STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

BULLETIN NO. 9

GROUND-WATER RESOURCES
of
ADAMS COUNTY, INDIANA

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

1962

INDIANA DEPARTMENT OF CONSERVATION

Donald E. Foltz, Director

BULLETIN NO. 9

OF THE

DIVISION OF WATER RESOURCES

Charles H. Bechert, Director

GROUND-WATER RESOURCES OF ADAMS COUNTY, INDIANA

BY

F. A. Watkins, Jr., and P. E. Ward

Prepared by the

GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR

In cooperation with the

DIVISION OF WATER RESOURCES

INDIANA DEPARTMENT OF CONSERVATION

1962

CONTENTS

ILLUSTRATIONS

(All plates are in pocket)

TABLES

GROUND-WATER RESOURCES OF ADAMS COUNTY, INDIANA

By F. A. Watkins, Jr. and P. E. Ward

ABSTRACT

Adams County, in northeastern Indiana has an area of about 345 square miles. The county has a population of about 22,000, of which approximately a third reside in Decatur, the county seat.

The land surface is characterized by a flat to rolling central plain interrupted by low morainal ridges to the north and south. Except for the channels of the St. Marys and Wabash Rivers, the land surface has been altered only slightly by postglacial erosion and much of the relatively flat areas must be drained artificially.

Dolomitic limestone and dolomite of Middle Silurian age are exposed in quarries and at a few places along the St. Marys and Wabash Rivers. Elsewhere, the bedrock is covered by unconsolidated glacial deposits of Pleistocene age. The bedrock surface is a plain that slopes gently northward upon which a southward flowing preglacial stream system was superimposed. The deeper parts of this stream system may have cut through the rocks of Middle Silurian age into the underlying rocks of Ordovician age. The glacial deposits, which fill the channels and depressions in the preglacial bedrock surface, consist of till and stratified clay, sand, and gravel, and are reported to be as much as 400 feet thick. The bedrock of Middle Silurian age and the adjacent sand and gravel of Pleistocene age, which comprise the valley fill in the preglacial bedrock channels and depressions form a single aquifer that is the chief source of ground water in Adams County.

Recharge to the principal aquifer is by slow percolation of precipitation through the overlying glacial material. If only 1 inch of the available precipitation reached the aquifer as recharge it would amount to greater than nine times the quantity pumped from the aquifer. Much of the natural discharge from the aquifer is probably to points of discharge outside the county. Some ground water from both the bedrock and the sand and gravel may be discharged into the streams. The annual pumpage of ground water, most of which is from the principal aquifer, was estimated to be about 650 million gallons. About five-sixths of this water is pumped from the bedrock part of the aquifer, and is derived principally from the upper 100 feet or the upper zone of solutioning in the rock. The remainder is pumped from the unconsolidated glacial deposits and is derived principally from the sand and gravel which makes up the other part of the principal aquifer.

Future development of ground water in Adams County should be restricted to the upper 100 feet or upper zone of solutioning in the bedrock part of the aquifer and to the sand and gravel part of the aquifer. Neither of these sources of ground water have been developed to their maximum sustainable yield. Even in Decatur in the area of greatest pumpage from the bedrock part of the aquifer, additional ground water is available -- only a small fraction of the available water in the sand and gravel part of the aquifer is being pumped. Minor amounts of additional water are also available locally from sand and gravel lenses in the upper part of the till.

The quality of the ground water in Adams County is poor. The water is very hard and has a high iron and sulfate content. However, with some treatment the water is suitable for domestic, farm, municipal and many industrial uses.

INTRODUCTION

Purpose and Scope of the Investigation

An investigation of the ground-water resources and geology of Adams County was conducted intermittently during the period 1946 to 1955. This investigation was made by the U. S. Geological Survey in cooperation with the Division of Water Resources, Indiana Department of Conservation, as a part of a broad program of these agencies to inventory and evaluate the ground-water resources of Indiana. This report is the fifth of a series of county ground-water reports prepared for publication under the Indiana cooperative program. Its purpose is to present the available basic data and interpretations based thereon as an aid to sound planning and development of the ground-water resources of the county.

This investigation was made under the general direction of A. N. Sayre and P. E. LaMoreaux, successive chiefs of the Ground Water Branch, U. S. Geological Survey, and under the immediate supervision of F. H. Klaer and C. M. Roberts, successive district geologists of the Ground Water Branch for Indiana. Survey personnel who participated in the field work or helped prepare this report are G. E. Davis, D. G. Jordan, J. S. Rosenshein, and R. J. Vig.

Location and Areal Extent of the Area

Adams County is in northeastern Indiana (fig. 1); it is rectangular in shape and has an area of about 345 square miles. It is bounded on the north by Allen County, on the east by the State of Ohio, on the south by Jay County, and on the west by Wells County.

Previous Investigations

The ground-water resources and geology of Adams County have been described in several reports concerning larger areas which include the county. However,

the previous information about the county is not detailed. The rocks of Silurian age in northern Indiana are described in reports by Kindle (1904), Cumings and Shrock (1927, 1928), and Esarey and Bieberman (1949). Leverett and Taylor (1915) briefly described the Pleistocene geology of Adams County in their report on Indiana and Michigan. Leverett (1899, p. 51-52) described the Pleistocene geology and ground-water conditions in the county in a report on northern Indiana. Harrell (1935, p. 104-107) summarized ground-water conditions in Adams County in a report describing the ground-water resources of the state. A soil survey of Adams County was made by Jones and others (1923).

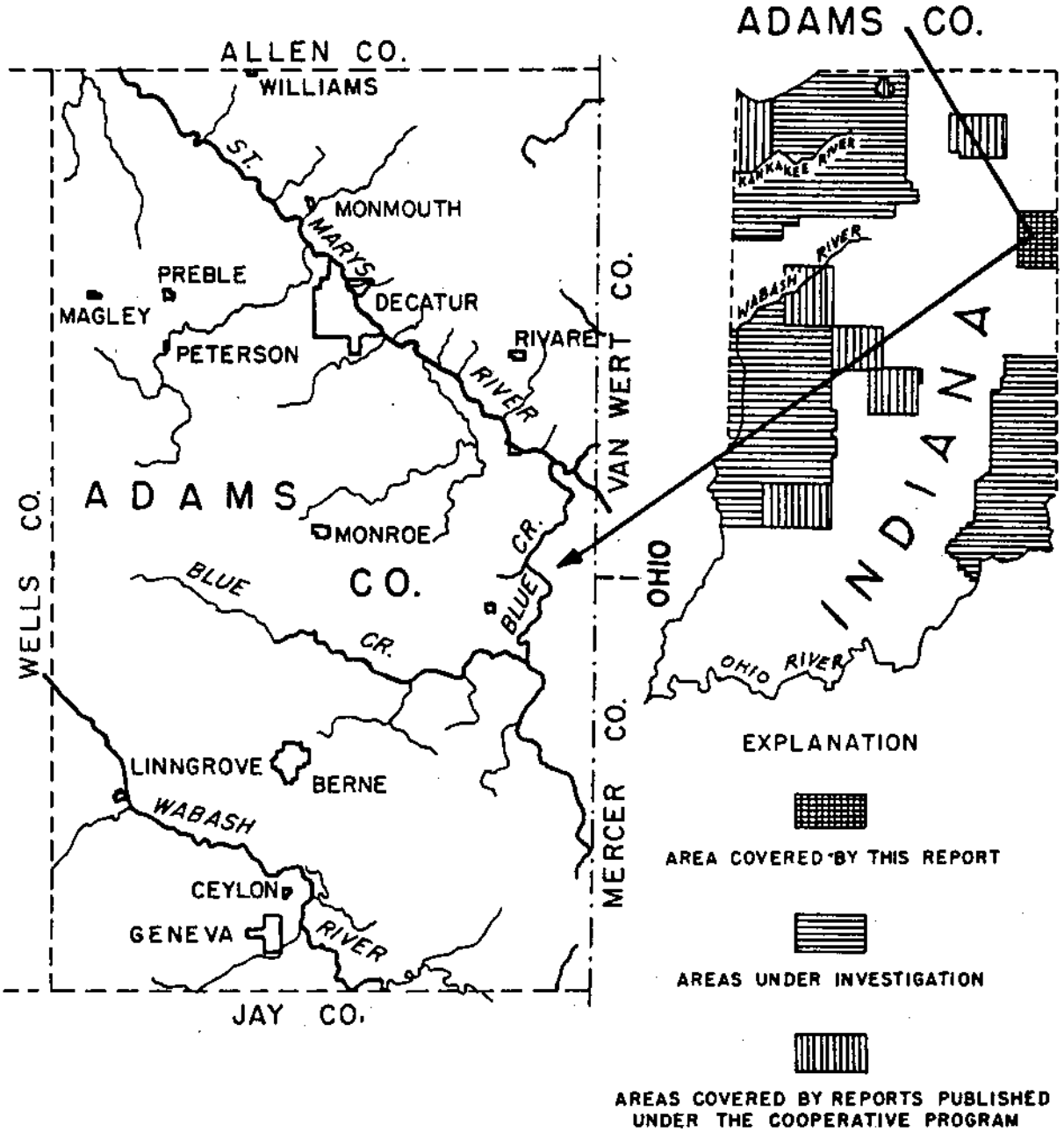


FIGURE 1.--Map of Indiana showing area covered by this report, areas under investigation and areas covered by reports published under the cooperative program.

SEE PAGE 67 FOR LIST OF PUBLISHED REPORTS

Well-Numbering System

The numbering system used in this report to identify the wells indicates their location according to the official rectangular survey of public lands. The numbers for wells in Adams County all bear the prefix "Ad". Each township and range is assigned a letter symbol as shown in figure 2. The number after the township and range symbol indicates the section in which the well is located. Within each section the wells are numbered consecutively. Thus, as illustrated in figure 2, wells AdH32-1 and AdH32-2 are the first and second wells listed in sec. 32, T. 26 N., R. 14 E. The well locations are shown on plate 1.

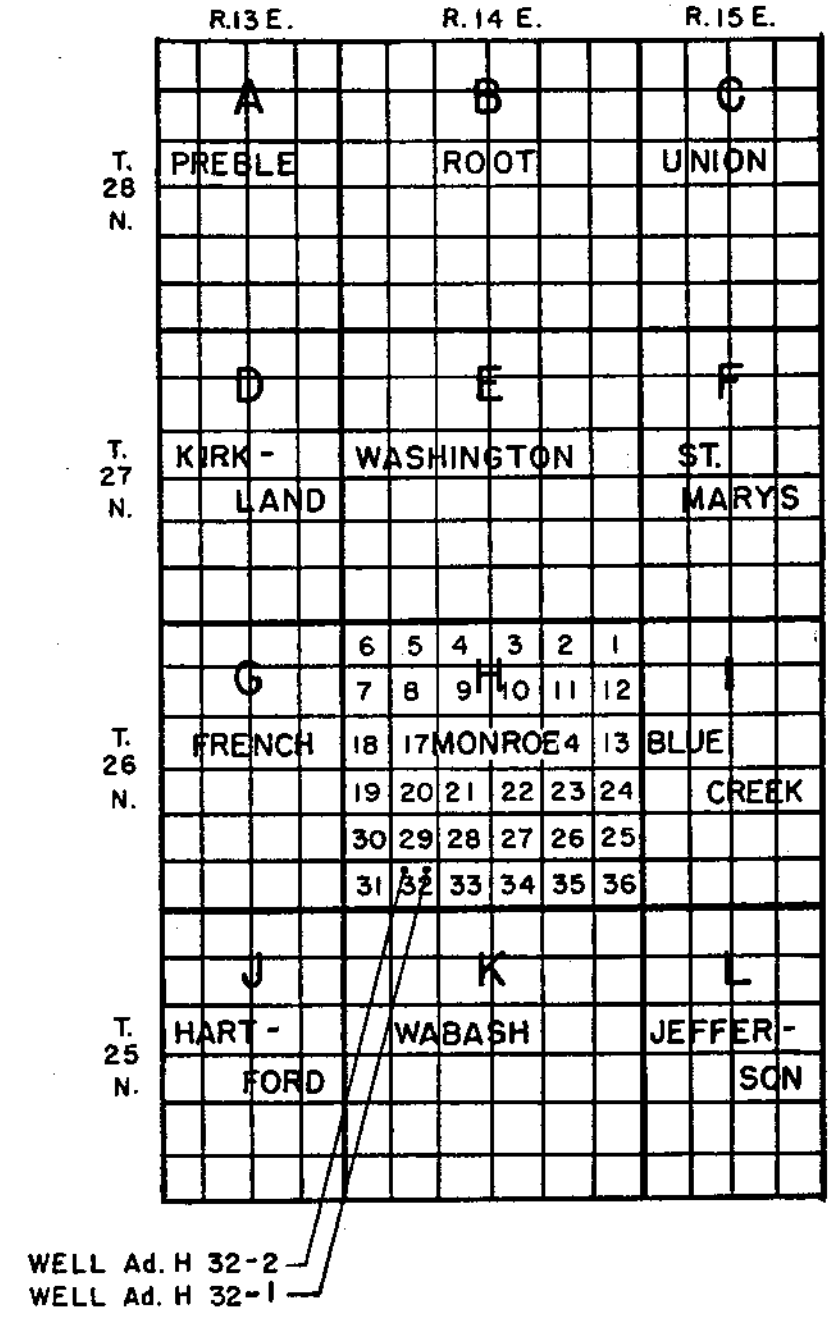


FIGURE 2--Map of Adams County, Ind., showing well-numbering system

Methods of Investigation

The records of wells and other information on ground water were collected from owners or drillers. Data on municipally owned wells and pumpage for public supplies were obtained from water-works officials. Many wells were visited to check the depth and diameter and to measure the depth to water when possible to do so. The locations of all wells listed in this report were either checked in the field or verified from property records in the county courthouse.

The bedrock was examined at outcrops and in quarries in Adams County and adjoining counties. The glacial deposits were examined within the county where they are exposed in gravel pits, road cuts, and ditches. Microscopic examination was made of rock cuttings from several water and oil wells to determine their lithologic characteristics.

Land-surface altitudes were determined by the use of an altimeter. U. S. Coast and Geodetic and U. S. Geological Survey bench marks were used for control.

Six pumping tests were conducted at Decatur but the results of these tests were not conclusive.

Water samples from 27 wells were analyzed for chemical quality in the Geological Survey laboratory at Columbus, Ohio. Water samples were collected at four of the wells twice and from one of the wells three times.

Observation wells were established prior to and during the investigation to measure the fluctuations of water level.

Acknowledgments

Appreciation is expressed to the many persons who assisted in making this report possible We especially thank well drillers, J. Hole, E. Joray, E. Moody, F. Moody, R. Speicher, J. Yoder, and I. Yoder, who furnished most of the well logs and other information on wells that are included in this report. R. Roop, city engineer at Decatur, and officials of the Central Soya Co. cooperated in making arrangements for the pumping tests.

GEOGRAPHY

Topography and Drainage

The land surface is a flat to rolling glacial plain that has been slightly altered by postglacial erosion. The highest points in the county are in the southeastern part as shown by plate 2, and are more than 880 feet above mean sea level, whereas the lowest point is in the northwestern part, where the St. Marys River leaves the county at about 780 feet above mean sea level. The

maximum topographic relief in the county is more than 100 feet but the maximum relief in any one township is about 60 feet; the minimum relief is about 30 feet.

The county is drained by the St. Marys and Wabash Rivers. These major streams flow northwestwardly, the Wabash draining the southern one-fourth of the county, and the St. Marys River draining the rest except for a small area in the northeastern part which is drained by a tributary of Flatrock Creek.

The drainage is controlled by the distribution of the glacial deposits and does not follow the buried courses of preglacial streams. However, where the streams have cut their valleys through the glacial deposits, joints in the bedrock control the stream courses to some extent. Drainage of flat areas has been improved by deepening and straightening parts of the stream channels. Loblolly Creek, a tributary of the Wabash River south of Geneva, flows through a poorly drained topographic low that follows the general course of a buried bedrock channel. This topographic low may have been formed by compaction of unconsolidated materials that fill the bedrock channel.

Climate

The climate of Adams County is similar to that of the rest of northern Indiana: precipitation is fairly well distributed throughout the year; temperatures vary through a wide range; the humidity is generally rather high; and the prevailing wind is from the southwest.

The U. S. Weather Bureau has recorded climatological data at Berne, in the south-central part of the county, since 1910. The annual precipitation at this station, shown in figure 3, for the period 1910-54 has ranged from 25.30 inches (1934) to 49.78 inches (1950). The average annual precipitation during this period was 36.65 inches. Table 1 shows the normal monthly precipitation for the period 1921-50 as established by the U. S. Weather Bureau. This table also shows the even distribution of precipitation throughout the year. About half of the precipitation falls during the period May through September, which approximates the growing season. Occasionally droughts occur during the growing season.

Table 1.--Normal monthly precipitation and temperature at Berne, Indiana[a], 1921-50

Month	Precipitation (inches)	Temperature (°F)
January-------	2.61	26.8
February------	1.56	28.9
March---------	3.52	38.2
April---------	3.38	49.1
May-----------	3.67	60.2
June----------	3.59	69.9
July----------	3.56	74.7
August--------	3.21	72.5
September-----	3.54	66.0
October-------	2.71	50.0
November------	2.41	40.6
December------	2.44	30.2

[a] Data from U. S. Weather Bureau

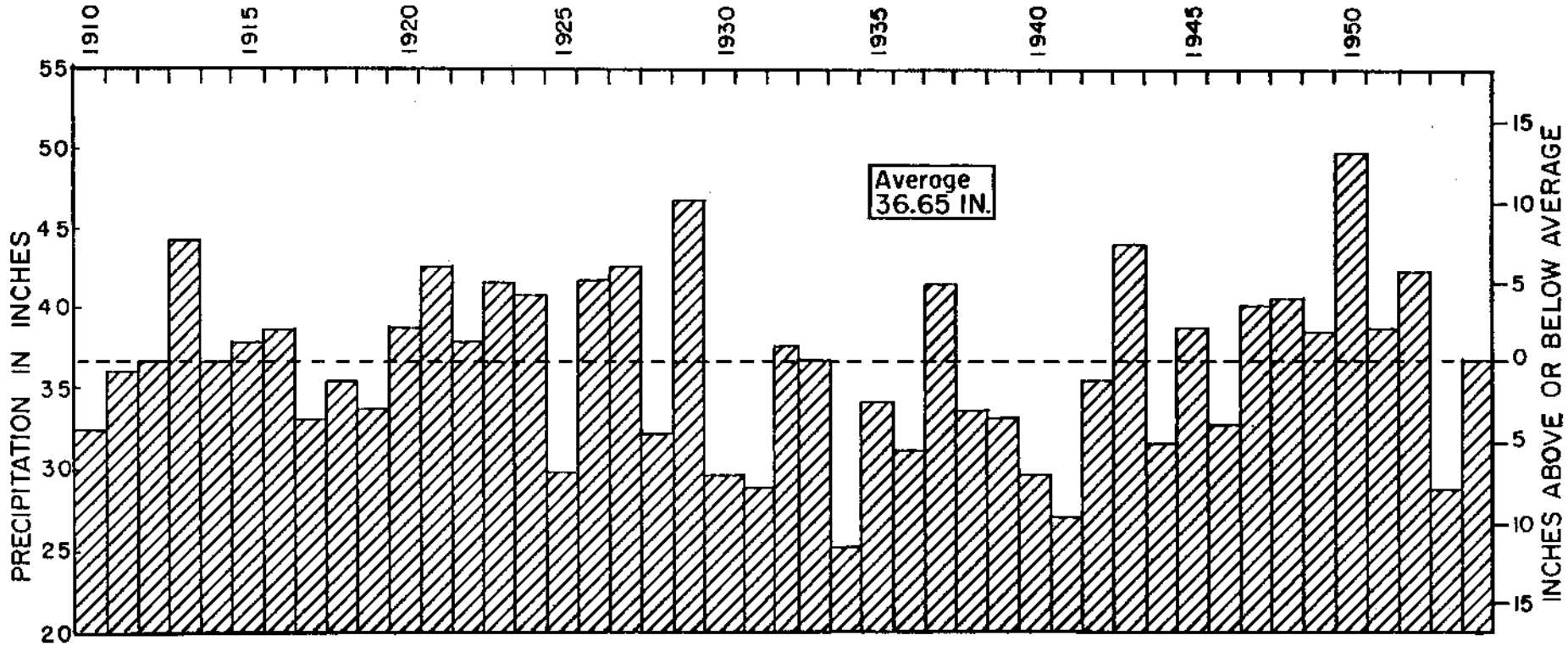


FIGURE 3 -- Graph showing annual precipitation at Berne, Indiana, 1910-1954

During the period 1921-50 the highest recorded temperature was 107°F (July 31, 1934), the lowest was -20°F (January 20, 1936), and the average was about 51°F. The last killing frost in the spring usually occurs near the end of April or in the early part of May and the first killing frost in the fall usually occurs near the end of September or in the early part of October; the frost-free period averages about 159 days. Table 1 shows the normal monthly temperature at Berne for the period 1921-50. The coldest month is January, which has a normal temperature of about 27°F, and the warmest month is July, which has a normal temperature of about 75°F.

At Fort Wayne, 21 miles northwest of Decatur, the average relative humidity for the period 1950-52 was 76 per cent.

Soils

The principle soil types in Adams County are the Nappanee and St. Clair silt loams and the Brookston silty clay loam (Bushnell, 1944, p. 24). These soils cover more than 90 per cent of the county. River-bottom soil, peat, muck, and other depressional soils cover the rest of the county. The Nappanee and St. Clair are light-colored upland soils while the Brookston is a dark-colored upland soil formed in depressions. The permeability of these soils ranges from good in the Nappanee, to poor in the Brookston. The subsoil of each is fairly heavy and of small permeability.

Agriculture, Industries, and Mineral Resources

The economy of the county is chiefly agricultural and the 1954 Census of Agriculture classifies about 92 per cent of the area as agricultural lands. The principle crops are corn, soybeans, hay, oats, wheat, and tomatoes. Dairy farming and livestock and poultry raising are also important sources of farm income.

Because of the high moisture-retention properties of the soil and adequate and well-distributed precipitation through the growing season, irrigation is not practiced. Tile drains are used extensively to improve soil drainage, particularly in the relatively flat areas in the extreme northeastern, central, and extreme southwestern parts of the county.

The principle industries are at Decatur and include manufacture of electric motors, iron castings, and processing of stock feeds, soybean, and tomato products. Furniture and work clothing are manufactured at Berne, and tomato products are processed at Geneva.

Limestone is quarried for agricultural lime and road metal and several pits have been opened into deposits of sand and gravel and of clay. Small amounts of gas and oil are produced.

Population and Transportation

Adams County had a total population of 22,393 or an average density of 64.9 persons per square mile according to the 1950 census. About half the population is rural. The urban population (table 2) has increased in each decade since 1920 and the rural population has decreased in each decade except during the 1930's.

The county is served by three railroads, the Erie, the Pennsylvania, and the New York, Chicago and St. Louis, which pass through Decatur. U. S. Highways 27, 33, and 224 and State Highways 101, 116, 118 and 124 pass through the county. A system of gravelled county roads provide all-weather routes to the paved highways.

Table 2.--Population in Adams County, Indiana 1920-1950[a/]

Incorporated city or town	1920	1930	1940	1950
Decatur	4,762	5,156	5,861	7,271
Berne	1,537	1,883	2,075	2,277
Geneva	879	895	966	999
Monroe	384	322	405	428
Total in cities and towns	7,562	8,256	9,307	10,975
Total rural[b/]	12,941	11,701	11,947	11,418
County total	20,503	19,957	21,254	22,393

a/ Data from U. S. Bureau of the Census

b/ Includes unincorporated communities

GEOLOGY AND WATER-BEARING CHARACTERISTICS OF THE ROCK UNITS

The bedrock surface in Adams County is covered by unconsolidated gravel, sand, silt, and clay deposited by continental glaciers during Pleistocene time. The glacial deposits and locally the bedrock, along the flood plains of the St. Marys and Wabash Rivers and their tributaries, are overlain by thin deposits of alluvium of Recent age. The bedrock underlying the glacial drift consists of about 400 feet of dolomite, dolomitic limestone, limestone, and shale of Middle Silurian age. These rocks are underlain by a series of blue calcareous shales and thin-bedded impure limestones about 700 feet thick of Ordovician(?) age, and at greater depths by older rocks of Ordovician and Cambrian ages.

ORDOVICIAN SYSTEM

Rocks of Ordovician age are encountered at depths from 400 to 500 feet and are not used as a source of ground water in Adams County. Many wells are drilled into these rocks, to test the Trenton limestone for gas and oil, and are reported to have yielded salt water from the "blue lick horizon" (Trenton) of the drillers. The Trenton, in Adams County, is usually overlain by several

hundred feet of shale of Ordovician age in which no water has been reported. These shale beds are overlain by rocks of Silurian age except in the southern part of the county where the deepest parts of the pre-Pleistocene valleys may be cut into the uppermost rocks of Ordovician age.

SILURIAN SYSTEM

Middle Silurian Series

Cumings and Shrock (1927, 1928) first described the rocks of Middle Silurian age underlying Adams County. These authors divided the rocks into four formations. the Mississinewa shale, the Liston Creek formation, the Huntington dolomite, and the New Corydon limestone. The Huntington dolomite and the New Corydon limestone were mapped as lying beneath the glacial drift and were identified in natural exposures and quarries in the county and comprise much of the bedrock surface The other two formations, the Mississinewa shale and the Liston Creek formation may be present at depth and probably crop out on the sides of the deeper preglacial valleys. Rocks of Early Silurian age have not been identified in Adams County and regional relationships indicate that rocks of Middle Silurian age rest directly on rocks of Ordovician age.

The Huntington dolomite is as much as 250 feet thick and consists of yellow, gray, or pink-colored saccharoidal dolomite. The New Corydon limestone is as much as 25 feet thick and consists of a brown cherty impure limestone with carbonaceous partings. The New Corydon has been identified in two areas in the southern part of the county. These areas are on bedrock highs at altitudes above 800 feet. Elsewhere preglacial erosion removed this rock formation.

Study of rock cuttings shows that the underlying rocks of Middle Silurian age are chiefly an aggregate of dolomite crystals. The color of the rock ranges from white and very light gray to buff through various shades of tan and brown. Examination of the samples shows that the rock is dolomite to a depth of at least 270 feet below the surface in the southern part of the county, (wells AdJ24-3, AdL4-1), and to a depth greater than 400 feet below the surface in the northern part near Decatur, (well Ad527-7). Most of the water wells do not usually penetrate more than 100 feet into the rocks of Middle Silurian age. Therefore, it can be assumed that the rock reported by the drillers as "limestone" is either dolomite or dolomitic limestone.

Solution openings in the rocks of Middle Silurian age are reported in wells drilled in every township except Blue Creek and Union. The heaviest concentration of solution openings is in the southern half of the county particularly in the southwestern part. Some openings are filled or partially filled with red mud (clay?), mud (clay?), clay, sand, and gravel, or mixtures of these materials. The fillings of clay, sand, and gravel may be glacial deposits. The red mud may be a residual material resulting from weathering of the carbonate rock. The logs of wells AdE13-3, AdF19-2, AdJ3-13, and AdL29-2 report fillings of these types. All of these filled openings are in the upper 40 feet of the bedrock. Well logs also record solution openings and fractured zones that are not filled (AdG34-2, AdH18-2, AdJ23-1, and AdK24-2) and some broken rock (AdG36-3, AdH3-5, AdJ22-1, and AdK16-4). The broken rock may be the result of collapse of relatively large solution openings.

Records of wells and the configuration of the bedrock surface (pl. 5) indicate that sinkholes were formed in the dolomite and dolomitic limestone in pre-Pleistocene times. These sinkholes were later filled with glacial material. One of these sinkholes is near Linngrove, in the southwestern part of the county. Well AdJ3-12 and 13, less than ½ mile apart, record rock at 22 and 20 feet respectively, but well AdJ3-11, about midway between them, penetrated 63 feet of glacial drift without reaching bedrock. The records of these wells and the bedrock contours on plate 5 indicate that the overlying bedrock collapsed to form a sinkhole which later was filled with glacial material. Well AdJ10-3 is drilled in a similar gravel-filled sinkhole. Broken rock reported in the logs of wells AdG36-3, AdH19-2, AdH30-1, and AdJ22-1 may be further evidence of collapse features in the area.

There were apparently two zones of solution activity in the rocks of Middle Silurian age in Adams County prior to glaciation of the area. The uppermost zone is within 60 to 70 feet of the bedrock surface beneath the preglacial topographic highs. This zone is interpreted as being the result of enlargment of bedding-plane openings by solution of the relatively flat-lying rocks. This upper zone can be traced in the records of wells AdA2-2, AdE13-3, AdG34-3, AdL29-4, and others from the northern county line to near the southern county line. The lower zone is reported in a few wells (AdB27-7 and 34-10, AdE3-2 and 4, AdI27-1, 28-3 and 34-1) as openings in the rock or as broken and caving zones. This zone is adjacent to and at or near the base level of the major preglacial streams and is generally below 500 feet altitude. Most of the solution openings in both zones are below the base level of the present day streams. Therefore, it is concluded that there is very little present-day solution activity in these zones.

Water-bearing Characteristics

The bedrock of Middle Silurian age and the adjacent sand and gravel of Pleistocene age, which comprise the valley fill in the preglacial bedrock channels and depressions, form a single aquifer (pl. 3). The bedrock and the sand and gravel are hydraulically connected and water can move from one into the other. However, the two rocks have different physical characteristics and therefore their water-bearing characteristics are described separately.

The water-bearing characteristics of the bedrock are dependent upon the rock's physical characteristics, such as size, distribution, and number of openings; chemical composition, and its topographic position with respect to the preglacial bedrock surface.

The openings in the dolomitic rocks of Middle Silurian age in Adams County are of two types, pore spaces between crystals and openings along bedding planes and joints. The pore spaces between crystals vary in number and size and many, especially the larger ones, are not inter-connected. Openings in the carbonate rocks of Middle Silurian age have been enlarged by the solvent action of percolating ground water. The enlargment of the openings by solution was particularly effective in the upper 60 or 70 feet of the rock where the rock was situated topographically above the principal preglacial drainage. The solution openings range in size from thin seams of less than an inch to cavities as much as 20 feet. Some openings are reported to have been filled or partially filled with unconsolidated material. The permeability of these rocks (their ability to transmit water) is greatest where the solution openings are most numerous

and remain unfilled. The most productive water-bearing zone is in the upper 60 to 70 feet of the rock. The deeper zone between 250 and 350 feet below the top of the rock is probably the next most productive zone. The rocks between the two zones and below the lower zone contribute very little water to wells drilled into the rocks of Middle Silurian age.

Six pumping tests were conducted at Decatur to determine the water-yielding characteristics of the aquifer. The results of these tests were not conclusive. Data collected at the pumped well during one of these tests and from short-term drillers' tests in other parts of the county were used to calculate the specific capacities and estimated coefficients of transmissibility shown in table 3. The specific capacity (gallons per minute per foot of drawdown) is a measure of the wells' efficiency and also a rough measure of the permeability of the aquifer. The coefficient of transmissibility of an aquifer is a measure of the aquifers' ability to transmit water. The coefficient of transmissibility is defined as the number of gallons of water that will move in 1 day through a vertical strip of the aquifer 1 foot wide, having a height equal to the thickness of the aquifer, under a hydraulic gradient of 100 per cent. This table shows the amount of rock penetrated and indicates which wells penetrated solution zones. Comparison of data in table 3 shows that generally the wells having the largest specific capacities tap only the upper part of the rock. Therefore, further development of rocks of Middle Silurian age in Adams County as a source of water should be limited to the upper 100 feet or the upper zone of solutioning. Drilling to the lower zone can be justified only where the upper zone is missing or does not furnish the water required.

QUATERNARY SYSTEM

Pleistocene and Recent Series

The youngest rocks in Adams County are the unconsolidated glacial deposits of Pleistocene age and alluvium of Recent age. The glacial materials were deposited by the continental ice sheets which moved over northern Indiana from centers of ice accumulation in Canada. These glaciers dumped large quantities of clay, silt, sand, and gravel over the bedrock surface of Adams County. Today, only those materials deposited by the youngest glacier of Wisconsin age are recognized at the surface. Materials deposited by preceding glaciers have been either removed, reworked, or buried. Deposits of the earlier glaciers may be present at depth but the delineation of any older deposits is beyond the scope of this report.

The topography is primarily a result of glaciation although it undoubtedly reflects to some extent the configuration of the underlying bedrock surface. Solution cavities and sinkholes in the bedrock surface contain fillings of glacial material and the preglacial bedrock valleys are filled with as much as 400 feet of unconsolidated glacial deposits. The preglacial bedrock uplands are covered by a relatively thin blanket of glacial material, which ranges in thickness from about 3 feet in the southern part to about 70 feet in the northern part of the county. The flat to gently undulating plain that characterizes the central part of the county is interrupted by two low, wide, slightly hummocky morainal ridges. The southernmost ridge parallels the Wabash River on its north side and the northernmost ridge parallels the St. Marys River on its north side. The ridges or moraines are underlain by as

Table 3.--Specific capacities and estimated coefficients of transmissibility from wells tapping rocks of Middle Silurian age in Adams County

Well	Date	Duration of test (hours)	Specific capacity (gpm per ft of drawdown)	Estimated coefficient of transmissibility (gpd per ft)	Thickness of rock penetrated (ft)	Solution zone reported in well record
AdA 4- 1	4-14-52	1	4	8,000	14	
AdA 11- 4	10-25-50	1	1.5	3,000	27	
AdA 24- 3	11-21-52	---	8	16,000	31	Upper
AdA 36- 9	8- 6-47	6	5.5	11,000	---	
AdA 36-10	8- 7-47	6	4.5	9,000	---	
AdB 27- 6	4-30-52	1¼	15	30,000	22	
AdB 33- 7	1949	6½	8.5	17,000	264	
AdB 34-10	3-50	80	3.5	7,000	377	Lower, upper missing
AdD 12- 2	1-20-51	1	5.5	11,000	28	
AdE 3- 4	8-10-51	---	1.5	3,000	280	Lower, upper missing
AdE 4- 3	4- 7-52	1	1	2,000	57	
AdE 11- 5	1949	24	.5	1,000	30	
AdF 7- 1	4-50	1	5	10,000	106	
AdF 20- 6	--------	1	28	56,000	41	
AdG 24- 2	7- 7-51	---	3	6,000	33	Upper
AdH 3- 5	11- 8-52	---	8	16,000	20	Do
AdH 4- 8	10-24-50	24	6	12,000	153	
AdH 18- 2	6-26-52	---	20	40,000	18	Upper
AdH 19- 2	4-19-52	---	10	20,000	26	Do
AdH 30- 1	2-20-52	---	4	8,000	61	Do
AdH 33- 5	7- 7-49	2	2	4,000	132	
AdH 33- 8	9-19-52	1	1.5	3,000	64	
AdJ 3- 5	5-48	8	12.5	25,000	221	
AdJ 3-13	11- 1-55	---	10.6	21,000	220	Upper
AdJ 11- 2	8- 2-50	---	1.5	3,000	34	
AdJ 22- 1	3-15-53	---	8	16,000	19	Upper
AdJ 23- 1	7-24-50	---	16	32,000	4	Do
AdJ 26- 1	1948	---	24	48,000	22	Do
AdK 24- 2	2-18-55	---	3	6,000	11	Do

much as 130 feet of glacial drift and are probably the prime control factors of the present channels of the Wabash and St. Marys Rivers.

