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GROUND-WATER RESOURCES

of

TIPPECANOE COUNTY, INDIANA

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# GROUND WATER RESOURCES OF TIPPECANOE COUNTY, INDIANA

by

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## ABSTRACT

The basic data in this report consist of tabulated well records, drillers' well logs, and the water levels in 10 observation wells in Tippecanoe County. The well records contain information about well construction, water levels, yields, and characteristics of the water-bearing materials. The well logs give detailed information about the geology of the subsurface materials encountered in well drilling in Tippecanoe County. The water levels in observation wells indicate the magnitude of short-term and long-term fluctuations of water levels in similar water-bearing materials.

The driller's well record is an important source of basic data. For this reason the content of an adequately detailed well record is delineated.

A base map of Tippecanoe County shows the location of each well listed in the report. A topographic map of the county was compiled from existing topographic sheets and from an altimeter survey contoured on a 50-foot interval. The elevation of each contour shown on the map is estimated to be accurate to within the nearest 10 feet.

## INTRODUCTION

An investigation of the ground-water resources of Tippecanoe County, Indiana, has been in progress since 1945. During this period, the investigation was conducted intermittently by personnel of the U. S. Geological Survey and the Water Resources Division of the Indiana Department of Conservation, as a part of the broad cooperative program established by these agencies in 1935 to inventory and evaluate the ground-water resources of the entire state.

The basic data collected during the investigation appears in appendix form in this county report published under the cooperative program. Its purpose is to make the information available to the public as soon as possible. The analysis and interpretation of the basic data are now in progress. The final report, including this appendix will be entitled "The Ground-Water Resources of Tippecanoe County, Indiana".

Tippecanoe County lies in the west-central part of Indiana (see figure 1, p. 3). The unconsolidated deposits in the county are underlain by rocks of Mississippian and Devonian age. The Devonian rocks underlie the northeastern part of the county, and crop out as shale along the lower Wabash River terrace above the town of Americus. Mississippian shale, siltstone, and limestone crop out near the town of West Point, and in the extreme west-central part of the county.

The unconsolidated rocks in Tippecanoe County consist primarily of glacial and glaciofluvial (water-laid) deposits, which crop out in the terrace cuts along the Wabash River and Wildcat Creek. In the northern and southern parts of the county much of the surface material is of ice or ice-contact origin. Recent alluvial deposits occur chiefly in the flood plains of the major streams. A detailed discussion of the geology, areal extent, and hydrologic properties of the deposits will be included in the interpretive part of the report "The Ground-Water Resources of Tippecanoe County, Indiana."

#### ACKNOWLEDGMENTS

The authors wish to thank all persons who contributed time, information, and assistance during the collection, tabulation, and processing of data for this report. Well drillers who furnished the information summarized in tables 2 and 3 were especially helpful. They are: C. Coy & Sons, Lafayette; Dilden Bros., Dayton; L. E. Golden, Klondyke; N. Higer, Darlington; Holt Bros., Darlington; H. R. Lamb, Indianapolis; Layne-Northern Co., Inc., Indianapolis; H. Lister, Clarks Hill; Ranney Method Water Supplies Inc., Columbus, Ohio; and O. J. Titus, Battleground.

#### DATA COLLECTION AND PROCESSING

E. A. Brown, F. H. Klaer, Jr., R. C. Withrow, and T. M. Kingsbury, collected well data during the early phases of the investigation. D. G. Jordan and E. N. Coopridier, Water Resources Division, Indiana Department of Conservation, assisted in the preparation of data for this report.

The basic data were collected through contacts with drillers, well owners, waterworks superintendents and others. The well records obtained from drillers are of two types - written records and reports from memory. Each well was located on a county highway and transportation map and the location then checked against the property records in the County Courthouse to verify the location, to outline the property, and to obtain the name of the current property owner. Discrepancies between the driller's location and that indicated on the property plat books were corrected. Well locations that could not be verified

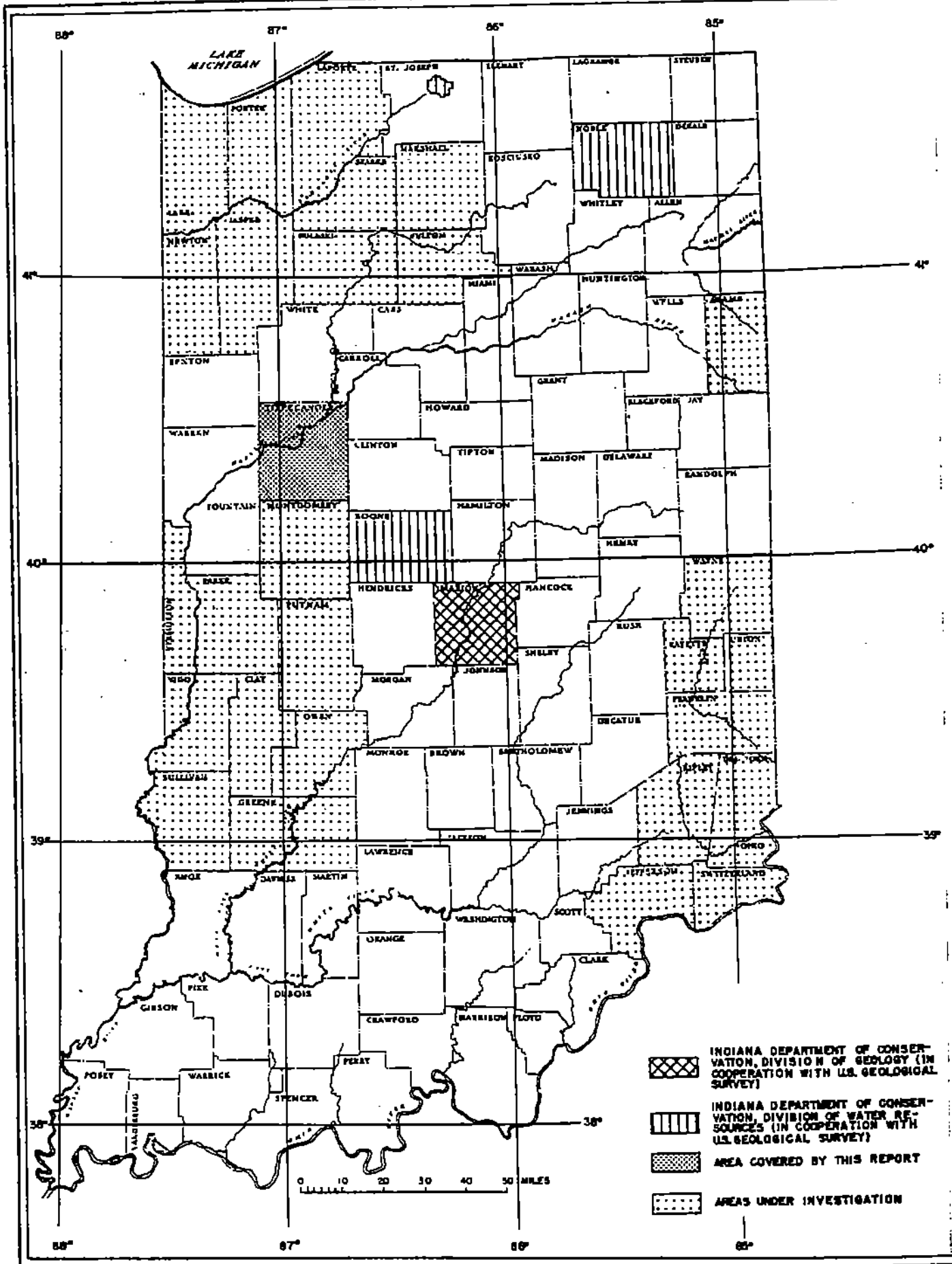


FIGURE 1. MAP OF INDIANA SHOWING LOCATION OF AREAS ON WHICH REPORTS HAVE BEEN PUBLISHED, AREA DESCRIBED IN THIS REPORT, AND AREAS UNDER INVESTIGATION

by this method were checked in the field or rechecked with the driller. Records containing incomplete information or indefinite well locations are not tabulated in the report.

Plate 1 shows the locations of the wells, most of which are located to the nearest quarter-quarter section. Where information is available, a more detailed location is given in table 2. A well numbering system is used to locate and identify the wells, and all numbers in Tippecanoe County bear the prefix "Tc". Each township and range is assigned a letter symbol arranged alphabetically from left to right in four rows across the map (see pl. 1). For example, T. 24 N., R. 6 W., bears the symbol "A", and T. 24 N., R. 5 W., the symbol "B". Each full township is divided into 36 sections, and the number after the township symbol indicates the section in which the well is located. Within a section, wells are numbered consecutively. The numeral has not relation to the geographic location of a well. For example, TcG 32-1 is in Tippecanoe County; "G" indicates T. 23 N., R. 4 W.; "32-1" means the well is the first well plotted in section 32. Table 2 shows that well TcG 32-1 is in the NW1/4SW1/4SE1/4 sec. 32, T. 23 N., 4 W.

At the beginning of the field investigation, observation wells were established in order to obtain data concerning the effect upon ground-water levels of short-range and long-range variations in precipitation; the magnitude of ground-water recharge and discharge; the seasonal water-level fluctuations; the localized influence upon water levels of pumping and changes in river stage. Recording gages were placed in some of the wells; the other wells were measured manually with an engineer's steel tape calibrated to a hundredth of a foot.

Table 4 of the report contains the records of the water levels in observation wells in Tippecanoe County. Available water-level measurements from recorder charts are tabulated for the first day and the fifteenth day of each month. <sup>1/</sup> In addition, the high and the low measurements for each month are tabulated. If the same high or low measurement for the month occurred on more than one day, the date of the first occurrence is reported. All water-level measurements are tabulated for the manually measured wells. The water levels are reported in feet below land-surface datum except where otherwise noted.

#### DETAILED WELL RECORDS

Accurate and detailed records are helpful to an appraisal of ground-water conditions in any area. The detailed record is of particular value to

<sup>1/</sup> For additional water levels see the annual water-level reports of the U. S. Geol. Survey (3).

the driller because it provides a permanent log of the well, the accuracy of which is not dependent on memory. When the records are catalogued, tabulated, and plotted on maps, a wealth of valuable information is made readily available. Adequate well records provide information about the nature and areal extent of water-bearing zones and the effect of changes in physical character of the deposits on well yields.

A detailed well record should include the property owner's name, driller's name, date of drilling, and an accurate location of the well. Water-bearing zones should be noted and the water level of each zone recorded. Also, the nonpumping water level in the finished well, and the date of measurement should be recorded. Furthermore, the casing diameter and length are important information. The record should indicate whether the well was finished with a screen, a section of slotted pipe, or an open end. If the well contains a section of slotted pipe or a screen, the slot size, depth to top of, and length of the slotted section or screen, should be recorded. Additional data concerning the yield of the well, duration of pumping, drawdown, and quality of the water are valuable. Every detailed well record should contain a list of each kind of material passed through, the grain size, color, and thickness, and any peculiarities encountered during drilling.

#### TYPES OF WELLS

The principal types of wells used in Tippecanoe County are the dug well, the drilled well, and the collector. The dug well consists of a shallow hole dug into the water-bearing material. Wells of this type are usually unreliable during drought periods, and they can easily become contaminated.

Most drilled wells in the county are constructed by the cable-tool method. A small-diameter pipe is put down into the water-bearing material by a process of drilling, driving, and bailing. Some industries use a modification of the tubular well, which contains a gravel lining between the well screen and the water-bearing material. A well having this kind of finish is called a gravel-packed well.

The collector is a large-diameter well or caisson from which a number of horizontal pipes extend radially into the water-bearing material.

#### WELL FINISH

A well may be finished with a screen or an open end after the well had penetrated the water-bearing material. Some drillers use slotted pipe in

lieu of a screen. A screen may consist of a metal tube with rows of V-slotted grooves, a continuous wire wrap, or a single or double jacket over slotted pipe. The double-jacket type of screen contains a wire mesh cloth between the slotted pipe and the outer perforated metal sheet. The single-jacket screen has only the perforated metal sheet over the slotted pipe. The slots in the pipe are larger than the openings in the wire mesh and the perforated sheet; therefore, the covering over the slotted pipe determines the grain size of the water-bearing material that the screen will hold out of the well. Table I, below, contains a grain size classification in inches and millimeters and the equivalent slot, gauze, and perforation numbers. The slot number is the width of the slot in thousandth of an inch. The grain size of the water-bearing material determines the slot size of the screen to be selected.

Table 1, -- Grain size and equivalent screen openings

	Grain size		Equivalent screen openings		
	Inches	Millimeters	Slot No.	Gauze No.	Perforated hole No.
Gravel	0.08	2	80	8	<sup>a/</sup> 8
Very coarse sand	0.04-0.08	1-2	40-80	20-8	3-6
Coarse sand	0.02-0.04	0.5-1	20-40	40-20	1-2
Medium sand	0.01-0.02	0.25-0.5	10-20	60-40	
Fine sand	0.005-0.01	0.125-0.025	6-10	90-60	
Very fine sand	0.0025-0.005	0.062-0.125	2-5		
Silt	0.00016-0.00025	0.004-0.062			
Clay	0.00016	0.004			

<sup>a/</sup> No. 8 perforation is 0.138 inch in diameter



## TOPOGRAPHIC MAP

Plate 2 is a topographic map of Tippecanoe County. Parts of the map are based on published Geological Survey topographic sheets and U. S. Corps of Engineers river charts of the Wabash River. The areas not covered by topographic sheets were mapped by altimeter. Two altimeters were used, one calibrated in 2-foot intervals and the other calibrated in 10-foot intervals. Closed traverses were run between Coast and Geodetic Survey bench marks established by second-order leveling with adjusted elevations based on sea-level datum of 1929. The traverses were as short as possible. Two sets of readings were made at each station and the time and location of each reading was recorded on a field data sheet. A correction was applied to the readings, if the differences in elevation between the bench marks and the altimeter readings at the bench marks were not equal. The correction applied was determined by dividing the total time of the traverse into the total amount of discrepancy in feet. By this calculation, a correction factor expressed as feet of change per minute was determined for each traverse. This correction factor was then applied to each reading in the traverse. Any traverse having a large discrepancy was rerun.

From the several sources of data collected, a topographic map of Tippecanoe County was prepared with a contour interval of 50 feet. It is estimated that the elevation of each contour shown is accurate to the nearest 10 feet. The map was prepared primarily to determine sea-level altitude of the water-bearing zones and the water levels.

Table 2—Records of Wells by Township in Pappas County, Tex.

1/ For explanation of well-numbering system see text, page 1.  
 2/ The location of the well is shown on plate 1.  
 3/ Dr. does Dr. drilled.  
 4/ All elevations are approximately sea level, plus or minus.  
 5/ Dr. given by Hamilton; 2/ well depth; 3/ hole; 4/ no. sections; 5/ date of completion and equipment; 6/ date number; 7/ date number and perforation number.

1/ P. Pappas, N. Hamilton, F. Hamilton  
 2/ W. Pappas, N. Hamilton, F. Hamilton  
 3/ W. Pappas, N. Hamilton, F. Hamilton  
 4/ W. Pappas, N. Hamilton, F. Hamilton  
 5/ W. Pappas, N. Hamilton, F. Hamilton  
 6/ W. Pappas, N. Hamilton, F. Hamilton  
 7/ W. Pappas, N. Hamilton, F. Hamilton

Tab. (T. 24 N., R. 5 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Disaster (Lambert)	Flow	Alluvium above sea level (feet)	Depth to peak (feet)	Depth (feet)	Original water-bearing formation	Water level (feet)	Static level (feet)	Deviation (feet)	10/	Remarks
1-1	See 1	John Sautter	Leach	about 1900	Dr.	85	4	—	755	—	—	—	—	—	—	Dr, 3	—

Tab. (T. 24 N., R. 5 E.)

1-1	See 1	Walter Peart	L. E. Jordan	—	Dr.	178	4	—	730	—	—	—	—	—	—	Dr, 8	—
1-1	See 1	Samuel Sautter	do	—	Dr.	222	4	—	748	—	—	—	—	—	—	—	—
1-2	See 1	Charles Dean	do	—	Dr.	190	4	—	790	—	—	—	—	—	—	—	—
1-3	See 1	Marshall Reiste	Hidden Bros.	6-21-31	Dr.	54	4	See summary 3 feet of 24% performance	730	—	50	4	21	15	—	—	See Log.
1-4	See 1	L. Colvert	L. E. Jordan	1930	Dr.	96	—	—	723	—	—	—	—	—	—	Dr	—
2-1	See 2	A. V. Bryant	do	—	Dr.	320	—	—	670	—	—	—	—	—	—	Dr	—
2-1	See 2	Robert Kelly	do	1944	Dr.	124	4	—	692	124	—	—	—	—	—	Dr, 3	See Log.
2-2	See 2	do	do	—	Dr.	137	—	—	692	137	—	—	—	—	—	Dr, 3	—
2-3	See 2	do	do	1943	Dr.	68	4	—	693	—	—	—	—	—	—	Dr, 3	—
2-4	See 2	Million Best	Hidden Bros.	11-12-30	Dr.	170	6	—	692	—	110	19	—	—	—	Dr	See Log.
2-1	See 2	V. S. Callwood	L. E. Jordan	—	Dr.	308	4	—	708	68	—	—	—	—	—	Dr	—
2-1	See 2	Frank Welch	do	—	Dr.	—	4	—	703	—	—	—	—	—	—	Dr	—
2-2	See 2	do	do	—	Dr.	158	4	—	705	—	—	—	—	—	—	Dr	—
2-3	See 2	L. E. Disher, J. E. Terry	O. J. Tillis	—	Dr.	170	—	—	692	90	90	60	—	—	—	Dr	All reported dry. See Log.
2-4	See 2	do	do	—	Dr.	60	—	—	692	—	30	10	—	—	—	Dr	All reported dry. See Log.
2-1	See 2	L. Williams	L. E. Jordan	—	Dr.	223	4	—	700	54	—	—	—	—	—	Dr	—
2-2	See 2	do	do	—	Dr.	—	4	—	690	70	—	—	—	—	—	Dr	—
2-1	See 2	W. E. Church	do	1920	Dr.	148	4	—	700	—	130	17	—	—	—	Dr	Well originally drilled to 200 feet casing pulled back to 50 feet. Shale from 30 to 200 feet, shale reported dry.
2-2	See 2	B. Catherine	H. Lister	—	Dr.	80	4	—	693	120	—	—	—	—	—	Dr	Well reported dry.
2-3	See 2	B. Johnson	L. E. Jordan	—	Dr.	226	4	—	670	60	—	—	—	—	—	Dr	—
2-4	See 2	A. Terry	L. E. Jordan	1918	Dr.	102	4	—	690	—	—	—	—	—	—	Dr	—
2-1	See 2	W. E. Church	C. Coy and Sons	1911	Dr.	110	4	—	662	—	90	20	—	—	—	Dr	See Log.
2-2	See 2	C. Gilman	L. E. Jordan	—	Dr.	210	6	—	665	210	—	—	—	—	—	Dr	Well reported dry.

Table 2—Records of Wells by Township in Tippecanoe County—Cont. (cont.)  
 Twp (T., N., S., E., & W.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Finish	Altitude above sea level (feet)	Depth to rock (feet)	Depth to water (feet)	Principal water-bearing zone	Water level (feet)	Head level (feet)	Drawdown (feet)	Use	Remarks
1-1	sec. 10	George McCoy	Dillon Bros.	5-29-12	Dr	97	4	Screen 3 feet of no. 8 perforation	641	—	87	30	Dr, Ur	67	12	—	See log.
1-2	sec. 11	Albert Smith	do	10-23-13	Dr	91	4	Screen 3 feet of no. 8 perforation	635	—	46	6	34, Or	86	10	—	See log.
9-1	sec. 9	H. P. Brown	O. J. Elise	—	Dr	100	4	—	645	—	—	—	Ur	—	—	—	—
15-1	sec. 15	O. J. Elise	do	—	Dr	10	4	—	638	—	—	—	Ur	—	—	—	—
16-1	sec. 16	F. H. Stone	do	—	Dr	108	4	—	645	—	—	—	Or	—	—	—	—
16-2	sec. 16	A. Thompson	do	—	Dr	90	4	—	640	—	—	—	Ur	—	—	—	—
16-3	sec. 16	O. J. Elise	do	—	Dr	77	4	—	630	—	—	—	Ur	—	—	—	—
17-1	sec. 17	Zillionhausen	H. Matter	6-1-15	Dr	112	4	Screened	678	—	139	12	Dr	80	—	—	—
17-2	sec. 17	H. Myers	—	—	Dr	20	12	—	673	—	—	—	—	—	—	—	—
18-1	sec. 18	Ann Donnelly	—	—	Dr	30	—	—	630	—	—	—	—	—	—	—	—
18-2	sec. 18	Byrne Roberts	O. Coy & Sons	—	Dr	135	—	—	620	—	—	—	Ur	—	—	—	—
20-1	sec. 20	Wm. Kosare	—	—	—	76	—	—	630	—	—	—	Ur	—	—	—	—
22-1	sec. 22	H. Walden	—	1913	Dr	137	—	—	600	—	90	47	Or	90	—	—	—
23-1	sec. 23	Donald Hanna	H. Matter	1915	Dr	18	4	—	585	—	—	—	Ur	30	—	—	—
26-1	sec. 26	Tippecanoe Hum- bly School	—	—	Dr	48	6	—	575	—	—	—	Ur	—	—	—	—
27-1	sec. 27	H. R. Constance of H. R. Churchill Oil Co.	Coner-Smith Oil Co.	1923	Dr	1600	—	—	354	165	—	—	—	—	—	—	—

Twp (T., N., S., E., & W.)

10-1	sec. 10	E. Carter	—	1-23-14	Dr	84	10, 1	—	563	20	—	—	—	—	—	—	—	—
15-1	sec. 15	do	O. Day & Sons	—	Dr	146	—	—	600	45	—	—	—	—	—	—	—	—
15-2	sec. 15	Fremont Park	Dillon Bros.	7-23-50	Dr	88	4	Screen 2 feet of no. 10 slot, wire mesh	660	—	78	10	Dr, Or	78	30	—	—	—
15-3	sec. 15	Leola White	Dillon Bros.	4-4-15	Dr	133	4	—	623	94	—	—	—	—	—	—	—	—
16-1	sec. 16	D. L. Kirby	H. Matter	—	Dr	86	4	—	550	23	—	—	Dr	—	—	—	—	—
19-1	sec. 19	J. Geo. Malin	O. J. Elise	—	Dr	80	4	—	560	—	—	—	Ur	—	—	—	—	—
20-1	sec. 20	Prison Union	H. Matter	—	Dr	—	4	—	540	60	—	—	Dr	—	—	—	—	—
21-1	sec. 21	H. Matter	Dillon Bros.	7-15-15	Dr	10	4	Open end	600	—	37	3	Dr	—	—	—	—	—
21-2	sec. 22	A. L. Dubas	—	1-3-14	Dr	1000	—	—	500	16	—	—	—	—	—	—	—	—
22-2	sec. 22	Jessie Purdy	O. Coy & Sons	—	Dr	—	—	—	620	—	—	—	Ur	—	—	—	—	—
23-1	sec. 23	Ann Pettit	H. Matter	9-22-14	Dr	64	4	Screened	670	—	40	4	Or	—	—	—	—	—
21-1	sec. 21	Sam Dulong	L. H. Walden	1913	Dr	83	4	—	648	—	75	8	Or	—	—	—	—	—
23-1	sec. 23	Byrlia Ross	Dillon Bros.	6-3-50	Dr	74	4	—	650	—	44	30	Dr, Or	44	8	—	—	—

Table 3—Reports of Wells by Township in Elbert County—Continued

TABLE (T. 24 N., R. 3 W.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Fluids	Altitude above sea level (feet)	Depth in rock (feet)	Depth to base of productive zone (feet)	Production character	Capacity (gpm)	Water level (feet)	Field (acres)	Production (bbls)	Remarks
33-2	Section 33	Charlie Lister	do	—	Dr	100	—	Screen, 3 feet of oil & perforation	690	—	60	Oil, Gr	7	40	8	6	See log.
33-3	Section 33	Miss Alice	H. Lister	1-3-56	Dr	75	4	Screened	660	—	70	Gr	30	—	—	—	See log.
34-1	Section 34	Arthur Walsh	O. Coy & Sons	—	Dr	65	—	—	670	—	—	Gr	—	—	—	—	—

TABLE (T. 23 N., R. 6 W.)

2-1	Section 3	H. W. Booth	O. Coy & Sons	—	Dr	60	4	—	698	—	—	Oil, Gr	—	—	40	—	See log.
10-1	Section 10	Arthur Palka	do	—	Dr	185	—	—	616	—	—	Gr	—	—	—	—	See log.
11-1	Section 11	H. E. Bortwell	do	—	Dr	35	—	—	848	—	—	Oil, Gr	—	—	—	—	See log.
13-1	Section 13	Forster	L. E. Galden	1952	Dr	135	4	—	655	330	33	Oil, Gr	300	—	—	—	See log.
13-2	Section 13	A. Bennett	—	—	Dr	22	—	—	690	—	—	—	28	—	—	—	See log.
21-3	Section 21	Sam Orsick	L. E. Galden	10-90	Dr	219	—	—	680	159	64	Gr	117	—	—	—	See log.
24-2	Section 24	Charles Hecker	do	do	Dr	215	—	—	685	—	—	Gr	118	—	—	—	—
27-2	Section 27	Robert Williams	O. Coy & Sons	—	Dr	155	4	—	680	—	—	Gr	—	—	—	—	—
34-1	Section 34	Pauline University Base Camp	Ray-Northrup Co., Inc.	5-27-48	Dr	235	3 1/2	—	664	192	33	Oil, Gr	—	—	—	—	Field estimated 15 gpm per foot of formation. See log.
34-2	Section 34	do	O. Coy & Sons	—	Dr	235	4	—	664	—	—	Gr	—	—	—	—	—
34-3	Section 34	George Debus	H. Lister	—	Dr	90	—	—	570	—	—	Gr	—	—	—	—	—
34-3	Section 34	Ernie Conrad	H. Lister	4-1-54	Dr	106	4	Screen, 3 feet	590	—	80	Oil, Gr	80	6	6	—	See log.

TABLE (T. 23 N., R. 5 W.)

1-1	Section 1	T. A. Ross	L. E. Galden	—	Dr	168	—	—	640	—	—	Gr	—	—	—	—	—
1-2	Section 1	John Leary	do	—	Dr	160	—	—	665	—	—	Gr	—	—	—	—	See log.
1-3	Section 1	A. Dettman	do	About 1973	Dr	177	—	—	670	—	—	Gr	—	—	—	—	See log.
1-4	Section 1	Pauline University	O. J. Titus	5-1-50	Dr	184	2	Screen, 8 feet of oil, 30 feet	690	—	—	Oil, Gr	234	20	—	—	See log.
1-5	Section 1	do	L. E. Galden	—	Dr	190	4	—	690	—	—	Gr	—	—	—	—	—
2-1	Section 2	H. Kujar	do	1952	Dr	168	4	—	700	—	—	Gr	146	10	—	—	Originally drilled to 200 feet. Casing pulled back to 164 feet.
2-2	Section 2	Arthur Hultberg	do	—	Dr	164	4	—	680	—	—	Gr	126	—	—	—	See log.
2-3	Section 2	H. H. Kuyhla	O. Coy & Sons	—	Dr	42	—	—	640	38	4	Oil, Gr	—	—	—	—	Originally drilled to 200 feet. Casing pulled back to 116 feet.
2-4	Section 2	Marion Township School	Black	1926	Dr	116	—	—	670	170	—	Gr	—	—	—	—	See log.
2-5	Section 2	V. J. Orman	L. E. Galden	1927	Dr	114	4	—	670	—	—	Gr	43	—	—	—	Driller abandoned well.
2-6	Section 2	H. E. Ellis	H. Lister	4-22-54	Dr	169	4	Screened	692	—	—	Gr	140	8	—	—	Dr. 2 Oil and well 30 feet deep abandoned when water. See log.
3-1	Section 3	Flonnie Channing City	H. H. Fox	4-1-43	Dr	57	6	Screened	650	—	—	Gr	20	100	—	—	See log.
3-2	Section 3	do	do	Summer 1943	—	23	1 1/2	—	630	—	—	Gr	—	—	—	—	See log.

Table 2.—Records of Wells by Township in Tippecanoe County—Continued

Ref. (P. 2) B., B., S. N.

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Material	Altitude above sea level (feet)	Depth to rock (feet)	Depth to casing (feet)	Depth to casing (feet)	Water level (feet)	Fluid (gpm)	Deviation (feet)	See	Remarks
2-3	W1131 sec. 3	Manilla Canning Corp.	O. J. Tiltie	7-1-35	Dr	60	6	—	653	—	—	—	10	100	—	1	Little drainage. See log.
3-4	W1212 sec. 3	Leroy H. Jones	O. Coy & Sons	—	Dr	85	—	—	680	—	72	33	—	40	—	Dr, 1	See log.
3-5	W1213 sec. 3	William Purdon	Dillon Bros.	11-26-45	Dr	128	4	Screen 4 feet	655	—	123	5	79	8	1	Dr	See log.
3-6	W1214 sec. 3	R. P. O. K. Ltd	do	10-18-49	Dr	101	6	—	650	33	—	—	—	—	—	—	Well reported dry. See log.
3-7	W1215 sec. 3	do	do	11-2-49	Dr	40	6	Screen 10 feet of no. 70 and no. 60 shot, 2 1/2 in. mesh.	650	—	—	—	35	40	0	Dr	See log.
4-1	W1216 sec. 4	J. Golden	L. E. Golden	—	Dr	190	—	—	695	—	—	—	—	—	—	Dr	—
4-2	Center of W sec. 4	Lena Golden	do	—	Dr	96	—	—	695	—	85	—	2.8	—	—	Dr	—
4-3	W1217 sec. 4	do	do	—	Dr	130	4	—	695	—	—	—	—	—	—	Dr, 1	—
4-4	W1218 sec. 4	O. S. Smith	O. Coy & Sons	—	Dr	50	—	—	680	30	—	—	—	—	—	—	—
4-5	W1219 sec. 4	McIntosh	L. E. Golden	1941	Dr	1000	4	—	700	95	—	—	80	3	—	Dr	Water at 500 feet. See log.
4-6	W sec. 4	Purdon Brewery	Water Bros.	—	Dr	330	—	—	700	190	—	—	—	—	—	—	—
4-7	W1220 sec. 4	do	L. E. Golden	9-50	Dr	41	—	—	705	—	73	23	—	210	—	7	Test pumped 12 hours.
4-8	W1221 sec. 4	do	do	4-30	Dr	70	—	—	705	63	—	—	—	—	—	7	Not enough water in test. See log.
4-9	W1222 sec. 4	do	do	do	Dr	70	—	—	705	48	—	—	—	—	—	—	Shells contained a little water. See log.
4-10	W1223 sec. 4	do	do	3-30	Dr	90	—	—	705	60	—	—	—	300	—	Dr	Well reported dry. See log.
5-1	W1224 sec. 5	do	do	—	Dr	98	4	—	700	—	—	—	—	—	—	Dr	—
5-2	W1225 sec. 5	do	O. Coy & Sons	—	Dr	145	—	—	660	—	—	—	—	—	—	Dr	—
5-3	W1226 sec. 5	R. J. Bent	O. J. Tiltie	1930	Dr	90	4	—	650	—	—	—	—	—	—	Dr	—
5-4	W1227 sec. 5	Eliza Warren	L. E. Golden	—	Dr	48	—	—	670	—	—	—	—	—	—	Dr	—
5-5	W1228 sec. 5	William H. Smith	do	—	Dr	92	—	—	670	—	—	—	—	—	—	Dr	—
5-6	W1229 sec. 5	E. McPherson	do	—	Dr	68	—	—	675	—	—	—	—	—	—	Dr	—
5-7	W1230 sec. 5	F. Stewart	do	—	Dr	205	4	—	695	—	—	—	—	—	—	Dr	—
10-1	W1231 sec. 10	R. L. Cook	B. Lester	—	Dr	202	4	—	695	—	—	—	—	—	—	Dr	See log.
11-1	W1232 sec. 11	L. S. Ellsala	William Bros.	3-6-47	Dr	202	4	Screen 4 feet of no. 8 perforation	695	—	175	26	—	—	—	Dr	See log.
11-2	W1233 sec. 11	F. O. Groom	L. E. Golden	—	Dr	180	6	—	705	—	—	—	—	—	—	Dr	—
11-3	W1234 sec. 11	William Bros.	do	1933	Dr	220	—	—	705	—	—	—	—	10	—	Dr	—
12-1	W1235 sec. 12	Wagoner Foundation	do	—	Dr	238	—	—	700	—	—	—	—	—	—	Dr	—
12-2	W1236 sec. 12	William Sells Police Institute	B. Erney	1942	Dr	214	6	—	710	—	—	—	—	—	—	Dr	See log.
12-3	W1237 sec. 12	J. S. Groom	Dillon Bros.	Spring 1936	Dr	277	6	—	715	—	—	—	—	—	—	Dr, 1	Capped 3-1-46. See log.
13-1	W1238 sec. 13	Purdon Research Housing Project	—	7-31-45	Dr	206	6	—	680	—	—	—	—	—	—	0	Observation well log.
14-1	W1239 sec. 14	W. H. Groom	Dillon Bros.	3-23-35	Dr	174	4	—	690	—	—	—	—	6	—	—	Double of wood from 125 to 139 feet. See log.
14-2	W1240 sec. 14	Orson Moore	B. Lester	2-15-54	Dr	180	4	Screened	675	—	—	—	—	5	—	Dr	—
15-1	W1241 sec. 15	Ernie Best	L. E. Golden	1950	Dr	161	4	—	690	—	—	—	—	—	—	Dr	—

Table 2.—Records of wells by Township in Tippah County—Continued

Ref. (T. 23 N., R. 5 W.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Material	Altitude above sea level (feet)	Depth to rock (feet)	Depth to water (feet)	Original casing diameter (inches)	Original casing depth (feet)	Water level (feet)	Head (feet)	Drawdown (feet)	Use	Remarks
16-1	Section 16, T. 23 N., R. 5 W.	E. Weaver	do	1933	Dr	173	4	—	695	—	143	3 1/2	—	—	10	—	Dr	—
17-1	Section 17, T. 23 N., R. 5 W.	H. Wicks	do	1946	Dr	156	—	—	635	—	—	3 1/2	29	—	—	—	Dr	See log.
20-2	Section 20, T. 23 N., R. 5 W.	J. Klutke	Dillon Bros.	1929	Dr	168	4	Screens 4 feet of no. 30 shot	675	—	167	3 1/2	37	—	10	—	Dr	See log.
20-3	Section 20, T. 23 N., R. 5 W.	F. Bauer	do	11-12-24	Dr	193	4	Screens 3 feet of no. 6 perforation	670	—	167	3 1/2	26	—	7	—	—	See log.
20-3	Section 20, T. 23 N., R. 5 W.	Triguan	L. E. Walden	—	Dr	180	4	—	670	—	—	—	—	—	10	—	Dr	See log.
22-1	Section 22, T. 23 N., R. 5 W.	F. H. Monahan	O. Coy & Sons	—	Dr	65	4	—	545	—	—	—	—	—	—	—	—	—
22-1	Section 22, T. 23 N., R. 5 W.	F. H. Monahan	L. E. Walden	1920	Dr	196	4	—	640	—	146	—	16	—	—	—	Dr, 2	—
22-4	Section 22, T. 23 N., R. 5 W.	Charles Miller, Alice Myers	do	1916	Dr	161	4	—	665	—	—	—	11	—	—	—	Dr, 2	—
22-3	Section 22, T. 23 N., R. 5 W.	Ferdinand Koppert, Central Firm	A. Walden	about 1923	Dr	265	6	—	660	—	—	—	—	—	50	—	Dr	—
23-4	Section 23, T. 23 N., R. 5 W.	Lesley Firm, Federal University	—	1926	Dr	165	6	—	660	—	—	—	15	—	—	—	Dr, 3	—
24-1	Section 24, T. 23 N., R. 5 W.	O. T. Gregg	L. E. Walden	—	Dr	256	—	—	530	150	—	—	—	—	—	—	Dr	Subsidiary water reported. Layer of gravel above limestone.
24-1	Section 24, T. 23 N., R. 5 W.	H. J. Mickey	do	Spring 1946	Dr	69	4	—	590	—	—	—	—	—	—	—	Dr	—
24-2	Section 24, T. 23 N., R. 5 W.	Ferdinand Koppert, Federal University	Dillon Bros.	10-23-46	Dr	139	4	—	540	—	—	—	30	—	—	—	Dr, 2	Test pumped 4 hours. See log.
24-1	Section 24, T. 23 N., R. 5 W.	Jacob Schalle	O. Coy & Sons	—	Dr	60	4	—	600	—	—	—	—	—	—	—	—	—
25-1	Section 25, T. 23 N., R. 5 W.	T. J. Nelson	do	—	Dr	145	4	—	600	—	—	—	—	—	—	—	—	—
25-1	Section 25, T. 23 N., R. 5 W.	do	H. Lister	—	Dr	130	4	—	565	—	—	—	—	—	—	—	—	—
25-1	Section 25, T. 23 N., R. 5 W.	F. Condit	do	—	Dr	144	4	—	600	—	—	—	—	—	—	—	—	—
25-2	Section 25, T. 23 N., R. 5 W.	O. O. Overton	do	1922	Dr	137	4	—	600	—	—	—	—	—	—	—	—	—
25-2	Section 25, T. 23 N., R. 5 W.	Ed Lilly & Co.	Sammy Hubert Water Supplies, Inc.	July-Aug. 1921	Dr	94	—	—	513	—	—	—	—	—	—	—	—	Drilled to 20 feet, water level 6 feet drilled to 30 feet, (flange, see log).
25-3	Section 25, T. 23 N., R. 5 W.	do	O. J. Tines	do	Dr	74	—	—	515	—	—	—	—	—	—	—	—	See log.
26-1	Section 26, T. 23 N., R. 5 W.	John A. Myers	do	5-46	Dr	90	—	—	530	—	—	—	—	—	—	—	Dr, 2	See log.
26-2	Section 26, T. 23 N., R. 5 W.	Ed Lilly & Co.	Sammy Hubert Water Supplies, Inc.	July-Aug. 1921	Dr	40	—	—	513	—	—	—	—	—	—	—	—	See log.
26-3	Section 26, T. 23 N., R. 5 W.	do	do	April-June 1921	Dr	30	7	Galvanized pipe 3 feet	541	—	—	—	—	—	—	—	—	Water level measured 5/14/21. Screen set from 44 to 40 feet. See log.
26-4	Section 26, T. 23 N., R. 5 W.	do	do	do	Dr	20	7	Galvanized pipe 3 feet	514	—	—	—	—	—	—	—	—	Water level measured 5/14/21. Screen set from 44 to 40 feet. See log.
26-3	Section 26, T. 23 N., R. 5 W.	do	do	do	Dr	10	7	Galvanized pipe 3 feet	508	—	—	—	—	—	—	—	—	Water level measured 5/14/21. Water level in well reported. (Flange change in March River stage. Screen set from 28 to 30 feet and 71 to 60 feet. See log.)
26-6	Section 26, T. 23 N., R. 5 W.	do	do	do	Dr	144	7	Galvanized pipe 3 feet	512	129	—	—	—	—	—	—	—	Water level in well reported. (Flange change in March River stage. See log.)

