35	
Pennsylvanian system:			
Lower series:			
Coal-----	.5	35.5	
Clay-----	2.5	38	
Shale, gray-----	17	55	
Clay-----	4	59	
Shale, sandy, gray-----	13	72	
Shale, gray-----	6	78	
Coal-----	2	80	

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

Well 13/7W- 2N1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay-----	1.5	81.5	
Shale, sandy, gray-----	57.5	139	
Sandstone-----	48	187	W.B.
Well 13/7W- 2N2			
Type of record: Driller's log.		Altitude: About 635 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	22	22	
Sand-----	4	26	
Pan-----	20	46	
Pennsylvanian system:			
Lower series:			
Coal, very-soft-----	1	47	
Clay-----	4	51	
Shale, sandy, gray-----	20	71	
Coal-----	4	75	
Clay-----	2	77	
Shale, sandy, gray-----	22	99	
Coal, soft-----	1	100	
Clay-----	2	102	
Shale, sandy, gray-----	17	119	
Sandstone-----	3	122	
Shale, sandy, gray-----	13	135	
Sandstone-----	15	150	W.B.
Well 13/7W- 3F1			
Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface soil-----	3	3	
Boulder clay (hardpan)-----	33	36	
Pennsylvanian system:			
Lower series:			
Limestone-----	10	46	
Shale, black-----	7	53	
Coal-----	3	56	
Fire clay-----	3	59	
Sandstone-----	2	61	
Shale, blue-----	17	78	
Coal-----	1.5	79.5	
Fire clay (rock)-----	5	84.5	
Fire clay-----	7.5	92	
Shale, gray-----	25	117	
Coal and bone coal-----	2	119	
Coal-----	2	121	

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

Well 13/7W-3P1

Type of record: Driller's log.

Altitude: About 575 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Drift, sandy-----	16	26	
Hardpan-----	6	32	
Pennsylvanian system:			
Lower series:			
Shale, light-----	12	44	
Shale, sandy, gray-----	16	60	

Well 13/7W- 4N1

Type of record: Driller's log.

Altitude: About 570 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pennsylvanian system:			
Middle? series:			
Shale, black-----	2	12	
Shale, white-----	9.5	21.5	
Coal-----	1.3	22.8	
Shale, white-----	21.2	44	
Coal-----	1.2	45.2	
Shale, white-----	4.8	50	
Shale, blue-----	15	65	
Sandstone-----	10	75	
Lower series:			
Shale, gray-----	3	78	
Fire clay-----	7	85	
Shale, blue-----	25	110	
Sandstone-----	7	117	
Shale, gray-----	4	121	
Coal-----	4.2	125.2	
Fire clay-----	3	128.2	
Shale, blue-----	10.6	138.8	
Coal and shale-----	.4	139.2	
Coal-----	.6	139.8	
Fire clay-----	1	140.8	

Well 13/7W- 4R1

Type of record: Driller's log.

Altitude: About 575 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Wash, gray-----	21	31	
Sand, coarse-----	4	35	W.B.
Sand and gravel-----	14	49	W.B.
Hardpan-----	3	52	

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

Well 13/7W- 4R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay-----	1	53	

Well 13/7W- 9R1

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	5	5	
Pennsylvanian system:			
Middle? series:			
Sandstone-----	17	22	
Shale, gray-----	18.5	40.5	
Sandstone-----	10	50.5	
Shale-----	23.5	74	
Sandstone-----	2.2	76.2	
Lower? series:			
Coal-----	2	78.2	
Clay-----	1.6	79.8	
Shale, gray-----	15.7	95.5	
Shale, black-----	9	104.5	
Fire clay-----	2	106.5	

Well 13/7W-10C1

Type of record: Driller's log.		Altitude: About 630 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Sand-----	1	20	
Boulder clay-----	23	43	
Pennsylvanian system:			
Middle? series:			
Sandstone-----	40	83	
Lower? series:			
Coal-----	2.2	85.2	
Clay-----	2	87.2	
Shale, gray-----	15.8	103	
Shale, black-----	20	123	

Well 13/7W-10F1

Type of record: Driller's log.		Altitude: About 630 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Quicksand-----	2	17	
Boulder clay-----	19	36	

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

Well 13/7W-10F1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle? series:			
Limestone-----	14	50	
Shale, black-----	1	51	
Coal-----	1.5	52.5	
Shale-----	.5	53	
Coal-----	.5	53.5	
Clay-----	6	59.5	
Shale, sandy-----	36	95.5	
Lower? series:			
Coal-----	2.3	97.8	
Clay-----	5.7	103.5	
Shale, light-----	3	106.5	
Shale, gray-----	15.5	122	
Coal-----	3.8	125.8	
Sandstone-----	1	126.8	

Well 13/7W-10J1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Boulder clay-----	4	19	
Sand-----	4	23	
Boulder clay-----	57.5	80.5	
Pennsylvanian system:			
Middle? series:			
Shale, sandy-----	4	84.5	
Coal-----	2.4	86.9	
Clay-----	2.6	89.5	
Shale, gray-----	7.5	97	
Lower? series:			
Shale and coal-----	1.2	98.2	
Clay-----	1.8	100	
Coal-----	3	103	
Clay, soft-----	1	104	
Shale, clayey-----	6	110	
Sandstone-----	7	117	
Shale, gray-----	4.2	121.2	
Coal-----	2.6	123.8	
Clay, dark-----	2	125.8	
Coal, soft-----	4	126.2	
Shale, black-----	2.6	128.8	
Coal-----	1	129.8	
Clay-----	1	130.8	
Shale, brown-----	2.4	133.2	
Coal (mixed)-----	.6	133.8	
Clay-----	1	134.8	
Shale, light-----	5.7	140.5	

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

Well 13/7W-10K1		Altitude: About 630 feet.	
Type of record: Driller's log.			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Sand-----	12	28	
Boulder clay-----	34.5	62.5	
Pennsylvanian system:			
Middle? series:			
Shale, soft, blue-----	2.5	65	
Coal-----	2.3	67.3	
Clay-----	2	69.3	
Shale, light-----	5.7	75	
Lower? series:			
Shale, gray-----	12.5	87.5	
Coal-----	4	91.5	
Clay-----	2	93.5	
Shale, clayey-----	3.5	97	
Shale, gray-----	18	115	
Coal-----	1.9	116.9	
Coal, bone-----	1.2	118.1	
Clay, hard-----	.9	119	

Well 13/7W-10M1		Altitude: About 630 feet.	
Type of record: Driller's log.			
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	14	14	
Sand-----	10	24	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	3	27	
Limestone-----	1	28	
Sandstone-----	11	39	
Shale, gray-----	32.5	71.5	
Sandstone, white-----	10	81.5	
Sandstone-----	3.3	84.8	
Lower? series:			
Clay-----	2.2	87	
Shale, blue-----	18.5	105.5	
Coal-----	2.5	108	
Shale, blue-----	1.9	109.9	
Coal-----	1.4	111.3	
Fire clay-----	3.6	114.9	
Shale, gray-----	12.8	127.7	
Shale, blue-----	4	131.7	
Sandstone-----	5	136.7	

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

Well 13/7W-10Q1

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Boulder clay-----	29	45	
Sand-----	4	49	
Boulder clay-----	17	66	
Pennsylvanian system:			
Middle? series:			
Shale, blue-----	14	80	
Coal-----	2.5	82.5	
Clay-----	1	83.5	
Shale, gray-----	8	91.5	
Lower? series:			
Smut and shale-----	1.5	93	
Clay-----	.5	93.5	
Rock-----	5.5	99	Limestone (?)
Shale, gray-----	23	122	
Coal-----	4.8	126.8	
Shale-----	12.2	139	
Shale, blue-----	41	180	

Well 13/7W-10R1

Type of record: Driller's log.

Altitude: About 600 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Pan, sandy-----	39	51	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	2.5	53.5	
Coal-----	.5	54	
Coal, very-soft-----	.5	54.5	
Coal-----	2	65.5	
Clay-----	2.5	59	
Smut-----	1	60	
Clay-----	3	63	
Sandstone-----	1	64	

Well 13/7W-11D1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	2	2	
Boulder clay-----	2	4	
Conglomerate (gravel?)-----	18	22	

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

Well 13/7W-11D1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	12	34	
Shale, black-----	1.1	35.1	
Shale, gray-----	31	66.1	
Coal-----	5.9	72	
Clay-----	.3	72.3	

Well 13/7W-11E1			
Type of record: Driller's log.		Altitude: About 635 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	4.5	4.5	
Sand and muck-----	13.5	18	
Sand and boulder clay-----	14	32	
Boulder clay, rough-----	7	39	
Coal-----	4	43	
Clay-----	5	48	
Sandstone, soft-----	3	51	
Shale, blue-----	17.5	68.5	
Coal-----	1.8	70.3	
Clay-----	13.2	83.5	
Shale, gray-----	2.5	86	
Coal-----	2.3	88.3	
Coal, bone-----	1.4	89.7	
Clay-----	.3	90	

Well 13/7W-12A1			
Type of record: Driller's log.		Altitude: About 680 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan, sandy-----	27	47	
Pennsylvanian system:			
Lower series:			
Shale, gray-----	33	80	
Shale, sandy, gray-----	30	110	
Shale, gray-----	10	120	
Shale, sandy, gray-----	5	125	
Shale, gray-----	5	130	
Shale, sandy, gray-----	6	136	
Sandstone-----	19	155	W.B.

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

Well 13/7W-12K1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface, sandy-----	15	15	
Pan, sandy-----	90	105	
Sand and gravel-----	2	107	W.B.

Well 13/7W-13P1

Type of record: Driller's log. Altitude: About 660 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Open well-----	35	35	
Hardpan-----	14.5	49.5	
Gravel, dirty-----	.5	50	
Hardpan, gray-----	34	84	
Pennsylvanian system:			
Lower series:			
Clay, light-----	8	92	
Shale, blue-----	103	195	
Shale, sandy, light-blue-----	2	197	
Sandstone, hard-----	1	198	
Shale, sandy, blue-----	2	200	
Sandstone, gray-----	12	212	W.B.
Shale, sandy, blue-----	3	215	
Sandstone, gray-----	1	216	

Well 13/7W-15A1

Type of record: Driller's log. Altitude: About 610 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	12	12	
Sand-----	14	26	
Boulder clay-----	8	34	
Pennsylvanian system:			
Lower series:			
Shale, sandy-----	5	39	
Coal-----	3.6	42.6	
Clay-----	1.4	44	
Shale, light-----	3	47	
Shale, gray-----	13	60	
Clay-----	1	61	

Well 13/7W-15D1

Type of record: Driller's log. Altitude: About 645 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	75	75	

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

Well 13/7W-15D1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Clay, white-----	6	81	
Slate, blue-----	12	93	
Coal-----	1	94	
Fire clay-----	5	99	
Limestone, blue-----	3	102	W.B.
Slate-----	1	103	

Well 13/7W-15N1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	24	24	
Hardpan-----	52	76	
Pennsylvanian system:			
Middle? series:			
Slate, blue-----	6	82	
White top-----	7	89	
Lower series:			
Slate, blue-----	8	97	
Slate, sandy, gray-----	18	115	
Slate blue-----	7	122	
Coal-----	4	126	W.B.
Fire clay-----	5	131	
Shale, blue-----	3	134	

Well 13/7W-16C1

Type of record: Driller's log.

Altitude: About 615 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	6	6	
Sand-----	15	21	
Pennsylvanian system:			
Middle series:			
Shale, blue-----	6	27	
Coal-----	4	31	
Fire clay-----	4	35	
Shale-----	3	38	
Sandstone-----	1	39	
Shale, blue-----	2.5	41.5	
Clay-----	9	50.5	
Shale, blue-----	2	52.5	
Clay-----	8.5	61	
Sandstone-----	3	64	
Shale, gray-----	13	77	
Shale, blue-----	13.7	90.7	

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

Well 13/7W-16C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower? series:			
Coal-----	3	93.7	
Shale-----	1.6	95.3	
Coal-----	2.6	97.9	
Shale-----	.2	98.1	
Sandstone-----	3.6	101.7	
Shale, gray-----	35.3	137	

Well 13/7W-16E1

Type of record: Driller's log.

Altitude: About 610 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Sand-----	9	22	
Boulder clay-----	22	44	
Shale-----	2	46	"Drift"
Clay-----	4	50	Do
Shale-----	1.5	51.5	Do
Pennsylvanian system:			
Middle series:			
Coal-----	2.5	54	
Fire clay-----	7.5	61.5	
Shale, blue-----	3	64.5	
Clay-----	6.4	70.9	
Sandstone-----	1	71.9	
Flint rock (limestone)-----	1.3	73.2	
Clay-----	4.3	77.5	
Sandstone-----	3	80.5	
Clay-----	7.5	88	
Shale, blue-----	6.3	94.3	
Lower? series:			
Coal-----	.5	94.8	
Shale-----	3.3	98.1	
Clay-----	1.8	99.9	
Limestone-----	4.2	104.1	
Shale, blue-----	7	111.1	
Clay-----	1.1	112.2	
Shale, gray-----	20.7	132.9	

Well 13/7W-16Q1

Type of record: Driller's log.

Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Pan-----	67	77	

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

Well 13/7W-16Q1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Middle series:			
Shale, gray-----	1	78	
Coal-----	1	79	
Clay-----	2	81	
Shale, gray-----	3	84	
Coal-----	1	85	
Shale, gray-----	20	105	
Coal-----	3	108	
Clay-----	1	109	
Shale, sandy, gray-----	24	133	
Lower? series:			
Coal-----	2	135	
Clay-----	4	139	
Shale, sandy, gray-----	15	154	
Coal-----	3	157	
Clay-----	1	158	
Shale, sandy, gray-----	22	180	
Sandstone-----	50	230	W.B.

Well 13/7W-22E1

Type of record: Driller's log.	Altitude: About 640 feet.	
Record missing-----	125.5	125.5
Pennsylvanian system:		
Lower series:		
Fire clay-----	5.5	131
Shale, light-----	8	139
Shale, dark-----	15	154
Shale, light-----	5	159
Sandstone-----	4	163
Sandstone, dark-----	7	170
Shale, limy, soft-----	10	180
Shale, sandy-----	20	200
Shale, sandy, blue-----	5	205
Sandstone, white-----	108.5	313.5
		W.B.

Well 13/7W-23C1

Type of record: Driller's log.	Altitude: About 640 feet.	
Quaternary system:		
Recent and Pleistocene series:		
Surface-----	15	15
Pan, sandy-----	76	91
Clay-----	3.5	94.5
Pennsylvanian system:		
Lower series:		
Shale, sandy-----	17.5	112
Sandstone-----	13	125
		W.B.

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

Well 13/7W-23H1

Type of record: Driller's log.

Altitude: About 670 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Softpan-----	5	18	
Hardpan-----	16	34	
Sand-----	4	38	
Sand and pan-----	26	64	
Pennsylvanian system:			
Lower series:			
Sandstone-----	36	100	W.B.
Shale, sandy-----	8	108	
Shale, sandy, gray-----	2	110	
Sandstone-----	38	148	W.B.
Shale, gray-----	2	150	
Sandstone-----	8	158	
Shale, gray-----	2	160	

Well 13/7W-25F1

Type of record: Driller's log.

Altitude: About 650 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Pennsylvanian system:			
Middle? series:			
Slate, blue-----	4	22	
Sandstone, pasty-----	20	42	
Lower series:			
Slate, gray-----	7	49	
Coal-----	1	50	
Slate, gray-----	12	62	
Slate, blue-----	5	67	
Clay-----	2	69	
Slate, sandy, gray-----	4.5	73.5	
Mine opening-----	5	78.5	

Well 13/7W-26E1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	32	52	
Sand-----	1	53	W.B.
Pan-----	2	55	

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

Well 13/7W-26P1

Type of record: Driller's log. Altitude: About 640 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	32	50	
Sand and gravel, fine-----	1	51	
Softpan, gray-----	34	85	
Wash-----	14	99	
Pennsylvanian system:			
Lower series:			
Shale, sandy, hard, light-----	1	100	
Sandstone, white-----	16	116	W.B.
Shale, white-----	4	120	
Shale, sandy, blue-----	4	124	

Well 13/7W-26R1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	5	25	
Pennsylvanian system:			
Middle series:			
Sandstone-----	25	50	
Lower series:			
Shale, gray-----	2	52	
Coal-----	2	54	
Clay-----	2	56	
Shale, sandy, gray-----	14	70	
Coal-----	2	72	
Clay-----	2	74	
Shale, sandy, gray-----	1	75	
Sandstone-----	20	95	
Shale, sandy, gray-----	19	114	
Coal-----	4	118	
Clay-----	1	119	
Sandstone-----	47	166	W.B.
Shale, gray-----	8	174	
Shale, sandy, gray-----	4	178	
Sandstone-----	3	181	

Well 13/7W-27F1

Type of record: Driller's log. Altitude: About 575 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	24	24	
Pan, soft, gray-----	16	40	
Black formation, soft, smooth---	1	41	Clay (?)

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

Well 13/7W-27F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, soft, light-----	5	46	
Shale, sandy, hard, dark-----	14	60	
Coal, hard, black-----	3.5	63.5	
Shale, hard, gray-----	5.5	69	
Shale, sandy, hard, dark-----	14	83	
Sandstone, hard, dark-----	17	100	W.B.
Sandstone, hard, light-----	16	116	W.B.

Well 13/7W-27G1

Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Hardpan, soft, yellow-----	80	80	
Sand, light-----	3	83	W.B.
Gravel-----	2	85	W.B.

Well 13/7W-27G2

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay, soft, yellow----	18	18	
Hardpan, gray-----	26	44	
Softpan, gray-----	20	64	
Sand, fine, dark-----	10	74	W.B.
Sand, fine gray-----	11	85	W.B.
Gravel, coarse, gray-----	5	90	W.B.

Well 13/7W-27H1

Type of record: Driller's log.		Altitude: About 630 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan, sandy-----	10	27	
Sand-----	4	31	
Hardpan-----	45	76	
Gravel-----	6	82	W.B.

Well 13/7W-27R1

Type of record: Driller's log.		Altitude: About 630 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Hardpan-----	10	10	
Hardpan-----	100	110	
Sand, fine, dirty, and wash----	15	125	

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

Well 13/7W-27R1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Sandstone, light-gray-----	75	200	W.B.
Shale, sandy, blue-----	2	202	

Well 13/7W-28D1

Type of record: Driller's log.		Altitude: About 605 feet.		
Quaternary system:				
Recent and Pleistocene series:				
Dug well-----	37	37		
Hardpan-----	53	90		
Pennsylvanian system:				
Middle series:				
Sandstone-----	8	98		
Lower series:				
Shale, dark-gray-----	7	105		
Coal-----	5	110		

Well 13/7W-28N1

Type of record: Driller's log.		Altitude: About 605 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	W.B.
Hardpan, gray-----	24	40	
Softpan, dark-----	54	94	
Sand and gravel-----	5	99	

Well 13/7W-28Q1

Type of record: Driller's log.		Altitude: About 600 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	26.5	26.5	
Hardpan-----	58.5	85	
Softpan-----	11	96	
Pennsylvanian system:			
Lower series:			
Shale, light-gray-----	6	102	W.B.
Shale, dark-gray-----	15	117	
Sandstone, light-----	73	190	
Sandstone, dark-gray-----	9	199	
Sandstone, light-gray-----	21	220	

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

Well 13/7W-34H1

Type of record: Driller's log. Altitude: About 625 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	28	28	
Muck, soft, gray-----	21.5	49.5	
Gravel-----	.5	50	W.B.

Well 13/7W-34H2

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dug well-----	35	35	
Drift, yellow-----	17	52	
Pan-----	16	68	
Pennsylvanian system:			
Middle? series:			
Shale, sandy, gray-----	15	83	
Sandstone-----	2	85	
Lower? series:			
Shale, sandy, gray-----	25	110	
Shale, gray-----	4	114	
Coal-----	2	116	
Clay-----	1	117	
Shale, gray-----	3	120	
Shale, sandy, gray-----	4	124	
Sandstone-----	86	210	W.B.
Shale, gray-----	5	215	

Well 13/7W-34J1

Type of record: Driller's log. Altitude: About 635 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Hardpan, gray-----	32	50	
Pennsylvanian system:			
Middle? series:			
Slate, light-blue-----	10	60	
Slate, sandy, gray-----	28	88	
Lower series:			
Coal-----	2	90	
Fire clay?-----	5	95	
Shale, light-blue-----	5	100	
Clay, white-----	3	103	
Shale, sandy, gray-----	37	140	
Sandstone, gray-----	20	160	W.B.

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

Well 13/7W-34K1

Type of record: Driller's log. Altitude: About 620 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Pan-----	34	54	
Pennsylvanian system:			
Middle series:			
White top-----	6	60	
Shale, dark-gray-----	5	65	
Sandstone-----	1	66	
Lower series:			
Shale, dark-gray-----	18	84	
Shale, gray-----	13	97	
Coal-----	2	99	
Clay-----	2	101	
Shale, sandy-----	14	115	
Sandstone-----	20	135	
Shale, sandy-----	30	165	
Sandstone-----	25	190	W.B.

Well 13/7W-34R1

Type of record: Driller's log. Altitude: About 640 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	16	16	
Hardpan-----	24	40	
Pennsylvanian system:			
Middle series:			
Shale, gray-----	1	41	
Sandstone-----	13	54	W.B.
Shale, gray-----	1	55	
Sandstone-----	20	75	W.B.
Lower? series:			
Shale, sandy, gray-----	2	77	

Well 13/7W-35B1

Type of record: Driller's log. Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan, gray-----	14	34	
Pennsylvanian system:			
Middle? series:			
Sandstone, pasty, light-----	21	55	
Lower series:			
Coal, trace-----	--	55	
Slate, gray-----	4	59	

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

Well 13/7W-35B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Coal-----	3	62	
Fire clay, soft-----	3	65	
Slate, sandy, gray-----	19	84	
Coal, trace-----	--	84	W.B.
Fire clay, soft-----	6	90	
Shale, gray-----	1	91	

Well 13/7W-35C1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan-----	15	35	
Sand-----	10	45	
Softpan-----	3	48	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	10	58	
Coal-----	1	59	
Clay-----	4	63	
Shale, sandy, gray-----	21	84	
Coal-----	1	85	W.B.

Well 13/7W-35C2

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Softpan-----	15	35	
Sand-----	10	45	
Softpan-----	6	51	
Pennsylvanian system:			
Lower series:			
Coal-----	1	52	
Clay-----	4	56	
Shale, sandy, gray-----	7	63	
Coal-----	1	64	
Clay-----	2	66	
Shale, sandy, gray-----	29	95	
Sandstone-----	25	120	W.B.

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

Well 13/7W-35C3

Type of record: Driller's log.

Altitude: About 635 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	W.B.
Hardpan-----	9	24	
Sand and gravel-----	1	25	
Hardpan, gray-----	23	48	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	10	58	

Well 13/7W-35C4

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	17	17	
Hardpan-----	18	35	
Sand, dirty-----	2	37	
Hardpan, gray-----	14	51	
Pennsylvanian system:			
Lower series:			
Slate, gray-----	7	58	W.B.
Fire clay-----	5	63	
Slate, dark-gray-----	5	68	
Slate, gray-----	10	78	
Fire clay, hard-----	3	81	
Shale, sandy, gray-----	11	92	
Shale, dark-gray-----	11	103	
Shale, sandy, gray-----	5	108	
Slate, dark-----	4	112	
Coal, trace-----	--	112	
Fire clay, hard-----	2	114	
Shale, sandy, gray-----	12	126	
Sandstone, hard, gray-----	10	136	
Sandstone, white-----	10	146	
Sandstone, blue-----	10	156	
Shale, sandy, blue-----	4	160	

Well 13/7W-35E1

Type of record: Driller's log.

Altitude: About 600 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	4	4	
Sand, red-----	23	27	
Pennsylvanian system:			
Lower series:			
Shale-----	23	50	W.B.
Coal-----	3	53	

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

Well 13/7W-35E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Fire clay-----	13	66	
Shale, black-----	9	75	

Well 13/7W-35H1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	13	13	
Hardpan, gray-----	29	42	
Clay-----	4	46	
Pennsylvanian system:			
Lower series:			
Shale, sandy, white-----	19	65	
Slate, sandy, gray-----	20	85	
Coal-----	2	87	
Fire clay-----	6	93	
Shale, sandy, light-----	3	96	
Shale, sandy, blue-----	7	103	
Shale, blue-----	4	107	
Shale, sandy, light-blue-----	3	110	
Shale, sandy, blue-----	17	127	
Shale, sandy, light-blue-----	13	140	
Sandstone, very-hard-----	--	140	
Sandstone, gray-----	16	156	
Shale, dark-blue-----	24	180	
Shale, sandy, dark-blue-----	30	210	
Shale, dark-blue-----	14	224	
Sandstone, blue-----	53	277	W.B.

Well 13/7W-35R1

Type of record: Driller's log.