The upper part of the drift consists chiefly of till -- a poorly sorted silty clay containing sand, pebble gravel, and some cobble gravel. Interbedded with the till is some glaciofluvial sand and gravel (wells AdH33-2, AdJ23-1, and AdL17-1). Locally, thin sand and gravel was deposited between the till and the top of the bedrock (wells AdD2-7, and AdJ24-1).

The deposits of till, and stratified clay, sand, and gravel in the preglacial bedrock valleys and in other depressions represent more than one stage of glaciation. Several well logs report hardpan and clay separating deposits of sand and gravel; this hardpan and clay may represent buried till (well AdH33-2, AdK23-1, and AdK35-1). However, the sand and gravel, (pl. 3 and 4) which were deposited by glacial streams, are found chiefly in valley fill of the preglacial bedrock channels and depressions. An exception is a thin, sheetlike deposit in the northeast corner of the county, which in part is unrelated to the channels and lies beneath the moraine north of the St. Marys River.

The deposits of Recent age consist chiefly of alluvium of the flood plains of the Wabash and St. Marys Rivers and their tributaries.

Water-bearing Characteristics

The water-bearing characteristics of the unconsolidated rocks are dependent upon the grain size and grain-to-grain relations, the size, number, and distribution of the interconnected pore spaces, and the thickness of the deposit. Clayey till is not a source of appreciable quantities of water because of the small size of the interconnected pores. Most of the material at the surface in Adams County is clayey till.

Glaciofluvial sand and gravel is generally a source of large quantities of water provided the deposit is areally extensive, thick, and does not contain much fine material. Generally, the pore spaces are large enough and the number of interconnections are sufficient to yield large quantities of water. Plate 4 outlines the areas of sand and gravel deposits in which ground water occurs under conditions potentially favorable for development. Development of large supplies for municipal and industrial use is possible in area 1, the deeper part of the valley fill, and smaller supplies for domestic and farm use almost anywhere in the areas 1 and 2. Additional data are needed to define the ground-water potential of these sand and gravel deposits. At Geneva three wells finished with screens (wells AdK29-1, 2, and 5) have been completed in these sand and gravel deposits and all had yields of more than 200 gpm. The deepest of these wells penetrated only 160 feet of the glacial deposits which are reported by Batchley (1896), to be 400 feet thick at Geneva. Leverett (1899) reports 350 feet of glacial drift at Geneva, the upper 80 feet being chiefly till and the remaining 270 feet being mainly sand and gravel.

Table 4 shows water-yielding characteristics of the sand and gravel aquifers. These specific capacities and estimated coefficients of transmissibility were calculated using data from short-term tests made by the drillers. Comparison of the data in table 4 with that in table 3 shows that for similar thicknesses of aquifer the sand and gravel wells yield more water than the rock wells even

though most of the gravel wells are constructed with an open-end casing through which all water must enter the well. Therefore, only a very small part of the formation is open to the well.

The deposits of sand and gravel, in the deeper bedrock valleys and depressions, are potentially the best source for obtaining large quantities of water from properly constructed wells.

Table 4.--Specific capacities and estimated coefficients of transmissibility from wells tapping sand and gravel of Pleistocene age in Adams County

Well	Date	Duration of test (hours)	Specific capacity (gpm per ft of drawdown)	Estimated coefficient of transmissibility (gpd per ft)	Thickness of water-bearing zone (ft)	Finish
AdA 35- 9	5-52	---	4	8,000	2	Open-end casing
AdA 36- 7	1- 6-51	---	5.5	11,000	1	Do
AdB 21- 7	5-52	1	5	10,000	6	Do
AdD 1- 2	9-16-50	---	13.5	27,000	2	Do
AdD 1- 3	6- 6-52	---	4	8,000	1	Do
AdF 4- 4	1-49	---	4	8,000	6	Do
AdH 4-13	7-53	---	4	8,000	2	Do
AdH 5- 8	2- 1-55	---	3	6,000	1	Do
AdH 14- 1	5- 6-52	---	10	20,000	-----	Do
AdH 32- 4	3-18-50	6½	4.5	9,000	10	Screen(?)
AdK 16- 6	11-12-52	---	3	6,000	1	Open-end casing
AdK 29- 1	1932	12	13	26,000	10(?)	Screen
AdK 29- 2	1945	8	16.5	33,000	10	Do
AdK 29- 5	7-10-44	4	33.5	67,000	15	Do

BEDROCK TOPOGRAPHY

Plate 5 shows the configuration of the bedrock surface underlying Adams County. The buried bedrock surface is a relatively flat plain sloping gently northward, over which a deeply entrenched, southward flowing, preglacial stream system flowed. The pattern of preglacial streams, which flowed across this surface, was controlled to a large extent by the jointing in the rocks of Middle Silurian age. The deep valleys, especially in the southern part of the county, were eroded 400 feet or more below the present upland surface and may cut the uppermost rocks of Ordovician age. The bedrock channels of this system were modified by glaciation during Pleistocene time.

The bedrock surface is characterized by closed depressions (sinkholes) formed in the rocks. One of these closed depressions underlies the town of Preble in the northwestern part of the county. Another is west of Berne and two smaller ones are located near Linngrove in the southwestern part of the county.

HYDROLOGIC CYCLE

The hydrologic cycle is "the circulation of the water from the sea, through the atmosphere, to the land; and thence, with numerous delays, back to the sea by overland and subterranean routes, and in part, by way of the atmosphere; also the many short circuits of the water that is returned to the atmosphere without reaching the sea" (Meinzer and others, 1949, p. 1).

Evaporation of moisture from the sea is a continuous process. Although much of the water vapor condenses and falls back into the sea, some of it is carried inland by the winds. Of the moisture that condenses, some is evaporated back into the atmosphere; the remainder falls onto the land surface. Of the latter, part evaporates directly to the atmosphere, part runs off into the streams and eventually reaches the sea, and part infiltrates the soil. Of the amount of water that infiltrates the soil, part is eventually returned to the atmosphere by evaporation or by the transpiration by vegetation and part continues to descend until it reaches the zone of saturation in the rocks below. Water in the zone of saturation is called ground water. It is the water that issues from springs, that seeps into streams or bodies of standing water, and that is withdrawn through wells.

GROUND WATER

Occurrence

An aquifer is a water-bearing formation, group of formations, or part of a formation that will yield water (to wells) in sufficient quantities to be important as a source of supply. Water in an aquifer is said to occur under water-table or unconfined conditions if the aquifer is directly overlain by unsaturated permeable material. The water level, as measured in a well tapping such an aquifer, will coincide approximately with the water level in the aquifer.

Conversely, water in an aquifer is said to occur under artesian or confined conditions if the water is under pressure because the aquifer is directly overlain by impermeable or relatively impermeable materials. The water level, in a well tapping such an aquifer, will stand significantly higher than the top of the aquifer. The surface, either imaginary or real, that coincides with the static level of the water in an aquifer is called the piezometric surface. The piezometric surface is imaginary in an artesian aquifer because it is above the zone of saturation in the artesian aquifer, but in a water-table aquifer it is real because it represents the top of the zone of saturation or water-table. A single aquifer may be under water-table conditions in one place and under artesian conditions in another but it will usually have only one piezometric surface. In places underlain by two or more aquifers there may be more than one piezometric surface.

Recharge

Recharge to ground water is derived from precipitation and it takes place most readily where the bedrock or sand and gravel are exposed at the surface or are covered by permeable materials.

The quantity of water that infiltrates to the zone of saturation is dependent upon several factors; such as the intensity, duration, and type of precipitation, the slope of the land, the soil characteristics, the kind and amount of vegetation, and the season of the year. When the rainfall is gentle and of relatively long duration, more water enters the ground than when rainfall is intense and of short duration. Snow melting on unfrozen ground is an important source of recharge. Where the surface slopes are steep, overland flow is greater and infiltration is less than in flat-lying areas. Recharge in an area covered by fine-grained soil of small permeability will be less than in an area covered by coarse-grained soil of larger permeability. Plant cover generally retards overland flow, allowing more water to seep into the soil. When moist ground becomes frozen, water has less chance to enter the soil and become available for recharge, consequently overland flow is increased.

Several of the above factors are favorable to recharge of the ground water in Adams County. Figure 3 and table 1 show that precipitation is usually plentiful and well distributed throughout the year. The land surface is relatively flat, as shown by plate 2, therefore, the rate of overland flow and run-off is slow and precipitation has ample opportunity to infiltrate the soil. According to Jones and others (1923), more than 97 per cent of Adams County is covered by silty clay loam of poor permeability, but Bushnell (1944), reclassified about 62 per cent as a silt loam which is of good to fair permeability. The soil with the larger permeability occupies the higher ground. Thus the best areas in the county for recharge are on the higher ground. This relationship is borne out by the fact that the water levels are generally higher under the uplands (pl. 3 and table 7). These higher water levels are probably on or near the ground-water divides.

The St. Marys and the Wabash Rivers flow on or near bedrock throughout much of their courses. In local areas, where the ground-water level is depressed below the stream channel by pumping, some river water may enter the rock.

Hydrographs of five observation wells (fig. 4) show that most ground-water recharge takes place from September through April or from the end of one growing season to the beginning of the next. The peak of the recharge cycle generally lags behind the precipitation by a month or more.

Adams County is almost completely mantled by glacial materials. The upper part of these deposits consists chiefly of till, which is relatively impermeable. However, recharge to the bedrock, and sand and gravel aquifers must take place through the till, which has a minimum thickness of about 3 feet in the southern part of the county and a maximum thickness of about 130 feet beneath the moraine north of the St. Marys River. The lack of bedrock exposures in the county precludes appreciable recharge directly to the bedrock.

If the annual recharge to the aquifers was equivalent to only 1 inch of the annual precipitation that falls on the county, the recharge would amount to more than 9 times the annual pumpage.

Discharge

Water is discharged from underground storage by evapo-transpiration, by springs and seeps, by underflow to other areas, and by pumping from wells.

The natural discharge of the principal aquifer presumably is, in large part, somewhere out of the county because the confined aquifer is below the base level of the present stream system. Part of the water from this aquifer may move down dip to the northwest through the upper solution zone in the rock to points of discharge, and part of the water may move southward through the valley fill of the buried valleys to points of discharge. A part of the water in this aquifer may discharge to the Wabash and St. Marys Rivers as indicated by the generalized piezometric surface on plate 3.

Discharge of the shallow ground water is into ditches, tributaries of the Wabash and St. Marys Rivers, and into the main stems of these rivers. An undetermined quantity of shallow ground water is discharged into ditches and streams by buried tile used to drain low-lying wet land. Much shallow ground water is probably discharged by transpiration.

The discharge from the bedrock part of the chief aquifer through wells is estimated to be about 1.5 million gallons per day. The discharge from all the sand and gravel zones is estimated to be about 0.3 million gallons per day. Most of this water is produced from the sand and gravel part of the chief aquifer.

Fluctuations of water level

Fluctuations of water level are shown by hydrographs (fig.4) for several wells in which measurements were made during the course of the investigation. The observation wells are in or near Decatur and tap the bedrock part of the chief aquifer. Figure 4 also presents bar diagrams of monthly pumpage,

monthly precipitation and a hydrograph of the mean monthly gage heights of the St. Marys River at Decatur for comparison with the ground-water levels.

The hydrographs of wells AdB34-8 and 9, and AdB33-6 show a perceptible rise in water levels from late 1948 through 1952 while the hydrographs of wells AdE3-5 and AdB35-3 show a definite decline of water levels during this period. This decline is associated with the pumping in the city of Decatur's new well field east of the St. Marys River, which moved the center of pumpage away from the first three wells and closer to the latter two wells. As the cone of influence of the new wells became established, the water levels flattened out in all the observation wells.

Figure 4 shows also that peak water levels in the observation wells may lag behind precipitation by about a month and that these water levels may lag behind the peak mean monthly gage heights of the St. Marys River by as much as four months. Therefore, recharge probably is from precipitation rather than influent seepage from the river. The low water levels in the observation wells usually occur during the period of heaviest pumpage by the city of Decatur, lowest stage of the St. Marys River, and lightest precipitation. Therefore, the low water levels may be caused by a combination of heavy pumping and light precipitation. However, heavy pumping alone does not seem to cause significant declines in water levels in the observation wells and light precipitation could be the dominant factor.

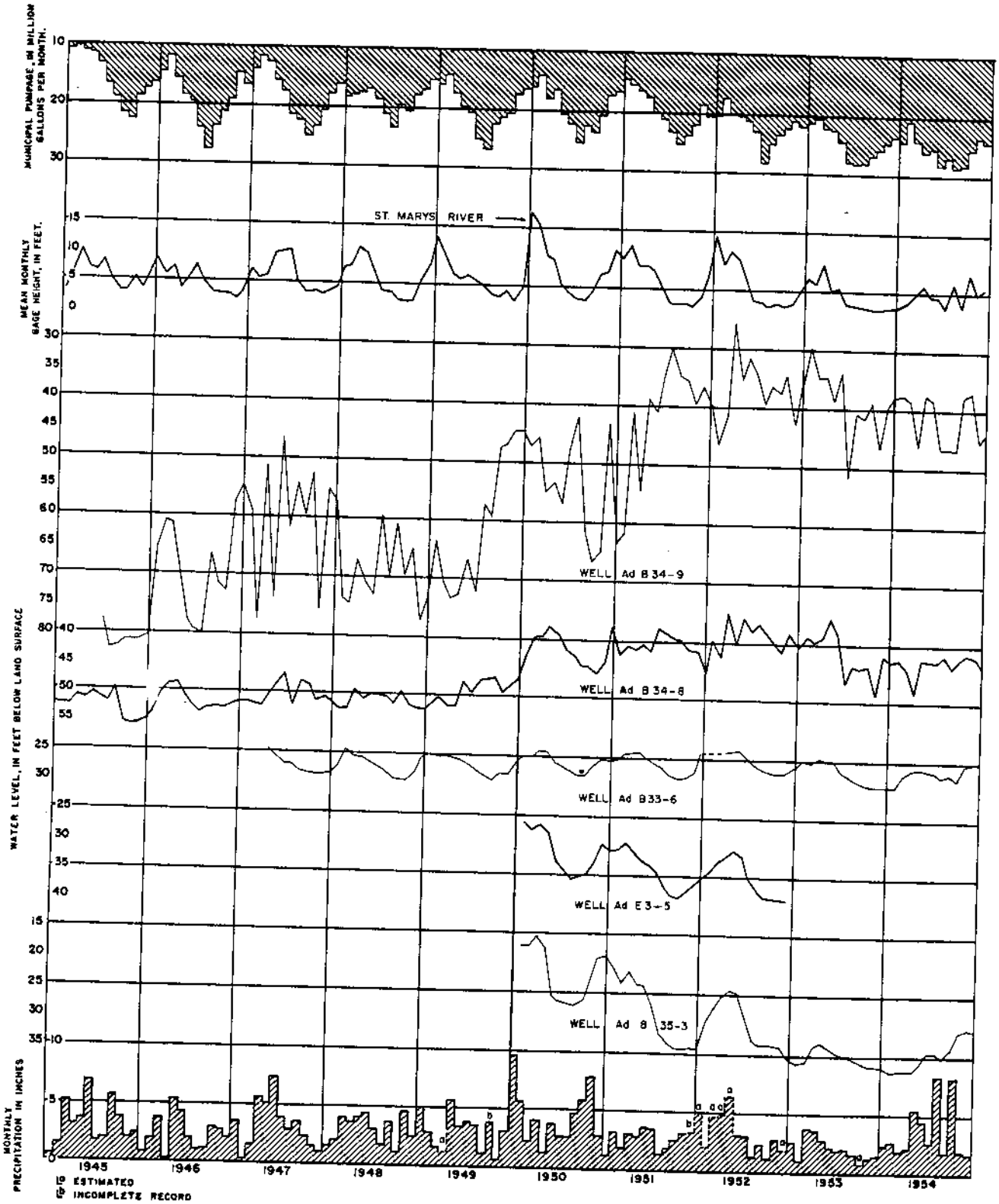


FIGURE 4.--Graph showing monthly pumpage from municipal wells, mean monthly stage of the St. Marys River, monthly precipitation at Decatur, and water levels in five observation wells in and near Decatur.

Utilization

All water supplies for municipal, industrial, and domestic uses are obtained from ground-water sources. Most water supplies for stock use also come from ground-water sources although undoubtedly some stock water is obtained from streams. In 1954 the annual pumpage of ground water was estimated to be slightly more than 650 million gallons. Of this amount about 543 million gallons is pumped from wells tapping the bedrock and about 108 million gallons from wells tapping the sand and gravel.

Farm and Domestic Supplies

Farm and domestic water supplies were obtained from dug wells and cisterns before the development and wide-spread use of modern drilling equipment. Dug wells usually tap only a few feet of an aquifer; therefore, during dry periods the water level in the aquifer may decline sufficiently to be below the bottom of the well. In many places the water-bearing material tapped by dug wells is of small permeability and consequently the yields are small. However, the relatively large storage space afforded by the large diameter of the dug well partly offsets the small yield. The large diameter, the type of casing or cribbing used, and the shallow depth of most dug wells make it extremely difficult to seal out surface contamination. For these reasons, most dug wells have been replaced by drilled wells, which are more reliable, will yield more water, and are easily sealed against surface contamination. Rain and snowmelt is stored in cisterns and is used by many households for laundry and other domestic purposes. However, now that ground-water supplies have become more dependable because of drilled wells, this practice is becoming less common.

Drilled wells were used in Adams County prior to 1906, but this method of construction did not become common until about 1915. The oldest drilled well recorded in table 7 is AdF3-1, which was drilled in 1885. The early wells were generally 2 or 3½ inches in diameter, relatively shallow, and were equipped with either a hand or windmill-operated pump. Today most farm and domestic wells are 4 inches in diameter, and a few are as large as 6 inches in diameter; they generally are equipped with an electrically powered deep-well cylinder or ejector pump. Some wells are still equipped with hand pumps.

To prevent caving, wells tapping glacial sand and gravel are cased to the bottom. Only a few of these wells in Adams County are equipped with screens. The water enters most of the wells either through the open end of the casing or through slots cut in the bottom few feet of casing. The yield is not nearly as large as it would be if the well had been equipped with a screen designed for the formation and had been carefully developed. A screen of correct design facilitates the removal of fine-grained material from the aquifer around the well when a well is developed. Thus the effective diameter and yield of the well are increased. The selection of the openings in a screen should be governed by the grain size and degree of sorting of the rock particles comprising the aquifer. A screen, although it increases the yield, also increases the cost of the well. Therefore, if a well, drilled for farm or domestic purposes, yields the required amount of water through an open-end

or slotted casing a screen usually will not be installed even though it would increase the yield and probably extend the life of the well. To insure a good seal against surface contamination the annular space between the sides of the hole and the well casing should be backfilled with clay or some other impermeable material.

Wells drilled into bedrock are generally cased through the overburden and a short distance into the rock in order to seal against surface contamination. Driving a casing into rock does not always make a good seal. Therefore, it is better to cement the casing into the rock or fill the annular space with clay. Below the casing the well is drilled as an open hole. Little development may be necessary in rock wells other than bailing to remove the drill cuttings. In wells that penetrate filled solution openings surging and bailing may be necessary to remove the loose fill, to clear the water, and make it usable.

Unscreened wells tapping glacial sand and gravel and wells tapping bedrock yield about equal amounts of water. The yield of farm and domestic wells is generally more than 10 gpm and less than 20 gpm. An estimated 315 million gallons of ground water is pumped annually to supply rural needs.

Municipal Supplies

Berne, Decatur, Geneva, and Monroe have public-water supplies. In 1954, water for public supplies was obtained from 10 wells tapping bedrock and from 3 wells tapping glacial gravel deposits (table 5). Figure 5 shows the annual pumpage of ground water by municipalities from 1923 through 1954.

Public-supply wells are larger in diameter and deeper than farm and domestic wells drilled in similar material because they ordinarily must yield large quantities of water. The municipal wells tapping bedrock are about 400 feet deep at Decatur, less than 300 feet deep at Berne, and about 200 feet deep at Monroe. Yields from these wells range from about 26 to about 250 gpm. Locally two methods have been used in attempts to increase the yield of the bedrock wells. One is to pour hydrochloric acid into the well to enlarge the openings in the rock around the well, and the other is to detonate an explosive charge in the well to increase, by fracturing, the number and size of the openings in the rock. Neither of these methods have increased yields more than a few gallons per minute. Wells tapping the glacial deposits are equipped with screens, and to obtain maximum yields, are developed by pumping or surging to remove fine materials from around the screen. Yields from these wells range from about 165 to about 500 gpm.

Table 5.-- Municipal water-supply data, Adams County, Ind., 1954

Material: G, gravel; R, rock; numeral indicates number of wells. Treatment: Ch, chlorination; F, filtration; Ir, iron removal; S, softening.

City	Material	Average daily pumpage in gallons	Storage (gallons)		Treatment	Number of services	
			Ground	Elevated		Domestic and commercial	Industrial
Berne	1 G, 2 R	127,000	119,000	30,000	Ch, Ir, S	752	8
Decatur	7 R	727,000	929,400		Ch, S	2,346	23
Geneva	2 G	48,000		60,000	None	310	2
Monroe	1 R	21,500		40,000	Ch, F, Ir	134	0

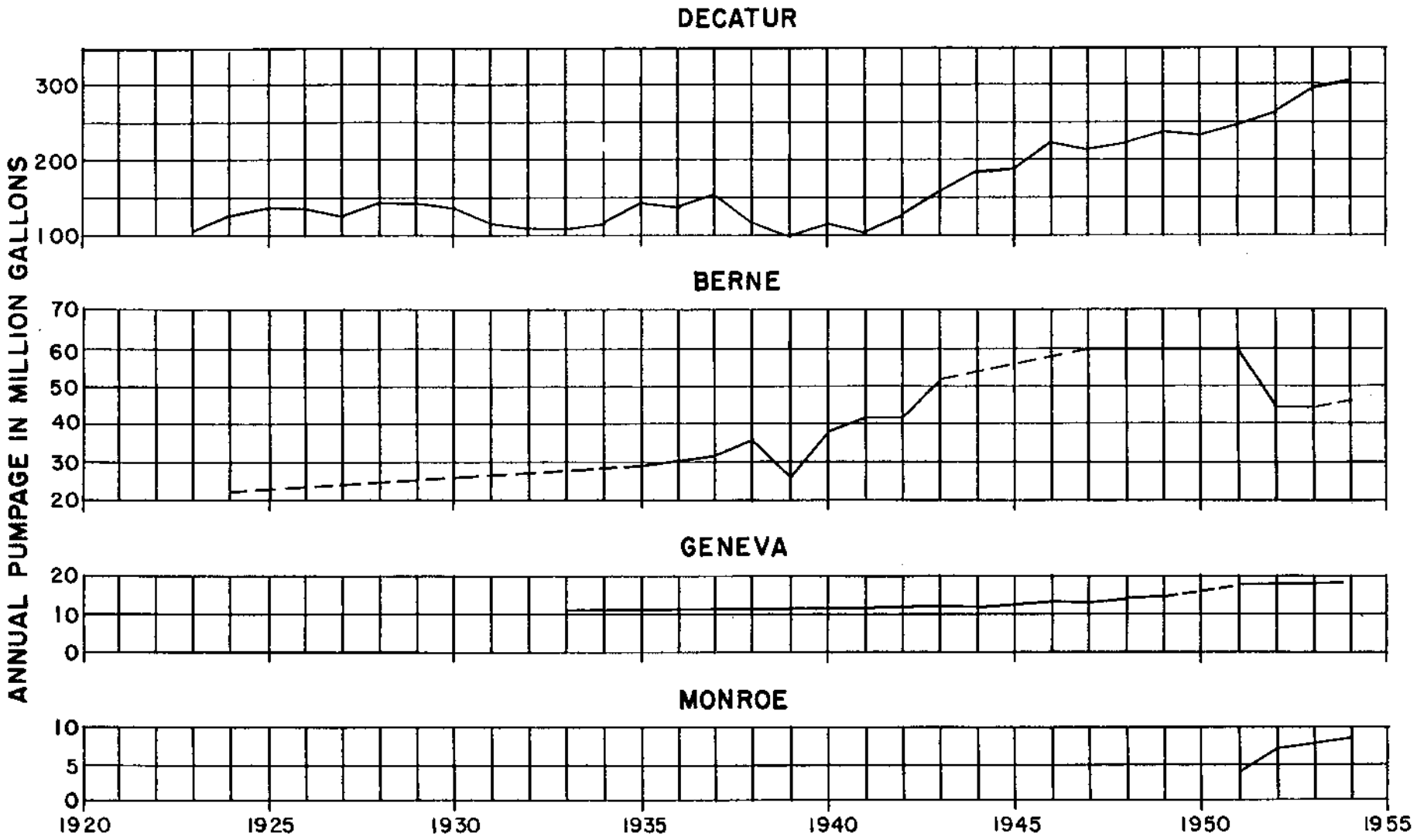


FIGURE 5-- GRAPH SHOWING ANNUAL PUMPAGE FROM MUNICIPAL WELLS AT DECATUR, BERNE, GENEVA AND MONROE, 1923-54

Chemical Quality

The chemical quality of the ground water is shown by analyses of 33 water samples collected from wells (table 6). The analyses show the dissolved mineral content, but not the sanitary quality of the water. The ground water is generally of poor quality and softening and iron removal are desirable for most uses.

All ground water contains mineral matter dissolved from the rock and soil with which it has been in contact. The quantity and kind of dissolved mineral matter in the water is governed by the type of rock or soil through which the water has moved, the duration of contact, and the prevailing pressure and temperature conditions. The quantity and kind of dissolved minerals in the water determine the suitability of the water for different uses.

The concentration of dissolved solids in the samples analyzed ranged from 796 to 2,110 ppm (parts per million), and consisted mainly of calcium, magnesium, sulfate and bicarbonate. The U.S. Public Health Service (1946) recommends that dissolved solids in drinking water preferably should not exceed 500 ppm, however if water of such quality is not available a dissolved-solids content of 1,000 is considered acceptable.

Hardness increases the amount of soap needed to produce a lather and causes a curdy precipitate to form before a good lather can be obtained. The use of hard water in boilers, water heaters, radiators, and pipes results in the formation of scale which causes a decrease in the quantity of flow and in the rate of heat transfer. Calcuim and magnesium are the principal constituents that impart hardness to water. Water having a hardness of less than 60 ppm is considered soft and treatment to remove hardness is unnecessary. Hardness between 61 and 200 ppm does not seriously interfere with the use of the water for most purposes, but its removal by softening processes may be profitable for laundries and certain other industries. If the hardness exceeds 200 ppm, treatment for its removal is desirable for most purposes.

All samples of water from the dolomite and dolomitic limestone rocks of Middle Silurian age and the glacial sand and gravel of Pleistocene age had a hardness of more than 300 ppm and thus are classified as very hard. Only six of the samples had a hardness of less than 300 ppm.

Water containing more than about 0.5 ppm of iron is objectionable because of the disagreeable taste and because it stains fabrics, porcelain, enamelware, and plumbing fixtures. The treatment of such water for removal of iron is desirable. Excessive iron may also interfere with the efficient operation of certain types of water softeners. Nearly all of the samples contained between 1 and 5 ppm of iron and only one of the 33 samples analyzed had an iron content of less than 0.3 ppm, the maximum recommended by the Public Health Service for drinking water.

Sodium and potassium usually have little effect on the suitability of water for most industrial and domestic uses. Generally if the equivalents per million of sodium exceed the sum of the equivalents per million of calcium and magnesium in irrigation water, there is danger of damaging the soil and certain crops are sensitive to sodium.

The relatively high concentration of sulfate in the ground water from the rocks of Middle Silurian age is probably derived from gypsum and iron sulfide

Table 6.--Chemical analyses of water from selected wells in Adams County, Indiana

(Results in ppm (parts per million), except as indicated. Analyses by U. S. Geological Survey. Aquifer: G, gravel; L, dolomitic limestone or dolomite. The concentrations of the following constituents are the maxima recommended in Public Health Service drinking-water standards (1946): Iron (Fe) and Manganese (Mn) together: 0.3 ppm; Magnesium (Mg): 125 ppm; Sulfate (SO_4): 250 ppm; Chloride (Cl): 250 ppm; Fluoride (F): 1.5 ppm (mandatory limit); Dissolved solids: 500 ppm, 1,000 ppm permitted if water of better quality is not available).

Well No.	Aquifer	Depth	Date of collection	Temperature °F	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) and Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids (residue on evaporation at 180° C)	Hardness as ($CaCO_3$)	Specific conductance (micromhos at 25° C)	pH
AdA 15-2	G	67	4-13-50	51	----	1.2	-----	-----	-----	108	1,160	12	-----	1.7	-----	1,110	2,010	7.9
AdB 5-3	L	152	4-12-50	52	----	1.3	-----	-----	-----	216	317	6	-----	1.7	-----	380	932	7.2
21-5	G	200	3-10-50	55	9	2.0	131	84	63	208	599	7.5	1.3	1.7	1,090	672	1,370	7.8
21-6	L	140	3-10-50	52	9	2.4	131	77	68	237	561	7.5	1.0	.0	1,050	643	1,330	7.7
21-11	G	85	3-10-50	53	12	3.5	173	98	61	192	761	11	1.2	.0	1,350	835	1,620	7.1
34-8	L	439	12-13-49	53	13	.89	207	97	83	309	787	14	1.3	.1	1,400	915	1,730	7.2
			4-11-50	52	----	1.3	-----	-----	-----	326	742	14	-----	.0	-----	934	1,670	7.3
34-10	L	400	12-13-49	53	12	1.1	138	60	51	272	440	12	1.1	2.0	907	591	1,180	7.3
			4-11-50	53	----	1.3	-----	-----	-----	292	393	16	-----	1.8	-----	576	1,140	7.4
AdC 8-3	L	88	4-12-50	52	----	1.2	-----	-----	-----	170	787	10	-----	.0	-----	788	1,590	7.5
AdD 2-5	L	92	4-13-50	52	----	2.3	-----	-----	-----	168	683	8	-----	.1	-----	692	1,430	7.6
27-3	L	88	4-14-50	48	----	2.3	-----	-----	-----	244	618	9	-----	.0	-----	716	1,410	7.5
AdE 3-1	L	400	12-13-49	54	10	4.0	252	105	79	229	984	12	1.4	.0	1,600	1,080	1,910	7.4
			4-11-50	--	----	1.5	-----	-----	-----	228	981	18	-----	.1	-----	1,080	1,910	7.2
3-3	L	426	12-13-49	53	10	1.2	134	68	54	286	456	12	1.2	1.6	920	614	1,220	7.4
			4-11-50	53	----	2.5	-----	-----	-----	312	389	8	-----	1.2	-----	588	1,140	7.4
10-1	L	400	12-13-49	52	14	1.5	280	104	92	206	1,090	12	1.3	2.3	1,780	1,130	2,020	7.4
			3-10-50	53	7	3.8	282	104	80	221	1,060	12	1.2	.0	1,790	1,130	2,020	7.7
			4-11-50	53	----	.61	-----	-----	-----	224	1,060	14	-----	.0	-----	1,130	2,000	7.4
11-2	L	121	3-10-50	52	7	3.4	285	101	89	168	1,120	8.8	1.1	.0	1,840	1,130	2,040	7.6
33-2	G	102	4-12-50	52	----	2.4	-----	-----	-----	152	1,140	8	----	.2	-----	1,140	2,020	7.6
33-3	G	233	3- 8-50	53	9	3.1	334	115	93	168	1,300	9.5	1.2	.0	2,110	1,310	2,280	7.5
AdF 4-2	L	212	4-13-50	52	----	1.5	-----	-----	-----	150	481	10	-----	.0	-----	472	1,130	7.8
AdG 13-1	L	102	4-13-50	52	----	3.1	-----	-----	-----	140	465	8	-----	.0	-----	464	1,080	7.7
AdH 27-1	L	201	4-14-50	52	----	1.8	-----	-----	-----	190	643	16	-----	.1	-----	698	1,430	7.5
32-4	G	128	3- 8-50	54	11	5.0	233	84	88	160	930	10	1.8	0	1,590	927	1,810	7.5
33-5	L	260	12-13-49	53	12	.25	140	60	75	212	541	12	1.7	.0	984	596	1,250	7.4
AdI 9-1	L	40	4-14-50	52	----	36	-----	-----	-----	244	988	18	-----	.0	-----	1,080	1,920	7.3
AdJ 3-4	L	70	4-13-50	52	----	1.2	-----	-----	-----	450	70	48	-----	3.7	-----	486	914	7.2
3-5	L	241	4-13-50	52	----	.35	-----	-----	-----	438	72	22	-----	33	-----	470	895	7.2
AdK 4-1	L	297	12-13-49	53	10	1.3	160	74	95	200	654	44	1.5	.0	1,200	704	1,520	7.4
29-2	G	140	12-14-49	54	16	.82	112	49	66	227	397	14	1.7	.1	796	481	1,070	7.1
AdL 9-1	L	116	4-14-50	52	----	2.4	-----	-----	-----	252	482	12	-----	.0	-----	607	1,220	7.4

in the rocks. The high concentration of sulfate in the water from glacial sand and gravel of Pleistocene age may be due to mixing with water from the rocks of Middle Silurian age or may be derived from gypsum and oxidized sulfides of iron in the glacial drift. When combined with calcium and magnesium, sulfate tends to cause scale in boilers. Only two of the samples analyzed had less than 250 ppm of sulfate, the maximum recommended by the Public Health for drinking water.

Chloride chemically combined with sodium is common salt, and in small amounts, as in Adams County, has little effect on the usefulness of water.

Fluoride in drinking water in concentrations of about 1.0 ppm lessens the incidence of tooth decay and concentrations in excess of about 1.5 ppm may cause mottling of teeth of children according to Dean (1936). The fluoride content of ground water analyzed in Adams County ranged from 1.0 to 1.8 ppm.