Table 2—Records of Wells by Township in Stephens County—Coal Leased

TP (T. 23 N., R. 9 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Permanence (months)	Finish	Altitude above sea level (feet)	Depth to water (feet)	Principal water-bearing zone (feet)	Water level (feet)	Water level (feet) 2/27	Remarks
26-7	adjacent sec. 26	Ed Lilly & Co.	James H. H. Miller, Sup. pipes, fan.	Spring 1932	Dr	127	7	galvanized pipe 3 feet	510	126	—	—	—	Water level in well reflects change in Mimbah River stage. Screen set from 119 to 126 feet. See log.
26-8	adjacent sec. 26	do	do	do	Dr	51	7	galvanized pipe 3 feet	514	—	—	9	—	Water level measured 8/14/31. Screen set from 46 to 51 feet. See log.
26-9	adjacent sec. 26	do	do	do	Dr	53	7	galvanized pipe 3 feet	514	—	—	9	—	Water level measured 5/14/31. Screen set from 44 to 49 feet. See log.
26-10	adjacent sec. 26	do	do	do	Dr	59	7	galvanized pipe 3 feet	514	—	—	9	—	Water level measured 2/14/31. Screen set from 44 to 49 feet. See log.
26-11	adjacent sec. 26	do	do	do	Dr	51	12	galvanized pipe 30 feet	514	—	—	—	—	Screen set from 40 to 51 feet. See log.
26-12	adjacent sec. 26	do	do	do	Dr	46	7	galvanized pipe 3 feet	511	—	—	—	—	Screen set from 32 to 37 feet. See log.
26-13	adjacent sec. 26	do	do	do	Dr	46	7	galvanized pipe 3 feet	511	—	—	—	—	Screen set from 32 to 37 feet. See log.
26-14	adjacent sec. 26	do	do	do	Dr	145	12	galvanized pipe 30 feet	513	113	—	—	—	Screen set from 32 to 46 feet. See log.
26-15	adjacent sec. 26	do	do	July-Aug 1932	Dr	53	7	galvanized pipe 3 feet	513	—	—	—	—	See log.
26-16	adjacent sec. 26	do	do	do	Dr	54	12	galvanized pipe 10 feet	511	—	—	—	—	See log.
26-17	adjacent sec. 26	do	do	do	Dr	47	7	galvanized pipe 3 feet	513	—	—	—	—	See log.
26-18	adjacent sec. 26	do	do	do	Dr	55	7	galvanized pipe 3 feet	513	—	—	11	—	Water level measured 8/13/31. Water level in well reflects change in Mimbah River stage. Screen set from 30 to 35 feet. See log.
26-19	adjacent sec. 26	do	do	do	Dr	51	7	galvanized pipe 3 feet	512	—	—	12	—	Water level in well reflects change in Mimbah River stage. Screen set from 30 to 35 feet. See log.
26-20	adjacent sec. 26	do	do	do	Dr	59	7	galvanized pipe 3 feet	514	—	—	17	—	Water level measured 8/13/31. Water level in well reflects change in Mimbah River stage. Screen set from 30 to 35 feet. See log.
26-21	adjacent sec. 26	do	do	do	Dr	63	7	galvanized pipe 3 feet	513	—	—	—	—	Water level measured 8/13/31. Water level in well reflects change in Mimbah River stage. Screen set at 45 feet. See log.
26-22	adjacent sec. 26	do	do	Summer 1931	Dr	43	7	galvanized pipe 3 feet	513	—	—	—	—	See log.
26-23	adjacent sec. 26	do	do	do	Dr	44	—	—	510	—	—	—	—	See log.
26-24	adjacent sec. 26	do	do	do	Dr	57	—	—	500	63	—	—	—	See log.
26-25	adjacent sec. 26	do	do	do	Dr	54	—	—	513	—	—	—	—	See log.
26-26	adjacent sec. 26	do	do	do	Dr	58	—	—	510	—	—	—	—	See log.
26-27	adjacent sec. 26	do	do	do	Dr	137	—	—	509	—	—	—	—	See log.

Table 2—Records of Wells by Township in Tippecanoe County—Continued

702 (T. 23 R., N. 5 W.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Material	Altitude above sea level (feet)	Depth to rock (feet)	Depth to water (feet)	Water level (feet)	Flow (gpm)	Development (feet)	Use	Remarks
26-28	W. 1/4 sec. 36	W. L. Lally & Co.	Robert Meibohm Water Sup- plies, Inc.	Summer 1934	Dr	84	—	—	322	—	—	—	—	—	1	See log.
26-29	W. 1/4 sec. 36	do	do	do	Dr	79	—	—	320	—	—	—	—	—	1	See log.
26-30	W. 1/4 sec. 36	do	do	do	Dr	64	7	Slotted pipes 3 feet	323	—	—	13	—	—	1	Water level measured 8/15/34. Water level in well the flow change in which river above. Screen set from 63 to 64 feet. See log.
26-31	W. 1/4 sec. 36	do	do	do	Dr	59	7	Slotted pipes 3 feet	315	—	—	15	—	—	1	Water level measured 8/15/34. Water level in well the flow change in which river above. Screen set from 54 to 59 feet. See log.
26-32	W. 1/4 sec. 36	do	do	do	Dr	74	13	Slotted pipes 30 feet	318	—	—	—	—	—	1	Screen set from 70 to 80 feet. See log.
26-33	W. 1/4 sec. 36	do	do	do	Dr	63	7	Slotted pipes 3 feet	318	—	—	—	—	—	1	Screen set from 54 to 63 feet. See log.
26-34	W. 1/4 sec. 36	do	do	do	Dr	59	7	Slotted pipes 3 feet	316	—	—	—	—	—	1	Screen set from 55 to 59 feet. See log.
26-35	W. 1/4 sec. 36	do	do	do	Dr	33	7	Slotted pipes 3 feet	314	—	—	14	—	—	1	Water level measured 8/15/34. Water level in well the flow change in which river above. Screen set from 50 feet. See log.
26-36	W. 1/4 sec. 36	do	do	July-Aug 1934	Dr	58	7	Slotted pipes 3 feet	318	—	—	—	—	—	1	See log.
26-37	W. 1/4 sec. 36	do	do	do	Dr	136	—	—	316	—	—	—	—	—	1	See log.
26-38	W. 1/4 sec. 36	do	do	July-Aug 1934	Dr	38	—	—	314	—	—	—	—	—	1	See log.

703 (T. 23 R., N. 5 W.)

2-1	W. 1/4 sec. 5	John H. Harty	L. S. Dalton	—	Dr	268	4	—	685	—	—	—	—	—	—	—	See log.
2-2	W. 1/4 sec. 5	Indiana State Electric Power Co.	—	—	Dr	193	—	Screen 20 feet	510	—	—	60	600	—	—	—	See log.
2-3	W. 1/4 sec. 5	do	Layne-Markham Co., Inc.	11-27-33	Dr	203	8, 4	—	682	—	—	—	—	—	1	See log.	
2-4	W. 1/4 sec. 5	do	do	—	Dr	298	—	—	682	288	—	—	—	—	1	See log.	
2-5	W. 1/4 sec. 5	do	do	—	Dr	285	—	—	682	—	—	—	—	—	1	See log.	
2-6	W. 1/4 sec. 5	do	do	2-6-34	Dr	202	—	—	684	272	—	—	—	—	1	See log.	
2-7	W. 1/4 sec. 6	Francis Murphy	L. S. Dalton	1933	Dr	193	—	—	693	—	—	38	—	—	2	See log.	
2-8	W. 1/4 sec. 6	A. Fraibuffer	Indiana Elec. Co.	1948	Dr	194	4	Screen 3 feet of no. 8 perforation	693	—	—	278	5	0	2	See log.	
2-1	W. 1/4 sec. 7	P. Schmitz	H. Luster	1933	Dr	217	4	—	720	—	—	100	—	—	2	See log.	
2-2	W. 1/4 sec. 7	Hoop & Foundation	L. S. Dalton	—	Dr	208	—	—	710	—	—	—	—	—	—	—	
2-3	W. 1/4 sec. 7	Carl Oberhel	O. J. Titus	March 1935	Dr	213	—	—	714	—	—	100	—	—	2	See log.	
2-4	W. 1/4 sec. 8	H. Schmitz	L. S. Dalton	1945	Dr	216	—	—	720	—	—	213	—	—	2	See log.	



Table 2—Records of Wells by Township in Hippocrene County—Continued

Foot (ft., 2.5 m., 8.4 ft.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Material	Altitude above sea level (feet)	Depth to rock (feet)	Depth to casing (feet)	Production (gallons per minute)	Water level (feet)	Head level (feet)	Deviation (feet)	10' test	Remarks
8-2	W-2	Ray Einar	O. J. Zipes	—	Dr	28	—	—	540	—	—	—	—	—	—	Dr, 1	—
8-3	W-3	Paul Johnson	L. E. Johnson	1947	Dr	296	4	—	70.5	—	—	—	24	—	—	Dr	—
8-4	W-4	L. Randall, L. F. Hall	do	—	Dr	342	4	—	500	—	—	—	—	—	—	Dr	—
9-1	W-1	F. Schneider	Walden Bros.	11-29-48	Dr	94	4	—	539	—	32	—	39	8	0	Dr	See log.
9-2	W-2	do	do	4-49	Dr	93	4	—	535	—	43	—	40	6	0	Dr	See log.
9-3	W-3	do	do	7-49	Dr	96	4	—	535	—	37	—	—	—	—	Dr, 2	See log
9-4	W-4	Deana Electric Manufacturing Co.	H. H. Lamb	Quam 1952	Dr	129	10	—	535	—	73	—	40	205	2	78	Test pump 4 hours. See log
9-5	W-5	do	do	46	Dr	336	13	—	535	—	—	—	40	654	3	78	See log.
9-6	W-6	do	do	7-53	Dr	338	6	—	535	330	—	—	35	—	—	7	bedrock is shaly. See log.
9-7	W-7	do	—	Feb. 1950	Dr	—	—	Screened	538	345	76	—	40	300	—	—	bedrock is shaly. See log.
10-1	W-1	J. Klucke	E. Klater	2-14-53	Dr	97	4	Drilled pipe 2 feet	550	—	20	—	35	10	—	Dr	See log.
10-2	W-2	Myron W. W. W. W.	do	9-20-53	Dr	92	4	—	550	—	—	—	35	—	—	Dr	—
10-3	W-3	George Bond	do	4-13-53	Dr	91	4	—	535	—	—	—	20	10	—	Dr	—
10-4	W-4	Jesse Wallace	Walden Bros.	6-20-46	Dr	159	4	Screen 4 feet of no. 6 perforation	560	—	13	—	48	6	0	Dr	See log.
11-2	W-2	H. H. Cummings	do	1949	Dr	77	4	Screen 3 feet of no. 6 perforation	550	—	45	—	1	10	—	Dr	See log.
12-3	W-3	F. Fritz	H. Klater	—	Dr	64	—	—	645	—	—	—	—	—	—	Dr, 1	Water rocky at times.
12-4	W-4	G. J. Strickland	A. L. Mabe	—	Dr	80	4	—	530	—	—	—	16	—	—	Dr, 1	See log.
12-5	W-5	Logan Electric Works	Logan Electric Works	1-13-53	Dr	94	16	—	530	—	—	—	—	—	—	78	See log.
12-6	W-6	do	Walden Bros.	3-4-52	Dr	129	—	Screened	500	—	—	—	77	—	—	7	See log.
12-7	W-7	W. L. Lupton	H. H. Lamb	—	Dr	300	11	—	500	—	—	—	20	500	—	78	See log.
12-8	W-8	do	do	—	Dr	308	—	—	535	—	—	—	—	500	—	73	See log.
12-9	W-9	do	do	—	Dr	100	12	Screen 20 feet of no. 100 mesh, 20 ft. sand.	533	—	—	—	—	750	—	78	See log.
12-10	W-10	do	do	1939	Dr	100	12	Screen 20 feet of no. 100 mesh, 20 ft. sand.	535	—	—	—	—	650	—	74	See log.
12-11	W-11	do	do	Spring 1947	Dr	102	16	Screen 20 feet	535	—	—	—	—	—	—	75	See log.
12-12	W-12	do	—	—	Dr	54	2	—	530	—	—	—	—	—	—	—	Formerly observation well in 2.
12-13	W-13	Logan Electric Works	H. A. Clark	1913	Dr	112	12	—	530	—	—	—	—	—	—	—	Observation well in 4.
12-14	W-14	do	do	1940	Dr	160	12	—	625	—	—	—	—	750	—	73	—

WPA

Table 2—Records of Wells by Township in Riparian County—Continued

Tab (7, 23, 24, 25, 26, 27)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Material	Altitude above sea level (feet)	Depth to rock (feet)	Depth to casing (feet)	Production casing diameter	Oblique casing	Meter level (feet)	Head (feet)	Drawdown (feet)	Use	Remarks
19-2	Sec. 19	Purdue University Physical Plant	H. Kersey	—	Dr	180	12	—	623	—	—	—	—	110	150	—	4	Formerly observation well to G.
19-3	Sec. 19	do	do	about 1945	Dr	—	12	—	623	—	—	—	—	—	300	—	PS	well no. 2.
19-4	Sec. 19	do	do	5-18-46	Dr	201	12	—	643	—	—	—	—	110	500	—	PS	well no. 3.
19-5	Sec. 19	do	do	about 1945	Dr	—	12	—	643	—	—	—	—	—	300	—	PS	well no. 4.
19-6	Sec. 19	Purdue University College-Northern Chem. Bldg.	do	6-20-53	Dr	205	10	—	620	—	—	—	—	—	—	—	PS	Permanent well no. 3. See log.
19-7	Sec. 19	do	do	9-29-52	Dr	199	10	—	620	—	—	—	—	—	—	—	PS	Permanent well no. 2. See log.
19-8	Sec. 19	Purdue University Life Sciences Building	do	1-17-53	Dr	223	12	—	623	—	—	—	—	—	—	—	—	Permanent well no. 1. See log.
19-9	Sec. 19	do	do	6-20-53	Dr	201	12	—	643	—	—	—	—	—	—	—	PS	Permanent well no. 2. See log.
19-10	Sec. 19	Purdue University	do	11-4-58	Dr	205	16	—	623	—	—	—	—	93	1100	—	PS	Meter level-measured 4/50. See log.
19-11	Sec. 19	do	do	1-26-61	Dr	168	6	—	623	210	97	23	—	97	—	—	0	Observation well to G. 204-210 feet drilled to 210 feet. See log.
19-12	Sec. 19	do	do	10-21-61	Dr	227	16	—	623	—	—	—	—	—	—	—	—	See log.
20-1	Sec. 20	Riparian County Courthouse	H. Kelly	about 1957	Dr	230	—	—	590	170	316	14	—	None	3	—	PS	Meter contained sulphur. See reference (1) p. 2. See log.
20-2	Sec. 20	Riparian County Courthouse	L. Hicks	1938	Dr	245	—	—	590	200	—	—	—	—	—	—	PS	See log.
20-3	Sec. 20	do	F. D. Boyd	about 1960	Dr	231	—	—	590	—	—	—	—	—	—	—	PS	Meter contained sulphur. See log.
20-4	Sec. 20	Leah Department Store	Kersey or Thinks	6-24	Dr	104	20	—	590	—	—	—	—	—	—	—	PS	See log.
20-5	Sec. 20	LaFayette Ice and Coal Company	O. Peff Co.	—	Dr	135	—	—	595	—	—	—	—	—	—	—	1	well no. 2. See log.
20-6	Sec. 20	do	do	5-21-45	Dr	150	12	Screen: 20 feet of no. 20 mesh	535	—	—	—	—	23	300	—	1	well no. 3. See log.
20-7	Sec. 20	Amalthea Farm	O. J. Titus	1938	Dr	118	10	Screen: 12 feet	535	—	—	—	—	62	—	—	1	—
20-8	Sec. 20	do	do	about 1939	Dr	210	8	Screen: 12 feet	535	—	—	—	—	—	—	—	—	—
20-9	Sec. 20	City of Lafayette	H. Kersey	2-12	Dr	112	16	—	510	130	—	—	—	29	500 to 1400	—	PS	Pumped sand at base.
20-1	Sec. 22	Brom Rubber Co.	L. L. Hicks	about 1935	Dr	150	8	—	666	—	—	—	—	125	175 to 200	—	1	See log.
20-2	Sec. 22	Perkins Bros. Coal Co.	Wagon-Northern Co., Inc.	—	Dr	220	8	—	673	219	—	—	—	—	—	—	1	See log.
20-3	Sec. 24	Demp Heflice	William Hovee	1-22-53	Dr	28	4	Screen: 3 feet of no. 8 perforation	645	—	18	12	—	16	6	0	Dr	See log.
20-2	Sec. 24	O. Bernhoff	do	4-15-54	Dr	99	4	Screen: 4 feet of no. 30 mesh, wire wound	672	—	92	7	—	73	8	0	Dr	See log.
20-1	Sec. 25	F. Kiefer	do	6-15-55	Dr	67	4	Screen: 3 feet of no. 8 perforation	653	—	43	24	—	43	10	0	Dr, 2	See log.

Table 3—Records of Wells by Township in Dipsomous County—Continued

Top (p. 23 B., L. & R.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Capacity (bbls)	Notes	Altitude above level (feet)	Depth to pack (feet)	Estimated casing depth (feet)	Estimated casing diameter (inches)	Geologic age	Water level (feet)	Flow (gpm)	Drawdown (feet)	10/000	Remarks	
24-2	SE1/4 sec. 25	Foreman Bros.	Miloon Bros.	8-21-52	Dr	83	4	Screen 3 feet of no. 5 perforation	654	—	44	24, Or	F	32	10	0	0	See log.	
24-1	SE1/4 sec. 26	D. C. Bickelbeer	H. Lister	—	Dr	—	4	—	655	120	—	—	—	—	—	—	—	—	See log.
24-2	NE1/4 sec. 26	Dr. E. Perkins	Miloon Bros.	1952	Dr	171	4	—	673	—	157	24, Or	F	113	7	0	—	See log.	
27-1	SE1/4 sec. 27	National Mines	Layne-Hartman Co., Inc.	7-17-43	Dr	233	—	—	670	233	—	—	—	—	—	—	—	See log.	
27-2	SE1/4 sec. 27	L. Johnson	Miloon Bros.	3-31-48	Dr	76	4	Screen 3 feet of no. 5 perforation	660	—	56	Or	F	56	32	—	—	See log.	
27-3	SE1/4 sec. 27	K. Sawyer	do	3-24-47	Dr	93	4	Screen 4 feet	660	—	84	Or	F	76	8	0	—	See log.	
27-4	SE1/4 sec. 27	Miloon Bros.	—	—	Dr	126	8	—	670	—	—	—	—	—	—	—	—	Observation well Fr 3.	
29-1	SE1/4 sec. 29	Miloon-Purline	Layne-Hartman Co., Inc.	8-27-50	Dr	160	6.4	—	535	159	—	—	—	—	—	—	—	Foot well no. 1. See log.	
29-2	SE1/4 sec. 29	do	do	—	Dr	130	6.4	—	535	133	—	—	—	—	—	—	—	Foot well no. 2. See log.	
29-3	SE1/4 sec. 29	do	do	5-16-51	Dr	137	6.4	—	535	136	—	—	—	—	—	—	—	Foot well no. 3. See log.	
29-4	SE1/4 sec. 29	do	do	6-21-51	Dr	115	6	—	529	112	—	—	—	—	—	—	—	Foot well no. 4. See log.	
29-5	SE1/4 sec. 29	do	do	12-29-50	Dr	129	30	General pack	535	—	100	29	F	—	—	—	—	Permanent well no. 1. See log.	
29-6	SE1/4 sec. 29	do	do	10-5-51	Dr	112	30	General pack	535	—	—	—	F	—	—	—	—	Permanent well no. 2. See log.	
29-7	SE1/4 sec. 29	Miloon Bros. Ward	Layne-Hartman Co., Inc.	—	Dr	98	10	Screen 23 feet	545	—	87	Or	F	5	920	40	—	Test pumped 8 hours. See log.	
29-8	SE1/4 sec. 29	do	do	1-25-53	Dr	110	—	—	545	109	52	Or	F	10	—	—	—	Foot well no. 1. See log.	
29-9	SE1/4 sec. 29	do	do	11-24-46	Dr	99	—	—	545	—	—	—	—	—	—	—	—	Foot well no. 2. See log.	
29-10	SE1/4 sec. 29	do	do	8-27-46	Dr	115	6	—	545	—	—	—	F	—	—	—	—	Foot well no. 3. See log.	
29-11	SE1/4 sec. 29	do	do	—	Dr	140	—	—	530	135	20	Or	F	8	—	—	—	See log.	
30-1	SE1/4 sec. 30	University Dairy	C. Coy & Sons	—	Dr	45	—	—	580	—	—	—	F	—	—	—	—	—	
30-2	SE1/4 sec. 30	Eastern Indiana Oilfield Co.	Erwin and Sons	—	Dr	133	12	Screen 14 feet of no. 20 slot	567	—	90	24, Or	F	61	540	21	—	See log.	
30-3	SE1/4 sec. 30	do	O. J. Thies	4-46	Dr	116	6	—	567	—	—	—	—	—	—	—	—	See log.	
30-4	SE1/4 sec. 30	do	Coak	6-6-46	Dr	124	12	—	567	—	124	20	F	66	—	—	—	See log.	
30-5	SE1/4 sec. 30	do	Erwin and Sons	1948	Dr	147	12	Screen 23 feet	567	—	114	23	F	65	473	21	—	Test pumped 1 1/2 hours. See log.	
30-6	SE1/4 sec. 30	Ill. Utility & Co.	Harvey Method Water Supply Pipe, Inc.	1952	Dr	130	12	Bottom pipe 10 feet	512	—	—	—	F	—	—	—	—	3 screens set from 60 to 70 feet from 92 to 107 feet, and from 123 to 130 feet. See log.	
30-7	SE1/4 sec. 30	do	do	6	Dr	129	—	—	512	127	—	—	F	—	—	—	—	See log.	
30-8	SE1/4 sec. 30	do	do	6	Dr	65	—	—	512	—	—	—	—	—	—	—	—	See log.	
30-9	SE1/4 sec. 30	do	do	6	Dr	96	—	—	517	—	—	—	—	—	—	—	—	See log.	
30-10	SE1/4 sec. 30	do	do	6	Dr	102	—	—	512	—	—	—	—	—	—	—	—	See log.	
30-11	SE1/4 sec. 30	do	do	4-4-53 1952	Dr	93	—	—	514	—	—	—	F	—	—	—	—	See log.	
30-12	SE1/4 sec. 30	do	do	6	Dr	97	—	—	515	—	—	—	—	—	—	—	—	See log.	

Table 2--Records of Wells by Township in Tippecanoe County--Continued

Top (T. 2) R., S. & N.

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Number (inches)	Finished	Altitude above sea level (feet)	Depth to rock (feet)	Depth (feet)	Production (gallons per day)	Character	Geologic age	Water level (feet)	Yield (gpm)	Drawdown (feet)	Use	Remarks
20-13	W123456 sec. 20	W. Lilly & Co.	Henry White Water Supply, Inc.	Aug-Sept 1922	Dr	79	7	Stalled pipe 3 feet	314	—	—	—	64	F	—	—	—	F	Water level measured 9/11/22. Screen set from 74 to 79 feet. See log.
20-14	W123456 sec. 20	do	do	do	Dr	79	7	Stalled pipe 3 feet	317	—	—	—	53, Jr	F	15	—	—	F	Water level measured 9/11/22. Screen set from 42 to 47 feet. See log.
20-15	W123456 sec. 20	do	do	do	Dr	115	7	Stalled pipe 3 feet	317	—	—	—	54, Jr	F	13	—	—	F	Water level measured 9/11/22. Screen set from 100 to 109 feet. See log.
20-16	W123456 sec. 20	do	do	do	Dr	80	7	Stalled pipe 3 feet	326	—	—	—	54, Jr	F	14	—	—	F	Water level measured 9/11/22. Screen set from 75 to 79 feet. See log.
20-17	W123456 sec. 20	do	do	do	Dr	92	12	Stalled pipe 30 feet	326	—	—	—	54, Jr	F	—	—	—	F	Water level measured 9/11/22. Screen set from 81 to 91 feet. See log.
20-18	W123456 sec. 20	do	do	do	Dr	80	7	Stalled pipe 3 feet	327	—	—	—	54	F	15	—	—	F	Water level measured 9/11/22. Screen set from 75 to 80 feet. See log.
20-19	W123456 sec. 20	do	do	do	Dr	97	—	Stalled pipe	328	—	—	—	54	F	16	—	—	F	Water level measured 9/11/22. Screen set from 75 to 80 feet. See log.
20-20	Center 0 1/2 sec. 20	do	do	do	Dr	95	—	Stalled pipe	325	—	—	—	54	F	—	—	—	F	—
20-21	W123456 sec. 20	do	do	—	—	70	156	—	320	—	—	—	Jr	F	—	500	—	F	Calipers find bottom area of 100 feet. 10 inch diameter. 1000 feet log.
21-1	W123456 sec. 21	Indiana Locomotive Co.	Dallas Bros.	6-19-17	Dr	67	8	Screen 12 feet of no. 10 slot 1/2 inch	425	—	47	20	54, Jr	F	47	173	—	F	See log.
21-2	W123456 sec. 21	do	do	9-2-22	Dr	65	6	Screen 3 feet of no. 20 slot 1/2 inch	423	—	47	18	54, Jr	F	47	50	—	F	See log.
21-3	W123456 sec. 21	F. Coyner	do	4-19-13	Dr	81	6	Screen 3 feet of no. 8 perforation	420	—	63	20	54, Jr	F	63	8	0	—	See log.
21-4	W123456 sec. 21	S. Falls	do	11-4-20	Dr	81	4	Screen 3 feet of no. 8 perforation	420	—	61	20	54, Jr	F	61	9	0	20	See log.
21-5	W123456 sec. 21	John Beck	do	9-17	Dr	70	4	Screen 3 feet of no. 8 perforation	428	—	54	16	54, Jr	F	54	6	—	20	See log.
21-6	W123456 sec. 21	Harmon Egan	do	3-23-14	Dr	90	6	Screen 3 feet of no. 8 perforation	425	—	73	17	54	F	73	8	0	20	See log.
21-7	W123456 sec. 21	W. Lilly & Co.	Henry White Water Supply, Inc.	July-Aug. 1922	Dr	77	7	Stalled pipe 3 feet	325	—	—	—	54, Jr	F	13	—	—	F	Water level measured 9/11/22. Screen set from 70 to 73 feet. See log.
21-8	W123456 sec. 21	do	do	do	Dr	67	7	Stalled pipe 3 feet	327	—	—	—	54, Jr	F	15	—	—	F	Water level measured 9/11/22. Screen set from 61 to 66 feet. See log.
21-9	W123456 sec. 21	do	do	do	Dr	69	—	—	326	—	—	—	54, Jr	F	14	—	—	F	Water level measured 9/11/22. Screen set from 48 to 53 feet. See log.
21-10	W123456 sec. 21	do	do	do	Dr	129	—	—	326	—	—	—	54, Jr	F	14	—	—	F	See log.
21-11	W123456 sec. 21	do	do	do	Dr	77	7	Stalled pipe 3 feet	326	—	—	—	54, Jr	F	—	—	—	F	Water level measured 9/11/22. Screen set from 68 to 73 feet. See log.
21-12	W123456 sec. 21	do	do	do	Dr	78	12	Stalled pipe 10 feet	326	—	—	—	54, Jr	F	—	—	—	F	Screen set from 65 to 75 feet. See log.

Table 2—Records of Wells by Township in DePue County—Continued

Top (T. 23 N., R. 4 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Number (inches)	Material	Material set level (feet)	Depth to water (feet)	Production (bbls per day)	Water level (feet)	Uplift (gpm)	Overhead (feet)	10' Gage	Remarks	
21-1	adjacent sec. 21	Ed Lilly & Co.	Henry Wilson Water Supply Co., Inc.	July-Aug. 1932	Dr	54	7	drilled pipe 3 feet	53	—	—	33	—	—	Y	Water level measured 8/1/32. Water level in well reflects stage at 40 to 50 feet. See log.	
21-2	adjacent sec. 21	do	do	06	Dr	61	7	drilled pipe 3 feet	512	—	—	20	—	—	Y	Water level measured 8/1/32. Water level in well reflects stage in Ash Grove stage some 200 feet from 47 to 72 feet.	
21-3	adjacent sec. 21	do	do	46	Dr	60	—	—	518	—	—	—	—	—	Y	See log.	
22-1	adjacent sec. 22	Charles Ross	Ollan Bros.	3-22-31	Dr	72	—	Screen 3 feet of no. 8 perforation	645	—	34	20	—	—	—	See log.	
22-2	adjacent sec. 22	F. Williams	H. Lister	6-13	Dr	60	4	—	640	—	—	40	9	—	Do	—	
22-3	adjacent sec. 22	Joe Clark	H. Lister	6-24	Dr	67	3	drilled pipe 2 feet	640	—	60	8	—	—	Do	—	
24-1	adjacent sec. 24	Aluminum Company of America	Layne-Whitburn Co., Inc.	8-10-43	Dr	204	—	—	643	204	—	—	—	—	Y	Test well no. 6. See log.	
24-2	adjacent sec. 24	do	do	10-20-43	Dr	214	—	—	642	208	24	59	—	—	Y	Test well no. 7. 25 gpm per foot of drawdown. See log.	
24-3	adjacent sec. 24	do	do	3-27-43	Dr	197	—	—	643	197	—	—	—	—	Y	Sealed with concrete. See log.	
24-4	adjacent sec. 24	do	do	10-13	Dr	203	24	Overall pack	643	—	—	74	700	19	Y	Permanent well no. 4. Inside diameter 15 inches. Test pumped 9 hours. See log.	
24-5	adjacent sec. 24	do	do	10-27-43	Dr	208	24	Overall pack	643	208	28	63	300	35	Y	Test and permanent well no. 3. Inside diameter 15 inches. Test pumped 8 hours. See log.	
24-6	adjacent sec. 24	do	do	6-12-43	Dr	201	24	Overall pack	642	201	24	61	300	37	Y	Permanent well no. 2. Inside diameter 15 inches. Test pumped 8 hours. See log.	
24-7	adjacent sec. 24	do	do	1-26-43	Dr	203	24	Overall pack	643	—	24	61	300	64	0	0	Observation well to 9. Test and permanent well no. 1. Inside diameter 15 inches. Test pumped 3 hours. See log.
24-8	adjacent sec. 24	do	do	3-25-40	Dr	206	16	—	642	213	76	78	480	19	Y	Permanent well no. 1. Test pumped 8 hours. See log.	
24-9	adjacent sec. 24	G. H. Robinson	Ollan Bros.	7-28-30	Dr	76	4	Screen 3 feet of no. 8 perforation	643	—	64	60	8	0	Do	See log.	
24-10	adjacent sec. 24	Dorsey Feaster	do	8-3-30	Dr	76	4	Open end	660	—	63	—	9	—	Do	See log.	
24-11	adjacent sec. 24	G. H. Miller	do	10-6-46	Dr	95	4	Screen 4 feet of no. 8 perforation	643	—	73	71	8	0	Do	See log.	
24-12	adjacent sec. 24	Sam Danks	do	3-3-32	Dr	67	4	Screen 3 feet of no. 8 perforation	660	—	72	57	4	0	Do	See log.	
24-13	adjacent sec. 24	Henry Wilson	do	6-12-32	Dr	66	4	Screen 3 feet of no. 8 perforation	660	—	58	56	10	0	Do	See log.	
24-14	adjacent sec. 24	H. Williams and Associates, Inc.	do	10-8-33	Dr	69	6	Screen 3 feet of no. 8 perforation	660	—	58	56	10	0	Y	See log.	
24-15	adjacent sec. 24	Continental Feaster	G. Coy & Sons	—	Dr	110	6	Screen 3 feet	642	—	—	45	235	—	Y	Well no. 2.	
24-16	adjacent sec. 24	do	do	—	Dr	122	10	Screen 3 feet	642	—	—	45	920	—	Y	Well no. 1.	

Table 2—Records of Wells by Township in Tappan County—Continued

Top (p. 23 B., R. 4 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Number (Inches)	Finish	Depth to base of rock (feet)	Depth to top of casing (feet)	Actual measurement (feet)	Water level (feet)	Total (feet)	Deviation (feet)	Remarks
24-17	21st sec. 24	Centennial Presser	Jayne-Markham Dr., Inc.	—	Dr	120	—	—	643	—	60	—	—	—	See log.
24-18	21st sec. 24	do	G. Coy & Sons	1934	Dr	112	6	Screens 2 feet	—	—	—	45	290	—	Well no. 2.
24-19	21st sec. 24	Fairfield Manufacturing Co.	Jayne-Markham Dr., Inc.	3-16-31	Dr	123	26	—	—	—	—	—	500	—	Permanent well no. 1. See log.
24-20	21st sec. 24	do	do	7-18-31	Dr	123	26	—	—	—	—	—	500	—	Permanent well no. 2. See log.
24-21	21st sec. 24	do	do	1-23-31	Dr	120	6	—	—	—	—	—	—	—	Bedrock is shale. See log.
24-22	21st sec. 24	do	do	2-6-31	Dr	120	6, 6	—	—	—	—	—	—	—	Bedrock is shale. See log.
24-23	21st sec. 24	do	do	3-14-31	Dr	115	—	—	—	—	—	—	—	—	Bedrock is shale. See log.
25-1	21st sec. 25	Lee Swanson	Widom Bros.	6-18-31	Dr	165	—	—	—	—	—	—	—	—	Bedrock is live shale. See log.
25-2	21st sec. 25	do	do	6-25-31	Dr	118	4	Screens 3 feet of no. 6 perforation	—	—	130	23	30	3	See log.
25-3	21st sec. 25	Impadora Miller	do	1-23-47	Dr	76	4	—	—	—	65	47	6	1	See log.
25-4	21st sec. 25	Lee Swanson	do	10-31-33	Dr	71	4	Screens 3 feet of no. 6 perforation	—	—	66	47	10	0	See log.

Top (p. 23 E., R. 4 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Number (Inches)	Finish	Depth to base of rock (feet)	Depth to top of casing (feet)	Actual measurement (feet)	Water level (feet)	Total (feet)	Deviation (feet)	Remarks
2-1	21st sec. 5	John Qualls	Widom Bros.	10-3-31	Dr	130	4	Screens 5 feet of no. 6 perforation	—	—	132	77	6	0	See log.
2-1	21st sec. 7	J. L. Stiles	do	10-11-48	Dr	155	4	Screens 3 feet of no. 10 sh. 4 in. 10 sh. 4 in. 10 sh. 4 in.	—	—	125	100	12	—	See log.
6-1	21st sec. 8	Alas Farnum	do	—	Dr	121	4	Screens 3 feet of no. 6 perforation	—	—	111	43	7	6	See log.
12-1	21st sec. 12	Bert Math	M. Lister	9-1-34	Dr	69	4	Open end	—	—	69	35(1)	9	—	Drilled to 75 feet, casing pulled back to 68 feet. See log.
13-1	21st sec. 13	F. Kreitcher	G. Coy & Sons	—	Dr	100	3	—	—	—	—	—	—	—	Lids of water.
14-1	21st sec. 14	Bob Amaly	Widom Bros.	3-17	Dr	120	4	—	—	—	123	65	35	—	See log.
15-1	21st sec. 15	Paulabo	do	2-16-49	Dr	218	4	—	—	—	215	67	7	6	See log.
17-1	21st sec. 17	J. E. Bink	G. Coy & Sons	—	Dr	132	—	—	—	—	—	—	—	—	See log.
17-2	21st sec. 17	J. Fobels	Widom Bros.	6-26-51	Dr	249	4	—	—	—	169(1)	21	35	—	See log.
17-3	21st sec. 17	H. A. Birt	G. Coy & Sons	—	Dr	115	—	—	—	—	131	—	—	—	See log.
18-1	21st sec. 18	H. L. Biles	Widom Bros.	12-17-49	Dr	115	4	Screens 3 feet of no. 10 sh. 4 in.	—	—	102	96	7	2	See log.
19-1	21st sec. 19	J. Callaway	H. Lister	9-21	Dr	200	4	—	—	—	—	—	—	—	See log.
20-1	21st sec. 20	Paul Neer	Widom Bros.	3-21-51	Dr	116	4	—	—	—	97	97	6-15	—	Test pumped 9 hours. See log.
20-2	21st sec. 20	T. Smith	do	3-27-51	Dr	124	4	Screens 3 feet of no. 6 perforation	—	—	123	80	10	0	See log.
20-3	Center 21st sec. 20	H. Swarth	do	3-26-51	Dr	107	4	Screens 3 feet of no. 6 perforation	—	—	64	44	10	0	See log.
20-4	21st sec. 20	Ray Swanson of Tappan	do	5-7-48	Dr	235	6	Screens 8 feet of no. 10, 10, 10	—	—	221	64	60	—	See log.