Altitude: About 630 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	15	15	
Sand and gravel, dirty, yellow-	14	29	
Softpan, dark-----	9	38	
Pennsylvanian system:			
Lower series:			
Fire clay-----	6	44	
Limestone, hard, trace-----	--	44	
Slate, blue-----	26	70	
Fire clay-----	3	73	
Slate, gray-----	51	124	
Coal, trace-----	--	124	
Fire clay-----	3	127	

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

Well 13/7W-35R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Shale, gray-----	4	131	
Shale, sandy, blue-----	9	140	
Shale, sandy, light-----	10	150	
Shale, blue-----	4	154	
Coal, trace-----	--	154	
Fire clay-----	5	159	
Shale, sandy, gray-----	10	169	
Shale, sandy, blue-----	5	174	
Sandstone, pasty-----	5	179	
Shale, dark-blue-----	77	256	
Shale, sandy, blue-----	16	272	
Sandstone, blue-----	5	277	W.B.
Sandstone, dark-----	3	280	W.B.

Well 13/7W-35R3

Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Record missing-----	10	10	
Sand and gravel-----	13	23	
Pan and gravel-----	3	26	
Sand-----	1.5	27.5	W.B.
Sand and gravel-----	12.5	40	W.B.
Hardpan-----	14	54	
Pennsylvanian system:			
Lower series:			
Shale, sandy, gray-----	38	92	
Coal-----	2.5	94.5	
Shale, sandy, light-----	7.5	102	

Well 13/7W-35R5

Type of record: Driller's log.		Altitude: About 620 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	10	10	
Sand and gravel, yellow-----	9	19	
Softpan, gray-----	1	20	
Sand and gravel, gray-----	2	22	W.B.
Sand, fine, gray-----	2	24	W.B.
Gravel, gray-----	9	33	W.B.
Hardpan, gray-----	15	48	
Pennsylvanian system:			
Lower series:			
Slate, gray-----	42	90	
Coal-----	1	91	
Fire clay, sandy, hard-----	9	100	

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

Well 13/7W-36N2

Type of record: Driller's log.

Altitude: About 625 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	19	19	
Gravel, yellow-----	12	31	
Hardpan-----	6	37	
Gravel, gray-----	17	54	W.B.
Softpan-----	6	60	
Pennsylvanian system:			
Lower series:			
Fire clay-----	5	65	
Slate, blue-----	65	120	

Well 13/7W-36N5

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface; clay-----	15	15	
Softpan-----	3	18	
Sand and muck, dirty-----	3	21	
Sand, yellow, and fine gravel--	13	34	W.B.
Sand, fine, yellow-----	2	36	W.B.
Sand, fine, gray-----	2	38	W.B.
Gravel, gray-----	13	51	W.B.
Hardpan, gray-----	.5	51.5	
Sand, fine, dirty-----	6.5	58	
Softpan, gray-----	2	60	
Pennsylvanian system:			
Lower series:			
Slate, blue-----	8	68	
Slate, gray-----	31	99	
Coal-----	1	100	
Clay-----	2	102	
Shale, blue-----	31	133	

Well 13/7W-36N6

Type of record: Driller's log.

Altitude: About 630 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface-----	19	19	
Sand and gravel, dirty, yellow-	10	29	
Sand and gravel, yellow-----	8	37	W.B.
Sand and gravel, gray-----	4	41	W.B.
Sand-----	2	43	W.B.
Sand and gravel, gray-----	7	50	W.B.
Sand-----	2.5	52.5	W.B.
Sand and gravel, gray-----	1.5	54	W.B.
Hardpan-----	6	60	

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

Well 13/7W-36N6--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Pennsylvanian system:			
Lower series:			
Slate, dark-blue-----	8	68	
Coal, trace-----	--	68	
Fire clay-----	3	71	
Slate, sandy, gray-----	27	98	
Coal-----	1	99	
Fire clay-----	3	102	
Shale, sandy, light-----	15	117	
Slate, blue-----	18	135	

Well 13/7W-36N7

Type of record: Driller's log.

Altitude: About 620 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	18	18	
Sand-----	8	26	W.B.
Sand and gravel-----	6	32	W.B.
Softpan-----	8	40	
Pennsylvanian system:			
Lower series:			
Slate, dark-blue-----	3	43	
Coal-----	1.5	44.5	
Fire clay-----	5.5	50	
Sandstone, white-----	2	52	
Shale, gray-----	20	72	
Slate, gray-----	13	85	
Coal-----	2	87	
Fire clay-----	3	90	

Table 3.--Field chemical analyses of water from wells, Clay County, Indiana
(Results in parts per million)

Well number: See text for description of well-numbering system.

Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian.