SUMMARY

The principal sources of ground water in Adams County are dolomite and dolomitic limestone of Middle Silurian age and deposits of sand and gravel of Pleistocene age. Rocks of Middle Silurian age and adjacent sand and gravel of Pleistocene age that fill the preglacial bedrock channels and depressions form a single aquifer, the chief aquifer in the county.

Most of the ground water used in Adams County is from the rocks of Middle Silurian age. Wells tapping this bedrock unit yield small to moderate quantities of water. The maximum yield of a well tapping the bedrock is reported to be about 250 gpm. The water-yielding characteristics of the bedrock change rapidly in short distances as indicated by a pumping test at Decatur, and by data from short-term drillers'tests elsewhere in the county. This part of the aquifer usually does not transmit large quantities of water. Specific capacities range from about 0.5 to about 28 gpm per foot of drawdown and estimated coefficients of transmissibility range from about 1,000 to 56,000 gpd per foot. Water levels in observation wells at or near Decatur, in the area of heaviest use, do not show a marked decline or a declining trend due to pumpage. This factor indicates that even in the area of heavy pumpage additional water is available from the bedrock. Additional quantities of ground water are available from this source in many places in the county for domestic, farm, municipal, and industrial supplies. Further development of the bedrock should be limited to the upper 100 feet or the upper zone of solutioning in the bedrock.

Wells tapping the sand and gravel units of the chief aquifer yield moderate quantities of water but can probably yield large quantities. The maximum yield of a well tapping the sand and gravel is reported to be about 500 gpm. Data from short-term drillers' tests indicate that the water-yielding characteristics of the sand and gravel part of the aquifer do not change as rapidly and are generally better than those of the bedrock. The sand and gravel is capable of transmitting large quantities of water to properly constructed wells. Specific capacities range from about 3 to about 33 gpm per foot of drawdown and estimated coefficients of transmissibility range from about 6,000 to about 67,000 gpd per foot. The sand and gravel in the preglacial bedrock channels and depressions is potentially the best source for

obtaining large amounts of additional ground water for municipal and industrial supplies.

Water from the chief aquifer generally has a hardness of more than 300 and less than 1,400 ppm and a dissolved-solids content of more than 700 and less than 2,200 ppm. Treatment of the water for removal of hardness and iron is desirable for most purposes.

Additional geologic and hydrologic data are needed to permit quantitative evaluation of the ground-water resources in Adams County. The areal extent, lithology, and thickness of the sand and gravel are only partially known and detailed data are lacking on the areal extent and thickness of solution zones in the bedrock.

RECORDS

The records of about 860 water wells, oil wells, and test wells are given in table 7. The table gives information about well construction, water levels, yields and drawdowns, thickness and characteristics of the water-bearing zone, use and other data.

Table 8 contains the logs of about 90 wells and test holes. This table gives the driller's description of the materials encountered and includes four sample logs compiled from sample studies.

SELECTED BIBLIOGRAPHY

Blatchley, W. S., 1896, The petroleum industry in Indiana: Indiana Dept. Geol. and Nat. Hist. 21st Ann. Rept., p. 27-96.

_____, 1900, The petroleum industry in Indiana in 1900: Indiana Dept. Geol. and Nat. Hist. 25th Ann. Rept., p. 481-527.

Bushnell, T. M., 1944, The story of Indiana soils: Purdue Univ., Agr. Expt. Sta., Spec. Circ. 1, 59 p.

Cumings, E. R., 1922, Nomenclature and description of the geological formations of Indiana; in Handbook of Indiana geology: Indiana Dept. Conserv., Div. Geology Pub. 21, p. 403-570.

Cumings, E. R., and Shrock, R. R., 1927, The Silurian coral reefs of northern Indiana and their associated strata: Indiana Acad. Sci. Proc., v. 36, p. 71-85.

Dean, H. T., 1936, Chronic endemic dental fluorosis: Am. Med. Assoc. Jour., v. 107, p. 1269-1272.

Esarey, R. E., and Bieberman, D. F., 1949, Silurian formations and reef structures of northern Indiana: Indiana Dept. Conserv., Div. Geology Guidebook, 3rd Ann. Indiana Field Conf., 19 p.

Harrell, M. 1935, Ground water in Indiana: Indiana Dept. Conserv., Div. Geology Pub. 133, 504 p.

Jones, G. B., Baldwin, Mark, Jones C. S., Jabine, Thomas Bushnell, T. M., and Brill, J. B., 1923, Soil survey of Adams County, Indiana: U. S. Dept. Agriculture, Bur. of Soils, 20 p.

Kindle, E. M., 1904, The stratigraphy and paleontology of the Niagara of northern Indiana: Indiana Dept. Geology and Nat. Res. 28th Ann. Rept., p. 397-486.

Leverette, Frank, 1899, Wells of northern Indiana: U. S. Geol. Survey Water-supply and Irrig. Paper 21, 82 p.

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

Logan, W. N., 1926, The geology of the deep wells in Indiana: Indiana Dept. Conserv., Div. of Geology Pub. 55, 540 p.

_____, 1931, The sub-surface state of Indiana: Indiana Dept. Conserv., Div. Geology Pub. 108, 790 p.

Meinzer and others, 1949, Hydrology: New York, Dover Publications, Inc., p. 1.

U. S. Public Health Service, 1946, Drinking water standards: Public Health Repts., v. 61, no. 11, p. 371-384.

Table 7.--Records of wells in Adams County, Indiana

Type of well: Dr, drilled; Du, dug; Dv, driven.
Material: G, gravel; L, dolomitic limestone or dolomite; S, sand; T, till.
Use: O, domestic; I, industrial; Ir, irrigation; N, not used; O, oil well; P, public supply; S, stock; T, test.

Remarks: Dd, drawdown; L, log in table 8; M, measured water level; T, water temperature in °F; W, water analysis in table 6; Y, yield.

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone			Water level		Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Below land surface (feet)	Date		
T. 28 N., R. 13 E., (PREBLE TOWNSHIP)																
AdA 1-1	SW¼NE¼ sec. 1	St. John's Church	E. and F. Moody	----	805	Dr	120	4	80	80	40	L	30	--------	P	
1-2	SW¼NE¼ sec. 1	St. John's School	----do----------	1949	805	Dr	200	4	80	80	120	L	40	1949	P	Y, 3 gpm.
2-1	NE¼NW¼ sec. 2	M. Braun	----do----------	----	785	Dr	98	5	68	68	30	L	20	1947	D,S	Reported no gravel above rock.
2-2	NE¼SE¼ sec. 2	C. Mowery	J. Yoder	1952	790	Dr	120	4	64	64	56	L	23	10-10-52	D,S	Production from solution opening at bottom of well; soil and clay 0 to 64 ft.; 66 ft. of casing.
3-1	NE¼SW¼ sec. 3	Alfred Bauck	T. Yoder	1946	802	Dr	77	4	60	60	17	L	28	1946	D	
4-1	SW¼SE¼ sec. 4	G. Bultemeyer	----do----------	1952	810	Dr	78	4	64	64	14	L	23	4-14-52	D,S	Dd, 4 ft. after 1 hr. bailing 16 gpm, 4-14-52; soil and clay 0 to 64 ft., limestone with shale 64 to 78 ft.; 68 ft. of casing.
9-1	NE¼NW¼ sec. 9	O. Hartman	----------	1940	810	Dr	115	4	80	80	35	L	21	1940	D,S	
9-2	SW¼SW¼ sec. 9	E. Reefsteck	----------	1935	823	Dr	92	4	70	70	22	L	29	1947	D,S	
10-1	NE¼NE¼ sec. 10	E. Bauck	T. Yoder	1949	800	Dr	66	4	58	58	8	L	28	10-49	D	60 ft. of casing.
10-2	SE¼NW¼ sec. 10	H. Moellering	----------	----	805	Dr	90	4	80	80	10	L	18	4-47	D,S	
10-3	SE¼NE¼ sec. 10	A. and M. Doehrman	----------	----	810	Du	28	42	---	---	---	T(?)	17	5- 7-47	S	M.
10-4	NE¼SW¼ sec. 10	A. Blomenberg	----------	1897	810	Du	35	42	---	---	---	G	25	--------	D,S	Reported clay over gravel.
10-5	NW¼SE¼ sec. 10	Albert Bauck	----------	----	806	Du	28	36	---	---	---	G	15	--------	D,S	Reported clay and gravel.
10-6	SW¼SE¼ sec. 10	R. and M. Bauck	----------	----	810	Dr	70	2	---	---	---	L	12	--------	D,S	
11-1	NW¼NW¼ sec. 11	A. Gallemeyer	----------	1900	803	Dr	65	2	65	---	---	G	16	--------	D,S	Gravel above rock.
11-2	SW¼NE¼ sec. 11	G. Werling	----------	1915	808	Dr	112	4	80	80	32	L	20	4-47	D,S	
11-3	SE¼NE¼ sec. 11	----do----------	----------	----	805	Du	40	42	---	---	---	G	25	4-47	D,S	
11-4	SW¼NW¼ sec. 11	H. Fuhrman	T. Yoder	1950	810	Dr	94	4	67	67	27	L	18	10-25-50	D	Dd, 11 ft. after 1 hr. bailing 15 gpm, 10-25-50; clay 0 to 67 ft., 67 ft. of casing.
12-1	NE¼SW¼ sec. 12	Mr. Gallemeyer	----------	----	785	Dr	72	4	50	50	22	L	5	1937	D,S	L.
12-2	SE¼SW¼ sec. 12	J. Meriweather	E. and F. Moody	1943	807	Dr	195	5	80	80	115	L	22	1943	D,S	
13-1	NE¼NW¼ sec. 13	C. Bultemeyer	----------	1915	806	Dr	80	4	---	---	---		18	4-47	D,S	
13-2	NE¼NE¼ sec. 13	W. Beihold	----------	----	809	Dr	100	4	---	---	---	L	17	4-47	D,S	
13-3	SW¼NW¼ sec. 13	A. Ewell	----------	----	803	Dr	100	4	70	70	30	L	13	--------	D,S	
13-4	SW¼SW¼ sec. 13	W. Kruetzman	----------	1928	801	Dr	86	--	83	83	3	L	20	1942	D	
13-5	SW¼SW¼ sec. 13	----do----------	----------	----	801	Du	32	42	---	---	---	T	9.9	5- 1-47	D,S	M; reported in clay.
14-1	NW¼NW¼ sec. 14	M. Boesse	----------	----	812	Du	55	42 to 6	---	---	---	G	14	--------	D,S	Dry to 35 ft.; bored to 55 ft.
14-2	SW¼NW¼ sec. 14	M. Blomenberg	----------	----	812	Dr	97	4	---	---	---	L	25(?)	--------	D,S	
14-3	SW¼SW¼ sec. 14	C. Muerge	----------	----	806	Dr	110	4	75	75	35	L	15	--------	D,S	
14-4	SE¼SW¼ sec. 14	A. Ewell	----------	1905	817	Dr	70	4	---	---	---	L	13	--------	D,S	
14-5	SE¼SE¼ sec. 14	L. Kruetzman	T. Yoder	1950	804	Dr	86	4	62	62	24	L	15	4-50	D,S	62 ft. of casing.
15-1	NW¼NW¼ sec. 15	H. Conrad	----------	1900	815	Dr	80	2	65	65	15	L	-----	--------	D,S	
15-2	SE¼NE¼ sec. 15	M. Blumeberg	E. and F. Moody	1943	805	Dr	67	4	---	---	---	G	18	--------	D,S	W.
16-1	SE¼SW¼ sec. 16	A. Hartman	----------	1917	822	Dr	97	4	68	68	29	L	13	--------	D,S	
21-1	NW¼SW¼ sec. 21	L. Fuhrman	V. Snarr	1936	830	Dr	141	4	77	77	64	L	13	--------	D,S	
22-1	NW¼NE¼ sec. 22	M. Kiefer	----------	----	820	Du,Dr	115	42 to 3	---	---	---	G	20	--------	D,S	Dug to 35 ft. and drilled to 115 ft.
22-2	NE¼SE¼ sec. 22	L. Worthman	----------	1939	820	Dr	80	4	---	---	---	G	-----	--------	D,S	
23-1	NW¼NE¼ sec. 23	L. Ewell	F. Moody	1948	817	Dr	53	6	---	---	---	G	30	1-48	D,S	51 ft. of casing.
23-2	SW¼SW¼ sec. 23	H. Schenkel	----------	1900	819	Dr	90	4	45	45	45	L	20	--------	D,S	Reported clay and gravel above rock.
24-1	SE¼NE¼ sec. 24	C. Macke	----------	1912	798	Dr	95	4	---	---	---	L	20	--------	D,S	
24-2	NE¼SE¼ sec. 24	W. Macke	----------	1900	790	Dr	85	4	---	---	---	L	20	--------	D,S	

AdA 25-1	NW¼NW¼ sec. 25	F. Koenemann	G. Mumma	----	805	Dr	73	4	60	60	13	L	20	--------	D,S	Reported soft rock.
25-2	SE¼NE¼ sec. 25	M. Selking	----------	----	804	Du,Dr	50	42 to 8	---	---	---	T(?)	10	--------	D,S	Reported in clay.
25-3	SE¼NW¼ sec. 25	H. Koenemann	G. Mumma	1927	810	Dr	142	4	80	60	82	L	22	--------	D,S	Reported soft rock.
25-4	SW¼NE¼ sec. 25	F. and L. Bulemahen	----------	1939	810	"	85	4	70	70	15	L	18	--------	D,S	
25-5	NW¼SW¼ sec. 25	O. Peck	----------	1907	808	Dr	85	3	80	80	5	L	20	--------	D,S	Reported clay above rock.
25-6	SW¼SW¼ sec. 25	Wm. Meyer Estate	----------	----	810	Du	29	42	---	---	---	G	9.1	4-30-37	D,S	M.
25-7	SW¼SE¼ sec. 25	H. Bulemahen	G. Mumma	----	806	Dr	115	4	60	60	55	L	18	--------	D,S	Reported soft rock.
26-1	NW¼NW¼ sec. 26	H. Ehlerding	V. Snarr	1927	813	Dr	170	4	70	70	100	L	40	--------	D,S	
26-2	SE¼NW¼ sec. 26	----do----------	----------	1910	815	Dr	100	3	60	60	40	L	16	--------	D	
26-3	NW¼SW¼ sec. 26	A. Scheuler	----------	1905	808	Dr	108	4	100	100	8	L	20	--------	D,S	
26-4	NW¼SE¼ sec. 26	O. Hoffman	----------	1910	814	Dr	132	----	---	---	---	L	13	--------	D,S	
26-5	NE¼SE¼ sec. 26	P. Hoffman	----------	----	814	Dr	85	4	80	80	5	L	----	--------	D,S	
27-1	NW¼SW¼ sec. 27	D. Wefel	----------	1935	831	Dr	136	---	80	80	56	L	19	--------	D,S	
27-2	SE¼SE¼ sec. 27	H. and G. Ehlerding	E. Joray	1931	813	Dr	89	4	73	73	16	L	----	--------	D,S	73 ft. of casing.
28-1	SE¼NE¼ sec. 28	J. Hilgeman	----------	1900	803	Du,Dr	45	42 to 4	---	---	---	----	21.8	5- 8-47	S	M.
28-2	SE¼NE¼ sec. 28	----do----------	T. Yoder	1949	833	Dr	126	4	90	90	36	L	30	9-49	D	92 ft. of casing.
28-3	SE¼NE¼ sec. 28	Reformed Church	R. Speicher	----	811	Dr	260	4	100 (?)	100	160	L	22	--------	D	Reported sulfur water cased out of upper part of well.
28-4	NW¼SW¼ sec. 28	M. Peters	----------	----	835	Dr	177	4	---	---	---	L	24	--------	D,S	Do.
28-5	NE¼SE¼ sec. 28	E. Fruchte	----------	1935	831	Dr	134	4	80	80	54	L	20	--------	D,S	
33-1	NE¼NW¼ sec. 33	B. Heuer	E. and F. Moody	1947	834	Dr	137	5	75	75	62	L	----	--------	D,S	
33-2	SE¼SE¼ sec. 33	A. Adams	T. Yoder	1949	835	Dr	132	4	---	122	10	G	30	6-49	D	132 ft. of casing.
33-3	SE¼SE¼ sec. 33	R. Borne	----do----------	1949	835	Dr	153	4	134	134	19	L	30	9-49	D	136 ft. of casing.
34-1	SE¼NE¼ sec. 34	C. Schwartz	----------	----	812	Du,Dr	14	42	---	---	---	T(?)	3.8	5- 6-47	D,S	M; drilled well in bottom of dug well, depth unknown.
34-2	NW¼SW¼ sec. 34	R. N. Kolter and Co.	F. Moody	----	835	Dr	111	5	---	---	---	G	60(?)	--------	D	111 ft. of casing.
34-3	SW¼SW¼ sec. 34	W. Reppert	----------	----	835	Du	35	42	---	---	---	G	20	--------	D,S	
34-4	SW¼SW¼ sec. 34	E. Worthman	T. Yoder	1947	835	Dr	112	6	---	110	2	G	30	Spring 1947	D	112 ft. of casing.
34-5	SW¼SW¼ sec. 34	W. Bracht	E. Joray	1937	835	Dr	99	4	---	---	---	G	28	1937	D	99 ft. of casing.
34-6	SW¼SW¼ sec. 34	Gerber and Bowers	T. Yoder	1947	835	Dr	188	4	120	120	68	L	30	Spring 1947	D	Reported no water in rock until solution opening encountered at 187 ft.; 122 ft. of casing.
34-7	SW¼SW¼ sec. 34	Mr. Rekeweg	J. Yoder	1952	835	Dr	177	4	96	96	81	L	31	10- 3-52	D	Dd, 9 ft. bailing 16 gpm 10-3-52: soil and clay 0 to 96 ft.; 97 ft. of casing.
35-1	NW¼NE¼ sec. 35	C. Hoffman	----------	1930	815	Dr	284	4	140	140	144	L	23	--------	D,S	Reported water-bearing gravel above rock.
35-2	NE¼NW¼ sec. 35	F. Fruchte	V. Snarr	----	815	Dr	90	4	---	---	---	G	----	--------	D,S	
35-3	NE¼NE¼ sec. 35	W. Werling	----------	1910	810	Dr	70	4	---	---	---	L	16	--------	D,S	
35-4	SE¼SW¼ sec. 35	A. Baiberick	----------	1900	822	Dr	166	5	100	100	66	L	40(?)	1944	D,S	Well deepened in 1947 by E. and F. Moody.
35-5	SW¼SE¼ sec. 35	C. Ehldering	----------	----	820	Dr	125	2	100	100	25	L	14	--------	D,S	
35-6	NE¼SE¼ sec. 35	G. Koenmann	T. Yoder	1948	816	Dr	62	6	---	60	2	G	14	Fall 1948	D	62 ft. of casing.
35-7	NE¼SE¼ sec. 35	----------	----do----------	1948	816	Dr	62	6	---	60	2	G	14	Fall 1948	D	Do.
35-8	SE¼SE¼ sec. 35	A. Koahleringer	H. Smith	----	816	Dr	213	4	135	78 213	57 ---	S,G,T L	17	--------	---	
35-9	SE¼SE¼ sec. 35	M. Spencer	J. Yoder	1952	816	Dr	73	4	---	71	2	G	12	5-52	D	Dd, 5 ft. bailing 20 gpm 5-52; soil and clay 0 to 71 ft; 73 ft. of casing.
35-10	SE¼SE¼ sec. 35	N. Schuman	----do----------	1952	816	Dr	134	4	---	79 132	8 2	G G	14	4-52	D	Y, 24 gpm 4-52; L; 134 ft. of casing.
35-11	SE¼SE¼ sec. 35	G. Bumgardner	T. Yoder	1947	816	Dr	68	6	---	66	2	G	18	Spring 1947	D	68 ft. of casing.
35-12	SE¼SE¼ sec. 35	E. Kirchner	----do----------	1951	816	Dr	120	4	---	95	25	S	18	7-20-51	D	Clay 0 to 95 ft., sand and clay 95 to 120 ft.
36-1	NW¼NW¼ sec. 36	H. Selking	E. Joray	1940	810	Dr	106	4	60	60	46	L	22	--------	D,S	Reported no gravel above rock; 60 ft. of casing.
36-2	NE¼NE¼ sec. 36	A. Ehldering	E. and F. Moody	1932	806	Dr	93	4	45	45	48	L	18	--------	D,S	
36-3	SW¼SW¼ sec. 36	W. Werling	----------	1900	810	----	64	2	---	---	---	G	16	--------	D,S	
36-4	NW¼SW¼ sec. 36	L. and E. Reinking	E. and F. Moody	1945	810	Dr	156	4	---	150	6	G	13	--------	D,S	
36-5	SW¼SW¼ sec. 36	----------	T. Yoder	1947	816	Dr	72	4	---	---	---	G	18	Spring 1947	D	72 ft. of casing.
36-6	SW¼SW¼ sec. 36	C. Miller	----do----------	1947	816	Dr	65	4	---	63	2	G	18	Spring 1947	D	65 ft. of casing.
36-7	SW¼SW¼ sec. 36	C. Furhman	J. Yoder	1951	816	Dr	90	4	---	89	1	G	15	1- 6-51	D	L; Dd, 3 ft. bailing 16 gpm. 1-6-51; 90 ft. of casing.
36-8	SE¼SW¼ sec. 36	Mr. Foley	----------	1900	815	----	125	3	---	---	---	----	14.2	8- 1-47	D	M.
36-9	SE¼SW¼ sec. 36	----do----------	----------	----	815	Dr	---	8	---	---	---	----	20	8- 6-47	I	M; Dd 18.4 ft. after 6 hrs. pumping 97 gpm. 8-6-47.
36-10	SE¼SW¼ sec. 36	----do----------	----------	----	815	Dr	---	8	---	---	---	----	20	8- 7-47	I	M; Dd 14.2 ft. after 6 hrs. pumping 66 gpm. 8-7-47.
36-11	SW¼SW¼ sec. 36	Mr. Werling	T. Yoder	1955	815	Dr	63	4	---	62	1	G	13	3-10-55	D	L; Dd, 5 ft. bailing 24 gpm. 3-10-55; 63 ft. of casing.

Table 7.--Records of wells in Adams County, Indiana--Continued

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
						T. 28 N., R. 14 E., (ROOT TOWNSHIP)										
AdB 1-1	SW¼NW¼ sec. 1	H. Tieman	T. Yoder	1950	830	Dr	120	4	90	90	30	L	---	--------	D,S	
1-2	SW¼NW¼ sec. 1	----do----------	E. and F. Moody	1946	830	Dr	100	4	85	85	15	L	45	1946	D,S	Reported clay to rock.
1-3	SW¼SE¼ sec. 1	P. Bleeke	----do----------	----	820	Dr	110	5	70	70	40	L	30	--------	D,S	Reported red clay to rock, no gravel.
2-1	NW¼NW¼ sec. 2	E. Fuelling	----------	----	834	Dr	70	4	---	---	---	L	31	--------	D,S	
2-2	NE¼NE¼ sec. 2	W. Ostemeyer	G. Mumma	1925	836	Dr	300	4	90	90	210	L	---	--------	D,S	
2-3	SE¼NW¼ sec. 2	A. and K. Gerke	F. Moody	1947	835	Dr	154	6	100	100	50	L	54	10-47	D,S	Reported till to rock; 100 ft. of casing.
2-4	SE¼NE¼ sec. 2	R. Gerke	---do----------	1947	834	Dr	190	6	94	94	96	L	40	9-47	D,S	Reported hardpan and clay to rock; 94 ft. of casing.
2-5	SE¼SW¼ sec. 2	A. Witte	Mr. Grimm	1940	831	Dr	138	4	100	100	38	L	49	--------	D,S	
2-6	SW¼SE¼ sec. 2	E. Busick	E. and F. Moody	1940	830	Dr	250	4	100	100	150	L	---	--------	D,S	Reported clay to rock.
2-7	SE¼SE¼ sec. 2	L. and E. Busick	----------	----	828	Dr	---	4	70	70	---	L	---	--------	D,S	
3-1	NW¼NW¼ sec. 3	C. Berning	E. and F. Moody	1946	832	Dr	158	5	90	90	68	L	50	1946	D,S	Reported clay to rock.
3-2	SW¼SE¼ sec. 3	E. and H. Fuelling	----------	----	832	Dr	---	---	80	80	---	L	---	--------	D,S	
4-1	SE¼NE¼ sec. 4	R. Fuelling	----------	----	833	Dr	180	4	---	---	---	----	48	--------	D,S	
4-2	SE¼SW¼ sec. 4	P. Fuelling	----------	----	837	Dr	212	4	100	100	112	L	46	--------	D,S	Reported clay above rock.
5-1	NW¼NW¼ sec. 5	----------	----------	----	832	Dr	172	4	---	---	---	G	---	--------	D	
5-2	NW¼NW¼ sec. 5	----------	E. and F. Moody	1947	828	Dr	120	4	---	---	---	G	---	--------	D	
5-3	NW¼NW¼ sec. 5	R. Deam	----do----------	1947	830	Dr	152	6	95	95	57	L	30	3-47	D	W; reported sandy clay and gravel above rock.
5-4	NW¼NW¼ sec. 5	G. Sonner	F. Moody	1949	827	Dr	173	6	123	123	50	L	40	1949	D,S	123 ft. of casing.
5-5	NW¼NE¼ sec. 5	F. Lewton	----------	1938	843	Dr	110	2	85	85	25	L	---	--------	D,S	
5-6	NE¼SE¼ sec. 5	H. Bulmahn	E. and F. Moody	----	836	Dr	123	4	117	117	6	L	63(?)	--------	D,S	Reported no gravel above rock.
6-1	SE¼NE¼ sec. 6	P. Gallmier	----do----------	1942	827	Dr	124	4	120	120	4	L	34	--------	D,S	Reported clay above rock.
8-1	NW¼NW¼ sec. 8	C. Berning	----do----------	----	802	Dr	60	4	---	---	---	G	28	--------	D,S	
8-2	NW¼SW¼ sec. 8	----do----------	----------	----	803	Dr	60	---	---	---	---	G	28	--------	D,S	
8-3	NW¼NE¼ sec. 8	F. Bulmahn	----------	1907	825	Dr	130	4	---	---	---	----	55	--------	D,S	
9-1	SE¼SW¼ sec. 9	Mr. Lower	----------	----	830	Dr	170	4	---	---	---	L	60	--------	D,S	
9-2	SE¼SE¼ sec. 9	R. Miller	E. and F. Moody	----	814	Dr	108	5	60	60	48	L	30	--------	D,S	Reported clay to rock, no gravel.
10-1	NW¼NW¼ sec. 10	E. Gerke	----do----------	----	831	Dr	108	4	93	93	15	L	48	--------	D,S	Do.
10-2	NW¼SE¼ sec. 10	E. and H. Kukelhan	----------	1946	830	Dr	140	5	69	69	71	L	50	--------	D,S	
10-3	SE¼SE¼ sec. 10	O. Boerger	----------	1920	828	Dr	224	4	90	90	134	L	60	--------	D,S	Reported mostly gravel to rock.
11-1	NW¼NW¼ sec. 11	St. Peter's Church	E. and F. Moody	----	831	Dr	180	4	80	80	100	L	46	--------	P	Reported clay to rock.
11-2	SE¼NW¼ sec. 11	H. Franz	----------	----	833	Du	55	42	---	---	---	G	48	--------	D,S	Reported clay above gravel.
11-3	SW¼SW¼ sec. 11	H. Fuelling	E. and F. Moody	1945	819	Dr	202	6	100	100	102	L	45	1945	D,S	Reported clay to rock.
12-1	NW¼NW¼ sec. 12	W. Boerger	----------	1935	825	Dr	200	4	---	---	---	----	44	--------	D,S	
13-1	SW¼NW¼ sec. 13	M. Ohler	E. and F. Moody	----	818	Dr	120	4	75	75	45	L	----	--------	D,S	Reported clay to rock, no gravel.
13-2	SW¼SE¼ sec. 13	C. Kukelhan	----------	----	840	Dr	84	4	---	---	---	G	20	--------	D,S	
14-1	NW¼NW¼ sec. 14	H. Boerger	----------	1930	818	Dr	164	4	100	100	64	L	42	--------	D,S	
14-2	SE¼NW¼ sec. 14	O. Boerger	----------	1941	812	Dr	150	4	90	90	60	L	37	--------	D,S	L.
14-3	SW¼SW¼ sec. 14	H. Kukelhan	----------	----	808	Dr	120	4	65	65	55	L	17	--------	D,S	
15-1	NW¼NW¼ sec. 15	R. Fleming	F. Moody	1948	814	Dr	143	4	90	90	53	L	40	10-48	D	Reported no gravel above rock.
15-2	SE¼SE¼ sec. 15	A. Hall	E. and F. Moody	1935	814	Dr	143	4	80	80	63	L	30	1935	D,S	Reported clay to rock, no gravel.
16-1	SW¼SW¼ sec. 16	P. and A. Scheiferstein	F. Moody	1950	795	Dr	107	5	63	63	44	L	37	1-50	D,S	63 ft. of casing.
16-2	SW¼SE¼ sec. 16	E. Hustin and W. Burger	----------	----	800	Du	40	42	---	---	---	G	----	--------	D,S	
16-3	SE¼SE¼ sec. 16	K. Christian	----------	----	814	Dr	104	4	---	---	---	G	----	--------	N	
16-4	SE¼SE¼ sec. 16	----do----------	E. and F. Moody	1944	814	Dr	239	6	130	130	109	L	40	1944	D,S	Dd, 25 ft. bailing, 1944; reported dry gravel above rock.
17-1	NW¼NW¼ sec. 17	M. Auman	F. Moody	1947	812	Dr	133	4	80	80	53	L	38	4-24-47	D,S	L; M.
17-2	NW¼NE¼ sec. 17	W. Rodenbeck	----do----------	1947	812	Dr	133	4	---	---	---	L	29.6	4-24-47	D,S	M; reported sand and clay above rock.
17-3	SE¼SW¼ sec. 17	A. Lewton	----------	----	785	Du	18	42	---	---	---	G	12	--------	N	
17-4	SE¼SW¼ sec. 17	----do----------	F. Moody	1949	785	Dr	87	5	42	42	45	L	18	9-49	D,S	42 ft. of casing.
18-1	SW¼NW¼ sec. 18	H. Hockmeyer	----------	----	790	Du	50	42	---	---	---	T(?)	40	--------	D,S	