Table 3—Records of Wells by Township in Tippecanoe County—Continued

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Well No.	Location	Owner	Driller	Date completed	Depth (feet)	Diameter (inches)	Production	Altitude above sea level (feet)	Depth to rock (feet)	Practical production depth (feet)	Character	Geologic age	Water level (feet)	Yield (gpm)	Loss (feet)	Remarks
20-1	Wagoner sec. 20	Boy Smith of America	Bilden Bros.	7-10-33	125	8	Screens 10 feet of No. 8 mesh, size sand	600	—	127	84, Jr	F	90	—	—	See log.
20-1	Wagoner sec. 21	Wagoner School	H. Lister	Winter 1913	196	4	—	664	—	—	84	F	—	—	—	See log.
20-2	Wagoner sec. 21	H. L. Stevens	O. Coy & Sons	1916	110	—	—	655	—	—	14	D	Flowed	—	—	See log.
20-2	Wagoner sec. 21	High Falls	Bilden Bros.	7-7-30	24	4	—	650	—	23	54, Jr	F	6	1	—	See log.
20-4	Wagoner sec. 21	Burrall Falls	do	10-17	30	4	Screens 3 feet of No. 8 perforation	650	—	35	4	F	23	—	—	See log.
20-5	Wagoner sec. 21	E. McLaughlin	do	3-9-18	71	4	Screens 3 feet	670	—	64	54, Jr	F	39	10	—	See log.
20-6	Wagoner sec. 21	William Payne	do	6-23-31	90	4	—	640	—	48	24, Jr	F	Flowed	48	—	See log.
20-7	Wagoner sec. 21	Harold West	do	6-28-33	143	4	Open end	600	—	141	8	—	Flowed	12	—	Flowed 1 1/2 gpm the first day since the record. See log.
20-1	Wagoner sec. 22	Kenneth Cook	do	6-18-30	72	4	Screens 3 feet of No. 8 perforation	623	—	64	54, Jr	F	57	10	—	See log.
20-2	Wagoner sec. 22	Wm. V. Mann	do	10-17	65	4	Screens 3 feet of No. 8 perforation	620	—	61	4	F	45	8	0	See log.
20-3	Wagoner sec. 22	Orestis Foster	do	6-27-34	93	4	Screens 3 feet of No. 8 perforation	673	—	49	84, Jr	F	60	13	—	See log.
20-1	Wagoner sec. 23	Earle Ball	do	8-15-33	49	—	Screens 3 feet of No. 8 perforation	610	—	38	34, Jr	F	17	10	0	See log.
20-1	Wagoner sec. 23	Arden	do	10-4-49	119	4	—	675	—	104	54, Jr	F	20	13	1	See log.
20-2	Wagoner sec. 23	C. A. Farnsworth	H. Lister	1916	83	4	—	640	—	—	0r	F	—	—	—	See log.
20-1	Wagoner sec. 26	Arden Falls	Bilden Bros.	11-11-16	101	4	Open end	620	—	100	34, Jr	F	40	13	—	See log.
20-2	Wagoner sec. 26	Chatham Mills	do	—	75	4	Screens 3 feet of No. 8 perforation	675	—	70	54, Jr	F	43	6	0	See log.
20-1	Wagoner sec. 27	Council of War Schools	do	6-6-30	63	6	Screens 6 feet, wire mesh	660	—	54	54, Jr	F	47	50, 60	3	Test pumped 4 hours. See log.
20-2	Wagoner sec. 27	George Michels	do	12-20-31	55	4	Open end	600	—	53	54, Jr	F	4	23	—	See log.
20-1	Wagoner sec. 28	William Palm	do	2-12-30	100	4	Open end	650	—	90	54, Jr	F	5	8	1	See log.
20-2	Wagoner sec. 28	Wilbert May	do	10-26-31	65	4	—	645	—	63	24, Jr	F	Flowed	210	—	Was first drilled, flowed over 600 gpm. See log.
20-3	Wagoner sec. 28	William Cook	do	6-15-30	143	4	Screens 3 feet of No. 8 perforation	665	—	136	54, Jr	F	54	8	1	See log.
20-4	Wagoner sec. 28	Swat Robinson	do	7-1-18	144	4	Screens 3 feet of No. 8 perforation	665	—	138	54, Jr	F	49	8	1	See log.
20-1	Wagoner sec. 29	George Fox	do	4-2-32	104	4	Screens 3 feet of No. 8 perforation	650	—	97	84, Jr	F	49	10	0	See log.
20-1	Wagoner sec. 30	Fred Winson	do	—	84	4	Open end	664	—	78	6	F	64	8	0	See log.
20-2	Wagoner sec. 30	Warren Dean	do	10-28-31	59	4	Screens 3 feet of No. 8 perforation	656	—	54	54, Jr	F	42	10	0	See log.
20-1	Wagoner sec. 31	do	do	6-13-32	63	4	Screens 3 feet of No. 8 perforation	656	—	45	34, Jr	F	43	10	0	See log.
20-1	Wagoner sec. 32	Merry Bilden	do	9-23-49	111	4	—	640	—	120	4	F	65	9	0	Test pumped 4 hours. See log.
20-1	Wagoner sec. 33	Orville Edmond	do	12-30	64	4	—	650	—	77	54, Jr	F	Flowed	112	—	Flowed over top of 4 1/2 ft. test. No lead surface. See log.
20-2	Wagoner sec. 33	Harold Palm	Bilden Bros.	2-2-49	61	4	—	660	—	71	30	F	Flowed	120	—	Flowed

Table 2—Records of wells by Township in Tippecanoe County—Continued

194 (T. 23 N., R. 3 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Production	Depth to rock (feet)	Altitude above sea level (feet)	Production (gallons per minute)	Water level (feet)	Static level (feet)	Drawdown (feet)	Remarks
23-3	SE1/4 sec. 23	Merola Progs	William Bros.	1937	Dr	132	4	Screen 3 feet of no. 6 perforation	—	640	—	45	8	—	See log.
24-1	SE1/4 sec. 24	Ohio East	do	10-31-38	Dr	130	4	Open end	—	630	—	45	10, 12	—	See log.
25-1	SE1/4 sec. 25	Chas. Williams	do	—	Dr	131	4	Screen 3 feet of no. 6 perforation	—	693	—	40	6	—	See log.
26-2	SE1/4 sec. 26	Floyd Hayward	do	3-4-48	Dr	75	4	Screen 3 feet of no. 6 perforation	—	678	—	77	8	—	See log.

251 (T. 23 N., R. 4 E.)

23-1	SE1/4 sec. 23	Merrell Marks	H. Lister	1948	Dr	103	4	—	35	649	—	—	10	—	See log.
24-2	SE1/4 sec. 24	Marie Conrad	do	Spring 2346	Dr	96	4	—	55	645	—	—	—	—	See log.
25-1	SE1/4 sec. 25	Walter Jones	do	12-8-39	Dr	111	4	—	—	716	—	30	10	—	Driller estimates could pump 30 to 50 gpm. See log.
26-1	SE1/4 sec. 26	Joseph Lepler	do	—	Dr	116	4	—	70	690	—	—	—	—	See log.
24-1	SE1/4 sec. 24	Charles Rahr	C. Coy & Sons	—	Dr	90	—	—	45	715	—	—	—	—	Good well

267 (T. 23 N., R. 5 E.)

1-1	SE1/4 sec. 1	Wood Ward	O. J. Hines	—	Dr	158	4	Screen 3 feet of no. 6 perforation	—	624	—	90	—	—	See log.
1-2	SE1/4 sec. 1	Ed Funglin	Dalton Bros.	12-26-32	Dr	92	4	Screen 3 feet of no. 6 perforation	—	625	—	70	7	—	See log.
1-3	SE1/4 sec. 1	E. V. Richardson	do	4-27-48	Dr	130	4	Screen 3 feet of no. 6 perforation	—	635	—	90	10	—	See log.
1-4	SE1/4 sec. 1	Louis Small	do	5-20-38	Dr	170	4	Screen 3 feet of no. 6 perforation	—	630	—	86	7	—	See log.
1-5	SE1/4 sec. 1	Paul Sabuh	do	1-17-56	Dr	124	4	Screen 3 feet of no. 6 perforation	—	575	—	86	8	—	See log.
2-1	SE1/4 sec. 2	Charles Ruppert	H. Lister	—	Dr	80	4	—	—	612	—	—	—	—	Originally drilled to 126 feet.
3-1	SE1/4 sec. 3	Irina Burges	do	—	Dr	120	4	—	—	607	—	—	—	—	See log.
10-1	SE1/4 sec. 10	Estelle Lutz	L. E. Holden	—	Dr	248	—	—	28	628	—	—	—	—	—
11-1	SE1/4 sec. 11	George Kluber	do	About 1925	Dr	148	—	—	—	620	—	—	—	—	—
11-2	SE1/4 sec. 11	Jarvis Hill	O. J. Hines	About 1942	Dr	94	4	—	—	615	—	—	—	—	—
13-1	SE1/4 sec. 13	Radio Martin	H. Lister	June 1946	Dr	60	—	—	50	635	—	4	—	—	Originally drilled to 145 feet.
13-2	SE1/4 sec. 13	Martha Mason	Dalton Bros.	1947	Dr	146	4	—	—	630	—	—	—	—	See log.
14-1	SE1/4 sec. 14	J. Harrison	L. E. Holden	1945	Dr	140	4	—	20	660	—	77	—	—	See log.
14-2	SE1/4 sec. 14	Eula Parks	H. Lister	—	Dr	—	—	—	40	615	—	Flamed	—	—	—
14-3	SE1/4 sec. 14	William Bair	do	—	Dr	40	—	—	40	625	—	—	—	—	—
15-1	SE1/4 sec. 15	Felix Valera	Dalton Bros.	1-1-52	Dr	89	4	—	45	690	—	23	13	—	3 feet of water-bearing sand above shale. See log.
19-2	SE1/4 sec. 19	Alvin Clemons	H. Lister	—	Dr	—	—	—	60	630	—	—	—	—	Very little water.
22-1	SE1/4 sec. 22	M. Brodson	O. Coy & Sons	—	Dr	33	—	—	30	700	—	—	—	—	See log.



Table 2—Records of Wells by Township in Tippecanoe County—Continued

27  
1912-1913, B. 3 W.

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Finish	Altitude above sea level (feet)	Depth to rock (feet)	Practical measuring depth (feet)	Water level (feet)	Production (gpm)	10/100	Remarks
24-1	24th sec. 24	Taylor School	M. Lister	—	Dr	90	—	—	630	—	—	—	—	Fr	Little water.
24-2	24th sec. 24	Arthur Haller	L. E. Jordan	—	Dr	488	4	—	645	80	—	130	—	—	Water contained sulphur.
24-3	24th sec. 24	Thane Helton	M. Lister	—	Dr	60	4	—	648	38	—	—	—	—	See log.
24-4	24th sec. 24	C. J. & L. E. Taylor	do	—	Dr	120	4	—	650	65	—	—	—	—	Not much water.
24-5	24th sec. 24	M. Taylor	do	—	Dr	104	4	—	648	30	20	10	6	Dr	See log.
24-6	24th sec. 24	O. Huchuck	L. E. Jordan	Spring 1913	Dr	120	4	—	655	20	—	—	—	—	—
24-7	24th sec. 24	Stidman H. E. Church	M. Lister	—	Dr	80	—	—	655	—	—	—	—	—	—
25-1	25th sec. 25	Robert Wiley	C. Coy & Sons	—	Dr	—	—	—	718	120	—	—	—	—	—
25-2	25th sec. 25	do	M. Lister	10-13	Dr	120	4	—	703	90	80	4	—	—	Bedrock was stable and was located at 80 ft. The water was accumulated under the sand at 45 feet. See log.
25-3	25th sec. 25	E. Miller	do	about 1914	Dr	30	4	—	645	—	—	12	—	Dr	—
26-1	Center of 2d sec. 26	L. E. Jordan	C. Coy & Sons	—	Dr	135	—	—	700	60	—	—	—	Dr	See log.
26-2	26th sec. 26	Thane Helton	M. Lister	7-3-14	Dr	60	4	Open end	702	60	7	28	10	Dr	—
26-3	26th sec. 26	E. Taylor	do	—	Dr	63	—	—	703	48	—	—	—	—	—
26-4	26th sec. 26	A. Martin	—	—	Dr	90	—	—	723	35	—	—	—	—	—
26-5	26th sec. 26	M. Clarken	C. Coy & Sons	—	Dr	—	4	—	700	40	—	—	—	—	—
26-6	26th sec. 26	do	William Brown	3-20-10	Dr	70	4	—	700	30	—	4	—	—	See log.
26-7	26th sec. 26	J. Walsh	C. Coy & Sons	—	Dr	120	—	—	720	80	—	—	—	—	—

27  
1912-1913, B. 4 W.

1-1	1st sec. 1	Celli Osterling	Edgar Brown	3-2-11	Dr	30	4	—	660	—	12	—	12	—	See log.
1-2	1st sec. 1	George Munch	do	1919	Dr	35	4	Screens 3 feet of no. 6 perforation	645	—	42	24	10	Dr	See log.
2-1	2d sec. 2	Bygone Richard	M. E. Wash	Spring 1916	Dr	73	—	—	640	—	12	12	—	Dr	603 barrels (60 gpm in 3) hours. See log.
2-2	2d sec. 2	M. Trapp	Edgar Brown	3-6-17	Dr	60	4	Screens 3 feet of no. 6 perforation	640	—	6	45	8	Dr	See log.
2-3	2d sec. 2	Lee Swanson	do	6-26-17	Dr	60	4	Screens 3 feet of no. 6 perforation	640	—	22	45	8	Dr	See log.
2-4	2d sec. 2	E. Hollenback	do	2-11-18	Dr	40	4	Screens 3 feet of no. 6 perforation	645	—	7	20	12	Dr	See log.
2-5	2d sec. 2	Jacob Bergman	do	6-3-13	Dr	72	4	Screens 3 feet of no. 6 perforation	644	—	20	27	10	Dr	See log.
3-1	3d sec. 3	William Smith	do	9-3-13	Dr	63	4	Screens 3 feet of no. 6 perforation	640	—	27	27	10	Dr	See log.
3-2	3d sec. 3	James Atchile	do	9-16-13	Dr	60	4	Screens 3 feet of no. 6 perforation	635	—	28	28	10	Dr	See log.
3-3	3d sec. 3	Bill Coffey	do	3-2-14	Dr	30	6	Screens 3 feet of no. 20 pack	635	—	40	32	10	Dr	See log.

Table 2—Records of Wells by Location in Tipton County—Continued

Feb. 22, 1934, 8, 4 m.

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Casings (feet)	Finish	Stations on hole (feet)	Depth to top of casing (feet)	Depth to bottom of casing (feet)	Perforations (feet)	Perforations (feet)	Water level (feet)	Head (feet)	Drawdown (feet)	Use	Remarks	
6-1	Shelby sec. 6	G. C. & M. Lewis & S.	A. L. Stokes	12-13-29	Dr	192	12	Sailed 20 ft. 4	442	287	166	26	Gr	7	43	110	—	Water level measured 8/2/46. Originally drilled 225 feet. See log.	
6-2	Shelby sec. 6	do	do	do	Dr	194	12	Screen 8 feet	642	—	—	—	Gr	7	103	—	—	See log.	
6-3	Shelby sec. 4	do	H. B. Cook	4-16	Dr	120	12	—	642	—	—	—	Gr	7	36	—	—	—	
6-4	Shelby sec. 4	do	do	7-16	Dr	97	12	Wire wound screen	642	—	—	—	Gr	7	28	—	—	Measured 8/2/46.	
6-5	Shelby sec. 6	do	do	7-11-46	Dr	106	12	Wire wound screen	642	—	90	14	24, Jr	7	43	—	—	See log.	
6-1	Shelby sec. 3	Ferry Road	Hidden Area.	12-10-31	Dr	69	4	Screen 2 feet of no. 6 perforation	642	—	34	13	24, Jr	7	34	—	—	See log.	
6-2	Shelby sec. 3	John Dumban	do	6-10-32	Dr	70	4	Screen 3 feet of no. 6 perforation	648	—	37	13	24, Jr	7	37	—	—	See log.	
6-3	Shelby sec. 3	Ferry Road	do	6-13-32	Dr	63	4	Open end	648	—	35	6	Gr	7	35	—	—	See log.	
6-4	Shelby sec. 3	Fred Cabal	do	6-22-46	Dr	84	4	—	640	—	61	20	24, Jr	7	61	0	0	See log.	
6-1	Shelby sec. 6	Carl Swan	H. A. Johnson	—	Dr	144	4	—	632	144	—	—	Gr	7	—	—	—	See log.	
6-2	Shelby sec. 6	I. Daily	Hidden Area.	10-47	Dr	177	4	Screen 3 feet of no. 6 perforation	630	—	209	48	24, Jr	7	48	0	0	See log.	
6-3	Shelby sec. 6	Harvey Bennett	do	8-4-30	Dr	60	4	Screen 3 feet of no. 30 shot	640	—	58	23	24, Jr	7	48	0	0	See log.	
6-4	Shelby sec. 6	H. B. Johnson	do	12-6-47	Dr	49	4	Screen 3 feet	620	—	35	14	24, Jr	7	35	4	4	See log.	
6-5	Shelby sec. 6	Mrs. Sawyer	do	4-47	Dr	65	4	Screen 4 feet of no. 6 perforation	640	—	30	22	24, Jr	7	30	0	0	See log.	
6-1	Shelby sec. 8	Robert Duff	do	4-20-51	Dr	46	4	—	626	—	—	—	Gr	7	20	—	—	See log.	
6-2	Shelby sec. 8	Theodore Stephens	do	5-30	Dr	69	4	Screen 3 feet of no. 6 perforation	626	—	36	25	24, Jr	7	26	—	—	See log.	
6-3	Shelby sec. 8	J. E. Thorne	do	9-12-50	Dr	50	4	Screen 3 feet of no. 6 perforation	635	—	18	34	24, Jr	7	18	0	0	See log.	
11-1	Shelby sec. 11	Lee Boney	do	5-20-47	Dr	24	4	Screen 3 feet	645	—	11	18	24, Jr	7	12	8	3	20	See log.
11-2	Shelby sec. 11	Carl Smith	do	5-26-47	Dr	10	4	Screen 4 feet of no. 6 perforation	643	—	15	23	24, Jr	7	15	0	0	See log.	
12-2	Shelby sec. 12	Melvin Price	do	about 1948	Dr	12	4	Screen 3 feet of no. 6 perforation	642	—	12	13	24, Jr	7	12	0	0	See log.	
12-1	Shelby sec. 12	C. Kirkpatrick	do	—	Dr	59	4	Screen 4 feet of no. 6 perforation	647	—	3	6	24, Jr	7	12	—	—	Well reported dry. Redrock in situ. See log.	
12-2	Shelby sec. 12	G. Thompson	do	—	Dr	205	—	—	671	203	—	—	—	—	—	—	—	Well reported dry. Redrock in situ. See log.	
12-3	Shelby sec. 12	do	do	4-27-51	Dr	228	—	—	675	200	—	—	—	—	—	—	—	Well reported dry. Redrock in situ. See log.	
12-4	Shelby sec. 12	H. Kirkpatrick	do	June 1934	Dr	35	4	Screen 3 feet of no. 6 perforation	648	—	20	15	24, Jr	7	10	0	0	See log.	
12-1	Shelby sec. 12	A. Thompson	do	8-8-51	Dr	142	4	Screen 3 feet of no. 6 perforation	640	—	123	27	24, Jr	7	70	0	0	See log.	
12-2	Shelby sec. 12	Merlin Hardy	do	6-23-51	Dr	73	—	Screen 3 feet of no. 6 perforation	665	—	54	13	24, Jr	7	62	—	—	Well reported dry. Redrock in situ. See log.	
12-1	Shelby sec. 16	Dr. Cole	H. Eister	—	Dr	100	—	—	660	100	—	—	—	—	—	—	—	Well reported dry. Redrock in situ. See log.	
12-1	Shelby sec. 17	Michael McCoy	Hidden Area.	6-8-50	Dr	28	4	Screen 3 feet of no. 30 shot, wire wound	660	—	40	15	24, Jr	7	24	0	0	See log.	

Table 2--Records of Wells by Township in Thompson County--Continued

FEET (T. 22 N., R. 3 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Thickness (inches)	Stratigraphic	Production (bbls./day)	Water level (feet)	Production (cwt)	10/ Day	Remarks
17-2	Sec. 17	A. Ludwig	William Bros.	8-18-30	Dr	117	4	Screen 3 feet of no. 6 perforation	50	29	10	Dr	See log.
17-3	Sec. 17	F. Schuster, Jr.	do	11-13-30	Dr	47	4	---	35	35	12	Dr	See log.
18-1	Sec. 16	Edith Koser	H. Lister	---	Dr	50	4	---	---	---	---	Dr	---
20-1	Sec. 20	James Vaughn	William Bros.	5-22-47	Dr	112	4	Screen 4 feet of no. 6 perforation	104	26	8	Dr	See log.
20-2	Sec. 20	J. McCoy	do	5-18-54	Dr	96	4	Screen 3 feet of no. 6 perforation	49	41	8	Dr	See log.
21-1	Sec. 21	Charles Dougherty	H. Lister	1943	Dr	145	4	---	---	---	---	Dr	See log.
22-1	Sec. 22	Robert McHenry	William Bros.	4-26-30	Dr	98	4	Screen 3 feet of no. 6 perforation	58	58	8	Dr	See log.
23-2	Sec. 23	Max Township School	do	6-47	Dr	32	4	Screen 4 feet of no. 6 perforation	28	22	15	Dr	---
24-1	Sec. 24	O. McDonald	C. Coy & Sons	---	Dr	Screen 3'	---	---	---	---	---	Dr	---
26-1	Sec. 26	B. McCoy	William Bros.	6-2-48	Dr	62	4	Screen 3 feet of no. 6 perforation	21	21	30	Dr	See log.
29-1	Sec. 29	B. E. Wilson	do	2-9-30	Dr	42	4	Screen 3 feet of no. 6 perforation	10	6	20	Dr	See log.
31-1	Sec. 31	Edgar Miller	H. Lister	1942	Dr	68	3	---	48	---	---	Dr	See log.
31-2	Sec. 31	---	do	1932	Dr	60	3	---	90	---	---	Dr	See log.
32-1	Sec. 32	---	William Bros.	---	Dr	92	4	---	99	---	---	Dr	See log.
33-1	Sec. 33	Wm. McCoy	do	9-3-30	Dr	36	4	Screen 3 feet of no. 6 perforation	26	12	10	Dr	See log.
33-2	Sec. 33	Robert May	do	4-16-31	Dr	60	4	Screen 3 feet of no. 6 perforation	51	43	8	Dr	See log.
36-1	Sec. 36	Clark Wilson	do	1-26-30	Dr	136	4	Screen 3 feet of no. 6 perforation	151	49	8	Dr	See log.
33-1	Sec. 33	B. Lloyd Salside	H. Lister	---	Dr	80	4	---	---	---	---	Dr	---
33-2	Sec. 33	Jack Stone	C. Coy & Sons	---	Dr	120	---	---	---	---	---	Dr	---

FEET (T. 22 N., R. 3 E.)

1-1	Sec. 1	Samuel Dack	William Bros.	3-2-49	Dr	61	4	Screen 2 feet of no. 30 silt	64	30	8	Dr	See log.
2-1	Sec. 2	O. McCoy	do	9-3-31	Dr	40	4	Screen 3 feet of no. 8 perforation	32	23	12	Dr	See log.
3-1	Sec. 3	Roller Meyer	do	4-20-48	Dr	139	4	---	126	49	8	Dr	See log.
3-2	Sec. 3	Virgil Lott	do	10-17	Dr	31	4	---	20	7	13	Dr	See log.
4-1	Sec. 4	Jin Connally	do	8-15-32	Dr	69	---	Screen 3 feet of no. 6 perforation	62	32	10	Dr	See log.
4-2	Sec. 4	Ida Paul	do	6-13-48	Dr	68	6	Screen 3 feet of no. 6 perforation	43	45	8	Dr	See log.
4-3	Sec. 4	Lloyd Myers	do	7-7-30	Dr	70	4	Screen 3 feet of no. 6 perforation	56	41	20	Dr	See log.
4-4	Sec. 4	William Wilson	do	6-24-30	Dr	74	4	Screen 3 feet of no. 6 perforation	51	40	8	Dr	See log.
4-5	Sec. 4	Geat Bridwell	do	10-13-49	Dr	79	4	Screen 3 feet of no. 6 perforation	73	38	8	Dr	See log.

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Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Finish	Altitude above sea level (feet)	Depth to top of casing (feet)	Production casing diameter (inches)	Perforations (feet)	Water level (feet)	Static level (feet)	10' drawdown (feet)	Remarks
4-6	sec. 4	C. J. Deth	Edison Bros.	2-14-48	Dr	73	4	Screen 3 feet of no. 6 perforation	665	49	24	24	49	49	0	See log.
4-7	sec. 4	William M. Leach	do	11-26-54	Dr	70	4	Open end	660	62	8	8	54	54	0	See log.
4-8	sec. 6	Floyd R. Mann	do	3-10-53	Dr	72	4	Open end	658	52	20	20	52	52	0	See log.
4-9	sec. 6	J. M. Dillon	do	10-67	Dr	76	4	Screen 4 feet of no. 20 slot	660	57	19	19	51	51	0	See log.
4-10	sec. 4	Ray Michael	do	5-9-47	Dr	76	4	Screen 3 feet of no. 8 perforation	660	60	60	60	41	41	0	See log.
4-11	sec. 4	Robert Johnson	do	8-3-49	Dr	26	—	Screen 3 feet of no. 6 perforation	690	3	23	23	3	3	—	See log.
4-12	sec. 4	W. L. White	do	7-27-49	Dr	35	4	Screen 3 feet of no. 6 perforation	690	30	3	3	32	32	0	See log.
5-1	sec. 5	Frank Miller	do	2-4-50	Dr	70	4	Screen 3 feet of no. 6 perforation	665	45	14	14	41	41	0	See log.
5-2	sec. 5	Carl Pearson	do	2-14-50	Dr	72	4	Screen 3 feet of no. 6 perforation	670	59	12	12	35	35	0	See log.
5-3	sec. 5	Carl Lombard	do	8-14-50	Dr	78	4	Screen 3 feet of no. 6 perforation	670	70	8	8	36	36	0	See log.
5-4	sec. 5	Ray Franks	do	5-27-51	Dr	75	4	Open end pipe	665	54	21	21	54	54	0	See log.
5-5	sec. 5	George Hart	do	11-19-51	Dr	73	4	Open end pipe	665	50	19	19	56	56	0	See log.
5-6	sec. 5	Dary Glass	do	12-11-48	Dr	51	4	—	670	44	7	7	35	35	0	See log.
6-1	sec. 6	Jesse Hines	do	3-21-49	Dr	44	4	Screen 3 feet of no. 6 perforation	699	38	6	6	39	39	1	See log.
6-2	sec. 6	do	do	8-28-53	Dr	46	4	Screen 3 feet of no. 8 perforation	660	39	7	7	26	26	0	See log.
7-1	sec. 7	Allen Berry	do	7-24-50	Dr	70	4	Screen 3 feet of no. 6 perforation	668	59	11	11	30	30	0	See log.
8-1	sec. 8	J. A. Glass	do	2-9-54	Dr	73	4	Screen 3 feet of no. 6 perforation	670	60	13	13	28	28	0	See log.
9-1	sec. 9	R. H. Jr.	do	10-48	Dr	76	4	Screen 3 feet of no. 20 slot	670	61	13	13	59	59	0	See log.
9-2	sec. 9	H. E. Longdon	do	1-8-51	Dr	28	4	Screen 3 feet of no. 6 perforation	670	54	24	24	44	44	—	See log.
9-3	sec. 9	William Weber	do	4-23-50	Dr	46	4	Screen 3 feet of no. 6 perforation	670	37	9	9	20	20	—	See log.
9-4	sec. 9	H. Oltmeyer	do	11-24-50	Dr	40	22	Screen 3 feet of no. 6 perforation	695	12	30	30	12	12	1	Originally drilled to 43 feet. See log.
10-1	sec. 10	George Rose	do	10-5-51	Dr	25	4	Screen 3 feet of no. 6 perforation	680	26	9	9	14	14	—	See log.
11-1	sec. 11	Ray Grand	do	6-12-51	Dr	70	4	Screen 3 feet of no. 6 perforation	680	66	13	13	49	49	0	See log.
12-1	sec. 12	J. H. Mages	J. Mages	—	Dr	167	—	—	750	—	—	—	—	—	—	Commented gravel.
12-2	sec. 12	Harry Tumb	do	1955	Dr	160	2	Drilled pipe	745	—	—	—	70	70	—	—
12-3	sec. 12	Brith Stewart	O. Coy & Sons	—	Dr	23	—	—	691	—	—	—	—	—	—	—
12-4	sec. 12	do	Edison Bros.	2-8-48	Dr	70	4	Screen 3 feet of no. 6 perforation	680	65	8	8	27	27	0	See log.
12-5	sec. 12	Robert Schlein	H. Lister	5-12-54	Dr	75	4	Screen 3 feet of no. 6 perforation	680	70	5	5	35	35	0	30 feet log with water drilled well. See log.
12-6	sec. 12	Ben Duroody	Edison Bros.	11-24-50	Dr	53	4	Screen 3 feet of no. 6 perforation	680	49	4	4	31	31	—	See log.

Table 2—Records of Wells by Township in Tippecanoe County—Continued

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Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Diameter (inches)	Plumb	Altitude above sea level (feet)	Depth to water (feet)	Depth to oil (feet)	Production (bbls/day)	10/100	Remarks
18-1	41st sec. 18	Robert Elliot	William Ross	3-14-24	Dr	42	4	—	670	—	—	15	—	Test pumped 2 hours. See log.
19-1	34th sec. 19	A. Eldredge	do	6-2-24	Dr	43	—	Screens 3 feet of no. 6 perforation	680	—	—	10	Dr, 3	See log.
21-1	Center of 21st sec. 21	Wall Hobbs	do	6-6-24	Dr	61	4	Screens 3 feet of no. 6 perforation	715	—	—	2	Dr	See log.
21-2	34th sec. 21	Robert Emv	do	9-8-24	Dr	130	4	Screens 3 feet of no. 6 perforation	709	—	—	—	Dr	See log.
22-1	21st sec. 22	H. F. Harris	do	10-10-24	Dr	72	4	Screens 3 feet of no. 6 perforation	673	—	—	—	—	See log.
23-1	34th sec. 23	J. Tuck	H. Lister	7-12-24	Dr	64	4	—	750	—	—	10	—	Spring in gully near well.
24-1	34th sec. 24	John Lewis	H. Lister	2-1-25	Dr	56	2	Slotted pipe	680	—	—	—	Dr	—
26-2	34th sec. 26	do	do	2-5-25	Dr	40	2	Slotted pipe	670	—	—	—	Dr	—
26-3	34th sec. 26	Carl Helms	do	6-24	Dr	100	2	Slotted pipe	730	—	—	—	Dr, 3	—
33-1	34th sec. 33	A. J. Hutchinson	H. Lister	—	Dr	110	4	Screened	725	—	—	—	Dr	See log.
33-2	34th sec. 33	do	do	—	Dr	106	4	—	715	—	—	—	Dr	—
33-3	34th sec. 33	William Cox	do	—	Dr	110	—	—	730	—	—	—	Dr	—
33-4	34th sec. 33	Ray Swails	H. Lister	9-4-24	Dr	112	4	Screened	720	—	—	—	Dr, 3	See log.

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1-1	34th sec. 1	E. S. Hubert	H. Lister	—	Dr	—	4	—	730	—	—	—	—	Dr, 3	Bedrock in well.
13-1	34th sec. 13	H. S. Sears	C. Day & Sons	—	Dr	80	4	—	705	90	—	—	—	Dr	Bedrock in limestone. See log.
13-2	34th sec. 13	do	H. Lister	—	Dr	48	4	—	760	—	—	—	—	Dr	See log.
14-1	34th sec. 14	L. S. Hubert	do	Spring 1946	Dr	72	4	—	720	60	—	—	—	Dr	See log.
26-1	34th sec. 26	Frank McCarly	—	—	Dr	68	4	—	715	58	—	—	—	Dr	—
26-2	34th sec. 26	do	—	—	—	21	—	—	720	—	—	—	—	—	Drye point.

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9-1	34th sec. 9	Zeno Thras	William Ross	1-20-24	Dr	66	4	—	740	62	—	—	—	Dr	See log.
14-1	34th sec. 14	For Lumber Co.	O. J. Eble	—	Dr	110	—	—	715	65	—	—	—	Dr	See log.
20-1	34th sec. 20	O. S. Collins	H. Lister	—	Dr	—	4	—	710	—	—	—	—	Dr	See log.
21-1	34th sec. 21	John Bank	do	1-21	Dr	63	6	—	710	62	—	—	—	Dr	Good domestic well.
25-1	34th sec. 25	K. H. Adams	do	10-15	Dr	60	4	—	750	—	—	—	—	Dr	See log.

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1-1	34th sec. 1	Wally Meisel	H. Lister	—	Dr	135	4	—	730	—	—	—	—	Dr	See log.
1-2	34th sec. 1	Flowers Estate	do	—	Dr	—	4	—	735	100	—	—	—	Dr	See log.
2-1	34th sec. 2	E. Freiburger	do	Spring 1946	Dr	67	4	—	700	—	—	—	—	Dr	See log.

Table 3—Records of Wells by Township in Zippesen County—Continued

100 (T. 21 N., R. 4 W.)

Well No.	Location	Owner	Driller	Date completed	W/Type	Depth (feet)	Casement (feet)	Flow (gpm)	Remarks
2-2	W/100, sec. 2	E. E. Skinner	H. Lister	—	Dr	68	—	—	On main Ave., 1 mile S.W. 75 feet deep flowing well in creek bottom.
2-3	W/100, sec. 2	do	do	—	Dr	127	—	—	—
2-4	W/100, sec. 2	My Gordon	H. Alger	1928	Dr	228	2	—	—
2-5	W/100, sec. 3	Adams W. Collins	Edison Bros.	6-49	Dr	520	4	—	See log.
2-6	W/100, sec. 5	do	do	7-16-43	Dr	310	6	—	See log.
2-7	W/100, sec. 6	Law U. Pflaster	H. Lister	Fall 1935	Dr	25	4	—	See log.
2-8	W/100, sec. 6	V. T. Breckenridge	C. Coy & Sons	—	Dr	85	—	—	—
10-1	W/100, sec. 10	H. Carpenter	Edison Bros.	3-10-48	Dr	55	6	—	See log.
10-2	W/100, sec. 10	F. B. Dodge	H. Lister	—	Dr	80	4	—	See log.
12-1	W/100, sec. 11	J. B. Berger	do	—	Dr	122	4	—	See log.
12-2	W/100, sec. 13	William H. Sumner	do	—	Dr	72	6	—	See log.
12-3	W/100, sec. 13	do	Howell	—	Dr	142	10-3	—	Oil well 140. See log.
12-4	W/100, sec. 15	Alan O. Naples	H. Lister	—	Dr	120	4	—	See log.
12-5	W/100, sec. 17	Curran Leasing	do	—	Dr	90	3	—	See log.
12-6	W/100, sec. 17	do	do	—	Dr	90	6	—	See log.
12-7	W/100, sec. 17	Merrell Union	do	1920	Dr	33	4	—	See log.
12-8	W/100, sec. 17	Cecil J. Slagden	C. Coy & Sons	—	Dr	—	—	—	Water contained area.
12-9	W/100, sec. 17	Carlise H. Howe	—	—	Dr	46	—	—	Very hard water. Well reported dry.
12-10	W/100, sec. 18	J. B. Callerman	—	—	Dr	35	—	—	See log.
12-11	W/100, sec. 19	Dr. B. L. Huby	H. Lister	About 1933	Dr	215	—	—	See log.
12-12	W/100, sec. 19	do	do	—	Dr	88	4	—	See log.
12-13	W/100, sec. 19	Robert McCallif	Walt Bros.	9-54	Dr	90	4	—	See log.
20-1	W/100, sec. 20	A. J. Rieder	C. Coy & Sons	1944	Dr	165	—	—	See log.
20-2	W/100, sec. 20	Curran Leasing	H. Lister	1940	Dr	65	4	—	See log.
20-3	W/100, sec. 20	do	—	—	Dr	28	30	—	See log.
22-1	W/100, sec. 22	Dr. J. T. Mitchell	H. Lister	—	Dr	85	6	—	See log.
24-1	W/100, sec. 24	Orry Ellis	H. Alger	1935	Dr	90	2	—	See log.
25-1	W/100, sec. 25	V. E. Bridwell	H. Lister	—	Dr	—	4	—	See log.
25-2	W/100, sec. 25	Walt Bros	do	—	Dr	100	4	—	See log.
25-3	W/100, sec. 25	H. Orland	Walt Bros.	9-54	Dr	43	4	—	See log.
26-1	W/100, sec. 26	M. B. Adams, J. A. F. Mitchell	H. Lister	1933	Dr	80	4	—	See log.
28-1	W/100, sec. 28	Dr. J. F. Mitchell	do	—	Dr	80	4	—	See log.
31-1	W/100, sec. 31	E. B. Milling	do	—	Dr	66	4	—	See log.