Material: C, coal; F, fire clay; G, gravel; Ls, limestone; S, sand; Sd-sh, sandy shale; Sh, shale; Ss, sandstone.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as CaCO ₃	Remarks
9/6W- 4E1	Ss	P	12-30-59	--	0.1	268	110	70	524	
4R1	Ss	P	12- 9-59	55	.3	605	12	6	18	
5J1	-----	P	3-25-58	--	.3	312	-----	72	302	
6F1	C	P	12- 9-59	54	.3	537	9	8	8	
9J1	Ss	P	12-30-59	--	.1	1,370	13	2,540	36	
17N1	-----	P	12- 9-59	--	.3	737	90	444	10	
18G1	Sd-sh	P	1- 4-60	--	.3	517	6	4	212	
18L1	Ss	P	12- 9-59	53	.1	512	8	4	62	
20C1	Ss	P	3-25-58	--	.1	586	-----	154	4	
20D1	Ss	P	12- 9-59	52	.3	1,240	13	34	2	
21K2	C	P	12-30-59	--	1.0	542	7	16	8	
21R1	C,Sh	P	8- 5-59	65	.5	532	15	25	2	
22M1	-----	P	12- 9-59	54	.5	468	10	8	156	
31D1	G	P1	12- 9-59	--	7.5+	356	16	4	240	
9/7W- 1D1	Sd-sh	P	12-29-59	--	2.0	439	10	10	276	
	Ss									
1E1	Ss	P	12-29-59	52	.1	488	12	12	112	
5A1	Sh,Ls	P	12-30-59	54	2.0	371	8	4	100	
6C1	Sh	P	6-25-59	--	5.0	532	1,250	34	1,616	Shale now cased out
6C1	Ss	P	12- 9-59	--	.3	434	520	10	784	
6G1	Ss	P	6-25-59	--	7.5+	449	430	8	676	Iron bacteria
7C1	Ss	P	12-29-59	--	2.5	532	90	8	388	
8L1	C	P	3-25-58	56	7.5	0	-----	22	192	High sulfate
14Q2	S,G	P1	5- 7-57	54	1.0	329	-----	6	296	
28H1	Ss	P	12-29-59	54	.1	283	64	66	288	
30F1	Ss	P	12-29-59	--	1.0	449	270	50	548	
31R1	Ss,Sh	P	3-58	--	.5	337	-----	54	436	
35E1	-----	P	4- 4-60	53	.1	871	7	212	12	
35K1	Ss	P	12-29-59	--	.3	327	115	82	464	
36E1	-----	P	12-29-59	--	.1	996	10	76	4	
36L1	Ss	P	5- 7-57	--	1.0	1,560	-----	1,316	20	
36M1	-----	P	12-29-59	--	.3	1,620	12	876	12	
10/6W- 3M1	S,G	P1	4-29-58	57	5.0	356	-----	4	236	
6C1	G	P1	3-26-58	52	.5	376	-----	18	208	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic Age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
10/6W- 6N1	Ss	P	12-29-59	56	3.0	464	11	150	108	
10E1	-----	M	3-26-58	50	3.0	410	-----	14	160	
16F1	Ss	P	8-20-59	60	.5	922	18	158	32	
16G1	Ss	P	12-10-59	--	.5	542	12	14	19	
16J1	Ss	P	12-29-59	51	.1	639	11	6	12	
20H1	-----	P	3-26-58	--	.1	791	-----	32	24	
20P1	-----	P	12-30-59	54	3.0	503	28	30	380	
21L1	Ss	P	12-30-59	--	.3	834	11	32	20	
22E1	C	P	12-29-59	50	.1	595	12	8	38	
22H1	S	P1	1- 6-60	46	.1	224	43	20	184	
22H2	Ss	P	1- 6-60	52	.1	464	27	10	116	
22L1	-----	P	1- 6-60	50	7.5+	493	11	16	312	
28A1	Ss	P	12-30-59	--	.1	815	10	26	8	
29C1	Ss	P	12-30-59	--	.1	637	10	26	24	
29N2	Ss	P	4-29-58	58	.3	595	-----	6	8	
30B3	-----	P	12-30-59	--	.1	693	10	24	8	
30D1	Sd-sh	P	1- 4-60	54	.5	444	10	12	188	
30D2	Sd-sh	P	12-30-59	54	.1	1,090	10	228	8	
30G2	-----	P	12-10-59	--	.1	1,220	12	96	6	
31C1	C,Ss	P	12-30-59	--	.5	478	25	6	20	
31F1	-----	P	6-28-60	57	.3	190	10	86	16	
31K1	Sh	P	12-30-59	--	.1	449	11	2	224	
31L1	-----	P	12-30-59	--	.1	415	18	8	68	
31P1	Ss	P	4- 4-60	--	.1	586	8	8	6	
32K1	Ss	P	4- 4-60	--	.1	508	38	18	216	
10/7W- 1D2	Ss	P	4-29-58	56	.3	644	-----	10	12	
1J1	G	P	1- 4-60	57	.3	288	86	50	336	
3A1	Ss	P	12-29-59	56	.5	405	10	6	180	
5B1	Ss	P	12-10-59	--	.3	454	59	6	356	
5J1	-----	P	1- 4-60	54	.1	346	47	12	260	
8A1	Ss	P	12-29-59	52	.5	439	47	6	288	
11A1	G	P1	3-26-58	--	1.0	171	-----	116	252	
12B2	S,G	P1	3-27-58	--	7.5	122	-----	158	270	
17Q1	Ss	P	12-29-59	52	.3	615	14	24	88	
20M1	Sd-sh Ss	P	12-10-59	--	.1	503	10	50	132	
20M2	Ss	P	12-29-59	52	7.5+	215	115	16	184	
20N1	-----	P	12-29-59	54	1.0	459	18	6	332	
24H1	C	P	12-10-59	--	1.5	551	13	14	76	
24K1	-----	P	12-29-59	--	.1	264	125	64	436	
24R1	Sd-sh	P	12-10-59	--	.3	371	12	8	176	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
10/7W-25H1	-----	P	12-10-59	55	1.0	517	11	4	96	
25K1	-----	P	12-10-59	56	1.0	429	12	2	284	
25M1	-----	P	1- 7-60	48	.3	293	8	2	64	
25R1	-----	P	4- 4-60	--	.1	605	10	14	32	
27E1	S,G	P1	12-10-59	--	7.5	381	11	84	336	
32G1	Ss	P	-----	--	.3	132	-----	128	72	
36P1	C	P	12-29-59	54	.3	371	13	4	260	
11/5W-3G1	Ss	P	1-26-60	--	.3	444	100	10	376	
4N1	Ss	P	3-27-58	--	1.5	346	-----	6	104	
4R1	Ss	P	1-26-60	--	7.5	283	225	14	400	
5A1	G	P	3-27-58	--	1.0	395	-----	22	272	
6C1	Ss	P	1-27-60	--	1.5	195	710	10	676	
9A1	Ss	P	3-27-58	--	.0	249	-----	24	168	
17R1	-----	P	1-26-60	--	7.5	390	33	6	184	
18R1	-----	P	1-26-60	--	.1	288	80	12	236	
19D1	Ss	P	1-26-60	--	.3	98	34	26	84	
19D2	Ss	P	1-26-60	--	5.0+	190	80	56	204	
19D3	Ss	P	1-26-60	--	.3	83	86	110	192	
19D4	-----	P	1-26-60	--	.5	151	75	64	168	
19F1	Ls(?)	M	1-26-60	--	.1	722	21	58	16	
19F2	-----	P	1-26-60	--	.1	93	55	12	64	
19H1	Ss	P	3-27-58	--	.1	98	-----	216	300	
19L1	Ss	P	1-26-60	--	.3	137	220	20	224	
20M1	Ss	P	4- 1-58	--	.5	590	-----	18	480	
28C1	Ss	P	4- 1-58	--	7.5	268	-----	14	300	
28H1	-----	-----	3-29-60	54	.5	473	38	8	200	
30A1	Ss	P	1-26-60	--	.1	371	16	12	244	
30B1	Ss	P	4-29-58	55	7.5+	454	-----	22	296	
30F1	Ss	P	1-26-60	--	.1	312	56	48	356	
30M1	Ss	P	1-26-60	--	.1	356	18	6	76	
31N1	-----	P	10-16-59	56	1.0	59	175	26	152	
11/6W-1D1	S	P1	1- 6-60	50	3.0	439	12	14	240	
2B1	Ss	P	1- 6-60	54	3.0	425	12	6	180	
2P1	Ss	P	1- 6-60	--	.1	508	32	8	24	Water sample from upper aquifer
4Q1	-----	-----	1- 6-60	--	.1	1,250	12	84	8	
4R1	-----	P	4- 1-58	--	.5	508	-----	4	160	
6H1	Ss	P	1- 6-60	--	.1	249	73	28	236	
7B1	Ss	P	4- 5-60	--	.3	444	10	8	144	
7K1	Ss	M(?)	4- 2-58	56	.1	1,350	-----	528	18	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic Age	Date of Collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
11/6W- 7L1	Ss	P	4- 1-58	--	0.1	795	-----	10	4	
8P1	-----	P	4- 2-58	--	.5	346	-----	144	428	
9C1	Ss	M(?)	1- 6-60	54	.1	1,450	20	168	8	
10E1	Ss	P	4- 1-58	--	.0	454	-----	120	336	
11B1	Ss	P	1- 6-60	--	2.5	454	110	10	372	
13G1	Ss	P	4- 2-58	--	1.0	503	-----	4	104	
14G1	-----	M(?)	1- 6-60	--	.1	473	34	6	136	
14Q1	Ss	P	1- 7-60	--	.1	220	42	18	212	
15D1	Ss	P	1- 6-60	--	.1	810	50	18	32	
17C1	-----	P	4- 2-58	--	.5	547	-----	10	28	
17C3	Ss	P	1- 7-60	--	.1	1,260	10	412	8	
17E1	Ss	P	1- 7-60	--	.1	322	95	20	348	
19A2	Ss	P	4- 2-58	--	1.0	468	-----	6	136	
19B1	Ss	P	4- 5-60	56	.3	561	10	8	60	
20P1	S	P1	4- 2-58	--	.1	508	-----	16	348	
21P3	S,G	P1	5- 7-57	55	1.0	420	-----	16	304	
22H1	Ss	P	1- 7-60	--	2.0	410	58	20	252	
23P1	-----	P	1- 6-60	--	.1	68	26	28	80	
27G1	-----	P	4- 2-58	--	.3	366	-----	12	202	
29M1	Ss	P	1- 6-60	--	.3	429	7	14	180	
31P1	S,G	P1	1- 7-60	50	5.0	356	18	6	248	
32B1	S,G Ss	P1	1- 7-60	--	3.0	434	13	12	244	
35F1	Ss	P	4- 2-58	--	.3	195	-----	13	128	
35N1	Ss	P	1- 7-60	49	.1	171	12	8	80	
36J1	-----	P	4-29-58	56	3.0	537	-----	24	580	
11/7W- 2H1	Ss	P	6-12-58	59	.5	595	-----	2	45	
3A1	Ss	P	6-12-58	56	.0	917	-----	24	18	
3D1	Ss	P	6-12-58	56	.5	595	-----	6	116	
4M1	-----	P	6-12-58	54	.3	459	-----	10	224	
5M1	Ss	P	6-12-58	--	.1	390	-----	76	390	
5Q1	-----	P	6-12-58	58	.5	444	-----	4	92	
7H1	-----	P	6-12-58	60	.5	444	-----	8	260	
7L1	Ss	P	6-12-58	59	.0	478	-----	38	432	
7N1	Ss	P	4- 5-60	52	1.5	303	170	48	328	
8B2	G	P1	1- 5-60	--	.1	390	30	18	312	
9J1	S	P1	6-12-58	58	1.0	483	-----	8	192	
10C1	C,Sh	P	1- 5-60	54	.1	473	9	4	112	
11A1	-----	P	6-12-58	59	.5	517	-----	4	288	
11M1	S,G	P1	6-12-58	--	1.0	532	-----	8	344	
12C1	Ss	P	1- 5-60	55	1.0	464	7	4	264	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic Age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
11/7W-12N1	-----	P	6-12-58	58	0.3	483	-----	24	256	
15P1	Ls	P	1- 5-60	--	1.5	468	12	6	212	
15Q1	S,G	P1	6-12-58	--	1.5	488	-----	6	264	
16C1	Ss	P	6-12-58	60	.1	610	-----	36	48	
16G1	G,S	P1	6-12-58	62	.5	415	-----	4	188	
17H1	F,C	P	1- 5-60	54	.1	585	7	6	256	
17Q1	Ss	P	1- 5-60	--	.1	439	7	4	280	
17R1	Ss	P	6-12-58	59	.0	508	-----	12	332	
18N1	C,Ss	P	6-12-58	60	.1	566	-----	4	40	
18Q1	Ss	P	6-12-58	--	.5	439	-----	4	300	
19D1	Ss	P	6-12-58	--	.1	356	-----	76	580	
19D2	Ss	P	6-12-58	--	.1	547	-----	16	40	
19R1	Ss	P	1- 5-60	--	.1	400	7	2	128	
20E1	Sh	P	7- 9-58	58	.1	468	-----	6	24	
20G1	Ss	P	1- 5-60	--	.1	434	11	4	268	
20K2	C,Ss	P	1- 5-60	--	.5	371	83	8	312	
21B1	Ss	P	7- 9-58	58	.0	444	-----	12	232	
21N1	Ss	P	7- 9-58	58	.3	98	-----	204	295	
23B1	S,G	P1	1- 5-60	--	2.0	425	8	4	284	
23N1	Ss	P	4-30-58	57	.3	439	-----	14	316	
25G1	C	P	1- 5-60	--	1.0	459	7	6	92	
26N1	C	P	4-30-58	54	.0	464	-----	4	52	
26P1	G	P1	1- 5-60	52	.3	439	66	8	352	
27C1	C,Sh	P	1- 5-60	56	1.5	200	17	22	148	
27D1	S,G	P1	1- 5-60	--	.3	464	10	14	324	
28Q1	Ss	P	4-30-58	52	2.0	464	-----	4	360	
29D1	-----	P	4-30-58	57	.1	234	-----	16	240	
29H1	Ss	P	4- 5-60	--	.5	425	41	8	336	
32A1	Ss	P	4-30-58	--	.0	327	-----	4	208	
32H1	Ss	P	4-30-58	57	.0	190	-----	46	300	
35B1	S,G	P1	4-30-58	50	2.5	532	-----	24	424	
35M2	Ss	P	4-30-58	57	.1	429	-----	24	404	
36B1	C	P	4-30-58	52	.5	693	-----	6	156	
12/5W-20H1	Ls	M	7- 9-58	60	3.0	229	-----	2	156	
20N1	-----	P	7- 9-58	58	7.5+	93	-----	62	632	
21L1	-----	P(?)	1-26-60	--	.3	337	13	6	220	
28L1	S,G	P1	7- 9-58	58	1.0	386	-----	0	228	
28P1	G	P1	1-26-60	--	.3	322	24	4	236	
30J1	Ss	P	1-26-60	--	.5	429	13	6	240	
31F1	Ss	P	7- 9-58	60	7.5+	220	-----	22	440	
32J1	Ss	P	3-28-60	52	4.0	390	5	8	264	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
12/5W-33R1	-----	P	7- 9-58	60	1.0	44	-----	122	110	
34B1	G	P1	4-29-58	53	1.5	342	-----	1	236	
34B3	G	P1	1-26-60	--	2.5	303	20	4	228	
34C1	Sh	P	1-26-60	--	.1	307	14	6	192	
12/6W-1Q1	S,G	P1	7-23-57	63	1.0	222	-----	2	194	
2N1	-----	P	8- 6-58	60	.3	649	-----	20	92	
3N1	Ss	P	8- 6-58	--	.3	410	-----	3	4	
5C1	C	P	10-22-58	--	.0	664	-----	18	16	
5D1	Ss	P	8- 6-58	60	1.0	434	-----	2	92	
6A1	Ss	P	1-28-60	--	.3	429	11	4	100	
7D2	-----	P	1-28-60	--	.1	898	9	10	7	
7F1	Ss	P	8- 6-58	58	.5	473	-----	24	480	
8N1	Ss	P	1-28-60	--	.1	498	13	6	30	
8P1	Ss	P	1-20-60	--	.1	439	10	6	144	
9D1	Ss	P	1-28-60	--	.1	468	13	16	84	
9E1	Ss	P	1-28-60	--	.1	659	33	12	28	
12B1	Ss	M(?)	8- 6-58	--	.1	307	-----	8	272	
12J1	-----	M(?)	1-27-60	--	.3	405	18	8	272	
13D1	-----	P	7-10-58	60	.3	420	-----	8	244	
13E1	Ss	P	1-27-60	--	.1	1,600	11	488	22	
14D1	-----	P	4-18-60	54	.5	444	100	10	300	
15A1	-----	P	1-27-60	--	2.5	478	185	10	404	
16D1	S,G	P1	7-10-58	60	2.0	478	-----	8	248	
16J1	Ss	P	7-10-58	56	.0	996	-----	56	0	
17N1	Ss	P	8- 6-58	59	.1	551	-----	3	100	
17N2	Ss	P	1-27-60	--	.5	468	11	6	92	
18H1	Ss	P	1-28-60	--	.1	307	200	28	364	
18P1	Ss	P	8- 6-58	59	3.0	415	-----	46	484	
18Q1	Sd-sh	P	4- 5-60	--	.3	566	310	6	148	
20B1	Ss	P	7-10-58	58	.1	468	-----	4	216	
22B1	C	P	1-27-60	--	.1	342	275	184	516	
22M1	C	P	7-10-58	60	2.0	483	-----	6	260	
23C1	Ls	M(?)	7-10-58	58	3.0	473	-----	52	400	
23P1	-----	P	7-10-58	60	.1	581	-----	26	48	
27R1	-----	P	1-28-60	--	.3	493	12	56	68	
29B1	Ss	P	7-10-58	58	3.0	464	-----	8	272	
30E1	Ss	P	1-28-60	--	.1	420	21	6	240	
30Q1	Ss	P	1-28-60	--	.3	449	12	6	284	
31M1	Ss	P	7-10-58	--	1.0	478	-----	4	232	
31Q1	Sd-sh	P	7-10-58	--	.5	478	-----	12	212	
32R1	Ss	P	7-10-58	60	.0	615	-----	4	48	
33B1	Ss	P	7-10-58	--	.1	356	-----	114	84	
33J1	Ss	P	6-28-60	--	.1	151	85	18	128	
34P1	Ss	P	7-10-58	58	.0	620	-----	42	0	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
12/6W-34Q1	Ss	P	1-28-60	--	0.3	542	35	8	22	
12/7W- 1D1	Sd-sh Ss	P	6-29-60	--	.3	664	7	12	4	
1J1	Sd-sh	P	2-28-57	59	.3	512	-----	3	302	
2F1	Sd-sh Ss	P	8-28-57	59	.3	581	-----	1	34	
2G5	-----	P	1-28-60	--	.1	771	13	8	4	
3A2	Sd-sh Ss	P	-----	58	---	625	-----	14	102	
3A3	Ss	P	4- 6-60	56	1.0	298	15	14	224	
3L2	Ss	P	8-28-57	62	.2	822	-----	8	6	
3N3	-----	P	9-24-58	--	.1	566	-----	16	40	
3R1	Ss	P	8-28-57	59	.3	705	-----	8	6	
4J4	S,G	P1	8-27-57	62	.5	300	-----	22	331	
4J5	S,G	P1	9-23-58	--	.3	312	-----	26	316	
4K1	S,G	P1	8-27-57	59	.5	200	-----	3	212	
4Q1	Ss	P	8-20-58	59	.5	561	-----	12	26	
4Q2	-----	P	9-24-58	--	.5	869	-----	176	8	
4Q3	-----	P	8-27-57	59	.3	183	-----	6	210	
4R2	S,G	P1	9-29-58	--	.5	73	-----	146	308	
4R3	-----	P	8-27-57	58	4.5	266	-----	16	209	
5Q1	S,G	P1	9-29-58	--	.3	303	-----	24	344	
5R1	S,G	P1	9-24-58	--	.1	342	-----	14	320	
6E1	G	P1	9-29-58	--	3.0	395	-----	12	284	
6E2	G	P1	8-28-57	62	3.0	344	-----	4	270	
6F1	C	P	7-28-57	62	.2	217	-----	4	214	
6G1	Sd-sh	P	9-24-58	--	.1	224	-----	4	160	
6Q1	Ss	P	9-24-58	--	.1	556	-----	12	114	
7F2	C	P	8-29-57	62	.3	307	-----	4	290	
7F7	S,G	P	8-28-57	62	3.5	327	-----	4	272	
7K1	Ss	P	8-29-57	58	.3	637	-----	42	4	
7Q1	-----	P	4- 6-60	--	.1	410	8	6	32	
8A1	-----	P	9-25-58	56	.1	449	-----	4	188	
8D1	S,G	P1	8-30-57	60	.3	354	-----	50	576	
8D2	S,G	P1	4-22-59	54	.3	268	130	10	300	
8D4	S,G Ss	P1 P	6-28-60	57	1.5	288	24	4	184	
12A2	Sd-sh	P	9-25-58	--	.1	874	-----	6	10	
12H2	Sd-sh Ss	P P	1-28-60	--	1.0	498	355	8	196	
12J3	Ss	P	1- 7-60	--	.1	727	10	6	14	
13A1	Ss	P	9-25-58	--	.3	312	-----	12	292	
13A2	-----	P	4- 6-60	51	.1	654	7	6	6	
13C1	Sd-sh	P	9-25-58	--	.1	875	-----	18	52	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
12/7W-14D1	F	P	4- 6-60	--	0.3	605	8	10	18	
14R1	-----	P	9-25-58	--	.1	742	-----	4	312	
16F1	C	P	9-29-58	--	.3	498	-----	8	116	
16K2	C	P	9-29-58	--	.1	560	-----	12	16	
19C1	-----	P	9-29-58	--	.3	688	-----	14	46	
19R1	S,G	P1	9-29-58	--	.5	556	-----	18	388	
22L1	C	P	4- 6-60	--	1.0	439	80	6	220	
22L2	S,G C	P1 P	4- 6-60	--	.3	478	10	6	96	
24J1	-----	P	9-29-58	56	.1	493	-----	6	44	
25L1	S,G	P1	9-29-58	--	1.0	449	-----	4	256	
27J1	-----	P	9-29-58	--	.1	468	-----	4	288	
27R1	Ss	P	9-29-58	--	.1	1,040	-----	296	8	
29C1	C	P	4- 6-60	--	.2	493	37	28	396	
29E1	Sh	P	9-29-58	--	.3	434	-----	8	272	
30D1	S,G	P1	9-29-58	58	.1	259	-----	14	216	
30M1	S,G	P	4- 6-60	--	1.0	429	10	8	212	
30R1	Ls	P	9-29-58	--	.0	517	-----	6	36	
31B1	-----	P	9-29-58	--	.1	595	-----	8	44	
31B2	S,G	P1	4- 6-60	--	.3	312	13	6	216	
32R1	-----	P	9-29-58	--	.1	464	-----	7	308	
33A1	-----	P	4- 6-60	57	.3	415	100	32	400	
33R1	Sh	P	9-29-58	--	.3	498	-----	10	340	
34C1	C	P	9-29-58	56	.1	517	-----	6	356	
34P1	Ss	P	4- 6-60	52	.3	727	8	20	18	
13/6W- 2E1	G	P1	9-30-58	--	.1	459	-----	15	264	
3A1	-----	-----	7-25-57	54	5.0	227	-----	6	188	
3D1	Ss	P	9-30-58	--	.1	434	-----	2	292	
4J1	Ss	P	9-30-58	--	.1	512	-----	4	72	
4R1	Sd-sh	P	8-27-57	54	7.5	317	-----	28	232	
5E1	Ss	P	9-22-59	--	.1	473	10	4	80	
5N1	Ss	P	11-21-58	--	.1	439	-----	2	144	
6A1	S,G	P1	9-30-58	56	2.0	493	-----	70	664	
6H1	Ss	P	4-17-58	57	.1	483	-----	2	52	
6J1	Ss	P	4-19-60	--	.1	581	10	6	18	
6P1	C	P	9-30-58	--	1.0	454	-----	14	304	
6R1	Ss	P	4-14-60	53	.3	454	10	6	144	
7C1	-----	P	4-14-60	50	.1	434	13	8	320	
7D1	Ss	P	4-14-60	52	.3	405	10	40	284	
7F1	Ss	P	4-14-60	50	3.0	386	10	22	296	
8D1	S,G	P1	4-14-60	52	2.0	244	95	20	248	
9A1	S,G	P1	4-14-60	53	.3	244	33	10	188	
12H1	Ss	P	4-14-60	53	.2	127	15	8	72	
14Q1	-----	P	7-25-57	61	.5	285	-----	5	246	
15J1	S,G	P1	4-14-60	--	3.0	439	9	10	312	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
13/6W-15N1	Ss	P	10-14-58	56	0.0	683	-----	4	64	
18R1	Ss	P	4-14-60	--	.3	678	10	10	10	
19H1	Ss	P	4-14-60	52	.2	747	18	90	6	
20B1	Ss	P	4-14-60	--	.3	834	20	18	6	
20D1	Ss	P	4-14-60	--	.3	161	210	50	268	
20P2	-----	P	4-14-60	--	.5	303	195	14	308	
22J1	-----	P	7-24-57	61	.1	261	-----	2	184	
22R1	-----	P	7-24-57	55	.1	439	-----	4	227	
23B1	Ss	P	4-14-60	54	.3	98	10	16	28	
23J1	-----	P	10-14-58	58	2.0	88	-----	12	84	
24R1	-----	P	7-22-57	56	4.5	154	-----	10	118	
25J1	-----	P	10-14-58	--	.1	322	-----	12	216	
26A1	Ss	P	7-22-57	55	7.5	224	-----	32	194	
26A3	Ss	P	10-14-58	56	.0	83	-----	6	24	
27M1	C	P	7-22-57	62	3.0	307	-----	1	215	
27M4	-----	P	7-22-57	56	.2	749	-----	16	8	
28D1	-----	P	7-22-57	--	.3	852	-----	16	5	
28H1	G	P1	7-22-57	57	.5	193	-----	12	216	
28J1	Sh	P	7-22-57	57	1.0	1,710	-----	168	15	
28N1	Sd-sh Ss	P	7-22-57	62	.8	412	-----	6	346	
28N2	S,G	P1	7-22-57	61	2.0	454	-----	8	448	
28P1	Ss	P	6- 3-58	58	.1	771	-----	4	2	
28P2	S,G	P1	7-23-57	58	1.5	366	-----	4	288	
28Q1	-----	P	7-23-57	62	.1	976	-----	50	13	
28Q2	Ss	P	7-23-57	62	2.0	395	-----	1	270	
28R2	Ss	P	4-14-60	--	.2	864	7	64	44	
29B1	C	P	4-14-60	--	.2	698	85	64	124	
29E1	-----	-----	10-22-58	58	7.5+	468	-----	6	540	Water from old mine
29E2	-----	P	6- 3-58	54	1.5	249	-----	12	188	
29E3	T	P1	6- 3-58	54	.1	395	-----	3	332	
29J1	C	P	7-26-57	58	3.0	251	-----	10	210	
30H2	Ss	P	4-19-60	--	.3	547	84	10	156	
30J1	S,G	P1	4-19-60	--	5.0	488	155	8	448	
30M1	Ss	P	8-27-57	61	.3	420	-----	12	140	
31P1	S,G	P1	4-19-60	--	1.0	307	95	14	296	
31R1	Ss	P	10-22-58	--	.2	654	-----	12	5	
32H1	Ss	P	7-24-57	63	.3	449	-----	4	29	
32J1	Ss	P	7-26-57	62	.5	583	-----	10	28	
32J3	Ss	P	7-22-57	62	.1	664	-----	11	7	
32J4	Ss	P	4-19-60	--	.1	610	8	12	6	
32N1	S,G	P1	4-19-60	--	3.0	478	10	8	320	
33H1	S,G	P1	1-23-57	62	2.0	373	-----	6	128	