AdB 18-2	NW¼SW¼ sec. 18	L. Scheuman	----------	----	788	Du	40	42	---	---	---	T(?)	30	--------	D,S		
18-3	NE¼SW¼ sec. 18	M. Fuhrman	----------	1914	790	Dr	70	4	55	55	15	L	27	Fall 1943	D,S		
19-1	NE¼NE¼ sec. 19	J. Fuhrman	----------	1912	790	Dr	88	4	60	60	28	L	14	--------	D,S		
19-2	NE¼NE¼ sec. 19	F. Fuhrman	E. and F. Moody	1927	792	Dr	88	4	60	60	28	L	22	1-47	D,S		
19-3	NW¼NW¼ sec. 19	W. and S. Macke	----do----------	1944	798	Dr	82	4	---	---	---	G(?)	----	--------	D,S		
19-4	SE¼NW¼ sec. 19	B. Thompson	----do----------	----	798	Dr	100	4	70	70	30	L	----	--------	D,S	Reported no gravel above rock.	
19-5	NW¼SW¼ sec. 19	C. Bitner	----------	----	800	Du	30	42	---	---	---	G	22	--------	S		
19-6	NW¼SW¼ sec. 19	----do----------	E. and F. Moody	1945	800	Dr	108	6	80	80	28	L	17	--------	D		
19-7	SE¼SW¼ sec. 19	J. Singleton	----do----------	1946	800	Dr	110	5	70	70	40	L	22	--------	D,S		
20-1	NE¼NW¼ sec. 20	W. Beihold	----------	1935	785	Dr	75	4	40	40	35	L	10	--------	D,S		
20-2	NW¼NE¼ sec. 20	W. Aumann	----------	----	790	Du	20	42	---	---	---	T(?)	4	4-15-47	D,S	M.	
20-3	NW¼NE¼ sec. 20	----do----------	F. Moody	1948	790	Dr	138	5	50	50	88	L	20	1-48	D,S	Dd, 7 ft. pumping 15 gpm, 1-48; 54 ft. of casing.	
20-4	SW¼NW¼ sec. 20	N. Fuhrman	----------	----	790	Dv	72	2	---	---	---	G(?)	25	1947	D,S		
21-1	NW¼NW¼ sec. 21	H. Aumann	F. Moody	1948	798	Dr	130	4	70	70	60	L	21	12-48	D,S		
21-2	NE¼NW¼ sec. 21	Mr. Ridenbaugh	E. and F. Moody	1947	803	Dr	80	6	---	41	39	S,G	41	6-17-47	D,P	M; clay, red, 0 to 8 ft., sand, coarse, gray, with pea-size gravel 8 to 80 ft.	
21-3	NE¼NE¼ sec. 21	R. Delong	J. Yoder	1952	812	Dr	142	4	125	125	17	L	31	5- 5-52	D	Dd, 2 ft. bailing 16 gpm, 5-5-52; soil and clay 0 to 125 ft; 128 ft. of casing.	
21-4	SW¼NE¼ sec. 21	L. Roe	E. and F. Moody	1946	802	Dr	150	5	96	96	54	L	19	--------	D,S		
21-5	SW¼NE¼ sec. 21	Monmouth High School	---do----------	1939	802	Dr	200	6	200 (?)	---	---	G	40	1939	P	W.	
21-6	NE¼SW¼ sec. 21	S. Runkel	----------	1922	790	Dr	140	4	100	100	40	L	30	--------	D,S	W.	
21-7	NW¼SE¼ sec. 21	Mr. Hammond	J. Yoder	1952	800	Dr	81	4	---	75	6	G	16	5-52	D	L; Dd, 4 ft. after 1 hr. bailing 20 gpm, 5-52; 81 ft. of casing.	
21-8	SE¼NE¼ sec. 21	Mr. Dugan	F. Moody	1950	798	Dr	54	5	---	50	4	G	17	6-50	D	54 ft. of casing.	
21-9	NW¼SE¼ sec. 21	C. Schafer	N. Hole	1949	798	Dr	72	5	---	65	7	G	18	Spring 1949	D	72 ft. of casing.	
21-10	NW¼SE¼ sec. 21	D. Baughman	----------	----	800	Dr	83	4	---	---	---	G	26	--------	D		
21-11	SW¼SE¼ sec. 21	Steury-Abbatoir Packing Co.	E. and F. Moody	----	790	Dr	85	6	---	---	---	G	27	--------	I	W.	
22-1	SW¼NW¼ sec. 22	C. Johnson	----do----------	----	803	Dr	80	5	---	76	4	G	17	--------	D,S	Dd, 7 ft. pumping 5 gpm, 1947; 80 ft. of casing.	
22-2	SW¼NE¼ sec. 22	J. Lloyd	----------	----	810	Dr	254	4	90	90	164	L	30	--------	D,S		
22-3	NE¼SW¼ sec. 22	R. Rice	O. Ainsworth	----	808	Dr	124	4	100	100	24	L	40	--------	D,S		
22-4	NE¼SW¼ sec. 22	----do----------	----------	----	808	----	60	--	---	---	---	G	----	--------	N	Well pumped sand.	
23-1	SE¼NW¼ sec. 23	C. Fritzinger	----------	----	810	Dv	100	2	---	---	---	G	----	--------	D,S		
23-2	SW¼SW¼ sec. 23	A. Bohnke	----------	1940	820	Dr	140	4	96	96	44	L	40	--------	S		
23-3	SE¼SE¼ sec. 23	B. Shroyer	----------	----	830	Dr	109	6	60	60	49	L	40	--------	D,S	Reported clay above rock.	
24-1	NE¼NE¼ sec. 24	H. Neidlinger	----------	----	843	Dr	113	4	70	70	43	L	50	--------	D,S		
24-2	SW¼NW¼ sec. 24	O. Fuelling	E. and F. Moody	----	835	Dr	100	4	80	80	20	L	----	--------	D,S		
24-3	NW¼SW¼ sec. 24	R. Parrish	J. Yoder	1952	843	Dr	106	4	75	75	31	L	53	11-21-52	D,S	L; Dd, 2 ft. bailing 16 gpm, 11-21-52; 86 ft. of casing.	
25-1	NW¼NW¼ sec. 25	B. Schroyer	E. and F. Moody	1941	832	Dr	115	6	75	75	40	L	40	--------	D	Reported clay above rock.	
25-2	NE¼NW¼ sec. 25	A. Barkley	----------	----	844	----	98	2	---	---	---	----	60(?)	--------	D,S		
25-3	NE¼NE¼ sec. 25	M. Kincaid	E. and F. Moody	1946	846	Dr	157	6	80	80	77	L	46	4-23-47	D,S	M; reported no gravel above rock.	
25-4	SE¼SE¼ sec. 25	Union Chapel Ch.	T. Yoder	1946	834	Dr	126	4	90	90	36	L	----	--------	P	92 ft. of casing.	
26-1	SE¼SE¼ sec. 26	T. Drew	----------	----	826	Dv	82	2	---	---	---	----	37	--------	D,S		
27-1	SE¼NW¼ sec. 27	D. Moses	E. and F. Moody	----	804	Dr	157	6	56	56	101	L	20	--------	I	Y, 50 gpm, 1947; 60 ft. of casing.	
27-2	SW¼NW¼ sec. 27	----do----------	----do----------	1947	802	Dr	137	6	50	50	87	L	20	1947	I		
27-3	NE¼SW¼ sec. 27	Millers Service Station	----do----------	----	801	Dr	80	4	30	30	50	L	21	--------	D,P	Reported clay to rock; 35 ft. of casing.	
27-4	SW¼SE¼ sec. 27	L. Beckmeyer	----do----------	1946	794	Dr	116	5	40	40	76	L	31	1946	D,S	Reported clay above rock.	
27-5	SW¼SE¼ sec. 27	----do----------	----------	----	792	Dv	40	4	---	---	---	G	----	--------	N	Well dry 4-16-47.	
27-6	SE¼SE¼ sec. 27	E. Warren	J. Yoder	1952	792	Dr	55	4	33	33	22	L	15	4-30-52	D	L; Dd, 4 ft. after 1¼ hrs. pumping 60 gpm, 4-30-52; 35 ft. of casing.	
27-7	SW¼SW¼ sec. 27	Central Soya Co.	E. and F. Moody	1945	785	Dr	408	10	20	20	388	L	27	2-46	I	L; Dd, 138 ft. pumping 110 gpm, 3-30-45; T, 56; 30 ft. of casing.	
28-1	NW¼NW¼ sec. 28	O. Yost	----------	----	788	Dv	83	2	---	---	---	G	21	--------	P		
28-2	NW¼SW¼ sec. 28	J. Schafer	----------	----	788	Dr	80	4	65	65	15	L	----	--------	D,S		
29-1	SW¼NW¼ sec. 29	W. Schnepf	F. Moody	----	798	Dr	129	5	95	95	34	L	50	--------	D,S	Dd 5 ft. bailing; 95 ft. of casing.	
29-2	NE¼SE¼ sec. 29	J. Ciemer	----do----------	1948	792	Dr	81	4	---	---	---	G	60(?)	--------	D,S	81 ft. of casing.	
29-3	NW¼SE¼ sec. 29	G. Sprague	----do----------	1949	790	Dr	162	5 to 4	120	120	42	L	30	1949	D,S	120 ft. of casing.	
30-1	SW¼NW¼ sec. 30	W. Selking	----------	----	806	Dr	90	4	75	75	15	L	----	--------	D,S		
30-2	NW¼SW¼ sec. 30	H. Selking	----------	1914	806	Dr	70	4	40	40	30	L	13	1914	D,S	Reported no gravel above rock.	
30-3	NW¼SE¼ sec. 30	A. Selking	----------	----	804	Dr	107	4	77	77	30	L	22	1946	D,S		
31-1	NW¼SE¼ sec. 31	P. Kreps	E. and F. Moody	----	806	Dr	86	4	---	---	---	G	26	--------	D,S		
31-2	SW¼SE¼ sec. 31	J. Brite	----------	----	809	Dr	172	4	80	80	92	L	----	--------	D,S		
32-1	SW¼NE¼ sec. 32	G. Grandstaff	----------	----	806	Dr	182	4	---	---	---	----	18	--------	D,S		
32-2	SE¼SW¼ sec. 32	J. Geels	R. Speicher	----	808	Dr	70	4	---	---	---	S,G	22	--------	D,S		
32-3	SE¼SE¼ sec. 32	M. Wolpert	----------	----	804	Dr	90	4	---	---	---	L	----	--------	D,S		
33-1	NE¼NE¼ sec. 33	R. Johnson	E. and F. Moody	1946	795	Dr	60	4	---	---	---	G	----	--------	D,S		

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone			Water level		Use	Remarks
										Depth to top (feet)	Thickness (feet)	Material	Below land surface (feet)	Date		
T. 28 N., R. 14 E., (ROOT TOWNSHIP)--Continued																
AdB 33-2	SE¼NE¼ sec. 33	R. Johnson	E. and F. Moody	1947	796	Dr	130	5	40	40	90	L	----	--------	D	Reported no gravel above rock
33-3	NW¼SE¼ sec. 33	Hanna City Park	----do----------	----	792	Dr	160	4	40	40	120	L	----	--------	P	
33-4	NW¼SE¼ sec. 33	----do----------	----do----------	----	794	Dr	160 (?)	4	40	40	120	L	----	--------	P	Reported no gravel above rock.
33-5	SE¼SW¼ sec. 33	St. Joseph Cemetery	----do----------	1946	802	Dr	210	6	40	40	170	L	29	5-46	D,Ir	Do.
33-6	SE¼SW¼ sec. 33	----do----------	----------	----	802	Dr	107	6	40	40	67	L	26.1	4- 9-47	----	M; observation well, Adams 3.
33-7	SW¼SE¼ sec. 33	G. Maclean	F. Moody	----	798	Dr	304	10	40	40	264	L	37	--------	Ir	Dd, 13 ft. after 6½ hrs. pumping 108 gpm, 1949; 45 ft. of casing.
33-8	SW¼SE¼ sec. 33	----do----------	----do----------	1949	796	Dr	154	6	36	36	118	L	33	1949	P	Dd,5 ft. bailing; 38 ft. of casing.
34-1	NE¼NW¼ sec. 34	Central Soya Co.	E. and F. Moody	1937	790	Dr	400	10	---	---	---	L	40	1937	I	Y, 60 gpm; T, 56, 5-24-45; 30 ft. of casing.
34-2	NE¼NW¼ sec. 34	----do----------	----do----------	1937	790	Dr	400	10	---	---	---	L	40	1937	I	Y, 30 gpm; T, 56, 5-24-45; 30 ft. of casing.
34-3	NE¼NW¼ sec. 34	----do----------	----do----------	1937	790	Dr	400	10	---	---	---	L	40	1937	I	Y, 140 gpm; T, 56, 5-24-45; 30 ft. of casing.
34-4	NE¼NW¼ sec. 34	----do----------	----do----------	1937	790	Dr	400	10	---	---	---	L	40	1937	I	Y, 80 gpm; T, 56, 5-24-45; 30 ft. of casing.
34-5	NW¼NW¼ sec. 34	----do----------	----do----------	1940	790	Dr	400	10	---	---	---	L	40	1940	I	Y, 150 gpm; T, 56, 5-24-45; 30 ft. of casing.
34-6	SE¼SW¼ sec. 34	City of Decatur	----------	1925	798	Dr	439	8	37	37	402	L	54	2- 4-25	P	W Y, 131 gpm, 12-45; 37 ft. of casing.
34-7	SE¼SW¼ sec. 34	----do----------	----------	1924	798	Dr	440	8	35	35	405	L	40	5- 8-43	N	Y, 150 gpm, 12-24; Dd, 35 ft. pumping 50 gpm, 5-8-43; 36 ft. of casing.
34-8	SW¼SE¼ sec. 34	----do----------	----------	----	802	Dr	246	8	---	---	---	L	40	4-11-53	----	M; Y, 30 gpm; observation well Adams 1.
34-9	SE¼SW¼ sec. 34	----do----------	----------	----	799	Dr	250	6	30	30	220	L	43.9	4-11-53	----	M; observation well Adams 2.
34-10	SE¼SE¼ sec. 34	----do----------	E. and F. Moody	1947	782	Dr	100	12	23	23	377	L	15	1- 9-47	P	L; W; Y, 212 gpm; Dd,47 ft. after 80 hrs. pumping 174 gpm; 30 ft. of casing.
34-11	SE¼SE¼ sec. 34	----do----------	----do----------	1948	781	Dr	400	10	20	20	380	L	17	11-48	P	Dd, 100 ft. pumping 250 gpm, 11-48; 27 ft. of casing.
34-12	NW¼SW¼ sec. 34	S. Bailer	T. Yoder	1945	798	Dr	65	4	36	36	29	L	30	--------	D	Solution opening filled with red mud from 42 to 47 ft.; 38 ft. of casing.
34-13	SW¼SW¼ sec. 34	M. Swearingen	E. and F. Moody	1945	800	Dr	207	6	35	35	172	L	30	1950	I	
35-1	NE¼SW¼ sec. 35	F. Reppert	----do----------	----	798	Dr	---	4	40	40	---	L	12.5	3-20-50	D	M.
35-2	NE¼SW¼ sec. 35	E. Reppert	F. Moody	1948	798	Dr	123	5	37	37	86	L	30	10-48	D	40 ft. of casing.
35-3	SW¼SW¼ sec. 35	----do----------	----------	----	791	Dr	144	6	30	30	109	L	33.1	4-11-53	----	M; Y, 150 gpm, 1946; observation well Adams 5; 36 ft. of casing.
35-4	SW¼SW¼ sec. 35	C. Baker	E. and F. Moody	1946	796	Dr	110	4	40	40	70	L	12.5	2-22-46	D	M; 40 ft. of casing.
35-5	SW¼SE¼ sec. 35	J. Huddleston	N. Hole	1949	804	Dr	91	4	60	60	31	L	28	Spring 1949	D	L; 62 ft. of casing.
35-6	NE¼SW¼ sec. 35	A. Hurst	E. and F. Moody	1946	798	Dr	110	4	40	40	70	L	----	--------	D	L.
36-1	SW¼NW¼ sec. 36	W. Gass	F. Moody	1944	804	Dr	80	5	30	30	50	L	22	1944	D,S	
36-2	SW¼NE¼ sec. 36	J. Hebble	N. Hole	1949	818	Dr	104	4	60	60	44	L	32	Spring 1949	D	Reported about 1 ft. of gravel above rock.
36-3	SW¼NE¼ sec. 36	R. Holthouse	J. Holy	1950	818	Dr	110	4	62	62	48	L	30	1950	D	65 ft. of casing.
T. 28 N., R. 15 E., (UNION TOWNSHIP)																
AdC 3-1	NE¼NW¼ sec. 3	C. Jones	V. Morton	----	801	Dr	89	4	---	---	---	L	26	--------	D,S	
3-2	SW¼SW¼ sec. 3	E. Bischoff	----------	1913	816	Dr	73	2	40	40	33	L	18	1945	D,S	
4-1	SE¼NW¼ sec. 4	A. Bowen	----------	----	815	Dr	80	4	70	70	10	L	----	--------	S	
4-2	NE¼SE¼ sec. 4	C. Guenin	----------	1920	812	Dr	85	4	45	45	40	L	17	--------	D,S	

AdC 4-3	SW¼SW¼ sec. 4	W. Schafer	----------	----	825	Dr	180	4	70	70	110	L	----	--------	D,S	
4-4	SE¼SE¼ sec. 4	E. Ramsey	----------	----	816	Dr	---	4	65	65	---	L	----	--------	D,S	
5-1	SE¼NE¼ sec. 5	A. Converset	----------	----	825	Dr	75	4	70	70	5	L	----	--------	D,S	
5-2	NW¼SE¼ sec. 5	A. Bowen	F. Moody	1948	835	Dr	218	4	98	98	120	L	35	11-48	D,S	98 ft. of casing.
5-3	SE¼SE¼ sec. 5	I. Mowery	----------	----	825	Dr	80	4	70	70	10	L	----	--------	D,S	
6-1	NE¼NE¼ sec. 6	W. Anderson	V. Morton	1937	823	Dr	90	4	80	80	10	L	----	--------	D,S	
6-2	SW¼NW¼ sec. 6	V. Barkley	----do----------	1940	823	Dr	175	4	79	79	96	L	36	1940	D,S	Reported gravel above rock.
6-3	NE¼SW¼ sec. 6	D. Lehrman	----do----------	1938	820	Dr	87	4	80	80	7	L	----	--------	D,S	Do.
6-4	NW¼SW¼ sec. 6	E. Fuelling	T. Yoder	----	823	Dr	---	4	95	95	---	L	----	--------	D,S	
6-5	SE¼SE¼ sec. 6	H. Lehrman	----------	1914	823	Dr	150	4	---	---	---	L	30	--------	D,S	
7-1	NW¼NW¼ sec. 7	B. Gerke	----------	----	815	Dr	100	4	65	65	35	L	25	--------	D,S	
8-1	NE¼NW¼ sec. 8	A. Blakey	V. Morton	----	820	Dr	74	4	67	67	7	L	30	--------	D,S	
8-2	SW¼SW¼ sec. 8	----do----------	G. Mumma	1913	822	Dr	98	4	68	68	31	L	36	1913	D,S	
8-3	SW¼SE¼ sec. 8	H. Blakey	F. Moody	1949	820	Dr	88	5	67	67	21	L	35	8-49	D,S	Dd, 10 ft. bailing.
9-1	SE¼NE¼ sec. 9	W. Clem	----------	1943	813	Dr	60	2	60	60	---	----	----	--------	D	
9-2	SW¼SW¼ sec. 9	M. Bulmahn	F. Moody	----	819	Dr	79	5	70	70	9	L	35	--------	D,S	
10-1	NW¼NW¼ sec. 10	A. Bischoff	----------	----	814	Dr	70	2	40	40	30	L	18	--------	N	
10-2	NW¼NE¼ sec. 10	----do----------	----------	----	808	Dr	70	2	40	40	30	L	18	--------	N	
10-3	SW¼NW¼ sec. 10	C. Lee	W. Gerardot	1949	808	Dr	73	4	40	40	33	L	17	1949	D,S	
10-4	SW¼SE¼ sec. 10	D. Plumley	F. Moody	1946	814	Dr	100	5	42	42	58	L	19	1946	D,S	
11-1	NW¼NW¼ sec. 11	J. Zizelman	V. Morton	----	813	Dr	110	4	40	40	70	L	17	--------	D,S	
14-1	SW¼NW¼ sec. 14	H. Baxter	----------	----	816	Dr	70	4	45	45	25	L	----	--------	D,S	Reported no gravel above rock.
15-1	NW¼NW¼ sec. 15	E. Thieme	----------	----	808	Dr	---	4	---	---	---	L	35(?)	1948	D,S	
15-2	SE¼NE¼ sec. 15	M. Crozier	----------	----	808	Dr	---	2	---	---	---	L	17	--------	D,S	
17-1	NE¼NE¼ sec. 17	M. Bentz	F. Moody	1948	818	Dr	124	5	75	75	49	L	31	2-48	D,S	75 ft. of casing.
17-2	SE¼SW¼ sec. 17	W. Bleeke	-----do----------	1948	830	Dr	158	5	80	80	78	L	35	5-48	D	
17-3	SW¼SE¼ sec. 17	C. Bohnke	----------	1896	830	Dr	69	2	---	---	---	S,G	30	--------	D,S	
18-1	NE¼SE¼ sec. 18	M. Shearer	F. Moody	1939	826	Dr	308	4	---	---	---	L	----	--------	D,S	
19-1	SW¼NW¼ sec. 19	W. Kukelhan	E. and F. Moody	1942	845	Dr	165	4	---	---	---	----	65(?)	--------	D,S	
20-1	NW¼NW¼ sec. 20	J. Sheets	----------	1900	832	Dr	55	3	---	---	---	----	45	--------	D,S	
20-2	NE¼SE¼ sec. 20	H. Thieme	----------	1920	836	Dr	198	4	90	90	108	L	----	--------	D,S	Reported clay above rock.
20-3	SE¼SE¼ sec. 20	R. Grote	----------	1914	840	Dr	97	4	---	---	---	L	45	--------	D,S	
21-1	SE¼SW¼ sec. 21	W. Blakey	F. Moody	1948	844	Dr	158	5	80	80	78	L	40	4-48	D,S	80 ft. of casing.
22-1	SE¼SE¼ sec. 22	A. Krueckeberger	----------	----	830	Du	40	42	---	---	---	T(?)	20	--------	N	
27-1	NE¼NE¼ sec. 27	P. Krueckeberger	----------	----	830	Dr	80	2	70	70	10	L	28	1939	D,S	
27-2	SW¼NW¼ sec. 27	W. Thieme	F. Moody	1948	843	Dr	141	5	84	84	57	L	40	4-48	D,S	84 ft. of casing.
27-3	SE¼SW¼ sec. 27	E. Thieme	----------	----	845	Dr	80	3	75	75	5	L	36	--------	D,S	
27-4	SW¼SE¼ sec. 27	----do----------	----------	----	845	Dr	90	2	75	75	15	L	36	--------	D,S	
28-1	SW¼SE¼ sec. 28	H. Geimer	----------	1890	847	Dr	140	2	120	120	20	L	50	--------	D,S	
29-1	NE¼NE¼ sec. 29	D. Grote	F. Moody	1949	844	Dr	173	5	90	90	83	L	50	10-49	D	
29-2	SW¼SW¼ sec. 29	F. Schnepp	----------	----	843	Dv	90	2	---	---	---	G(?)	60	--------	D,S	
29-3	SE¼SW¼ sec. 29	H. Geimer	E. and F. Moody	1942	845	Dr	145	4	75	75	70	L	90(?)	--------	D,S	Reported clay above rock.
29-4	SE¼SE¼ sec. 29	B. Scott	F. Moody	1947	847	Dr	105	4	80	80	25	L	35	11-47	D,S	Reported no gravel above rock; 80 ft. of casing.
30-1	SW¼SW¼ sec. 30	M. Hershey	T. Yoder	1948	834	Dr	129	4	92	92	37	L	63	4-48	D,S	Y, 5 gpm, 4-48.
31-1	NW¼NW¼ sec. 31	M. Frank	J. Yoder	1952	834	Dr	145	4	74	74	71	L	45	3-52	D,S	Dd, 8 ft. bailing 12 gpm, 3-52; soil and clay 0 to 74 ft.; 79 ft. of casing.
31-2	SE¼NE¼ sec. 31	H. Eichenbauer	E. and F. Moody	1942	843	Dr	185	4	130	130	55	L	85	--------	D,S	
31-3	NW¼SW¼ sec. 31	G. Porter	F. Moody	1947	827	Dr	148	6	70	70	78	L	70	10-47	D	Reported till to rock; 70 ft. of casing.
32-1	NW¼NW¼ sec. 32	C. Spuller	V. Morton	1946	843	Dr	130	4	---	---	---	L	85	1946	D,S	
33-1	NW¼NE¼ sec. 33	R. Geimer	----------	1939	847	Dr	230	4	---	---	---	L	50	1939	D,S	
34-1	NE¼NW¼ sec. 34	T. Thieme	----------	1916	848	Dr	70	4	50	50	20	L	36	--------	D,S	
34-2	SW¼SE¼ sec. 34	P. Witch	F. Moody	1947	840	Dr	177	4	92	92	85	L	50	1947	D,S	92 ft. of casing.

T. 27 N., R. 13 E., (KIRKLAND TOWNSHIP)

AdD 1-1	NW¼NW¼ sec. 1	G. Bultemeyer	T. Yoder	1947	816	Dr	68	6	---	64	4	G	14	1947	D	68 ft. of casing.
1-2	NW¼NW¼ sec. 1	V. Goldner	J. Yoder	1950	816	Dr	65	4	---	63	2	G	17	9-16-50	D	L; Dd, 3/4 ft. after 1/4 hr. pumping 10 gpm, 9-16-50; 65 ft. of casing.
1-3	NW¼NW¼ sec. 1	J. Kirchner	----do----------	1952	816	Dr	75	4	---	74	1	G	12	6- 6-52	D	Dd, 4 ft. bailing 16 gpm, 6-6-52; soil and clay 0 to 74 ft; 75 ft. of casing.
1-4	NW¼NW¼ sec. 1	H. Bucher	----------	1903	816	Dr	100	4	---	---	---	G(?)	15	--------	D,S	
1-5	NE¼NW¼ sec. 1	P. Germann	----------	----	816	Dr	60	3	---	---	---	S	13.4	8- 5-47	N	M; well pumped sand.
1-6	NE¼NW¼ sec. 1	----do----------	----------	----	816	Dr	92	6	55	55	37	L	19	--------	D,S	
2-1	NW¼NE¼ sec. 2	J. Gerber	----------	----	823	Du	27	42	---	---	---	T(?)	18.4	5- 6-48	S	M.
2-2	SE¼NE¼ sec. 2	M. Kirchner	----------	----	820	Du	35	42	---	---	---	T	20	--------	D,S	
2-3	NE¼SE¼ sec. 2	H. Brubaker	----------	----	820	Du	30	42	---	---	---	T(?)	15	--------	N	
2-4	NE¼SE¼ sec. 2	----do----------	T. Yoder	1950	820	Dr	63	4	62	62	1	L	18	10-20-50	D,S	Solution opening at 63 ft; clay 0 to 62 ft.; 63 ft. of casing.

Table 7.--Records of wells in Adams County, Indiana--Continued

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 27 N., R. 13 E., (KIRKLAND TOWNSHIP)--Continued																
AdD 2-5	NE¼SW¼ sec. 2	G. Ehlerding	----------	----	826	Dr	92	4	70	70	22	L	21	--------	D,S	W; reported clay above rock; 70 ft. of casing.
2-6	SE¼SE¼ sec. 2	Kirkland Township School	E. Joray	1936	818	Dr	91	4	48	48	43	L	18	1936	P	48 ft. of casing.
2-7	NE¼SW¼ sec. 2	W. Fairbush	J. Hole	1953	826	Dr	91	4	67	67	24	L	20	5- 5-53	D,S	L; Y, 20 gpm, 10-5-53; 67 ft. of casing.
2-8	SE¼SE¼ sec. 2	Mr. Straub	T. Yoder	1953	820	Dr	76	4	48	48	28	L	14	2-10-53	D	Dd, 14 ft. bailing 15 gpm, 2-10-53; soil and clay 0 to 48 ft; 49 ft. of casing.
3-1	NW¼NW¼ sec. 3	G. Gerber	----------	----	835	Du	45	42	---	---	---	G	20	--------	D	
3-2	NW¼NW¼ sec. 3	E. Kolter	T. Yoder	1945	835	Dr	142	4	92	92	50	L	18	1945	D	Reported gravel 65 to 70 ft.; 94 ft. of casing.
4-1	NW¼NW¼ sec. 4	E. Bryan	E. Joray	----	834	Dr	77	4	---	---	---	G	28	--------	D	
4-2	NW¼NW¼ sec. 4	E. Fraughiger	H. and G. Gilliam	----	835	Dr	88	4	75	75	13	L	28	--------	D	
4-3	NE¼NE¼ sec. 4	O. Hildebrand	----------	----	835	Dr	103	4	---	---	---	G	24	--------	D,S	
9-1	NW¼NW¼ sec. 9	J. Sovine	J. Yoder	1951	834	Dr	92	4	67	67	25	L	23	12-10-51	D,S	L; 69 ft. of casing.
9-2	NE¼SE¼ sec. 9	R. Andrews	E. Joray	1923	833	Dr	102	4	78	78	24	L	16	1923	D,S	78 ft. of casing.
9-3	SE¼SE¼ sec. 9	E. Griffith	T. Yoder	1947	833	Dr	105	6	80	80	25	L	24	1947	D,S	Reported no gravel above rock; 82 ft. of casing.
10-1	NW¼NW¼ sec. 10	A. Beineke	E. Joray	1939	838	Dr	122	4	62	62	60	L	26	1939	D,S	62 ft. of casing.
10-2	NE¼SW¼ sec. 10	----do----------	----do----------	1941	832	Dr	80	4	60	60	20	L	17	1941	S	60 ft. of casing.
10-3	NE¼NW¼ sec. 10	O. Bieberick	----do----------	1933	835	Dr	77	4	58	58	19	L	26	1933	D,S	58 ft. of casing.
10-4	SE¼NW¼ sec. 10	----do----------	----do----------	1934	830	Dr	89	4	58	58	31	L	----	--------	S	
11-1	NE¼NE¼ sec. 11	E. Sommer	E. and F. Moody	1943	818	Dr	105	4	80	80	25	L	----	--------	D	
11-2	NE¼NE¼ sec. 11	W. Scherry	T. Yoder	1947	818	Dr	80	4	68	68	12	L	17	Spring 1947	D	70 ft. of casing.
11-3	NE¼SE¼ sec. 11	H. and M. Haggard	E. Joray	1930	820	Dr	118	4	60	60	58	L	24	1930	D,S	60 ft. of casing.
11-4	SW¼SW¼ sec. 11	E. Arnold	F. Moody	1949	823	Dr	101	5	60	60	41	L	20	3-49	D,S	Do.
12-1	NW¼NW¼ sec. 12	Mr. Brown	T. Yoder	1947	818	Dr	85	5	68	68	17	L	17	Spring 1947	D	70 ft. of casing.
12-2	SW¼SW¼ sec. 12	R. Ehrman	J. Yoder	1951	823	Dr	86	4	58	58	28	L	23	1-20-51	D,S	L; Dd, 3 ft. bailing 16 gpm, 1-20-51; 60 ft. of casing.
13-1	NW¼NW¼ sec. 13	F. Stepter	----------	----	823	Dr	140	3	---	---	---	L(?)	18	--------	D,S	
13-2	NE¼SE¼ sec. 13	E. Martin	----------	----	820	Dr	110	4	50	50	60	L	18	--------	D,S	
13-3	SE¼SE¼ sec. 13	E. Gerber	T. Yoder	1951	822	Dr	94	4	45	45	49	L	14	8- 2-51	D,S	L; 46 ft. of casing.
13-4	SW¼SW¼ sec. 13	Kirkland Township School	E. Joray	1931	833	Dr	98	4	55	55	43	L	20	1931	P	55 ft. of casing.
14-1	NW¼SW¼ sec. 14	W. Ehrman	----do----------	1941	830	Dr	84	4	61	61	23	L	24	1941	D,S	61 ft. of casing.
14-2	SE¼SW¼ sec. 14	J. Byerly	----do----------	1931	835	Dr	93	4	71	73	22	L	35	1931	D,S	73 ft. of casing.
14-3	NE¼NE¼ sec. 14	F. Stoneburner	J. Yoder	1955	820	Dr	108	4	58	58	50	L	17	10-28-55	D,S	Dd, 6 ft. pumping 8 gpm, 10-28-55; soil and clay 0 to 58 ft; 60 ft. of casing.
15-1	NE¼NW¼ sec. 15	V. Stoneburner	E. Joray	1935	830	Dr	88	4	60	60	28	L	----	--------	D,S	82 ft. of casing.
15-2	NW¼NE¼ sec. 15	G. Yake	F. Moody	1949	826	Dr	100	5	60	60	40	L	20	3-49	D,S	Y, 15 gpm, 3-49; 60 ft. of casing.
16-1	NW¼NE¼ sec. 16	H. Mankey	E. Joray	1940	834	Dr	88	4	64	64	24	L	29	1940	D,S	64 ft. of casing.
16-2	NE¼NE¼ sec. 16	J. Horne	----do----------	1922	834	Dr	105	4	66	66	39	L	18	1922	D,S	66 ft. of casing.
21-1	NE¼NE¼ sec. 21	Kirkland Township School	----do----------	1937	841	Dr	85	4	56	56	29	L	25	1937	P	56 ft. of casing.
21-2	NW¼SW¼ sec. 21	A. Leimenstall	----do----------	1914	846	Dr	100	4	80	80	20	L	36	1914	D,S	80 ft. of casing.
21-3	SE¼SW¼ sec. 21	R. Brown	----do----------	----	846	Dr	81	4	70	70	11	L	27	----------	D,S	71 ft. of casing.
22-1	NE¼NE¼ sec. 22	J. Roth	T. Yoder	1949	836	Dr	80	6	66	66	12	L	18	9-49	D,S	Dd, 12 ft. pumping 15 gpm, 9-49; 68 ft. of casing.
22-2	SE¼SE¼ sec. 22	E. Arnold	----------	----	830	Dr	118	4	---	---	---	G	24	--------	D,S	
23-1	SE¼SE¼ sec. 23	O. Gerber	T. Yoder	1945	834	Dr	105	4	88	88	17	L	30	1945	D	L; 90 ft. of casing.