Table 2—Records of Wells by Township in Tippecanoe County—Continued

Top (T. 22 N., R. 3 E.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Production (barrels)	Flow (gallons)	Depth to water (feet)	Production (barrels)	Flow (gallons)	Water level (feet)	Minimum (feet)	Remarks
24-1	sec. 24	F. A. Rucker	C. Coy & Sons	—	Dr	770	—	—	74	—	—	—	—	—
24-2	sec. 24	do	do	—	Dr	778	—	—	70	—	—	—	—	—
24-3	sec. 23	Miller J. New	do	—	Dr	778	—	—	1.5	—	—	—	—	—
24-4	sec. 26	Walter Orlum	B. Lister	—	Dr	790	—	—	60	—	—	—	—	—

Top (T. 21 N., R. 3 E.)

1-1	sec. 1	Lee Nichols	B. Lister	—	Dr	220	—	—	—	—	—	—	—	—
1-2	sec. 1	E. O. Bennett	do	1-2-34	Dr	196	—	—	—	—	—	—	—	—
4-1	sec. 4	J. B. Skinner	do	—	Dr	240	—	—	—	—	—	—	—	—
5-1	sec. 5	W. L. Smith	B. Lister	Above 1926	Dr	718	—	—	—	—	—	—	—	—
6-1	sec. 6	J. B. Skinner	B. Lister	—	Dr	240	—	—	100	—	—	—	—	—
7-1	sec. 7	F. Knicker	do	—	Dr	—	—	—	60	—	—	—	—	—
7-2	sec. 7	—	do	—	Dr	100	—	—	100	—	—	—	—	—
7-3	sec. 7	J. B. Skinner	do	—	Dr	48	—	—	—	—	—	—	—	—
8-1	sec. 8	Charles Fink	do	—	Dr	—	—	—	60	—	—	—	—	—
8-2	sec. 8	Lynn Logan	do	—	Dr	43	—	—	—	—	—	—	—	—
8-3	sec. 8	do	do	Above 1941	Dr	100	—	—	—	—	—	—	—	—
9-1	sec. 9	Basile Anderson	B. Lister	1937	Dr	90	—	—	—	—	—	—	—	—
10-1	sec. 10	G. A. Fry	William Bros.	—	Dr	60	—	—	—	—	—	—	—	—
10-2	sec. 10	Ray Gordon	B. Lister	10-6-34	Dr	48	—	—	—	—	—	—	—	—
10-3	sec. 10	Arma Gibson	do	—	Dr	90	—	—	—	—	—	—	—	—
11-1	sec. 11	W. L. Johnson	do	10-9-34	Dr	80	—	—	—	—	—	—	—	—
11-2	sec. 11	J. K. Smith	do	3-7-34	Dr	96	—	—	—	—	—	—	—	—
11-3	sec. 11	W. L. Johnson	do	—	Dr	about 75	—	—	—	—	—	—	—	—
12-1	sec. 12	W. L. Johnson	do	—	Dr	62	—	—	—	—	—	—	—	—
12-2	sec. 12	G. A. Fry	B. Lister	1933	Dr	26	—	—	—	—	—	—	—	—
20-1	sec. 20	G. A. Kennedy	B. Lister	—	Dr	103	—	—	—	—	—	—	—	—
20-2	sec. 20	Wm. L. H. Loring	do	—	Dr	105	—	—	—	—	—	—	—	—
21-1	sec. 21	Ernest C. Benton	do	—	Dr	—	—	—	100	—	—	—	—	—
21-2	sec. 21	William Kippie	B. Lister	April 1931	Dr	101	—	—	—	—	—	—	—	—
22-1	sec. 22	Wm. Smith	do	10-34	Dr	69	—	—	—	—	—	—	—	—
22-2	sec. 22	Charles Hill Kester	B. Lister	1938	Dr	90	—	—	—	—	—	—	—	—

Test pumped 18 hours. See log.

Table 2—Records of Wells in Township in Ripponese County—Continued

Top (T. 21 N., R. 3 W.)

Well No.	Location	Owner	Driller	Date completed	Type	Depth (feet)	Number (cables)	Radius	Altitude surface (feet)	Depth to casing (feet)	Production (bbls)	Water level (feet)	Yield (gpm)	Recovery (%)	10' Dip	Remarks
22-2	N. 24 1/2 sec. 23	Coastal association	H. Lister	—	Dr	172	—	—	815	—	332	—	—	—	—	See log.
23-2	N. 24 1/2 sec. 23	Joe Jackson	do	1944	Dr	139	4	—	815	—	—	—	—	—	—	See log.
23-4	N. 24 1/2 sec. 23	Walter E. Ketchum	H. Lister	9-12-31	Dr	78	3	Slotted pipes 2 feet	825	—	—	27	—	—	—	See log.
23-5	N. 24 1/2 sec. 23	Tom of Clarke Mill	H. Lister	R. 5-56	Dr	90	5	Screen 5 feet of no. 50 shot	825	6	—	20	100	10	78	See log.
23-6	N. 24 1/2 sec. 23	Clare Mill	do	—	Dr	155	4	—	825	—	—	—	—	—	—	See log.
24-1	N. 24 1/2 sec. 24	J. E. Ketchum	do	6-10-33	Dr	163	4	Screen 3 feet	813	—	—	40	—	—	—	See log.
24-2	N. 24 1/2 sec. 24	do	do	1944	Dr	139	4	—	815	—	—	—	—	—	—	See log.
24-3	N. 24 1/2 sec. 24	Lee Johnson	H. Lister	1941	Dr	160	4	Open end	821	—	—	—	—	—	—	Platonsens cement gravel (1).
24-4	N. 24 1/2 sec. 24	U. S. C. 3 St. L. S. K.	do	1927	Dr	60	2	Slotted pipes 2 feet	828	—	—	20	—	—	—	On side of house bit line—stone at 121' T. E. line (1).
24-5	N. 24 1/2 sec. 27	Raymond Johnson	do	above 1938	Dr	57	2	Slotted pipe	813	—	—	—	—	—	—	See log.
24-7	N. 24 1/2 sec. 27	Ship boiler	H. Lister	9-10-54	Dr	112	4	Open end	815	—	—	26	9	—	—	Very little drainage.
24-8	N. 24 1/2 sec. 28	Ureah Sealer	do	—	Dr	80	4	—	820	—	—	—	—	—	—	See log.
24-9	N. 24 1/2 sec. 28	Raymond Johnson	H. Lister	1933	Dr	60	2	Slotted pipes 2 feet	820	—	—	2	3	—	—	See log.
24-3	N. 24 1/2 sec. 28	do	do	1934	Dr	90	2	Screen 7 feet of no. 60 gauge	795	100	—	20	10	—	—	Well originally 190' test deep.
24-1	N. 24 1/2 sec. 30	Earl Dahl	H. Lister	4-12-53	Dr	66	4	—	790	—	—	8	—	—	—	Well originally 190' test deep.
24-4	N. 24 1/2 sec. 32	Alfred Harris	do	10-23-54	Dr	67	4	Screen 3 feet	790	—	70	27	9	—	—	Well originally 190' test deep.
25-1	N. 24 1/2 sec. 33	H. E. Johnson	do	—	—	—	4	—	813	—	—	—	—	—	—	Well originally 190' test deep.
25-2	N. 24 1/2 sec. 33	Raymond Johnson	H. Lister	1925	Dr	120	4	Open end	813	100	18	—	8	—	—	Well originally 190' test deep.
25-3	N. 24 1/2 sec. 33	do	do	1941	Dr	102	2	Open end	813	97	3	24	15,20	—	—	Well originally 190' test deep.
25-4	N. 24 1/2 sec. 33	Raymond Johnson	H. Lister	—	Dr	48	4	—	813	—	—	—	—	—	—	Well originally 190' test deep.
25-5	N. 24 1/2 sec. 33	do	do	1948	Dr	—	4	—	813	—	—	—	—	—	—	Well originally 190' test deep.
25-6	N. 24 1/2 sec. 33	Lewis D. Christie I., Mayor	do	—	Dr	100	—	—	813	100	—	—	—	—	—	Well originally 190' test deep.
25-4	N. 24 1/2 sec. 33	Orville Johnson	H. Lister	1938	Dr	77	2	Slotted pipes 2 feet	813	—	—	14	—	—	—	Well originally 190' test deep.



Table J—Well Logs

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)										
TeB 18-1	770	Soil.....	1	1	TeC 27-1	554	Sand and gravel.....	165	165								
		Clay, yellow.....	14	15			Lime, gray and brown.....	30	195								
		Clay, blue.....	17	32			Sand.....	15	210								
		Gravel, blue, and sandy sand; water-bearing.....	15	47			Lime, gray, brown, and white.....	392	602								
		Clay, blue.....	3	50			Shale and lime, gray and brown.....	413	1015								
		Gravel, coarse, blue and gray, and sand; water-bearing.....	4	54			Lime, gray, brown, and white.....	428	1443								
		Clay, blue, at.....		54			Shale, brown.....	5	1448								
							Lime, broken, water-bearing.....	4	1472								
							Sand, white.....	53	1525								
							Lime, white, gray, and brown.....	75	1600								
TeB 26-4	692	Fill.....	3	3	TeD 10-1	565	Overburden.....	8	8								
		Hardpan, yellow.....	7	10			Drift.....	12	20								
		Clay, blue.....	18	28			Shale, blue.....	60	80								
		Clay, blue, with sand streaks.....	40	68			Lime, brown, hard, water-bearing.....	132	212								
		Gravel, yellow, dry.....	12	80			Lime, break, soft, water-bearing.....		212								
		Clay, gritty, blue.....	8	88			Lime.....	48	260								
		Hardpan, gritty.....	3	91			Lime, break, soft.....	2	262								
		Sand, yellow, and gravel; dry.....	19	110			Lime, breakage, hard.....	138	400								
		Sand, yellow, and gravel; water- bearing.....	14	124			Lime, gray, hard.....	140	540								
		Sand, coarse, gray, and coarse gray gravel; water-bearing.....	5	129			Lime, gray, hard, water-bearing.....	25	565								
		Sand, coarse, and some gravel at.....		129			Slate, gray, soft.....	210	775								
							Shale, brown, soft.....	120	895								
TeB 34-1	692	Drift.....	90	90	TeD 15-1	600	Drift.....	45	45								
		Shale.....	80	170			Shale, black.....	70	115								
TeB 36-2	692	Drift.....	30	30			Lime, brown (top) to white.....	30	145								
		Gravel.....	10	40													
TeB 36-1	662	Drift.....	30	30	Top lime was brown limestone; it graded down into hard white lime which yielded sulfur water.												
		Gravel.....	10	40	TeD 15-2	660	Clay, yellow.....	15	15								
TeB 36-1	662	Soil, black.....	?	?					Hardpan, brown.....	8	23						
		Clay, yellow.....	?	?	Clay, sandy.....	3			26								
		Clay, white and blue.....	?	?	Sand, yellow, dry.....	31			57								
		Gravel, coarse, dry.....	15	85	Clay, blue.....	2			59								
		Sand, fine, red, water-bearing.....	15	100	Gravel, dry.....	19			78								
		Gravel, medium, brown, water- bearing.....	10	110	Gravel, coarse, gray, and coarse sand; water-bearing.....	10			88								
					Sand, fine, and a little gravel at.....				88								
TeC 1-1	661	Soil.....	1	1	TeD 15-3	625	Clay, yellow.....	21	21								
		Clay, gritty, yellow.....	17	18			Clay, blue.....	3	24								
		Clay, blue.....	52	70			Sand, waddy.....	8	32								
		Clay, sandy, brown.....	11	81			Clay, blue.....	12	44								
		Sand, fine, gray, dry.....	6	87			Gravel, sharp.....	2	46								
		Sand, fine, gray, water-bearing.....	2	89			Clay, blue.....	15	61								
		Gravel, coarse, gray, and a little coarse and fine sand; water- bearing.....	8	97			Clay with streaks of sand, water- bearing.....	3	64								
		Clay, blue, at.....		97			Clay, brown.....	13	77								
							Clay with sand streaks.....	3	80								
							Clay, sandy, brown.....	10	90								
TeC 1-2	651	Soil.....	1	1			Sand.....	1	91								
		Clay, yellow.....	12	13			Clay.....	5	96								
TeC 1-1	651	Hardpan, blue.....	15	28			Shale, brown.....	14	110								
		Clay, blue, with sand streaks.....	56	84			TeD 16-1	590	Shale, gray.....	43	153						
		Sand, gray, water-bearing.....	1	85							Drift.....	25	25				
		Gravel, coarse and small, gray, and sand; water-bearing.....	6	91									Shale or slate.....	59	84		
		Clay, blue at.....		91									TeD 21-1	600	Sand, gravel, and boulders.....	6	6
																	Clay, blue, and sand.....
					Gravel.....	5											19
TeC 20-1	690	Soil and clay, yellow.....											4	4			
		Clay, blue.....	50	54													
		Sand, dry.....	20	74													
		Gravel, coarse.....	2	76													

Table 3--Wall Logs - Continued

ToD 21-1 Continued	Thickness (feet)	Depth (feet)	ToE 11-1 Altitude: 681	Thickness (feet)	Depth (feet)
Sand, yellow.....	18	37	Clay.....	10	10
Gravel, very coarse, yellow, and a little coarse sand.....	3	40	Gravel and sand.....	45	55
ToD 22-1 Altitude: 590			ToE 12-1 Altitude: 665		
Sand, coarse, gravel.....	40	40	Clay.....	120	120
Sand, fine, water-bearing.....	13	53	Sand and gravel.....	35	155
Sand, coarse.....	7	60			
Clay, sandy, water-bearing at 65' to 70'.....	10	70	ToE 24-1 Altitude: 680		
Clay, gravel and mud; water-bearing.....	5	75	Clay.....	155	155
Gravel, heavy, mud; water-bearing....	5	80	Gravel.....	64	219
Shale, brown, water-bearing to 95'..	20	100			
Shale, gray.....	30	130			
Lime, brown.....	25	155			
Lime, gray, water-bearing at 225'...	473	628			
Shale, blue.....	192	820			
Shale, brown, little gas.....	150	970			
Lime, black, water-bearing at 975'..	12	982			
Lime; gray.....	58	1040			
Lime, gray, salt water.....		1040			
ToD 25-1 Altitude: 670			ToE 34-1 Altitude: 664		
Clay, sandy, gravelly.....	40	40	Soil, clay.....	10	10
Gravel.....	4	44	Clay, gritty, hard.....	17	27
Clay, sandy, gravelly, blue.....		44	Gravel, medium.....	2	29
			Clay, gritty, hard.....	73	102
			Clay, sandy, hard.....	34	136
			Clay, gravelly.....	7	143
			Lime, rock (boulder).....	1	144
			Clay, sandy, hard.....	24	168
			Sand, sandy.....	7	175
			Clay, sandy, hard.....	17	192
			Sand, coarse, and gravel; water- bearing.....	4	196
			Sand, coarse, water-bearing.....	4	200
			Sand, coarse, and gravel, clean; water-bearing.....	10	210
			Gravel, medium, clean, water- bearing.....	15	225
ToD 33-1 Altitude: 650					
Soil.....	1	1			
Clay, yellow.....	15	16			
Clay, blue.....	27	43			
Sand, hard, dry.....	1	44			
Mud and sand.....	24	68			
Sand, gray, and small gravel; water- bearing.....	5	73			
Gravel, yellow, and mud; water- bearing.....	1	74			
Clay, blue.....		74			
ToD 33-2 Altitude: 650			ToE 36-2 Altitude: 590		
Clay, yellow, and sand.....	25	25	Gravel, dry (old well).....	80	80
Clay, blue.....	14	39	Sand and gravel; water-bearing.....	25	105
Clay, sandy, brown.....	3	42			
Sand and gravel; dry.....	21	63			
Clay, gritty, yellow.....	6	69			
Sand, yellow, and gravel; water- bearing.....	7	76			
Sand, fine, yellow, water-bearing...	5	81			
Sand, yellow, and gravel; water- bearing.....	2	83			
Sand, yellow, and gravel; increas- ingly coarser.....	18	101			
Gravel and a boulder at.....		101			
ToD 33-3 Altitude: 660			ToE 1-3 Altitude: 650		
Dog wall.....	30	30	Clay, sand, and gravel.....	60	60
Clay, dirty, sandy, gravelly.....	40	70	Sand and gravel.....	80	140
Gravel, mica.....	3	73	Hardpan (clay).....	10	150
			Gravel.....	27	177
			ToE 1-4 Altitude: 690		
			Top soil, black.....	4	4
			Clay, yellow.....	12	16
			Gravel, water-bearing.....	1	17
			Clay, light gray.....	46	63
			Sand, dry.....	3	66
			Clay, light gray.....	77	143
			Sand, dirty.....	17	160
			Sand, cleaner.....	14	174
			Sand, clean, to coarse sand with some gravel, fine.....	10	184
			Clay, blue, at.....		184
			ToE 2-3 Altitude: 683		
			Clay.....	38	38
			Gravel and sand; water-bearing.....	4	42
			ToE 2-6 Altitude: 692		
			Dog wall.....	30	30
			Streak of sand, water-bearing.....	5	35
			Clay, gravelly.....	125	160
			Gravel.....	29	189
ToE 3-1 Altitude: 696					
Clay.....	20	20			
Gravel and sand; water-bearing.....	40	60			
ToE 10-1 Altitude: 684					
Clay and hardpan.....	65	65			
Gravel, dry.....		65			
Gravel, water-bearing.....		165			

Table 3--4all Logs - Continued

Tcf 3-1 Altitude: 650	Thickness (feet)	Depth (feet)	Tcf 4-8 altitude: 705	Thickness (feet)	Depth (feet)
Top soil.....	6	6	Clay, sand, and some gravel.....	28	28
Gravel.....	51	57	Clay, gray-brown, hard, and gravel..	27	56
			Sand, fine gravel; water-bearing....	6	62
			Shale, light gray.....	8	70
Tcf 3-2 Altitude: 650			Tcf 4-9 Altitude: 705		
Top soil.....	6	6	Clay, sand, and a little fine gravel; light brown oxidation.....	20	20
Gravel.....	16	22	Same as above with more gravel.....	6	26
			Gravel, packed, dirty, water-bearing	4	30
Tcf 3-3 Altitude: 653			Clay, sand, and gravel.....	18	48
Top soil.....	6	6	Shale, hard, light gray.....	2	50
Gravel.....	54	60	Shale, light to dark gray, water- bearing (little).....	20	70
Tcf 3-4 Altitude: 680			Tcf 4-10 Altitude: 705		
Drift.....	72	72	Clay, sand, and gravel.....	24	24
Gravel, coarse, blue, water-bearing..	13	85	Clay, sand, and more gravel.....	36	60
			Shale, light gray.....	30	90
			Shale, dark gray, at.....		90
Tcf 3-5 Altitude: 655			Tcf 11-1 altitude: 695		
Clay, yellow.....	12	12	Soil.....	1	1
Gravel, dry.....	25	38	Clay, yellow.....	11	12
Clay, blue.....	20	58	Clay, blue.....	43	55
Hardpan, blue, with sand streaks....	2	60	Hardpan, blue.....	3	58
Gravel, dry.....	20	80	Clay, blue, with sand streaks.....	7	65
Clay, blue, with sand and gravel streaks.....	15	95	Clay, blue.....	20	85
Sand, sticky.....	3	98	Gravel, dry.....	33	118
Clay.....	2	100	Clay, blue.....	5	123
Sand, sticky.....	2	102	Gravel, dry.....	52	175
Sand and gravel, fair.....	1	103	Sand, fine, yellow, water-bearing...	5	180
Clay, with gravel streaks.....	20	123	Sand, water-bearing.....	9	189
Sand and gravel, coarse; water- bearing.....	5	128	Sand and some gravel.....	1	190
Still in good gravel at.....		128	Gravel, coarse, and sand.....	3	193
			Sand, coarse, and some gravel.....	4	197
			Gravel, coarse.....	4	201
Tcf 3-6 altitude: 650			Tcf 12-2 Altitude: 710		
Soil.....	2	2	Top soil.....	6	6
Clay, gritty, yellow.....	10	12	Till.....	34	40
Hardpan, gritty, brown.....	6	18	Gravel, dry.....	70	110
Gravel, dry.....	7	25	Clay, blue.....	90	200
Hardpan, blue.....	8	33	Gravel, water-bearing.....	14	214
Shale, blue.....	120	153			
Shale, blue, hard.....	16	169			
Limestone, hard, blue.....	3	172			
Limestone, gray.....	8	180			
Shale, brown.....	11	191			
Tcf 3-7 Altitude: 650			Tcf 12-3 Altitude: 715		
Soil, black.....	2	2	Mud and clay.....	60	60
Clay, gritty, brown.....	12	14	Gravel, dry.....	100	160
Sand, yellow, and some gravel.....	15	29	Hard (stone?).....	2	162
Gravel, coarse, and sand.....	6	35	Blue sand.....		
Sand.....	2	37	Gravel.....		
Gravel, small, and sand.....	3	40			
Clay, blue, at.....		40			
Tcf 4-4 Altitude: 680			Tcf 14-1 Altitude: 690		
Drift.....	30	30	Fill.....	3	3
Limestone.....	20	50	Clay.....	15	18
			Clay, sandy, blue.....	72	90
			Clay, sandy, brown.....	20	110
			quicksand.....	15	125
			Sand, gray, some gravel, chunks of wood.....	4	129
			Clay, gritty, brown.....	24	153
			Sand, gray, water-bearing.....	15	168
			Gravel, coarse, gray, water-bearing..	6	174
			Still in gravel at.....		174
Tcf 4-5 Altitude: 700			Tcf 17-1 Altitude: 655		
Drift.....	95	95	Clay.....	75	75
Limestone, hard (water-bearing at 500').....	880	975	Gravel, dry.....	54	129
Shale, soft.....	25	1000	Gravel, water-bearing.....	29	158

Table J--Well Logs - Continued

Tef 20-1 Altitude: 675	Thickness (feet)	Depth (feet)	Tef 36-2 Continued	Thickness (feet)	Depth (feet)
Soil.....	1	1	Sand and gravel.....	12	28
Clay, yellow.....	11	12	Sand.....	8	36
Clay, blue.....	22	34	clay.....	4	40
Clay, gravelly, blue.....	56	90			
Clay, soft, brown.....	14	104			
Sand, fine, yellow, dry.....	3	138			
Sand, blue, clay.....	10	148	Tef 36-3		
Sand, hard, gray, dry.....	4	152	Altitude: 514		
Sand, gray, dry.....	15	167	Clay and sand.....	19	19
Sand, coarse, gray, and gravel; water-bearing.....	21	188	Sand and gravel.....	17	36
Still in gravel.....		188	Clay, sand, and gravel.....	2	38
			Sand and gravel.....	12	50
Tef 20-2 Altitude: 670			Tef 36-4 Altitude: 514		
Clay, brown.....	18	18	Sand and clay.....	18	18
Missing.....	79	97	Sand, gravelly, silty.....	9	27
Clay, sandy, yellow.....	6	103	Sand and gravel.....	8	35
Sand, yellow, and gravel; dry.....	64	167	Sand, gravel, and clay.....	2	37
Sand, yellow, and gravel; water- bearing.....	9	176	Sand and gravel.....	13	50
Sand, gray and yellow, and gravel; water-bearing.....	4	180			
Sand, coarse to fine, gray, some gravel; water-bearing.....	7	187	Tef 36-5 Altitude: 508		
Gravel, coarse, gray, and a little coarse sand; water-bearing.....	6	193	Clay.....	6	6
			Sand and clay.....	14	20
			Sand and gravel.....	19	39
			Sand and clay.....	3	42
			Clay.....	14	76
			Gravel, sand, and clay.....	4	80
Tef 20-3 Altitude: 670			Tef 36-6 Altitude: 512		
Clay.....	165	165	Sand and clay.....	17	17
Gravel, dry.....	2	167	Sand and gravel.....	31	48
Gravel, water-bearing.....	13	180	Sand.....	2	50
			Sand and clay.....	28	78
			Sand, gravel, and clay.....	10	88
			Gravel and sand.....	4	92
			Sand, gravel, and clay.....	7	95
			Sand.....	1	96
			Sand, gravel, and clay.....	6	102
			Sand and clay.....	28	130
			Clay.....	9	139
			Rock.....	5	144
Tef 26-2 Altitude: 580			Tef 36-7 Altitude: 510		
Soil.....	1	1	Sand and clay.....	20	20
Clay, sandy, yellow.....	11	12	Sand and gravel.....	30	50
Gravel, dry.....	47	59	Clay.....	32	82
Clay, blue.....	26	85	Gravel, sand, and clay.....	35	117
Gravel, sandy.....	1	86	Sand and gravel.....	2	119
Clay, blue.....	62	148	Sand.....	5	124
Clay, sandy, blue.....	1	149	Rock.....	3	127
Gravel, sandy, and sand; water- bearing.....	4	153			
Sand and gravel; water-bearing.....	6	159			
Sand at.....		159			
Tef 35-2 Altitude: 512			Tef 36-8 Altitude: 514		
Silt.....	10	10	Sand and clay.....	20	20
Sand and gravel.....	69	79	Sand and gravel.....	15	35
Clay.....	2	81	Clay, sand and gravel.....	2	37
Sand and clay.....	8	89	Sand and gravel.....	15	52
Hardpan.....	5	94			
			Tef 36-9 Altitude: 514		
			Sand and clay.....	20	20
			Sand and gravel.....	12	32
			Gravel, sand, and clay.....	2	34
			Sand and gravel.....	16	50
Tef 35-3 Altitude: 515			Tef 36-10 Altitude: 514		
Sand and clay.....	11	11	Sand and clay.....	20	20
Silt.....	4	15	Sand and gravel.....	17	37
Sand and gravel.....	30	45	Sand, gravel, and clay.....	2	39
Sand and gravel; dirty.....	10	55	Sand and gravel.....	11	50
Sand and gravel.....	10	65			
Sand and gravel; dirty.....	7	72			
Clay.....	2	74			
Tef 36-1 Altitude: 550					
Drift.....	75	75			
Gravel.....	13	90			
Tef 36-2 Altitude: 513					
Clay.....	7	7			
Silt.....	6	13			
Sand and clay.....	3	16			

Table J--Wall Logs - Continued

Tef 36-11		Thickness	Depth	Tef 36-19	
Altitude: 514		(feet)	(feet)	Continued	
	Sand and clay.....	18	18	Hardpan.....	4
	Sand and gravel.....	34	52	Gravel and sand.....	13
	Sand and clay.....	2	54	Sand.....	10
				Sand, dirty.....	10
Tef 36-12		Tef 36-20			
Altitude: 511		Altitude: 516			
	Sand and clay.....	15	15	Silt.....	22
	Sand and gravel.....	12	27	Clay.....	13
	Sand, silty, and gravel.....	12	39	Sand and gravel.....	14
	Clay, sand, and gravel.....	11	50	Sand, dirty.....	10
	Clay, sand, and gravel with boulders	10	60		
	Clay, sand, and gravel.....	18	78		
	Sand and gravel.....	10	88		
Tef 36-13		Tef 36-21			
Altitude: 511		Altitude: 511			
	Clay and sand.....	15	15	Clay.....	6
	Clay, sand, and gravel.....	5	20	Silt.....	12
	Sand, silty, and gravel.....	5	25	Sand and gravel.....	42
	Sand and gravel.....	10	35	Clay.....	2
	Clay, sand, and gravel.....	15	50	Sand and gravel.....	6
	Sand and gravel.....	6	56	Clay.....	4
	Clay, sand, and gravel.....	4	60		
	Sand and gravel.....	4	64		
	Clay, sand, and gravel.....	8	72		
	Sand.....	14	86		
Tef 36-14		Tef 36-22			
Altitude: 513		Altitude: 512			
	Sand and clay.....	14	14	Clay.....	6
	Sand and gravel.....	14	28	Silt.....	12
	Sand, gravelly, dirty.....	8	36	Sand, gravelly.....	23
	Sand and gravel.....	6	42		
	Clay, sand, and gravel.....	32	74		
	Sand.....	11	85		
	Sand and gravel.....	13	98		
	Clay.....	3	101		
	Sand and clay.....	21	122		
	Sand, dirty.....	11	133		
	Clay.....	10	143		
	Rock.....	3	146		
Tef 36-15		Tef 36-23			
Altitude: 512		Altitude: 510			
	Silt.....	10	10	Silt.....	12
	Hardpan.....	12	22	Sand and gravel.....	46
	Sand and gravel.....	26	48	Sand and gravel; dirty.....	6
	Sand and clay.....	5	53		
Tef 36-16		Tef 36-24			
Altitude: 511		Altitude: 560			
	Silt.....	10	10	Silt.....	7
	Hardpan.....	12	22	Boulders.....	3
	Gravel.....	9	31	Gravel and clay.....	37
	Sand and gravel.....	17	48	Silt.....	16
	Sand.....	3	51	Rock.....	4
Tef 36-17		Tef 36-25			
Altitude: 512		Altitude: 572			
	Silt.....	10	10	Silt.....	10
	Hardpan.....	12	22	Sand and gravel.....	38
	Gravel.....	23	45	Sand, dirty.....	3
	Sand.....	2	47		
Tef 36-18		Tef 36-26			
Altitude: 511		Altitude: 510			
	Silt.....	18	18	Clay.....	4
	Gravel.....	22	40	Silt.....	12
	Sand and gravel.....	15	55	Sand and gravel.....	10
				Sand and gravel; dirty.....	7
				Sand and gravel.....	15
				Sand and gravel; dirty.....	6
				Clay.....	4
Tef 36-19		Tef 36-27			
Altitude: 512		Altitude: 550			
	Silt.....	18	18	Sand and clay.....	157
Tef 36-18		Tef 36-28			
Altitude: 511		Altitude: 522			
	Silt.....	18	18	Sand.....	17
	Gravel.....	22	40	Silt.....	13
	Sand and gravel.....	15	55	Sand and gravel.....	3
				Clay.....	11
				Sand, dirty.....	28
				Sand and gravel.....	5
				Clay.....	5

Table 3—Well Logs - Continued

ToF 36-29 Altitude: 520	Thickness (feet)	Depth (feet)	ToF 36-27 Continued	Thickness (feet)	Depth (feet)
Clay.....	25	25	Sand, silty, and gravel.....	5	98
Gravel.....	2	27	Sand.....	12	110
Gravel and clay.....	12	39	Sand and clay.....	20	130
Sand and gravel.....	18	57	Sand.....	6	136
Clay.....	2	59			
Sand and gravel.....	18	77			
Clay.....	2	79			
			ToF 36-38 Altitude: 514		
ToF 36-30 Altitude: 513			Clay.....	8	8
Sand.....	8	8	Silt.....	6	14
Clay.....	26	14	Sand and gravel.....	12	26
Gravel.....	5	39	Sand.....	8	34
Sand.....	10	49	Clay.....	4	38
Gravel.....	17	66			
Clay.....	2	68	ToF 5-2 Altitude: 510		
			Gravel.....	50	50
ToF 36-31 Altitude: 516			Clay, hard.....	30	80
Sand and clay.....	18	18	Gravel, water-bearing.....	45	125
Clay.....	12	30			
Sand and gravel.....	29	59	ToF 5-3 Altitude: 682		
			Clay, yellow.....	20	20
ToF 36-32 Altitude: 518			Clay, blue.....	30	50
Sand.....	9	9	Clay, sandy, blue.....	96	146
Gravel and clay.....	17	26	Gravel strip, dry.....	2	148
Silt.....	4	30	Clay, sandy, blue.....	50	198
Sand and gravel.....	30	60	Gravel strip, dry.....	2	200
Clay.....	3	63	Clay, gritty, blue.....	64	264
Sand and gravel.....	15	78	Gravel, coarse, clean, and sand with boulders, active.....	12	276
			Sand, fine, brown, active.....	2	278
			Clay, yellow.....	2	280
			Sand, fine, brown, very active.....	2	282
ToF 36-33 Altitude: 518					
Silt.....	18	18	ToF 5-4 Altitude: 682		
Clay.....	16	34	Clay, yellow.....	16	16
Gravel and clay.....	5	39	Sand strip.....	1	17
Hardpan.....	18	57	Clay, gritty, blue.....	15	52
Sand and gravel.....	6	63	Gravel strip.....	1	53
			Clay, gritty.....	9	62
ToF 36-34 Altitude: 518			Boulders.....	2	64
Silt.....	22	22	Clay, gritty, blue.....	62	126
Clay.....	15	37	Boulders.....	2	128
Sand and gravel.....	22	59	Clay, gritty, rough drilling.....	29	157
			Clay, smooth.....	25	182
			Clay.....	10	192
			Clay, hard, rough.....	10	202
			Clay, hard, blue.....	10	212
			Clay, blue.....	15	227
			Gravel, muddy.....	4	231
			Clay, rocky.....	12	243
			Gravel strip.....	1	244
			Clay, gritty.....	18	262
			Rock or gravel.....	9	271
			Gravel.....	4	275
			Gravel, cemented.....	7	282
			Clay, gritty.....	4	286
			Clay, shaly, brown.....	2	288
			Shale.....	10	298
ToF 36-35 Altitude: 514					
Silt.....	16	16	ToF 5-5 Altitude: 682		
Sand and gravel.....	17	33	Fill.....	2	2
			Clay, brown.....	18	20
			Clay, gritty, hard.....	4	24
			Gravel.....	4	28
			Clay, gritty.....	6	34
			Clay, gritty, hard.....	18	72
			Clay.....	40	112
			Clay, gritty.....	140	252
			Clay.....	20	282
			Gravel, hard drilling.....	3	285
ToF 36-36 Altitude: 518					
Top soil.....	5	5	ToF 5-6 Altitude: 682		
Sand and clay.....	15	20	Fill.....	1	1
Sand and gravel.....	5	25	Clay, yellow.....	15	16
Sand, silty, and gravel.....	7	32			
Sand.....	8	40			
Clay.....	1	41			
Sand.....	5	46			
Clay.....	12	58			
ToF 36-37 Altitude: 518					
Top soil.....	8	8			
Sand and clay.....	10	18			
Sand.....	13	31			
Sand and gravel.....	6	37			
Clay, sand, and gravel.....	6	43			
Sand, gravelly.....	19	62			
Clay, sand, and gravel.....	26	88			
Sand and gravel.....	5	93			