Table 3.--Field chemical analyses of water from wells, Clay County, Ind.--Cont.

Well Number	Material	Geologic age	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as (CaCO ₃)	Remarks
13/6W-33H2	S,G	P1	4-14-60	--	0.5	307	63	24	252	
33N1	Ss	P	7-22-57	65	2.3	642	-----	12	394	
33Q1	Ss	P	1-28-60	--	1.0	439	12	6	292	
34N1	Ss	P	4-14-60	--	.5	410	9	8	232	
35Q1	Sd-sh	P	4-14-60	--	.3	351	9	44	192	
13/7W-1J1	Ss	P	4- 7-60	48	.1	395	8	6	260	
2N1	Ss	P	4- 7-60	--	.2	386	8	6	196	
2N2	Ss	P	10-23-58	56	1.0	473	-----	4	208	
3P1	Sd-sh	P	4- 7-60	--	3.0	386	135	10	224	
12A1	Ss	P	9-30-58	--	1.0	478	-----	4	300	
13P1	Ss	P	4- 7-60	50	.3	447	12	6	132	
15D1	Ls	P	4- 7-60	51	3.0	346	55	12	304	
15N1	C	P	7-22-57	56	7.5	547	-----	8	394	
16Q1	Ss	P	10-23-58	--	3.0	444	-----	16	176	
23C1	Ss	P	10-23-58	--	1.0	390	-----	4	236	
23H1	Ss	P	4- 7-60	--	.1	381	12	8	264	
26E1	S	P1	10-23-58	--	.1	337	-----	32	272	
26P1	Ss	P	10-23-58	--	.5	473	-----	4	160	
27F1	Ss	P	4- 7-60	--	.1	386	17	8	164	
27G1	S,G	P1	7-22-57	62	.1	346	-----	36	404	
27G2	S,G	P1	4- 7-60	--	1.0	351	22	14	276	
27R1	Ss	P	4- 7-60	--	.2	434	8	10	140	
28D1	-----	P	4- 7-60	54	.2	268	145	30	372	
28N1	S,G	P1	7-26-57	56	2.0	244	-----	0	185	
28Q1	Ss	P	4- 7-60	52	.3	381	13	142	160	
34J1	Ss	P	7-26-57	65	.1	378	-----	4	88	
35C1	C	P	10-23-58	--	.3	498	-----	4	232	
35H1	Ss	P	7-26-57	58	.1	590	-----	20	42	
35R1	Ss	P	8-28-57	58	.3	639	-----	8	2	
36N1	G	P1	10-23-58	--	.0	283	-----	28	372	

Table 4.--Records of springs, Clay County, Indiana

Flow: e, estimated.
 Use: N, not used; S, stock.
 Field chemical analyses: in parts per million; water samples collected on date of measurement.

Spring number: See text for well-numbering system.
 Altitude: Altitude of land-surface datum from topographic map.
 Water-bearing material: T, till; Ls, limestone; Ss, sandstone.
 Geologic age: Pl, Pleistocene; P, Pennsylvanian.

Spring	Owner	Altitude (feet)	Water-bearing material	Geologic age	Flow (gpm)	Date of measurement	Use	Temperature (F°)	Field chemical analyses				Remarks	
									Iron (Fe)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)		Hardness as CaCO ₃
13/6W-13H1	-----	645	T	P1	-----	9-14-60	N	59	0.2	244	13	8	192	Seep area at base of hill
36D1	E. Hoffman	640	Ss	P	-----	9-14-60	N	60	.8	1,176	40	32	344	Spring in bottom of small gully
36D2	---ditto---	645	Ss	P	1e	9-14-60	S	60	.8	107	10	8	48	Do
13/7W-10D1	-----	590	Ls	P	.5e	9-14-60	N	57	.3	298	65	10	316	Seep area near bottom of face in small unused quarry

Table 5.--Field chemical analyses of water from streams, Clay County, Indiana
(Results in part per million)

Name	Location	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as CaCO ₃	Remarks
T. 9 N., R. 6 W.									
Eel River White Oak Creek	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19	9-13-60	70	0.3	317	23	12	284	Sample taken at bridge on state road.
	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20	9-13-60	70	.2	376	490	10	792	Sample taken at bridge on county road.
T. 9 N., R. 7 W.									
Conneley Ditch	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13	9-13-60	78	.5	268	19	8	220	Do
T. 10 N., R. 6 W.									
---Do---	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18	9-13-60	75	.3	239	190	12	348	Sample taken at bridge on state road.
T. 10 N., R. 7 W.									
Eel River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17	9-13-60	71	.2	307	22	10	280	Sample taken at bridge on county road.
T. 11 N., R. 5 W.									
Jordan Creek Six Mile Creek	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18	9-13-60	67	.3	210	9	8	148	Do
	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31	9-13-60	64	.2	122	11	8	84	Do

Table 5.--Field chemical analyses of water from streams, Clay County, Indiana
(Results in part per million)

Name	Location	Date of collection	Temperature (F°)	Iron (Fe)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Hardness as CaCO ₃	Remarks
T. 11 N., R. 6 W.									
McIntyre Creek	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1	9-13-60	65	0.2	190	110	12	240	Sample taken at bridge on county road.
Birch Creek	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7	9-13-60	71	.3	317	185	36	396	Sample taken at bridge on state road.
Eel River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33	9-13-60	69	.2	322	18	16	284	Sample taken at bridge on county road.
T. 11 N., R. 7 W.									
Big Slough	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18	9-14-60	58	.2	215	12	30	164	Sample taken at bridge on state road.
Clear Branch	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33	9-13-60	68	.2	327	21	8	212	Sample taken at bridge on county road.
Birch Creek	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35	9-13-60	76	.2	268	185	28	352	Do
T. 12 N., R. 5 W.									
Eel River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29	9-13-60	68	.2	312	33	12	276	Sample taken at bridge on state road.
T. 12 N., R. 6 W.									
Croys Creek	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2	9-14-60	60	.2	220	11	8	172	Sample taken at bridge on county road.
Billy Creek	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2	9-14-60	60	.2	298	260	12	468	Do
East Fork	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17	9-13-60	66	.2	303	120	10	312	Do
Birch Creek	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18	9-13-60	65	1.0	454	89	76	352	Do

T. 12 N., R. 7 W.

Sulphur Creek	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4	9-14-60	58	7.5+	0	1,140	22	1,090	Sample taken at bridge on county road.
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T. 13 N., R. 6 W.