AdD 24-1	SW¼SW¼ sec. 24	L. Sauder	E. Joray	----	834	Dr	82	4	---	---	---	G	----	--------	----	82 ft. of casing.
24-2	SW¼SW¼ sec. 24	----do----------	----do----------	----	834	Dr	134	4	120	120	14	L	----	--------	----	
24-3	SE¼SW¼ sec. 24	R. Heller	----do----------	1913	830	Dr	83	4	62	62	21	L	35	1913	D,S	62 ft. of casing.
25-1	NW¼NW¼ sec. 25	J. Brown, Jr.	----do----------	1937	834	Dr	102	4	---	---	---	G	30	1937	D,S	102 ft. of casing.
26-1	NE¼NW¼ sec. 26	W. Scherry	T. Yoder	1948	834	Dr	109	4	90	90	19	L	30	5-48	D,S	92 ft. of casing.
26-2	NW¼NE¼ sec. 26	E. Arnold	----------	----	834	Dr	84	4	---	---	---	G	22	--------	D,S	
26-3	NW¼SW¼ sec. 26	A. Yaney	T. Yoder	1949	834	Dr	106	4	89	89	15	L	26	9-49	D,S	91 ft. of casing.
26-4	SE¼SW¼ sec. 26	F. Adler	E. Yoray	1920	836	Dr	28	4	---	---	---	G	----	--------	D,S	
27-1	NW¼NE¼ sec. 27	J. Aschleman	----do----------	----	836	Dr	83	4	65	65	18	L	26	--------	D,S	65 ft. of casing.
27-2	SW¼SW¼ sec. 27	N. Steffen	T. Yoder	1945	846	Dr	102	4	85	85	17	L	24	1945	D,S	87 ft. of casing.
27-3	SE¼SW¼ sec. 27	W. Yager	E. Joray	1931	840	Dr	88	4	62	62	26	L	30	1931	D,S	W; 62 ft. of casing.
33-1	NE¼SE¼ sec. 33	J. Kaehr	----do----------	----	850	Dr	112	4	82	82	30	L	42	--------	D,S	84 ft. of casing.
33-2	SW¼SW¼ sec. 33	O. and L. Gerber	----do----------	----	861	Dr	100	4	80	80	20	L	55	--------	D,S	81 ft. of casing.
34-1	NW¼NW¼ sec. 34	E. Gerber	----------	----	848	Dr	100	4	---	---	---	L(?)	45	--------	D,S	
34-2	NE¼NE¼ sec. 34	W. Steffen	E. Joray	1931	836	Dr	95	4	74	74	21	L	38	1931	D,S	74 ft. of casing.
34-3	SE¼SE¼ sec. 34	W. Aschleman	T. Yoder	1946	848	Dr	98	4	84	84	14	L	35	Spring 1946	D,S	86 ft. of casing.
35-1	NE¼NE¼ sec. 35	J. Zimmerman	----do----------	1947	836	Dr	118	4	90	90	28	L	28	10-47	D,S	92 ft. of casing.
35-2	SW¼SW¼ sec. 35	E. Kaehr	E. Joray	1910	849	Dr	95	4	---	---	---	L	35	1947	D,S	
36-1	NE¼NE¼ sec. 36	D. Parrish	----do----------	1936	830	Dr	117	4	97	97	20	L	21	1936	D,S	Report boulder clay above rock.
36-2	NE¼SE¼ sec. 36	E. Landis	----do----------	----	838	Dr	109	4	70	70	39	L	36	--------	D,S	70 ft. of casing.
36-3	NE¼SE¼ sec. 36	----do----------	----------	----	838	----	90	3	70	70	20	L	35	--------	----	

T. 27 N., R. 14 E., (WASHINGTON TOWNSHIP)

AdE 2-1	NE¼NW¼ sec. 2	F. Reppert	----------	----	793	Dr	100+	4	40	40	---	L	25	--------	D,S	
2-2	SW¼NW¼ sec. 2	Braden Teeple Co. Inc.	O. Ainsworth	1928	785	Dr	405	8	30	30	375	L	12	1928	N	Y, 125 gpm, 1928; till 0 to 30 ft.; 70 ft. of casing.
3-1	NE¼SE¼ sec. 3	City of Decatur	E. and F. Moody	1934	805	Dr	400	10	45	45	355	L	35	8-34	P	W; Y, 185 gpm, 2-4-46; 49 ft. of casing.
3-2	NW¼SE¼ sec. 3	----do----------	----do----------	1942	803	Dr	400	10	46	46	354	L	43 37.5	2- 1-46 10-42	M. N	L; Y, 100 gpm, 4-5-45; 44 ft. of casing.
3-3	NE¼NE¼ sec. 3	----do----------	----do----------	1945	788	Dr	426	10	32	32	394	L	41 25.5	2-46 8-45	P	L; W 34 ft. of casing.
3-4	NE¼NE¼ sec. 3	----do----------	F. Moody	1951	788	Dr	400	10	30	30	370	L	22.7	8-51	P	L; Dd, 109 ft. pumping 172 gpm, 8-51; 41 ft. of casing.
3-5	NW¼NE¼ sec. 3	McConnell and Son, Inc.	E. and F. Moody	----	796	Dr	76	4	40	40	36	L	28.8	3-21-50	----	M; observation well Adams 4; 40 ft. of casing.
3-6	NW¼NE¼ sec. 3	R. Kalver	----do----------	----	796	Dr	400	9	45	45	365	L	----	--------	I	Y, 90 gpm, 1946.
3-7	SE¼NW¼ sec. 3	Steury Locker Service	R. Speicher	1937	802	Dr	69	4	---	---	---	L	27	--------	N	
3-8	SE¼NW¼ sec. 3	----do----------	E. and F. Moody	----	802	Dr	200	6	40	40	160	L	54(?)	--------	I	
3-9	SW¼NE¼ sec. 3	A. Aschleman	----do----------	----	798	Dr	160	4	50	50	110	L	40	--------	D	
3-10	SE¼NE¼ sec. 3	N. Rich	----do----------	----	798	Dr	203	6	60	60	143	L	----	--------	I	
3-11	NW¼SE¼ sec. 3	L. Springer	----------	----	802	Dr	84	4	---	---	---	L	39.9	3- 3-46	N	M.
3-12	NW¼SE¼ sec. 3	W. Foor	----------	----	802	Dr	74	4	---	---	---	L	45	3- 3-46	N	M.
3-13	NE¼SE¼ sec. 3	R. Burdg	E. and F. Moody	----	800	Dr	---	---	140	140	---	L	----	--------	----	
3-14	NW¼SE¼ sec. 3	Kraft Foods Co.	----do----------	1934	800	Dr	400	8 to 5	40	40	360	L	---	--------	N	Y, 200 gpm, 1944.
4-1	NW¼NE¼ sec. 4	O. Lankenaw	F. Moody	1949	797	Dr	106	6	40	40	66	L	32	1949	D	Dd, 8 ft. bailing.
4-2	SW¼SW¼ sec. 4	O. Schultz	Mr. Smith	1910	816	Dr	100	4	80	80	20	L	----	--------	D,S	
4-3	SE¼SE¼ sec. 4	R. Nyffeler	J. Yoder	1952	803	Dr	94	4	37	37	57	L	24	4- 7-52	D	Dd, 10 ft. bailing 10 gpm, 4-7-52; soil and clay 0 to 37 ft.; 39 ft. of casing.
5-1	NE¼NE¼ sec. 5	J. Appleman	E. and F. Moody	1946	800	Dr	118	6	80	80	38	L	22	--------	D,S	Reported till to rock.
5-2	SW¼SE¼ sec. 5	R. Voglewede	O. Ainsworth	----	818	Dr	110	4	80	80	30	L	40	--------	D,S	
6-1	NW¼NE¼ sec. 6	J. Geels	R. Speicher	1940	803	Dr	87	4	69	69	18	L	11	1940	D,S	
6-2	SE¼NE¼ sec. 6	E. Tumbleson	----------	1850 (?)	810	Du	36	28	---	---	---	G	17	--------	D,S	Bottom 6 ft. bored.
6-3	SW¼SW¼ sec. 6	United Missionary Church	----------	1944	814	Dr	100	4	---	---	---	L	18	--------	P	
6-4	SE¼SE¼ sec. 6	A. Logerman	----------	1920 (?)	817	Dr	60	4	---	---	---	G	16	1920(?)	D,S	
7-1	NW¼NE¼ sec. 7	E. Castella	----------	----	814	Dr	100	4	---	---	---	G	16	--------	D,S	100 ft. of casing.
7-2	NE¼NE¼ sec. 7	----------	O. Ainsworth	----	814	Dr	200	4	---	25	175	S	----	--------	N	Clay 0 to 25 ft.
7-3	NE¼SE¼ sec. 7	J. Lengrick	----------	1924	818	Dr	90	4	---	---	---	G	----	--------	D,S	
8-1	SW¼NW¼ sec. 8	C. Lengrick	----------	1912	816	Dr	90	4	---	---	---	G	----	--------	D,S	
8-2	SW¼NE¼ sec. 8	E. Mutschler	----------	----	817	Dr	155	4	138	138	17	L	----	--------	D,S	
8-3	NE¼SE¼ sec. 8	----do----------	----------	1932	817	Dr	100	4	---	---	---	G	----	--------	D,S	
8-4	SE¼NE¼ sec. 8	R. Voglewede	G. Mumma	1914	817	Dr	168	6	138	138	30	L	14	1914	D,S	
9-1	NE¼NE¼ sec. 9	B. and E. Eiting	E. and F. Moody	1948	805	Dr	81	6 to 4	39	39	42	L	30	7-48	S	
9-2	SE¼NE¼ sec. 9	----do----------	----------	----	808	Dr	75	----	40	40	35	L	----	--------	D	
9-3	SW¼NW¼ sec. 9	J. Kohne	O. Ainsworth	1904	816	Dr	126	4	113	113	13	L	14	--------	D,S	113 ft. of casing.

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 27 N., R. 14 E., (WASHINGTON TOWNSHIP)--Continued																
AdE 9-4	NE¼SW¼ sec. 9	E. Mutschler	----------	----	813	Dr	145	4	102	102	43	L	----	--------	D,S	106 ft. of casing.
9-5	SE¼SW¼ sec. 9	H. Loshe	----------	----	814	Dr	90	4	---	---	---	G	16	--------	D,S	
10-1	SE¼NE¼ sec. 10	City of Decatur	E. and F. Moody	1937	803	Dr	400	10	38	38	362	L	32	1-24-44	P	L; W; Y, 100 gpm, 1-46; 40 ft. of casing.
11-1	NW¼NW¼ sec. 11	L. Brokaw	----do----------	1946	803	Dr	127	6	47	47	80	L	30	6-46	D	
11-2	SW¼NW¼ sec. 11	F. Owens	----do----------	1946	798	Dr	121	6	41	41	80	L	30	7-46	D	W; Y, 15 gpm, 7-46.
11-3	NE¼NW¼ sec. 11	C. Yost	----do----------	----	795	Dr	240	6	180	180	60	L	30	--------	D,S	Reported hardpan at 100 ft.; 184 ft. of casing.
11-4	SW¼NE¼ sec. 11	----do----------	O. Ainsworth	----	797	Dr	190	----	----	----	----	S	----	--------	S	
11-5	SW¼NE¼ sec. 11	----do----------	E. and F. Moody	1925	795	Dr	130	8 to 6	100	100	30	L	30	--------	D,S	Dd, 10 ft. after 24 hrs. pumping 6 gpm, 1949; 100 ft. of casing.
11-6	SW¼SW¼ sec. 11	L. Rumschlag	R. Speicher	1924	807	Dr	175+	4	---	75	100	S,G	20	--------	D,S	75 ft. of casing.
11-7	SW¼SW¼ sec. 11	H. Rumschlag	J. Hole	1949	807	Dr	64	4	---	61	3	G	15.6	10-19-49	D	W; no Dd reported bailing 28 gpm, 1949; reported no rock to 200 ft.; 65 ft. of casing.
11-8	NE¼SE¼ sec. 11	T. Witte	----------	1920	798	Dr	170	5	---	---	---	L	19	--------	D	Reported gravel at 70 ft.
11-9	NE¼SE¼ sec. 11	F. Aurand	Mr. Dellinger	1927	800	Dr	63	5	---	58	5	G	14	1927	D,S	No Dd reported after 2 days of pumping 5 gpm.
11-10	SE¼SE¼ sec. 11	D. Smith	----do----------	1929 (?)	802	Dr	75	4	40	40	35	L	17	--------	D,S	
12-1	SW¼NW¼ sec. 12	S. McMillen	E. and F. Moody	----	798	Dr	130	5	90	90	40	L	18	--------	D,S	94 ft. of casing.
12-2	NW¼SE¼ sec. 12	B. McMillen	----do----------	1949	803	Dr	120	6	60	60	60	L	26	7-49	D,S	60 ft. of casing.
12-3	NE¼SW¼ sec. 12	----do----------	----do----------	----	798	Dr	120	6	60	60	60	L	----	--------	D	
13-1	NE¼NE¼ sec. 13	R. Price	F. Moody	----	803	Dr	140	5	40	40	100	L	18	--------	D,S	Report clay to rock; 42 ft. of casing.
13-2	SW¼NW¼ sec. 13	Adams County Farm	E. and F. Moody	1943	804	Dr	130	6	60	60	70	L	----	--------	D,S	60 ft. of casing.
13-3	SE¼NE¼ sec. 13	R. Taylor	J. Hole	1942	803	Dr	136	4	60	60	76	L	20	--------	D,S	L.
13-4	SW¼SE¼ sec. 13	C. Horshey	----do----------	1944	796	Dr	65	4	36	36	29	L	14	1944	D,S	38 ft. of casing.
14-1	NW¼NW¼ sec. 14	W. Meyers	R. Speicher	1939	807	Dr	74	4	---	---	---	G	20	1949	D,S	74 ft. of casing.
14-2	SW¼NW¼ sec. 14	H. Bornes	----------	1890	805	Du	30	60	---	---	---	G(?)	10(?)	--------	D,S	
14-3	NE¼SE¼ sec. 14	C. Cook	E. and F. Moody	1949	808	Dr	168	4	50	50	118	L	15	1948	D,S	50 ft. of casing.
14-4	SW¼SW¼ sec. 14	P. Miller	----do----------	1935	806	Dr	82	4	40	40	42	L	18	12-48	D,S	45 ft. of casing.
14-5	SW¼SE¼ sec. 14	F. Grimm	----------	1900	810	Dr	100	2	---	---	---	L	20	4-49	D,S	
15-1	SW¼NW¼ sec. 15	B. Eaton	F. Moody	----	815	Dr	80	4	---	78	2	G	20	--------	D,S	
15-2	NE¼SE¼ sec. 15	F. Smitley	----------	1942	806	Dr	70	4	40	40	30	L	15	--------	D,S	
15-3	SE¼SW¼ sec. 15	J. Miller	Mr. Steele	1905	813	Dr	68	4	40	40	28	L	20	--------	D,S	
16-1	NW¼NW¼ sec. 16	L. Lengrich	R. Speicher	1923	812	Dr	92	4	75	75	17	L	16	1923	D,S	80 ft. of casing.
16-2	NW¼NE¼ sec. 16	M. Smith	----------	1925	810	Dr	94	4	70	70	24	L	16	--------	D,S	70 ft. of casing.
16-3	SW¼SW¼ sec. 16	F. Heiman	----------	1908	815	Dr	60	4	50	50	10	L	18	--------	D,S	
17-1	NE¼NE¼ sec. 17	H. Kohne	----------	----	812	Dr	204	4	80	80	124	L	16	--------	S	
17-2	SE¼NE¼ sec. 17	P. Miller	----------	----	812	Dr	162	4	80	80	82	L	16	--------	D,S	80 ft. of casing.
17-3	SW¼SE¼ sec. 17	C. Poling	----------	1875	819	Du	40	30	---	---	---	T(?)	25	--------	D,S	T, 50; reported in clay.
18-1	SE¼SE¼ sec. 18	T. Johnston	P. Roth	1910	831	Du,Dr	70	30 to 4	50	50	20	L	30	--------	D,S	
19-1	NE¼NE¼ sec. 19	R. Owens	E. Joray	1939	831	Dr	70	4	50	50	20	L	----	--------	D,S	
19-2	SE¼SW¼ sec. 19	T. Baltzell	----------	1892	824	Dr	117	4	100	100	17	L	14	1892	D,S	Reported gravel at 10 ft.
20-1	NW¼NW¼ sec. 20	D. Rhinehart	E. Joray	1921	828	Dr	67	4	48	48	19	L	24	1921	D,S	48 ft. of casing.
20-2	NW¼NE¼ sec. 20	J. Stootenberry	----------	1875	820	Du	45	42	---	---	---	T(?)	35	--------	S	Reported in clay.
20-3	NW¼SW¼ sec. 20	H. Andrews	E. Joray	1925	823	Dr	74	4	47	47	27	L	15	--------	D,S	47 ft. of casing.
21-1	NE¼NW¼ sec. 21	F. and M. Baker	----------	----	816	Dr	90	4	70	70	20	L	----	--------	D,S	
21-2	NW¼NE¼ sec. 21	B. Walters	T. Yoder	1945	816	Dr	120	4	98	98	22	L	30	Spring 1945	D,S	Y, 10 gpm, Spring, 1945; reported gravel and boulders at 90 ft; 100 ft. of casing.
21-3	SE¼SW¼ sec. 21	C. Schepp	F. Moody	1948	822	Dr	109	5	---	90	19	G	20	1948	D,S	
22-1	NW¼SW¼ sec. 22	J. and A. Schultz	T. Yoder	1949	815	Dr	116	4	---	---	---	G	----	--------	D,S	
22-2	SE¼SW¼ sec. 22	K. Reed	----------	1942	815	Dr	64	4	50	50	14	L	----	--------	D,S	
23-1	NW¼NW¼ sec. 23	F. Lundin	T. Yoder	1945	806	Dr	45	4	30	30	15	L	14	1945	D,S	Y, 15 gpm, Spring 1945; 32 ft. of casing.

AdE 23-2	SW¼SW¼ sec. 23	C. Colchin	Mr. Linnmeyer	1900	812	Dr	80	4	40	40	40	L	14	--------	S	
23-3	SW¼SW¼ sec. 23	----do----------	----do----------	1910	812	Dr	119	4	40	40	79	L	19	--------	D	
24-1	NE¼NW¼ sec. 24	O. Johnson	R. Speicher	1938	810	Dr	56	4	---	---	---	L	22	--------	D,S	
24-2	NE¼NW¼ sec. 24 SE¼	L. Tauge	N. Hole	1949	800	Dr	76	4	38	38	38	L	22	Spring 1949	D,S	Y, 10 gpm, Spring, 1949; reported gravel at 37 ft.
25-1	NE¼SE¼ sec. 25	H. Hirsh	----------	1929	810	Dr	150	4	50	50	100	L	25	--------	D,S	
25-2	SW¼SW¼ sec. 25	J. Chilcote	R. Speicher	1934	805	Dr	52	4	20	20	32	L	7	--------	D,S	
26-1	SW¼NW¼ sec. 26	H. Braun	J. Hole	1949	816	Dr	68	4	40	40	28	L	14	1949	D	Reported clay to rock, no gravel.
27-1	NW¼NW¼ sec. 27	J. Schultz	T. Yoder	1949	815	Dr	118	4	90	90	28	L	24	1949	D,S	Y, 15 gpm, 1949; 90 ft. of casing.
27-2	NE¼NE¼ sec. 27	V. Baltzell	E. Yoray	1924	814	Dr	61	4	40	40	21	L	9	1924	D,S	42 ft. of casing.
27-3	SE¼SE¼ sec. 27	L. Graham	----------	----	818	Dr	130	4	85	85	45	L	12	1949	D,S	
29-1	NW¼NW¼ sec. 29	T. Baltzell	D. Moore	1893	823	Dr	110	2	90	90	20	L	20	--------	D,S	
29-2	NE¼SE¼ sec. 29	W. Michaels	----------	----	823	Dr	70	4	55	55	15	L	20	--------	D,S	
29-3	SW¼SW¼ sec. 29	J. McKean	E. Joray	1938	830	Dr	75	4	57	57	18	L	22	--------	D,S	57 ft. of casing.
30-1	NW¼NW¼ sec. 30	H. Andrews	----do----------	1909	825	Dr	90	4	78	78	12	L	18	--------	D,S	Reported gravel above rock.
30-2	NE¼NE¼ sec. 30	----do----------	----------	----	823	Dr	---	----	160	---	---	L	----	--------	T	
30-3	NE¼SE¼ sec. 30	J. Stoneburner	E. Joray	1912	825	Dr	86	4	---	---	---	G	18	--------	D,S	
30-4	SW¼SE¼ sec. 30	S. Engle	----------	----	830	Dr	86	4	---	---	---	G	23	--------	D,S	86 ft. of casing.
31-1	NW¼NE¼ sec. 31	L. Engle	E. Joray	1921	830	Dr	93	4	---	---	---	G	16	--------	D,S	93 ft. of casing.
31-2	SW¼NW¼ sec. 31	C. Adler	----do----------	1930	829	Dr	106	4	85	85	21	L	14	--------	D,S	88 ft. of casing.
31-3	NE¼SE¼ sec. 31	H. Stepler	----do----------	1918	830	Dr	83	4	---	---	---	S,G	15	--------	D,S	83 ft. of casing.
31-4	SW¼SW¼ sec. 31	K. Sanders	----do----------	1904	838	Dr	110	4	80	80	30	L	35	1949	D,S	
31-5	SW¼SE¼ sec. 31	W. Bluhm	----do----------	----	830	Dr	79	4	66	66	13	L	18	1949	D,S	67 ft. of casing.
32-1	SW¼NW¼ sec. 32	W. Reppert	----do----------	1935	830	Dr	80	4	57	57	23	L	27	1935	D,S	57 ft. of casing.
32-2	SE¼NE¼ sec. 32	R. Andrews	E. and F. Moody	1942	823	Dr	89	4	---	80	9	G	22	1949	D,S	
32-3	SE¼SW¼ sec. 32	S. Gould	E. Joray	1918	828	Dr	79	4	---	---	---	G	21	1950	D,S	Dd, 12 ft. bailing 7 gpm, 8-50.
32-4	SW¼SE¼ sec. 32	----do----------	J. Yoder	1951	828	Dr	109	4	94	94	15	L	21	1951	D,S	L; Dd, 1 ft. bailing 15 gpm, 4-4-51; 95 ft. of casing.
32-5	SE¼SE¼ sec. 32	J. McKean	E. Joray	1919	823	Dr	120	4	---	115	5	G	18	1919	D,S	120 ft. of casing.
33-1	NW¼SW¼ sec. 33	A. Longrich	T. Yoder	1948	821	Dr	68	4	56	56	12	L	16	1948	D	56 ft. of casing.
33-2	SW¼SW¼ sec. 33	C. Coppess	----do----------	1950	821	Dr	102	4	---	100	2	G	15	3-50	D	W; Y, 23 gpm, 3-50; 102 ft. of casing.
33-3	SW¼SW¼ sec. 33	H. Smith	----do----------	1947	821	Dr	233	4	---	231	2	G	12	10-47	D	W; reported quicksand above gravel; 233 ft. of casing.
33-4	SE¼SW¼ sec. 33	P. Bohner	J. Yoder	1951	821	Dr	234	4	---	233	1	G	14	3-24-51	D	L; no Dd reported bailing 22 gpm, 3-24-51; 234 ft. of casing.
34-1	NW¼SW¼ sec. 34	C. Graham	E. Joray	1919	818	Dr	94	4	49	49	45	L	14	1919	D,S	49 ft. of casing.
34-2	SW¼SW¼ sec. 34	Mr. Parrish	T. Yoder	1946	819	Dr	64	4	---	62	2	G	18	1946	D	64 ft. of casing.
34-3	SW¼SW¼ sec. 34	A. Mitchell	----do----------	1945	819	Dr	72	4	---	70	2	G	18	1945	D	72 ft. of casing.
34-4	SW¼SW¼ sec. 34	D. Rich	----do----------	1950	819	Dr	120	4	81	81	39	L	18	9-50	D	81 ft. of casing.
35-1	NW¼NW¼ sec. 35	G. Thomas	----do----------	1948	818	Dr	68	6	40	40	28	L	18	Fall 1948	D,S	40 ft. of casing.
35-2	NE¼NE¼ sec. 35	Washington Township School	----------	----	807	Dr	50	4	20	20	30	L	7	--------	P	
35-3	NW¼SW¼ sec. 35	M. Thomas	E. Joray	1927	820	Dr	66	4	38	38	28	L	15	1927	D,S	40 ft. of casing.
36-1	NW¼NE¼ sec. 36	C. Marchand	----do----------	----	813	Dr	41	4	24	24	17	L	15	---------	D,S	Red clay 0 to 24 ft.; 26 ft. of casing.
36-2	NE¼SE¼ sec. 36	L. Stump	J. Hole	1947	814	Dr	87	4	57	57	30	L	25	1947	D,S	62 ft. of casing.
36-3	SW¼SW¼ sec. 36	H. M. Cook	J. Dague	1914	816	Dr	44	4	30	30	14	L	13	--------	D,S	Y, 10 gpm.
36-4	SE¼SW¼ sec. 36	H. B. Cook	----------	1900	815	Dr	44	2	30	30	14	L	13	--------	D,S	Y, 10 gpm.

T. 27 N., R. 15 E., (ST. MARYS TOWNSHIP)

AdF 3-1	NE¼NW¼ sec. 3	W. Miller	----------	1885	836	Dr	93	----	90	90	3	L	----	--------	N	
3-2	NE¼NW¼ sec. 3	----do----------	E. and F. Moody	1938	836	Dr	200	4	90	90	110	L	45	--------	D,S	
4-1	NW¼NW¼ sec. 4	W. Alfather	O. Ainsworth	----	837	Dr	120	4	60	60	60	L	50	--------	D,S	
4-2	SW¼NW¼ sec. 4	O. Shifferly	C. Dellinger	1930	845	Dr	212	4	75	75	137	L	50	--------	D,S	
4-3	SE¼NE¼ sec. 4	J. Dailey	O. Ainsworth	----	839	Dr	160	4	65	65	95	L	50	--------	D,S	W.
4-4	NW¼SE¼ sec. 4	F. Kennedy	N. Hole	1949	840	Dr	96	4	---	90	6	G	45	1-49	D,S	Reported clay to rock; 67 ft. of casing.
5-1	SW¼NE¼ sec. 5	J. Chapman	O. Ainsworth	----	841	Dr	150	4	60	60	90	L	50	--------	D,S	Dd, 5 ft. pumping 21 gpm, 1-49.
5-2	NW¼SE¼ sec. 5	W. Johnson	N. Hole	1949	844	Dr	112	4	84	84	28	L	37	Fall 1949	D,S	L.
5-3	SE¼SE¼ sec. 5	E. Ross	O. Ainsworth	----	832	Dr	120	4	40	40	80	L	50	--------	D,S	Reported clay to rock; 43 ft. of casing.
6-1	SW¼SW¼ sec. 6	C. Shaffer	----------	1900	820	Dr	96	2	---	---	---	L	40	--------	D,S	Reported sulfur water.
6-2	SW¼SE¼ sec. 6	R. Schaffer	T. Yoder	1948	828	Dr	118	5	85	85	33	L	24	1948	D,S	92 ft. of casing.
7-1	SE¼NW¼ sec. 7	K. Butler	J. Hole	1950	801	Dr	143	4	42	42	106	L	12	4-50	D,S	Dd, 4 ft. after 1 hr. pumping 20 gpm, 4-50; reported clay to 40 ft. 44 ft. of casing.
7-2	S½NE¼ sec. 7	----do----------	R. Speicher	1922	808	Dr	97	4	40	40	57	L	22	--------	D,S	
7-3	S½NW¼ sec. 7	J. Folk and D Dailey	----do----------	----	801	Dr	60	4	---	---	---	G	15	--------	D,S	
7-4	NW¼SE¼ sec. 7	K. Butler	G. Mumma	1910	806	Dr	250	4	---	---	---	L	15	--------	D,S	
8-1	NE¼SW¼ sec. 8	R. Sprunger	J. Hole	----	810	Dr	75	4	35	35	40	L	19	--------	D,S	38 ft. of casing.

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 27 N., R. 15 E. (ST. MARYS TOWNSHIP)--Continued																
AdF 8-2	SE¼SE¼ sec. 8	T. Bebout	O. Ainsworth	1920	815	Dr	90	4	52	52	38	L	40	1920	D,S	55 ft. of casing.
8-3	NE¼SE¼ sec. 8	Mr. Andrews	J. Hole	----	827	Dr	105	4	70	70	35	L	35	--------	D	
9-1	SW¼NE¼ sec. 9	W. Reichert	T. Yoder	1949	820	Dr	140	4	60	60	80	L	20	4-49	D,S	62 ft. of casing.
9-2	NW¼SW¼ sec. 9	Mr. Chronister	N. Hole	1945	827	Dr	101	4	70	70	31	L	33	1945	D	L; 76 ft. of casing.
10-1	NE¼SE¼ sec. 10	R. Meyers	E. and F. Moody	1935	836	Dr	135	4	90	90	45	L	----	--------	D,S	
16-1	SW¼NE¼ sec. 16	T. Spangler	J. Hole	1953	825	Dr	117	4	50	50	67	L	20	3- 1-53	D,S	L; Dd, 8 ft. pumping 21 gpm, 3-1-53.
17-1	SE¼SE¼ sec. 17	M. Colter	N. Hole	1947	795	Dr	72	4	26	26	46	L	19	1947	D,S	Reported clay to 26 ft.
18-1	NW¼NW¼ sec. 18	Mr. Bitner	J. Hole	----	802	Dr	125	4	32	32	93	L	10	--------	D	
18-2	NE¼NE¼ sec. 18	R. McAharn	----do----------	1947	795	Dr	66	4	23	23	43	L	16	1947	D,S	26 ft. of casing.
18-3	SE¼NW¼ sec. 18	S. Dague	----do----------	1948	799	Dr	145	4	40	40	105	L	25	1949	D	
18-4	NW¼SW¼ sec. 18	J. Ellsworth	----------	----	796	Dr	125	4	40	40	85	L	20	1949	D,S	
19-1	NW¼NW¼ sec. 19	O. Ratcliff	----------	----	796	Dr	150	4	40	40	110	L	25	--------	D,S	
19-2	NE¼NW¼ sec. 19	R. Martin	N. Hole	1947	805	Dr	136	4	60	60	76	L	20	1947	D,S	L; 83 ft. of casing.
20-1	NE¼NW¼ sec. 20	M. Werling	J. Hole	1950	803	Dr	67	4	35	35	32	L	18	5-50	D,S	39 ft. of casing.
20-2	NE¼NE¼ sec. 20	J. Everett	N. Hole	1947	795	Dr	68	4	28	28	40	L	21	1947	D,S	L; 32 ft. of casing.
20-3	SW¼NW¼ sec. 20	S. Dague	J. Hole	----	800	Dr	90	4	35	35	55	L	13	--------	D	No Dd reported pumping 28 gpm; reported mud to 35 ft.
20-4	NE¼SE¼ sec. 20	Mr. Evans	----do----------	----	797	----	108	4	28	28	80	L	22	--------	D	
20-5	SE¼SE¼ sec. 20	O. Dague	----do----------	----	794	Dr	70	4	28	28	42	L	15	--------	D	29 ft. of casing.
20-6	SE¼SE¼ sec. 20	Mr. Everett	J. Hole	----	794	Dr	68	4	27	27	41	L	16	--------	D	Dd, 1 ft. after 1 hr. pumping 28 gpm; reported clay to 27 ft.; 27 ft. of casing.
21-1	SW¼SW¼ sec. 21	E. Melching	N. Hole	1945	796	Dr	91	4	34	34	57	L	20	1945	D	L; Dd, 2 ft. pumping 21 gpm; 38 ft. of casing.
21-2	NW¼NE¼ sec. 22	E. and R. Fisher	S. Jutte	1948	804	Dr	1224	8 to 6	39	---	---	----	----	--------	T	L.
27-1	SE¼SW¼ sec. 27	J. King	N. Hole	1947	794	Dr	58	4	35	35	23	L	20	Spring 1947	D,S	L; 40 ft. of casing.
28-1	NE¼NW¼ sec. 28	J. Haberstadt	J. Hole	1947	795	Dr	49	4	25	25	24	L	14	1947	D	28 ft. of casing.
31-1	SW¼NW¼ sec. 31	H. Martz	----------	----	812	Dr	55	4	23	23	32	L	----	--------	D,S	
32-1	NE¼NE¼ sec. 32	B. Custer	E. Joray	----	805	Dr	40	4	---	---	---	L	15	--------	D,S	
T. 26 N., R. 13 E., (FRENCH TOWNSHIP)																
AdG 1-1	NW¼NW¼ sec. 1	J. Kaehr	----do----------	1936	842	Dr	108	4	71	71	37	L	20	1936	D,S	72 ft. of casing.
1-2	NW¼NE¼ sec. 1	L. Engle	----------	1940	841	Dr	130	4	68	68	62	L	25	1940	D,S	
2-1	SW¼SE¼ sec. 2	B. Seesenguth	E. Joray	----	848	Dr	---	4	83	83	---	L	----	--------	D,S	
2-2	SE¼SE¼ sec. 2	French Township School	----do----------	----	847	Dr	134	4	---	---	---	G	25	--------	P	Reported sand 40 to 45 ft.
3-1	NW¼SW¼ sec. 3	A. Geisel	----do----------	1911	856	Dr	89	4	65	65	24	L	45	1911	D,S	
4-1	SE¼NE¼ sec. 4	L. Gerber	----do----------	1914	860	Dr	87	4	68	68	19	L	44	1914	D,S	68 ft. of casing.
4-2	SW¼SW¼ sec. 4	E. and F. Reinecck	----do----------	1914	863	Dr	87	4	---	---	---	G	40	1914	D,S	87 ft. of casing.
9-1	SE¼NW¼ sec. 9	S. Kaehr	----do----------	1908	860	Dr	131	4	---	---	---	G	35	1908	N	
9-2	SW¼SW¼ sec. 9	A. Kipfer	----do----------	1910	868	Dr	137	4	98	98	39	L	57	1910	D,S	99 ft. of casing.
10-1	SE¼SE¼ sec. 10	I. and C. Liebig	----do----------	1915	855	Dr	96	4	81	81	15	L	48	1915	D,S	83 ft. of casing.
11-1	NW¼NW¼ sec. 11	E. Hegerly	----do----------	1922	852	Dr	94	4	74	74	20	L	38	1922	D,S	76 ft. of casing.
11-2	SW¼NW¼ sec. 11	M. Von Bergen	----do----------	1922	850	Dr	112	4	87	87	25	L	43	1922	D,S	87 ft. of casing.
11-3	SW¼SW¼ sec. 11	G. Ringger	----do----------	1918	853	Dr	182	4	---	---	---	G	37	1918	N	182 ft. of casing.
11-4	SW¼SW¼ sec. 11	----do----------	T. Yoder	1949	853	Dr	188	4	---	184	4	G	24	4-49	D,S	Reported red mud above gravel; 188 ft. of casing.
12-1	NE¼NW¼ sec. 12	W. Moser	E. Joray	1918	845	Dr	103	4	---	---	---	G	38	1918	D,S	Reported sand, clay, and gravelly clay above gravel; 103 ft. of casing.
12-2	SW¼SW¼ sec. 12	J. Isch	----do----------	1933	854	Dr	105	4	83	83	22	L	50	1933	D,S	83 ft. of casing.
13-1	SW¼SW¼ sec. 13	E. Fox	----do----------	1938	860	Dr	102	4	74	74	28	L	38	1938	D,S	W; 76 ft. of casing.