Table J—Well Logs - Continued

Top 5-6 Continued	Thickness (feet)	Depth (feet)	Top 9-4 Altitude: 555	Thickness (feet)	Depth (feet)
Clay, sandy, blue.....	3	29	Fill.....	3	3
Clay, gritty, blue.....	14	33	Clay and gravel.....	7	10
Clay, hard, gravelly.....	7	40	Sand, gray, and gravel.....	4	14
Clay, gritty, blue.....	30	70	Boulders and sand.....	6	20
Clay, soft and smooth, blue.....	67	137	Sand and gravel; dirty.....	3	23
Clay, very gritty.....	4	141	Boulders, hard, and gravel.....	12	35
Clay, gritty, hard, blue.....	56	197	Sand and gravel.....	5	40
Clay, gritty, blue, and shale.....	40	237	Gravel and hardpan.....	16	56
Clay, smooth, and shale.....	4	241	Sand, fine, water-bearing.....	24	80
Clay, gritty, and shale.....	20	261	Gravel, water-bearing.....	25	105
Gravel, dry.....	11	272	Sand and small gravel; water- bearing.....	4	109
Rock - brown limestone mixture.....	10	282	Gravel, water-bearing.....	3	112
			Gravel, very coarse, water-bearing..	17	129
<b>Top 6-1</b> Altitude: 595			<b>Top 9-5</b> Altitude: 555		
Clay.....	100	100	Clay and gravel.....	20	20
Gravel, dry.....	58	158	Gravel and boulders.....	1	21
Gravel.....	34	192	Sand, dirty.....	8	29
			Sand and gravel.....	6	35
<b>Top 6-2</b> Altitude: 695			Sand and gravel; water-bearing.....	11	46
Soil.....	2	2	Clay, soft, yellow.....	2	48
Clay, yellow.....	16	18	Sand, yellow, very dirty.....	6	54
Clay, sandy.....	4	22	Sand, fine.....	21	75
Clay, blue.....	6	28	Sand and gravel.....	4	79
Gravel.....	1	29	Sand, fine.....	2	81
Clay, blue.....	4	33	Sand and some gravel.....	2	83
Hardpan, brown.....	10	43	Sand and gravel.....	51	134
Clay, sandy, blue.....	5	48			
Gravel, dry.....	9	57	<b>Top 9-6</b> Altitude: 555		
Clay, blue.....	9	66	Topsoil and subsoil.....	10	10
Gravel, dry.....	2	68	Clay and small stones.....	10	20
Clay, blue.....	8	76	Clay, gray, 5% sand, and very small stones.....	10	30
Gravel, dry.....	19	95	Clay, tan, 10% sand, and small stones.....	10	40
Sand, dry.....	7	102	Clay, 10% sand, large rocks.....	10	50
Clay, blue.....	3	105	Sand, 100%.....	10	60
Muck, sandy, blue.....	10	115	Gravel, 20% sand.....	10	70
Hardpan, blue.....	4	119	Gravel, 15% sand, large stones.....	20	90
Gravel, dry.....	21	140	Gravel, 10% sand, and large stones..	10	100
Hardpan, gravelly, blue.....	17	157	Gravel, blue-gray, and 1% sand.....	10	110
Clay, blue, and gravel streaks (seepage).....	3	170	Gravel and 5% sand.....	10	120
Gravel, dry.....	1	171	Gravel, stone, coarse sand.....	10	130
Hardpan, blue.....	3	174	Shale.....	8	138
Hardpan, gravelly.....	2	176			
Sand, gray, and some gravel; water- bearing.....	3	181	<b>Top 9-7</b> Altitude: 555		
Sand, fine, gray, water-bearing.....	10	191	Mixed formation.....	20	20
Sand, fine, and a little coarse gravel.....	2	193	Gravel, sandy, and clay; dry.....	50	70
Gravel, coarse, gray to yellow, and coarse sand.....	5	198	Gravel, coarse, excellent, water- bearing.....	76	146
			Shale at.....		146
<b>Top 9-1</b> Altitude: 555			<b>Top 10-1</b> Altitude: 550		
Clay, gravel, and boulders.....	7	7	Clay.....	20	20
Gravel, dry.....	38	45	Hardpan.....	57	87
Clay, gritty, brown.....	17	62	Sand and gravel.....	10	97
Sand, yellow, water-bearing.....	28	90			
Sand and some gravel.....	1	91	<b>Top 11-1</b> Altitude: 555		
Gravel, coarse, yellow, and a little coarse sand.....	3	94	Soil.....	1	1
			Clay, yellow, and boulders.....	11	12
<b>Top 9-2</b> Altitude: 555			Gravel, dry.....	42	54
Pit.....	5	5	Clay, gravelly, blue.....	21	85
Gravel, dry.....	31	36	Sand, muddy.....	11	96
Sand, dry.....	8	44	Sand, sandy, and some gravel.....	9	105
Clay, sandy, gray.....	8	52	Clay, blue, with sand streaks.....	42	147
Sand, yellow, water-bearing.....	35	87	Sand, gray, water-bearing.....	8	155
Gravel and sand; water-bearing.....	3	90	Sand and gravel; water-bearing.....	4	159
Gravel and coarse sand; water- bearing.....	3	93	Sand, fine, at.....		159
			<b>Top 9-3</b> Altitude: 555		
<b>Top 9-3</b> Altitude: 555			Top soil.....	5	5
Gravel.....	50	55	Gravel.....	50	55
Clay, blue.....	4	59	Clay, blue.....	4	59
Gravel.....	37	96	Gravel.....	37	96

Table 3—Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)				
Tel 12-2	550	Sand.....	12	12	Tel 17-8	535	Topsoil and fill.....	8	8		
		Sand and boulders.....	7	19			Clay, red (hardpan).....	8	16		
		Clay, blue.....	12	31			Clay, gray (hardpan).....	19	35		
		Sand, fine, and some gravel; water-bearing.....	7	38			Sand, uniform.....	31	66		
		Sand, fine, water-bearing.....	35	73			Sand and gravel.....	16	82		
		Gravel and sand; water-bearing.....	4	77			Gravel, coarse, cobbles and boulders.....	40	102		
Tel 17-2	520	Fill.....	12	12	Tel 19-6	620	Pit.....	6	6		
		Clay, gritty.....	16	28			Fill.....	9	15		
		Sand, muddy.....	36	64			Gravel, medium to coarse.....	40	55		
		Sand, coarse, and gravel, muddy.....	12	76			Sand, coarse.....	5	60		
		Sand, medium, and gravel, muddy.....	18	94			Gravel, medium to coarse.....	20	80		
		Clay, blue, at.....		94			Sand, coarse.....	5	85		
			Gravel, medium to coarse, muddy.....	25			110				
Tel 17-3	520	Soil.....	1	1			Sand, coarse, cloudy.....	15	125		
		Clay, gravelly, brown, and boulders.....	28	29			Gravel, fine, cloudy.....	15	140		
		Sand, coarse and fine, yellow, and a little small gravel; water-bearing.....	8	37			Sand, coarse, cloudy.....	25	165		
		Sand, fine, yellow, water-bearing.....	16	53			Sand, fine, cloudy.....	8	173		
		Sand, coarse and fine, and a little gravel; water-bearing.....	5	58			Sand, coarse, and gravel.....	5	178		
		Sand, coarse and fine, yellow, water-bearing.....	2	60			Gravel, fine to medium.....	19	197		
		Gravel, coarse, yellow, and sand; water-bearing.....	3	63	Clay.....	1	198				
		Sand, fine.....	1	64	Gravel, coarse.....	6	204				
		Gravel, coarse, small, and sand.....	1	65	Sand, coarse, muddy.....	2	206				
		Gravel, good, yellow, and coarse sand.....	8	73							
		Gravel, small, gray.....	4	77	Tel 19-7	620	Pit.....	18	18		
		Sand, gray, and a little gravel.....	4	81			Gravel.....	77	95		
		Gravel, good, coarse, gray.....	9	90			Clay, gravel.....	5	100		
		Sand and a little gravel.....	2	92			Gravel.....	99	199		
		Gravel, coarse.....	2	94			Clay, boulders, and gravel at.....		199		
		Hardpan, gray, gravelly.....	35	129							
Tel 17-5	535	Clay.....	3	3	Tel 19-8	625	Open pit.....	12	12		
		Sand, dry.....	3	6			Gravel, dry.....	5	17		
		Boulders and dry sand.....	18	24			Clay.....	4	21		
		Hardpan.....	6	30			Gravel; medium, muddy.....	36	57		
		Sand, muddy.....	1	31			Sand and gravel.....	11	68		
		Hardpan and sand.....	7	40			Clay, gritty, hard.....	111	179		
		Sand, fine.....	5	45			Gravel, medium to coarse.....	6	185		
		Sand, coarse, with little water.....	5	50			Clay.....	2	187		
		Sand, coarse.....	7	57			Gravel, medium to coarse.....	13	200		
		Gravel and sand.....	2	59			Clay, gritty, hard.....	23	223		
		Gravel, yellow.....	12	71			Rock at.....		223		
		Gravel, coarse.....	21	92							
		Gravel, small.....	5	97			Tel 19-9	625	Sand, gravel and boulders.....	35	35
		Gravel and sand.....	3	100					Sand and medium gravel.....	7	42
		Sand.....	3	103					Boulders, sand and gravel.....	34	76
		Gravel and sand.....	5	108					Clay.....	28	104
									Clay, gritty, hard.....	41	145
			Clay, sandy, hard.....	16	161						
			Gravel, medium.....	5	166						
			Clay, gritty, hard.....	4	170						
			Gravel, fine, and sand.....	10	180						
			Gravel, fine, medium, and sand.....	13	193						
			Clay.....	1	194						
			Gravel, fine to medium.....	4	198						
			Gravel, coarse.....	2	200						
			Clay.....	1	201						
Tel 17-6	535	Boulders and gravel.....	3	3	Tel 19-10	625			Top soil.....	5	5
		Hardpan, gray.....	6	9					Clay, gritty.....	20	25
		Clay, gray.....	19	28			Gravel, boulders, sand.....	143	168		
		Gravel and hardpan.....	12	40			Gravel, coarse, and coarse sand.....	4	172		
		Gravel and muddy sand.....	8	48			Gravel, medium, and coarse sand.....	20	192		
		Gravel, moist, and gray sand.....	3	51			Gravel, coarse, boulders, and coarse sand.....	13	205		
		Sand, muddy.....	8	59			Sand, coarse, at.....		205		
		Gravel and coarse sand; water-bearing.....	3	61							
		Sand, gray.....	11	72							
		Gravel, good.....	10	82							
		Gravel and some sand.....	1	83							
		Gravel, good, and a little sand.....	8	91							
		Gravel, small, and a little sand.....	5	96							
		Gravel, small.....	4	100							



Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)														
Tel 19-11	625	Topsoil	5	5	Tel 20-5			Clay and cinners	13	13											
		Clay, sandy, yellow	8	13							Clay and dry sand	31	44								
		Clay, gritty, yellow	12	25							Sand, fine, water-bearing	20	64								
		Gravel, medium, with muddy sand	14	39							Gravel and roset gray sand	13	77								
		Boulders	2	41							Sand, coarse	10	87								
		Sand, muddy	10	51							Gravel, coarse, and fine sand	8	95								
		Gravel, medium coarse, and fine, muddy sand	3	54							Sand, yellow, almost red	5	100								
		Gravel, medium coarse, and fine, muddy sand, small boulders	17	71							Sand, yellow	3	103								
		Sand, fine, medium gravel and boulders	6	77							Sand, flour-like	1	104								
		Sand, coarse, and fine gravel	9	86							Clay, blue, and sand	3	107								
		Gravel, medium, and coarse sand; water-bearing	11	97							Clay, gravel, and hardpan	2	109								
		Boulders, coarse gravel, and sand; water-bearing	14	111							Gravel and gray sand; water-bearing	2	111								
		Sand, coarse and fine, water-bearing	5	116							Clay, blue, and dry sand	8	119								
		Gravel, medium coarse, with boulders and fine sand; water-bearing	5	121							Gravel, coarse	7	120								
		Sand, coarse, and medium to coarse gravel; water-bearing	8	205							Clay, blue, and sand	13	133								
		Sand, medium, and boulders	5	210							Gravel, coarse, and sand; water-bearing	18	151								
		Shale	6	216																	
		Tel 15-12	625	Topsoil							5	5	Tel 20-6	635		Cinders and clay	13	13			
				Clay, gritty							20	25							Sand and gravel, dry	31	44
				Sand, gravel and boulders							72	97							Sand, fine, water-bearing	20	64
Boulders and sand	6			103	Sand and small gravel	13	77														
Sand, gravel and boulders	17			120	Sand, coarse, and small gravel	10	87														
Boulders and sand	35			175	Sand, gray, and small gravel	8	95														
Boulders, coarse gravel and sand	32			207	Sand, yellow, and small gravel	5	100														
Tel 20-1	550	Clay	3	3	Tel 20-1	666		Clay and gravel	10	10											
		Clay and gravel	9	12							Hardpan, blue	115	125								
		Fabblers and gravel	2	14							Gravel and fine sand	25	150								
		Gravel, fine, and sand	13	27																	
		Quicksand	1	28							Tel 22-2	675		Fill	3	3					
		Gravel, clay, and pebbles	2	30													Clay, tough	24	27		
		Clay, dark gray	72	102													Clay, hard, and gravel	2	29		
		Sand and gravel	4	106													Gravel, medium	1	30		
		Clay and pebbles	2	108													Clay and gravel	9	39		
		Sand and gravel	10	118													Gravel, medium, dry	56	95		
		Clay and pebbles	7	125													Gravel, fine, cloudy	11	106		
		Gravel and pebbles	5	130													Clay, gritty, hard	2	108		
		Boulders	40	170													Gravel, fine, dry	5	113		
		Shale, blue-gray	2	172													Sand, medium, dry	7	120		
		Limestone, coralline	38	210													Sand, coarse, and gravel	8	128		
Limestone, gray	20	230	Gravel, medium	9	137																
Tel 20-2	550	Drift	200	200	Tel 20-3	550		Sand, gravel, boulders	65	65											
		Shale, black	5	205													Clay, blue	40	105		
		Limestone, brown, water-bearing	40	245													Sand and gravel	65	170		
											Shale, black	14	184								
Tel 20-3	550	Sand, gravel, boulders	65	65	Tel 20-4	550		Clay	79	79											
		Clay, blue	40	105							Gravel	2	81								
		Sand and gravel	65	170							Clay	17	98								
		Shale, black	14	184							Gravel	6	104								
		Limestone, water-bearing	47	231																	
											Tel 24-1	645		Clay and boulders	5	5					
																	Clay and gravel	7	12		
			Sand	4	16																
			Gravel, coarse, yellow, water-bearing	12	28																
			Clay, blue, at		28																

Table 3--Well Logs - Continued

Top	Thickness	Depth	Top	Thickness	Depth
Altitude	(feet)	(feet)	Altitude	(feet)	(feet)
Top 24-2 Altitude: 672			Top 27-2 Altitude: 660		
Cinders and soil.....	1	1	Soil.....	1	1
Clay, yellow.....	17	18	Clay, blue.....	20	21
Clay, blue.....	48	65	Sand, yellow, dry.....	16	37
Gravel, dry.....	14	80	Gravel, dry.....	21	58
Clay, brown.....	12	92	Gravel, coarse, gray, water-bearing..	18	76
Gravel, gray, and coarse sand; Water-bearing.....	7	99			
Same, getting finer at.....		99	Top 27-1 Altitude: 669		
			Soil.....	1	1
Top 25-1 Altitude: 653			Clay, yellow.....	11	12
Soil.....	2	2	Clay, gravelly, blue.....	26	38
Clay, gritty, yellow.....	15	17	Sand, yellow, dry.....	2	40
Clay, blue.....	5	22	Gravel, dry.....	44	84
Sand, fine, yellow.....	2	24	Gravel, yellow, with a little sand; water-bearing.....	11	95
Clay, blue.....	6	30			
Hardpan, sandy, brown.....	10	40	Top 29-1 Altitude: 535		
Gravel, dry.....	3	43	Clay, gritty, yellow.....	20	20
Sand and small gravel; water- bearing.....	10	53	Clay, gritty, gray.....	60	80
Sand, water-bearing.....	9	62	Clay, gray.....	18	98
Gravel, coarse and small, gray and some coarse sand; water-bearing...	5	67	Sand, muddy.....	7	101
			Clay, gritty, gray.....	9	110
Top 25-2 Altitude: 654			Sand, muddy.....	4	114
Soil.....	1	1	Sand, coarse, muddy.....	6	120
Clay, yellow.....	13	14	Clay, gritty.....	4	124
Sand and gravel.....	12	26	Gravel, coarse, sand, and boulders..	9	133
Clay, blue.....	18	44	Clay, brown.....	26	159
Sand, coarse, yellow, water-bearing..	9	53	Shale, brown.....	1	160
Gravel, gray and yellow, and sand; water-bearing.....	4	57			
Sand, coarse, gray, and some gravel; water-bearing.....	2	59	Top 29-2 Altitude: 535		
Gravel, coarse, small, gray, and coarse sand; water-bearing.....	3	62	Feet (log, vegetation, etc.).....	4	4
Clay at.....		62	Clay, blue.....	89	87
			Sand and clay.....	13	100
Top 26-2 Altitude: 671			Sand, coarse, some gravel; water- bearing.....	15	115
Soil.....	1	1	Clay, gritty, hard.....	3	118
Clay, yellow.....	11	12	Sand, water-bearing.....	1	119
Clay, blue.....	7	19	Clay, gritty, hard.....	2	121
Sand.....	4	23	Sand, water-bearing.....	2	123
Clay, sandy, blue.....	7	30	Clay, gritty, hard.....	2	125
Clay, soft, brown.....	29	59	Sand, water-bearing.....	4	129
Clay with sand streaks.....	11	70	Clay.....	5	134
Sand, fine, gray.....	12	82	Sand, muddy.....	1	135
Hardpan, brown, streaks.....	16	98	Shale, brown.....	15	150
Sand and a little clay.....	20	118			
Hardpan, brown.....	3	121	Top 29-3 Altitude: 535		
Gravel and sand; water-bearing.....	3	124	Clay.....	83	83
Clay, gritty, brown.....	33	157	Sand, fine, muddy.....	2	85
Sand, gray, and a little gravel; water-bearing.....	8	165	Clay.....	2	87
Gravel, coarse, gray, and coarse to fine sand.....	6	171	Sand, fine, muddy.....	17	100
			Sand, fine, clean.....	5	105
Top 27-1 Altitude: 670			Clay.....	23	128
Clay.....	12	12	Sand, fine.....	1	129
Gravel.....	12	24	Clay.....	5	134
Clay.....	22	46	Shale, brown.....	3	137
Gravel, medium.....	2	48			
Clay, gritty.....	5	53	Top 29-4 Altitude: 535		
Gravel, medium.....	12	65	Clay.....	10	10
Clay.....	7	72	Sand, fine.....	1	11
Sand, medium, and gravel.....	22	94	Gravel, coarse, sand, and boulders..	8	19
Clay, gritty.....	36	130	Clay.....	5	24
Gravel, medium.....	14	144	Gravel, medium, fine sand, and boulders.....	6	30
Clay, gritty.....	25	169	Sand, fine to medium.....	20	50
Sand, coarse.....	2	171	Clay.....	29	79
Sand, medium.....	11	202	Sand, fine, one foot of medium gravel.....	16	95
Sand, coarse.....	10	212	Sand, medium to coarse.....	17	112
Gravel, medium.....	10	222	Shale, brown.....	3	115
Shale.....	11	233			

Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)		
Tel 29-5 Altitude: 533		Fill.....	8	8	Tel D-2 Altitude: 567	Fill.....	10	10	
		Clay, gray.....	52	60		Gravel, dry.....	5	15	
		Clay and boulders.....	40	100		Boulders and gravel.....	20	35	
		Sand and gravel; water-bearing.....	16	116		Hardpan.....	6	41	
		Clay and boulders.....	9	125		Gravel, water-bearing.....	11	52	
		Sand and gravel.....	4	129		Hardpan.....	14	66	
Tel 29-6 Altitude: 533		Topsoil.....	4	4		Gravel and hardpan; dry.....	14	80	
		Clay, yellow.....	6	10		Clay and sand.....	10	90	
		Sand.....	2	12		Sand, fine, water-bearing.....	9	99	
		Gravel, coarse, sand, and boulders..	8	20		Gravel, water-bearing.....	6	105	
		Clay.....	4	24		Sand, fine, water-bearing.....	11	116	
		Gravel, medium, and sand.....	26	50		Gravel, water-bearing.....	14	130	
		Clay.....	29	79		Gravel and sand; water-bearing.....	3	133	
		Sand, fine.....	16	95					
		Sand, medium.....	15	110		Tel D-3 Altitude: 567	Hardpan.....	40	40
		Shale, brown, or clay.....	2	112		Sand, fine.....	66	106	
			Gravel, blue.....	10		116			
Tel 29-7 Altitude: 545		Fill and clay.....	11	11		Tel D-4 Altitude: 567	Gravel.....	23	23
		Gravel.....	2	13			Sand.....	22	45
		Clay, gritty.....	54	67	Clay, hard.....		5	50	
		Gravel, water-bearing.....	11	98	Muck.....		5	55	
Tel 29-8 Altitude: 545		Fill.....	11	11	Hardpan.....		40	95	
		Gravel.....	2	13	Clay, soft.....		9	104	
		Clay, tough.....	49	62	Sand, fine.....		4	108	
		Gravel, medium, muddy.....	7	69	Gravel and sand.....		16	124	
		Gravel, medium.....	28	97	Clay at.....			124	
		Clay, gritty, hard.....	4	101					
		Gravel, medium, cloudy.....	5	106	Tel D-5 Altitude: 567	Sand and gravel, dry.....	20	20	
		Clay, hard.....	3	109	Gravel, coarse.....	14	34		
		Limestone.....	1	110	Hardpan.....	37	71		
					Sand and fine gravel.....	11	82		
Tel 29-9 Altitude: 545		Fill.....	11	11	Gravel, thin, and hardpan.....	29	111		
		Clay, gravelly, hard.....	55	66	Sand, water-bearing.....	1	112		
		Sand, fine, muddy.....	1	67	Hardpan and gravel.....	12	124		
		Clay, gravelly, hard.....	15	82	Gravel, good, water-bearing.....	19	143		
		Gravel, coarse, boulders and clay..	10	92	Gravel, fine, and coarse sand; water-bearing.....	4	147		
		Gravel, coarse, and sand; clean.....	7	99					
Tel 29-10 Altitude: 545		Clay, hard, at.....	99	99	Tel D-6 Altitude: 512	Sand and clay.....	19	19	
		Clay, black, muddy, and fill.....	11	11		Sand, bouldery, and gravel.....	9	28	
		Gravel, dirty.....	3	14		Sand and gravel.....	42	70	
		Clay, hard.....	10	24		Clay, sand, and gravel.....	7	77	
		Sand, fine, muddy.....	2	26		Sand and gravel.....	8	85	
		Clay, hard.....	13	39		Clay, sand, and gravel.....	5	90	
		Sand, medium.....	3	42		Sand, bouldery, and gravel.....	37	127	
		Clay, sandy, hard.....	21	63		Sand and gravel.....	3	130	
		Sand, fine, muddy.....	6	69					
		Gravel, medium, water-bearing.....	30	99		Tel D-7 Altitude: 512	Sand and clay.....	20	20
		Gravel and clay.....	1	100	Gravel and sand.....	11	31		
		Clay, sandy, medium.....	12	112	Sand, silty.....	21	52		
		Clay, sandy, fine.....	3	115	Sand and gravel.....	22	74		
					Clay, sand, and gravel.....	13	87		
					Sand, gravelly.....	19	106		
			Clay, sand, and gravel.....	14	120				
			Sand and boulders.....	5	125				
			Sand, gravelly.....	10	135				
			Sand, silty, gravelly.....	8	143				
			Sand, silty.....	14	157				
			Rock.....	2	159				
Tel 29-11 Altitude: 520		Clay, hard, blue.....	63	63					
		Sand, fine, muddy.....	8	71					
		Clay, hard, blue.....	4	75					
		Gravel, medium to coarse, water- bearing.....	33	108					
		Clay, hard, blue.....	7	115					
		Gravel, hard, cemented.....	7	122					
		Clay and sand.....	13	135					
		Shale.....	5	140					

Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)				
Tel 30-8	altitude: 512	Topsail.....	9	9	Tel 30-15	altitude: 517	Topsail.....	5	5		
		Sand and clay.....	10	19			Sand and clay.....	23	28		
		Clay.....	16	35			Sand and gravel.....	7	35		
		Sand and gravel.....	5	58			Clay.....	4	39		
		Sand, silty, and gravel.....	5	63			Sand, fine.....	24	63		
		Sand and clay.....	2	65			Sand, medium.....	28	91		
Tel 30-9	altitude: 517	Clay, sand, and gravel.....	15	15	Tel 30-16	altitude: 516	Silt.....	5	5		
		Sand, silty, and gravel.....	5	20			Clay.....	10	15		
		Sand and gravel.....	5	25			Sand and gravel.....	25	40		
		Sand.....	11	36			Sand.....	32	72		
		Sand and gravel.....	7	43			Sand and gravel.....	8	80		
		Sand.....	10	53			Tel 30-17	altitude: 516	Silt.....	6	6
		Sand and clay.....	5	58					Sand and clay.....	15	21
		Sand and gravel.....	8	66					Sand and gravel.....	15	36
		Clay, sand, and gravel.....	4	70					Sand.....	25	61
		Sand and gravel.....	5	75					Sand and gravel.....	11	92
		Clay, sand, and gravel.....	3	78					Tel 30-18	altitude: 517	Silt.....
Sand and gravel.....	8	86	Sand and clay.....	13	18						
Sand and clay.....	10	96	Sand and gravel.....	25	43						
Tel 30-10	altitude: 512	Sand and clay.....	20	20	Sand.....	27					70
		Clay.....	15	35	Sand and gravel.....	4			74		
		Sand, gravel, and boulders.....	9	44	Sand.....	4			78		
		Sand and gravel.....	9	53	Sand, silty.....	2	80				
		Clay, sand, and gravel.....	24	77	Tel 30-19	altitude: 518	Topsail.....	8	8		
Sand and gravel.....	8	85	Sand and clay.....	18			26				
Sand and clay.....	17	102	Sand, silty, and gravel.....	12			38				
Tel 30-11	altitude: 514	Topsail.....	5	5			Sand.....	6	44		
		Clay.....	18	23			Sand and gravel.....	3	47		
		Sand.....	3	26	Sand, medium.....	10	57				
		Sand and gravel.....	4	30	Sand, fine.....	20	77				
		Sand.....	33	63	Sand, silty.....	20	97				
Sand and gravel.....	22	85	Tel 30-20	altitude: 515	Topsail.....	5	5				
Sand and clay.....	8	93			Clay.....	10	15				
Tel 30-12	altitude: 515	Topsail.....			5	5	Sand and clay.....	6	21		
		Clay.....			10	15	Sand, gravelly.....	19	40		
		Sand and clay.....			10	25	Sand, fine.....	15	75		
		Sand and gravel.....	17	42	Sand, gravelly.....	17	92				
		Sand, fine.....	17	59	Sand, silty.....	3	95				
Sand and gravel.....	13	72	Tel 30-13	altitude: 514	Silt.....	5	5				
Sand, medium.....	12	84			Clay.....	10	15				
Sand, silty, medium.....	13	97			Sand and clay.....	2	17				
Tel 30-14	altitude: 517	Silt.....			5	5	Sand and gravel.....	20	37		
		Sand and clay.....			15	20	Sand.....	27	64		
		Sand and gravel.....	13	35	Sand and gravel.....	10	74				
		Sand.....	30	65	Sand.....	5	79				
		Sand and gravel.....	14	79	Tel 31-1	altitude: 625	Clay.....	2	2		
Tel 30-13	altitude: 514	Silt.....	5	5			Clay, gravelly.....	6	8		
		Sand and clay.....	15	20			Gravel, dry.....	39	47		
		Sand and gravel.....	13	35			Gravel, water-bearing.....	8	55		
		Sand.....	30	65			Sand, fine, water-bearing.....	4	59		
		Sand and gravel.....	14	79	Gravel, coarse, and sand; water-bearing.....	6	65				
Tel 30-14	altitude: 517	Silt.....	5	5	Clay, blue.....	1	66				
		Sand and clay.....	15	20	Gravel, water-bearing.....	1	67				
		Sand and gravel.....	13	35	Tel 31-2	altitude: 625	Dog well.....	47	47		
		Sand.....	30	65			Gravel, yellow, water-bearing.....	9	56		
		Sand and gravel.....	14	79			Sand, yellow and gray, water- bearing.....	3	59		

Table J--Well Logs - Continued

Top II-2 Continued	Thickness (feet)	Depth (feet)	Top II-9 Altitude: 516	Thickness (feet)	Depth (feet)
Sand, coarse and fine, gray, with some small gravel; water-bearing..	2	61	Topsoil.....	10	10
Sand, coarse, gray and yellow, water-bearing.....	4	65	Sand and clay.....	9	19
Clay, blue, at.....		65	Sand and gravel.....	8	27
			Clay, sand, and gravel.....	7	34
			Sand.....	13	47
			Sand and gravel.....	12	59
Top II-3 Altitude: 640			Top II-10 Altitude: 514		
Soil.....	1	1	Soil.....	3	5
Clay, yellow, and sand.....	16	17	Sand and clay.....	10	15
Gravel, dry.....	3	20	Clay, sand, and gravel.....	8	23
Clay, blue.....	5	25	Sand, silty, and gravel.....	5	28
Gravel, dry.....	36	61	Clay, sand, and gravel.....	5	33
Gravel, coarse, gray, and sand; water-bearing.....	14	75	Sand, silty.....	29	62
Gravel, coarse, and some coarse sand.....	6	81	Sand and gravel.....	13	75
Gravel, small, and sand at.....		81	Sand and clay.....	12	87
			Clay, sand, and gravel.....	42	129
Top II-4 Altitude: 640			Top II-11 Altitude: 516		
Fill.....	2	2	Topsoil.....	6	6
Clay, yellow.....	14	16	Sand and clay.....	13	19
Clay, blue.....	21	37	Sand and gravel.....	14	33
Sand, yellow, and gravel; dry.....	24	61	Sand, silty, and gravel.....	30	63
Gravel, yellow, water-bearing.....	3	64	Sand and gravel.....	12	75
Gravel, small, gray, and coarse to fine sand; water-bearing.....	9	73	Sand and clay.....	2	77
Gravel, very coarse, gray, and coarse sand; water-bearing.....	8	81			
 			Top II-12 Altitude: 516		
Top II-5 Altitude: 628			Topsoil.....	5	5
Soil.....	2	2	Sand and clay.....	19	24
Clay, gravelly.....	10	12	Sand and gravel.....	10	34
Gravel, and sand; dry.....	42	54	Clay, sand, and gravel.....	4	38
Sand, gray, and gravel; water- bearing.....	13	67	Boulders.....	2	40
Gravel, coarse, with some sand; water-bearing.....	3	70	Sand.....	7	47
Gravel at.....		70	Sand and gravel.....	29	76
			Sand and clay.....	2	78
Top II-6 Altitude: 635			Top II-13 Altitude: 515		
Clay, yellow.....	17	17	Topsoil.....	10	10
Sand.....	9	26	Sand and clay.....	9	19
Clay, blue.....	18	44	Sand and gravel.....	13	32
Gravel, dry.....	29	73	Sand.....	16	48
Gravel, very coarse, water-bearing..	17	90	Sand and gravel.....	8	56
Gravel, very coarse, at.....		90			
 			Top II-14 Altitude: 512		
Top II-7 Altitude: 515			Topsoil.....	4	4
Topsoil.....	5	5	Sand and clay.....	15	19
Sand and clay.....	20	25	Sand and gravel.....	11	30
Sand and gravel.....	8	33	Sand, gravel, and boulders.....	8	38
Clay, sand, and gravel.....	5	38	Sand and gravel.....	10	48
Sand.....	18	56	Sand.....	14	62
Sand and gravel.....	13	69	Sand and gravel.....	13	75
Gravel and sand.....	6	75	Clay, sand, and gravel.....	5	80
Sand and clay.....	2	77	Sand and clay.....	5	85
Top II-8 Altitude: 517			Top II-15 Altitude: 518		
Topsoil.....	5	5	Topsoil.....	5	5
Sand and clay.....	12	17	Sand and clay.....	19	24
Sand and gravel.....	12	29	Sand and gravel.....	14	38
Clay, sand, and gravel.....	10	39	Sand.....	37	75
Sand.....	16	55	Sand, medium.....	6	81
Sand and gravel.....	12	67	Clay, silt, and sand.....	2	83
Top II-9 Altitude: 645			Top II-1 Altitude: 645		
Fill and yellow clay.....	12	12	Fill and yellow clay.....	12	12
Clay, blue.....	9	21	Clay, blue.....	9	21
Barren, gritty, blue.....	4	25	Gravel, dry.....	25	50
Gravel, dry.....	25	50	Clay, brown.....	4	54
Clay, brown.....	4	54			

Table 3—Well Logs - Continued

Log No.	Thickness (feet)	Depth (feet)	Log No.	Thickness (feet)	Depth (feet)
Log 32-1 Continued			Log 34-5 Altitude: 662		
Gravel, gray and yellow, coarse water-bearing.....	10	64	Topsoil.....	2	2
Gravel, coarse, gray, and coarse sand; water-bearing.....	8	72	Clay, hard.....	40	42
			Clay and gravel.....	46	88
			Sand and gravel.....	11	99
			Clay and gravel.....	15	114
			Gravel, fine.....	1	115
			Clay and gravel.....	21	136
			Gravel and sand; dirty.....	6	142
			Clay, hard.....	28	170
			Sand, fine, water-bearing.....	9	179
			Sand, fine, and gravel; water-bearing.....	26	201
			Clay, blue.....	7	208
			Limestone at.....		208
Log 34-1 Altitude: 661			Log 34-6 Altitude: 662		
Clay, gritty, hard.....	27	27	Topsoil.....	2	2
Gravel.....	3	30	Clay, soft.....	13	20
Clay.....	2	32	Sand and gravel.....	24	44
Gravel, medium.....	10	42	Sand and hard clay.....	14	58
Sand, coarse.....	4	46	Sand, medium, and gravel.....	21	79
Gravel, medium, muddy.....	24	70	Sand, medium.....	21	100
Sand, coarse, and gravel.....	12	82	Clay.....	25	125
Gravel, medium.....	27	109	Gravel.....	2	127
Clay, tough.....	18	127	Clay.....	7	134
Gravel, medium.....	11	138	Clay, hard.....	33	167
Clay, tough.....	6	144	Sand.....	3	170
Clay, gritty, soft.....	7	151	Sand and gravel.....	28	198
Sand, fine.....	27	178	Clay.....	3	201
Sand, medium.....	7	185	Limestone at.....		201
Clay, tough.....	1	186			
Sand, coarse.....	6	192			
Sand, coarse, and gravel.....	8	200			
Sand, fine.....	2	202			
Shale, blue.....	2	204			
Log 34-2 Altitude: 661			Log 34-7 Altitude: 662		
Clay.....	20	20	Topsoil.....	3	3
Hardpan.....	9	29	Clay, soft.....	15	18
Gravel.....	1	30	Clay, hard.....	4	22
Clay, tough.....	3	33	Gravel and clay.....	8	30
Sand.....	1	34	Gravel, medium.....	38	68
Clay, gritty.....	8	42	Clay and gravel.....	11	79
Gravel, medium, muddy.....	33	75	Clay, rusty gravel and coarse sand..	17	96
Gravel, medium, clean, water-bearing.....	14	109	Gravel, medium and clean sand; water level 61'.....	6	102
Clay, tough.....	15	124	Clay.....	2	104
Sand, fine.....	3	127	Gravel and medium sand; water level 61'.....	5	109
Gravel, medium.....	4	131	Clay.....	9	118
Clay, tough.....	9	140	Gravel and sand, medium; water level 61'.....	5	123
Clay and sand, mixed.....	50	190	Gravel and sand; muddy.....	8	131
Clay, tough.....	18	208	Clay.....	37	168
Gravel, medium, water-bearing.....	25	233	Clay, hard.....	6	174
Shale, black.....	1	234	Gravel, medium, and sand; water level 61'.....	25	199
			Clay and broken stone.....	1	200
			Limestone.....	1	201
Log 34-3 Altitude: 661			Log 34-8 Altitude: 662		
Fill.....	2	2	Fill and clay.....	12	12
Clay.....	26	28	Hardpan.....	13	25
Clay and gravel.....	25	53	Gravel.....	3	28
Sand and gravel.....	47	100	Clay, gritty.....	3	31
Sand, medium.....	10	110	Gravel, fine to medium and coarse... ..	61	92
Clay, sandy.....	17	127	Clay, soft, gritty.....	14	106
Sand and gravel.....	28	155	Sand, fine.....	14	120
Sand, fine.....	15	170	Clay, gritty, hard, and boulders.....	48	168
Sand and fine gravel.....	5	175	Gravel, fine, water-bearing.....	14	182
Sand and clay.....	9	184	Gravel, fine to coarse, water-bearing.....	63	245
Sand and gravel.....	10	194	Shale.....	1	246
Clay.....	3	197			
Rock at.....		197			
Log 34-4 Altitude: 662			Log 34-9 Altitude: 663		
Topsoil and fill.....	6	6	Clay.....	13	13
Clay.....	21	27	Hardpan, gravelly.....	28	41
Sand.....	7	34	Gravel, dry.....	18	59
Clay.....	8	42	Clay, blue.....	7	66
Sand, coarse, to coarse gravel, dirty.....	31	73	Sand, gray, and gravel; water-bearing.....	10	76
Clay and boulders, rough drilling... ..	5	78			
Gravel, dirty.....	9	87			
Gravel, fine, to medium sand.....	20	107			
Clay, tough.....	17	124			
Clay and boulders.....	15	139			
Clay, sandy, soft.....	20	159			
Clay, gritty, tough.....	4	163			
Sand and coarse gravel; clean.....	5	168			
Clay, gravelly.....	20	188			
Clay, smooth, tough.....	21	209			
Record missing.....	24	233			

Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)				
Tol 34-10	Altitude: 660	Clay, yellow.....	17	17	Tol 34-20	Altitude: 645	Topsoil.....	3	3		
		Clay, gritty, blue.....	18	35			Clay, gritty, yellow.....	34	37		
		Gravel, yellow, dry.....	25	60			Sand, yellow, and gravel.....	13	52		
		Clay, blue.....	1	61			Gravel, coarse, sand, and boulders..	23	75		
		Sand and gravel; water-bearing.....	10	71			Clay, hard, gray.....	3	78		
		Sand, gray.....	2	73			Gravel, coarse, and boulders.....	11	89		
		Sand, gray and gravel.....	3	76			Clay, gray.....	2	91		
						Gravel, coarse, sand, and boulders..	12	123			
Tol 34-11	Altitude: 665	Soil.....	1	1	Tol 34-21	Altitude: 645	Topsoil and clay.....	9	9		
		Clay, yellow.....	14	15			Clay, sandy.....	11	20		
		Clay, blue.....	25	40			Clay, gritty, hard.....	9	29		
		Gravel, dry.....	35	75			Gravel.....	1	30		
		Sand, coarse, gray, and gravel; water-bearing.....	13	88			Clay, gritty, hard.....	20	50		
Sand, coarse, gray.....	4	92	Gravel, medium, cloudy.....	6			56				
Gravel, coarse.....	3	95	Gravel, fine, cloudy.....	12			68				
								Gravel, medium, clean to muddy.....	42	110	
								Gravel, fine, clean to muddy.....	14	124	
								Gravel, medium, clean.....	7	131	
						Sand, fine, sticky.....	6	137			
						Shale.....	1	138			
Tol 34-12	Altitude: 660	Soil.....	1	1	Tol 34-22	Altitude: 645	Soil, hard, gritty, clay.....	35	35		
		Clay, gravelly, yellow.....	16	17			Sand and gravel.....	13	48		
		Gravel, dry.....	12	29			Sand, coarse, and gravel.....	27	75		
		Sand, dry.....	25	54			Sand and gravel; sandy.....	15	90		
		Gravel, yellow, dry.....	3	57			Sand, coarse, and gravel.....	5	95		
		Sand, gray-yellow, and a little gravel; water-bearing.....	6	63			Gravel, medium, sticky.....	10	105		
		Gravel, broken, sandy, and sand.....	7	70			Clay.....	21	126		
		Clay, blue.....	2	72			Shale.....	2	128		
		Sand, gray, gravelly, water-bearing.....	11	83							
		Gravel, coarse, small, gray, and coarse sand; water-bearing.....	4	87							
Tol 34-13	Altitude: 660	Soil.....	2	2	Tol 34-23	Altitude: 645	Topsoil.....	1	1		
		Clay, yellow, and gravel.....	33	35			Clay, yellow.....	11	12		
		Gravel, dry.....	21	56			Sand and gravel; sandy.....	23	35		
		Sand and gravel; water-bearing.....	14	70			Sand, yellow.....	6	41		
		Sand, gray, water-bearing.....	7	77			Sand and gravel, coarse; water-bearing.....	20	61		
		Sand, gray, and coarse gravel; water-bearing.....	3	80			Sand, coarse, and medium gravel.....	16	77		
		Gravel, coarse, and coarse sand; water-bearing.....	6	86			Boulders.....	1	78		
Gravel, coarse, and coarse sand; water-bearing, at.....	8	94	Sand and gravel; coarse.....	32			110				
								Boulders.....	1	111	
								Gravel, coarse.....	5	116	
						Gravel, sandy or dead.....	5	121			
						Clay and gravel.....	15	136			
						Shale.....	16	152			
Tol 34-14	Altitude: 660	Clay, yellow.....	16	16	Tol 35-1	Altitude: 645	Soil.....	1	1		
		Sand and gravel; dry.....	10	26			Clay, gritty, brown.....	14	15		
		Clay, gritty, blue.....	11	37			Clay, blue, brown, sandy.....	75	90		
		Gravel, dry.....	23	60			Clay, brown, and sand streaks.....	10	100		
		Sand, gray, and gravel; water-bearing.....	13	73			Clay, sandy, gray.....	3	103		
		Sand, fine, gray, water-bearing.....	11	84			Clay, dark brown.....	11	114		
		Gravel, coarse, gray, and coarse sand; water-bearing.....	5	89			Sand, gray, and a little gravel; water-bearing.....	11	125		
								Sand, yellow, sandy.....	16	141	
								Hardpan, gravelly, brown.....	9	150	
								Shale, blue.....	13	163	
Tol 34-17	Altitude: 662	Soil.....	2	2	Tol 35-2	Altitude: 645	Soil.....	1	1		
		Clay.....	18	20			Clay, gritty, yellow.....	9	10		
		Clay, sandy, white.....	40	60			Clay, sandy, blue.....	21	31		
		Sand, yellow, water-bearing.....	30	90			Clay, blue, with thin streaks of water-bearing gravel.....	2	33		
		Gravel, blue, water-bearing.....	30	120			Clay, blue.....	25	58		
Tol 34-19	Altitude: 645	Topsoil.....	3	3	Sand, fine, gray.....	1	59				
		Clay, gritty, yellow.....	21	24	Clay, blue.....	46	105				
		Gravel, coarse.....	2	26	Clay, dark brown.....	5	110				
		Clay, gritty, gray.....	14	40	Sand, fine, gray, sandy, water-bearing.....	5	115				
		Sand, yellow, and gravel.....	16	56	Gravel, gray, and sand; water-bearing.....	3	118				
		Gravel, gray.....	6	62	Sand at.....		118				
		Clay, gray.....	1	63							
		Gravel, gray, and boulders.....	59	122							

Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)		
TcH 14-3	645	Soil.....	1	1	TcH 14-1	665	Clay, yellow.....	18	18
		Clay, gritty, yellow.....	17	18			Clay, blue.....	9	27
		Clay, gritty, soft, blue.....	12	30			Clay, blue, with sand streaks.....	2	29
		Sand and gravel, sandy, water-bearing; water level 10'.....	1	31			Gravel.....	3	32
		Clay, gravelly, blue.....	2	33			Clay, blue.....	45	75
		Hardpan, sandy.....	10	43			Muck, sandy, blue, seep water.....	12	87
		Clay, blue.....	14	57			Clay, blue.....	5	92
		Clay, sandy.....	6	63			Sand, muddy, water-bearing.....	3	95
		Sand, fine, muddy.....	7	70			Hardpan, sandy.....	5	100
		Sand, gray, and coarse gravel; water-bearing.....	6	76			Quick sand.....	17	117
							Hardpan, blue.....	1	122
			Sand, coarse, gray, water-bearing.....	1	123				
TcH 15-4	640	Fill.....	3	3	TcH 15-1	675	Well pit.....	5	5
		Clay, yellow.....	7	10			Clay, yellow.....	15	20
		Clay, gravelly.....	8	18			Clay, blue.....	11	31
		Clay, sandy, blue.....	48	66			Gravel.....	16	47
		Sand, gray, water-bearing.....	1	67			Clay, blue.....	34	81
Gravel, small, gray, water-bearing.....	4	71	Hardpan, brown.....	6	87				
TcH 5-1	660	Fill.....	2	2	Clay, sandy, brown.....	3	90		
		Clay, gritty, yellow.....	12	14	Clay, blue, with sand streaks.....	7	97		
		Clay, sandy, blue.....	26	40	Clay, soft, gray.....	13	110		
		Clay, sandy, brown, seepage.....	30	70	Clay, gritty, brown.....	15	125		
		Clay, brown.....	42	112	bed, red.....	20	145		
Gravel, gray, and some fine sand; water-bearing.....	7	119	Quick sand.....	2	147				
Gravel, gray, and some fine sand; water-bearing at.....		119	Clay, brown.....	36	183				
			Clay, blue.....	13	196				
			Shale.....	19	215				
			Limestone.....	3	218				
TcH 7-1	645	Clay, yellow.....	15	15	TcH 17-2	625	Clay and boulders.....	6	6
		Clay, blue.....	11	26			Clay, blue.....	9	15
		Gravel, dry.....	31	57			Gravel, dry.....	15	30
		Clay, blue.....	36	93			Clay, blue.....	24	54
		Sand, yellow, dry.....	13	106			Hardpan, brown.....	21	75
		Clay, blue.....	7	113			Clay, soft, brown.....	11	106
		Sand, fine, gray, water-bearing.....	14	127			Quick sand.....	18	124
		Clay, sandy, blue.....	8	135			Sand, fine, gray, and a small amount of gravel; water-bearing.....	1	125
		Quick sand.....	7	142			Hardpan, brown.....	26	151
		Quick sand, and gravel.....	2	144			Clay, blue, with sand streaks.....	13	164
		Quick sand.....	3	147			Gravel, coarse, and sand with pieces of shale; water-bearing.....	5	169
Sand, gray, fine, water-bearing.....	5	152	Shale, probably, at.....		169				
Sand, gray, and some small gravel; water-bearing.....	3	155							
Clay, blue, at.....		155	TcH 17-3	625	Drift.....	151	151		
					Shale at.....		151		
TcH 8-1	650	Clay, yellow.....	10	10	TcH 18-1	647	Soil.....	1	1
		Clay, blue.....	15	25			Clay, yellow.....	9	10
		Gravel, dry.....	5	30			Gravel, dry.....	2	12
		Hardpan, blue.....	35	65			Hardpan, blue.....	7	19
		Clay, sandy, blue.....	41	106			Gravel, dry.....	65	84
		Sand, and gravel with balls of gray and yellow clay; water-bearing.....	1	107			Clay, blue.....	2	86
		Clay, blue.....	4	111			Gravel, dry.....	3	89
		Sand and some small gravel, gray and yellow.....	10	121			Hardpan, gritty, blue.....	7	96
Clay, blue, at.....		121	Clay, blue.....	6	102				
TcH 12-1	640	Clay.....	30	30	Quick sand.....	8	110		
		Sand, dirty, water-bearing (little).....	5	35	Sand, very fine, gray, water-bearing.....	10	120		
		Clay, blue.....	30	65	Sand, fine, gray, and a little small gravel.....	2	122		
		Sand.....	4	69	Sand, gray, with some good gravel; water-bearing.....	3	125		
		Sandstone (?).....	6	75	Clay, blue, at.....		125		
TcH 19-1	650	Hardpan.....	180	180	TcH 19-1	650	Hardpan.....	180	180
		Gravel.....	20	200			Gravel.....	20	200



Table 3--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)			
Tch 20-1	625	Clay, yellow	17	17	Tch 20-5	Continued				
		Gravel	1	18						
		Clay, blue	14	32						
		Gravel, dry	13	45						
		Clay, blue	22	67						
		Gravel, dry	13	80						
		Gravel, gray, water-bearing, water level 80'	6	86						
		Clay, blue	2	88						
		Clay, sandy, brown	9	97						
		Gravel, yellow, water-bearing	8	105						
		Sand, coarse, gray, and gravel; water-bearing	10	115						
		Sand, coarse, and some gravel	1	116						
								Gravel, coarse, gray and yellow, and fine sand; water-bearing	1	121
								Clay	1	122
			Gravel, coarse, gray, and sand; water-bearing	3	124					
			Gravel, coarse, yellow and sand; water-bearing	8	133					
			Gravel, coarse, gray, and sand; water-bearing	2	135					
Tch 20-2	652	Clay, sandy, yellow	14	14	Tch 21-1	664	Gravel, dry	50	50	
		Sand	3	16			Hardpan	130	180	
		Clay, blue	10	26			Sand	16	196	
		Sand and gravel, dry	44	70	Tch 21-2	655	Drift	100	100	
		Clay, sandy, blue	7	77			Shale, blue	5	105	
		Clay and gravel	2	79			Limestone	5	110	
		Clay, brown	44	123	Tch 21-3	650	Soil	2	2	
		Gravel, gray, and sand; water-bearing	7	130			Clay	3	5	
		Gravel, coarse, gray, and coarse sand; water-bearing	4	134			Sand and gravel; seepage	15	20	
		Tch 20-3	650	Soil	1	1	Tch 21-4	650	Hardpan, blue	3
Clay, yellow	16			17	Gravel and sand; water-bearing	9			32	
Gravel and clay	3			20	Coarse gravel at open end					
Gravel, dry	17			37	Tch 21-5	670	Clay, yellow	19	19	
Clay, blue	6			43			Clay, blue	22	41	
Gravel, dry	17			60			Gravel, gray, water-bearing	4	45	
Sand, dry	2			62	Clay, blue	9	54			
Gravel, dry	8			70	Sand, gray, and gravel; water-bearing	4	58			
Gravel, gray, and sand; water-bearing	7			77	Clay, blue	8	66			
Clay, blue	2			79	Sand, gray, and gravel; water-bearing	5	71			
Gravel, dry	1			80	Tch 21-6	640	Soil	2	2	
Clay	4			84			Clay	4	6	
Sand, yellow and gray, water-bearing	8			92			Gravel	10	16	
Sand, gray, and gravel; water-bearing	2			94	Clay, blue	3	19			
Gravel, coarse, gray, water-bearing	9	103	Sand, water-bearing	2	21					
Gravel, coarse, gray, water-bearing at		103	Clay, blue	10	31					
Tch 20-4	625	Soil	1	1	Tch 21-7	600	Sand, gray, and some gravel; water-bearing	7	38	
		Clay, yellow	12	13			Clay, blue	23	61	
		Gravel and clay	11	26			Sand, gray, and gravel; water-bearing	1	62	
		Gravel, dry	6	32	Hardpan, yellow	26	88			
		Clay, blue	9	41	Gravel, water-bearing	2	90			
		Gravel, dry	46	87	Tch 21-8	600	Pit	4	4	
		Clay, blue	27	114			Gravel	8	12	
		Sand, gray, with small, noddy gravel; water-bearing	1	115			Clay, blue	36	48	
		Clay, blue	1	116			Sand, gray, noddy, and fine, water-bearing	32	80	
		Sand, coarse, gray, and gravel; water-bearing	3	119			Clay, green and sand	27	107	
		Clay, blue	3	122						
		Sand, yellow, and gravel; water-bearing	2	124						
		Sand, coarse, yellow, and gray, and gravel	11	135						
		Tch 20-5	600	Clay, yellow			15	15		
Clay and dry gravel	10			25						
Gravel and sand; dry	21			46						
Clay, blue	8			54						
Gravel, dry	31			85						
Clay, brown	3			88						
Clay, gritty, blue	22			110						
Gravel, coarse, gray, water-bearing, water level 90'	2			112						
Clay, gravelly, blue	7			119						

Table 3—Well Logs - Continued

Well No.	Thickness (feet)	Depth (feet)	Well No.	Thickness (feet)	Depth (feet)	
Tch 21-7 Continued	Clay, brown, with sand streaks.....	6	Tch 26-2 Altitude: 675	Clay, yellow.....	21	
	Clay, blue.....	28		Gravel and clay.....	2	
	Stone, brown (sandstone).....	2		Gravel, dry.....	17	
		143		Clay, sandy, blue.....	12	
Tch 22-1 Altitude: 625	Soil.....	1	Tch 27-1 Altitude: 660	Sand and gravel, sandy; water-bearing.....	1	
	Clay, yellow.....	14		Clay, blue.....	17	
	Gravel, dry.....	30		Sand, coarse and small, gray, and a little gravel; water-bearing....	5	
	Clay, blue.....	21			75	
	Sand, gray, and gravel; water-bearing.....	6				
		72				
Tch 22-2 Altitude: 680	Soil.....	1	Tch 27-2 Altitude: 600	Clay, gravelly, yellow.....	7	
	Clay, yellow.....	14		Gravel, dry.....	20	
	Clay, blue.....	3		Clay, blue.....	26	
	Sand and gravel.....	8		Gravel, coarse, yellow, and coarse sand; water-bearing.....	3	
	Clay, blue.....	19		Gravel, coarse, gray, and fine and coarse sand; water-bearing.....	5	
	Sand and gravel.....	15			62	
	Clay, blue.....	1				
	Gravel, coarse, gray, water-bearing.....	4				
	Clay, blue, at.....			65		
Tch 22-3 Altitude: 673	Clay, yellow.....	17	Tch 28-1 Altitude: 650	Clay.....	1	
	Clay, blue.....	28		Sand, dry.....	3	
	Sand, gray, water-bearing.....	3		Gravel, dry.....	8	
	Gravel, gray, water-bearing.....	5		Clay, blue.....	20	
Tch 23-1 Altitude: 680			Tch 28-2 Altitude: 645	Clay, blue, with streaks of sand and gravel; water-bearing.....	2	
				Clay, blue.....	18	
				Gravel, coarse, gray, and sand; water-bearing.....	3	
				Sand and gravel at.....	55	
Tch 24-1 Altitude: 675	Soil.....	1	Tch 28-3 Altitude: 665	Clay, yellow.....	25	
	Clay, yellow.....	12		Clay, blue.....	19	
	Clay, blue.....	5		Gravel, dry.....	10	
	Sand, water-bearing.....	8		Clay, blue.....	17	
	Clay, blue.....	5		Hardpan, blue, with sand streaks and seepage.....	25	
	Gravel with clay streaks.....	7		Clay, soft, blue.....	11	
	Sand, gray, water-bearing.....	2		Sand, water-bearing.....	1	
	Gravel, small, gray, water-bearing..	1		Clay, sandy, blue.....	7	
	Sand and gravel, gray; water-bearing.....	8		Sand, yellow, and a little gravel; water-bearing.....	9	
		49		Clay, blue, and sand.....	9	
		Gravel, coarse, yellow, and sand....	7			
Tch 24-2 Altitude: 683			Tch 28-4 Altitude: 665	Soil.....	1	
	Hardpan.....	73		Clay, yellow.....	11	
	Gravel.....	10		Sand.....	8	
				Clay, gravelly.....	9	
				Sand.....	25	
				Clay, blue.....	15	
Tch 25-1 Altitude: 650	Fill.....	5				
	Clay, yellow.....	13				
	Sand.....	9				
	Gravel, seep water.....	5				
	Sand, fine, dirty, yellow.....	5				
	Gravel, dry.....	29				
	Clay, blue.....	35				
	Sand, gray, and coarse gravel; water-bearing.....	1				
		102				

Table J--Well Logs - Continued

Well	Thickness (feet)	Depth (feet)	Well	Thickness (feet)	Depth (feet)
TcH 28-4 Continued	Gravel, dry.....	41	TcH 33-2 Altitude: 660	Clay and boulders.....	5
	Clay, blue.....	3		Clay.....	9
	Sand and gravel streaks.....	23		Clay, blue.....	57
	Sand, gray, water-bearing.....	4		Gravel, coarse, and sand.....	10
	Gravel, coarse, gray, and sand; water-bearing.....	4			
TcH 29-1 Altitude: 650	Clay, yellow.....	15	TcH 33-3 Altitude: 660	Soil.....	1
	Clay, blue.....	4		Clay, yellow.....	9
	Gravel, dry.....	21		Clay and gravel.....	4
	Clay, blue.....	16		Sand and gravel; dry.....	12
	Gravel, dry.....	15		Clay, blue.....	14
	Clay, gritty, yellow.....	2		Gravel, dry.....	27
	Clay, blue.....	16		Clay, blue, with gravel streaks.....	61
	Sand, gray, water-bearing.....	1		Sand, gray, and gravel; water- bearing.....	4
	Clay, blue.....	7			
	Gravel, coarse, small, gray, and coarse sand; water-bearing.....	7			
	Clay st.....	104			
	TcH 30-1 altitude: 664	Fill.....		2	TcH 34-1 Altitude: 650
Clay, gritty, yellow.....		18	Clay, yellow.....	14	
Sand.....		11	Gravel, dry.....	13	
Clay, brown, with sand streaks.....		13	Clay.....	1	
Clay, sandy, blue.....		17	Gravel, cemented.....	4	
Hardpan, blue.....		1	Gravel, dry.....	19	
Gravel, dry.....		4	Clay, blue.....	7	
Clay, blue.....		1	Gravel.....	3	
Gravel, gray, and sand; water- bearing.....		5	Clay, blue.....	61	
Clay, sandy, blue.....		6	Sand, coarse and fine, and gravel; water-bearing.....	5	
Gravel, coarse, gray, and a little coarse sand; water-bearing.....		6			
TcH 30-2 Altitude: 654		Soil.....	1	TcH 35-1 Altitude: 680	
	Clay, yellow.....	15	Clay.....		10
	Gravel, dry.....	9	Clay and gravel.....		6
	Clay, blue.....	29	Sand.....		6
	Gravel, small, gray, water-bearing and coarse sand, uniform in size..	5	Clay, blue.....		99
	Clay st.....	59	Sand, gray, water-bearing.....		2
TcH 31-1 Altitude: 655	Soil.....	1	TcH 35-2 Altitude: 678	Sand, coarse and fine, gray, and some gravel.....	2
	Clay, yellow.....	13		Gravel, coarse, gray, and some sand; water-bearing.....	4
	Clay and gravel.....	4			
	Clay, gritty, brown.....	27			
	Sand, gray, water-bearing.....	8			
	Gravel, coarse, small, gray, and coarse sand; water-bearing.....	5			
	Gravel, small, and coarse sand.....	2			
	Sand, coarse, and coarse gray gravel	3			
TcH 32-1 Altitude: 660	Soil.....	1	TcH 36-1 Altitude: 625	Clay.....	14
	Clay.....	3		Sand.....	6
	Clay, sandy.....	8		Hardpan.....	15
	Sand.....	8		Shale.....	67
	Gravel, dry.....	35			
TcH 33-1 Altitude: 650	Clay, gritty, blue.....	65	TcH 37-1 Altitude: 645	Clay.....	55
	Gravel, coarse, no sand.....	1		Shale.....	41
TcH 33-1 Altitude: 650	Soil.....	1	TcH 38-1 Altitude: 715	Clay.....	30
	Clay, yellow.....	4		Sand streak.....	1
	Gravel.....	7		Clay, soft.....	75
	Clay, blue.....	65		Gravel, clean formation.....	5
	Sand, coarse, gray, water-bearing...	3			
TcH 33-1 Altitude: 650	Gravel, coarse, gray, and gray sand; water-bearing.....	4			

Table 3—Wall Logs - Continued

Top	Thickness (feet)	Depth (feet)	Top	Thickness (feet)	Depth (feet)
Top 25-1 Altitude: 670			Top 14-1 Altitude: 660		
Clay and sand.....	70	70	Glacial drift.....	20	20
Shale.....	46	116	Limestone.....	120	140
Top 1-1 Altitude: 624			Top 19-1 Altitude: 690		
Gravel, dry.....	40	40	Clay, yellow.....	15	15
Clay, blue.....	48	88	Clay, blue.....	27	42
Sand.....	67	155	Sand, gray, water-bearing.....	3	45
			Shale, hard, blue.....	28	73
			Limestone, gray.....	16	89
			Limestone at.....		89
Top 1-2 Altitude: 625			Top 22-1 Altitude: 700		
Soil.....	1	1	Drift (sand, clay, gravel).....	30	30
Sand and gravel; dry.....	69	70	Limestone, hard.....	2	32
Sand, yellow, and gravel; water-bearing.....	15	85	Limestone at.....		32
Gravel, coarse, small, yellow, and coarse sand; water-bearing.....	7	92			
Top 1-3 Altitude: 625			Top 24-3 Altitude: 648		
Clay, sandy.....	4	4	Sand and gravel.....	58	58
Sand.....	21	25	Limestone.....	2	60
Gravel, dry.....	49	74	Limestone at.....		60
Sand, yellow, water-bearing.....	7	81			
Clay, blue.....	42	123	Top 24-6 Altitude: 648		
Sand, gray, and gravel; water-bearing.....	7	130	Clay.....	30	30
			Shale, next water at 50' to 80'.....	74	104
Top 1-4 Altitude: 630			Top 25-2 Altitude: 705		
Sand.....	12	12	Clay and hardpan.....	80	80
Gravel, dry.....	58	70	Sand, fine, water-bearing.....	4	84
Sand, dry.....	5	75	Shale.....	56	140
Clay, blue.....	64	139			
Sand, fine, gray, muddy, water-bearing.....	6	144	Top 28-1 Altitude: 700		
Sand, coarse, gray, and gravel; water-bearing.....	8	152	Drift.....	40	40
Gravel, cemented, and sand.....	4	156	Limestone.....	20	60
Hardpan, gravelly.....	4	160	Shale, white.....	7	67
Hardpan with streaks of gravel.....	2	162	Limestone.....	68	135
Sand, coarse and fine, with a little gravel; water-bearing.....	3	165			
Gravel, gray, coarse, and coarse sand.....	5	170			
Top 1-5 Altitude: 575			Top 16-2 Altitude: 700		
Sand.....	12	12	Soil.....	1	1
Gravel, dry.....	38	50	Clay, yellow.....	5	6
Clay, blue.....	3	53	Gravel, dry.....	12	18
Gravel, dry, and boulders.....	20	73	Clay, blue.....	4	22
Clay.....	2	75	Hardpan, sandy, brown.....	4	26
Gravel, dry.....	5	80	Clay, blue.....	24	50
Clay, brown.....	15	95	Shale, hard, blue.....	20	70
Sand, yellow, and gravel, muddy; water-bearing.....	5	100	Shale at.....		70
Gravel, coarse, yellow, water-bearing.....	5	105			
Sand, yellow, water-bearing.....	15	120	Top 1-1 Altitude: 660		
Gravel, coarse, small, yellow water-bearing.....	4	124	Soil.....	2	2
Gravel, with sand at.....		124	Clay, yellow.....	2	4
			Sand.....	14	18
			Clay, blue.....	23	41
			Sand, gray, water-bearing.....	8	49
			Gravel, coarse, gray, and coarse sand; water-bearing.....	4	53
Top 8-1 Altitude: 607			Top 1-2 Altitude: 645		
Sand and gravel.....	129	129	Soil.....	2	2
			Clay, yellow.....	16	18
			Clay, brown.....	5	23
			Sand.....	2	25
			Gravel, coarse.....	3	28
Top 13-2 Altitude: 630					
Sand.....	18	18			
Gravel, dry.....	35	53			
Sand, fine, yellow.....	24	77			
Gravel, coarse, and sand.....	1	78			
Sand, fine, yellow.....	61	139			
Sand, fine, gray.....	5	144			

Table 3--Well Logs - Continued

Test	Thickness (feet)	Depth (feet)	Test	Thickness (feet)	Depth (feet)
<b>Test 1-2</b> Continued			<b>Test 1-2</b> Altitude: 635		
Hardpan, blue.....	4	32	Clay and gravel.....	18	18
Clay, blue.....	10	42	Gravel, dry.....	10	28
Sand, and some gravel; water- bearing.....	2	44	Sand, yellow, water-bearing.....	21	49
Gravel, coarse, and sand.....	7	51	Sand, yellow, and a little gravel; water-bearing.....	5	54
Still in gravel at.....		51	Gravel, coarse, gray, and coarse and fine sand; water-bearing.....	6	60
<b>Test 2-1</b> Altitude: 640			<b>Test 3-3</b> Altitude: 635		
Clay.....	4	4	Clay.....	12	12
Gravel.....	4	8	Gravel, dry.....	2	14
Quicksand.....	32	40	Clay, blue.....	3	17
Quicksand with a layer of gravel and coarse to medium sand.....	33	73	Sand.....	7	24
<b>Test 2-2</b> Altitude: 640			Clay, blue.....	16	40
Fill.....	1	1	Gravel, coarse, yellow, and sand; water-bearing.....	8	48
Soil.....	1	2	Gravel, coarse and small, yellow, water-bearing.....	5	53
Clay, yellow.....	13	15	Sand and gravel; water-bearing, at.....		53
Hardpan, sandy.....	15	30	<b>Test 4-1</b> Altitude: 642		
Clay, blue.....	6	36	Clay, yellow, and sand.....	140	140
Hardpan, blue.....	3	39	Sand, very fine.....	14	154
Sand, fine, gray.....	24	63	Gravel, fine and blue clay.....	12	166
Sand and gravel; water-bearing.....	6	69	Gravel, water-bearing.....	26	192
Clay at.....		69	Limestone.....	25	217
<b>Test 2-3</b> Altitude: 640			Shale.....	29	246
Soil.....	1	1	<b>Test 4-2</b> Altitude: 642		
Clay, gravelly, yellow.....	17	18	Clay.....	12	12
Gravel.....	2	20	Gravel, fine.....	18	30
Clay, sandy, blue.....	17	37	Sand.....	25	55
Gravel, dry.....	8	45	Clay.....	66	121
Clay.....	2	47	Sand, fine.....	26	147
Gravel.....	8	55	Gravel.....	47	194
Sand, fine.....	4	61	<b>Test 4-5</b> Altitude: 645		
Gravel, sandy.....	2	63	Topsoil.....	1	1
Sand, coarse, and gravel; water- bearing.....	6	69	Clay, yellow.....	13	14
<b>Test 2-4</b> Altitude: 645			Hardpan, gritty, yellow.....	7	21
Soil.....	1	1	Sand.....	2	23
Clay, yellow.....	15	16	Clay, gritty, brown.....	9	32
Clay and gravel.....	3	19	Gravel, yellow, dry.....	8	40
Sand, yellow, and gravel.....	6	25	Sand, gray, and gravel; water- bearing.....	18	58
Hardpan, blue.....	8	33	Sand, hard, and gravel, boulders....	2	60
Sand, coarse, gray, and gravel; water-bearing.....	7	40	Hardpan, gravelly, blue.....	12	72
<b>Test 2-5</b> Altitude: 646			Clay, gritty, gray.....	18	90
Soil.....	1	1	Sand, noddy, gray, and gravel.....	3	93
Clay, yellow.....	16	17	Sand and gravel; clean.....	3	96
Clay, blue, and sand.....	26	43	Sand and gravel with balls of clay..	1	97
Gravel, yellow, and sand; water- bearing.....	11	54	Sand and gravel.....	9	106
Sand, yellow, water-bearing.....	4	58	<b>Test 5-1</b> Altitude: 650		
Sand, gray, and small gravel; water-bearing.....	3	61	Clay.....	3	3
Gravel, yellow, water-bearing.....	3	64	Clay and sand.....	9	12
Gravel, gray and blue, and sand; water-bearing.....	8	72	Clay, blue.....	12	24
<b>Test 3-1</b> Altitude: 640			Sand and gravel; dry.....	32	56
Soil.....	1	1	Gravel, yellow, water-bearing.....	2	58
Clay, brown.....	9	10	Gravel, coarse, gray, and sand; water-bearing.....	11	69
Clay and gravel.....	9	19	Clay, blue, at.....		69
Gravel, dry.....	8	27	<b>Test 5-2</b> Altitude: 648		
Sand, yellow, and gravel; water- bearing.....	24	51	Sand and soil.....	1	1
Gravel, gray, and sand; water- bearing.....	5	56	Clay, yellow.....	11	12
Sand, coarse to fine, gray, water-bearing.....	2	58	Clay, blue.....	12	24
Gravel, coarse to small, uniform....	5	63	Hardpan, blue sand.....	3	27
			Gravel, dry.....	30	57
			Gravel, coarse and small, gray, and a little sand; water-bearing.....	15	72
			Clay, blue, at.....		72

Table J--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)		
Tck 5-3	Altitude: 648	Clay, yellow.....	12	12	Tck 8-2	Altitude: 634	Clay, yellow.....	6	
		Clay, blue.....	9	21			Clay and gravel; dry.....	12	18
		Hardpan, gravelly, blue.....	5	26			Sand, yellow, and gravel; water-bearing.....	22	40
		Gravel, dry.....	29	55			Sand, gray, and some small gravel; water-bearing.....	10	50
		Gravel, coarse and small, water-bearing.....	8	63			Sand, fine, gray.....	13	63
		Clay at.....		63			Sand and small gravel.....	2	65
				Gravel, coarse, gray, and some sand.....	4	69			
Tck 5-4	Altitude: 640	Soil.....	1	1	Tck 8-3	Altitude: 635	Soil.....	1	
		Clay, yellow.....	13	14			Clay and sand.....	4	5
		Hardpan, gritty, yellow.....	6	20			Sand and gravel; dry.....	13	18
		Clay, sandy, blue.....	9	29			Gravel, yellow, water-bearing.....	16	34
		Sand, yellow, dry.....	3	32			Sand, fine.....	10	44
		Gravel, dry.....	29	61			Gravel, coarse, gray, and sand; water-bearing.....	5	49
		Sand, yellow, and gravel; water-bearing.....	8	69			Sand, coarse and fine, and some gravel.....	1	50
		Sand, coarse, gray, and gravel; water-bearing.....	15	84					
		Still in gravel at.....		84					
Tck 6-2	Altitude: 610	Clay, sandy.....	18	18	Tck 11-1	Altitude: 643	Fill.....	1	
		Gravel, dry.....	19	37			Clay, yellow.....	13	31
		Clay, blue.....	10	47			Sand and gravel; water-bearing.....	18	49
		Sand and gravel; dry.....	1	48			Clay at.....		67
		Clay, blue.....	5	53					
		Gravel, dry.....	14	67					
		Clay, blue.....	42	109					
		Gricksand.....	11	120					
		Sand, fine, gray.....	33	153					
		Sand and a little clean gravel.....	4	157					
Tck 6-3	Altitude: 640	Soil.....	1	1	Tck 11-2	Altitude: 645	Fill.....	2	
		Clay, brown.....	5	6			Clay, yellow.....	13	15
		Clay, blue.....	22	28			Gravel, and mostly coarse sand; water-bearing.....	23	38
		Sand, dry.....	12	40					
		Gravel, dry.....	18	58					
		Gravel, coarse, gray, and coarse sand; water-bearing.....	22	80					
		Clay, blue, at.....		80					
Tck 6-4	Altitude: 620	Clay.....	2	2	Tck 12-1	Altitude: 647	Soil.....	1	
		Clay, gritty.....	10	12			Clay, yellow.....	9	10
		Sand and gravel.....	2	14			Clay, blue.....	2	12
		Clay.....	4	18			Sand, gray, and small gravel; water-bearing.....	20	32
		Gravel, dry.....	17	35			Sand, fine.....	3	35
		Sand, yellow, and gravel; water-bearing.....	12	47			Clay, blue, at.....		35
		Sand, gray, and gravel; water-bearing.....	2	49					
		Clay, blue, at.....		49					
Tck 6-5	Altitude: 640	Clay, yellow.....	20	20	Tck 13-1	Altitude: 667	Soil.....	1	
		Hardpan, sandy.....	5	25			Clay.....	11	12
		Clay.....	5	30			Sand and gravel; water-bearing.....	12	24
		Sand.....	5	35			Hardpan, brown.....	27	51
		Gravel, dry.....	22	57			Sand and gravel; water-bearing.....	6	57
		Gravel, small, water-bearing.....	20	77					
		Sand and gravel.....	1	80					
Tck 8-1	Altitude: 634	Clay.....	4	4	Tck 13-2	Altitude: 675	Fill.....	4	
		Gravel, dry.....	16	20			Clay, yellow.....	11	15
		Sand, yellow, and some small gravel; water-bearing.....	26	46			Hardpan, blue.....	18	33
		Sand, gray, water-bearing, at.....		46			Gravel, gray, and sand; water-bearing; water level 18'.....	1	34
							Clay, sandy, blue.....	46	80
							Sand, fine, gray, and some small gravel; water-bearing.....	5	85
							Sand, fine, and a little coarse, gray, water-bearing.....	8	93
							Clay, blue.....	1	94
							Clay, green, and fine, gray sand streaks.....	6	100
							Sand, fine, gray, water-bearing.....	15	115
			Sand, fine, and a little gravel.....	2	117				
			Sand, fine.....	3	120				
			Clay, blue, and fine sand.....	10	130				
			Clay, blue, and more fine sand.....	48	178				
			Clay, blue.....	25	203				
			Shale.....	2	205				

Table J--Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)		
Tel 13-J	675	Fill	4	4	Tel 20-1	660	Soil	1	1
		Clay, gritty, yellow	13	17			Clay, yellow	15	16
		Hardpan, brown	23	40			Gravel, dry	24	40
		Clay, blue	40	80			Clay, blue, with sand streaks	18	58
		Clay, sand streaks, seepage	22	102			Sand, fine, muddy	6	64
		Sand, fine, gray, water-bearing	14	116			Clay, blue	77	101
		Sand, fine, gray, and some gravel; water-bearing	5	121			Sand, fine, gray, water-bearing	8	109
		Quicksand	2	123			Sand and some gravel at		109
		Clay, blue, and fine sand, mostly sand	52	175					
		Clay, blue	25	200					
Shale, brown	20	220							
Tel 13-4	668	Clay	5	5	Tel 20-2	655	Clay	6	6
		Sand and gravel	17	18			Gravel, dry	21	29
		Clay	2	20			Clay, blue	8	37
		Sand and gravel, yellow; water-bearing	9	29			Clay, fine, yellow	12	49
		Gravel, very coarse, gray, water-bearing	6	35			Gravel, very coarse, yellow, water-bearing	7	56
Tel 15-1	680	Clay, sandy, yellow	10	10	Tel 21-1	650	Clay	45	45
		Clay, blue	9	19			Sand	5	50
		Clay, gritty, brown	4	23					
		Hardpan, sandy, blue	20	43					
		Clay, blue, with water-bearing sand streaks	12	55					
		Clay, blue	34	89					
		Sand, gray, and a little gravel; water-bearing	2	91					
		Sand, fine, gray	5	96					
		Sand, fine, gray, and a little gravel	2	98					
		Hardpan, gritty, brown	10	108					
Clay, brown	17	125							
Sand, very fine, gray	13	138							
Sand, coarse and fine, and a little gravel; water-bearing	4	142							
Tel 17-1	660	Clay	5	5	Tel 22-1	640	Soil	1	1
		Gravel, dry	20	25			Clay, yellow	4	5
		Clay, brown	8	33			Clay, yellow, gravelly	9	14
		Sand, fine, yellow	3	36			Gravel, dry	8	22
		Clay, blue	4	40			Hardpan, blue	16	38
		Sand, fine, yellow, water-bearing	6	46			Hardpan, brown	2	40
		Gravel, coarse and small, yellow and gray, water-bearing	9	55			Sand and gravel; dry	20	60
		Still in gravel at		55			Sand, yellow, and small gravel; water-bearing	1	61
							Sand, very fine, gray, water-bearing	26	87
							Sand, fine and coarse, gray, with some small gravel; water-bearing	8	95
Tel 17-2	625	Well pit	7	7	Tel 21-1	673	Clay	3	3
		Gravel, dry	34	41			Clay, sandy	2	5
		Clay, blue	49	90			Sand	27	32
		Sand, fine, gray, and fine gravel; water-bearing	10	100			Sand and yellow gravel	9	41
		Gravel, small, gray	9	109			Sand, gray, and gravel; water-bearing	7	48
		Gravel, coarse, and sand	3	112			Clay, blue	3	47
							Clay, blue, with sand streaks	4	51
							Sand, coarse, and small gravel	8	59
							Gravel, coarse, and a little sand	3	62
							Clay, blue, at		62
Tel 17-3	620	Well pit	7	7	Tel 29-1	650	Clay, yellow	10	10
		Gravel, dry	34	41			Sand, yellow, water-bearing	14	24
		Clay, blue	49	90			Sand, gray, water-bearing	12	36
		Sand, fine, gray, and fine gravel; water-bearing	10	100			Sand, gray, and gravel; water-bearing	5	41
		Gravel, small, gray	9	109			Sand, coarse, gray, and small gravel; water-bearing	1	42
Gravel, coarse, and sand	3	112	Still in gravel at		42				
Tel 17-3	620	Soil	1	1	Tel 31-1	715	Gravel	48	48
		Clay, yellow	23	23			Limestone, blue	20	68
		Gravel, dry	12	35					
		Sand, yellow, and gravel; water-bearing	9	44					
		Gravel, coarse, gray, and sand; water-bearing	3	47					
Clay at		47							