Croys Creek Otter Creek	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11	9-14-60	61	.2	293	15	10	232	Do
	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18	9-14-60	59	.3	215	495	10	712	Do

T. 13 N., R. 7 W.

North Branch Otter Creek Otter Creek	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3	9-14-60	58	.3	273	530	10	740	Do
	SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27	9-14-60	58	.3	215	415	14	532	Do

Table 6.--Water levels in observation wells in Clay County, Indiana
(In feet below land-surface datum.

Water level: e, estimated; h, tape measurement)

Clay 1. (9/7W-31E1). Shakamak State Park. Jasonville. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 9N., R. 7 W. Drilled unused artesian well in limestone, diameter 6 inches, reported depth 160 feet. Land-surface datum is 580.3 feet above msl. Highest water level is 26.75 below lsd, Feb. 1, 1939; lowest, 33.76 below lsd, Feb. 25, 1941. Records available 1936-1941.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1936		Oct. 19	27.65	Sept. 1	27.54	Aug. 18	27.58
Nov. 30	27.95	Nov. 1	27.71	19	27.50	25	27.70
1937		15	27.75	Oct. 5	27.75	31	27.77
Jan. 11	27.37	Dec. 1	27.78	17	27.77	Sept. 15	28.09
Feb. 2	27.57	15	27.72	Nov. 2	27.79	29	28.27
15	27.55	1938		15	27.80	Oct. 31	28.45
Mar. 1	27.64	Jan. 3	27.58	Dec. 1	27.42	Nov. 21	28.48
15	27.64	Feb. 3	27.55	19	27.43	30	28.47
Apr. 1	27.59	15	27.52	1939		1940	
15	27.56	Mar. 1	27.43	Jan. 5	26.86	Jan. 31	28.47
May 3	26.80	17	27.02	20	27.16	July 12	28.52
15	27.48	Apr. 1	26.92	Feb. 1	26.75	Oct. 13	32.27
June 1	27.66	18	27.33	Mar. 6	26.92	23	33.26
17	27.44	May 3	27.52	16	27.06	30	33.47
July 1	27.87	17	27.72	Apr. 4	27.27	Nov. 27	32.92
16	27.68	June 2	26.82	15	26.91	Dec. 30	33.52
31	27.90	17	27.33	May 3	27.18	1941	
Aug. 17	27.93	July 5	27.30	15	27.14	Jan. 21	33.49
Sept. 13	28.23	18	27.45	June 16	26.88	31	33.51
17	28.33	Aug. 1	27.48	July 18	27.30	Feb. 25	33.76
Oct. 4	28.21	15	27.50	31	27.39		

Clay 2. (13/7W-35R6). Brazil Water Works. Brazil. SE $\frac{1}{4}$ SE $\frac{1}{4}$, sec. 35, T. 13 N., R. 7 W. Dug unused water table (?) well in sand, diameter 14 feet, depth 25.8 feet. Land-surface datum is about 620 feet above msl. Highest water level is 8.45 below lsd, April 16, 1944; lowest, 19.67 below lsd, Feb. 11, 1944. Records available 1944. Affected by nearby pumping.

1944		Mar. 5	19.26	Apr. 16	8.45	May 28	8.80
Feb. 11	19.67	12	18.54	30	8.47	June 4	9.5
18	19.09	27	17.82	May 7	8.47	11	9.3
26	19.27	Apr. 3	14.75	14	8.94	18	10.5
		9	11.64	21	8.75	25	10.25

Clay 4. (10/6W-30B2). Town of Clay City. Clay City. NW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 30, T. 10 N., R. 6 W. Drilled unused artesian well in sand and gravel, diameter 8 inches, depth 48.0 feet. Land-surface datum is 574.3 feet above msl. Recording gage installed Aug. 13, 1957. Highest water level is 13.35 below lsd, Mar. 10, 12, 1959; lowest, 19.40 below lsd, July 7, 1958. Records available 1957-59. Affected by nearby pumping, changes in barometric pressure, and trains.

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

Clay 4.--Continued

(Daily highest water level from recorder graph, 1957)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 14	15.09	Sept. 12	15.30	Sept. 28	16.03	Nov. 25	14.86
15	15.17	13	15.28	29	16.04	26	15.14
16	15.03	14	15.53	30	15.87	Dec. 6	14.78
17	15.27	15	15.60	Oct. 7	16.32	7	14.60
18	15.37	16	15.36	8	16.34	8	14.59
19	15.10	17	15.55	9	16.46	9	14.44
20	15.24	18	15.59	10	16.46	10	14.43
23	15.43	19	15.68	11	16.44	11	14.38
24	15.53	20	15.66	12	16.58	12	14.52
25	15.27	21	15.76	13	16.56	20	14.04
26	15.17	22	15.78	23	h 15.81	21	14.14
27	15.30	23	15.62	Nov. 20	14.81	22	14.29
28	15.30	24	15.76	21	14.85	23	14.12
29	15.35	25	15.89	22	14.89	24	14.20
Sept. 10	15.32	26	16.01	23	14.91	25	14.01
11	15.29	27	15.97	24	14.99	26	13.87

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-----	-----	14.36	14.78	-----	16.50	17.20	18.35	17.95	18.10	17.30	16.60
2	-----	-----	14.41	14.91	-----	16.45	17.25	18.20	18.00	18.15	17.20	16.55
3	-----	-----	14.25	14.93	-----	16.70	17.40	17.70	18.00	18.25	17.10	16.25
4	-----	-----	14.29	14.91	-----	16.70	17.45	17.65	18.05	18.10	17.25	16.10
5	-----	13.90	14.34	14.98	-----	16.80	17.45	17.80	18.20	18.00	17.35	16.15
6	-----	13.86	14.30	14.93	-----	17.00	17.55	17.75	18.35	17.90	17.45	16.05
7	-----	13.88	14.43	14.79	-----	17.00	17.60	17.80	18.25	17.95	17.45	16.05
8	13.52	14.01	14.44	14.88	-----	16.90	18.25	17.75	18.20	17.95	17.40	15.95
9	13.77	14.09	14.48	-----	-----	16.90	18.20	17.90	18.20	17.85	17.40	16.10
10	13.75	13.92	14.37	15.03	-----	16.85	18.10	17.95	18.30	17.90	17.25	16.10
11	13.68	13.95	14.42	14.98	-----	16.85	17.90	17.90	18.30	17.80	17.40	16.00
12	13.80	-----	14.48	15.05	-----	16.90	17.85	18.00	18.20	17.80	17.45	15.95
13	13.72	14.03	14.43	15.17	15.70	16.90	17.80	18.05	18.15	17.75	17.45	-----
14	-----	14.12	14.47	15.04	15.75	17.05	17.65	18.10	18.25	17.70	17.45	-----
15	-----	14.04	14.57	15.06	15.90	17.00	17.85	18.05	18.10	17.65	17.35	-----
16	13.83	14.18	14.63	15.16	15.95	16.75	17.85	18.05	18.15	17.55	17.30	-----
17	13.93	14.08	14.39	15.25	16.00	16.65	17.95	18.00	17.90	17.50	17.20	16.00
18	14.03	14.17	14.51	15.29	16.00	16.75	17.85	17.85	18.10	17.45	17.20	15.90
19	14.19	14.23	14.47	15.44	15.90	16.80	18.05	18.05	18.15	17.20	17.15	15.85
20	14.05	-----	14.46	15.39	15.95	16.80	17.70	17.95	18.15	17.15	17.00	15.85
21	-----	-----	14.42	15.29	16.10	16.80	17.60	18.05	18.20	17.15	17.00	15.90
22	-----	-----	14.48	15.43	16.05	16.90	17.65	17.95	18.00	17.10	17.00	15.90
23	-----	-----	14.74	15.60	16.00	16.70	17.85	18.10	18.10	17.05	16.90	15.75
24	13.75	-----	14.55	15.53	16.00	16.55	17.95	18.00	18.15	17.10	16.85	15.70
25	13.73	e14.32	14.50	-----	16.10	16.75	18.15	17.90	18.20	17.10	16.85	15.70
26	13.51	14.35	14.52	-----	16.10	16.80	18.15	18.10	18.15	17.15	16.80	15.55

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

Clay 4.--Continued

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	13.57	14.25	14.63	-----	16.30	17.40	18.05	18.05	18.05	17.05	16.90	15.50
28	13.60	14.20	14.59	-----	16.40	17.25	18.00	18.05	18.20	17.10	16.75	15.55
29	-----	-----	14.73	-----	16.55	17.05	18.20	18.05	18.05	17.20	16.65	15.60
30	-----	-----	14.85	-----	16.60	16.95	18.20	18.00	18.10	17.15	16.70	15.55
31	-----	-----	14.75	-----	16.50	-----	18.15	18.00	-----	17.25	-----	15.50

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.45	14.70	13.65	13.80	14.20	13.80	15.20	16.05	16.20	-----	14.85	14.40
2	15.40	14.65	13.60	13.80	14.20	13.90	15.10	16.00	15.90	15.20	14.85	14.30
3	15.45	14.55	13.65	13.80	14.10	13.90	15.20	15.85	15.75	15.15	14.90	14.30
4	15.45	14.45	13.60	13.80	14.10	14.10	15.35	15.85	15.60	15.20	14.75	14.25
5	15.45	14.45	13.55	13.75	14.20	14.10	15.20	15.70	15.60	15.10	14.75	14.20
6	15.50	14.45	13.50	13.65	14.30	14.20	15.20	15.75	15.80	15.15	14.80	14.15
7	15.45	14.50	13.50	13.75	14.30	-----	15.35	15.75	15.65	15.10	14.85	14.10
8	15.40	14.40	13.40	13.85	14.35	-----	15.45	15.70	15.60	15.10	14.90	14.15
9	15.35	14.10	13.40	13.80	14.60	14.40	15.50	15.80	15.60	15.05	14.85	14.15
10	15.30	14.00	13.35	13.75	14.40	14.35	15.50	15.60	15.60	15.05	14.85	14.20
11	15.35	14.00	13.45	13.80	14.20	14.35	15.60	15.70	15.55	14.95	14.70	14.10
12	15.40	14.00	13.35	13.90	14.05	14.30	15.60	15.75	15.75	14.95	14.75	13.90
13	15.35	14.00	13.40	13.80	13.90	14.35	15.50	15.95	15.70	15.00	14.60	13.95
14	15.20	13.90	13.60	13.85	13.95	14.40	15.65	16.00	15.55	14.95	14.55	13.90
15	15.05	-----	13.60	13.90	13.95	14.35	15.60	16.20	15.50	15.00	14.60	13.95
16	15.05	14.00	13.60	13.90	14.05	14.35	16.10	16.20	15.60	14.95	14.55	13.95
17	15.05	13.85	13.70	14.05	14.35	14.40	15.85	15.95	15.70	14.95	14.55	13.95
18	15.10	13.75	13.70	14.10	14.15	14.55	16.00	15.95	15.65	15.00	14.50	13.85
19	15.00	13.90	13.85	13.95	14.05	14.55	15.85	15.95	15.50	15.00	14.40	13.95
20	14.95	13.95	13.80	13.80	13.95	14.55	15.70	16.20	15.55	15.00	14.40	13.90
21	14.70	14.00	13.85	13.85	13.85	14.65	15.70	16.25	15.45	15.05	14.35	13.85
22	14.75	13.90	13.90	13.90	13.90	14.50	15.90	16.20	15.50	15.00	14.50	13.95
23	14.80	13.80	13.75	14.00	13.85	14.55	15.80	16.30	15.50	14.90	14.35	13.95
24	14.85	13.80	13.80	13.95	13.80	14.65	15.85	16.05	15.40	14.80	14.35	13.95
25	14.80	13.85	13.80	13.90	13.65	14.60	16.05	16.20	15.50	14.85	14.35	13.85
26	14.70	13.75	13.80	14.05	13.80	14.75	16.00	16.40	15.35	14.80	14.30	13.75
27	14.70	13.75	13.85	13.90	13.80	14.85	15.80	16.25	15.25	14.80	14.30	13.65
28	14.65	13.75	13.90	13.85	13.85	14.90	15.85	16.20	15.15	14.85	14.30	13.60
29	14.70	-----	14.00	13.90	14.05	14.95	16.00	16.25	-----	15.05	14.30	13.70
30	14.70	-----	13.85	14.05	13.95	15.10	16.05	16.40	-----	14.90	14.30	13.65
31	14.70	-----	13.90	-----	13.85	-----	16.15	16.15	-----	14.90	-----	13.65

Clay 5. (13/6W-2B1). David Chavis. Lena. NW $\frac{1}{4}$ NE $\frac{1}{4}$, sec. 2, T. 13 N., R. 6 W. Drilled unused artesian well in sand and gravel, diameter 6 inches, depth 52.1 feet. Land-surface datum is 426.9 feet above msl. Recording gage installed Aug. 13, 1957; removed Sept. 14, 1959. Highest water level is 11.96 below lsd, Aug. 3, 1958; lowest, 18.59 below lsd, Oct. 14, 1957. Records available 1957-59. Affected by changes in barometric pressure and trains.