Ad-13-2	SE¼SW¼ sec. 13	E. Beer	E. Joray	1910	852	Dr	78	4	64	64	14	L	32	1910	N	64 ft. of casing.
13-3	SE¼SW¼ sec. 13	----do----------	T. Yoder	1946	852	Dr	80	4	64	64	16	L	32	Fall 1946	D,S	66 ft. of casing.
13-4	SW¼SE¼ sec. 13	A. Hockenjos	E. Joray	1911	850	Dr	87	4	70	70	17	L	35	1911	N	70 ft. of casing.
13-5	SW¼SE¼ sec. 13	----do----------	T. Yoder	1947	850	Dr	90	6	72	72	18	L	32	1947	D,S	74 ft. of casing.
14-1	NW¼NW¼ sec. 14	G. Ringger	E. Joray	----	853	Dr	90	4	---	---	---	G	----	--------	S	90 ft. of casing.
14-2	NE¼NW¼ sec. 14	A. Reinhard	----do----------	1918	854	Dr	103	4	86	86	17	L	35	1918	D,S	87 ft. of casing.
14-3	NE¼NE¼ sec. 14	A. Klickman	----do----------	1925	854	Dr	121	4	---	101	20	G	35	1925	D,S	121 ft. of casing.
14-4	NE¼SE¼ sec. 14	A. Beer	----do----------	1908	856	Dr	200	4	100	100	100	L	35	1908	S	
15-1	NE¼SE¼ sec. 15	A. Kohler	----do----------	1915	864	Dr	99	4	69	69	30	L	45	1915	D,S	70 ft. of casing.
15-2	SW¼SW¼ sec. 15	S. Baumgartner.	----do----------	1912	865	Dr	101	4	87	87	14	L	55	1912	D,S	89 ft. of casing.
15-3	SE¼SW¼ sec. 15	D. Baumgartner	----do----------	1912	866	Dr	109	4	81	81	28	L	65	1912	D,S	
15-4	SW¼SE¼ sec. 15	M. Baumgartner	----do----------	1930	866	Dr	136	4	76	76	60	L	65	1930	D,S	77 ft. of casing.
15-5	SE¼SE¼ sec. 15	C. Baumgartner	----do----------	1915	866	Dr	107	4	78	78	29	L	58	1915	D,S	78 ft. of casing.
16-1	NW¼NW¼ sec. 16	D. Schwartz	----do----------	1914	870	Dr	138	4	94	94	44	L	60	1914	D,S	94 ft. of casing.
16-2	SW¼SW¼ sec. 16	E. Joray	----do----------	1917	864	Dr	79	4	---	77	2	G	51	--------	D,S	
16-3	SW¼SE¼ sec. 16	E. Moser	----do----------	1908	865	Dr	108	4	100	100	8	L	55	1908	D,S	100 ft. of casing.
21-1	NW¼NE¼ sec. 21	----do----------	----do----------	1939	840	Dr	75	4	57	57	18	L	40	1939	D,S	57 ft. of casing.
21-2	NW¼SW¼ sec. 21	J. Lobsinger	----do----------	1924	825	Dr	53	4	42	42	11	L	----	--------	D,S	42 ft. of casing.
22-1	NW¼NW¼ sec. 22	J. Baumgartner	----do----------	1933	865	Dr	116	4	84	84	32	L	75	1933	D,S	90 ft. of casing.
22-2	NE¼NW¼ sec. 22	A. Schlickman	----do----------	1919	865	Dr	119	4	84	84	35	L	65	1919	D,S	
22-3	SE¼NE¼ sec. 22	W. Feichter	----do----------	1917	870	Dr	110	4	70	70	40	L	58	1917	D,S	72 ft. of casing.
22-4	NW¼SW¼ sec. 22	E. Culver	----do----------	1895	842	Dr	285	4	40	40	245	L	25	--------	S	
22-5	SW¼SW¼ sec. 22	----do----------	----do----------	1911	838	Dr	57	4	31	31	26	L	20	1911	D,S	31 ft. of casing.
23-1	NW¼NE¼ sec. 23	A. Beer	----do----------	1918	862	Dr	145	4	---	---	---	G	48	1918	D,S	145 ft. of casing.
24-1	NW¼SW¼ sec. 24	C. Lantis	----do----------	1913	863	Dr	103	4	68	68	35	L	38	1913	D,S	70 ft. of casing.
24-2	NE¼SE¼ sec. 24	Mr. Mulliman	T. Yoder	1952	853	Dr	91	4	58	58	33	L	40	7- 7-52	D,S	Dd, 5 ft. bailing 16 gpm, 7-7-52; top soil and clay 0 to 58 ft.; small solution crevice at 91 ft.; 60 ft. of casing.
24-3	SW¼SW¼ sec. 24	J. Moser	----do----------	1945	856	Dr	84	4	69	69	15	L	34	8-45	D,S	71 ft. of casing.
24-4	SW¼SE¼ sec. 24	----do----------	E. Joray	1912	853	Dr	120	4	51	51	69	L	38	1912	D,S	53 ft. of casing.
25-1	NW¼NW¼ sec. 25	H. Ziegler	T. Yoder	1942	856	Dr	90	4	80	80	10	L	34	1942	D,S	Solution opening from 86 to 90 ft.; 82 ft. of casing.
25-2	SW¼SW¼ sec. 25	D. Reinhard	E. Joray	1906	859	Dr	135	4	60	60	65	L	40	1906	D,S	
27-1	NE¼NE¼ sec. 27	A. McAlhaney	----do----------	1918	836	Dr	40	4	37	37	3	L	15	1918	D,S	Lenses of red clay in limestone; 38 ft. of casing.
27-2	SE¼NW¼ sec. 27	F. Liechty	T. Yoder	1934	828	Dr	52	4	38	38	14	L	12	9-34	D,S	Solution opening from 48 to 52 ft.; 40 ft. of casing.
27-3	NE¼SW¼ sec. 27	E. Moser	----do----------	1942	824	Dr	100	4	20	20	80	L	12	1942	D	22 ft. of casing.
27-4	NW¼SW¼ sec. 27	----do----------	----do----------	1942	824	Dr	100	4	20	20	80	L	12	1942	S	Do.
27-5	SE¼SW¼ sec. 27	D. Liechty	----do----------	----	825	Dr	62	4	22	22	40	L	12	--------	D,S	Solution opening at 60 ft.; 24 ft. of casing.
28-1	NW¼NE¼ sec. 28	E. Culver	----do----------	1944	822	Dr	40	4	18	18	22	L	8	1944	D,S	Solution opening in limestone filled with red mud; 20 ft. of casing.
28-2	SW¼SE¼ sec. 28	A. Reynolds	E. Joray	1911	828	Dr	80	4	25	25	55	L	----	--------	N	31 ft. of casing.
28-3	SW¼SE¼ sec. 28	----do----------	T. Yoder	1943	828	Dr	214	4	21	21	193	L	8	1943	D,S	No water reported until 211 ft.; 21 ft. of casing.
33-1	SW¼NE¼ sec. 33	P. Beaty	T. Yoder	1950	830	Dr	166	4	20	20	146	L	14	7-29-50	D-	Dd, 8 ft. bailing 15 gpm, 7-29-50; reported clay 0 to 20 ft.; 20 ft. of casing.
33-2	SE¼NE¼ sec. 33	E. Baumgartner	E. Joray	1909	828	Dr	44	4	15	15	29	L	10	1909	D,S	
33-3	SE¼SW¼ sec. 33	W. Grandlinard	T. Yoder	1946	827	Dr	52	4	10	10	42	L	8	Fall 1946	D,S	Solution opening in 2nd well at this site; 11 ft. of casing.
33-4	SE¼SE¼ sec. 33	Meschberger Bros. Stone Co.	----------	----	828	Dr	---	4	8	---	---	L	----	--------	----	Blast hold.
34-1	NW¼NE¼ sec. 34	L. and F. Lehman	E. Joray	----	829	Dr	40	4	20	20	20	L	10	--------	D,S	Lenses of sand and mud in limestone.
34-2	SE¼NE¼ sec. 34	K. Schwartz	T. Yoder	1952	830	Dr	35	4	14	14	21	L	8	4- 9-52	D,S	L; no Dd reported bailing 24 gpm, 4-9-52; 19 ft. of casing.
34-3	SW¼SE¼ sec. 34	O. Alt	E. Joray	----	832	Dr	67	4	13	13	54	L	12	--------	D,S	Solution opening from 60 to 70 ft.; 13 ft. of casing.
35-1	NW¼NE¼ sec. 35	E. Moser	----do----------	1915	842	Dr	79	4	36	36	43	L	24	1915	D,S	
35-2	SE¼SW¼ sec. 35	O. Reusser	J. Yoder	1953	831	Dr	73	4	29	29	44	L	14	5- 4-53	D	L; Dd, 4 ft. pumping 8 gpm, 5-4-53; 30 ft. of casing.
36-1	NE¼NW¼ sec. 36	V. Steiner	T. Yoder	1949	860	Dr	236	4	80	80	156	L	38	12-49	D	80 ft. of casing.
36-2	NE¼NE¼ sec. 36	----do----------	----do----------	1950	862	Dr	82	4	75	75	7	L	57	9- 1-50	D,S	No Dd reported bailing 15 gpm, 9-1-50; reported till to 75 ft.; solution opening at 82 ft.; a little gravel on bottom.
36-3	SE¼SW¼ sec. 36	E. Reinhard	----do----------	1950	845	Dr	57	4	55	54	1	S,G	27	9- 9-50	D,S	L; no Dd reported after 5 hrs. pumping 9 gpm, 9-9-50; 55 ft. of casing.
36-4	SW¼SE¼ sec. 36	B. Smith	F. Moody	1948	865	Dr	227	5	154	52 154	2 73	L L	60	5-48	D,S	Dd, 20 ft. bailing, 5-48; 154 ft. of casing.

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 26 N., R. 14 E., (MONROE TOWNSHIP)																
AdH 1-1	NE¼NW¼ sec. 1	J. Baltzell	J. Crow	----	816	Dr	100	4	40	40	60	L	14	--------	D,S	
2-1	NE¼SE¼ sec. 2	R. Wable	E. Joray	1919	815	Dr	60	4	38	38	22	L	14	1919	D,S	40 ft. of casing.
3-1	NW¼NW¼ sec. 3	C. Andrews	----do----------	1917	819	Dr	62	4	44	44	18	L	10	1917	D	46 ft. of casing.
3-2	NW¼NW¼ sec. 3	Mr. McCullough	T. Yoder	1945	819	Dr	54	4	42	42	12	L	18	1945	D	Solution opening; 44 ft. of casing.
3-3	NW¼NW¼ sec. 3	G. Hike	----do----------	1944	819	Dr	56	4	42	42	14	L	18	Winter 1944	D	43 ft. of casing.
3-4	NW¼NW¼ sec. 3	Mr. Mann	----do----------	1947	819	Dr	100	6	42	42	58	L	18	1947	D	44 ft. of casing.
3-5	SE¼SW¼ sec. 3	J. Schwartz	----do----------	1952	828	Dr	68	4	48	48	20	L	23	11- 8-52	D,S	L; Dd, 3 ft. bailing 24 gpm, 11-8-52; 59 ft. of casing.
3-6	SE¼SW¼ sec. 3	M. Schwartz	----do----------	1953	820	Dr	81	4	49	49	32	L	18	5-15-53	D	L; Dd, 5 ft. bailing 8 gpm; 51 ft. of casing.
4-1	NW¼NW¼ sec. 4	C. Coppess	----------	----	821	Dr	189	4	---	---	---	G	16	--------	P	
4-2	NW¼NE¼ sec. 4	Earl Stucky	T. Yoder	1950	820	Dr	85	4	65	65	20	L	17	3-50	D	Solution opening, sand filled, at 85 ft.; 65 ft. of casing.
4-3	NE¼NE¼ sec. 4	C. Martz	----do----------	1948	822	Dr	72	6	---	68	4	G	18	1948	D	72 ft. of casing.
4-4	NE¼NE¼ sec. 4	Erwin Stuckey	----do----------	1945	821	Dr	120	4	100	100	20	L	18	Spring 1945	D	102 ft. of casing.
4-5	NE¼NE¼ sec. 4	W. Bluhm	----do----------	1949	821	Dr	86	4	68	68	18	L	18	10-49	D	70 ft. of casing.
4-6	SE¼NE¼ sec. 4	J. Wolf	----do----------	1948	820	Dr	65	5	50	50	15	L	18	7-48	D	Reported clay to rock; 52 ft. of casing.
4-7	SE¼NE¼ sec. 4	W. Smith	E. Joray	1924	820	Dr	105	4	78	78	27	L	25	1924	D	78 ft. of casing.
4-8	SE¼NE¼ sec. 4	City of Monroe	E. and F. Moody	1950	820	Dr	206	10	53	53	153	L	20	10-24-50	P	L; Dd, 35 ft. after 24 hrs. pumping 212 gpm, 10-24-50; 57 ft. of casing
4-9	NW¼SW¼ sec. 4	O. Nyffeler	T. Yoder	1948	825	Dr	56	5	---	55	1	G	21	1948	D,S	56 ft. of casing.
4-10	NW¼SW¼ sec. 4	----do----------	R. Speicher	----	826	Dr	190	----	---	---	---	----	----	--------	N	Reported to rock in 190 ft.
4-11	NE¼SE¼ sec. 4	H. Fritzinger	E. Joray	1929	825	Dr	95	4	51	51	44	L	14	1929	D,S	51 ft. of casing.
4-12	SE¼SE¼ sec. 4	A. Nidlinger	R. Speicher	----	825	Dr	97	4	77	77	20	L	----	--------	D,S	
4-13	SW¼NW¼ sec. 4	E. Ehrsam	J. Yoder	1953	825	Dr	148	4	---	146	2	G	19	7-53	D,S	L; Dd, 6 ft. bailing 24 gpm, 7-53; 148 ft. of casing.
5-1	NW¼NW¼ sec. 5	V. Bowman	E. Joray	1920	830	Dr	84	4	65	65	19	L	15	1920	D,S	67 ft. of casing.
5-2	NW¼NE¼ sec. 5	J. Burkhead	T. Yoder	----	826	Dr	135	4	---	---	---	G	18	3-48	D,S	135 ft. of casing.
5-3	SW¼NW¼ sec. 5	C. Shoaf	E. Joray	1932	832	Dr	109	4	98	98	11	L	26	1932	D,S	100 ft. of casing.
5-4	NE¼SW¼ sec. 5	W. Michaels	----do----------	----	832	Dr	88	4	---	---	---	G	20	--------	D,S	88 ft. of casing.
5-5	NE¼SW¼ sec. 5	----do----------	----------	----	832	Dr	---	----	300	---	---	----	----	--------	T	Limestone at 300 ft.
5-6	NW¼SW¼ sec. 5	A. Bollinger	E. Joray	1915	834	Dr	142	4	---	---	---	G	28	1915	D,S	142 ft. of casing.
5-7	SW¼SE¼ sec. 5	C. Holloway	----do----------	1937	830	Dr	152	4	96	96	56	L	30	1937	D,S	99 ft. of casing.
5-8	NW¼NE¼ sec. 5	J. Burkhead	J. Yoder	1955	825	Dr	89	4	---	88	1	G	21	2- 1-55	D,S	L; Dd, 5 ft. bailing 16 gpm, 2-1-55; 89 ft. of casing.
6-1	NW¼NW¼ sec. 6	O. Ehrsam	E. Joray	----	840	Dr	84	4	70	70	14	L	26	--------	D,S	72 ft. of casing.
6-2	SW¼NW¼ sec. 6	I. Eller	----do----------	----	840	Dr	111	4	83	83	28	L	20	--------	D,S	84 ft. of casing.
6-3	SE¼NE¼ sec. 6	J. Michaels	----do----------	----	832	Dr	88	4	---	---	---	G	20	--------	D,S	88 ft. of casing.
6-4	SE¼SE¼ sec. 6	P. Roth	----do----------	----	838	Dr	126	4	111	111	15	L	28	--------	D,S	113 ft. of casing.
7-1	NW¼SE¼ sec. 7	D. Mazlin	----do----------	1916	842	Dr	93	4	64	64	29	L	26	1916	N	64 ft. of casing.
7-2	NW¼SE¼ sec. 7	----do----------	T. Yoder	1944	842	Dr	74	4	---	73	1	G	25	1944	D,S	74 ft. of casing.
7-3	NE¼NW¼ sec. 7	C. Shell	J. Yoder	1953	840	Dr	270	4	137	137	142	L	35	8- 6-53	D,S	L; Dd, 6 ft. bailing 8 gpm, 8-6-53; 140 ft. of casing.
8-1	NE¼NE¼ sec. 8	W. Zurcher	E. Joray	----	832	Dr	95	4	---	55	40	G	----	--------	D,S	95 ft. of casing.
8-2	SW¼NW¼ sec. 8	I. Hirschey	----do----------	1920	838	Dr	114	4	96	96	18	L	12	1920	D,S	99 ft. of casing.
9-1	SE¼SE¼ sec. 9	C. Striker	R. Speicher	----	839	Dr	180	4	---	---	---	G	----	--------	D,S	180 ft. of casing.
10-1	NW¼NW¼ sec. 10	L. Johnson	----do----------	----	830	Dr	160	4	---	---	---	S	----	--------	D,S	
10-2	NW¼SW¼ sec. 10	C. Funk	----do----------	----	838	Dr	140	4	---	---	---	G	----	--------	D,S	140 ft. of casing.
13-1	SW¼NW¼ sec. 13	H. Murphy	T. Yoder	----	823	Dr	83	4	50	50	33	L	22	9-48	D,S	
14-1	SW¼SW¼ sec. 14	G. Snyder	----do----------	1952	838	Dr	84	4	---	---	---	G	23	5- 6-52	D,S	Dd, 1 ft. bailing 10 gpm, 5-6-52; 84 ft. of casing.
15-1	NW¼SW¼ sec. 15	D. Habegger	E. Joray	----	831	Dr	130	4	117	117	13	L	----	--------	D,S	117 ft. of casing.
15-2	SW¼SW¼ sec. 15	Monroe Township School	----do----------	----	834	Dr	105	4	---	---	---	G	----	--------	P	105 ft. of casing.

AdH 17-1	SE¼SW¼ sec. 17	C. Schwartz	----do----------	1918	843	Dr	82	4	---	80	2	G	30	1918	D,S	82 ft. of casing.
18-1	NE¼NE¼ sec. 18	C. Steury	----do----------	1919	842	Dr	96	4	---	---	---	G	25	1919	D,S	
18-2	SW¼SW¼ sec. 18	T. Beer	J. Yoder	1952	847	Dr	80	4	62	62	18	L	35	6-26-52	D,S	L; Dd, 1 ft. bailing 20 gpm, 6-26-52; 63 ft. of casing.
18-3	SE¼SE¼ sec. 18	M. Steury	E. Joray	----	847	Dr	91	4	65	65	26	L	25	--------	D,S	65 ft. of casing.
19-1	NE¼NE¼ sec. 19	C. Sargen	----do----------	1931	849	Dr	135	4	60	60	75	L	30	1931	D,S	60 ft. of casing.
19-2	NE¼SW¼ sec. 19	H. Nussbaum	T. Yoder	1952	852	Dr	84	4	58	58	26	L	35	4-19-52	D,S	L; Dd, 2 ft. bailing 20 gpm, 4-19-52; 70 ft. of casing.
20-1	NW¼NE¼ sec. 20	D. Steury	E. Joray	1918	844	Dr	106	4	82	82	24	L	25	1918	D,S	82 ft. of casing.
20-2	NE¼SE¼ sec. 20	J. Schwartz	----do----------	1920	844	Dr	82	4	---	80	2	G	20	1920	D,S	Do.
20-3	NE¼SW¼ sec. 20	L. Griffin	R. Yoder	1955	850	Dr	120	4	87	87	33	L	39	1-17-55	D,S	L; Dd, 10 ft. bailing 16 gpm, 1-17-55; 88 ft. of casing.
21-1	NW¼NW¼ sec. 21	S. Girod	E. Joray	1913	842	Dr	81	4	---	80	1	G	20	1913	D,S	
21-2	NW¼SW¼ sec. 21	D. Steury	T. Yoder	1947	842	Dr	108	4	80	80	28	L	20	5-47	D,S	
21-3	NE¼SW¼ sec. 21	C. Hilty	----do----------	----	844	Dr	---	4	92	92	---	L	----	--------	D,S	
21-4	NE¼NE¼ sec. 21	D. Striker	----do----------	1947	834	Dr	106	6	---	101	5	G	20	11-47	D,S	
21-5	SW¼SW¼ sec. 21	N. Moser	T. Yoder	----	846	Dr	95	4	80	80	15	L	20	--------	D,S	Reported boulders with some gravel at 60 ft.
22-1	NW¼NE¼ sec. 22	S. Sprunger	E. Joray	----	834	Dr	90	4	---	---	---	G	20	--------	D,S	
22-2	SE¼NE¼ sec. 22	E. Beer	----do----------	1912	828	Dr	76	4	56	56	20	L	16	1912	D,S	
22-3	NW¼SE¼ sec. 22	M. and J. Nussbaum	----do----------	----	826	Dr	172	4	156	156	16	L	----	--------	D,S	
22-4	SE¼SW¼ sec. 22	H. Steury	----do----------	----	838	Dr	90	4	---	---	---	G	----	--------	D,S	
23-1	NE¼NE¼ sec. 23	I. Nussbaum	----do----------	1906	824	Dr	83	4	60	60	23	L	16	1906	D,S	
23-2	SE¼NE¼ sec. 23	W. Rich	----do----------	1912	825	Dr	76	4	54	54	22	L	15	1912	D,S	56 ft. of casing.
23-3	NE¼SW¼ sec. 23	C. Flickinger	----do----------	1914	823	Dr	66	4	50	50	16	L	18	1914	D,S	54 ft. of casing.
24-1	SE¼NW¼ sec. 24	A. Sprunger	T. Yoder	----	824	Dr	70	4	55	55	15	L	----	--------	D,S	
24-2	NW¼SE¼ sec. 24	C. Hedington	----do----------	1935	816	Dr	65	4	32	32	33	L	18	4-35	D,S	34 ft. of casing.
25-1	NW¼SE¼ sec. 25	M. Kerr	----do----------	----	820	Dr	65	4	45	45	20	L	----	--------	D,S	
27-1	NE¼NW¼ sec. 27	F. Sprunger	----do----------	1947	838	Dr	201	6	94	94	107	L	20	11-47	D,S	L; W; 96 ft. of casing.
27-2	SW¼NE¼ sec. 27	G. Shoemaker	----do----------	1952	837	Dr	147	4	101	101	46	L	35	4-28-52	D,S	Dd, 8 ft. bailing 16 gpm, 4-28-52; top soil and clay 0 to 101 ft.; 102 ft. of casing.
28-1	NW¼NW¼ sec. 28	A. Inniger	E. Joray	----	846	Dr	85	4	---	82	3	G	40	--------	D,S	
28-2	SW¼SW¼ sec. 28	A. Fox	T. Yoder	1943	845	Dr	102	4	69	69	33	L	24	12-43	D,S	Reported no gravel above rock; 70 ft. of casing.
29-1	SE¼SE¼ sec. 29	E. and O. Nussbaum	----do----------	1944	845	Dr	98	4	73	73	25	L	25	2-44	D,S	74 ft. of casing.
29-2	NE¼NE¼ sec. 29	G. Jones	J. Yoder	1953	846	Dr	120	4	89	89	31	L	32	5-12-53	D,S	L; Dd, 9 ft. bailing 16 gpm, 5-12-53; 94 ft. of casing.
30-1	SE¼NE¼ sec. 30	A. Liechty	----do----------	1952	856	Dr	152	4	91	91	61	L	39	2-20-52	D,S	L; Dd, 4 ft. bailing 16 gpm, 2-20-52; 97 ft. of casing.
32-1	SW¼NE¼ sec. 32	W. Lehman	T. Yoder	1946	855	Dr	270	4	252	252	18	L	27	5-46	D,S	Reported muddy gravel 110 to 114 ft.; 252 ft. of casing.
32-2	SE¼NW¼ sec. 32	K. Yoder	R. Speicher	1950	857	Dr	100	4	---	94	6	G	45	6-50	D,S	100 ft. of casing.
32-3	SE¼SE¼ sec. 32	City of Berne	----do----------	1926	857	Dr	130	6	---	---	---	G	40	1940	N	
32-4	SE¼SE¼ sec. 32	----do----------	----------	1929	857	Dr	128	10	---	118	10	G	41	3- 8-37	P	W; Dd, 37.5 ft. after 6½ hrs. pumping 165 gpm, 3-18-50.
33-1	NE¼NW¼ sec. 33	F. Watanake	T. Yoder	1950	850	Dr	200	4	110	110	90	L	38	7-12-50	D	L; Dd, 25 ft. after 15 min. bailing 12 gpm, 7-12-50; 111 ft. of casing.
33-2	NE¼SW¼ sec. 33	United Milk Products Co.	Layne-Northern Co., Inc.	1940	840	Dr	116	6	116	101	3	S	60	11-13-40	T	L.
33-3	NE¼SW¼ sec. 33	----do----------	----do----------	1940	850	Dr	121	6	121	95	6	G	53	12-16-40	T	L.
33-4	NE¼SW¼ sec. 33	----do----------	----do----------	1941	846	Dr	143	12	---	129	14	S,G	31	4-10-41	I	L.
33-5	SW¼SE¼ sec. 33	City of Berne	E. and F. Moody	1937	845	Dr	260	10	128	128	132	L	28	7- 7-49	P	W; Dd, 54 ft. after 2 hrs. pumping 103 gpm, 7-7-49; reported slate at 260 ft.
33-6	SE¼SE¼ sec. 33	----------	F. Moody	----	835	Dr	118	5	---	---	---	G	----	--------	----	
33-7	SE¼SE¼ sec. 33	----------	R. Speicher	----	835	Dr	165	4	---	---	---	G	----	--------	----	
33-8	NW¼NW¼ sec. 33	P. Liechty	J. Yoder	1952	850	Dr	137	4	73	73	64	L	35	9-19-52	D,S	Dd, 12 ft. bailing 16 gpm 9-19-52; soil and clay 0 to 73 ft.; 74 ft. of casing.
34-1	SE¼SE¼ sec. 34	A. Habegger	E. Joray	1905	844	Dr	188	4	---	186	2	G	20	1905	D,S	Reported hardpan with sand streaks above gravel; 188 ft. of casing.
35-1	NE¼SW¼ sec. 35	E. Shoemaker	R. Speicher	----	840	Dr	---	4	240	240	---	L	----	--------	D,S	
36-1	SW¼NE¼ sec. 36	C. Stingel and J. Craig	Rockford Petroleum Co.	1927	812	Dr	1091	8 to 6	185	---	---	L	----	--------	O	L; Logan (1931).
36-2	SW¼SW¼ sec. 36	A. Ryf	T. Yoder	1953	830	Dr	137	4	---	136	1	G	9	5- 4-53	D,S	L; no Dd reported after 15 min. pumping 24 gpm, 5-4-53; 137 ft. of casing.

T. 26 N., R. 15 E., (BLUE CREEK TOWNSHIP)

AdH 3-1	NE¼SE¼ sec. 3	J. Danner	J. Hole	----	806	Dr	97	4	38	38	59	L	30	--------	D,S	40 ft. of casing.
5-1	NE¼SW¼ sec. 5	M. Dellinger	F. Moody	1948	810	Dr	108	5	43	43	65	L	27	1-48	D,S	43 ft. of casing.

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 26 N., 15 E., (BLUE CREEK TOWNSHIP)--Continued																
Adj 9-1	NW¼NW¼ sec. 9	O. Young	T. Yoder	1945	802	Dr	40	4	26	26	14	L	11	1945	D,S	W; 27 ft. of casing.
17-1	NE¼NW¼ sec. 17	A. Williams	F. Moody	1949	820	Dr	77	5	44	44	33	L	25	6-49	D	44 ft. of casing.
17-2	NE¼SW¼ sec. 17	R. Miller	----do----------	1947	820	Dr	65	4	42	42	23	L	27	10-47	D,S	42 ft. of casing.
18-1	SW¼NW¼ sec. 18	D. Roop	E. Joray	1930	825	Dr	66	4	47	47	19	L	25	1930	D,S	
18-2	SE¼SW¼ sec. 18	Milo Fuchs	----do----------	1940	827	Dr	57	4	45	45	12	L	25	1940	D,S	Reported sand and gravel on top of rock; 45 ft. of casing.
19-1	NE¼NW¼ sec. 19	Mary Fuchs	F. Moody	----	827	Dr	80	5	---	---	---	G	-----	--------	D,S	
19-2	NW¼NE¼ sec. 19	E. Birch	----do----------	----	827	Dr	160	5	---	---	---	G	-----	--------	S	
19-3	NE¼NE¼ sec. 19	H. Whittredge	R. Speicher	----	820	Dr	50	4	42	42	8	L	-----	--------	D,S	
20-1	NE¼NW¼ sec. 20	A. Dearmond	F. Moody	----	819	Dr	80	5	---	---	---	G	-----	--------	D,S	
20-2	NW¼NE¼ sec. 20	W. McMichael	R. Speicher	----	820	Dr	---	----	60	---	---	L	-----	--------	D,S	
21-1	NE¼NE¼ sec. 21	R. Strayer	F. Moody	1948	822	Dr	119	5	---	---	---	G	45	7-48	D,S	112 ft. of casing.
27-1	SE¼SE¼ sec. 27	H. Sipe	----------	1926	820	Dr	1130	8 to 6	84 (?)	---	---	-----	-----	--------	O	L; 84 ft. of drive pipe; Logan (1931).
28-1	SW¼SW¼ sec. 28	D. and H. Jones	R. Speicher	----	822	Dr	110	----	---	---	---	G	-----	--------	D,S	
28-2	SE¼SE¼ sec. 28	D. Tinkham	T. Yoder	1940	824	Dr	90	4	---	---	---	G	9	4-40	D,S	
28-3	NE¼SE¼ sec. 28	----do----------	G. Lacknett	1928	824	Dr	1111	----	175 (?)	---	---	-----	-----	--------	O	L; 175 ft. of drive pipe; Logan (1931).
29-1	NE¼NE¼ sec. 29	J. Tumbison	R. Speicher	1943	824	Dr	120	4	---	---	---	G	10	1943	D,S	
29-2	NE¼SE¼ sec. 29	F. Bollenbacher	----do----------	----	820	Dr	140	----	---	---	---	G	10	--------	D,S	
30-1	SW¼NW¼ sec. 30	O. Lessing	----do----------	----	825	Dr	---	4	80	---	---	L	-----	--------	D,S	
30-2	SW¼SW¼ sec. 30	B. Miller	----do----------	----	826	Dr	180	4	---	---	---	G	-----	--------	D,S	
31-1	NE¼SW¼ sec. 31	Mr. Rawley	----------	1900	818	Dr	1108	----	114 (?)	---	---	-----	-----	--------	O	L; 114 ft. of drive pipe; Blatchley (1900).
32-1	SE¼SW¼ sec. 32	R. Hoffman	E. Joray	----	837	Dr	103	4	---	---	---	G	-----	--------	D,S	
33-1	NW¼NW¼ sec. 33	F. Meyers	F. Moody	----	823	Dr	---	5	80	---	---	L	-----	--------	D,S	
33-2	NE¼NW¼ sec. 33	P. Gerber	T. Yoder	1946	823	Dr	120	6	90	90	30	L	8	1946	D,S	92 ft. of casing.
33-3	SW¼SW¼ sec. 33	E. Foreman	E. and F. Moody	----	832	Dr	70	5	---	---	---	G	-----	--------	D,S	
34-1	NE¼NE¼ sec. 34	H. Sipe	----------	1926	822	Dr	1125	----	84 (?)	---	---	-----	-----	--------	O	L; 84 ft. of drive pipe; Logan (1931).
34-2	SE¼SE¼ sec. 34	Bollenbacher Estate	Rosenthal and Fisher	1930	833	Dr	1131	8 to 6	84 (?)	---	---	-----	-----	--------	N	84 ft. of drive pipe.
34-3	SE¼SE¼ sec. 34	----do----------	----do----------	1929	833	Dr	1138	8 to 6	78 (?)	---	---	-----	-----	--------	N	78 ft. of drive pipe.
T. 25 N., R. 13 E., (HARTFORD TOWNSHIP)																
Adj 1-1	NE¼SE¼ sec. 1	A. Bieberstein	E. Joray	1910	854	Dr	96	4	81	81	15	L	40	1910	D,S	83 ft. of casing.
1-2	NE¼SE¼ sec. 1	----do----------	----do----------	1907	854	Dr	66	4	---	---	---	G	-----	--------	S	
2-1	NE¼NW¼ sec. 2	P. Augsburger	T. Yoder	1942	829	Dr	---	4	24	24	---	L	14	1942	D	Dd, 7 ft. pumping 6 gpm, Spring. 1942.
2-2	SE¼NW¼ sec. 2	----do----------	J. Yoder	1950	824	Dr	45	4	13	13	32	L	8	6-17-50	S	L; 14 ft. of casing.
2-3	NE¼NW¼ sec. 2	J. Augsburger	E. Joray	1919	830	Dr	47	4	21	21	26	L	9	1919	D,S	23 ft. of casing.
2-4	SE¼NW¼ sec. 2	L. Banter	T. Yoder	1948	826	Dr	60	5	18	18	42	L	14	1948	D	L.
2-5	SE¼SE¼ sec. 2	F. Duff	E. Yoray	1919	832	Dr	66	4	25	25	41	L	15	1919	N	25 ft. of casing.
2-6	SE¼SE¼ sec. 2	----do----------	T. Yoder	1951	832	Dr	75	4	29	29	46	L	10	4-20-51	D,S	Dd, 15 ft. pumping 10 gpm, 4-20-51; clay, sand, and gravel 0 to 29 ft.; 21 ft. of casing.
3-1	NW¼NW¼ sec. 3	L. Meschberger	E. Joray	1916	830	Dr	32	4	12	12	20	L	7	1916	D,S	12 ft. of casing.
3-2	NE¼NW¼ sec. 3	R. Meschberger	----do----------	----	827	Dr	37	4	7	7	30	L	-----	--------	D,S	
3-3	NE¼NE¼ sec. 3	----do----------	R. Speicher	----	826	Dr	---	4	20	---	---	L	-----	--------	S	
3-4	SW¼SE¼ sec. 3	E. Owens	T. Yoder	1946	830	Dr	140	6	19	19	51	L	10	1946	I	W; 20 ft. of casing.
3-5	SW¼SE¼ sec. 3	----do----------	----do----------	1948	830	Dr	241	8	20	20	221	L	12	5-48	I	L; W; Dd, 8 ft. after 8 hrs pumping 100 gpm, 5-48; 22 ft. of casing.