Table 3--Wall Logs - Continued

Loc	Altitude	Thickness (feet)	Depth (feet)	Loc	Altitude	Thickness (feet)	Depth (feet)
Tol 11-2	715			Tol 1-1	670		
Drift.....		50	50	Soil.....		1	1
Limestone.....		10	60	Clay, yellow.....		11	12
				Clay, sandy, blue.....		8	20
				Gravel.....		10	30
				Clay, sandy, blue.....		106	136
				Gravel, coarse, gray, water-bearing.....		7	139
				Gravel, water-bearing at.....			139
Tol 12-1	675			Tol 3-2	650		
Soil.....		1	1	Clay and boulders.....		19	19
Clay, sandy.....		11	12	Sand.....		1	20
Sand, fine, yellow.....		20	32	Gravel, coarse, gray, water-bearing.....		11	31
Clay, blue.....		7	39				
Gravel, water-bearing.....		1	36				
Clay, sandy, blue, seepage.....		16	52				
Sand, gray, water-bearing.....		7	59				
Shale, blue.....		25	84				
Shale, blue, hard, water-bearing.....		8	92				
Tol 13-1	725			Tol 4-1	670		
Clay, yellow.....		18	18	Soil.....		2	2
Hardpan, gravelly, blue.....		8	26	Clay, yellow.....		16	18
Gravel, coarse, and small, gray, and coarse sand; water-bearing.....		10	36	Clay, gritty, brown.....		24	42
				Clay, brown.....		20	62
				Sand, gray, with some gravel; water-bearing.....		4	66
				Gravel, coarse, gray, and coarse sand; water-bearing.....		3	69
Tol 13-2	725			Tol 4-2	670		
Topsoil.....		1	1	Soil (fill).....		2	2
Clay, gritty, yellow.....		16	17	Clay, yellow.....		16	18
Clay, gritty, brown.....		34	51	Clay, gritty, blue.....		27	45
Gravel, small, gray, some sand; water-bearing.....		6	57	Sand, muddy.....		19	64
Gravel, coarse, gray, and some sand.....		3	60	Sand, coarse, gray, and gravel; water-bearing.....		4	68
Gravel, coarse, gray, and fine gray sand, at.....			60				
Tol 14-1	715			Tol 4-3	670		
Well pit.....		6	6	Topsoil.....		1	1
Clay, sandy, yellow.....		10	16	Clay, yellow.....		14	15
Sand, yellow, water-bearing.....		5	21	Clay, blue.....		10	25
Clay, blue.....		9	30	Hardpan, blue.....		9	34
Sand, brown, and hardpan.....		7	37	Clay, blue.....		12	46
Sand, dry.....		6	43	Clay, sandy, soft, blue.....		12	58
Hardpan, sandy, brown.....		5	48	Sand, coarse, water-bearing.....		7	65
Clay, blue.....		27	75	Sand, gray, and gravel.....		5	70
Gravel and sand streaks.....		3	78				
Clay, blue.....		28	106				
Sand, fine, noddy, gray, water-bearing.....		5	111				
Clay, blue.....		15	126				
Hardpan, sandy, brown.....		25	151				
Gravel, coarse, gray, and coarse and fine sand; water-bearing.....		5	156				
Tol 1-1	665			Tol 4-4	665		
Clay, yellow.....		14	14	Soil.....		1	1
Hardpan.....		6	20	Clay, yellow.....		11	12
Sand.....		3	23	Clay, gritty, blue.....		39	51
Hardpan, gritty, brown.....		15	38	Sand, gray, and gravel; water-bearing.....		15	66
Hardpan with gravel streaks.....		14	52	Gravel, small, gray.....		6	72
Clay, sandy, brown.....		14	66				
Sand, fine, gray, water-bearing.....		10	76				
Sand, coarse, gray, and gravel; water-bearing.....		5	81				
Tol 2-1	680			Tol 4-5	670		
Clay, gravelly, yellow.....		18	18	Soil.....		1	1
Sand.....		7	25	Clay, yellow.....		11	12
Clay, blue.....		8	33	Clay, blue.....		5	17
Gravel, coarse to small, gray, water-bearing.....		7	40	Gravel.....		10	27
				Clay, blue.....		2	29
				Sand, noddy.....		6	35
				Clay, sandy.....		4	39
				Sand, gray, and a little gravel; water-bearing.....		12	71
				Clay, blue.....		1	72
				Clay and sand streaks.....		3	75
				Gravel, coarse, gray, and some sand; water-bearing.....		4	79



Table 3—Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)									
Tel 4-6	altitude: 665	Soil.....	1	1	Tel 4-12	Continued	Sand, gray, and yellow, and gravel; water-bearing.....	3	35							
		Clay, yellow.....	15	16												
		Clay, gravelly.....	7	23												
		Gravel.....	6	29												
		Clay, blue, gravelly.....	20	49												
		Sand, coarse, gray, and gravel; water-bearing.....	16	65												
		Sand, gray, and yellow, coarse, and gravel.....	8	73												
		Gravel at.....		73												
		Tel 4-7	altitude: 660	Well pit.....						6	6	Tel 4-1	altitude: 665	Pit.....	6	6
				Clay, sandy.....						14	20					
Sand, dry.....	25			45												
Clay, sandy, brown.....	9			54												
Gravel, yellow, and clay.....	8			62												
Gravel, yellow and gray, and some sand; water-bearing.....	8			70												
Still in sand and gravel at.....				70												
Tel 4-8	altitude: 655			Soil.....	1	1	Tel 4-2	altitude: 670	Soil.....	3	3					
				Clay, yellow.....	10	11										
				Gravel and yellow clay.....	6	17										
		Gravel, dry.....	10	27												
		Clay.....	2	29												
		Hardpan, gritty, brown.....	20	49												
		Gravel, dry.....	3	52												
		Gravel, yellow, water-bearing.....	3	55												
		Sand, gray, and gravel; water-bearing.....	3	58												
		Gravel, coarse, gray, and coarse sand; water-bearing.....	8	66												
Sand, coarse.....	6	72														
Still in sand at.....		72														
Tel 4-9	altitude: 660	Soil.....	2	2	Tel 4-3	altitude: 670	Pit.....	5	5							
		Clay, yellow.....	13	15												
		Sand.....	8	23												
		Clay, blue.....	4	27												
		Hardpan with sand streaks.....	30	57												
		Sand and gravel; water-bearing.....	19	76												
		Gravel at.....		76												
		Tel 4-10	altitude: 660	Soil.....						2	2	Tel 4-4	altitude: 665	Clay, yellow.....	16	16
				Clay, yellow.....						15	17					
				Clay, sandy, blue.....						12	29					
Sand.....	3			32												
Hardpan, blue.....	4			36												
Clay, blue, with sand streaks.....	24			60												
Sand and gravel; water-bearing.....	10			70												
Gravel, coarse, with very little sand; water-bearing.....	6			76												
Tel 4-11	altitude: 650			Clay.....	1	1	Tel 4-5	altitude: 665	Sand.....	5	21					
				Gravel, yellow, dry.....	1	2										
		Gravel, gray, and sand; water-bearing.....	21	23												
		Gravel, coarse, gray, water-bearing.....	3	26												
		Clay, blue, at.....		26												
		Tel 4-12	altitude: 630	Sand and clay.....	8	8						Tel 4-6	altitude: 670	Clay, blue.....	12	33
				Gravel and boulders.....	4	12										
				Sand, yellow, and gravel.....	6	18										
				Sand, gray, and a little gravel; water-bearing.....	1	19										
				Clay, blue.....	11	30										
Sand, gray and yellow, water-bearing.....	2			32												
Tel 4-13	altitude: 665			Soil.....	2	2	Tel 4-7	altitude: 660	Clay, blue, gravelly.....	7	46					
				Clay, yellow.....	14	16										
				Clay, blue, and sand.....	12	28										
				Gravel and sand; dry.....	10	38										
		Sand, fine, dry.....	16	54												
		Gravel, coarse to fine, yellow and gray, water-bearing.....	10	64												
		Gravel, very coarse, and sand; water-bearing.....	11	75												
		Still in gravel at.....		75												
		Tel 4-14	altitude: 665	Soil.....	1	1						Tel 4-8	altitude: 655	Gravel, coarse and small, gray and sand; water-bearing.....	8	70
				Clay, yellow.....	11	12										
Clay, blue.....	7			19												
Sand, yellow.....	7			26												
Clay, soft, blue.....	8			34												
Hardpan, blue.....	10			44												
Gravel, very coarse, gray, and some sand.....	6			50												
Sand and some gravel.....	1			51												
Sand, fine, at.....				51												

Table J—Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)						
Tel 6-1 Altitude: 659		Soil.....	2	2	Tel 10-1 Altitude: 680		Clay.....	2	2				
		Clay, yellow.....	7	9			Gravel, dry.....	13	15				
		Sand.....	2	11			Clay, blue.....	11	26				
		Clay and sand.....	12	23			Sand, muddy, gray, some gravel; water-bearing.....	3	29				
		Clay, blue.....	15	38			Sand and gravel, gray; water- bearing.....	3	32				
		Sand, gray, and gravel; water- bearing.....	6	44			Sand and gravel, coarse and fine; water-bearing.....	3	35				
							Still in sand and gravel at.....		35				
Tel 6-2 Altitude: 660		Soil.....	1	1	Tel 11-1 Altitude: 685		Soil and yellow clay.....	18	18				
		Clay, yellow.....	11	12			Clay, sandy, brown.....	12	30				
		Sand, yellow, water-bearing.....	14	26			Clay, blue.....	36	66				
		Clay, blue.....	13	39			Sand, gray, and some gravel; water-bearing.....	9	75				
		Gravel, coarse, gray, water-bearing.....	7	46			Gravel, small, gray, and sand; water-bearing.....	4	79				
		Clay at.....		46			Still in sand and gravel at.....		79				
Tel 7-1 Altitude: 668		Topsoil.....	1	1	Tel 17-2 Altitude: 690		Soil.....	1	1				
		Clay.....	3	4			Sand and clay.....	12	13				
		Gravel and sand, dry.....	16	20			Sand.....	6	19				
		Sand, dirty, yellow, and gravel; water-bearing.....	17	37			Muck, sandy, blue.....	41	60				
		Clay, blue.....	5	42			Sand, gray, water-bearing.....	1	61				
		Clay, sandy, blue.....	17	59			Clay.....	4	65				
		Sand, gray, and gravel; water- bearing.....	11	70			Sand, gray, and gravel; water- bearing.....	5	70				
Tel 9-1 Altitude: 670		Soil.....	1	1	Tel 17-3 Altitude: 680		Clay.....	30	30				
		Clay and gravel.....	12	14			Sand, dirty.....	30	60				
		Clay, blue.....	2	16			Clay, blue.....	10	70				
		Sand.....	9	25			Gravel, water-bearing.....	5	75				
		Hardpan, sandy, blue.....	20	45									
		Clay, soft, blue.....	18	63									
		Sand and gravel.....	6	69									
		Sand, fine.....	6	75									
		Gravel, very coarse, and some sand; water-bearing.....	3	78									
		Still in gravel at.....		78									
Tel 9-2 Altitude: 670		Well pit.....	6	6	Tel 17-4 Altitude: 680		Soil.....	2	2				
		Clay, gritty, yellow.....	8	14			Clay, yellow.....	14	16				
		Gravel, dry.....	16	30			Gravel, yellow, water-bearing.....	12	30				
		Hardpan, gritty, brown.....	22	52			Gravel and clay.....	6	36				
		Sand, gray and yellow, coarse and fine, water-bearing.....	3	57			Clay, blue.....	13	49				
		Sand, fine, gray, water-bearing.....	10	67			Gravel, coarse, gray, water- bearing.....	4	53				
		Sand and some gravel, gray, fine; water-bearing.....	1	68									
		Gravel, coarse, gray, some fine sand; water-bearing.....	10	78									
		Sand and little gravel at.....		78									
		Tel 9-3 Altitude: 670		Soil.....			1	1	Tel 18-1 Altitude: 670		Soil and clay.....	4	4
				Clay, sandy.....			4	5			Gravel, dry.....	8	12
				Gravel, dry.....			20	25			Sand and gravel; water-bearing.....	20	32
Clay, blue.....	12			37	Clay, gritty, blue.....	26	58						
Gravel, coarse, gray, and sand; water-bearing.....	9			46	Sand, gray, and some gravel; water-bearing.....	2	58						
Still in gravel at.....				46	Gravel, coarse, gray and yellow, water-bearing.....	2	60						
					Gravel, small, and sand.....	2	62						
Tel 9-4 Altitude: 655		Soil.....	1	1	Tel 19-1 Altitude: 680		Soil.....	1	1				
		Gravel, dry.....	11	12			Clay, sandy.....	13	14				
		Sand, yellow, water-bearing.....	10	22			Sand, gray, and some gravel; water-bearing.....	21	35				
		Sand, gray, and a little gravel; water-bearing.....	20	42			Gravel, coarse, and sand; water- bearing.....	2	37				
		Clay at.....		42			Sand and small gravel.....	2	39				
							Gravel, small, and coarse sand.....	4	43				
			Still in sand and gravel at.....		43								

Table J—Well Logs - Continued

Well No.	Altitude	Thickness (feet)	Depth (feet)	Well No.	Altitude	Thickness (feet)	Depth (feet)				
Tel 21-1 Altitude: 715		Soil.....	1	1	Tel 25-1 Altitude: 750	Hardpan.....	70	70			
		Clay, gravelly, yellow.....	14	15			Gravel.....	10	80		
		Clay, blue.....	29	40	Tel 1-1 Altitude: 720	Hardpan and sand.....	135	139			
		Hardpan, brown.....	15	55							
		Hardpan, sandy, yellow.....	3	58							
		Gravel, yellow, water-bearing.....	3	61	Tel 2-1 Altitude: 700	Hardpan.....	80	80			
		Still in gravel at.....		61			Gravel.....	7	87		
			Tel 5-1 Altitude: 710	Topsoil.....			2	2			
Tel 21-2 Altitude: 705		Well pit.....			6	6	Clay, yellow.....	12	14		
		Gravel, dry.....			13	19	Sand.....	1	15		
		Clay, blue.....	36	55	Clay, sandy, brown.....	10	25				
		Sand, yellow, and a little gravel, water-bearing.....	4	59	Clay, blue.....	2	27				
		Gravel, yellow, and sand.....	2	61	Hardpan, blue.....	2	29				
		Clay, blue.....	57	118	Gravel, coarse, gray and yellow, and fine sand; water-bearing; water-level 14'.....	3	32				
		Sand, fine, gray, water-bearing.....	2	120	Hardpan, blue.....	2	34				
Clay and sand.....	6	126	Gravel, dry.....	8	42						
Gravel, coarse and small, gray, and sand; water-bearing.....	4	130	Clay, gray.....	5	47						
Tel 22-1 Altitude: 675		Soil.....	1	1	Clay, sandy, brown.....	3	50				
		Clay, sandy, yellow.....	14	15	Clay, gray, with sand streaks.....	8	58				
		Gravel, dry.....	26	41	Gravel.....	1	59				
		Clay, blue.....	14	65	Clay, gritty, brown.....	14	73				
		Gravel, and some sand; water- bearing.....	7	72	Hardpan, blue.....	4	77				
		Clay, blue, at.....		72	Muck, yellow.....	4	81				
					Shale, soft, blue.....	47	128				
Tel 33-1 Altitude: 725		Hardpan.....	110	110	Shale, firm, blue.....	10	138				
		Sand.....	50	160	Shale, very hard, blue.....	37	175				
		Gravel.....	20	180	Shale, soft, blue.....	61	236				
					Shale, hard, brown, with streaks of soft blue shale.....	5	241				
					Shale, soft, blue.....	15	256				
					Shale, blue, with streaks of hard brown shale.....	57	313				
					Sandstone.....	1	314				
Tel 33-4 Altitude: 720		Clay, yellow.....	70	70	Shale with streaks of sandstone.....	8	322				
		Sand, water-bearing.....	39	109	Shale, blue.....	29	351				
		Gravel, water-bearing.....	3	112	Limestone, gray.....	5	356				
					Shale, limy.....	12	368				
					Shale, black.....	33	401				
					Shale, brown.....	28	429				
					Shale, gray.....	11	440				
Tel 13-1 Altitude: 760		Hardpan.....	65	65	Shale, brown.....	7	447				
		Sand, white, water-bearing.....	10	75	Limestone, gray, and shale.....	8	455				
		Limestone.....	5	80	Shale, black.....	13	468				
					Limestone, very hard, brown, only drilled 5' per day.....	32	500				
					Limestone, gray.....	5	505				
					Limestone, brown.....	5	510				
					Limestone, gray.....	4	514				
Tel 13-2 Altitude: 760		Sand, clay, and gravel.....	40	40	Limestone, brown.....	2	516				
		Gravel.....	8	48	Sandstone.....	4	520				
		Tel 15-1 Altitude: 720		Clay.....	30	30	Tel 5-2 Altitude: 735	Topsoil.....	2	2	
				Sand.....	2	32			Clay, yellow.....	14	16
				Clay.....	28	60			Hardpan, sandy, yellow.....	3	19
				Limestone.....	12	72			Clay, soft, brown.....	6	25
					Hardpan, brown.....	9			34		
					Sand, sandy, hard, water-bearing.....	1			35		
					Hardpan, blue.....	10			45		
Tel 9-1 Altitude: 740		Soil.....	1	1	Hardpan, gravelly, brown.....	4	49				
		Clay, gravelly, yellow.....	14	15	Hardpan, blue.....	17	66				
		Clay, blue.....	40	55	Hardpan, very hard, yellow.....	4	70				
		Sand, green.....	7	62	Limestone, brown.....	12	82				
		Limestone.....	6	68	Limestone, blue.....	11	93				
					Limestone, blue, and streaks of blue shale.....	17	110				
Tel 6-1 Altitude: 720		Drift.....	50	50							
		Limestone, water-bearing.....	5	55							

Table J—Well Logs - Continued

ToP 10-1 altitude: 740	Thickness (feet)	Depth (feet)	ToP 8-2 altitude: 775	Thickness (feet)	Depth (feet)
Clay.....	12	12	Hardpan.....	40	40
Gravel.....	2	14	Gravel.....	3	43
Clay, blue.....	3	17			
Sand, hard.....	5	22			
Clay, soft, blue.....	4	26	ToP 8-3 altitude: 775		
Sand and gravel; water-bearing.....	1	27	Clay.....	160	160
Clay, soft, blue.....	8	35	Sand and gravel.....	20	180
Hardpan, blue.....	5	40			
Gravel, muddy.....	3	43			
Clay, blue.....	7	50	ToP 10-1 altitude: 780		
Gravel, coarse, gray, and some sand; water-bearing.....	5	55	Gravel, sand, and clay.....	7	7
			Hardpan, blue.....	3	10
ToP 10-2 altitude: 700			Clay, sandy, blue.....	45	55
Clay.....	25	25	Sand, fine, gray, muddy, water- bearing.....	20	75
Sand.....	1	26	Sand, coarse to fine, gray, clean, water-bearing.....	5	80
Clay.....	49	75	Gravel, coarse, gray, and coarse to fine sand.....	2	82
Gravel.....	5	80			
ToP 11-1 altitude: 740			ToP 17-1 altitude: 790		
Hardpan.....	118	118	Dug well.....	20	20
Gravel.....	2	120	Hardpan (sandy clay).....	43	63
			Clay, blue.....	10	73
ToP 13-2 altitude: 730			Hardpan (sandy clay).....	5	78
Drift.....	10	10	Gravel, water-bearing.....	5	83
Sand and gravel.....	20	30			
Sand, water-bearing.....	99	129	ToP 18-1 altitude: 773		
Hardpan.....	28	157	Hardpan.....	25	25
Sand and gravel.....	82	239	Sand, water-bearing.....	3	28
Gravel and shale.....	60	299	Hardpan.....	24	52
Limestone.....	6	305	Sand and gravel; water-bearing.....	4	56
Gravel and shale.....	6	311			
Shale, black.....	101	412	ToP 20-1 altitude: 775		
Limestone, brown.....	460	872	Hardpan.....	95	95
Gravel and shale.....	21	893	Gravel.....	8	103
Limestone.....	22	915			
Limestone and shale, broken.....	48	963	ToP 23-1 altitude: 825		
Gravel and shale.....	87	1050	Hardpan with sand streaks.....	76	76
Shale, dark brown.....	179	1229	Gravel, water-bearing.....	6	82
Limestone.....	113	1342	Hardpan.....	2	84
			Gravel, water-bearing.....	6	90
ToP 15-1 altitude: 740			ToP 23-2 altitude: 815		
Hardpan.....	115	115	Unknown.....		142
Gravel.....	5	120	Sand, white, white.....	10	152
			Gravel, water-bearing.....	20	172
ToP 19-2 altitude: 740			Soil in gravel at.....		172
Hardpan.....	78	78			
Gravel.....	20	98	ToP 23-3 altitude: 825		
			Hardpan.....	145	145
ToP 20-1 altitude: 740			Gravel.....	24	159
Gravel, blue, water-bearing.....	165	165			
No hard rock			ToP 23-5 altitude: 825		
			Clay.....	20	20
ToP 25-2 altitude: 794			Sand, dirty.....	3	23
Clay, soft.....	30	30	Gravel, cemented.....	7	30
Sand streak.....	1	31	Clay.....	46	76
Clay, soft.....	69	100	Gravel and sand; water-bearing.....	3	79
Gravel at.....		100	Clay, hard.....	3	82
			Gravel, coarse, water-bearing.....	6	90
ToP 1-2 altitude: 785					
Clay, sandy, gravelly.....	50	50			
Sand, water-bearing.....	2	52			
Clay, sandy, gravelly.....	138	190			
Gravel, water-bearing.....	6	196			

Table 3--Well Logs - Continued

TcP 24-1 Altitude: 815	Thickness (feet)	Depth (feet)
Clay, soft.....	120	120
Hardpan.....	25	145
Sand, dirty.....	5	150
Clay.....	10	160
Gravel, clean, water-bearing.....	3	163

TcP 28-1 Altitude: 800	Thickness (feet)	Depth (feet)
Hardpan with thin streaks of sand and gravel.....	80	80
Soapstone (shale) at.....		80

TcP 32-1 Altitude: 790	Thickness (feet)	Depth (feet)
Clay.....	35	35
Sand, gravelly, water-bearing.....	6	41
Clay.....	29	70
Sand, fine.....	2	72
Clay.....	1	73
Gravel, sandy.....	14	87
Hardpan at.....		87

TcP 35-1 Altitude: 813	Thickness (feet)	Depth (feet)
Hardpan.....	42	42
Gravel.....	6	48

Table 4—Water levels in observation wells in Tippecanoe County, Ind.

Water levels are reported in feet below land-surface datum except where otherwise noted.

- 1/ Daily 2 a.m. water level from recorder chart.
- 2/ 24-hr highest water level from recorder chart.
- 3/ Daily lowest water level from recorder chart.

No 1 (ToG 25-1). Tippecanoe township School, in basement of schoolhouse at Battleground. S1/2S1 sec. 26, T. 24 N., R. 4 E.  
 Drilled unlined well in gravel, diameter 6 inches depth 48 feet. Records available: 1935-41, 1944, 1945.

1935			1936			1937			1938																	
Nov. 1	43.70		Jan. 15	43.78		Jan. 18	42.15		Apr. 30	42.81		Aug. 17	43.63		Nov. 29	44.00		Jan. 3	43.43		Apr. 30	42.15		Oct. 14	43.7	
13	43.73		Feb. 3	43.86		30	42.00		May 18	42.24		Jun. 1	43.79		Dec. 15	43.86		15	43.8		May 14	43.83		Nov. 1	43.88	
Dec. 4	43.77		17	44.26		Feb. 13	42.1		Jun. 1	42.38		Sept. 13	43.13		Feb. 15	43.72		Aug. 1	43.77		13	43.54		Dec. 1	43.86	
19	43.75		29	42.70		Mar. 1	42.34		17	41.93		Oct. 1	43.35		28	43.73		13	43.19		15	44.25				
31	43.74		Mar. 16	43.78		15	42.37		30	41.96		Nov. 1	43.46		Mar. 15	43.23		30	43.19		30	43.90				
						31	42.43		July 15	42.34		Nov. 1	43.83		30	43.9		Oct. 1	43.90							
						Apr. 15	42.26		31	42.70		16	43.56													

1939			1940			1941											
Jan. 3	44.30		Jan. 3	44.80		Jan. 15	46.13		Jan. 15	46.13		May 15	46.32		Sept. 15	47.35	
16	44.37		15	44.82		15	46.52		Feb. 1	46.52		June 2	46.34		30	47.89	
31	43.47		31	44.83		15	46.3		15	46.3		15	46.52		Oct. 16	48.10	
Feb. 28	43.66		Feb. 15	44.82		28	46.44		28	46.44		July 1	46.30		31	48.23	
Mar. 14	43.93		29	44.76		Mar. 18	46.31		Mar. 18	46.31		16	46.51				
31	43.69		31	44.22		Apr. 1	46.22		Apr. 1	46.22		31	46.51				
Apr. 15	43.66		Apr. 16	43.16		15	45.90		15	46.57		Aug. 15	46.60				
May 2	43.8		31	43.66		30	45.51		May 1	46.52		29	47.00				
						Apr. 15	44.68		30	45.51		30	47.00				

1944			1945								
Feb. 3	43.26		Feb. 28	43.21		Apr. 13	43.30		June 8	44.95	
Mar. 17	43.70		Mar. 17	43.60		Mar. 9	43.73		20	45.35	
24	43.60		29	42.60		16	43.90		15	45.00	
31	43.70		May 12	43.93		23	43.92		31	45.99	
Apr. 14	43.30		19	43.91		30	43.97		18	45.30	

No 2 (ToG 16-1). Ben Connelly, at residence. S1/2S1 sec. 18, T. 24 N., R. 4 W. Dig unlined well in drift, depth 30 feet. Records available: 1935-39.

1935			1936			1937																	
Nov. 1	23.20		Jan. 15	23.98		Jan. 15	23.28		Jan. 15	23.28		Apr. 15	22.15		July 15	22.58		Oct. 15	26.21				
13	23.99		Feb. 3	23.88		Apr. 17	26.20		Feb. 15	23.93		30	23.93		30	23.58		31	24.8		Nov. 1	26.26	
Dec. 4	26.58		17	23.68		Sept. 1	26.48		Mar. 1	23.89		Mar. 1	23.89		May 18	23.18		Aug. 17	23.99		16	26.28	
19	26.13		29	23.03		16	26.78		1	23.66		June 1	23.73		June 1	23.68		29	26.23				
31	26.28		Mar. 16	24.03		Oct. 1	26.78		15	22.95		17	22.68		Sept. 15	23.99		Dec. 15	26.26				
			31	23.13		15	25.28		31	23.18		30	22.46		Oct. 1	26.23							

1938			1939											
Jan. 3	23.26		Jan. 3	23.20		Jan. 3	23.20		Jan. 3	23.20		Jan. 3	23.20	
15	23.68		15	23.68		15	23.68		15	23.68		15	23.68	
31	23.66		31	23.66		31	23.66		31	23.66		31	23.66	
Feb. 15	22.96		Apr. 18	22.71		Apr. 18	22.71		Apr. 18	22.71		Apr. 18	22.71	

No 3 (ToG 17-2). Lafayette Loan and Trust Co. at residence of Marshall Byars. S1/2S1 sec. 17, T. 24 N., R. 4 W.  
 Dig unlined well in drift, diameter 12 inches, depth 20.8 feet. Records available: 1935-41, 1944

1935			1936			1937														
Nov. 1	10.20		Jan. 15	9.08		Jan. 15	9.03		Jan. 15	9.13		Apr. 15	7.2		July 15	9.52		Oct. 15	9.76	
15	6.00		Feb. 3	6.68		Apr. 17	10.2		Feb. 15	6.61		30	2.45		31	7.56		Nov. 1	8.5	
Dec. 4	7.58		17	6.58		Sept. 1	10.33		Mar. 1	6.61		Mar. 1	6.61		May 18	5.98		16	8.91	
19	6.38		29	7.28		16	7.68		15	6.52		June 1	6.52		31	8.74		29	9.21	
31	7.53		Mar. 16	6.03		Oct. 1	6.98		17	6.27		17	6.27		Sept. 15	9.12		Dec. 15	7.26	
			31	6.78		15	6.18		30	6.89		30	6.89		Oct. 1	9.01				

1938			1939			1940														
Jan. 3	7.1		Jan. 3	10.82		Jan. 3	10.77		Jan. 3	10.77		Jan. 15	5.29		Oct. 15	11.26				
15	7.16		15	8.79		15	11.07		15	11.07		15	11.07		31	7.07		31	12.75	
31	6.66		31	6.69		31	11.72		31	11.72		31	11.72		31	12.77				
Feb. 15	2.36		Feb. 17	3.26		Nov. 1	11.94		Feb. 15	11.42		Nov. 1	11.94		29	7.70		19	12.80	
28	2.01		24	4.29		Dec. 1	11.74		29	8.76		Dec. 1	11.74		Aug. 1	9.60		30	12.83	
Mar. 15	1.26		Mar. 14	0.99		Dec. 1	11.98		Mar. 15	7.96		15	10.43		15	10.43		Dec. 16	13.30	
30	1.56		Apr. 15	0.80					30	8.41		30	11.21		30	11.21		31	12.76	
Apr. 30	6.36		May 2	5.66					Apr. 15	5.34		Apr. 15	5.34		Apr. 15	5.34				
May 14	6.71								30	5.18		30	5.18		30	5.18				

1941			1944											
Jan. 15	12.77		Jan. 15	11.46		Jan. 15	11.46		Jan. 15	11.46		Jan. 15	11.46	
Feb. 1	12.51		Mar. 1	6.19		Mar. 1	6.19		Mar. 1	6.19		Mar. 1	6.19	
15	12.6		9	4.6		9	4.6		9	4.6		9	4.6	
28	12.42		16	4.3		16	4.3		16	4.3		16	4.3	
Mar. 18	12.43		22	4.6		22	4.6		22	4.6		22	4.6	

No 4 (ToG 17-10). City of Lafayette. Lafayette Water Dept., Canal and Tippecanoe Sts. S1/2S1 sec. 17, T. 24 N., R. 4 W. Drilled unlined well, diameter 12 inches, depth 112 feet. Recording gage installed April 24, 1944, removed June 3, 1953. Records available: 1944-54.

1944			1945											
May 1	6.23		Jan. 1	15.39		Jan. 1	15.39		Jan. 1	15.39		Jan. 1	15.39	
11	2.97		15	15.66		15	15.66		15	15.66		15	15.66	
15	7.06		31	20.08		31	20.08		31	20.08		31	20.08	
24	8.1		Feb. 1	19.79		Feb. 1	19.79		Feb. 1	19.79		Feb. 1	19.79	
June 1	9.08		3	20.34		3	20.34		3	20.34		3	20.34	
13	12.34		15	19.60		15	19.60		15	19.60		15	19.60	
21	17.41		25	12.32		25	12.32		25	12.32		25	12.32	
July 16	15.20		Mar. 1	17.75		Mar. 1	17.75		Mar. 1	17.75		Mar. 1	17.75	
27	14.38		2	18.25		2	18.25		2	18.25		2	18.25	

Table 4—Water levels in observation wells in Florence County, Ga.

1926				1927			
Jan. 3 4.62	Apr. 1 9.08	July 1 17.38	Oct. 1 20.24	Jan. 1 15.18	Mar. 15 13.33	June 15 7.53	Sept. 1 19.87
15 7.65	10 14.85	15 19.28	17 20.70	13 14.14	26 10.80	23 11.02	16 16.75
24 11.93	13 17.82	20 19.77	21 19.72	31 11.19	Apr. 1 11.43	July 15 17.83	24 14.54
Feb. 1 11.95	May 1 14.54	19 19.09	Nov. 26 17.35	Feb. 1 6.01	7 12.18	18 17.39	Oct. 1 15.10
13 13.00		5 18.93	28 16.00	3 4.63	28 3.70	30 19.22	16 15.88
15 4.79		15 19.63	Dec. 3 23.50	15 11.89	May 3 0.17	Ang. 1 19.08	20 14.98
26 2.64		19 19.30	4 16.13	26 13.82	15 10.73	15 20.92	Nov. 1 15.25
Mar. 23 3.09		11 20.67	15 14.80	Mar. 1 14.22	June 1 9.70	23 18.32	20 14.80
31 7.43		15 14.76	16 14.39	7 14.96	10 0.12	21 21.25	21 20.86

1928			1929			1930		
Jan. 11 9.82	May 15 7.24	Sept. 18 21.45	Jan. 2 7.03	May 15 13.00	Sept. 15 13.30	Jan. 1 7.6	May 1 5.3	Sept. 3 4.1
15 11.13	29 15.27	23 15.35	16 5.60	26 14.70	29 16.60	7 8.4	7 5.1	14 13.3
Feb. 13 13.45	3 17.80	Oct. 1 19.92	29 22.05	June 7 13.60	Oct. 2 15.25	15 4.8	15 10.2	18 17.5
13 14.40	18 18.68	4 15.45	Feb. 3 4.90	7 13.80	14 9.00	15 4.2	20 15.6	Oct. 1 12.7
15 15.75	30 13.28	8 20.20	13 8.80	15 13.70	15 10.15	Feb. 1 1.8	Jan. 1 11.0	15 16.9
29 1.30	1 17.45	15 20.00	15 5.70	20 20.85	30 16.80	8 8.3	8 17.2	25 18.4
Mar. 1 2.78	1 17.45	Nov. 1 15.60	19 4.30	July 1 15.10	Nov. 1 13.95	15 7.9	15 10.6	Nov. 2 14.5
14 12.05	15 18.90	15 13.90	Mar. 1 7.50	1 11.40	6 13.80	17 4.1	20 8.4	15 13.0
15 11.82	20 19.60	23 13.00	15 10.00	15 13.00	15 13.95	Mar. 1 5.5	July 1 11.3	17 17.4
24 11.66	1 19.12	Dec. 1 24.35	24 16.00	26 17.20	25 13.90	11 8.3	4 10.8	23 15.7
Apr. 1 3.43	15 20.34	12 15.30	Apr. 1 8.60	Aug. 1 13.00	Dec. 24 7.10	15 5.8	14 16.8	Oct. 1 11.4
15 1.70	23 24.84	15 14.90	15 11.80	15 14.50	30 10.65	30 4.2	15 12.9	3 11.5
16 0.95	28 20.92	30 9.00	19 11.89	20 18.35		Apr. 1 0.6	Ang. 1 17.1	6 0.1
30 10.76	Sept. 1 20.12		May 1 10.75	Sept. 1 7 14.15		15 2.1	11 18.7	15 8.2
May 1 11.24	15 16.27					22 6.1	Sept. 1 14.9	

Estimated. Data measurements.

1931			1932			1933		
Jan. 2 14.3	May 13 9.6	Oct. 1 14.4	Jan. 1 3.0	May 15 10.4	Sept. 19 20.6	Jan. 3 14.1	May 23 10.8	Oct. 16 20.90
6 2.1	26 16.4	13 29.3	15 14.5	16 15.0	Oct. 22 13.8	7 19.3	June 1 16.4	23 21.1
15 9.0	11 11.1	15 19.8	20 4.2	26 14.2	1 18.9	17 14.4	19 20.9	30 16.00
Feb. 1 10.9	15 13.0	28 12.9	Feb. 1 7.8	June 1 8.5	5 14.3	1 12.3	28 19.8	Nov. 1 22.45
6 13.6	23 18.6	1 14.0	13 7.3	13 7.3	16 19.3	7 12.4	3 23.9	13 22.70
15 3.8	7 17.6	12 14.8	18 7.3	30 17.4	23 19.4	11 17.3	10 18.2	20 21.05
23 4.2	15 8.4	16 13.0	26 13.0	July 1 17.9	Nov. 1 19.3	15 12.5	17 22.7	27 21.06
Mar. 1 4.3	25 18.1	Dec. 1 14.8	3 10.0	4 13.0	14 19.3	23 11.0	17 21.8	Dec. 7 20.50
15 8.4	Ang. 1 17.1		3 14.6	19 17.3	15 15.5	Mar. 12 9.1	7 19.0	11 16.04
20 10.4	13 14.2		13 0.5	26 19.4	30 13.9	27 9.3	4 20.7	18 12.98
Apr. 1 6.7	15 18.4		16 0.8	Ang. 1 18.8	Dec. 1 17.3	Apr. 3 11.4	9 20.78	22 20.08
19 2.7	27 18.9		Apr. 1 9.1	8 20.5	14 13.3	12 9.5	11 21.50	30 20.38
15 6.4	3 14.4		4 14.0	15 17.9	15 17.3	19 14.7	18 21.8	
28 9.7	3 14.4		15 3.5	25 13.7	31 18.4	28 15.6	25 20.28	
May 1 13.1	14 14.5		26 4.6	Sept. 1 18.5		May 1 12.7	Oct. 2 21.16	
14 7.9	21 19.2		May 1 13.4	15 29.0		14 17.3	9 20.50	

Data measurements.