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

Clay 5.--Continued

(Daily highest water level from recorder graph, 1957)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-----	-----	-----	-----	-----	-----	-----	-----	16.53	-----	16.86	14.51
2	-----	-----	-----	-----	-----	-----	-----	-----	16.49	-----	16.98	14.73
3	-----	-----	-----	-----	-----	-----	-----	-----	16.53	17.88	16.99	14.60
4	-----	-----	-----	-----	-----	-----	-----	-----	16.57	17.87	17.06	14.79
5	-----	-----	-----	-----	-----	-----	-----	-----	-----	18.03	17.17	14.90
6	-----	-----	-----	-----	-----	-----	-----	-----	-----	18.03	17.17	14.71
7	-----	-----	-----	-----	-----	-----	-----	-----	-----	18.14	17.28	14.49
8	-----	-----	-----	-----	-----	-----	-----	-----	17.05	18.06	16.92	14.20
9	-----	-----	-----	-----	-----	-----	-----	-----	17.07	-----	16.86	13.78
10	-----	-----	-----	-----	-----	-----	-----	-----	17.12	18.20	16.93	13.68
11	-----	-----	-----	-----	-----	-----	-----	-----	17.26	18.23	16.81	13.73
12	-----	-----	-----	-----	-----	-----	-----	-----	17.28	18.29	16.44	13.74
13	-----	-----	-----	-----	-----	-----	-----	15.23	17.28	18.34	16.11	13.79
14	-----	-----	-----	-----	-----	-----	-----	15.17	17.33	18.40	15.67	13.89
15	-----	-----	-----	-----	-----	-----	-----	15.17	17.28	18.47	15.10	14.12
16	-----	-----	-----	-----	-----	-----	-----	15.21	17.30	18.25	14.96	14.22
17	-----	-----	-----	-----	-----	-----	-----	15.38	17.49	18.15	14.61	14.23
18	-----	-----	-----	-----	-----	-----	-----	15.51	17.56	18.08	13.87	13.00
19	-----	-----	-----	-----	-----	-----	-----	-----	17.48	18.01	13.79	12.57
20	-----	-----	-----	-----	-----	-----	-----	15.71	17.39	-----	13.72	12.21
21	-----	-----	-----	-----	-----	-----	-----	15.86	17.35	-----	13.75	12.45
22	-----	-----	-----	-----	-----	-----	-----	16.10	-----	-----	13.85	12.63
23	-----	-----	-----	-----	-----	-----	-----	16.09	17.58	-----	13.62	12.62
24	-----	-----	-----	-----	-----	-----	-----	16.02	17.55	-----	13.66	12.78
25	-----	-----	-----	-----	-----	-----	-----	16.10	17.53	17.08e	13.83	-----
26	-----	-----	-----	-----	-----	-----	-----	-----	17.61	16.98	-----	-----
27	-----	-----	-----	-----	-----	-----	-----	-----	17.72	17.01	-----	-----
28	-----	-----	-----	-----	-----	-----	-----	-----	17.78e	16.78	14.07	-----
29	-----	-----	-----	-----	-----	-----	-----	-----	17.88	-----	14.26	-----
30	-----	-----	-----	-----	-----	-----	-----	16.43	-----	-----	14.31	-----
31	-----	-----	-----	-----	-----	-----	-----	16.46	-----	-----	-----	-----

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.35	13.79	-----	-----	15.69	15.65	13.97	-----	15.91	16.84	17.23	-----
2	12.51	-----	-----	-----	15.71	15.86	14.09	-----	16.15	17.02	17.29	14.32
3	12.72	14.02	-----	14.78	15.69	16.12	14.19	11.96	16.14	-----	17.38	14.10
4	13.02	14.15	-----	14.74	15.60	16.17	14.35	12.08	16.31	-----	17.42	14.04
5	13.20	14.10	16.47	14.61	15.33	16.15	14.53	12.39	16.30	-----	17.42	14.12
6	13.22	14.16	16.46	14.61	15.01	16.24	-----	-----	16.29	17.12	17.58	14.36
7	13.00	14.28	16.43	14.77	-----	16.26	-----	12.75	-----	17.08	17.56	14.41
8	13.06	14.45	16.44	15.05	-----	16.27	14.09	12.89e	16.38	17.06	-----	14.27
9	13.30	-----	16.41	14.90	-----	16.17	14.03	13.11	16.46	17.09	-----	-----
10	13.54	14.80	16.52	14.76	-----	15.85	13.95	13.38	16.48	17.06	-----	14.49
11	13.58	14.76	16.50	14.77	-----	-----	13.33	13.49	16.79	16.90	-----	14.50
12	-----	-----	16.46	14.87	-----	-----	12.86	13.69	16.81	16.81	-----	14.82
13	14.21	-----	16.37	15.00	14.54	-----	12.62	13.88	16.82	16.75	17.69	15.04

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

Clay 5.--Continued

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	14.19	-----	16.46	14.98	14.50	-----	-----	14.14	16.95	-----	17.68	15.18
15	14.37	-----	16.47	15.01	14.51	-----	-----	14.30	17.01	-----	17.57	15.22
16	14.55	-----	16.50	15.07	14.55	-----	-----	14.25	16.98	16.55	17.61	14.33
17	14.70	-----	16.51	15.20	14.57	13.94	-----	14.20	16.66	16.55	-----	-----
18	-----	15.57	16.55	15.15	14.70	13.96	-----	14.21	16.47	16.63	-----	-----
19	15.01e	15.68	16.55	15.17	14.80	-----	13.12	14.44	16.39	16.72	-----	15.20
20	14.72e	15.80	16.51	15.17	14.93	-----	13.28	14.52	16.24	16.71	15.79	15.49
21	14.37e	15.82	16.52	15.20	-----	-----	13.44	14.71	16.22	16.84e	15.62	15.78
22	14.37	-----	16.62	15.19	-----	-----	13.52	14.86	16.24	16.81	-----	15.78
23	14.14	-----	-----	15.14	15.13	13.43	13.67	14.96	16.37	16.82	-----	15.73
24	13.76	-----	-----	15.22	15.21	13.42	13.87	14.94	16.34	16.90	-----	15.92
25	13.74	-----	16.03	15.67	15.21	13.46	13.89	-----	16.39	17.04	-----	16.20
26	13.70	-----	15.61	15.84	15.34	13.55	-----	-----	16.48	17.17	-----	16.23
27	13.85	-----	-----	-----	15.42	13.55	-----	15.43	16.57	17.16	-----	-----
28	13.79	15.66	-----	-----	15.45	13.56	-----	15.47	16.69	17.25	-----	-----
29	13.70	-----	-----	-----	15.64	-----	-----	15.58	16.80	17.31	-----	-----
30	13.60	-----	-----	15.70	15.71	-----	-----	15.65	16.75	-----	-----	-----
31	13.58	-----	-----	-----	15.67	-----	-----	15.71	-----	-----	-----	16.41

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.25	-----	13.55	13.24	13.37	-----	-----	-----	18.19	-----	-----	-----
2	16.30	15.25	13.45	12.79	-----	-----	-----	-----	18.23	-----	-----	-----
3	16.35	14.82	13.44	12.65	-----	-----	-----	-----	13.39	-----	-----	-----
4	16.48	14.82	13.58	12.74	-----	-----	16.75	-----	18.42	-----	-----	-----
5	16.77	14.87	-----	12.68	-----	-----	16.77	-----	18.47	-----	-----	-----
6	16.65	15.26	-----	12.76	-----	15.30	16.89	-----	18.48	-----	-----	-----
7	16.59	15.16	-----	12.87	14.05	15.44	17.06	-----	-----	-----	-----	-----
8	16.65	15.10	13.43	12.91	14.33	15.54	17.15	-----	-----	-----	-----	-----
9	16.84	14.41	13.30	13.07	14.33	15.72	17.20	-----	-----	-----	-----	-----
10	16.88	-----	13.17	13.15	14.27	15.69	17.28	16.85	-----	-----	-----	-----
11	16.95	14.42e	12.94	13.18	14.35	15.41	-----	16.91	-----	-----	-----	-----
12	16.86	13.90	12.94	13.17	14.51	15.05	-----	17.03	-----	-----	-----	-----
13	16.89	-----	12.63	13.15	14.46	-----	17.66	17.09	-----	-----	-----	-----
14	16.74	-----	12.38	-----	14.53	-----	17.72	17.13	-----	-----	-----	-----
15	-----	-----	12.34	-----	14.56	-----	17.73	17.16	-----	-----	-----	-----
16	16.60	-----	-----	-----	14.62	-----	17.73	17.16	-----	-----	-----	-----
17	16.60	-----	12.50e	13.53	14.70	-----	17.73	-----	-----	-----	-----	-----
18	16.58	12.92	12.73	13.55	14.68	-----	17.68	-----	-----	-----	-----	-----
19	16.68	13.25	12.72	13.65	14.70	-----	17.58	-----	-----	-----	-----	-----
20	-----	13.39	12.70	13.63	14.82	-----	-----	-----	-----	-----	-----	-----
21	-----	13.60	12.82	13.77	14.87	-----	17.62	17.62	-----	-----	-----	-----
22	-----	13.50	13.10	13.70	14.94	-----	17.60	17.66	-----	-----	-----	-----
23	-----	13.32	13.21	13.65	14.91	-----	17.51	17.74	-----	-----	-----	-----
24	15.28	13.62	13.27	13.66	14.76	15.59	17.51	17.78	-----	-----	-----	-----
25	15.08e	13.62	13.43	13.66	14.59	15.70	17.55	17.86	-----	-----	-----	-----
26	15.05	13.58	13.36	13.83	14.50	15.79	17.55	17.95	-----	-----	-----	-----

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

Clay 5.--Continued

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	15.08	13.51	13.39	13.65	14.50	16.02	17.53	17.99	-----	-----	-----	-----
28	15.13	13.54	13.83	13.54	14.59	16.10	-----	-----	-----	-----	-----	-----
29	14.93	-----	13.87	13.40	-----	16.21	-----	-----	-----	-----	-----	-----
30	15.03	-----	13.71	13.29	-----	16.32	-----	-----	-----	-----	-----	-----
31	15.35	-----	13.66	-----	-----	-----	-----	18.17	-----	-----	-----	-----

PUBLICATIONS OF COOPERATIVE GROUND-WATER PROGRAM

Report

Ground-water resources of the Indianapolis area, Marion County, Ind. C. L. McGuinness. Ind. Dept. Conserv., Div. Geology. 1943.

Bulletins

- No. 1 Memorandum concerning a pumping test at Gas City, Ind. J. G. Ferris, Ind. Dept. Conserv., Div. Water Resources. 1945.
- 2 A preliminary report of the ground-water levels of the State based on records of twenty-six observation wells for which long time records are available. Anonymous. Ind. Dept. Conserv., Div. Water Resources. 1946. (Out of print.)
- 3 Ground-water resources of St. Joseph County, Ind. Part 1, South Bend area. F. H. Klaer, Jr., and R. W. Stallman. Ind. Dept. Conserv., Div. Water Resources. 1948.
- 4 Ground-water resources of Boone County, Ind. E. A. Brown. Ind. Dept. Conserv., Div. Water Resources. 1949.
- 5 Ground-water resources of Noble County, Ind. R. W. Stallman and F. H. Klaer, Jr. Ind. Dept. Conserv., Div. Water Resources. 1950.
- 7 Water-level records of Indiana. Anonymous. Ind. Dept. Conserv., Div. Water Resources. 1956.
- 8 Ground-water resources of Tippecanoe County, Ind.: Appendix, Basic Data. J. S. Rosenshein and O. J. Cosner. Ind. Dept. Conserv., Div. Water Resources. 1956.
- 8 Ground-water resources of Tippecanoe County, Ind.: J. S. Rosenshein. Ind. Dept. Conserv., Div. Water Resources. 1958.
- 9 Ground-water resources of Adams County, Ind., F. A. Watkins, Jr., and P. E. Ward. Ind. Dept. Conserv., Div. Water Resources. 1962.