AdJ 3-6	SE¼SE¼ sec. 3	Christian Church	T. Yoder	1945	830	Dr	32	4	24	24	8	L	12	1945	D			
3-7	SW¼SE¼ sec. 3	H. Wheeler	J. Yoder	1951	830	Dr	36	4	23	23	13	L	10	3- 2-51	D	L; 25 ft. of casing.		
3-8	SE¼SE¼ sec. 3	O. Yoder	T. Yoder	1937	827	"	32	3	18	18	14	L	8	10-37	D			
3-9	SE¼SE¼ sec. 3	E. Hersey	----do----------	1938	830	Dr	90	4	21	21	69	L	12	1938	D			
3-10	SE¼SE¼ sec. 3	C. Meyers	----do----------	1945	830	Dr	54	4	22	22	32	L	14	1945	D			
3-11	SW¼SE¼ sec. 3	P. Yoder	----do----------	1940	830	Dr	63	4	---	30	33	G	12	1940	I	Clay 0 to 30 ft.		
3-12	SW¼SE¼ sec. 3	C. Wolf	----do----------	1947	830	Dr	60	6	22	22	38	L	14	4-47	D			
3-13	SW¼SE¼ sec. 3	E. Owens	----do----------	1955	830	Dr	240	8	20	20	220	L	16	11- 1-55	I	L; Dd, 8 ft. pumping 85 gpm, 11-1-55; 22 ft. of casing.		
4-1	NE¼NW¼ sec. 4	A. Miller	----do----------	1934	827	Dr	36	4	9	9	27	L	9	1934	D,S			
4-2	SE¼NE¼ sec. 4	J. Yoder	----do----------	1934	828	Dr	99	4	8	8	91	L	8	1934	S			
4-3	NE¼SW¼ sec. 4	W. Banter	----do----------	----	830	Dr	36	4	8	8	28	L	7	--------	D,S	Solution opening from 34 to 36 ft.		
4-4	SE¼SW¼ sec. 4	F. Bietler	----do----------	1946	834	Dr	35	4	3	3	32	L	5	1946	D			
4-5	SE¼SW¼ sec. 4	O. Sours	----do----------	----	834	Dr	95	6 to 4	3	3	92	L	5	--------	D,S			
9-1	NE¼SW¼ sec. 9	G. Zimmerman	E. Joray	----	838	Dr	29	4	8	8	21	L	3	--------	D,S	10 ft. of casing.		
9-2	NE¼SW¼ sec. 9	D. Carlson	T. Yoder	1938	838	Dr	54	4	8	8	46	L	8	1938	S	Solution opening from 52 to 54 ft.		
9-3	SW¼SW¼ sec. 9	----do----------	E. Joray	----	840	Dr	78	4	8	8	70	L	10	--------	D,S	10 ft. of casing.		
10-1	SE¼NW¼ sec. 10	E. Habegger	T. Yoder	1941	834	Dr	298	6	12	12	286	L	6	1941	N			
10-2	SE¼NE¼ sec. 10	J. Yoder	----do----------	1946	826	Dr	35	4	21	21	14	L	14	1946	D	1½ ft. of sand and gravel on top of rock.		
10-3	NE¼SE¼ sec. 10	A. Steiner	----do----------	1932	826	Dr	60	4	---	14	46	S	14	5-32	D,S	L; 60 ft. of casing.		
10-4	SE¼SW¼ sec. 10	H. Schaadt	----do----------	----	838	Dr	75	4	16	60	---	G						
10-5	SE¼SE¼ sec. 10	T. Lehman	E. Joray	----	830	Dr	35	4	12	16	59	L	14	--------	D,S			
11-1	NE¼SW¼ sec. 11	E. Bixler	T. Yoder	----	828	Dr	40	4	5	12	23	L	10	--------	S			
11-2	SW¼SE¼ sec. 11	G. Shoemaker	----do----------	1950	828	Dr	52	4	18	5	35	L	8	--------	D,S			
11-3	SW¼SE¼ sec. 11	----do----------	T. Yoder	1950	828	Dr	48	4	18	18	34	L	12	8- 2-50	D,S	Dd, 12 ft. bailing 15 gpm, 8-2-50; top soil and clay 0 to 18 ft.; 18 ft. of casing.		
12-1	NW¼NW¼ sec. 12	C. and S. Duback	E. Joray	----	830	Dr	---	4	31	18	30	L	----	--------	N	Solution opening at 48 ft.		
14-1	NW¼NW¼ sec. 14	M. Aschelman	----do----------	----	832	Dr	---	4	6	---	---	L	----	--------	D			
15-1	NE¼NE¼ sec. 15	T. Lehman	----------	1900	832	Dr	40	4	---	---	---	L	----	--------	D,S			
16-1	SE¼SW¼ sec. 16	J. Reiff	K. Reiff	1942	850	Dr	1063	18 to 6	17 (?)	---	---	G(?)	12	--------	S	T, 54.		
22-1	SW¼SE¼ sec. 22	C. Short	J. Yoder	1953	863	Dr	61	4	42	42	19	L	----	--------	T	L; 17 ft. of drive pipe.		
23-1	NW¼SW¼ sec. 23	C. Shoemaker	T. Yoder	1950	855	Dr	78	5	74	74	4	L	24	3-15-53	D,S	L; Dd, 2 ft. after 15 min. pumping 16 gpm, 3-15-53; 47 ft. of casing.		
23-2	SE¼NW¼ sec. 23	----do----------	----do----------	1951	855	Dr	103	4	66	66	37	L	20	7-24-50	D,S	L; Dd, 1 ft. bailing 16 gpm, 7-24-50; 75 ft. of casing.		
24-1	SW¼NE¼ sec. 24	L. Stauffer	----do----------	1950	854	Dr	83	5	46	46	37	L	12	7-29-51	D,S	Dd, 10 ft. after 15 min. pumping 10 gpm, 7-29-51; clay and sand 0 to 66 ft.; 68 ft. of casing.		
24-2	NE¼NE¼ sec. 24	F. Moser	----do----------	----	823	Dr	---	4	55	---	---	L	21	11- 3-50	D,S	L; Dd, 10 ft. bailing 36 gpm, 11-3-50; 47 ft. of casing.		
24-3	NW¼NE¼ sec. 24	----do----------	----do----------	1954	840	Dr	1033	8 to 6	36	---	---	L	----	--------	D,S			
26-1	SW¼NE¼ sec. 26	C. Stricker	----do----------	1948	850	Dr	140	4	118	118	22	L	18	12-27-54	O	L; water level in top 257 ft. of hole, before 6-inch casing was set.		
34-1	NW¼NE¼ sec. 34	A. Zimmerman	----do----------	1949	851	Dr	70	4	54	54	16	L	10	1948	D,S	L; Dd, 1 ft. pumping 24 gpm, 1948; 120 ft. of casing.		
35-1	SE¼NE¼ sec. 35	R. Glendenning	R. McKee	1943	845	Dr	---	----	70	---	---	---	----	Spring 1949	D,S	Clay 0 to 54 ft.; 55 ft. of casing.		
35-2	NE¼SE¼ sec. 35	D. Runyon	T. Yoder	1949	848	Dr	135	4	(?) 92	92	43	L	12	--------	O	70 ft. of drive pipe.		
														1949	D,S	L; Dd, 10 ft. after 15 min. pumping 10 gpm, 1949; 94 ft. of casing.		

T. 25 N., R. 14 E., (WABASH TOWNSHIP)

AdK 1-1	NW¼NW¼ sec. 1	V. Sprunger	T. Yoder	1951	832	Dr	132	4	---	129	3	S,G	9	1-26-51	D,S	L; 132 ft. of casing.		
1-2	SW¼NE¼ sec. 1	H. Sprunger	R. Speicher	----	832	Dr	140	4	---	---	---	G	----	--------	D,S			
1-3	SW¼SW¼ sec. 1	E. Farlow	----do----------	----	850	Dr	150	4	---	150	---	G	----	--------	S			
1-4	NE¼SW¼ sec. 1	S. Farlow	T. Yoder	1948	830	Dr	94	5	---	92	2	G	8	1948	D,S	Reported clay to 92 ft.		
2-1	NE¼NE¼ sec. 2	D. Teeter	R. Speicher	----	830	Dr	170	4	---	---	---	G	----	--------	D,S			
3-1	NW¼NE¼ sec. 3	I. Stucky	E. Yoray	1906	836	Dr	133	4	---	132	1	G	20	1906	D,S			
3-2	NE¼NE¼ sec. 3	W. Lehman	----do----------	----	834	Dr	148	4	---	146	2	G	20	--------	D,S			
3-3	SW¼SW¼ sec. 3	L. Hirshey	R. Speicher	----	838	Dr	156	4	---	---	---	G	----	--------	S			
4-1	NE¼NW¼ sec. 4	City of Berne	----------	1924	847	Dr	297	10	---	---	---	L	42	2-24-49	P	W; Dd, 55 ft. pumping 26 gpm.		
4-2	NE¼NW¼ sec. 4	----do----------	----------	1924	847	Dr	304	6	---	---	---	L	42	7-17-37	N	Y, 25 gpm.		
4-3	NW¼SW¼ sec. 4	----do----------	R. Speicher	----	860	Dr	150	4	100	100	50	L	30	--------	P	123 ft. of casing.		
4-4	NW¼NW¼ sec. 4	J. and C. Hilty	H. Joray	1904	848	Dr	92	4	86	86	6	L	----	--------	D,S	88 ft. of casing.		
5-1	NE¼SW¼ sec. 5	G. Alger	R. Speicher	----	862	Dr	---	4	92	---	---	L	----	--------	D,S			
5-2	SE¼SE¼ sec. 5	E. Affolder	----do----------	----	860	Dr	132	4	90	90	42	L	----	--------	I			
6-1	NE¼NW¼ sec. 6	N. Wintersegg	----do----------	----	865	Dr	----	4	100	---	---	L	----	--------	D,S			

Table 7.--Records of wells in Adams County, Indiana--Continued

Well No.	Location	Owner	Driller	Date completed	Altitude of land surface (feet)	Type of well	Depth (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing zone: Depth to top (feet)	Water-bearing zone: Thickness (feet)	Water-bearing zone: Material	Water level: Below land surface (feet)	Water level: Date	Use	Remarks
T. 25 N., R. 14 E., (WABASH TOWNSHIP)--Continued																
AdK 7-1	SW¼NW¼ sec. 7	F. Turner	T. Yoder	----	850	Dr	---	4	72	---	---	L	----	--------	S	
7-2	NE¼NE¼ sec. 7	P. Girod	J. Yoder	1952	855	Dr	107	4	69	69	38	L	47	9-20-52	D,S	Dd, 10 ft. bailing 15 gpm, 9-20-52; soil and clay 0 to 69 ft.; 70 ft. of casing.
8-1	SE¼SW¼ sec. 8	E. Affolder	R. Speicher	----	850	Dr	130	4	90	90	40	L	----	--------	D,S	
9-1	NW¼NE¼ sec. 9	R. Miller	J. Yoder	1953	840	Dr	263	4	234	234	39	L	28	2- 5-53	D,S	L; Dd, 15 ft. bailing 15 gpm, 2-5-53; 235 ft. of casing.
10-1	NE¼NW¼ sec. 10	S. Eicher	R. Davis	----	840	Dr	137	4	---	---	---	G	----	--------	D,S	
10-2	NW¼NE¼ sec. 10	J. Eicher	R. Speicher	----	842	Dr	120	4	---	---	---	G	----	--------	D,S	
10-3	SW¼SW¼ sec. 10	J. Neuenschwander	----do----------	----	835	Dr	180	4	---	---	---	G	----	--------	D,S	
11-1	NW¼NE¼ sec. 11	F. Aumiller	----do----------	----	849	Dr	100	4	---	---	---	G	----	--------	D,S	
15-1	SW¼NW¼ sec. 15	J. Schwartz	J. Hole	----	840	Dr	105	4	---	100	5	G	26	--------	D,S	L.
15-2	SE¼SE¼ sec. 15	T. Lehman	R. Joray	----	865	Dr	119	4	---	---	---	G	----	--------	D,S	
16-1	NW¼NW¼ sec. 16	E. Gerber	B. Shadel	----	840	Dr	100	----	---	---	---	G	----	--------	D	
16-2	NE¼NE¼ sec. 16	V. Long	----do----------	----	840	Dr	166	----	---	---	---	G	----	--------	D,S	
16-3	NW¼SE¼ sec. 16	J. Schwartz	J. Hole	----	836	Dr	105	4	---	101	4	G	15	--------	D,S	Clay 0 to 101 ft.; 105 ft. of casing.
16	NW¼SW¼ sec. 16	Pennsylvania Railroad Co.	Layne-Northern Co., Inc.	1944	830	Dr	100	----	74	74	26	L	5	2-16-44	I	L.
16-5	NW¼SW¼ sec. 16	----do----------	----do----------	1945	830	Dr	24	50	---	14	10	G	8	2-13-48	I	L.
16-6	NW¼SW¼ sec. 16	L. Miller	J. Yoder	1952	835	Dr	75	4	---	74	1	S,G	----	--------	D,S	L; Dd, 5 ft. bailing 16 gpm, 11-12-52; 75 ft. of casing.
16-7	SW¼NW¼ sec. 16	M. Brown	R. Yoder	1955	840	Dr	91	4	78	78	13	L	13	3- 1-55	D	L; Dd, 5 ft. bailing 16 gpm, 80 ft. of casing.
17-1	SW¼NE¼ sec. 17	E. Affolder	R. Speicher	----	846	Dr	---	----	80	---	---	L	----	--------	D,S	
17-2	NW¼SW¼ sec. 17	C. Hawbaker	----------	----	840	Dr	---	----	80	---	---	----	----	--------	T	
17-3	SE¼SE¼ sec. 17	C. Bump	----------	----	835	Dr	---	----	100	---	---	----	----	--------	T	
18-1	SE¼NW¼ sec. 18	D. Schindler	----------	1899	820	Dr	1088	8	47	---	---	----	----	--------	O	L.
18-2	SE¼NW¼ sec. 18	----do----------	----------	1895	825	Dr	1046	8 to 6	36	---	---	----	----	--------	O	L.
18-3	SW¼NE¼ sec. 18	E. Carnes	White and Arnold	1954	827	Dr	1168	8 to 6	29	---	---	----	----	--------	O	L.
20-1	NE¼SE¼ sec. 20	Mr. McKlain	T. Yoder	1949	850	Dr	198	4	122	122	76	L	28	5-49	D,S	122 ft. of casing.
21-1	NW¼NW¼ sec. 21	W. Bailey	R. Speicher	----	840	Dr	150	4	---	---	---	G	----	--------	S	
21-2	NE¼NW¼ sec. 21	H. Moore	T. Yoder	----	842	Dr	138	4	---	---	---	G	----	--------	D,S	
22-1	NE¼NE¼ sec. 22	P. Schwartz	E. Joray	----	868	Dr	138	4	---	---	---	G	----	--------	D,S	
22-2	SW¼NE¼ sec. 22	A. Schwartz	J. Hole	----	850	Dr	130	4	95	95	35	L	35	--------	D,S	Reported sulfur water.
22-3	SE¼NW¼ sec. 22	C. Mathys	R. Speicher	----	852	Dr	---	4	100	---	---	L	17	--------	D,S	Do.
22-4	NW¼SE¼ sec. 22	E. Wheeler	----do----------	----	840	Dr	170	4	100	100	70	L	17	--------	D,S	
22-5	SE¼SW¼ sec. 22	R. Speicher	----do----------	----	836	Dr	65	4	50	50	15	L	14	--------	D,S	
23-1	NW¼NE¼ sec. 23	N. Schwartz	J. Hole	----	870	Dr	165	4	120	120	45	L	45	--------	D,S	L.
23-2	NW¼SE¼ sec. 23	M. Schwartz	R. Yoder	1955	840	Dr	83	4	57	57	26	L	38	1- 3-55	D,S	L; Dd, 6 ft. bailing 18 gpm, 1-3-55; 58 ft. of casing.
24-1	NE¼NW¼ sec. 24	P. Schwartz	J. Hole	1948	875	Dr	120	4	80	80	40	L	40	1948	D,S	Reported till 0 to 80 ft.
24-2	NE¼NE¼ sec. 24	D. Schwartz	T. Yoder	1955	880	Dr	110	4	99	99	11	L	51	3-18-55	D,S	L; Dd, 5 ft. bailing 15 gpm; 101 ft. of casing.
25-1	SW¼SW¼ sec. 25	F. Armstrong	J. Hole	----	850	Dr	80	4	40	40	40	L	25	--------	D,S	Reported clay 0 to 40 ft.
27-1	NW¼NE¼ sec. 27	S. Weaver	R. Speicher	----	836	Dr	56	4	42	42	14	L	----	--------	D,S	Reported 10 inches of gravel on top of rock; 43 ft. of casing.
27-2	SE¼SW¼ sec. 27	D. Stanley	----do----------	1943	840	Dr	62	4	51	51	11	L	12	--------	D,S	
28-1	NW¼SW¼ sec. 28	T. Affholder	T. Yoder	----	834	Dr	193	4	---	---	---	G	----	--------	D,S	
28-2	SW¼SE¼ sec. 28	L. Lybarger	----------	----	830	Dr	14	6	---	3	11	G	8	--------	D,S	14 ft. of casing.
28-3	SW¼SE¼ sec. 28	T. Mann	----------	----	830	Dr	1057	----	115	---	---	----	----	--------	O	L; Logan (1931).
29-1	NW¼SE¼ sec. 29	City of Geneva	R. Speicher	1925	840	Dr	160	10	---	---	---	G	12	--------	P	Dd, 17 ft. after 12 hrs. pumping 225 gpm, 1932; finished with 10 ft. of 10-inch diam. screen.
29-2	SW¼NE¼ sec. 29	----do----------	E. and F. Moody	1945	840	Dr	140	10	---	130	10	G	----	--------	P	L; W; Dd, 30 ft. pumping 500 gpm, 1945; finished with screen.

AdX 29-3	NE¼SE¼ sec. 29	Pennsylvania Railroad Co.	R. Speicher	----	839	Dr	240	----	---	---	---	G	----	---------	I	
29-4	SW¼SW¼ sec. 29	L. Bixler	----do---------	----	838	Dr	140	4	---	---	---	G	----	---------	S	
29-5	SW¼SE¼ sec. 29	Limberlost Canning Co.	Stremmel and Hill	1944	838	Dr	76	10	---	61	15	G	9	7-10-44	I	L; Dd, 9 ft. after 4 hrs. pumping 300 gpm, 7-10-44; finished with screen.
30-1	SE¼NE¼ sec. 30	W. Hale	----------	----	854	Dr	160	4	---	---	---	L	30	---------	D,S	
30-2	NE¼SW¼ sec. 30	B. Bixler	R. Speicher	----	850	Dr	---	4	70	---	---	L	----	---------	D,S	
31-1	NW¼NW¼ sec. 31	J. McCollum	----do---------	----	845	Dr	---	4	100	---	---	L	30	---------	D,S	
31-2	NW¼NE¼ sec. 31	M. Snyder	----do---------	----	848	Dr	---	4	100	---	---	L	----	---------	D,S	
31-3	NE¼NE¼ sec. 31	M. Moser	----do---------	----	835	Dr	142	4	---	---	---	G	----	---------	S	
32-1	SE¼SE¼ sec. 32	H. and W. Bachelder	----do---------	----	838	Dr	---	4	115	---	---	L	----	---------	D,S	
33-1	SW¼SW¼ sec. 33	J. Smith	----do---------	----	845	Dr	---	4	230	---	---	L	----	---------	D,S	
34-1	SW¼NW¼ sec. 34	Studlers Products Co.	F. Woody	1947	840	Dr	100	6	66	66	34	L	25	10-47	I	66 ft. of casing.
35-1	NE¼SE¼ sec. 35	C. Armstrong	J. Hole	1930	850	Dr	160	4	120	120	40	L	20	1930	D,S	L.
36-1	NE¼NE¼ sec. 36	J. Teeple	----do---------	----	874	Dr	70	----	40	40	30	L	24	---------	D,S	

T. 25 N., R. 15 E., (JEFFERSON TOWNSHIP)

AdL 3-1	NE¼SE¼ sec. 3	W. Greenfield	----------	1927	832	Dr	1122	8	88 (?)	---	---	----	----	---------	O	88 ft. of drive pipe; Logan (1931).
4-1	SW¼NE¼ sec. 4	D. Runyon	T. Yoder	1954	834	Dr	1108	8 to 5	69	---	---	L	16	9-54	O	L; water level in top 300 ft. of hole, before 5-inch casing was set.
5-1	NW¼SW¼ sec. 5	F. Kauffman	G. B. W. Oil and Gas Co.	1927	838	Dr	1111	8	112 (?)	---	---	----	----	---------	O	112 ft. of drive pipe; Logan (1931).
5-2	SW¼SW¼ sec. 5	----do----------	R. Grim	----	835	Dr	1112	8	72 (?)	---	---	----	----	---------	O	72 ft. of drive pipe; Logan (1931).
6-1	NE¼NE¼ sec. 6	J. Corey	R. Speicher	----	832	Dr	---	----	70	---	---	L	----	---------	D,S	
7-1	NE¼NW¼ sec. 7	B. Fetters	A. Spindler	1926	840	Dr	1130	8	75 (?)	---	---	----	----	---------	O	75 ft. of drive pipe; Logan (1931).
9-1	NE¼SE¼ sec. 9	J. Bailey	T. Yoder	1932	845	Dr	116	4	61	61	55	L	15	7-32	D,S	W; 63 ft. of casing.
17-1	SE¼SW¼ sec. 17	C. Christener	J. Hole	----	868	Dr	126	4	96	96	30	L	30	---------	D,S	L.
17-2	SE¼SE¼ sec. 17	Jefferson Township School	Mr. Andrews	----	863	Dr	110	----	80	80	30	L	20	---------	P	
20-1	NW¼SE¼ sec. 20	M. Ketchum	F. Yaney	----	872	Dr	120	4	54	54	66	L	30	---------	D,S	Solution openings from 54 to 60 ft.; 60 ft. of casing.
22-1	SW¼NW¼ sec. 22	D. and F. Schwartz	J. Manor	1948	855	Dr	1162	8	79	79	171	L	----	---------	T	L.
27-1	SW¼SW¼ sec. 27	M. Moran	J. Hole	1935	869	Dr	104	4	45	45	59	L	30	1935	D,S	48 ft. of casing.
28-1	SW¼SW¼ sec. 28	W. Davis	----do---------	----	890	Dr	80	4	38	38	42	L	35	---------	D,S	40 ft. of casing.
29-1	NW¼NW¼ sec. 29	J. Walls	----do---------	1937	875	Dr	90	4	40	40	50	L	30	1937	D,S	Do.
29-2	SE¼NW¼ sec. 29	L. Weaver	----do---------	----	880	Dr	90	4	30	30	60	L	25	---------	D,S	L; 44 ft. of casing.
29-3	SW¼NE¼ sec. 29	C. Buhler	----do---------	1937	880	Dr	80	4	38	38	42	L	25	1937	D,S	Reported clay 0 to 38 ft.; 40 ft. of casing.
29-4	SE¼SW¼ sec. 29	H. Woodruff	----do---------	----	880	Dr	132	4	40	40	92	L	32	---------	D,S	L; 80 ft. of casing.
30-1	SW¼SE¼ sec. 30	A. Coblentz	----do---------	----	860	Dr	68	6	35	35	33	L	14	---------	D,S	Y, 24 gpm; reported clay above rock; 38 ft. of casing.
31-1	SW¼SW¼ sec. 31	J. Karsch	Mr. Andrews	----	852	Dr	175	4	6	6	169	L	20	---------	D	Reported dry to 140 ft.
31-2	SW¼SW¼ sec. 31	----do----------	H. Hole	----	850	Dr	80	4	4	4	76	L	25	---------	I	20 ft. of casing.
31-3	SE¼SW¼ sec. 31	----do----------	----do---------	1947	850	Dr	165	6	8	8	157	L	18	---------	D	22 ft. of casing.
32-1	NE¼NE¼ sec. 32	C. Walters	J. Hole	----	886	Dr	100	4	40	40	60	L	----	---------	S	Thin sand and gravel on rock; 40 ft. of casing.
32-2	SW¼SE¼ sec. 32	B. and T. Huey	----do---------	----	855	Dr	75	4	12	12	63	L	8	---------	D,S	
32-3	SE¼SW¼ sec. 32	W. Miller	----do---------	----	852	Dr	90	4	7	7	83	L	----	---------	D,S	42 ft. of casing.
33-1	SW¼SW¼ sec. 33	K. Coblentz	----do---------	----	850	Dr	75	4	12	12	63	L	12	---------	D,S	18 ft. of casing.
33-2	SE¼SW¼ sec. 33	----do----------	----do---------	----	846	Dr	65	4	6	6	59	L	8	---------	D,S	9 ft. of casing.

Table 8.--Selected logs of wells and test holes in Adams County, Indiana

Well AdA 12-1

Type of record: Driller's log. Altitude: About 785 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Clay and hardpan	39	39	
Gravel, good	11	50	
Limestone	22	72	

Well AdA 35-10

Type of record: Driller's log. Altitude: About 816 feet.

Soil, clay and sand	79	79	
Sand and gravel, muddy	8	87	
Mud, blue, and brown sand	45	132	
Gravel, sharp, clean	2	134	

Well AdA 36-7

Type of record: Driller's log. Altitude: About 816 feet.

Clay	76	76	
Sand and mud	13	89	
Gravel	1	90	

Well AdA 36-11

Type of record: Driller's log. Altitude: About 815 feet.

Soil and yellow clay	18	18	
Mud, blue	41	59	
Mud, sand, and gravel	3	62	
Gravel, coarse, clean	1	63	

Well AdB 14-2

Type of record: Driller's log. Altitude: About 812 feet.

Hardpan	88	88	
Gravel	2	90	
Limestone	60	150	

Well AdB 17-1

Type of record: Driller's log. Altitude: About 812 feet.

No record	72	72	Drift
Gravel	8	80	
Limestone	53	133	

Well AdB 21-7

Type of record: Driller's log. Altitude: About 800 feet.

Soil and clay	75	75	
Gravel, cemented	4	79	
Gravel, clean	2	81	Water bearing

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdB 24-3

Type of record: Driller's log. Altitude: About 843 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Soil and clay	75	75	
Limestone, broken and loose	11	86	
Limestone, solid	17	103	
Limestone, cavey	3	106	

Well AdB 27-6

Type of record: Driller's log. Altitude: About 792 feet.

Top soil and clay	5	5	
Sand, yellow	4	9	
Sand and clay	24	33	
Limestone, very porous	22	55	

Well AdB 27-7

Type of record: Sample log; collected by driller, examined by G. V. Cohee. Altitude: About 785 feet.

No samples	20	20	Drift
Dolomite, finely-crystalline, light-brown	30	50	
Dolomite, crystalline, buff	100	150	Slight porosity in samples from 50 to 80 ft.
Dolomite, crystalline, light-brown	20	170	Slight porosity in samples
No samples	10	180	
Dolomite, crystalline, light-brown to buff	10	190	
Dolomite, crystalline, light-brown	20	210	Slight porosity in samples
Dolomite, finely-crystalline, buff	50	260	
Dolomite, medium-crystalline, white to very light-buff	90	350	Solution cavities in samples 260 to 270 ft., and 280 to 290 ft., and 300 to 320 ft.
Dolomite, fine to medium-crystalline, light-grayish-buff	55	405	Porosity in samples 370 to 380 ft., slight porosity in samples from 390 to 400 ft.

Well AdB 34-10

Type of record: Driller's log. Altitude: About 782 feet.

Clay, light and dark	23	23	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdB 34-10--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Limestone, soft, white	127	150	
Limestone, hard, white	25	175	
Limestone, hard, brown	15	190	
Limestone, hard, gray	105	295	
Limestone, hard, white	5	300	
Limestone, very hard, gray	30	330	
Limestone, hard, blue	15	345	
Limestone, soft, caving	2	347	
Limestone, hard, blue	18	365	
Limestone, soft, gray	5	370	
Limestone, cavey, gray	5	375	
Limestone, hard, gray	5	380	
Limestone, hard, blue	10	390	
Limestone, hard, blue, trace of shale	10	400	

Well AdB 35-5

Type of record: Driller's log. Altitude: About 804 feet.

No record	52	52	Drift
Quicksand	8	60	
Limestone, very hard	31	91	

Well AdB 35-6

Type of record: Sample log; collected by driller, examined by E. A. Brown. Altitude: About 798 feet.

No samples	40	40	Drift
Dolomite, creamy-gray	10	50	Non-porous to slightly porous
Dolomite, creamy-buff to brown	15	65	Porous to slightly porous
Dolomite, light rusty-brown	5	70	Do.
Dolomite, light to medium dirty-gray	20	90	Do.
Dolomite, white, slightly-creamy	20	110	

Well AdD 1-2

Type of record: Driller's log Altitude: About 816 feet.

Top soil and clay	59	59	
Clay, sandy	4	63	
Sand and gravel	1	64	
Gravel, sharp, clean	1	65	

Well AdD 2-7

Type of record: Driller's log. Altitude: About 826 feet.

Clay, yellow	20	20	
Clay, blue	45	65	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdD 2-7--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Sand	2	67	
Limestone	24	91	

Well AdD 9-1

Type of record: Driller's log. Altitude: About 834 feet.

Soil, clay and mud	65	65	
Mud and sand	2	67	
Limestone	25	92	

Well AdD 12-2

Type of record: Driller's log. Altitude: About 823 feet.

Clay, yellow	16	16	
Mud, blue	42	58	
Limestone	28	86	

Well AdA 13-3

Type of record: Driller's log. Altitude: About 822 feet.

Clay, yellow	18	18	
Mud, blue	27	45	
Limestone, white	45	90	
Limestone, brown	4	94	

Well AdD 23-1

Type of record: Driller's log. Altitude: About 834 feet.

No record	65	65	Drift
Boulder at	---	65	
Quicksand	23	88	
Limestone	17	105	

Well AdE 3-2

Type of record: Driller's log. Altitude: About 803 feet.

Overburden	46	46	Drift
Limestone, yellow	4	50	
Limestone, white	71	121	
Limestone, brown	10	131	
Limestone, white	35	166	
Limestone, blue	15	181	
Limestone, white	15	196	
Limestone, brown	25	221	
Limestone, blue	20	241	
Limestone, white	55	296	
Limestone, blue	5	301	
Limestone, white	30	331	
Limestone, blue	45	376	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdE 3-2--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Limestone, white	10	386	3-foot cave
Limestone, blue	14	400	

Well AdE 3-3

Type of record: Driller's log. Altitude: About 788 feet.

No record	32	32	Drift
Limestone, hard, white	46	78	
Limestone, medium	10	88	
Limestone, soft	15	103	
Limestone, medium	5	108	
Limestone, soft	45	153	
Limestone, light-yellow	5	158	
Limestone, brown	5	163	
Limestone, gray	25	188	
Limestone, hard, white	15	203	
Limestone, soft, yellow	5	208	
Limestone, hard, blue	30	238	
Limestone, medium, white	5	243	
Limestone, hard, blue	20	263	
Limestone, hard, gray	10	273	
Limestone, hard, blue	35	308	
Limestone, dark-gray	15	323	
Limestone, soft, white	5	328	
Limestone, hard, blue	85	413	
Limestone, hard, white	3	416	
Shale	2	418	
Limestone, hard, blue	8	426	

Well AdE 3-4

Type of record: Driller's log. Altitude: About 788 feet.

Clay, red	30	30	
Limestone, medium-hard, white	135	165	
Limestone, medium-hard, light-brown	15	180	
Limestone, hard, gray	10	190	
Limestone, hard, blue	10	200	
Limestone, medium-hard, white	20	220	
Limestone, extra-hard, gray	35	255	
Limestone, extra-hard, white	25	280	
Limestone, extra-hard, gray	25	305	11-inch crevice at 290 ft.
Limestone, extra-hard, white	10	315	1.5-foot crevice at 310 ft.
Limestone, medium-hard, white	30	345	
Limestone, extra-hard, gray	5	350	
Limestone, extra-hard, brown	25	375	
Limestone, extra-hard, gray	20	395	
Limestone, extra-hard, blue	5	400	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdE 10-1

Type of record: Driller's log. Altitude: About 803 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
No record	38	38	Drift
Limestone	27	65	
Limestone, medium-gray	65	130	
Limestone, hard, gray	10	140	
Limestone, very-hard, white	5	145	
Limestone, hard, gray	15	160	
Limestone, medium, brown	25	185	
Limestone, medium, gray	10	195	
Limestone, soft, gray	10	205	
Limestone, medium, gray	15	220	
Limestone, medium, white	35	255	
Limestone, soft, white	15	270	
Limestone, medium, white	45	315	
Limestone, medium, gray	10	325	
Limestone, hard, gray	60	385	
Limestone, hard, blue	15	400	

Well AdE 13-3

Type of record: Driller's log. Altitude: About 803 feet.

No record	60	60	Drift
Limestone	22	82	
Clay and fine sand; solution crevice-	18	100	
Limestone	36	136	

Well AdE 32-4

Type of record: Driller's log. Altitude: About 828 feet.

Clay	45	45	
Sand, gravel, and clay	49	94	
Limestone	15	109	

Well AdE 33-4

Type of record: Driller's log. Altitude: About 821 feet.

Top soil and yellow clay	28	28	
Clay, blue, and mud	157	185	
Sand, red and yellow	48	233	
Gravel	1	234	

Well AdF 5-2

Type of record: Driller's log. Altitude: About 844 feet.

No record	78	78	Drift
Sand and fine gravel	6	84	
Limestone	28	112	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdF 9-2

Type of record: Driller's log. Altitude: About 827 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
No record	68	68	Drift
Gravel	2	70	
Limestone	31	101	

Well AdF 16-1

Type of record: Driller's log. Altitude: About 825 feet.

Clay	14	14	
Clay, blue	31	45	
Sand	5	50	
Limestone	67	117	

Well AdF 19-2

Type of record: Driller's log. Altitude: About 805 feet.

No record	59	59	Drift
Sand and gravel	1	60	
Limestone	22	82	
Sand, gravel, and mud; solution crevice	18	100	
Limestone	36	136	

Well AdF 20-2

Type of record: Driller's log. Altitude: About 795 feet.

No record	24	24	Drift
Boulders	4	28	
Limestone	40	68	

Well AdF 21-1

Type of record: Driller's log. Altitude: About 796 feet.

No record	33	33	Drift
Gravel	1	34	
Limestone	47	91	

Well AdF 21-2

Type of record: Driller's log. Altitude: About 804 feet.

Mud	15	15	
Gravel	10	25	
Mud and gravel	14	39	
Limestone, cream-colored	81	120	
Limestone, gray	34	154	
Limestone, soft, gray	22	176	
Limestone, gray	249	425	
Shale, blue	350	775	
Shale, brown	425	1,200	
Limestone? (Trenton)	24	1,224	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdF 27-1

Type of record: Driller's log. Altitude: About 794 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
No record	34	34	Drift
Gravel	1	35	
Limestone	23	58	

Well AdG 34-2

Type of record: Driller's log. Altitude: About 830 feet.

Soil	5	5	
Sand, dirty, and very yellow	9	14	
Limestone	21	35	Solution crevice at bottom

Well AdG 35-2

Type of record: Driller's log. Altitude: About 831 feet.

Clay	29	29	
Limestone, yellow	36	65	
Limestone, white	8	73	

Well AdG 36-3

Type of record: Driller's log. Altitude: About 845 feet.

Clay	54	54	
Sand and gravel	1	55	
Limestone, broken	2	57	

Well AdH 3-5

Type of record: Driller's log. Altitude: About 828 feet.

Dug well	30	30	Drift
Clay, sandy	8	38	
Sand, yellow and muddy	10	48	
Limestone, loose and broken	11	59	
Limestone, very porous	9	68	

Well AdH 3-6

Type of record: Driller's log. Altitude: About 820 feet.

Clay, yellow	19	19	
Clay, blue	30	49	
Limestone	32	81	

Well AdH 4-8

Type of record. Driller's log. Altitude: About 820 feet.

Clay, red	53	53	
Limestone, brown	87	140	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdH 4-8--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Limestone, blue	5	145	
Limestone, brown	10	155	
Limestone, white	10	165	
Limestone, medium-soft	41	206	

Well AdH 4-13

Type of record: Driller's log. Altitude: About 825 feet.

Soil, clay and till	146	146	
Sand and gravel	2	148	
Gravel, coarse, at	----	148	

Well AdH 5-8

Type of record: Driller's log. Altitude: About 825 feet.

Soil and clay	79	79	
Mud to sand	9	88	
Gravel, coarse, good	1	89	

Well AdH 7-3

Type of record: Driller's log. Altitude: About 840 feet.

Soil and clay	81	81	Boulder at 75 ft.
Sand	14	95	
Sand and red mud	42	137	
Limestone	142	279	

Well AdH 18-2

Type of record: Driller's log. Altitude: About 847 feet.

Soil and clay	52	52	
Sand and clay	10	62	
Limestone	18	80	Solution crevice at 80 ft.

Well AdH 19-2

Type of record: Driller's log. Altitude: About 852 feet.

Soil, clay, and mud, blue	58	58	
Limestone, broken, loose	12	70	
Limestone, solid shell	3	73	
Limestone with solution crevices	11	84	

Well AdH 20-3

Type of record: Driller's log. Altitude: About 850 feet.

Soil and clay	19	19	
Mud, blue	68	87	
Limestone	33	120	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdH 27-1

Type of record: Driller's log. Altitude: About 838 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
No record	94	94	Drift(?)
Limestone	26	120	
Rock, white	81	201	Limestone (?)

Well AdH 29-2

Type of record: Driller's log. Altitude: About 846 feet.

Clay, yellow	16	16	
Clay, blue	73	89	
Limestone	31	120	

Well AdH 30-1

Type of record: Driller's log. Altitude: About 856 feet.

Soil and clay	82	82	
Sand and mud	4	86	
Gravel, cemented	5	91	
Limestone, loose	6	97	
Limestone, solid	55	152	

Well AdH 33-1

Type of record: Driller's log. Altitude: About 850 feet.

Clay	73	73	Boulder at 58 ft.
Gravel, muddy	1	74	
Clay, red	36	110	
Limestone	90	200	

Well AdH 33-2

Type of record: Driller's log. Altitude: About 840 feet.