1934											
Jan. 8 20.74	Feb. 19 20.74	Apr. 2 18.82	May 21 18.23	July 1 23.41	Aug. 19 20.09	Sept. 30 20.41	Nov. 10 19.39	Dec. 22 18.53	Jan. 15 16.43	Feb. 26 19.89	Apr. 3 19.25
23 20.23	Mar. 5 19.49	13 16.64	27 19.84	8 21.29	26 21.34	4 17.26	18 19.31	30 18.63	29 20.33	11 21.32	
29 20.33	11 21.32	22 17.52	10 16.49	19 21.99	2 21.85	14 16.38	21 18.77		5 20.45	19 19.41	
12 20.45	19 19.41	29 18.22	17 21.91	22 23.98	9 22.79	23 15.91	30 19.98		12 20.45	26 20.26	
	26 20.26	May 6 18.53	24 22.18	Ang. 12 21.96	27 20.66	Nov. 6 18.85	15 18.95				

Is of (Log 27-4) National Brass Corp. 841 Ave. and Kenneth Sts., Lafayette, La. 70501. 1 1/2" dia. 27' T. 2 1/2".  
L. & S. Drilled around well in gravel, diameter 8 inches, 125 feet. Recording pipe installed April 24, 1944,  
removed Nov. 28, 1945. Records available 1944-54.

1934				1935			
Apr. 28 88.58	July 4 88.17	Sept. 7 88.87	Nov. 25 89.07	Jan. 1 88.77	Mar. 15 88.72	May 23 89.11	July 15 89.08
May 1 87.83	13 88.63	15 88.71	Dec. 1 88.99	17 89.10	Apr. 3 89.20	June 1 88.87	Aug. 1 89.12
15 87.96	13 88.21	Oct. 1 88.71	4 89.15	Feb. 1 88.92	6 89.34	5 89.17	6 88.57
27 88.56	Ang. 1 88.59	19 88.35	13 88.83	4 88.42	15 88.96	15 88.77	Nov. 2 88.52
June 1 88.26	19 88.37	24 88.45	25 88.36	15 88.82	17 88.55	22 88.10	10 89.29
7 88.38	28 88.26	Nov. 1 88.74	9 88.21	17 89.07	1 89.43	18 89.55	13 88.48
12 87.59	Sept. 1 88.20	15 88.22	15 88.13	Mar. 6 89.61	3 88.87	30 89.21	15 89.22
14 88.13	4 88.72	15 88.22		8 89.18	15 89.72	11 89.25	Oct. 1 88.75

Data measurements.

1936				1937			
Jan. 28 88.93	June 3 89.09	Aug. 12 88.84	Dec. 16 89.27	Jan. 6 88.32	Mar. 17 88.99	June 9 88.61	Aug. 18 88.32
Feb. 4 88.97	10 88.94	17 88.73	23 89.29	13 88.90	24 88.38	16 88.97	23 88.72
11 89.06	17 88.71	2 88.83	30 89.30	20 88.34	21 89.28	23 88.99	Sept. 2 88.77
23 88.80	24 88.77	9 88.82		27 89.31	Apr. 7 89.36	30 88.87	6 88.87
Mar. 11 89.12	July 1 88.76	16 88.59		Feb. 3 88.89	21 89.31	July 7 88.84	15 88.74
18 88.86	8 88.74	23 88.70		10 88.98	28 89.28	14 88.61	22 88.96
29 88.52	15 88.51	30 89.06		27 89.08	May 12 88.71	14 88.61	22 88.96
Apr. 8 88.71	22 88.71	Nov. 25 88.92		24 88.82	19 88.78	28 88.93	28 88.52
May 13 89.05	28 88.82	Dec. 2 89.18		Mar. 3 89.10	26 88.65	Aug. 4 88.82	Oct. 6 88.75
27 88.97	Apr. 4 88.24	9 89.02		10 89.08	June 2 88.54	11 88.83	13 88.79

1938				1939				1940			
Jan. 5 88.01	May 3 77.75	Sept. 7 89.41	Jan. 4 88.57	May 16 88.20	Sept. 23 88.45	Jan. 3 87.92	May 1 88.11	Sept. 11 88.21	Jan. 18 88.43	May 9 88.12	Sept. 8 88.63
12 88.40	10 88.89	13 88.75	11 88.61	18 88.99	Oct. 3 88.38	9 88.12	8 88.43	16 88.07	16 88.77	15 88.10	25 88.08
19 88.53	17 88.39	23 88.39	18 88.93	21 88.43	13 88.41	23 88.35	22 87.95	Oct. 2 88.10	20 88.55	27 87.97	
26 88.80	24 88.84	27 88.71	Feb. 24 88.13	6 88.99	17 88.65	30 88.55	29 87.97	9 87.84	28 88.65	28 88.96	
Feb. 2 88.97	June 1 88.64	Oct. 1 88.62	8 88.99	13 88.20	24 88.65	Feb. 6 87.90	June 5 88.19	16 87.37	9 88.81	14 88.22	
9 88.81	7 88.45	11 88.51	15 88.44	22 88.11	31 88.37	13 88.13	12 88.30	23 88.22	10 88.59	30 88.05	
16 88.58	14 88.35	18 88.79	Mar. 15 88.41	27 88.11	Nov. 7 88.28	27 88.97	19 87.97	30 88.05	17 88.62	27 88.02	
20 88.59	21 88.35	19 88.54	3 88.64	July 5 88.33	14 88.46	27 88.32	26 88.08	Nov. 6 88.07	24 88.24	23 88.23	
Mar. 1 88.61	28 88.45	Nov. 1 88.58	13 88.61	11 88.50	21 88.50	Mar. 6 88.12	July 3 88.02	13 88.23	15 88.43	22 88.43	
8 88.53	6 88.38	9 88.26	22 88.06	18 88.26	Dec. 13 88.54	13 88.29	10 88.12	17 87.89	18 88.05	27 88.02	
15 88.23	12 88.45	16 88.44	29 88.65	33 88.44	19 88.32	17 88.29	10 88.12	24 88.04	11 88.29	18 88.38	
22 88.62	19 88.25	22 88.64	Apr. 5 88.21	Ang. 12 88.40	27 88.27	20 87.96	17 87.89	18 88.38	19 88.19	18 88.38	
Apr. 5 88.43	Ang. 2 88.70	Dec. 7 88.77	12 88.20	12 88.59		27 87.86	24 88.04	1 87.95	27 88.02	26 88.05	
13 88.35	9 88.98	20 88.32	18 88.23	28 88.23		10 87.86	21 87.88	1 87.95	27 88.02	26 88.05	
19 88.19	15 88.55	27 88.41	May 2 88.18	13 88.43		17 88.04	28 88.05	26 88.05			
26 88.47	23 88.64		9 88.34	19 88.48		24 88.09	Sept. 5 88.27				

Table 4.—Water levels in observation wells in Rippon County, Ind.

1931				1932			
Jan. 2 88.15	Mar. 5 88.24	May 7 88.29	July 9 87.97	Oct. 1 88.16	Dec. 3 88.21	Mar. 25 87.95	May 27 88.02
8 88.22	12 87.89	14 88.26	30 88.25	8 88.28		Apr. 1 87.82	June 3 87.92
15 87.70	19 88.14	22 88.16	6 87.96	15 88.07		8 88.14	10 87.98
23 88.30	26 88.39	28 88.14	13 88.20	22 88.25		15 88.18	17 88.07
29 88.36	Apr. 2 88.14	June 4 88.18	20 88.30	29 88.37		22 87.88	24 88.06
31 88.22	9 88.12	11 88.11	27 87.91	5 88.33		29 88.08	July 1 87.97
Feb. 1 88.22	16 88.24	18 88.24	Sept. 4 88.19	12 88.39		5 88.01	8 87.97
13 88.02	21 88.23	23 88.17	10 87.90	19 88.39		13 88.21	15 88.06
19 88.02	28 87.97	July 2 88.15	24 88.11	26 88.08		21 87.94	22 88.08
26 87.90							

1933				1934			
Jan. 19 88.3	Apr. 19 88.3	July 13 88.4	Oct. 1 88.1	Dec. 21 88.6	Jan. 8 88.4	May 3 88.7	July 26 89.0
26 88.93	27 88.3	20 88.5	13 88.7		15 88.6	10 89.6	Oct. 2 88.8
Feb. 2 88.3	May 4 88.6	27 88.35	19 88.5		29 88.9	17 89.9	9 88.9
9 88.5	11 88.4	Apr. 7 88.7	26 88.2		28 88.9	24 89.9	18 88.9
15 88.2	18 88.3	10 88.45	Nov. 2 88.7		June 1 88.6	23 89.0	23 89.0
22 88.1	29 88.5	17 88.5	9 88.75		8 88.7	30 89.0	22 89.0
Mar. 7 88.2	June 1 88.4	24 88.9	9 88.6		22 88.8	14 88.9	Sept. 7 88.8
9 88.3	8 88.5	31 88.3	16 88.95		30 88.7	21 89.1	13 88.8
16 88.4	15 88.55	Sept. 8 88.6	23 88.4		Apr. 8 88.8	28 89.1	20 88.8
23 88.2	22 88.5	14 88.4	30 88.6		12 89.1	July 6 88.9	27 88.9
30 88.2	29 88.55	21 88.6	Dec. 7 88.5		19 88.9	12 88.7	Oct. 4 89.0
Apr. 13 88.5	July 6 88.15	28 88.5	14 88.3		26 88.8	19 88.8	11 88.9

To 7 (Tul 13-1). State of Indiana. Purdue University, Purdue Research Housing Project. SLS251 sec. 13, T. 23 N., R. 5 W. Drilled uncased well, diameter 8 inches, depth 207 feet. Recording gear installed Aug. 10, 1945. Records available: 1945-54.

1934			1935		
Aug. 10 165.26	Oct. 26 165.69	Dec. 14 165.55	Jan. 1 165.62	Apr. 18 166.98	June 7 164.66
17 165.62	Nov. 6 165.49	21 165.97	5 165.38	22 166.69	15 164.90
Sept. 14 165.70	9 165.71	29 165.37	Mar. 15 166.60	May 1 166.71	23 164.98
21 165.95	16 166.37		20 166.76	4 166.46	July 19 166.99
5 166.82	21 165.54		29 166.42	15 166.71	29 165.26
12 165.73	30 165.58		Apr. 1 166.44	22 166.88	Aug. 1 167.17
29 165.69	Dec. 7 165.47		8 165.43	June 4 166.85	Sept. 3 167.32

1937			1938			1939		
Jan. 1 166.09	June 1 166.89	Oct. 4 165.10	Jan. 1 165.48	May 3 164.41	Sept. 6 164.79	Jan. 1 165.65	May 15 163.21	Sept. 15 164.28
14 165.97	3 165.05	15 164.27	10 165.81	15 164.21	15 164.97	10 164.79	25 163.51	30 164.62
17 166.25	8 164.75	31 165.55	15 165.35	29 164.02	26 165.16	15 164.66	9 163.63	1 164.67
20 165.77	4 164.29	Nov. 1 165.52	22 165.35	June 1 164.18	Oct. 1 165.05	31 164.86	9 163.84	3 164.57
Feb. 14 165.73	15 164.15	3 165.37	Feb. 1 165.51	4 164.00	7 164.93	Feb. 1 164.99	15 163.64	13 164.81
19 165.97	25 164.43	15 165.77	15 165.67	15 164.30	17 164.27	2 165.05	25 163.23	27 164.89
Mar. 1 165.70	Aug. 1 164.11	30 165.93	28 165.12	20 164.32	24 164.60	15 164.20	July 1 163.84	Nov. 1 164.74
14 165.29	3 164.37	Dec. 1 165.78	Mar. 1 165.37	1 164.42	Nov. 1 164.31	27 163.96	5 163.72	3 164.94
22 165.89	15 164.99	4 165.90	15 165.13	6 164.32	3 165.21	Mar. 1 164.06	25 163.90	13 164.88
Apr. 15 165.68	29 164.79	15 165.66	31 164.79	15 164.31	15 165.34	15 163.88	23 164.11	15 164.56
26 164.71	1 164.83	30 165.60	Apr. 1 165.09	24 164.30	21 165.28	27 163.38	Aug. 1 163.99	1 164.74
30 164.14	5 164.70		17 164.80	14 164.47	15 164.89	Apr. 1 163.18	15 164.12	11 164.60
May 1 165.45	15 164.98		30 164.34	31 164.82	15 164.45	15 163.12	Sept. 1 164.24	15 164.84
15 164.16	30 164.26		May 1 164.30	Sept. 1 164.86	26 164.30	Mar. 1 163.22	5 164.17	23 164.96
29 164.75	Oct. 1 164.22							

1937			1938			1939		
Jan. 1 164.62	May 13 159.81	Oct. 9 160.97	Jan. 1 161.42	May 17 161.22	Sept. 10 161.75	Jan. 1 162.70	May 1 161.17	Sept. 24 161.13
5 164.70	June 1 159.93	15 161.26	15 161.44	16 159.94	15 162.09	3 162.89	3 161.21	1 161.09
14 164.18	3 159.81	26 161.42	23 161.91	17 161.98	16 162.15	15 162.12	15 160.80	19 161.49
29 162.99	15 160.09	Nov. 1 162.07	27 161.31	1 161.39	1 162.64	22 162.29	31 160.48	29 161.76
Feb. 1 162.89	28 160.21	15 161.41	Feb. 2 161.90	8 162.17	3 161.91	Feb. 1 162.77	Jan. 1 160.96	1 161.72
15 161.96	July 1 160.11	24 161.90	14 161.75	19 161.37	15 162.30	7 162.96	15 160.26	5 161.60
28 161.20	14 160.90	Dec. 1 161.87	15 161.50	23 161.48	25 162.65	15 162.20	30 159.93	15 161.82
Mar. 1 161.77	19 160.07	5 161.94	26 161.39	July 1 161.41	1 162.42	28 161.58	July 1 159.97	77 162.14
1 161.49	25 160.39	15 161.71	Mar. 2 161.53	4 161.40	7 162.42	1 161.81	14 159.89	1 162.11
15 160.97	Aug. 1 160.36	26 161.52	15 161.06	13 161.70	15 162.73	13 162.97	Dec. 1 160.27	2 161.97
27 160.38	15 160.52		31 160.79	15 161.66	17 161.90	15 161.33	Aug. 1 160.70	13 162.19
Apr. 1 160.45	31 160.74		Apr. 1 160.81	1 164.54	1 162.47	31 161.48	6 160.03	19 162.33
6 160.79	Sept. 1 160.79		13 160.66	7 161.37	15 161.77	15 161.33	15 160.35	
25 159.70	14 160.96		15 160.82	25 161.62	21 162.30	13 161.63	20 160.63	
May 1 159.92	24 161.14		20 161.07	23 161.84	77 162.95	13 161.20	2 160.90	
8 160.04	Oct. 1 161.17		May 1 160.64	Sept. 1 161.82		15 161.57	15 160.84	

1937				1938			
Jan. 1 162.20	Apr. 2 162.20	July 15 162.99	Oct. 12 164.81	Jan. 1 164.24	Apr. 15 165.33	July 15 166.54	Oct. 29 167.08
2 161.98	9 161.33	24 163.97	15 165.89	2 164.20	20 165.79	30 166.77	Nov. 1 167.17
16 162.38	15 162.34	Aug. 1 163.11	Nov. 1 164.12	15 164.49	May 1 165.44	Aug. 1 166.78	13 167.25
Feb. 1 162.38	May 1 162.36	4 163.07	15 164.09	28 164.78	3 165.34	3 166.69	15 167.05
8 162.39	15 162.64	24 163.22	24 163.96	Feb. 1 164.48	15 165.47	15 166.91	27 166.76
15 162.47	28 162.97	28 163.36	28 164.39	7 164.44	20 165.66	22 167.07	1 167.00
22 162.42	Apr. 1 162.71	1 163.22	Dec. 1 164.29	12 164.94	June 1 165.43	3 167.06	6 167.19
Mar. 1 162.79	8 162.84	4 163.15	4 163.95	15 164.60	7 165.38	15 167.16	9 166.79
7 162.95	15 163.71	15 163.29	15 164.38	Mar. 1 164.78	15 164.74	30 167.35	15 166.82
15 162.49	27 163.98	30 163.60	17 164.57	15 164.85	30 166.17	Oct. 1 167.20	
18 162.16	July 1 162.92	Oct. 1 163.73		Apr. 1 165.23	July 1 166.26	15 167.45	
Apr. 1 162.36	3 163.81	6 163.99		6 164.96	7 166.23	19 167.67	

To 8 (Tul 17-9). West Lafayette Water Co. At West Lafayette Water Works. SLS251 sec. 17, T. 27 N., R. 4 W. Drilled uncased well, diameter 12 inches, depth 98 feet. Recording gear installed Nov. 28, 1945. Records available: 1945-47.

1944			1945			1947		
Nov. 29 10.97	Jan. 1 9.96	Apr. 15 9.08	July 29 13.13	Nov. 1 11.97	Jan. 1 12.75	Apr. 30 4.78	July 31 11.17	Nov. 1 13.63
30 10.51	14 7.06	30 10.90	Aug. 6 12.50	15 13.50	10 12.14	May 1 8.18	Aug. 1 11.26	13 13.65
Dec. 1 10.94	8.98	May 1 10.97	19 12.81	30 13.29	15 12.68	7 8.10	15 12.23	15 13.69
15 11.23	14 9.79	12 11.04	31 13.00	Dec. 1 13.29	Feb. 1 12.29	15 7.03	31 12.13	20 13.49
24 11.26	15 9.60	31 10.00	Sept. 1 13.01	15 13.22	8 10.21	8.22	Sept. 1 12.55	21 13.18
31 10.51	22 7.48	June 1 9.88	15 13.29	31 12.75	15 10.32	2 8.33	15 12.07	15 13.28
	Mar. 3 7.95	9.66	30 13.74		Mar. 1 11.29	12 4.99	30 13.62	31 13.11
	16 8.66	15 10.20	Oct. 1 13.75		15 11.29	15 11.16	1 13.07	
	25 7.30	July 2 10.50	15 14.02		8 11.14	July 4 8.57	15 13.42	
	Apr. 1 7.40	15 11.49	18 14.04		15 10.23	15 10.09	30 13.63	



Table 4--Water levels in observation wells in Tippecanoe County, Ind.

1944				1945			
Jan. 1	Feb. 1	Mar. 1	Apr. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
13.11	11.14	11.70	9.07	10.98	9.31	8.98	8.96
11.14	12.26	9.29	8.91	6.93	9.16	9.33	9.39
11.70	11.77	9.79	9.23	13.61	13.68	9.14	9.34
9.07	12.27	9.79	9.23	13.61	13.68	9.14	9.34
	11.77	9.79	9.23	13.61	13.68	9.14	9.34
	11.77	9.79	9.23	13.61	13.68	9.14	9.34
	11.77	9.79	9.23	13.61	13.68	9.14	9.34
	11.77	9.79	9.23	13.61	13.68	9.14	9.34

Estimated

To 9 (Fol 14-7). Aluminum Co. of America, Lafayette. Report sec. 34, p. 23 E. S. R. & F. Drilled mason well in gravel, diameter 16 inches, depth 160 feet. Recording gauge installed Feb. 15, 1944. Records available: 1944-54.

1946			1947			1948		
Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1
72.77	72.77	72.77	71.87	72.83	73.18	70.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09
72.77	72.77	72.77	70.75	72.83	73.18	69.09	70.09	70.09

1949			1950			1951		
Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70
70.54	70.54	70.54	70.60	71.70	73.33	71.35	71.70	72.70

1952			1953			1954		
Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1	Jan. 1	Feb. 1	Mar. 1
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83
71.95	71.95	71.95	74.90	74.95	74.80	72.64	72.78	74.83

To 11 (Fol 14-11). State of Indiana, Purdue University, West Lafayette. Report sec. 15, p. 23 E. S. R. & F. Drilled mason well in sand and gravel, diameter 6 inches, reported depth 216 feet. Recording gauge installed April 30, 1948. Records available: 1948-51.

1948				1949			
Apr. 30	June 30	Sept. 30	Dec. 1	Jan. 2	Mar. 27	June 2	Aug. 15
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71
89.33	96.60	97.43	98.14	98.25	95.21	96.23	96.71

Dike measurement.

1950				1951			
Jan. 1	Apr. 15	July 1	Oct. 1	Jan. 1	Apr. 15	July 1	Oct. 1
97.12	91.70	92.30	93.35	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14
96.05	91.25	92.45	93.60	94.28	93.05	94.35	94.14

Estimated

Dike measurement

Table 4--Water levels in observation wells in Hippessee County, Ind.

1957			1957			1956		
Jan. 3 895.38	May 21 92.60	Oct. 1 92.00	Jan. 2 92.90	May 15 95.55	Oct. 5 96.50	Jan. 1 97.35	May 6 99.75	Sept. 30 102.45
12 894.30	June 1 92.50	15 92.40	15 95.35	28 95.80	15 97.35	13 97.80	15 98.80	Oct. 1 102.30
22 91.00	15 92.15	30 92.75	30 95.45	1 95.30	30 98.90	18 97.30	1 98.65	15 102.60
Feb. 2 894.92	30 91.95	Nov. 15 92.95	Feb. 2 95.30	15 95.50	Nov. 1 97.45	21 97.95	15 99.10	17 102.65
15 94.45	1 91.95	27 895.18	15 95.30	27 95.95	9 97.30	Feb. 1 97.70	30 101.15	11 102.45
28 94.05	8 91.90	Dec. 5 895.90	18 95.75	1 96.15	15 97.35	15 97.75	July 1 100.35	1 100.35
Mar. 1 94.05	15 92.10	13 895.93	15 95.40	6 95.80	28 97.65	18 98.10	15 101.35	2 100.50
12 94.15	31 92.65	19 896.00	7 95.80	15 96.10	Dec. 1 97.60	Mar. 1 97.85	30 101.85	15 100.15
15 94.10	Aug. 1 92.75	31 94.90	15 95.40	30 96.25	15 97.65	15 98.00	15 101.85	28 100.00
21 93.80	4 92.45		30 95.20	1 96.35	17 97.80	18 98.35	15 102.10	Dec. 1 100.25
Apr. 2 93.80	15 92.90		Apr. 1 95.30	14 96.35	28 97.25	Apr. 5 98.20	24 100.85	11 100.35
15 93.65	29 93.20		13 94.90	31 95.75		15 98.60	29 102.25	15 100.25
29 93.40	1 93.85		15 95.15	1 95.95		30 98.70	31 102.25	31 99.90
May 1 93.35	15 93.40		May 1 95.30	18 97.20		May 1 98.75	15 102.10	
15 92.65	27 94.00		4 94.15	Oct. 1 97.00		3 98.25	22 101.10	

Diap measurement

To 12 (no 20-). Curves Lening. NW 1/4 sec. 30, T. 21 N., R. 4 E. One uncut wall in drift, diameter 20 inches, depth 28 feet. Records available: 1949-54.

1949			1949			1948		
Aug. 3 19.43	Sept. 21 20.47	Nov. 19 20.91	Jan. 7 20.20	Mar. 11 15.12	May 6 19.44	July 15 17.04	Oct. 7 18.76	Dec. 3 18.87
6 19.28	Oct. 1 20.37	26 20.92	14 20.30	18 15.13	13 19.77	22 17.10	14 18.85	9 18.70
13 19.41	8 20.69	Dec. 3 20.99	21 20.38	19 15.13	20 19.89	Aug. 19 18.33	21 18.98	17 18.67
30 19.86	15 20.61	10 21.01	28 19.90	Apr. 1 14.25	27 18.22	28 18.35	28 19.12	30 18.82
28 20.06	22 20.61	19 21.27	Feb. 4 15.85	8 13.77	June 3 16.35	Sept. 2 18.44	Nov. 4 19.27	
Sept. 3 20.13	29 20.68	27 20.81	11 15.70	15 13.99	10 16.66	9 18.47	11 19.39	
10 20.25	Nov. 5 20.82	31 20.68	18 14.07	23 14.40	17 16.44	16 18.75	18 19.40	
17 20.27	12 20.82		Mar. 9 14.10	29 14.47	24 15.82	30 18.41	25 19.00	

1951			1951			1950		
Jan. 6 18.75	Mar. 3 17.38	May 13 17.50	Apr. 3 17.99	May 28 17.29	July 21 16.77	Sept. 20 17.77	Nov. 29 19.89	
13 18.80	10 17.48	26 18.26	9 17.74	June 4 17.41	31 17.11	27 18.84	Dec. 5 20.00	
20 18.64	17 17.53	28 18.10	16 17.51	13 17.61	Aug. 8 17.69	Oct. 4 19.19	11 19.98	
27 18.79	24 17.54	23 18.27	23 18.93	19 16.10	15 17.76	11 19.22	19 20.03	
Feb. 1 18.80	31 17.36	29 18.54	30 18.70	25 15.40	22 18.02	18 19.31	26 20.11	
10 18.83	Apr. 7 17.80	July 6 18.39	May 7 18.81	July 3 15.43	30 18.03	24 19.44		
17 18.43	21 17.63	13 17.75	14 17.51	10 16.00	Sept. 1 18.25	Nov. 7 19.49		
24 17.47			21 17.11	17 16.40	13 18.37	14 19.65		

1953			1953			1952		
Jan. 2 20.14	Mar. 29 18.10	July 19 18.91	Oct. 13 20.44	Jan. 4 21.18	Mar. 29 21.43	June 21 21.27	Sept. 13 21.37	Dec. 6 21.75
10 20.21	Apr. 12 17.74	27 19.06	19 20.51	11 21.22	Apr. 5 21.44	28 21.28	30 21.99	13 21.76
18 20.74	19 17.78	Aug. 3 19.13	26 20.61	18 21.26	12 21.60	July 5 21.32	27 21.61	20 21.78
25 20.20	26 17.91	10 19.27	Nov. 2 20.50	29 21.30	19 21.34	12 21.31	Oct. 4 21.63	27 21.28
Feb. 1 20.13	May 3 18.04	17 19.41	9 20.10	Feb. 1 21.30	26 21.31	19 21.38	21 21.65	
8 20.15	27 18.27	34 19.58	16 20.82	8 21.34	May 3 21.31	26 21.60	18 21.65	
15 20.15	24 18.18	31 19.69	23 19.85	15 21.36	10 21.37	25 21.65	25 21.65	
22 20.18	June 12 18.40	Sept. 8 19.87	30 20.93	22 21.38	17 21.34	9 21.67	Nov. 1 21.66	
Mar. 1 20.13	14 18.41	14 19.96	Dec. 7 20.99	Mar. 1 21.39	24 21.26	16 21.68	8 21.67	
8 19.58	21 18.53	21 20.10	Dec. 14 21.03	8 21.40	June 7 21.34	23 21.69	15 21.68	
15 19.21	28 18.78	28 20.22	21 21.09	15 21.41	Sept. 14 21.26	20 21.51	22 21.52	
22 18.32	July 5 18.72	Oct. 5 20.31	28 21.14	22 21.42	Sept. 6 21.41	27 21.27		

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\_\_\_\_\_ 1954, Water levels and artesian pressures in observation wells in the United States in 1951, Part 1, Northeastern States: U. S. Geol. Survey Water-Supply Paper 1191, p. 73-76.

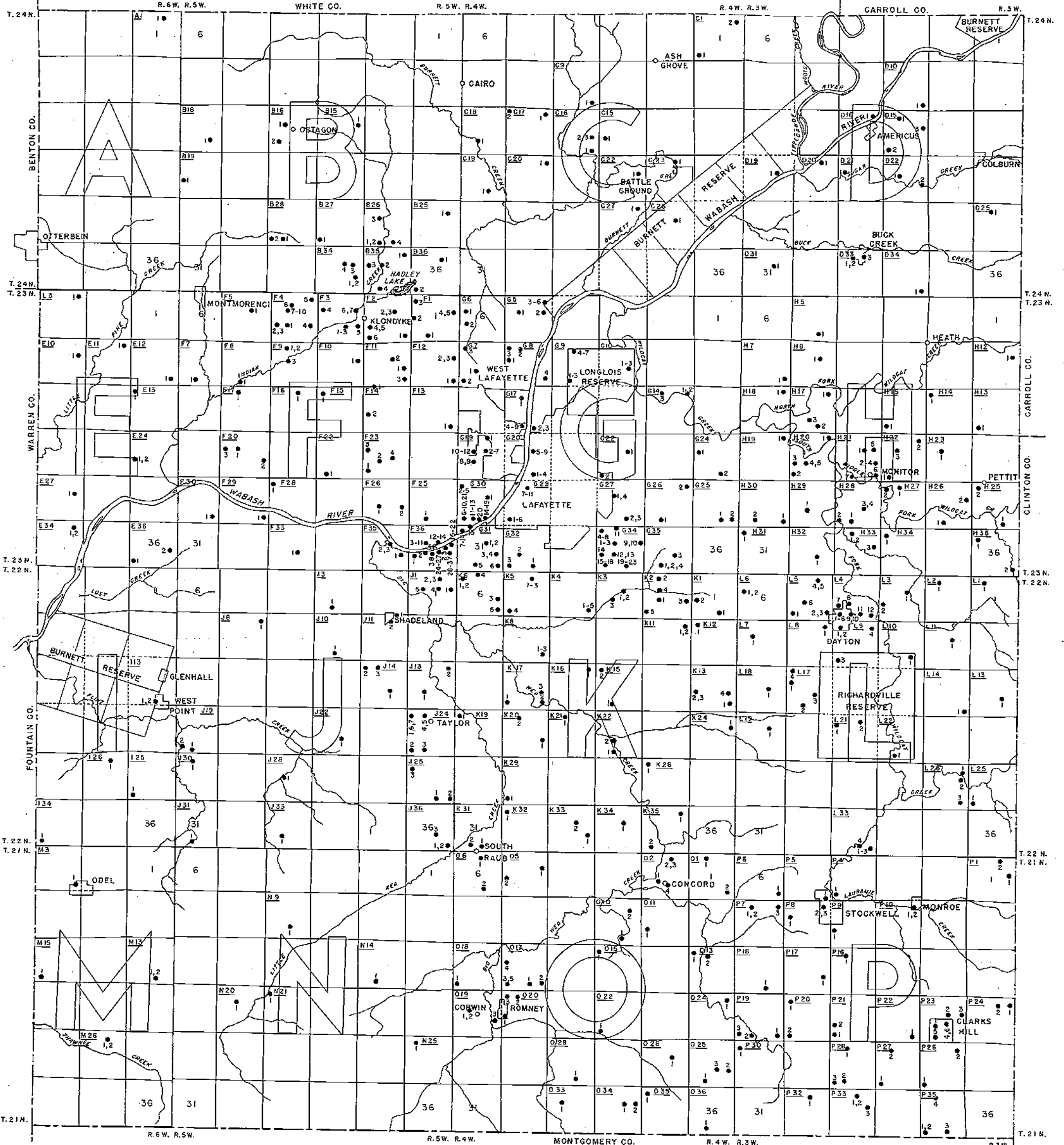
## PUBLICATIONS OF COOPERATIVE GROUNDWATER PROGRAM

### Report

Ground-water resources of the Indianapolis area, Marion County,  
Ind. C. L. McGuinness. Ind. Dept. of Cons., Div. Geology.  
1943.

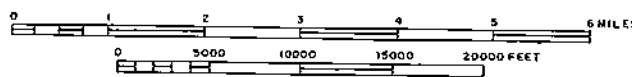
### Bulletins

1. Memorandum concerning a pumping test at Gas City, Ind.  
J. G. Ferris, Ind. Dept. Cons., 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. Cons.,  
Div. Water Resources. 1946.
3. Ground-water resources of St. Joseph County, Ind. Part 1,  
South Bend area. F. H. Klaer, Jr., and R. W. Stallman.  
Ind. Dept. Cons., Div. Water Resources. 1948.
4. Ground-water resources of Boone County, Ind. E. A. Brown.  
Ind. Dept. Cons., Div. Water Resources. 1949.
5. Ground-water resources of Noble County, Ind. R. W. Stallman  
and F. H. Klaer, Jr., Ind. Dept. Cons., Div. Water Re-  
sources. 1950.
7. Water level records of Indiana. Anonymous. Ind. Dept. Cons.,  
Div. Water Resources. 1956.



BASE MODIFIED FROM INDIANA  
DEPARTMENT OF CONSERVATION,  
GEOLOGICAL SURVEY, BASE MAP  
OF TIPPECANOE COUNTY,  
MAY 1, 1952.

MAP OF  
TIPPECANOE COUNTY, INDIANA  
SHOWING  
LOCATIONS OF WELLS



COMPILED BY J.S. ROSENHEIM AND O.J. COSNER  
1954

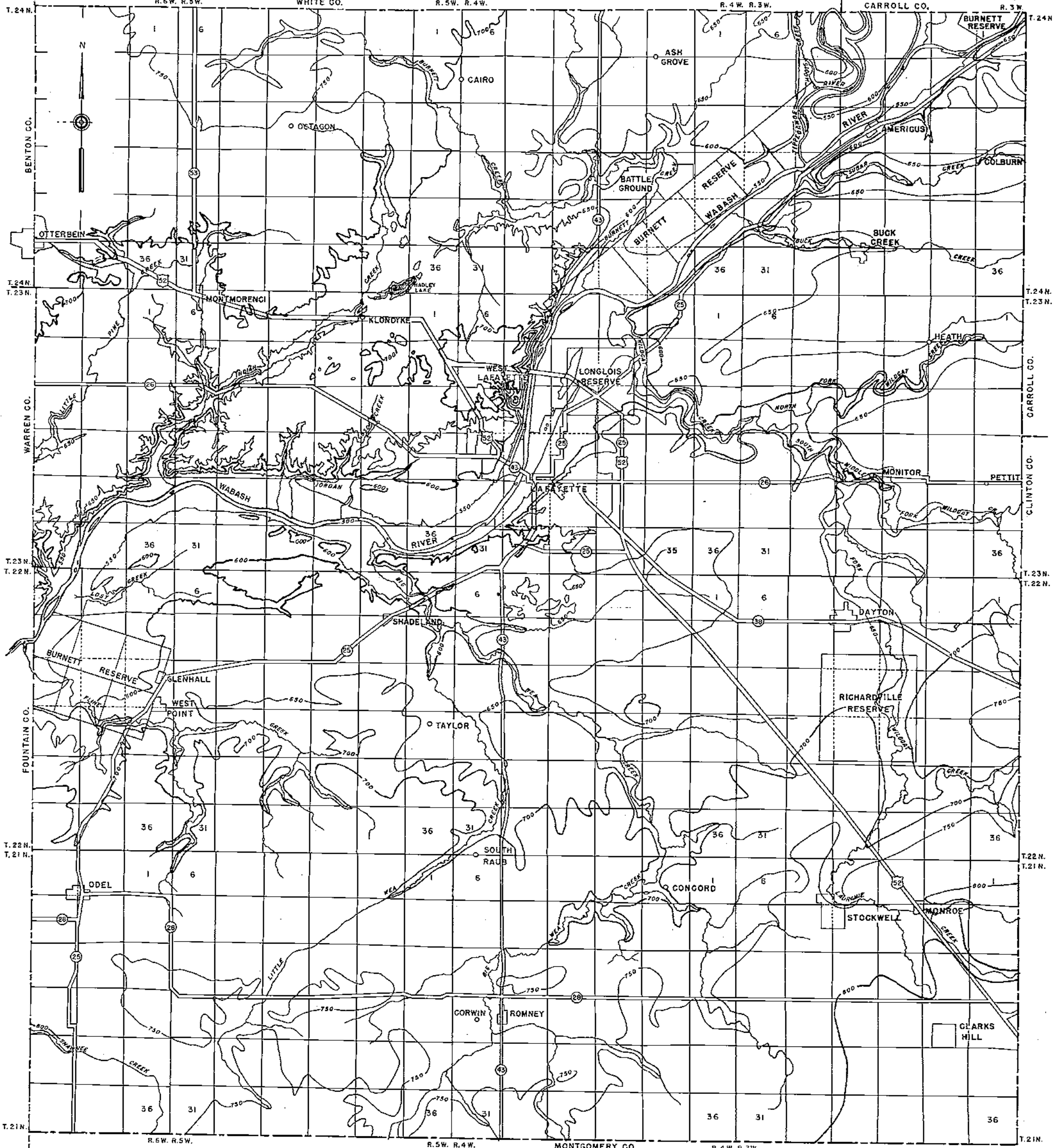
- EXPLANATION
- A6-1  
ONE WELL
  - A7-2,3  
TWO WELLS
  - A8-2-10  
GROUP OF WELLS

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

DIAGRAM OF TOWNSHIP

A	B	C	D	T. 24 N.
E	F	G	H	T. 23 N.
I	J	K	L	T. 22 N.
M	N	O	P	T. 21 N.

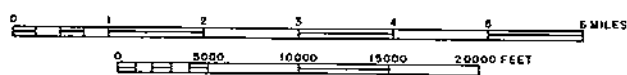
TOWNSHIP LETTER SYMBOLS  
IN WELL-NUMBERING SYSTEM



BASE MODIFIED FROM INDIANA DEPARTMENT OF CONSERVATION,  
GEOLOGICAL SURVEY, BASE MAP OF TIPPECANOE COUNTY,  
MAY 1, 1952, AND GENERAL HIGHWAY AND TRANSPORTATION MAP  
REVISED TO JULY 1, 1953.

TOPOGRAPHY COMPILED FROM EXISTING U.S. GEOLOGICAL SURVEY  
TOPOGRAPHIC MAPS, U.S. ARMY, CORPS OF ENGINEERS, WABASH  
RIVER CHARTS AND ALTIMETER SURVEY USING U.S. COAST AND  
GEODETIC SURVEY BENCH MARKS, SECOND-ORDER LEVELING.

TOPOGRAPHIC MAP  
OF  
TIPPECANOE COUNTY, INDIANA



CONTOUR INTERVAL 50 FEET  
DATUM IS MEAN SEA LEVEL  
COMPILED BY J.S. ROSENHEIM AND O.J. COSNER  
1954