Publications of cooperative ground-water program--Continued

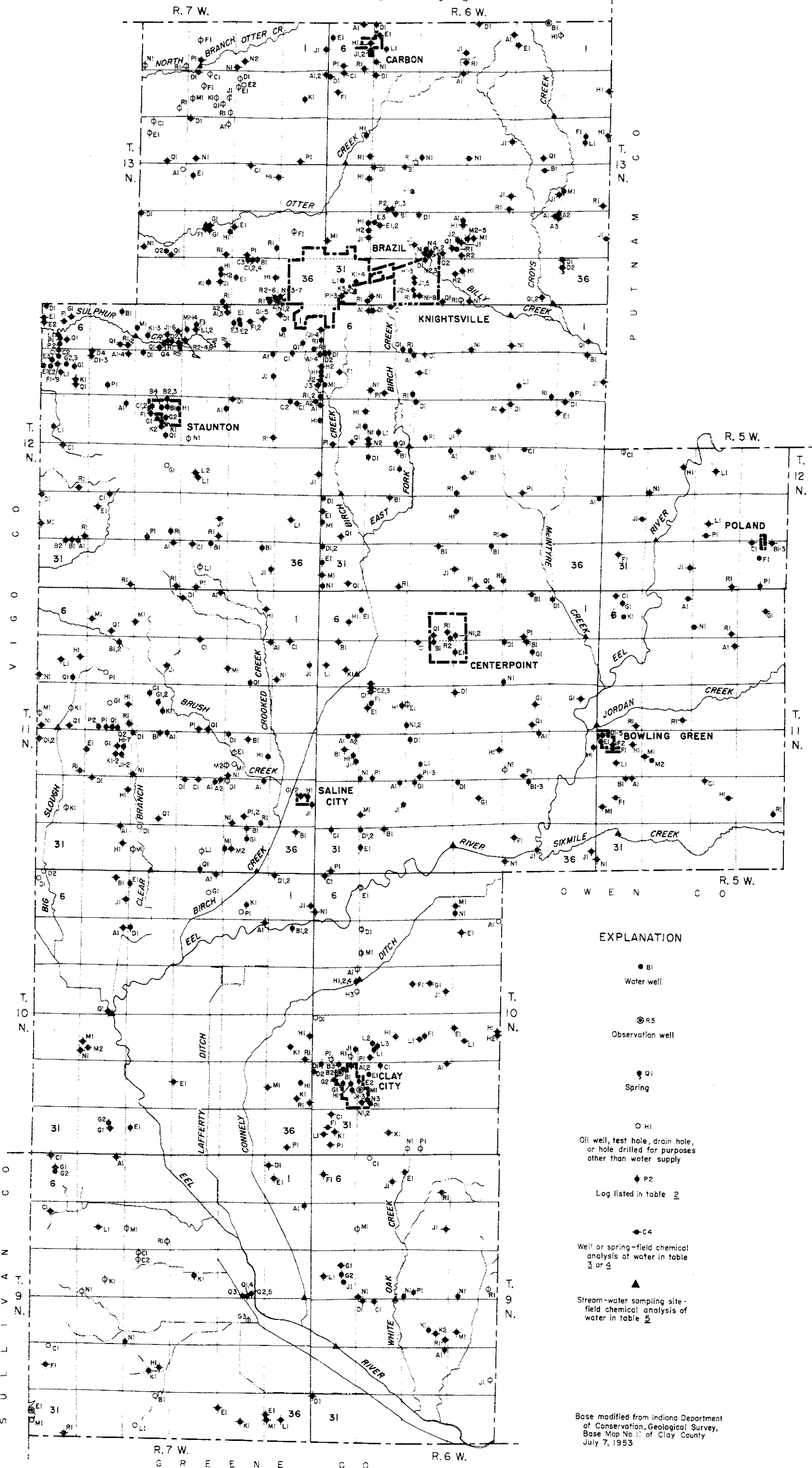
Bulletins--continued

- No. 10 Ground-water resources of Northwestern Ind., Preliminary Report: Lake County. J. S. Rosenshein. Ind. Dept. Conserv., Div. Water Resources. 1961.
- 11 Ground-water resources of West-Central Ind., Preliminary Report: Greene County. F. A. Watkins, Jr., and D. G. Jordan. Ind. Dept. Conserv., Div. Water Resources. 1961.
- 12 Ground-water resources of Northwestern Ind., Preliminary Report: Porter County. J. S. Rosenshein. Ind. Dept. Conserv., Div. Water Resources. 1962.
- 13 Ground-water resources of Northwestern Ind., Preliminary Report: LaPorte County. J. S. Rosenshein and J. D. Hunn. Ind. Dept. Conserv., Div. Water Resources. 1962.
- 14 Ground-water resources of West-Central Ind., Preliminary Report: Sullivan County. F. A. Watkins, Jr., and D. G. Jordan. Ind. Dept. Conserv., Div. Water Resources. 1962.
- 15 Ground-water resources of Northwestern Ind., Preliminary Report: St. Joseph County. J. S. Rosenshein and J. D. Hunn. Ind. Dept. Conserv., Div. Water Resources. 1962.
- 16 Ground-water resources of West-Central Ind., Preliminary Report: Clay County. F. A. Watkins, Jr., and D. G. Jordan. Ind. Dept. Conserv., Div. Water Resources. 1962.

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P A R K E C O



EXPLANATION

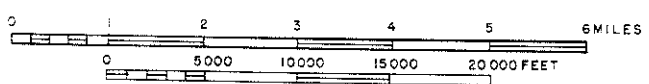
- B1 Water well
- ⊙ R5 Observation well
- Q1 Spring
- H1 Oil well, test hole, drain hole, or hole drilled for purposes other than water supply
- ◆ P2 Log listed in table 2
- ◆ C4 Well or spring—field chemical analysis of water in table 3 or 4
- ▲ Stream-water sampling site—field chemical analysis of water in table 5

Base modified from Indiana Department of Conservation, Geological Survey, Base Map No. 11 of Clay County, July 7, 1953

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
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DIAGRAM OF TOWNSHIP

MAP OF CLAY COUNTY, INDIANA, SHOWING LOCATION OF WELLS AND SPRINGS



BY F. A. WATKINS, JR. AND D. G. JORDAN
1960

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

SECTION LETTER SYMBOLS IN WELL-NUMBERING SYSTEM.

P A R K E C O

R. 7 W.

R. 6 W.

T. 13 N.

T. 13 N.

P U T N A M

T. 12 N.

R. 5 W.

T. 12 N.

V I G O

T. 11 N.

T. 11 N.

T. 10 N.

T. 10 N.

C O

T. 9 N.

S U L L I V A N

O W E N C O

EXPLANATION

Production from unconsolidated deposits



Water from sand and gravel of Pleistocene age overlain by Pleistocene lake sediments or Recent alluvium. Well depths range from 60 to 160 feet. Yields more than adequate for domestic and stock use. Area of municipal pumpage and relatively large yields



Water from sand and gravel lenses and stringers interbedded with till and/or lake sediments in pre-Pleistocene stream channels. Well depths range from 25 to 110 feet. Yields from sand and gravel adequate for domestic, stock, and locally for small industrial use. Many wells in area are drilled into Pennsylvanian bedrock, bypassing the sand and gravel

Production from bedrock



Water predominately from sandstone of Pennsylvanian age. Well depths range from 20 to 440 feet. Yields generally adequate for domestic and stock use, and locally for small industrial and municipal supplies

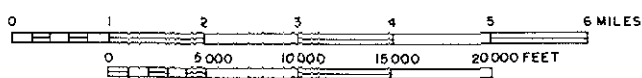
Base modified from Indiana Department of Conservation, Geological Survey, Base Map No. 11 of Clay County July 7, 1953

R. 7 W.

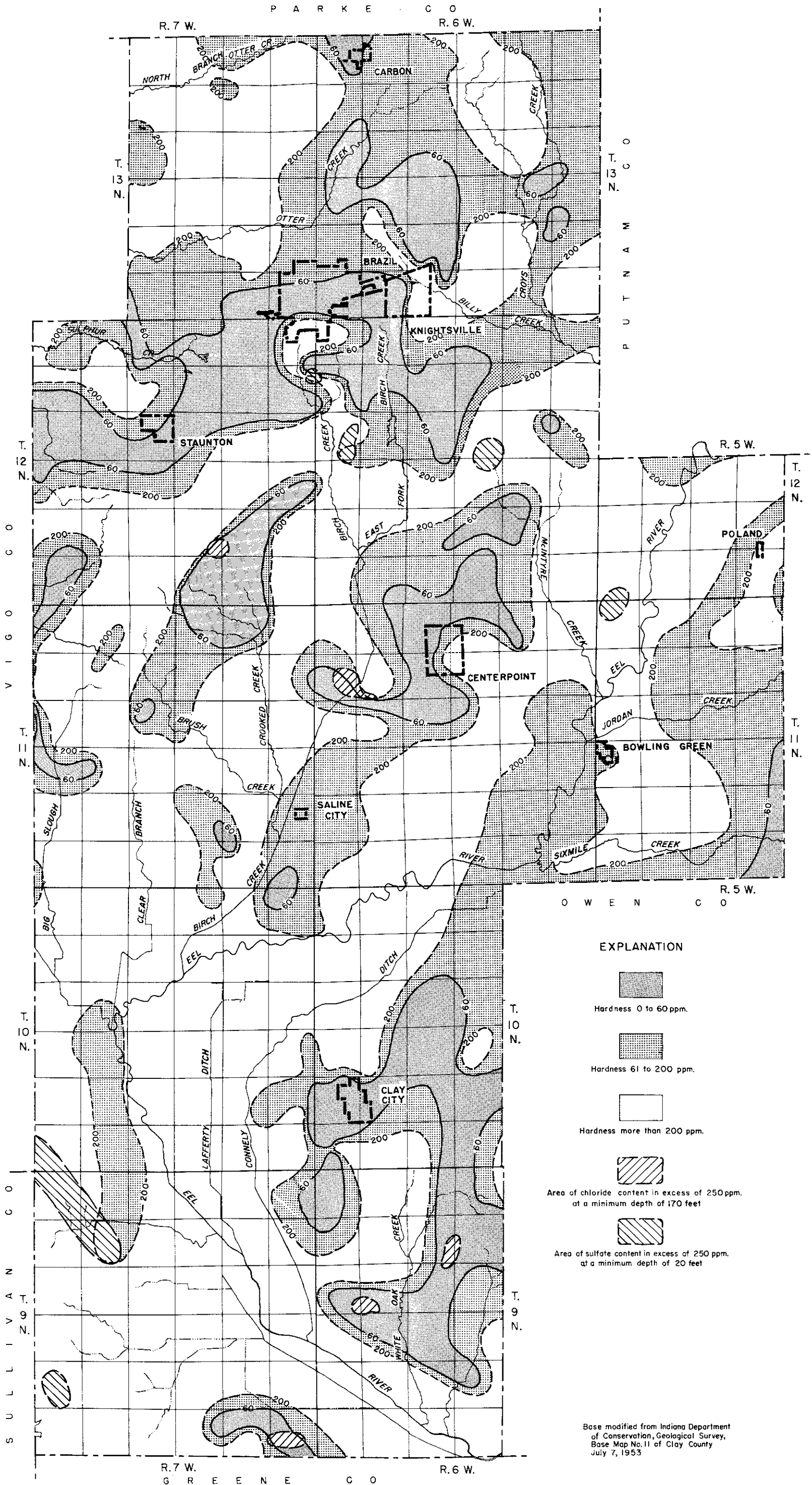
R. 6 W.

G R E E N E C O

MAP OF CLAY COUNTY, INDIANA, SHOWING
GROUND WATER CONDITIONS



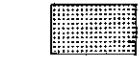
BY F. A. WATKINS, JR. AND D. G. JORDAN
1960



EXPLANATION



Hardness 0 to 60 ppm.



Hardness 61 to 200 ppm.



Hardness more than 200 ppm.



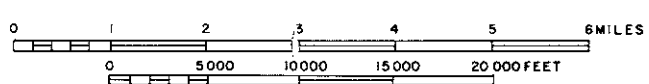
Area of chloride content in excess of 250 ppm. at a minimum depth of 170 feet



Area of sulfate content in excess of 250 ppm. at a minimum depth of 20 feet

Base modified from Indiana Department of Conservation, Geological Survey, Base Map No. 11 of Clay County July 7, 1953

MAP OF CLAY COUNTY, INDIANA, SHOWING
HARDNESS OF GROUND WATER



BY F.A. WATKINS, JR. AND D.G. JORDAN
1960