Top soil	2	2	
Clay, yellow	8	10	
Clay, blue	40	50	
Gravel	3	53	Dry
Clay, blue	27	80	
Hardpan	21	101	
Sand, fine, muddy	3	104	
Hardpan	12	116	
Limestone at	.....	116	

Well AdH 33-3

Type of record: Driller's log Altitude: About 850 feet

Clay	36	36	
Clay, sandy	14	50	
Clay	6	56	
Gravel, muddy, and clay	1	57	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdH 33-3--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Clay, sandy	6	63	
Clay	32	95	
Gravel	6	101	Very muddy water
Clay, red	20	121	
Rock at	----	121	Dolomitic limestone or dolomite

Well AdH 33-4

Type of record: Driller's log. Altitude: About 846 feet.

Clay, yellow	14	14	
Clay, gray	35	49	
Sand and gravel	2	51	Water bearing
Clay, gray	47	98	
Gravel, muddy, and boulders	7	105	Water bearing
Sand, coarse, and gravel	6	111	Do.
Gravel and clay	2	113	
Gravel, coarse, and clay	2	115	Water bearing
Gravel, coarse, and sand	2	117	Do.
Clay, hard, brown, and some gravel	4	121	
Gravel and some clay	3	124	Water bearing
Clay	5	129	
Sand and some gravel	7	136	Water bearing
Clay	1	137	
Sand, coarse, and gravel	5	142	Water bearing
Sand, fine	1	143	Do.

Well AdH 36-1

Type of record: Driller's log. Altitude: About 812 feet.

Muck	30	30	
Gravel and quicksand	155	185	
Limestone	201	386	Water bearing
Shale	680	1,066	
Limestone (Trenton)	25	1,091	Salt water

Well AdH 36-2

Type of record: Driller's log. Altitude: About 830 feet.

Clay, yellow	12	12	
Clay, blue	122	134	
Clay, sandy, blue	2	136	
Gravel	1	137	

Well AdI 27-1

Type of record: Driller's log Altitude: About 820 feet.

No record	84	84	Drift(?)
Limerock	312	396	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdI 27-1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Limestone, broken, and shale	204	600	
Shale	490	1,090	
Limestone? (Trenton)	40	1,130	

Well AdI 28-3

Type of record: Driller's log. Altitude: About 824 feet.

No record	175	175	Drift(?)
Limestone	217	392	
Limestone and shale, broken	458	850	
No record	221	1,071	Shale(?)
Limestone? (Trenton)	40	1,111	

Well AdI 34-1

Type of record: Driller's log. Altitude: About 822 feet.

No record	84	84	Drift(?)
Limerock	306	390	
Limestone and shale, broken	210	600	
Shale	485	1,085	
Limestone? (Trenton)	40	1,125	

Well AdJ 2-2

Type of record: Driller's log. Altitude: About 824 feet.

No record	9	9	Drift(?)
Sand	4	13	
Limestone	32	45	Solution crevice 42 to 45 ft.

Well AdJ 2-4

Type of record: Driller's log. Altitude: About 826 feet.

Clay	5	5	
Sand, fine	13	18	
Limestone	42	60	

Well AdJ 3-5

Type of record: Driller's log. Altitude: About 830 feet.

No record	20	20	Drift(?)
Limestone	50	70	
Limestone, chalky-white	130	200	Dry
Limestone	41	241	

Well AdJ 3-7

Type of record: Driller's log. Altitude: About 830 feet.

Clay	16	16	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdJ 3-7--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Sand, muddy	7	23	
Limestone	13	36	

Well AdJ 3-13

Type of record: Driller's log. Altitude: About 830 feet.

Soil and clay	18	18	
Gravel, cemented	2	20	Dry
Limestone	40	60	
Limestone and red mud	30	90	
Limestone, soft, white	100	190	
Limestone, gray to blue	49	239	
1st soft break	1	240	Shale (?)

Well AdJ 10-3

Type of record: Driller's log. Altitude: About 826 feet.

Clay	10	10	
Sand	50	60	
Gravel at	---	60	

Well AdJ 16-1

Type of record: Driller's log. Altitude: About 850 feet.

No record	17	17	Drift(?)
Limestone	286	303	
Shale	721	1,024	
Limestone? (Trenton)	39	1,063	

Well AdJ 22-1

Type of record: Driller's log. Altitude: About 863 feet.

Clay, yellow	15	15	
Clay, blue	27	42	
Limestone, broken	4	46	
Limestone, solid	15	61	

Well AdJ 23-1

Type of record: Driller's log. Altitude: About 855 feet.

Top soil and clay	45	45	
Gravel, cemented	6	51	
Clay	23	74	
Limestone	4	78	Solution crevices

Well AdJ 24-1

Type of record: Driller's log. Altitude: About 854 feet.

Clay and blue mud	42	42	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdJ 24-1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Sand and gravel	4	46	
Limestone	37	83	

Well AdJ 24-3

Type of record: Sample log; collected by driller, examined by S. P. Averill. Altitude: About 840 feet.

Clay till	30	30	
Dolomite, crystalline, light-gray to brown	240	270	
Limestone, crystalline, white to dark-gray	60	330	
Shale, light-gray, with limestone	10	340	
Limestone, shaly, light-gray	10	350	
Limestone, crystalline, light to dark-gray and bluish-gray	120	470	
Shale, calcareous, bluish-gray	10	480	
Limestone, crystalline, light to medium-gray	40	520	
Limestone and shale, light to medium-gray	10	530	
Shale, calcareous, medium-gray	20	550	
Limestone and shale, medium-gray	10	560	
Shale, calcareous, and shale; medium-gray	440	1,000	
Limestone, crystalline, white to yellowish-brown, speckled appearance	33	1,033	

Well AdJ 26-1

Type of record: Driller's log. Altitude: About 850 feet.

Clay	90	90	
Sand, little gravel	4	94	
Clay, sandy	24	118	
Limestone, solid	17	135	
Limestone, soft and very porous	5	140	

Well AdJ 35-2

Type of record: Driller's log. Altitude: About 848 feet.

Clay	70	70	
Clay, sandy	5	75	
Mud, blue	17	92	
Limestone	43	135	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdK 1-1

Type of record: Driller's log. Altitude: About 832 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Clay, yellow	16	16	
Mud, gray and blue	113	129	
Sand to coarse gravel	3	132	

Well AdK 9-1

Type of record: Driller's log. Altitude: About 840 feet.

Soil and clay	145	145	
Gravel, cemented	6	151	
Sand and blue mud	24	175	
Mud, tough, blue	59	234	
Limestone (Niagara)	28	262	
Limestone and shale	1	263	

Well AdK 15-1

Type of record: Driller's log. Altitude: About 840 feet.

Clay	60	60	
Sand	8	68	
Clay, blue	32	100	
Gravel	5	105	

Well AdK 16-4

Type of record: Driller's log. Altitude: About 830 feet.

Clay	19	19	
Gravel	6	25	Water bearing
Clay	43	68	
Rock, broken, and clay	6	74	
Limestone	26	100	Water bearing

Well AdK 16-5

Type of record: Driller's log. Altitude: About 830 feet.

Clay	6	6	
Sand	4	10	Water bearing
Clay and gravel	4	14	
Gravel	10	24	Water bearing

Well AdK 16-6

Type of record: Driller's log Altitude: About 835 feet.

Soil, clay, and till	73	73	
Sand and mud	1	74	
Sand and gravel	1	75	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdK 16-7

Type of record: Driller's log. Altitude: About 840 feet.

	Thickness (feet)	Depth (feet)	Remarks
Clay, yellow	22	22	
Mud, blue	53	75	
Mud and sand	3	78	
Limestone	13	91	

Well AdK 18-1

Type of record: Driller's log. Altitude: About 820 feet.

Soil and clay	47	47	
Limestone (Niagara)	210	257	
Shale	730	987	
Limestone? (Trenton)	101	1,088	

Well AdK 18-2

Type of record: Driller's log. Altitude: 825 feet.

Soil and clay	36	36	
Limestone (Niagara)	217	253	
Shale	738	991	
Limestone? (Trenton)	55	1,046	

Well AdK 18-3

Type of record: Driller's log. Altitude: About 827 feet.

Soil and clay	4	4	
Clay, sand and gravel	25	29	
Limestone (Niagara)	189	218	
1st break	---	218	Shale(?)
2nd break	7	225	Do
3rd break	31	256	Do
Lime and shale	424	680	
Shale	315	995	
Limestone? (Trenton)	173	1,168	

Well AdK 23-1

Type of record: Driller's log. Altitude: About 870 feet.

Clay	60	60	
Sand and gravel	20	80	
Mud	38	118	
Gravel	2	120	
Limestone	45	165	

Well AdK 23-2

Type of record: Driller's log. Altitude: About 840 feet.

Soil and yellow clay	21	21	
Mud, blue	36	57	
Limestone	26	83	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdK 24-2

Type of record: Driller's log. Altitude: About 880 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Soil and yellow clay	18	18	
Mud, blue	57	75	
Sand, mud, and limestone, particles; mixed	24	99	
Limestone, solid	11	110	Solution crevice 108 to 110 ft.

Well AdK 28-3

Type of record: Driller's log. Altitude: About 830 feet.

Drift	115	115	
Limestone, white	120	235	
Shale	15	250	
Limestone, white	30	280	
Shale	40	320	
Limestone	10	330	
Shale	75	405	
Limestone	5	410	
Shale	315	725	
Shale, brown	265	990	
Shale, black	11	1,001	
Limestone (Trenton)	56	1,057	

Well AdK 29-2

Type of record: Driller's log. Altitude: About 840 feet.

Clay	100	100	
Sand	30	130	
Gravel	10	140	

Well AdK 29-5

Type of record: Driller's log. Altitude: About 838 feet.

Soil and clay	10	10	
Mud, lively, blue	10	20	
Clay, blue	20	40	
Sand, dirty	4	44	
Hardpan	16	60	
Sand	1	61	
Gravel, clean	15	76	Water bearing

Well AdK 35-1

Type of record: Driller's log. Altitude: About 850 feet.

No record	80	80	Drift
Gravel	20	100	
Hardpan	18	118	
Gravel	2	120	
Limestone	40	160	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdL 4-1

Type of record: Sample log; collected by driller, examined by S. P. Averill. Altitude: About 834 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Clay till	60	60	
Dolomite, crystalline, white to dark-gray	250	310	
Shale, calcareous, gray to dark-gray	40	350	
Limestone, argillaceous, greenish-gray to gray	20	370	
Shale, calcareous, light to medium-gray	50	420	
Limestone, fine-grained, light-gray to bluish-gray	60	480	
Limestone, shaly, light to dark-gray	30	510	
Shale, calcareous, and shale, gray to dark-gray and bluish-gray	560	1,070	
Limestone, crystalline, white to yellowish-brown, speckled appearance	38	1,108	

Well AdL 17-1

Type of record: Driller's log. Altitude: About 868 feet.

Mud and clay, sandy	60	60	
Gravel with gas	10	70	
Mud with a little gravel at bottom	26	96	
Limestone	30	126	

Well AdL 22-1

Type of record: Driller's log. Altitude: About 855 feet.

Drift	79	79	
Limestone (Niagara)	171	250	
Shale break	5	255	
Limestone	75	330	
Shale, gray, and limestone with shells	250	580	
Shale, gray	320	900	
Shale, brown	157	1,057	
Limestone? (Trenton)	105	1,162	

Well AdL 29-2

Type of record: Driller's log. Altitude: About 880 feet.

No record	30	30	Drift.
Limestone	4	34	
Solution crevice, mud	8	42	
Limestone	48	90	

Table 8.--Selected logs of wells and test holes in Adams County--Continued

Well AdL 29-4

Type of record: Driller's log. Altitude: About 880 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
No record	40	40	Drift
Limestone	20	60	
Clay and gravel; solution crevice	20	80	
Limestone	52	132	

PUBLICATIONS OF COOPERATIVE GROUND-WATER PROGRAM

Report

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

Bulletins

No. 1 Memorandum concerning a pumping test at Gas City, Ind. J. G. Ferris. Ind. Dept. Conserv., Div. Water Resources. 1945.

2 A preliminary report of the ground-water levels of the State based on records of twenty-six observation wells for which long time records are available. Anonymous. Ind. Dept. Conserv., Div. Water Resources. 1946 (Out of print).

3 Ground-water resources of St. Joseph County, Ind. Part 1, South Bend area. F. H. Klaer, Jr., and R. W. Stallman. Ind. Dept. Conserv., Div. Water Resources. 1948.

4 Ground-water resources of Boone County, Ind. E. A. Brown. Ind. Dept. Conserv., Div. Water Resources. 1949.

5 Ground-water resources of Noble County, Ind. R. W. Stallman and F. H. Klaer, Jr. Ind. Dept. Conserv., Div. Water Resources. 1950.

7 Water-level records of Indiana. Anonymous. Ind. Dept. Conserv., Div. Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Ind.: Appendix, Basic Data. J. S. Rosenshein and O. J. Cosner. Ind. Dept. Conserv., Div. Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Ind. J. S. Rosenshein. Ind. Dept. Conserv., Div. Water Resources. 1958.

9 Ground-water resources of Adams County, Ind. F. A. Watkins, Jr., and P. E. Ward. Ind. Dept. Conserv., Div. Water Resources. 1962.

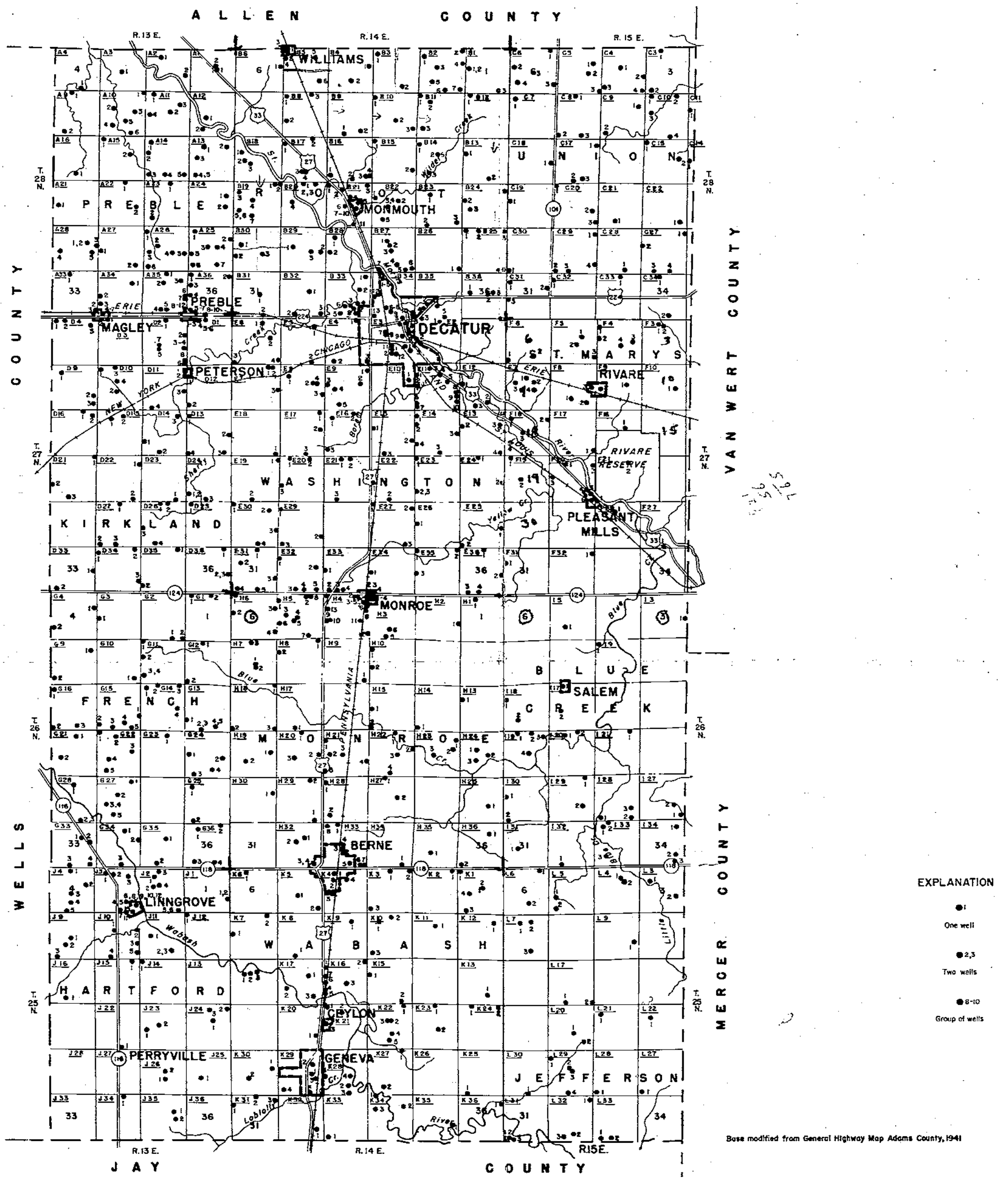
10 Ground-water resources of Northwestern Ind., Preliminary Report: Lake County. J. S. Rosenshein. Ind. Dept. Conserv., Div. Water Resources 1961.

11 Ground-water resources of West-Central Ind., Preliminary Report: Greene County. F. A. Watkins, Jr., and D. G. Jordan. Ind. Dept. Conserv., Div. Water Resources. 1961.

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 9. PLATE I



EXPLANATION

●1 One well

●2,3 Two wells

●8-10 Group of wells

Base modified from General Highway Map Adams County, 1941

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

MAP OF ADAMS COUNTY, INDIANA, SHOWING LOCATION OF WELLS

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY G. E. DAVIS
1962

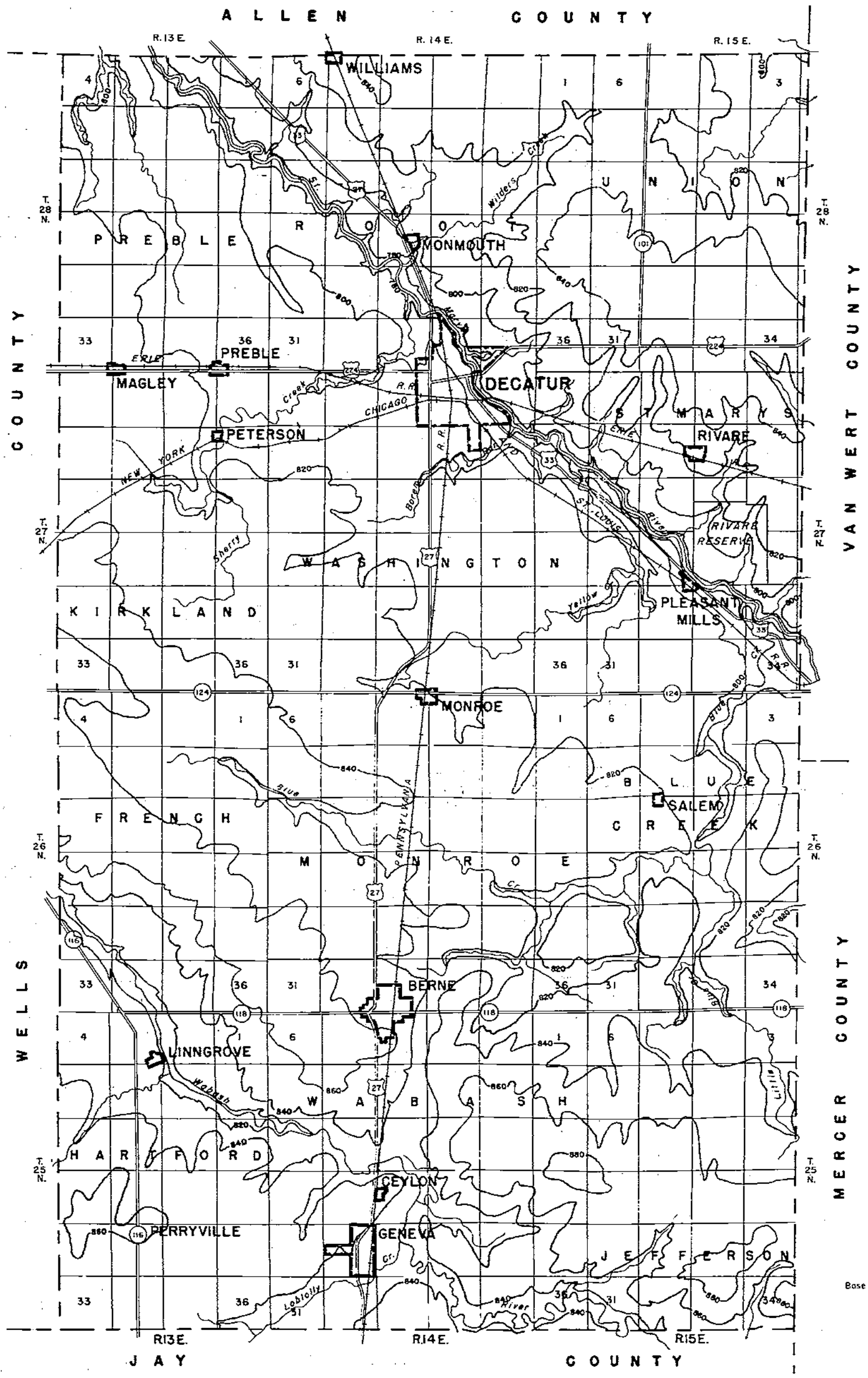
	A	B	C
	D	E	F
	G	H	I
	J	K	L

TOWNSHIP LETTER SYMBOLS IN WELL-NUMBERING SYSTEM

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 9. PLATE 2



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

Base modified from General Highway Map Adams County, 1941

Topography compiled from altimeter survey using U.S. Coast and Geodetic survey and U.S. Geological Survey bench marks.

MAP OF ADAMS COUNTY, INDIANA, SHOWING GENERALIZED CONTOURS ON THE LAND SURFACE

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY G. E. DAVIS AND P. E. WARD
1962

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 9. PLATE 3

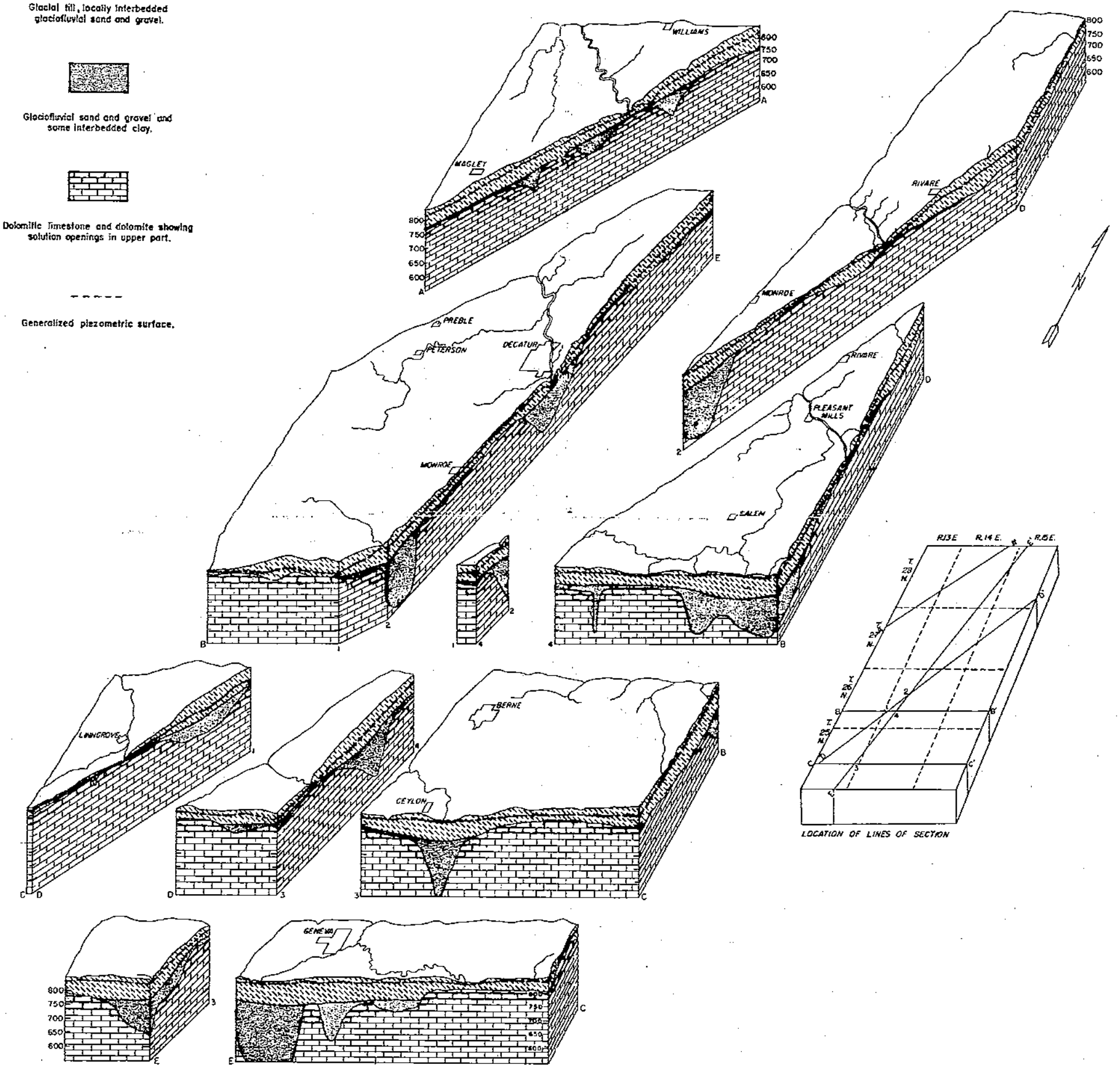
EXPLANATION

Glacial till, locally interbedded glaciofluvial sand and gravel.

Glaciofluvial sand and gravel and some interbedded clay.

Dolomitic limestone and dolomite showing solution openings in upper part.

Generalized piezometric surface.

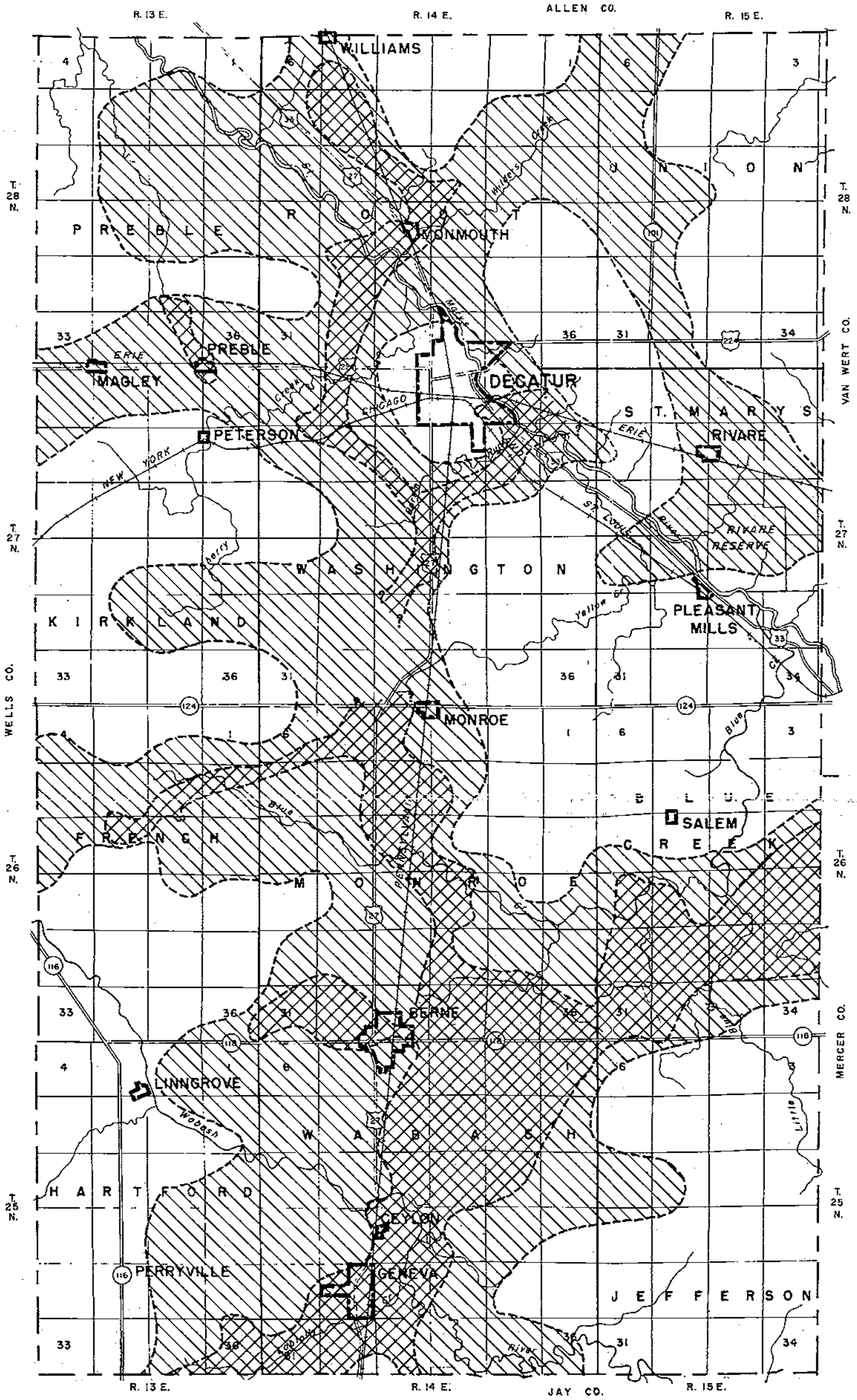


BLOCK DIAGRAM OF ADAMS COUNTY, INDIANA SHOWING GENERALIZED GEOLOGY

BY D. G. JORDAN
1962

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



EXPLANATION

Glacial till underlain by glaciofluvial sand and gravel and some clay. Glaciofluvial deposits range from 20 to 300 feet thick. Large supplies for industries and municipal use possible from glaciofluvial deposits. Locally small to moderate supplies for farm, domestic, industrial, and municipal use possible from underlying bedrock.

Glacial till underlain by glaciofluvial sand and gravel and some clay. Glaciofluvial deposits less than 20 feet thick. Small to moderate supplies for farm, domestic, industrial, and municipal use possible from glaciofluvial deposits and locally from underlying bedrock.

Glacial till underlain by bedrock. Locally some thin interbedded glaciofluvial sand and gravel. Locally small supplies for farm and domestic use possible from glaciofluvial deposits. Small to moderate supplies for farm, domestic, industrial, and municipal use possible from underlying bedrock.

Base modified from General Highway Map, Adams County, 1941

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

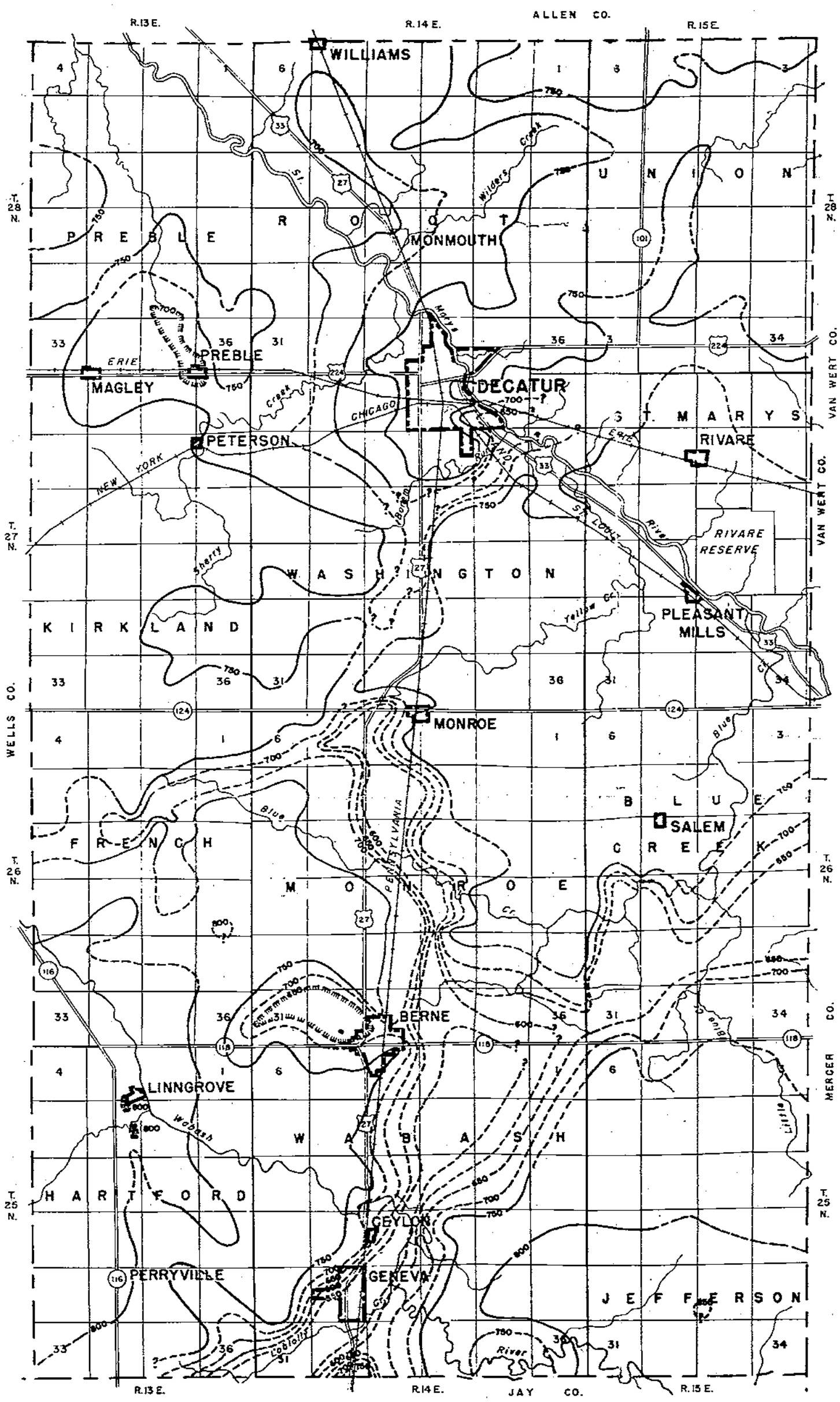
0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY F. A. WATKINS, JR.
1952

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Base modified from General Highway Map, Adams County, 1941

MAP OF ADAMS COUNTY, INDIANA, SHOWING GENERALIZED CONTOURS ON THE BEDROCK SURFACE

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

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

1962